

Article

Development of regional household expenditure measures

Further developments to our experimental estimates of household spending and saving in the countries, regions and sub-regions of the UK.

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1 . Main points

- In September 2018, we published our first [experimental](#) estimates of household expenditure for the Nomenclature of Units for Territorial Statistics (NUTS) level 1 countries and regions of the UK, with an [article](#) describing the concepts, data and methods used to produce them; we have now updated those results and have provided the first estimates for NUTS level 2 sub-regions.
- In 2018, the highest national expenditure per person of the four countries of the UK was in England at £20,750, followed by Scotland at £19,346; the lowest was in Northern Ireland at £17,449, with Wales at £17,568.
- In 2018, the highest households' saving ratio of the four countries of the UK was in England at 6.6%; the lowest was in Wales at negative 0.3%.
- In 2018, the highest national expenditure per person of the nine English regions was in London at £25,785, followed by the South East at £24,246; the lowest was in the West Midlands at £16,701.
- In 2018, the highest households' saving ratio of the nine English regions was in London at 16.4%, followed by the West Midlands at 11.5%; the lowest was in the South West at negative 1.4%.
- In 2018, the highest national expenditure per person of the NUTS2 sub-regions of the UK was in Inner London – West at £40,322, followed by Outer London – South at £27,279; the lowest was in the West Midlands (metropolitan county) at £14,857, followed by Tees Valley and Durham at £16,645.
- In 2018, the highest households' saving ratio of the NUTS2 sub-regions was in Inner London – West at 24.4%, followed by Inner London – East at 20.4%; the lowest was in Hampshire and Isle of Wight at negative 9.6%, followed by Cornwall and Isles of Scilly at negative 7.9%.

2 . Introduction

With increased devolution of powers to local and combined authorities within the UK, the need for statistics to monitor and inform policy at a regional level has also been increasing to an unprecedented level. Users of regional statistics have been telling us for years that they need more and better data, and the recent review of economic statistics by Sir Charles Bean recommended that more should be done to provide statistics for smaller areas within the UK. The UK government's "levelling up" agenda to address regional inequalities has only served to increase this demand.

We have responded to this need by setting up a devolution project, with around a dozen separate work streams designed to develop and provide the statistics needed by regional and local users. One of these work streams is to develop a regional measure of household final consumption expenditure (HFCE). There are many user needs that can be met through this development, including:

- information on the spending habits of householders, allowing better planning of facilities and infrastructure by local government
- improved investment planning by businesses providing goods and services
- expansion of the household account at a regional level, allowing the derivation of the saving ratio for subnational areas (a useful indicator of prosperity)

At a regional level, we currently measure the income and outgoings of households only as far as gross disposable household income (GDHI). That measures the primary income components, such as wages and salaries and property income, and the secondary distribution of income, such as the effect of taxes on income and social benefits. GDHI is a measure of the amount of money people in households have available for spending or saving.

Regional HFCE takes this to the next stage by measuring how much money people in households spend on each of a range of commodities. Once all spending is accounted for, we are left with a measure of saving.

We measure regional HFCE in two ways, known as the domestic concept and the national concept. Each is measured independently, using data collected according to that concept. The domestic concept measures all spending that takes place in a region, regardless of who is doing the spending. It therefore includes spending by foreign tourists visiting the UK as well as spending by the residents of other parts of the UK, but it excludes spending by residents of the region outside the region where they live. By contrast, the national concept measures all spending by the residents of a region, regardless of where that spending takes place.

Although these [experimental](#) estimates are the only regional measures produced on a consistent basis across the whole UK, the devolved administrations of Scotland and Northern Ireland have been independently compiling and publishing estimates of HFCE for their respective countries for several years. While our estimates are still in an early stage of development, you are advised to give more credence to the official Scottish and Irish estimates.

3 . Summary of consultation

In September 2018, we published our first [experimental](#) estimates of household final consumption expenditure (HFCE) for the Nomenclature of Units for Territorial Statistics (NUTS) level 1 countries and regions of the UK, with an [article](#) describing the concepts, data and methods used to produce them.

Following this, we carried out a [public consultation](#) to gather feedback on the project. We wanted to confirm that there is demand for these estimates and gauge what level of geographic breakdown users are interested in. We also looked to identify any concerns people have with our data sources and methods and to confirm that the variables and level of commodity data provided are suitable for user needs.

