

Article

# Using local authority financial data to improve the granularity of public sector expenditure, UK: financial year ending 2019

An investigation into the feasibility of using local authority financial data to help improve the granularity of public sector finance statistics.

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## Table of contents

1. [Main points](#)
2. [Supplementing public sector finances](#)
3. [Total expenditure by local government](#)
4. [Expenditure by selected function of government](#)
5. [Using local authority financial data to improve the granularity of public sector expenditure, UK data](#)
6. [Glossary](#)
7. [Data sources and quality](#)
8. [Future developments](#)
9. [Related links](#)
10. [Cite this article](#)

# 1 . Main points

- Local authority level source data can be used to build a geographically granular breakdown of local government expenditure across the UK.
- This analysis can be used to feed into future geographically granular breakdowns of public sector expenditure.
- The definition and coverage of this breakdown differs from estimates included in existing regional publications, but differences can be quantified.
- Many factors can influence expenditure per head within a small geographic area, including the density, age, and other characteristics of the population.
- Overall, the City of London has the highest local government expenditure per head in financial year ending March 2019 at £28,438.
- The next highest expenditure per head is the Shetland Islands at £6,900.

These research outputs are not official statistics, nor are they used in the underlying methods or assumptions in the production of official statistics. They are experimental statistics published as outputs from research into a methodology different to what is currently used. These outputs should not be used for policy or decision-making.

## 2 . Supplementing public sector finances

### About our research

This feasibility article is one of a series of articles describing our progress over the first 15 months of research seeking to supplement the quality and timeliness of public sector fiscal statistics and improve the granularity of subnational estimates.

Care should be taken in comparing local government expenditure across different areas as there may be differences in the responsibilities of local authorities as well as differences in the funding structures used to provide services.

### Local area measurement of local government expenditure

The Office for National Statistics (ONS) already produces sub-UK estimates of public sector revenue and expenditure in our [Country and regional public sector finances \(PSF\) article](#). The publication uses a combination of expenditure figures already presented in HM Treasury's [Country and regional analysis \(CRA\) publication](#) and various apportionment methodologies that rely on the most appropriate indicators. This research investigates replacement source data, or improved methodology, to allow breakdowns of expenditure at a lower level of spatial granularity. In the first phase of this work, we have considered only local government expenditure.

Expenditure (thought of as “spending”) is measured on an accruals basis – the expenditure is recorded when the liability to pay it is created. Total expenditure consists of capital expenditure (spending on capital assets, capital transfers) and current expenditure. Current expenditure includes production-related expenses (spending that government incurs to produce goods and services for its citizens, including compensation of employees and intermediate consumption) and transfer payments (for example, social benefits paid to citizens, or other current transfers), subsidies, and interest costs.

## **Local government data sources**

Public sector finances are compiled according to agreed international statistical definitions, which include a comprehensive definition of the public sector. The public sector comprises government (called general government to avoid confusion) and other public sector organisations such as public corporations and public banks. There are two subsectors of general government relevant to the administrative arrangements of the UK – central government and local government.

The local government subsector includes public administration bodies whose area of responsibility extends only to a local part of the UK. The sector is largely made up of local authorities, although other units are also present in the sector such as government-controlled local transport companies, which are operated on a non-market basis. Conversely, there are bodies controlled by local authorities which are not considered part of local government because they are operated on a market basis, such as trading companies or local authority-managed social housing. As market bodies, these are instead treated as public corporations.

A large proportion (around 73%) of local government source data in the UK PSF is obtained from figures published by the Department for Levelling Up, Housing and Communities (DLUHC) for England, or by devolved administrations. This information is available on a local authority level, with some exceptions. This means that there is potentially a clear and logical source for local government expenditure information, which is much more detailed spatially than the regional figures included in CRA (and in country and regional PSF), even if they do not include some conceptual or coverage adjustments that are applied to complete the PSF.

For this research, we have used these current and capital outturn data for local authorities, as collated by DLUHC and the devolved administrations.

## **3 . Total expenditure by local government**

These experimental estimates are provided to demonstrate feasibility. Caution should be taken in interpreting the results or making comparisons between areas, owing to the experimental nature of these estimates and the different funding structures that exist for local government.

