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Regional GVA Inventory for the United Kingdom

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Chapter 1: Summary

Overview of Organisation, Methodology and Sources

1.1 How the compilation of Regional GVA for the UK is organised

1.1.1 Organisation and Responsibilities

Regional and National Accounts for the United Kingdom (UK) are produced by the Office for National Statistics (ONS), which is the National Statistical Institute (NSI) for the UK. ONS is an executive body of the UK Statistics Authority. This is an independent statutory body operating at arm's length from government as a non-ministerial department, directly accountable to the UK Parliament. This structure was introduced on 1 April 2008.

As well as ONS, many other government departments and the three devolved administrations (Scotland, Wales and Northern Ireland), compile and publish statistics. All of these are subject to agreed standards of quality and independence that are monitored by the UK Statistics Authority and collectively they comprise the Government Statistical Service (GSS).

Within ONS, the Regional Accounts branch is a sub-division of the Economic, Labour Market and Social Analysis Directorate. The branch is based at the ONS office in the city of Newport in Wales and currently consists of 10.75 full-time equivalent staff. The sole role of the branch is to compile annual regional GVA and annual regional Gross Domestic Household Income figures. During the compilation process the branch uses data from many other parts of ONS and the GSS. The branch does not collect data itself.

1.1.2 Timetable for Releases and Revisions

Regional GVA is published at NUTS1, NUTS2 and NUTS3 levels. Data are published annually, in December.

Where t is the current calendar year, provisional GVA figures at NUTS1 are published in December of year t covering the calendar year t-1.

At the same time, revised NUTS1 GVA for the period from 1989 to t - 2 inclusive, and NUTS2 GVA and NUTS3 GVA for the period from 1995 to t - 2 inclusive are published (with revisions up to and including t-3). Revisions can on occasions be applied to the whole time series, to reflect changes in methodology or improved data.

See Section 2.1 for more details.

1.2 Overview of the methodology used to compile regional GVA

Note on Terminology

The following definitions apply throughout this document:

- **Indicator** is used to mean a variable measurable at the relevant regional level that is used to assign proportions of the component of GVA at national (UK) level to the regional level, i.e. a divisor.
- A **control** is a national total for an industry or region to which the regional or industrial estimates published by regional account must sum.

Please see Appendix 3 for a glossary of all the terms and acronyms used in this document.

1.2.1 Overview

Regional GVA in the UK is compiled exclusively using a top-down approach and the method of compilation is completely income-based. The income-based approach aggregates all the income earned by resident individual or corporations in the production of goods and services. The income-based approach is the only one currently used by ONS to produce Regional Accounts. The decision to use this approach reflects the quality of available data sources.

The earliest publication of regional GVA following the reference year is made at NUTS1 level, in response to user demand.

1.2.2 Publication

The initial publication of regional GVA estimates at NUTS1 level is made before the balanced UK National Accounts control totals are published and is estimated. These estimates are then revised in the following year's publication.

Table 1 : NUTS areas and their relationship to administrative areas in the UK

NUTS Level	England	Scotland	Wales	Northern Ireland	Total UK
1	Government Office Regions	All Scotland	All Wales	All Northern Ireland	12
2	Counties, or groups of counties	Combinations of council areas	Groups of unitary authorities	All Northern Ireland	37
3	Counties, or groups of unitary authorities	Combinations of council areas	Groups of unitary authorities	Groups of district council areas	133

1.3 Main sources used for the compilation of regional GVA

1.3.1 Components

The main components used in the compilation of income-based GVA in the UK are:

- Compensation of employees – accounts for approx. 60% of total GVA.
- Gross Operating Surplus/Mixed Income - accounts for approx. 37% of total GVA.
- Taxes on production – accounts for approx. 2.4% of total GVA.

Table 2 : Summary of main data sources for indicators used in apportionment

Data Source	Nature of data	Use in Regional Accounts
Annual Survey of Hours and Earnings (ASHE)	Workplace-based sample survey of wages and salaries	Provides an indicator that allocates compensation of employees
Short Term Employees Survey (STES)	Workplace-based sample survey of number of employees	Provides an indicator that allocates compensation of employees
Pay As You Earn income tax data (PAYE)	Administrative data provided by HMRC, the national tax authority	Provides indicators that allocate compensation of employees and gross trading profits of partnerships
Annual Business Inquiry 1 (ABI/1)	Structural business survey; a sample survey of enterprises	Provides an indicator that allocates gross operating surplus and compensation of employees (manufacturing only)
Annual Business Inquiry 2 (ABI/2)	Structural business survey; a sample survey of enterprises	Provides an indicator that allocates mixed income and gross trading profits of other corporations (manufacturing only)
Farm Business Survey (FBS)	Structural business survey of the agricultural sector. A sample survey.	Use to allocate rental income, compensation of employees, mixed income, gross trading profits of partnerships, and holding gains, all in the agricultural sector.
Labour Force Survey (LFS)	A residence-based sample survey answered by employees.	Used to apportion compensation of employee data for industry P by region
Data from Defence Analytical Systems and Advice (DASA)	Administrative data about the number and location of armed forces personnel .	Used to apportion national estimates of forces pay by region and extra regio.
Data from the Department for Energy and Climate Change (DECC)	Administrative data about onshore gas and oil profits.	Used to apportion gross operating surplus.
Self-Assessment income tax data	Administrative data provided by HMRC, the national tax authority. Derived from self-assessment tax returns completed by self-employed sole traders and partners.	Used to generate data about reported profits. This forms an indicator which is used to apportion gross trading profits or partnerships, and mixed income.

For a fuller assessment of the relative contribution of these items, available in a separate spreadsheet, refer to the table Appendix 1.