We received 14 responses from a variety of organisations, including local and devolved governments and an academic institution, as well as from individuals. Overall, respondents were supportive of further development in regional HFCE estimates. For our experimental data, the responses indicated that the level of commodity detail and the variables presented broadly meet user needs. Most respondents were interested in having data at country, NUTS1 and NUTS2 levels, and all were interested in having local authority level data. We also received suggestions for potential improvements to data sources and methodology.

Regarding geographic breakdown, there was clear demand for multiple levels of geography, including down to local authority level and beyond. However, there were also concerns about the quality and coverage of current data sources, and we recognise the trade-off with quality if we were to produce smaller regions with our existing data.

In accord with the responses we received, we believe the best strategy going forward is to continue to develop the statistics we have already produced. This includes improving the quality of our existing data and continuing to pursue commercial credit and debit card data. We are also looking to explore Survey of Living Conditions (SLC) and Value Added Tax (VAT) enhancements. Changes have been made to the SLC that should improve our modelling using Living Costs and Food Survey (LCF) data. Meanwhile, using VAT data instead of Annual Business Survey (ABS) turnover could give us better coverage and more granularity for regional estimates. Subject to success in these pursuits, we will look to add lower-level geographies when we are confident that the data are sufficiently robust and reliable to meet user needs.

Further details of the issues raised by respondents and the decisions we have taken following the consultation can be found in the [consultation response document \(DOCX, 26.6KB\)](#).

4 . Changes to data and methods

Full details of the data and methods used to produce our first [experimental](#) estimates of household final consumption expenditure (HFCE) for the Nomenclature of Units for Territorial Statistics (NUTS) level 1 countries and regions of the UK can be found in the [article](#) we published alongside the data.

The first change to note is that we have updated the estimates to take on revised UK data published in the UK National Accounts, The Blue Book 2019 and regional gross disposable household income (GDHI) published in June 2020. This also means the time series now run from 2009 to 2018.

We have also produced estimates for NUTS2 sub-regions for the first time. The Living Costs and Food Survey (LCF), our principal data source for estimates of national expenditure, has its sample designed and drawn at the NUTS2 level. Although the sample size for some NUTS2 sub-regions is rather small, in general we believe the survey data to be sufficient to produce reasonable quality results for a high-level commodity breakdown. Crucially, the NUTS2 sub-regions that are geographically contiguous with combined authorities have relatively large sample sizes, so results for these areas should be more reliable. However, we feel this is as low as we can possibly go without some more comprehensive data source on household spending at a local level.

In Annex A, you can find a summary table showing the achieved sample size of the LCF for each NUTS2 sub-region of the UK. This may be of use in assessing the reliability of results for each area.

For source data, the biggest change we have made is the introduction of turnover provided in Value Added Tax (VAT) returns to replace turnover estimates from the Annual Business Survey (ABS), a major component of our estimates of domestic expenditure. The VAT dataset is a near-census of businesses across the UK and therefore provides much greater coverage than the survey, particularly for small and medium-sized businesses. This change has also allowed us to improve the precision of some detailed industry components, providing a better fit to the commodities of interest.

Other changes to specific Classification of Individual Consumption According to Purpose (COICOP) commodities are:

- Water supply (COICOP 04.4.1) and Sewerage (COICOP 04.4.3): we have made improvements to reflect that residents of Northern Ireland do not pay separately for water and sewerage services (charges being subsumed within their Council Tax payments); for Scotland, we have used data provided by Scottish Water on household revenue for national expenditure at the NUTS1 level, with the NUTS2 allocation using LCF data on water and sewerage
- Hospital services (COICOP 06.3): national expenditure now uses ABS commodity data for NHS receipts to better reflect the regional distribution of spending
- Postal services (COICOP 08.1): domestic expenditure now includes other postal and courier activities as well as universal service to reflect the increased use of delivery services
- Financial Intermediation Services Indirectly Measured (FISIM, COICOP 12.6.1): our source for domestic expenditure only provides data at the NUTS1 level, so for the NUTS2 allocation we have used VAT turnover on banking activities; national expenditure uses data on property income from GDHI to reflect the regional distribution of loans and deposits, but it now only uses property income paid (reflecting mostly mortgage interest payments) and excludes property income received, which is dominated by dividends from share ownership (interest on deposits is now very small)

We have made one change to the commodity list for which we provide estimates. In our first publication, we included a detailed breakdown of the purchase of vehicles (COICOP 07.1), to show separately the amounts spent on motor cars, motorcycles and bicycles. However, the data on purchases of motorcycles and bicycles are quite limited, so we have withdrawn this additional detail and only published combined estimates for purchases of all vehicle types.