## Country level analysis

In the financial year ending March 2019, excluding Northern Ireland, Scotland had the highest expenditure per head of £3,082. England had the lowest expenditure per head of £1,942.

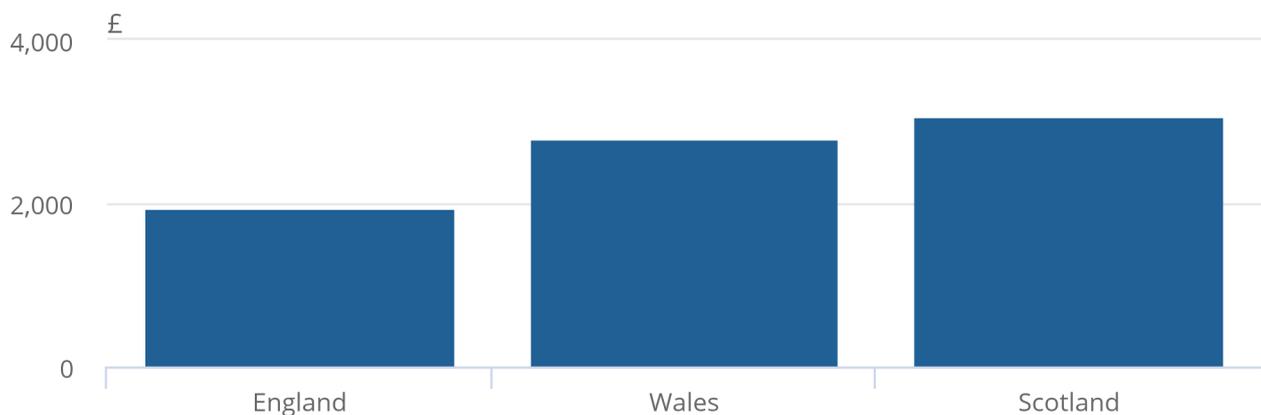
There are several reasons why an area might show higher or lower than typical expenditure per head. Commuter or tourist populations might mean that a local authority needs to spend more on providing particular services that do not directly benefit permanent residents. Other potential factors include the level of social deprivation, population density, and the funding structure for services such as education, which might not exclusively be provided by local government. Local authorities have some tax raising powers and there may be a correlation between the revenue an authority is able to raise and the amount it is able to spend.

### Figure 1: Scotland had the highest local government expenditure per head in financial year ending 2019

Total local government expenditure per head by country, financial year ending 2019

#### Figure 1: Scotland had the highest local government expenditure per head in financial year ending 2019

Total local government expenditure per head by country, financial year ending 2019



Source: Using local authority financial data to improve the granularity of public sector expenditure from the Office for National Statistics