1.4 Summary of apportionment at the three geographical levels

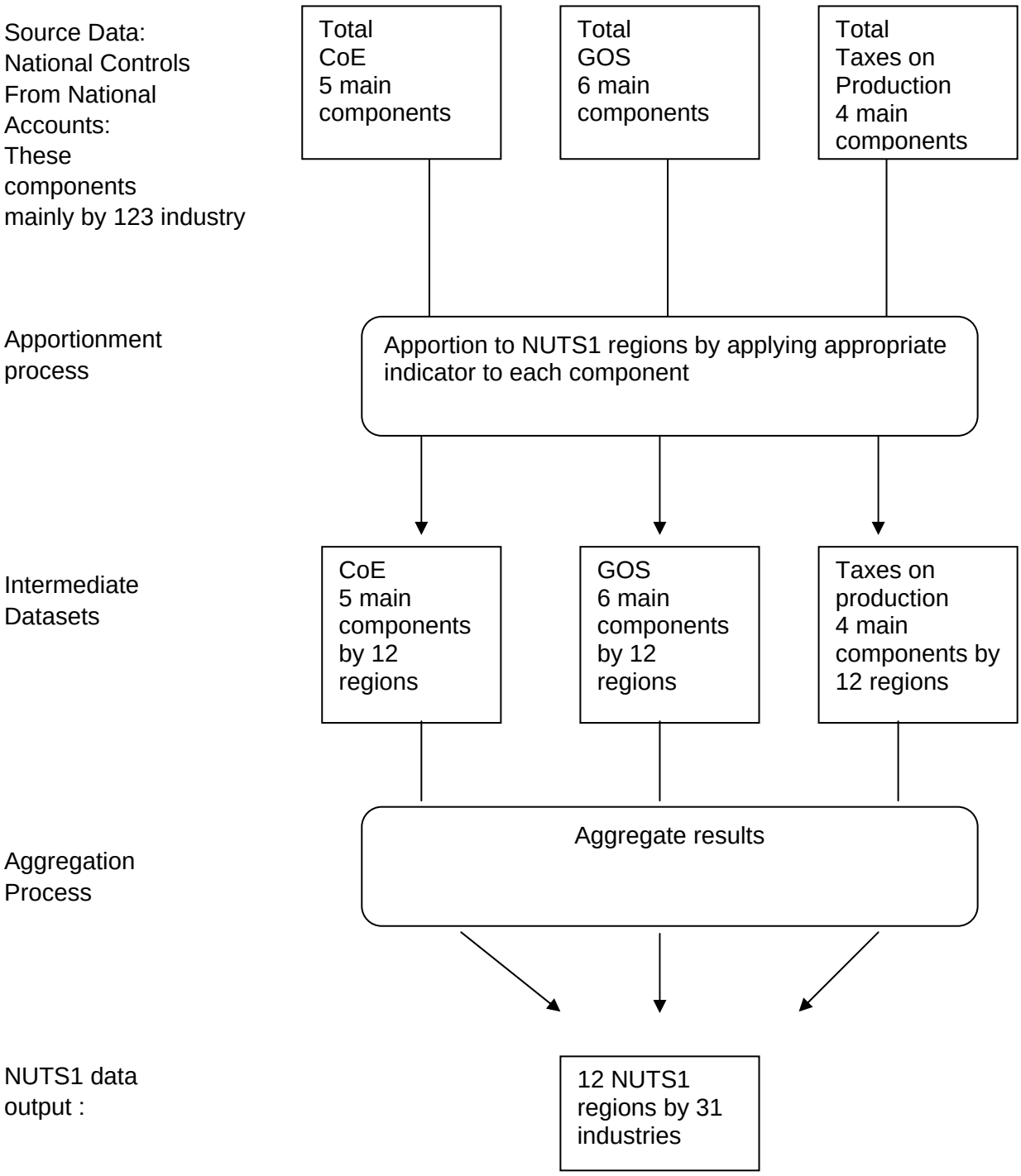
1.4.1 NUTS1 GVA

NUTS1 GVA data are produced on both a residence basis (allocated to where people live) and a workplace basis (allocated to where people work). It is currently assumed that the regions of London, East of England and South-East are the only regions where net commuting has a significant impact.

National aggregates (national control totals) are split and apportioned to NUTS1 regions using appropriate regional 'indicators'. The control totals are consistent with those in the latest published UK National Accounts. They are supplied to Regional Accounts branch by National Accounts ranches in ONS. The source of the national control totals and the methodology by which they are compiled is outside the scope of this document. Figures at NUTS1 level are published on both a workplace base and residence base. Industry totals are obtained from UK Supply and Use tables (except for the latest year).

The methodology used to compile NUTS2 and NUTS3 data generally mirrors the methodology used for NUTS1. Differences occur where data sources are not available below the NUTS1 level, as well as for the industry level at which the data are aggregated. NUTS2 data are constrained to the NUTS1 workplace-based data, and NUTS3 constrained to NUTS2 totals. GVA is not calculated at a level below NUTS3.
The following simplified process maps give an overview of the process that is followed.

Figure 1 : High-level Process Map : NUTS1



1.4.2 NUTS2 GVA

All NUTS2 estimates are workplace-based and published for t-2 at 15 industries, which are detailed at Appendix 2

Workplace-based NUTS1 **compensation of employees** is allocated to NUTS2s based on employment from the Annual Business Inquiry part 1 (ABI/1) multiplied by earnings from the Annual Survey of Hours and Earnings (ASHE). Unlike for NUTS1, ABI/1 can be used instead of STES because it is published for t-2. This does not apply to agriculture (NACE rev1.1 division 01), manufacturing (subsections DA-DN), or staff employed by private households (section P).

Compensation of employees in agriculture is allocated based on survey data supplied by the Department for Food and Rural Affairs (DEFRA) for compensation of employees in that industry. Manufacturing compensation of employees is based on compensation of employees estimates from the Annual Business Inquiry part 2 (ABI/2). Compensation of employees paid to staff employed by private households, which is not covered by ABI/1 or STES because these surveys do not approach private households, is allocated using the average of ABI/1*STES for all other industries. Section P is not published separately at NUTS2 level but is aggregated with subsection O, so this industry has been allocated using separate keys. Similarly, division 01 is aggregated with division 02.