In all other respects, the data and methods used remain unchanged from those described in the earlier [article](#). It is worth reiterating here that the regional distribution of spending on narcotics and prostitution services are both driven solely by the adult population and in no way reflect actual regional variation in the use of these commodities.

5 . Results for NUTS1 countries and regions

We have compiled estimates for the Nomenclature of Units for Territorial Statistics (NUTS) level 1 countries and regions of the UK, for the years 2009 to 2018, which are consistent with the UK National Accounts, The Blue Book 2019 and regional gross disposable household income (GDHI) published in June 2020.

The full set of results, including its detailed commodity breakdown, can be found in the [dataset](#) published with this article, which you can download as a spreadsheet. Here, we present a summary of the data showing the main items at a high level, to give a flavour of what is available in the full dataset. All the figures are compiled and presented in current market prices, which do not remove the effect of price inflation.

To begin, it is useful to say a little about what the data mean. The estimates of domestic expenditure relate to all spending that takes place in the region, but they do not necessarily relate to the people who live there, since people can and do travel around the country, spending as they go. It therefore makes little sense calculating domestic expenditure on a per person basis.

National expenditure for a region does relate directly to the spending by the people who live there, so calculating national expenditure per person is useful, as it allows us to compare spending across regions of different size and population. Total national expenditure is also the value that is used in the calculation of the households' saving ratio.

Where domestic expenditure is useful lies in its use in helping us to derive estimates of net spending flows between countries and regions of the UK. In this, we also need to take into account spending by foreign visitors to the UK and spending by UK residents abroad.

Table 1 shows total national expenditure on all goods and services and national expenditure per head of population for the NUTS1 countries and regions of the UK in 2018 as well as the percentage growth in spending per person between 2017 and 2018. For comparison purposes, the overall rate of inflation for this period, as shown by the Consumer Prices Index including owner occupiers' housing costs (CPIH all items), was 2.3%.

Table 1: National expenditure, total and per head, NUTS1 countries and regions, 2018

	Total national expenditure, 2018 (£ million)	National expenditure per head, 2018 (£ pounds)	Growth in national expenditure per head, 2017 to 2018 (%)
United Kingdom	1,354,729	20,392	3.6
England	1,161,549	20,750	3.6
North East	46,539	17,510	6.2
North West	130,702	17,924	1.9
Yorkshire and The Humber	97,327	17,762	1.1
East Midlands	87,983	18,314	2.2
West Midlands	98,548	16,701	3.6
East of England	129,487	20,881	1.9
London	229,697	25,785	5.0
South East	221,453	24,246	5.5
South West	119,812	21,396	3.1
Wales	55,139	17,568	5.4
Scotland	105,208	19,346	3.5
Northern Ireland	32,833	17,449	0.7

Source: Office for National Statistics

London had the highest national expenditure per person in 2018 at £25,785, mainly driven by the higher housing costs in and around the capital. The lowest spending per person in 2018 was seen in the West Midlands at £16,701.

In terms of growth in spending per person between 2017 and 2018, the North East had the greatest increase at 6.2%. This growth was seen across a wide range of goods and services, with the most significant increases in the miscellaneous goods and services and restaurants and hotels categories. The lowest growth in spending per person between 2017 and 2018 was seen in Northern Ireland at 0.7%.

We can explore what the people in each country and region of the UK are spending their money on by looking at the broad categories of goods and services. Tables 2 and 3 present these figures on a per person basis for 2018, so we can compare across different areas on a consistent basis.

Table 2: National expenditure per head by COICOP division, NUTS1 countries and regions, 2018

Annual spending in £ pounds per person	01: Food and soft drinks	02: Alcohol, tobacco and narcotics	03: Clothing and footwear	04: Housing	05: Household goods and services	06: Health
United Kingdom	1,592	717	1,015	5,291	986	419
England	1,585	689	1,002	5,540	999	431
North East	1,589	796	956	3,537	971	324
North West	1,484	804	1,024	4,061	940	365
Yorkshire and The Humber	1,429	704	970	3,787	938	387
East Midlands	1,612	728	884	3,916	1,032	382
West Midlands	1,503	678	835	3,864	868	412
East of England	1,632	687	1,027	5,250	1,048	502
London	1,598	562	1,111	9,812	914	450
South East	1,733	670	1,103	6,427	1,153	499
South West	1,618	686	934	5,374	1,089	448
Wales	1,570	710	904	3,681	855	308
Scotland	1,673	950	1,104	4,189	988	362
Northern Ireland	1,605	913	1,330	3,723	795	434