#### Notes:

1. Does not include Northern Ireland because of a narrower remit of local government.

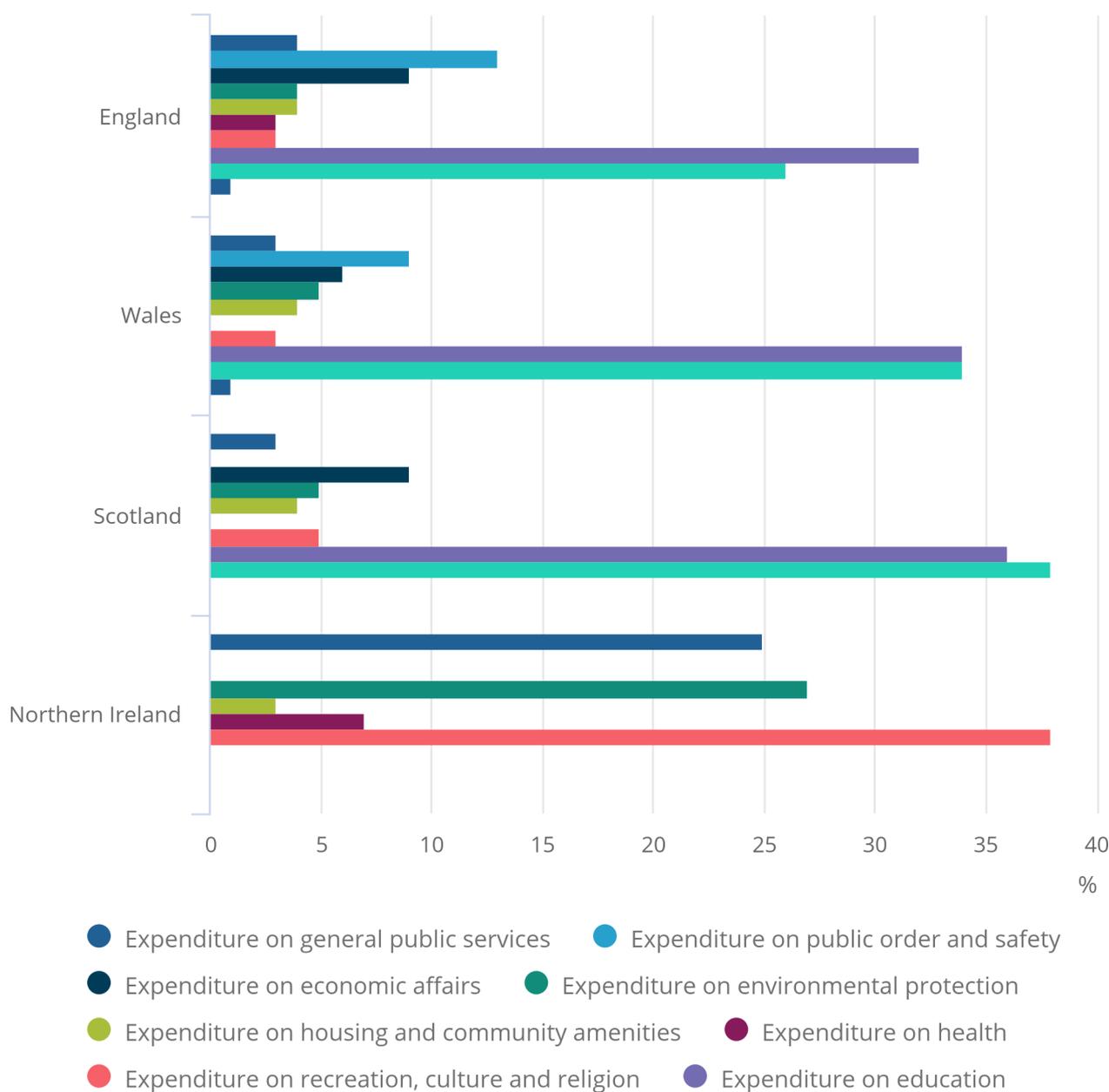
Local government does not have the same remit in every country of the UK, and so it can be misleading to compare expenditure between countries. Notably, public order and safety, economic affairs, education, and social protection all fall under the remit of central government in Northern Ireland (which is not included above), while public order and safety falls under the remit of central government in Scotland. These differences can be shown using the percentage share of expenditure per head by function of government.

**Figure 2: The percentage share of expenditure by function of government shows differences in the remit of local government and funding structures across countries**

Percentage share of local government expenditure by function of government, financial year ending 2019

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Percentage share of local government expenditure by function of government, financial year ending 2019



Source: Using local authority financial data to improve the granularity of public sector expenditure from the Office for National Statistics

Notes:

1. Figures may not sum to total because of rounding.

## Local authority, district, and metropolitan borough level analysis

**Figure 3: expenditure per head can vary by region depending on the responsibilities of local government and funding structures used**

**Local government expenditure per head by local authority, £, financial year ending 2019**

Download the data

[.xlsx](#)

In the financial year ending March 2019, excluding Northern Ireland, the City of London had the highest expenditure per head of £28,438. A significant proportion of this (around 47%) was on public order and safety, which represents specific requirements of the area because of a significant population of financial institutions and its own police force with a specialised economic crime directorate. The Shetland Islands had the highest expenditure per head in Scotland at £6,900, while the highest in Wales was Denbighshire (£3,233). Wellingborough had the lowest expenditure per head of £1,191.

Despite differences in population density, funding structures and the remit of local government in different areas of the UK, there is a reasonably linear relationship between the population of a local authority and its total expenditure on services.