Most components of **gross operating surplus**, except in manufacturing, are allocated to NUTS2 from NUTS1 estimates using compensation of employees as an indicator. The exceptions are mixed income and gross operating profits of partnerships, which are allocated using administrative data from Her Majesty's Revenue and Customs (HMRC) on profits of sole traders and partners respectively. This is regionalised by HMRC based on home address, not on business address. Discussions are currently ongoing with HMRC to move to data based on business address. Manufacturing mixed income is allocated using estimates of gross value added minus compensation of employees from ABI/2. Manufacturing gross trading profits are allocated using wages and salaries from ABI/2.

Taxes less subsidies on production at NUTS2 level are allocated using the compensation of employees estimates. At this level estimates in the survey data are often zero. If all NUTS2 estimates in a NUTS1 region are zero, the estimates cannot be used to prorate the NUTS1 total. In this case, the zeros are replaced with means for that region, across all industries, for the reference year.

1.4.3 NUTS3 GVA

All NUTS3 estimates are workplace-based and published for t-2 at 6 industries, which are detailed at Appendix 2.

NUTS3 **compensation of employees** is allocated from NUTS2 estimates in exactly the same way as the NUTS2 process described above, except that section P is no longer differentiated. Because it is not covered by ABI/1 or ASHE, it is allocated by ABI/1*ASHE for the other subsections in its industry grouping (L, M, N, and O). Note that manufacturing is not published separately, so the estimate for its industry grouping (sections C, D and E) has been estimated using different allocation keys.

NUTS3 **gross operating surplus** is allocated in the same way as for NUTS2, except that the HMRC data are not used for agricultural mixed income and gross trading profits of partnerships; compensation of employees is used instead.

Chapter 2: Publication

Release and publication timetable, revisions policy, and availability to the public

2.1 Timetable for release and publication of provisional and final estimates

Regional GVA are published at NUTS1, NUTS2 and NUTS3 levels. Data are published once a year, in December. Where t is the current calendar year, provisional GVA figures at NUTS1 are published in December of year t covering the calendar year t -1. At the same time, revised NUTS1 GVA for the period from 1989 to t - 2 inclusive, and NUTS2 GVA and NUTS3 GVA for the period from 1995 to t - 2 inclusive are published. The following table illustrates this principle, using publication in the years from 2007 to 2009 as an example:

Table 3 : Reference years of regional GVA data published each December

	Published in December 2007	**Published in December 2008**	**Published in December 2009**
NUTS1	NUTS1 GVA first release: estimates for reference year 2006	NUTS1 GVA first release: estimates for reference year 2007	NUTS1 GVA first release: estimates for reference year 2008
	Revised NUTS1 GVA estimates for the reference years 1989 to 2005 inclusive	Revised NUTS1 GVA estimates for the reference years 1989 to 2006 inclusive	Revised NUTS1 GVA estimates for the reference years 1989 to 2007 inclusive
NUTS2	NUTS2 GVA estimates for the reference years 1995 to 2005 inclusive	NUTS2 GVA estimates for the reference years 1995 to 2006 inclusive	NUTS2 GVA estimates for the reference years 1995 to 2007 inclusive
NUTS3	NUTS3 GVA estimates for the reference years 1995 to 2005 inclusive	NUTS3 GVA estimates for the reference years 1995 to 2006 inclusive	NUTS3 GVA estimates for the reference years 1995 to 2007 inclusive

GVA at NUTS2 and NUTS3 levels is not available for years before 1995, because of a discontinuity following a change in methodology from ESA 79 to ESA 95. See section 2.3 below.

2.2 Policy on benchmark revisions

In this context 'benchmark revision' is taken to mean occasional major or comprehensive revisions when a new methodology or new data source is introduced.
Revisions result from three main sources: revisions of the National Accounts control totals, improvements in the regional indicator data and NUTS region border changes .
National revisions are reflected in the regional GVA. As regional GVA is calculated top down, revision of the national control totals results in reapportionment to the regions.
Geographic revisions result in the populations and industries of the regions changing. Such changes are reflected in the compilation of regional GVA.

National data are allocated to regions using appropriate indicators drawn from a wide variety of survey and administrative sources. The main datasets used are Her Majesty's Revenue and Customs (HMRC) pay-as-you-earn (PAYE) and self-assessment tax data, as well as ONS surveys: the Annual Business Inquiry (ABI) (parts 1 and 2), the Short-Term Employment Survey (STES) and the Annual Survey of Hours and Earnings (ASHE) earnings data. These are subject to changes of methodology or procedures. These changes will lead to revision of Regional GVA. If national totals, boundaries, or source data change, revisions will apply to the whole time series.

Use of the statistical technique of 'benchmarking' meaning ***post-survey weighting or stratification of data*** is discussed in section 3.1.2.

2.3 Comparability over time

The current datasets are calculated using methodology prescribed in The European System of Accounts 1995 (ESA95). The NUTS1 dataset runs from 1989-2007 and the NUTS2 and NUTS3 datasets run from 1995-2006. A previously published dataset using ESA79 methodology was last published in 1998 and runs from 1970-1996. This uses an obsolete geography, Standard Statistical Regions and is not available at NUTS1. These data cannot be used with the latest dataset to create a time series, because of differences in the ESA 79 and ESA 95 methodology and in the geographical boundaries used and the use of an earlier NACE classification, rather than rev1 or rev1.1.

2.4 Transmission to international institutions other than Eurostat

ONS does not make any special transmissions to international institutions other than Eurostat.

2.5 Availability to the public

Regional GVA data are published at the following level of breakdown:

- 13 NUTS1 regions (including extra regio) by 31 industries;
- 37 NUTS2 sub-regions by 15 industries (equates to 17 industries, but in two cases small industries are combined);
- 133 NUTS3 local areas by 6 industries

The first publication of data for reference year t – 1 (provisional estimates) includes no industrial breakdown. In the following list, 'headline' refers to data that have been subject to a smoothing process; 'unsmoothed' refers to raw data that have not been subject to this process.