Source: Office for National Statistics

Table 3: National expenditure per head by COICOP division, NUTS1 countries and regions, 2018

Annual spending in £ pounds per person	07: Transport	08: Communication	09: Recreation and culture	10: Education	11: Restaurant and hotels	12: Miscellaneous goods and services
United Kingdom	2,790	321	2,336	401	1,914	2,610
England	2,799	320	2,342	436	1,943	2,664
North East	2,546	319	2,521	169	1,892	1,891
North West	2,362	305	2,262	263	1,763	2,289
Yorkshire and The Humber	2,546	291	2,298	196	1,891	2,324
East Midlands	2,518	317	2,356	313	1,721	2,536
West Midlands	2,297	309	1,953	299	1,479	2,205
East of England	2,899	326	2,643	152	1,879	2,837
London	2,696	326	1,812	1,118	2,365	3,020
South East	3,651	352	2,883	499	2,211	3,064
South West	3,171	316	2,431	400	1,898	3,031
Wales	2,512	318	2,608	100	1,698	2,304
Scotland	2,989	337	2,270	252	1,799	2,434
Northern Ireland	2,412	299	1,879	293	1,735	2,032

Source: Office for National Statistics

Here, we can clearly see the much higher housing costs in London and the South East of England. We can also see that spending in the South East is generally high across a wide range of commodities, compared with most other parts of the UK.

London shows a much higher expenditure on education, more than double that of any other region, but also has the lowest spending per person on recreation and culture and on alcohol and tobacco. The West Midlands shows by far the lowest spending on restaurants and hotels as well as the lowest on transport and clothing and footwear. Northern Ireland shows by far the highest spending per person on clothing and footwear.

We have mentioned that having both domestic and national expenditure allows us to estimate the net household spending flows between countries and regions of the UK. Table 4 shows the derivation of these estimates, which are calculated as total domestic expenditure, less spending in the UK by foreign visitors, less total national expenditure, plus spending by UK residents abroad. Positive net spending figures imply that the region is a net exporter of goods and services to the rest of the UK, whereas negative figures imply the region is a net importer of goods and services from the rest of the UK.

Table 4: Derivation of net inter-regional spending flows, NUTS1 countries and regions, 2018

£ million	Total domestic expenditure	Total national expenditure	Foreign visitors' spending in the UK	Spending abroad by UK residents	Net inter-regional spending
United Kingdom	1,338,866	1,354,729	33,468	49,331	0
England	1,165,599	1,161,549	29,374	43,366	18,042
North East	42,799	46,539	424	1,553	-2,612
North West	135,085	130,702	1,956	5,568	7,996
Yorkshire and The Humber	85,678	97,327	874	4,064	-8,459
East Midlands	73,922	87,983	762	3,148	-11,676
West Midlands	97,547	98,548	1,943	3,907	964
East of England	119,944	129,487	1,020	4,356	-6,206
London	296,726	229,697	17,854	10,067	59,241
South East	202,881	221,453	2,906	7,182	-14,297
South West	111,016	119,812	1,634	3,521	-6,910
Wales	47,342	55,139	586	1,897	-6,486
Scotland	99,219	105,208	3,195	3,379	-5,804
Northern Ireland	26,707	32,833	313	689	-5,752

Source: Office for National Statistics

We can see that, in 2018, only London, the North West and the West Midlands were net exporters of goods and services to the rest of the UK, although West Midlands has only a very small positive balance. In London, the largest exports are in financial services, recreation and culture, and transport services. In the North West, the largest exports are in gas supply, clothing and transport services.

Having compiled estimates of total household final consumption expenditure (HFCE) by the national concept, we can use these estimates to extend the regional household account from its current end point, gross disposable household income (GDHI), and derive the households' saving ratio for the countries and regions of the UK. The saving ratio is the percentage of total available resources that is left after all spending has occurred (gross saving divided by total resources). Table 5 shows the stages in this derivation, using data for 2018. The transaction codes shown (B.6g to B.8g) correspond to those used in the UK National Accounts.