**Figure 4: Despite differences in the remit of local government and funding structures in different regions of the UK, the relationship between population and expenditure is relatively consistent**

**Total local government expenditure by population for each local authority area in the UK, financial year ending 2019**

Notes:

1. Figures may not sum to total because of rounding.

Download the data

[.xlsx](#)

## 4 . Expenditure by selected function of government

### Social protection

**Figure 5: expenditure on social protection per head can vary depending on population density and demographics**

**Local government expenditure on social protection per head by local authority, £, financial year ending 2019**

Download the data

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In the financial year ending March 2019, excluding Northern Ireland, the Shetland Islands had the highest expenditure per head of £1,785. In England, the City of London saw the highest expenditure per head (£1,339), while in Wales the highest was Blaenau Gwent (£1,190). Slough had the lowest expenditure per head of £295.

Many factors can influence expenditure per head on social protection, including population density and age, and economic inactivity.

## Recreation, culture and religion

**Figure 6: expenditure on recreation, culture and religion is on a comparable basis across the UK, but can still vary between areas**

**Local government expenditure on recreation, culture and religion per head by local authority, £, financial year ending 2019**

Download the data

[.xlsx](#)

In the financial year ending March 2019, the City of London had the highest expenditure per head of £4,911. In Scotland, Dundee City saw the highest expenditure per head (£329), while in Wales the highest was Denbighshire (£220). Northern Ireland was included in this comparison as local government is responsible for providing services related to recreation, culture and religion. In Northern Ireland, the highest expenditure per head on recreation, culture and religion services was in Belfast (£254).

## Economic affairs

**Figure 7: expenditure on economic affairs can vary according to the needs of residents and businesses**

**Local government expenditure on economic affairs per head by local authority, £, financial year ending 2019**

Download the data

[.xlsx](#)

This function includes activities such as the regulation or support of general economic and commercial activities, the administration of agricultural, forestry, fishing, manufacturing and construction activities, and the administration or provision of transport services including roads. In the financial year ending March 2019, excluding Northern Ireland, the City of London had the highest expenditure per head of £4,185. In Scotland, the Shetland Islands saw the highest expenditure per head (£2,046), while in Wales the highest was Monmouthshire (£403).

## 5 . Using local authority financial data to improve the granularity of public sector expenditure, UK data

[Local government plus expenditure by local authority, UK](#)

Dataset | Released 29 June 2023

UK local government expenditure by local authority area and function of government.

## 6 . Glossary

### Public sector

Central government departments and bodies (such as the Department for Work and Pensions), local authorities and other local government bodies (such as police authorities), and public sector-controlled corporations (such as Scottish Water).

## **Public sector expenditure**

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

### **Current expenditure**

Day to day running costs, such as wage costs or purchasing raw materials.

### **Capital expenditure**

Expenditure on purchasing or maintaining capital assets, such as buildings or vehicles.

## **7 . Data sources and quality**

## Coherence with other data sources - reconciliation with UK public sector finances

The [UK public sector finances \(PSF\)](#) provides a detailed breakdown of public sector expenditure, both by transaction and by subsector (for example, local government, central government, or public corporations). This includes various adjustments to the source data necessary to meet agreed international statistical definitions. It reflects sectoral and transactional distinctions that are not considered in the source data, which is produced for regulatory reporting requirements and are often on an accounting, rather than a statistical, basis. Other adjustments are applied to incorporate different data sources, which are considered more accurate in the context of these statistical definitions. For example, expenditure on housing benefits is deducted from local government expenditure, and then replaced with outturn data from the Department for Work and Pensions.

To test the validity of using these source data to construct analysis at a lower geographical area, we needed to first prove coherence between these analyses and the amount of expenditure reported in the UK PSF for the local government subsector. Table 1 shows the relationship between the source data and UK PSF totals.

Table 1: Reconciliation of local authority source data and UK public sector finances (PSF) local government expenditure  
Financial year ending March 2019

	<b>£m</b>
<b>Sum of local authority source data - current expenditure</b>	113,944
<b>Sum of local authority source data - capital expenditure</b>	24,561
<b>Sum of local authority source data - capital receipts (sales and disposals)</b>	-3,323
<b>Sum of local authority source data</b>	135,182
<b>plus net social benefits</b>	27,728
<b>plus payments of VAT</b>	9,629
<b>plus imputed pension contributions</b>	2,963
<b>plus expenditure by LG subsidiaries of Transport for London</b>	1,563
<b>plus statistical adjustment items from source data</b>	1,450
<b>plus imputed subsidies</b>	1,403
<b>plus interest and financial intermediation services indirectly measured</b>	1,209
<b>plus expenditure funded by market output and penalty charges</b>	1,191
<b>plus other coverage adjustments</b>	4,791
<b>plus capital grants paid to the private sector</b>	2,018
<b>less net capital expenditure by housing revenue accounts</b>	-3,759
<b>Total local government expenditure (UK PSF)</b>	<b>185,368</b>