2.6 Catalogue of published regional GVA data tables

2.6.1 NUTS1

- GVA at current basic prices by region: residence-based (headline and unsmoothed);
- GVA at current basic prices by region: residence-based : by 15 industries (headline and unsmoothed);
- GVA by component of income at current basic prices by region (headline and unsmoothed);
- GVA by (31) industry groups, current basic prices by region (headline and unsmoothed);
- Workplace based GVA at current basic prices by region (headline and unsmoothed);

2.6.2 NUTS2

- GVA by NUTS2 area at current basic prices by region (headline and unsmoothed);
- GVA per head by NUTS2 area at current basic prices by region (headline and unsmoothed);
- GVA per head indices by NUTS2 area at current basic prices by region (headline and unsmoothed);
- Compensation of employees (CoE) by NUTS2 area at current basic prices by region (headline and unsmoothed);
- GVA by NUTS2 area and 15 industries at current basic prices by region (headline and unsmoothed);
- CoE by NUTS2 area and 15 industries at current basic prices by region (headline and unsmoothed);

2.6.3 NUTS3

- GVA by NUTS3 area at current basic prices by region (headline and constrained to headline NUTS2);
- GVA per head by NUTS3 area at current basic prices by region (headline and constrained to headline NUTS2);
- GVA per head indices by NUTS3 area at current basic prices by region (headline and constrained to headline NUTS2);
- GVA by NUTS3 area at current basic prices by region (headline and constrained to unsmoothed NUTS2);
- GVA per head by NUTS3 area at current basic prices by region (headline and constrained to unsmoothed NUTS2);
- GVA per head indices by NUTS3 area at current basic prices by region (headline and constrained to unsmoothed NUTS2).

'Headline' means that the data have been smoothed using a 5 year moving average. We recommend using the headline figures. This smoothing process is described at section 3.1.1.7

The data are published annually as an ONS first release.
The annual tables can be viewed or downloaded from the National Statistics website:
http://www.statistics.gov.uk/statbase/Product.asp?vlnk=14650
A Time Series Data Service can be accessed at: http://www.statistics.gov.uk/timeseries

2.6 Policy on metadata

No official international standard is used to describe metadata. Publications are accompanied by explanations and definitions of concepts used. Definitions and concepts used are consistent with those in UK National Accounts.

Chapter 3: Methodology: Principles applicable to all industries

Details of the methodology used to compile regional GVA

3.1 General Overview

3.1.1 Key points

- Regional GVA in the UK is compiled exclusively using a top-down approach;
- The method of compilation is completely income-based;
- The earliest publication of regional GVA following the reference year is made at NUTS1 level, in response to user demand.
- NUTS1 estimates are published at A31 industry level.
- NUTS2 estimates are at A15 industry level. This represents A17 level, with industries 01 (agriculture) and 02 (forestry) aggregated and industries O (other service activities) and P (persons employed by private households) aggregated.
- NUTS3 estimates are published at A6 industry level. See Appendix 2 for a list of industry groups.

3.1.2 The top-down approach

National aggregates (National Control totals) are split and allocated to NUTS1 regions using appropriate regional indicators. The control totals are consistent with those in the latest published UK National Accounts. They are supplied to Regional Accounts branch by National Accounts branches in ONS. Figures at NUTS1 level are published on both a workplace base and residence base. Industry totals are obtained from UK Supply and Use tables (except for the latest years).

The initial publication of regional GVA estimates at NUTS1 level is made before the UK National Control totals are published and is estimated. These estimates are then revised in the following year's publication. The national aggregates are split and re-allocated to regions using the most appropriate regional indicator available (see below). The national total is allocated to the NUTS1 regions, then NUTS1 totals are split and re-allocated to NUTS2 sub-regions, and finally NUTS2 totals are split and re-allocated to the NUTS3 local areas.

The UK Regional GVA estimates are constrained to the latest published UK 'Blue Book' totals. The 'Blue Book' is the name given to the annual publication of United Kingdom National Accounts by ONS.

3.1.3 Income-based compilation methodology

The income-based approach is the only one currently used by ONS to produce Regional Accounts. The decision to use this approach reflects the quality of available data sources. The income-based approach aggregates all the income earned by resident individual or corporations in the production of goods and services.

3.1.4 Industries and Supply and Use controls

The components of regional GVA that have been calculated are constrained to UK supply and use controls. These are supplied for the UK for 123 industries. These are collapsed to 31 NACE Rev 1.1 industries at which NUTS1 regional GVA is published.

3.1.5 Component Estimates

Estimates are published for compensation of employees and gross operating surplus at NUTS1 level and for compensation of employees at NUTS2 level. No estimates are published for intermediate consumption.

3.1.6 Analysis Process and Peer Review

Input datasets are compared to the data received for each variable in previous years. Large fluctuations against previous year are investigated using regional economic intelligence compiled within the branch supplemented by information received from ONS statisticians in the nine English regions and with government statisticians in the three devolved countries. Following this investigative procedure, any anomalous data that remain unexplained are followed up with the relevant data providers for clarification where resources are available. Regional Accounts branch then make adjustments to the source datasets where necessary. These are discussed with the ONS statisticians in the regions and devolved countries. The regional knowledge of these statisticians can help to explain or contest deviations from trend within their particular regions.

Output datasets are also subject to a rigorous quality assurance process, including looking at growth and shares, graphical depictions and comparisons with previous data. Output data, at NUTS1, 2 and 3 levels are also sent for peer review to the nine ONS regional statisticians and government statisticians in the devolved countries. Any queries received from the statisticians are investigated and rectified where necessary.