Table 5: Derivation of households saving ratio, NUTS1 countries and regions, 2018

£ million	Gross disposable household income (B.6g)	Adjustment for change in pension entitlement (D.8)	Total household available resources (TR)	Individual final consumption expenditure (P.31)	Gross saving (B.8g)	Households saving ratio (percentage)
United Kingdom	1,402,367	39,903	1,442,270	1,354,729	87,541	6.1
England	1,209,637	34,622	1,244,260	1,161,549	82,711	6.6
North East	45,171	1,228	46,398	46,539	-141	-0.3
North West	133,897	4,006	137,903	130,702	7,202	5.2
Yorkshire and The Humber	96,796	2,792	99,588	97,327	2,261	2.3
East Midlands	87,804	2,497	90,300	87,983	2,317	2.6
West Midlands	107,526	3,851	111,377	98,548	12,829	11.5
East of England	137,698	3,436	141,134	129,487	11,646	8.3
London	261,562	13,039	274,601	229,697	44,904	16.4
South East	222,113	2,738	224,851	221,453	3,397	1.5
South West	117,071	1,036	118,107	119,812	-1,705	-1.4
Wales	53,669	1,323	54,992	55,139	-146	-0.3
Scotland	106,433	2,809	109,242	105,208	4,034	3.7
Northern Ireland	32,627	1,149	33,776	32,833	943	2.8

Source: Office for National Statistics

We can see that the households' saving ratio varies considerably across the countries and regions of the UK, with saving in London and the West Midlands being the highest in 2018 at 16.4% and 11.5% respectively. The lowest levels of saving in 2018 were seen in the South West at negative 1.4%, followed by the North East and Wales both at negative 0.3%. These figures compare with a UK average saving ratio of 6.1%.

A negative saving ratio indicates that the residents of the area have spent more money than they have available in that year, reducing the overall balance of savings that they have.

6 . Results for NUTS2 sub-regions

We have compiled estimates for the Nomenclature of Units for Territorial Statistics (NUTS) level 2 sub-regions of the UK, for the years 2009 to 2018, which are consistent with the UK National Accounts, The Blue Book 2019 and regional gross disposable household income (GDHI) published in June 2020.

The full set of results, including its detailed commodity breakdown, can be found in the [dataset](#) published with this article, which you can download as a spreadsheet. Here, we present a summary of the data showing the main items at a high level, to give a flavour of what is available in the full dataset. All the figures are compiled and presented in current market prices, which do not remove the effect of price inflation.

Since there are 41 NUTS2 sub-regions in the UK, it would be impractical to attempt to show them all here. We have therefore chosen to show only a summary of the data available for those NUTS2 sub-regions that are geographically contiguous with combined authorities, Local Enterprise Partnerships (LEPs), and other city and enterprise regions of the UK. Note also that the Greater London Authority (GLA) and the London LEP are geographically identical to the London NUTS1 region (UKI).

Of the NUTS2 sub-regions shown in the following tables, Cumbria (UKD1), Cornwall and Isles of Scilly (UKK3), North Eastern Scotland (UKM5), and Highlands and Islands (UKM6) all have relatively small sample sizes in the Living Costs and Food Survey (LCF) (see Annex A for details). Estimates of national expenditure for these areas should be treated with caution, as they may be unreliable.

Table 6 shows total national expenditure on all goods and services and national expenditure per head of population for the NUTS2 sub-regions of the UK in 2018 as well as the percentage growth in spending per person between 2017 and 2018. For comparison purposes, the overall rate of inflation for this period, as shown by the Consumer Prices Index including owner occupiers' housing costs (CPIH all items), was 2.3%.

Table 6: National expenditure, total and per head, NUTS2 sub-regions, 2018

	Total national expenditure, 2018 (£ million)	National expenditure per head, 2018 (£ pounds)	Growth in national expenditure per head, 2017 to 2018 (%)
United Kingdom	1,354,729	20,392	3.6
UKD1: Cumbria LEP	8,550	17,139	-11.8
UKD3: Greater Manchester Combined Authority	48,489	17,240	0.0
UKD4: Lancashire LEP	26,265	17,530	3.5
UKD6: Cheshire and Warrington LEP	19,730	21,196	1.7
UKD7: Liverpool City Region Combined Authority	27,668	17,833	9.4
UKE1: Humber LEP	17,169	18,420	3.6
UKE3: Sheffield City Region Combined Authority	17,764	21,548	1.9
UKE4: West Yorkshire Combined Authority	38,640	16,654	-0.6
UKF1: Derby, Derbyshire, Nottingham and Nottinghamshire LEP	40,907	18,531	3.4
UKG3: West Midlands Combined Authority	43,331	14,857	6.8
UKK3: Cornwall and Isles of Scilly LEP	11,382	20,031	8.1
UKM5: Aberdeen City Region	10,518	21,507	-1.2
UKM6: Highlands and Islands Enterprise	8,746	18,634	-1.3

Source: Office for National Statistics

In 2018, the highest national expenditure per person of the NUTS2 sub-regions of the UK was in Inner London – West at £40,322, followed by Outer London – South at £27,279; the lowest was in the West Midlands (metropolitan county) at £14,857, followed by Tees Valley and Durham at £16,645.