Source: Using local authority financial data to improve the granularity of public sector expenditure from the Office for National Statistics

The analysis included in this article is similar to the “sum of local authority source data”, but with some small adjustments to provide better consistency with the way UK PSF is calculated. More information is included in the Applying local government source data to the measurement of public sector expenditure for detailed geographic areas section.

## Coherence with other data sources - reconciliation with country and regional analysis

HM Treasury produce estimates of identifiable expenditure by country and region in their [Country and regional analysis \(CRA\) publication](#). The CRA is currently used as the data source for country and regional splits in the existing country and regional PSF, which is then aligned to the UK PSF through a series of adjustments and a residual difference. The CRA does not produce figures that only cover the local government subsector in its main analysis – however, such figures are available in selected data tables. Although the UK PSF includes a more exhaustive measure of expenditure, being consistent with agreed statistical definitions, much of the source data is used in both the CRA and UK PSF publications.

To use these source data for a more granular geographic breakdown of UK PSF, we must prove consistency with the CRA figures and establish what conceptual adjustments exist for data covering the local government subsector. Some of the reconciliation between UK PSF and CRA is the same as adjustments applied in the calculation of UK PSF. In other words, the CRA measurement of local government expenditure is more directly linked to the source data and does not reflect all of the statistical adjustments applied to UK PSF.

Table 2: Reconciliation of UK public sector finances (PSF) local government expenditure and country and regional analysis  
Financial year ending March 2019

	£m
<b>Total local government expenditure (UK PSF)</b>	<b>185,368</b>
less net social benefits	-27,728
less payments of VAT	-9,629
less imputed subsidies	-1,403
less interest and financial intermediation services indirectly measured	-1,209
plus other coverage adjustments	191
plus education grants	3,542
plus capital grants received from the private sector	1,505
<b>Total local government expenditure (Country and Regional Analysis)</b>	<b>150,637</b>

Source: Using local authority financial data to improve the granularity of public sector expenditure from the Office for National Statistics

## Detailed differences between country and regional and UK PSF

The UK PSF provides a detailed breakdown of public sector expenditure and revenue, as well as the balancing item net borrowing, consistent with internationally agreed statistical definitions. This includes breakdowns in three dimensions, including:

- data are available for all subsectors of the public sector that are relevant to the UK (central government, local government, public corporations, public sector funded pension schemes, and the Bank of England)
- data are available on a detailed economic transaction level, consistent with the sequence of accounts used in the presentation of the UK National Accounts
- the Office for National Statistics (ONS) compiles a breakdown of expenditure by function of government, which is consistent with UK PSF totals

The UK PSF also includes information on the financial account as well as the net cash requirement, but these are out of scope for this project as well as being out of scope for the existing country and regional PSF. The existing country and regional PSF publication also produces measures of public sector expenditure and revenue, but does not make distinctions between sectors or subsectors, other than in adjustments to align with the UK PSF. It also does not produce a full transactional sequence of accounts, but instead breaks down expenditure by the function of government (type of service provided). For revenue, detail is provided on the type of tax or other form of revenue. Net borrowing is not a concept that applies to geographical areas, as they have no borrowing powers, but the difference between expenditure and revenue is instead presented as the “net fiscal balance”.

As this project uses geographic information in the same way as the existing country and regional PSF, it is most practical to produce estimates of expenditure in the same way – that is, broken down by the type of service provided. In this article, we are dealing only with local government expenditure, rather than the whole public sector, so the data discussed are only a subset of the existing public sector measurements included in the existing country and regional PSF.

## **Applying local government source data to the measurement of public sector expenditure for detailed geographic areas**

The most detailed source data available are at the local authority level, and we have already shown that this can be reconciled with the local government expenditure recorded in UK PSF through a series of adjustments. These adjustments help inform the transactional and sectoral distinctions made in the UK PSF.