3.1.7 Smoothing output data using a five year moving average

Output data are smoothed using a 5 year moving average. The resulting figures are known as ‘headline’ figures, and are published as well as the ‘raw’ (i.e. unsmoothed) data. Data are smoothed because sampling error is unavoidable in the survey inputs (and in the 1% PAYE samples) and the five year average helps to mitigate this, as sampling error is unlikely to persist over time. This will be especially true for smaller regions and industries. Further, data for the last published year are provisional and are partly based on projections, so averaging them with previous years should increase reliability.

The average is weighted as follows:

- For t -1, only that year and the preceding 2 are used, and the weights are 11/27 for t – 1 and t – 2 and 5/27 for t – 3.
- For t – 2, only 4 years are used and the weights are 7/27, 10/27, 7/27, and 3/27 for t – 1, t – 2, t – 3 and t – 4 respectively.

- For all other years the average really is 5 point, and the weights are 3/27, 6/27, 9/27, 6/27 and 3/27 from latest year to earliest, with the smoothed year as the central point.

3.1.8 Available sources used for the compilation of regional GVA

The main components used in the compilation of income-based GVA in the UK are:

- Compensation of employees
- Gross operating surplus
- Taxes on production (less subsidies)

3.2 Compensation of Employees (CoE)

3.2.1 Overview

This is the largest single component of GVA at basic prices (*circa* 60% of total) and is calculated regionally in two parts:

- compensation of employees (CoE) of civilian employees
- and CoE of UK armed forces.

3.2.2 Civilian wages and salaries by region and industry

CoE for the majority of civilian industries except manufacturing industries is apportioned to the regions using a regional indicator obtained by multiplying numbers of employees by average earnings on an industry by industry basis.

Hours and earnings data from ASHE (for males, females, full-time, part-time) by industry and region are smoothed (see below). The smoothed ASHE dataset is then multiplied by STES dataset (by males, females, part-time, full-time) to produce four datasets for unconstrained values for wages and salaries.
The two full-time datasets are summed; and the two part-time datasets summed and adjusted by multiplying by 0.8. These two summed datasets are then added together to give the “Adjusted total employment” dataset. All four ASHE * STES datasets are summed to produce the “Total unconstrained wages and salaries” dataset. This is subject to adjustments for the London Region and for strikes

After adjustment, ABI wages and salaries data for manufacturing industries (DA to DN) are inserted into the original series to produce the “Wages and salaries for civilian workers by region and industry adjusted for strikes with ABI substitution” dataset.

3.2.3 Smoothing the ASHE input data

The following smoothing process is applied to input data from the ASHE survey. The system identifies which estimates of average earnings require smoothing by examining the percentage standard error values and the number of observations, in the following manner.

At NUTS1, outliers are identified using graphical analysis and quality adjustments are assigned where necessary. The Regional Accounts SAS production system applies an automatic adjustment where the coefficient of variation is > 15 and/or the sample size is <10. This adjustment is made in the following way :-

For each region/industry combination a standard error is calculated for the last three data years, on a percentage basis. This is set to 90% if there have been two or fewer observations in the last three years. Then the adjustment is made. This is done by applying a weighted sum of two variables:

The first variable is calculated by taking the 3-year average of the regional ASHE estimate for the industry as a ratio of the national estimate for that industry and multiplying this ratio by the national estimate for the same industry for the current year. The second variable is derived from a ratio of the latest national estimate for the industry to the estimate for all industries, multiplied by the latest regional estimate across all industries.

The weights are determined by the standard error. The higher the standard error, the higher the weight on the second variable. Figures that are not selected for smoothing are not automatically accepted. We may on occasions apply quality adjustments to data that do not fall within the smoothing criteria. Note that this procedure is distinct from the smoothing of output data referred to in section 3.1.7.

3.2.4 The London Region adjustment

This adjustment converts the workplace-based wages and salaries estimates (ASHE*STES) to a residence basis. This is done by pro-rating the London, South East and East of England NUTS 1 regions PAYE total, (as received from the tax authority HMRC) by ASHE*STES wages and salaries.

3.2.5 Adjustment for strikes

Before ASHE*STES wages and salaries calculated can be used they need to be adjusted to account for time when workers were on strike and not paid. ABI data for manufacturing industries (DA to DN) already allow for strikes.

The proportion of working days lost by strikes (by region and industry) is used to calculate the wages and salaries lost through strikes. This is subtracted from the “Total unconstrained wages and salaries (after the London region adjustment) to produce “Wages and salaries adjusted for strikes”.

To produce **NUTS2** level estimates of CoE, NUTS1 estimates are apportioned to NUTS2 level using the Farm Business Survey, ABI/2, and ASHE * ABI/1 as indicators.

To produce **NUTS3** level estimates of CoE, NUTS1 or NUTS2 estimates are apportioned to NUTS3 level using the Farm Business Survey, ABI/2, and ASHE * ABI/1 as indicators.

‘ASHE’ and ‘STES’ are defined below in Chapter 4.

Table 4 : COMPENSATION OF EMPLOYEES
Main sources of indicators used to apportion national totals to NUTS1 regions

Main Component	Source of Indicator used to apportion national controls to NUTS1 regions	Nature of each source
Industry 01 : wages and salaries on farms	Farm Business Surveys for England, Scotland, Northern Ireland and Wales. Data for the UK are collated and supplied to ONS by Department for Environment, Food and rural Affairs (DEFRA).	Farm-based sample surveys. Workplace-based.
Industries DA-DN : wages and salaries in manufacturing	Annual Business Inquiry financial data (ABI/2)	Structural business survey. Workplace-based.
Industry P : wages of employees of private households	Labour Force Survey (LFS)	Survey of employees. Residence- based
Wages and salaries of armed forces (part of industry L)	DASA.	Numbers and location of armed forces personnel Administrative data. Both workplace and residence- based
Pay in all other industries	ASHE and STES	A combination of data from two sample surveys of employers. Earnings per worker by industry. Workplace-based.