We can explore what the people in each sub-region of the UK are spending their money on by looking at the broad categories of goods and services. Tables 7 and 8 present these figures on a per person basis for 2018, so we can compare across different areas on a consistent basis.

Table 7: National expenditure per head by COICOP division, NUTS2 sub-regions, 2018

Annual spending in £ pounds per person	01: Food and soft drinks	02: Alcohol, tobacco and narcotics	03: Clothing and footwear	04: Housing	05: Household goods and services	06: Health
United Kingdom	1,592	717	1,015	5,291	986	419
UKD1: Cumbria LEP	1,273	829	736	4,861	645	229
UKD3: Greater Manchester Combined Authority	1,421	829	1,007	3,827	885	320
UKD4: Lancashire LEP	1,493	787	946	3,894	1,004	302
UKD6: Cheshire and Warrington LEP	1,602	791	1,178	5,381	1,012	689
UKD7: Liverpool City Region Combined Authority	1,589	775	1,130	3,595	1,031	357
UKE1: Humber LEP	1,414	692	844	3,698	899	682
UKE3: Sheffield City Region Combined Authority	1,537	671	944	5,472	1,327	463
UKE4: West Yorkshire Combined Authority	1,386	703	1,033	3,553	830	228
UKF1: Derby, Derbyshire, Nottingham and Nottinghamshire LEP	1,644	784	963	3,621	1,123	416
UKG3: West Midlands Combined Authority	1,401	660	793	3,214	750	355
UKK3: Cornwall and Isles of Scilly LEP	1,637	636	754	5,317	1,085	393
UKM5: Aberdeen City Region	1,741	914	1,181	5,079	1,267	379
UKM6: Highlands and Islands Enterprise	1,656	901	707	4,734	863	318

Table 8: National expenditure per head by COICOP division, NUTS2 sub-regions, 2018

Annual spending in £ pounds per person	07: Transport	08: Communication	09: Recreation and culture	10: Education	11: Restaurants and hotels	12: Miscellaneous goods and services
United Kingdom	2,790	321	2,336	401	1,914	2,610
UKD1: Cumbria LEP	1,855	237	3,069	97	1,621	1,686
UKD3: Greater Manchester Combined Authority	2,292	287	2,222	529	1,542	2,079
UKD4: Lancashire LEP	2,550	333	2,037	42	1,857	2,284
UKD6: Cheshire and Warrington LEP	2,710	333	2,344	278	1,860	3,017
UKD7: Liverpool City Region Combined Authority	2,260	317	2,244	41	2,060	2,433
UKE1: Humber LEP	3,131	289	2,660	110	1,783	2,218
UKE3: Sheffield City Region Combined Authority	2,688	315	2,748	336	2,087	2,961
UKE4: West Yorkshire Combined Authority	2,195	284	1,926	100	1,909	2,505
UKF1: Derby, Derbyshire, Nottingham and Nottinghamshire LEP	2,435	312	2,373	448	1,735	2,677
UKG3: West Midlands Combined Authority	2,006	303	1,739	348	1,242	2,047
UKK3: Cornwall and Isles of Scilly LEP	3,034	328	2,104	326	1,654	2,763
UKM5: Aberdeen City Region	3,111	339	2,714	424	1,854	2,504
UKM6: Highlands and Islands Enterprise	3,190	300	2,721	72	1,291	1,879

Source: Office for National Statistics

We have mentioned that having both domestic and national expenditure allows us to estimate the net household spending flows between sub-regions of the UK. Table 9 shows the derivation of these estimates, which are calculated as total domestic expenditure, less spending in the UK by foreign visitors, less total national expenditure, plus spending by UK residents abroad. Positive net spending figures imply that the sub-region is a net exporter of goods and services to the rest of the UK, whereas negative figures imply the sub-region is a net importer of goods and services from the rest of the UK.