However, in following the processing of the UK PSF, some of the detailed geography information is lost. Adjustments applied to the source data might remove this detail from the sum of local government expenditure, only to add it to another sector, for example, some data recorded under local authorities may be expenditure by public corporations according to statistical guidance. Adjustments may also move expenditure to a different transaction, for example, some data recorded under local authority expenditure on goods and services might be deducted, and then added on an aggregated basis in net social benefits.

These distinctions are often irrelevant in the production of existing country and regional breakdowns of expenditure. Therefore, to make the best use of available geographically granular data, the source data can ignore some of these adjustments. In effect, we can consider public sector expenditure which is informed by local government source data, rather than being fully consistent with the expenditure by the local government subsector as reported in the UK PSF.

A further consideration is the measurement of the public sector as a whole – in effect we need to draw a boundary around the public sector and avoid including anything that does not cross that boundary. For example, where local government units administer and deliver services that are paid for by central government grants, if we were to include the expenditure by both local and central government then we would be double counting the overall public sector expenditure.

In optimising the use of the source data in this way, we are in effect creating a new measure, which for convenience we will call “local government plus”. It both ignores some expenditure included in the local government subsector in UK PSF, and also includes some expenditure removed from the local government subsector in UK PSF.

## **Coverage of local government plus compared with UK PSF’s local government measure**

Items in UK PSF local government not in “local government plus” include:

- sectoral coverage adjustments
- statistical coverage adjustments
- adjustments where local authority data are replaced by alternative data sources

Items in “local government plus” not in UK PSF local government include:

- expenditure from the general fund to support housing revenue accounts
- expenditure by trading accounts

Data that appear in both include:

- sum of outturn data - total service expenditure
- conceptual adjustments to current expenditure informed by source data
- sum of outturn data - expenditure less sales and disposals of capital assets
- net capital grants paid to the private sector
- capital grants paid to Transport for London

Sectoral coverage adjustments include expenditure by local government subsidiaries of Transport for London, imputed subsidies paid to housing revenue accounts, and others.

Statistical coverage adjustments include payments of VAT, pension adjustments, interest and financial intermediation services indirectly measures, insurance adjustments and others.

## **Strengths and limitations**

The data sources described contain a very granular source of spatial information, in a way that is consistent with existing measures of local government expenditure. To prove this consistency, we need to apply a series of adjustments as previously described. However, some of these adjustments do not apply to all source data. Notably, the data for England are more detailed than for the other countries and contains adjustments such as appropriations and other adjustments to net current expenditure. While this means that these data might more strictly follow statistical definitions, it is not a cause for concern in terms of this research, where the overriding quality measure is consistency with the UK PSF.

There are also country-by-country differences in the overall remit of local government. For example, some functions covered by local government in England, Wales and Scotland instead fall under the responsibility of central government in Northern Ireland (public order and safety, economic affairs, education, and social protection). In all cases, the analysis based on these source data cover only expenditure by local government, and so they should not be interpreted as the full expenditure by the public sector on a particular function.

## Classification of function of government

Both CRA and the UK PSF publish measurements of expenditure by function of government, or the type of service provided. The CRA breakdown is reproduced in country and regional PSF.

For local government, the UK PSF breakdown is derived from detailed source data, and aggregated according to an international standard described as [Classification of function of government \(COFOG\)](#). However, the local authority level source data used in this research does not always include the same level of detail as the country level data used to compile UK PSF estimates.

Instead, this research uses the categories presented in the local authority (LA) level source data. For this reason, while the function breakdown follows the standard wherever possible, the breakdowns quoted here will, when aggregated to the UK level, show some differences in the COFOG breakdown compared with estimates prepared for the PSF COFOG figures. In other words, PSF's UK level COFOG presentation includes nuances in classification not available in the LA level source data. For example, "housing services" in the source data contains elements which have been assessed as belonging to "social protection" in the UK level COFOG breakdown.

## Tiers of local government

The relationship between local authorities (as geographic areas) and local authorities (as units of government) is not always a direct one. England and Wales have police forces and fire and rescue authorities whose remit extends over several local authorities (in Scotland and Northern Ireland these services are considered part of central government). Similarly, England and Wales have national park authorities which cover a geographic area wider than just one local authority.