3.3 Gross Operating Surplus (GOS)

3.3.1 Defintion

Gross operating surplus is the sum of:

- ***Income from self-employment (known as 'mixed income'***); this applies to sole traders.
- ***Gross trading profits (GTP)***; this applies to self-employed partnerships, and to market corporations.
- ***Gross trading surpluses (GTS)***; this applies to non-market entities.
- ***Non-market capital consumption (NMCC)***; this applies to non-market corporations.
- ***Rental income***; this applies to households, financial corporations, local authorities, central government, and non-profit institutions serving households (NPISH).

From these are subtracted holding gains, and financial intermediation indirectly measured (known as 'FISIM'). National (UK level) totals are allocated to the regions using a number of data sources that are used to develop 'indicators' (i.e. regional divisors) that regionalise the national totals.

Some GVA is assigned to extra regio, this is value added that cannot be attributed to a specific region of the UK. This is largely made up of UK armed forces and diplomatic personnel stationed abroad and offshore oil and gas extraction. This is described in section 5.3.

The main data sources for these indicators are summarised in the table below (Table 5). The following paragraphs describe how each of these components of GoS is calculated at NUTS1.

3.3.2 Mixed income

This consists of income from self-employment, and applies to sole traders only.

Method: National mixed income estimates for the UK by 123 industries are collapsed to 31 industries. These are then split into 3 datasets:

- agriculture (industry A01);
- manufacturing (industries DA-DN) ;
- all other industries (industries A02, B, CA, CB and E-P).

Mixed income for agriculture is added to mixed income for the farming activities of non-farmers and mixed income for the non-farming activities of farmers. This provides an agricultural indicator by region that is used to prorate the national mixed income for A01.

The national data are further collapsed to give a manufacturing industry total (Industry D). Manufacturing mixed income is calculated using a 2-way prorating process. The regional indicators are the HMRC self-assessment totals. The "industry" (actually subsection, e.g. DA, DN) controls are the I-O totals.

Mixed Income for other 16 industries (A02, B, CA, CB and E-P) is calculated as follows. Estimates of sole traders' income by industry and region (from HMRC) are converted to percentages of the UK total to provide an indicator for sole traders by region and industry. This 16 industry national extract is prorated by the HMRC data to provide mixed income for these 16 industries by region.

Mixed income for the various industries is added to give mixed income by 31 industries and region. This is aggregated to give an all industry total mixed income by region.

3.3.3 Gross trading profits (GTP) of partnerships

This consists of the income of self-employed (unincorporated) partnerships.

Method: National GTP Income estimates by 123 industries are collapsed to 31 industries. This is then split into 3 datasets:

- agriculture (industry A01);
- manufacturing (industries DA-DN) ;
- other industries (industries A02, B, CA, CB and E-P).

GTP for agriculture is added to GTP for the farming activities of non-farmers, and mixed income for the non-farming activities of farmers. This provides an agricultural indicator by region that is used to prorate the I-O GTP for industry A01.

The national data are further collapsed to give a manufacturing industry total (Industry D). Manufacturing GTP is calculated using a 2-way prorating process. The regional indicators are the HMRC self-assessment totals. The “industry” (actually subsection, e.g. DA, DN) controls are the national totals. What’s being prorated is ABI/2 GVA minus CoE.

GTP for other 16 industries (A02, B, CA, CB and E-P) is calculated as follows. Estimates of partnerships’ GTP by industry and region (from HMRC) are converted to percentages of the UK total to provide an indicator for sole traders by region and industry. This 16 industry national extract is prorated by the HMRC data to provide GTP for these 16 industries by region.

GTP for the various industries is added to give GTP of partnerships by 31 industries and region. This is aggregated to give an all industry total GTP by region.

3.3.4 GTP of other corporations (GTPOC)

This consists of the gross trading profits of corporations. This includes ‘partnerships’ which are in law incorporated as limited companies.

Method: National GTP profit estimates by 123 industries are collapsed to 30 industries, after the extraction of groups 4 and 5. This is then split into 3 datasets:

- agriculture (industry A01);
- industries CA and DA-DN ;
- other industries (industries A02, B, CB and E-P).

GTPOC for agriculture from national controls is prorated by agricultural CoE that has already been calculated as part of the process to produce CoE estimates.

GTPOC for industries DA-DN is prorated using ABI/2 estimates of profits.

GTPOC for industry CA is split into extra regio and non-extra regio using a census of oil operators form DECC. Onshore industry CA is regionalised using ASHE*STES wages and salaries.

GTPOC for other industries (A02, B, CB and E-P) is prorated using wages and salaries from ASHE*STES.

GTPOC for the various industries is added to give GTP of other corporations by 31 industries and region. This is aggregated to give an all industry total GTP by region.

3.3.5 Gross trading surplus of non-market entities

This consists of the trading surpluses earned by local authorities, central government, and other non-market public bodies and non-profit institutions serving households (NPISH), such as charities. In this context the term ‘surplus’ is used instead of ‘profit’.

Method:

- GTS of local authorities is calculated using the national local authority GTS estimates, prorated by GTP of other corporations by region less extra regio;
- GTS of central government is calculated using the national local authority GTS estimates, prorated by GTP of other corporations by region less extra regio;
- GTS of public corporations is calculated using the national local authority GTS estimates, prorated by GTP of other corporations by region less extra regio.

The GTS figure for local authorities and central government has been 0 for several years.

3.3.6 Non-market capital consumption (NMCC)

This refers to non-market bodies in local and central government and non-profit institutions serving households (NPISH). They do not generate a profit, but do consume capital, i.e. depreciation occurs. NMCC must be added in as GTS figures are supplied net of depreciation. In the UK Regional Accounts it is only applicable to industries J, K, L, M, N and O.

Method: UK level controls are split into three sectors: central government, local government, and NPISH. These are regionalised using the following indicators: number of government employees (civil servants); number of hospital beds; expenditure on university premises; local authority employment in education; expenditure on roads; local authority expenditure by region.

Rental income
This is income from the use of buildings. A notional rental income is imputed for domestic owner-occupiers.