Table 9: Derivation of net inter-regional spending flows, NUTS2 sub-regions, 2018

£ million	Total domestic expenditure	Total national expenditure	Foreign visitors' spending in the UK	Spending abroad by UK residents	Net inter-regional spending
United Kingdom	1,338,866	1,354,729	33,468	49,331	0
UKD1: Cumbria LEP	8,600	8,550	152	380	278
UKD3: Greater Manchester Combined Authority	57,272	48,489	1,009	2,252	10,026
UKD4: Lancashire LEP	22,042	26,265	181	982	-3,421
UKD6: Cheshire and Warrington LEP	21,773	19,730	130	930	2,843
UKD7: Liverpool City Region Combined Authority	25,398	27,668	485	1,024	-1,731
UKE1: Humber LEP	13,587	17,169	94	532	-3,144
UKE3: Sheffield City Region Combined Authority	15,420	17,764	251	900	-1,695
UKE4: West Yorkshire Combined Authority	37,524	38,640	405	1,735	214
UKF1: Derby, Derbyshire, Nottingham and Nottinghamshire LEP	33,823	40,907	345	1,468	-5,961
UKG3: West Midlands Combined Authority	46,303	43,331	1,463	1,983	3,493
UKK3: Cornwall and Isles of Scilly LEP	9,739	11,382	248	174	-1,717
UKM5: Aberdeen City Region	8,288	10,518	201	307	-2,124
UKM6: Highlands and Islands Enterprise	7,345	8,746	423	166	-1,658

Source: Office for National Statistics

Having compiled estimates of total household final consumption expenditure by the national concept, we can use these estimates to extend the regional household account from its current end point, gross disposable household income (GDHI), and derive the households' saving ratio for the sub-regions of the UK. The saving ratio is the percentage of total available resources that is left after all spending has occurred (gross saving divided by total resources). Table 10 shows the stages in this derivation, using data for 2018. The transaction codes shown (B.6g to B.8g) correspond to those used in the UK National Accounts.

Table 10: Derivation of households saving ratio, NUTS2 sub-regions, 2018

£ million	Gross disposable household income (B.6g)	Adjustment for change in pension entitlement (D.8)	Total household available resources (TR)	Individual final consumption expenditure (P.31)	Gross saving (B.8g)	Households saving ratio (percentage)
United Kingdom	1,402,367	39,903	1,442,270	1,354,729	87,541	6.1
UKD1: Cumbria LEP	10,185	20	10,205	8,550	1,655	16.2
UKD3: Greater Manchester Combined Authority	49,250	2,475	51,725	48,489	3,236	6.3
UKD4: Lancashire LEP	26,400	513	26,913	26,265	648	2.4
UKD6: Cheshire and Warrington LEP	21,020	107	21,126	19,730	1,397	6.6
UKD7: Liverpool City Region Combined Authority	27,042	892	27,934	27,668	266	1.0
UKE1: Humber LEP	16,060	442	16,502	17,169	-666	-4.0
UKE3: Sheffield City Region Combined Authority	17,888	-90	17,797	17,764	34	0.2
UKE4: West Yorkshire Combined Authority	39,643	1,547	41,190	38,640	2,549	6.2
UKF1: Derby, Derbyshire, Nottingham and Nottinghamshire LEP	38,965	1,158	40,124	40,907	-783	-2.0
UKG3: West Midlands Combined Authority	46,891	2,623	49,514	43,331	6,183	12.5
UKK3: Cornwall and Isles of Scilly LEP	10,550	3	10,553	11,382	-829	-7.9
UKM5: Aberdeen City Region	10,586	307	10,894	10,518	376	3.4
UKM6: Highlands and Islands Enterprise	9,078	116	9,194	8,746	448	4.9

Source: Office for National Statistics

In 2018, the highest households' saving ratio of the NUTS2 sub-regions was in Inner London – West at 24.4%, followed by Inner London – East at 20.4%; the lowest was in Hampshire and Isle of Wight at negative 9.6%, followed by Cornwall and Isles of Scilly at negative 7.9%.

A negative saving ratio indicates that the residents of the area have spent more money than they have available in that year, reducing the overall balance of savings that they have.

7 . Future plans

Owing to the impact of the coronavirus (COVID-19) pandemic, our regional development programme has been delayed, so we are unable to say with any certainty when these [experimental statistics](#) will next be updated. What we can say is that we recognise the importance of these household final consumption expenditure (HFCE) data to users and will endeavour to make further progress as resources and development priorities permit.