Scotland features other bodies which straddle local authority boundaries: Valuation Joint Boards (who make decisions concerning council tax, valuations for rating, and electoral registration), Regional Transport Partnerships (RTPs) and the Tay Road Bridge Joint Board.

Along with these bodies, England also has a multi-tiered system of local government. Broadly, there are three tiers, but only the first two are material for the application of the source data, which are regional authorities and local authorities.

Regional authorities are made up of the Greater London Authority, and combined authorities (a group of local authorities who combine to deliver some, but not all, services). Local authorities are made up of London borough councils, metropolitan district councils, unitary authorities (who are responsible for the delivery of all services in their areas), and two-tier county and district councils. The county and district councils co-exist, each responsible for delivery of a subset of local government functions.

The source data supports breakdowns, by function, for each unit of local (or regional) authority. Therefore, some will directly relate to the most granular geographic area, while others relate to a group of these areas. To provide a complete dataset that covers all local government expenditure at the most granular level of detail, we need to apportion spending of higher-tier authorities across the areas for which they have responsibility.

For the purposes of this research, we have carried out this apportionment, in all cases, using population estimates. The expenditure for a higher-tier authority is split according to the proportionate share of the population of the member bottom-tier authorities. The only exception to this overall method is for national or regional park authorities, which do not share a border with a distinct group of local authorities and benefit a much broader area.

For park authorities, we have split the expenditure across all local authorities in the same region as the park, weighted according to population share. Were we to further develop this work, in some cases it may be possible to develop a more sophisticated method of apportionment. For example, mapping data on school admissions might support the apportionment of spending on education by county councils into the constituent district councils.

Finally, to allow for comparisons across all granular areas of the UK, this apportioned spending from wider geographical areas is then added to the directly measured spending at the lower geographical area. For example, some English local authorities as presented in this analysis might include expenditure by a district council, as well as apportioned spending by a county council, a police authority, a fire and rescue authority, a waste authority, and a national park authority. A local authority area in Wales might include expenditure by the local authority, a police authority, a fire and rescue authority, and a national park authority. A local authority area in Scotland might include expenditure by a local authority, a valuation joint board, and a regional transport board (and/or the Tay Road Bridge joint board).

Northern Ireland only includes expenditure by local authorities, and these authorities do not have the same remit for service delivery as bodies in other countries of the UK. Nevertheless, they are included in the analysis as they could still be used as a component of total public sector expenditure.

## Population estimates

Where analysis has been presented on a per-head basis, population estimates used are from the ONS mid-year estimates for financial year ending March 2019.

## 8 . Future developments

## Conclusions from phase 1 of the research

The research shows that it is possible to produce local authority level estimates of local government expenditure on a consistent basis across all areas of the UK. These estimates are only partially consistent with local government measures as recorded in the UK public sector finances (PSF). This applies additional adjustments to meet agreed statistical definitions including conceptual transactions and sectoral classification nuances that are not supported in the local authority level source data. Nevertheless, it is possible to reconcile these more granular estimates with the UK PSF measurement of local government expenditure.

## Further work to fully capture local government expenditure

To provide a complete recording of the local government subsector at a spatially granular level, it would be necessary to develop methods for apportioning conceptual and coverage adjustments applied in the UK PSF down to lower-level geographies. As these adjustments are either informed by other subsectors of the public sector, or applied alongside similar conceptual adjustments for the other subsectors, this work could fall into a future phase of research.

## Further work on spatially granular estimates of public sector expenditure

A future phase of this research could focus on central government. It could consider appropriate methods to present central government expenditure at a lower level of geography than that currently included in the country and regional PSF publication, and investigate alternative data sources that would help inform such a granular breakdown.

It would also consider conceptual adjustments that apply to both central and local government, as well as interactions between the two subsectors of government.

## 9 . Related links

[Country and regional public sector finances, UK: financial year ending 2022](#)

Article | Released 26 May 2023

Public sector revenue, expenditure and net fiscal balance on a country and regional basis.

[Country and regional analysis: 2022](#)

Article | Released 16 November 2022

Statistical estimates for the allocation of identifiable expenditure between the regions and nations of the United Kingdom.

[Public sector finances, UK: May 2023](#)

Statistical bulletin | Released 21 June 2023

How the relationship between UK public sector monthly income and expenditure leads to changes in deficit and debt.

## 10 . Cite this article

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