Method:

- Rental Income of financial corporations: regionalised by business rates.
- Rental income of non-financial corporations: this refers to industry 01 only. Estimates by region are received from DEFRA and are used to prorate the UK-level control total.
- Rental income of households and NPISH: prorated according to estimated value of dwelling stock.
- Rental income of local authorities: prorated according to administrative from the housing revenue account;
- Rental income of central government: prorated according to estimates of Crown Estate land in each NUTS 1 region.

3.3.7 Holding gains

These are profits or losses made because of rises or falls in the value of inventories.
Method: Holding gains national controls by 123 industries are collapsed to 31 industries. Agriculture (01) is prorated according to agricultural stock appreciation by region supplied by DEFRA. Industries DA to DN are prorated according to GVA from ABI/2. Other industries are prorated by the GTP and surplus regional total.

3.3.8 Subsidies

These are subsidies paid to the private sector by government

Method: Holding gains national controls by 123 industries are collapsed to 31 industries. This is prorated to regions using raw regional GVA.

Table 5 : GROSS OPERATING SURPLUS / MIXED INCOME
Main sources of indicators used to apportion national totals to NUTS1 regions

Main Component	Source of Indicator used to apportion national controls to NUTS1 regions	Nature of each source
Mixed income. (Excludes industries 01 and DA-DN).	Self-assessment tax returns. Supplied by the UK tax authorities, Her Majesty's Revenue and Customs (HMRC).	A full census of returns. Administrative data.
GTP of self-employed partnerships. (Excludes industries 01 and DA-DN).	Self-assessment tax returns. Supplied by the UK tax authorities, Her Majesty's Revenue and Customs (HMRC).	A full census of returns. Administrative data.
GTPOC (Excludes industries 01 and DA-DN).	ASHE and STES wages and salaries data.	From workplace-based sample surveys of employers.
GOS for industry 01	Farm Business Surveys for England, Scotland, Northern Ireland and Wales. Data for the UK are collated and supplied to ONS by Department for Environment, Food and Rural Affairs (DEFRA).	Farm-based sample surveys. Workplace-based
GOS in manufacturing Industries DA-DN	Annual Business Inquiry 2 data (ABI/2)	Structural business survey. Workplace-based.
Rental income of corporations. (Excludes industries 01 and DA-DN).	DCLG (England), Welsh Assembly (Wales), Scottish Executive (Scotland), NISRA (NI)	Business rates. A local tax on businesses levied by municipalities. Administrative data.
Rental income of households, including imputed rental income for owner-occupiers. (Excludes industries 01 and DA-DN).	Estimated dwelling stock value. DCLG.	A multiple of measures of dwelling stock by regional house prices. Administrative and survey data from a number of sources.
Holding gains. (Excludes industries 01 and DA-DN).	Self-assessment tax returns. Supplied by the UK tax authorities, Her Majesty's Revenue and Customs (HMRC); and ASHE and STES wages and salaries data..	A full census of returns. Administrative data.

3.3.9 Lower geographical levels

To produce **NUTS2** level estimates of GOS, NUTS1 estimates are apportioned to NUTS2 level using compensation of employees as indicators.

To produce **NUTS3** level estimates of GOS, NUTS2 estimates are apportioned to NUTS3 level mainly using compensation of employees as indicators

3.4 Taxes on Production

3.4.1 definition

Taxes on production and imports consist of compulsory, unrequited payments, in cash or in kind which are levied by general government, or by the institutions of the European Union, in respect of the production and importation of goods and services, the employment of labour, the ownership or use of land, buildings or other assets used in production. These taxes are payable whether or not profits are made.
(Source: ESA 95, Section D2)

Examples are national non-domestic rates, motor vehicle duty relating to vehicles used in production and taxes paid to regulatory bodies. The majority of tax data are allocated to regions and industries using numbers of employees as an indicator. Some regional administrative data are used such as national non-domestic rates and numbers of vehicles.

'Taxes on production' is the sum of:

- ***National non-domestic rates accrued receipts (NNDR*):** consists of the total amount paid in tax in Great Britain (GB) by business for owning commercial property.
- ***Northern Ireland business rates:*** Applicable only to Northern Ireland. A tax payable by businesses for owning a commercial property.
- ***Motor Vehicle Duty:*** The total amount of vehicle tax received by the Driver and Vehicle Licensing Agency (DVLA) for vehicles used in production. It is assumed that all vehicles are used solely for production purposes except private cars and light goods vehicles.
- ***Fees to industry regulatory bodies:*** Total receipts from taxes levied on companies in the energy industries, and water and drainage providers, to fund their respective industry regulatory bodies.
- ***Consumer credit fees:*** The Office for Fair Trading regulates consumer credit and hire purchase agreements and requires organisations offering such a service to own a license.

For revisions to time series only:

- ***Company registration surplus fees:*** Company registration fees that all companies, including public corporations, are required to pay and Company Registration Surplus fees are the part of those fees that funds policy work. Introduced into National Accounts in 1986/9 and removed 1996.

The following paragraphs describe apportionment at NUTS1 level.

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3.4.2 National non-domestic rates accrued receipts (NNDR)

Method:
NNDR for GB for 123 industry groups are collapsed to 31 industries. These are prorated by NNDR received by GB regions to give GB NNDR by region and industry. Estimates are supplied by the Department for Communities of the total amount of NNDR received by government for the English regions. Figures for Scotland and Wales are supplied separately.
The business rate for NI by 123 industry groups is collapsed to 31 industries. GB and NI figures are combined to give all business rates by UK region and industry.

Figures not supplied for years before 1991 and so proportions are back-cast.

3.4.3 Apportionment of motor vehicle duty (MVD)

Method: The value of MVD by vehicle type is prorated with the numbers of vehicles by type and region to produce MVD paid by vehicle type and region. The adjustment is made for proportion of vehicle types used in production (see above). Vehicle types can then be aggregated to give total MVD paid for vehicles used in production by region. MVD by 123 IO industry groups is collapsed to 31 industries and prorated by total MVD paid by region to produce MVD by 31 industries and region.