To produce estimates for lower-level geographic areas, including local authorities across the UK, we will continue to pursue access to anonymised credit and debit card data that will provide the level of coverage needed to produce reliable results for small areas. Naturally, these data will also improve the quality and reliability of data for larger areas

8 . Annex A: Living Costs and Food Survey sample size

Table 11 shows the achieved sample size (number of households) for each Nomenclature of Units for Territorial Statistics (NUTS) level 2 sub-region of the UK, financial year ending 2010 to financial year ending 2019.

Table 11: Living Costs and Food survey achieved sample size by NUTS2 sub-region

NUTS2 sub-region	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015	2015 to 2016	2016 to 2017	2017 to 2018	2018 to 2019	Average sample
UKC1 Tees Valley and Durham	134	122	148	132	113	128	89	104	106	106	118
UKC2 Northumberland and Tyne and Wear	112	127	134	125	134	117	141	134	108	120	125
UKD1 Cumbria	18	54	52	26	64	56	37	43	46	37	43
UKD3 Greater Manchester	224	210	244	251	216	239	208	233	194	218	224
UKD4 Lancashire	150	127	157	110	140	117	81	89	116	118	121
UKD6 Cheshire	96	72	73	109	54	51	90	109	73	80	81
UKD7 Merseyside	106	120	100	107	144	103	121	96	96	103	110
UKE1 East Yorkshire and Northern Lincolnshire	101	94	92	98	75	63	76	74	79	68	82
UKE2 North Yorkshire	71	70	63	97	67	80	99	72	84	79	78
UKE3 South Yorkshire	134	106	162	141	105	140	119	116	99	119	124
UKE4 West Yorkshire	175	221	187	176	212	196	163	181	176	180	187
UKF1 Derbyshire and Nottinghamshire	187	208	157	145	208	191	182	158	180	166	178
UKF2 Leicestershire, Rutland and Northamptonshire	138	154	212	196	100	151	166	153	142	130	154
UKF3 Lincolnshire	85	67	92	65	103	86	40	59	84	66	75
UKG1 Herefordshire, Worcestershire and Warwickshire	111	131	126	159	146	119	107	130	86	129	124
UKG2 Shropshire and Staffordshire	195	149	155	124	157	135	123	138	111	132	142
UKG3 West Midlands	191	178	249	231	228	205	206	188	192	179	205
UKH1 East Anglia	219	252	235	310	230	206	207	221	239	228	235
UKH2 Bedfordshire and Hertfordshire	181	112	157	130	179	125	161	138	126	138	145
UKH3 Essex	115	134	174	126	84	170	136	100	156	132	133
UKI3 Inner London - West	52	32	80	67	39	50	32	26	38	46	46
UKI4 Inner London - East	79	90	91	132	97	101	116	98	126	110	104
UKI5 Outer London - East and North East	83	138	109	117	133	95	75	110	110	103	107
UKI6 Outer London - South	78	100	79	98	82	65	104	82	72	85	85
UKI7 Outer London - West and North West	116	129	136	84	104	118	114	98	92	90	108
UKJ1 Berkshire, Buckinghamshire and Oxfordshire	186	147	245	208	193	148	150	173	158	179	179
UKJ2 Surrey, East and West Sussex	224	183	209	250	267	368	221	232	195	179	233
UKJ3 Hampshire and Isle of Wight	123	169	125	159	118	132	165	101	148	154	139
UKJ4 Kent	135	179	194	151	99	88	119	104	142	89	130
UKK1 Gloucestershire, Wiltshire and Bath/Bristol area	233	191	186	175	228	241	229	212	220	250	217
UKK2 Dorset and Somerset	92	99	151	156	88	109	95	91	102	113	110

UKK3 Cornwall and Isles of Scilly	71	59	38	33	41	52	44	65	42	36	48
UKK4 Devon	106	122	137	102	79	106	97	124	94	94	106
UKL1 West Wales and The Valleys	142	181	168	144	151	138	124	145	161	142	150
UKL2 East Wales	97	97	70	108	106	84	103	84	97	78	92
UKM5 North Eastern Scotland	50	37	41	31	44	42	37	22	60	73	44
UKM6 Highlands and Islands	13	44	26	16	33	35	9	18	67	82	34
UKM7 Eastern Scotland	228	166	210	199	170	158	162	144	266	315	202
UKM8 West Central Scotland	122	156	147	115	83	110	129	98	201	220	138
UKM9 Southern Scotland	106	70	108	88	82	97	83	78	129	126	97
UKN0 Northern Ireland	499	156	154	167	149	156	156	402	396	383	262

Source: Office for National Statistics