3.4.4 Fees and levies paid to regulatory bodies

Method: Fees paid to regulatory bodies use employment numbers to apportion to regions. The method is the same for all regulatory bodies. Activities involved are: broadcasting, water, energy, telecommunications, and credit. Fees or levies paid by 123 industry groups are collapsed to 31 industries. This is prorated by employment figures for the activity regulated by region to give the amount paid by 31 industries and regions.
Employment figures are used by region to prorate the following industries: electricity (NACE Rev 1.1 40.1), gas (40.2) water (41), telecommunications (64.2), finance (62).

3.4.5 Company registration fees

Method: Fees paid, by 123 industry groups, are collapsed to 31 industries. This is prorated by the number of companies by region (from the UK Inter-departmental Business Register (IDBR)).

Consumer credit fees
Method: Fees paid, by 123 industry groups, are collapsed to 31 industries. This is prorated according to employment in the industry.

3.4.6 Calculation of total taxes on production

The total business rates, MVD and the various fees and levies to regulatory bodies, by region and industry are then aggregated.
This gives the total taxes on production by region and industry

Table 6 : TAXES ON PRODUCTION (LESS SUBSIDIES)
Main sources of indicators used to apportion national totals to NUTS1 regions

Main Component	Source of Indicator used to apportion national controls to NUTS1 regions	Nature of each source
Business rates (Great Britain)	DCLG (England), Welsh Assembly (Wales), Scottish Executive (Scotland), NISRA (NI)	'National Non-domestic Rates' (NNDR) accrued receipts . A local property tax on businesses. Collected by municipalities. Does not apply to Northern Ireland. Administrative data.
Old-style rates (Northern Ireland)	DCLG (England), Welsh Assembly (Wales), Scottish Executive (Scotland), NISRA (NI)	Old-style rates in northern Ireland, applied to businesses. Accrued receipts.A local property tax on businesses. Collected by municipalities in Northern Ireland only. Does not apply to manufacturing industries. Administrative data.
Regulatory fees. This item measures total receipts from taxes paid by levied on companies operating in the relevant industries to fund their respective regulatory bodies.	ABI/1. Regional employees in the industry to which the fees apply.	Structural business survey. Workplace-based.
Vehicle Excise Duty (a tax on all vehicles)	DVLA	Administrative data from vehicle licensing authority. Number of vehicles registered in each region that is used in production.
Company Registration Surplus (1986 – 1996 only)	Company registration authority	Number of companies registered in each region. Administrative data.
Office of Fair Trading consumer Credit fees and fines. Organisations offering consumer credit must pay a license fee.	ABI/1. Employment in finance by region	Structural business survey. Workplace-based.

3.4.7 Lower geographical levels

To produce **NUTS2** level estimates of taxes on production net of subsidies, NUTS1 estimates are apportioned to NUTS2 level using compensation of employees as indicators.

To produce **NUTS3** level estimates of taxes on production net of subsidies, NUTS2 estimates are apportioned to NUTS3 level mainly using compensation of employees as indicators.

Chapter 4: Detailed description of sources of indicators used for apportionment

Descriptions follow of main sources available to Regional Accounts for indicators to apportion regional GVA.

Specific information relating to individual **industries** is listed in section 3.2.

4.1 Annual Survey of Hours and Earnings (ASHE)

This is a workplace-based sample survey of wages and salaries.

Availability of information to Regional Accounts:

- The questionnaire is available with each publication.
- The survey design is constant and available.
- The sample size is available.
- A standard quality report dated April 2008 is available.
- An explanation of methodological issues is available, published by the ASHE unit. It covers issues such as non-response, corrections (revisions), and so on. It dates from 2004.
- Information on confidence intervals is not directly available. Instead, coefficients of variation are provided along with the sample size.
- No information is available on deviations in the micro-data.
- Brief discussions of regional results usually appear in the first release. Other results, such as gender, are much more thoroughly discussed.

4.2 Short-term Employees Survey (STES)

This is a workplace-based sample survey which collects information about the number of jobs.

Availability of information to Regional Accounts:

- The questions in the surveys are not available.
- The sample design is constant and available.
- The sample size is relatively constant. However, sample sizes are not available year-on-year.
- Standard quality reports are not available.
- No information is available on deviations in the micro-data or confidence intervals.
- Description of regional results is extensive, because it makes up part of a separate ONS publication.
- Non-response is addressed using administrative data from the IDBR.

4.3 Annual Business Inquiry (ABI)

ABI is a structural business survey (SBS), collecting information about enterprises.
It is a sample survey. It consists of two parts:

- **ABI/1** collects information about the number of employees. It is being replaced by a new survey, the Business Register and Employment Survey (BRES) in 2009.
- **ABI/2** collects financial information. It is being re-named Annual Business Survey (ABS) in 2009.

Availability of information about ABI/1 and ABI/2 to Regional Accounts:

- The questions in the surveys are not available. Smaller enterprises receive shorter forms, and the forms also vary by industry.
- The sample design is constant and available.
- The sample size is relatively constant. However, sample sizes are not available year-on-year.
- A standard quality report is available. It is dated March 2009.
- Confidence intervals are not directly published. However, coefficients of variation are published.
- For employees, non-response is only addressed for non-respondents with employees of 100 or more. In these cases, estimates are produced by extrapolation – applying past growth rates to the latest figures. Very large non-respondents may be estimated by "manual construction" – through detailed study of the specific enterprise.
- For financial information, non-respondents are estimated by respondents of a similar size within the same industry and region.
- Deviations in the micro-data are identified and removed from the main dataset. Information is available.

4.4 Labour Force Survey (LFS)

The LFS is a residence-based sample survey answered by employees.

Availability of information to Regional Accounts:

- The questions in the survey vary from year to year; some questions are "non-core" and not asked every year, although this should not apply to questions relevant to Regional Accounts. They are available.
- The sample design is constant and available.
- Sample sizes are available.
- A standard quality report is available. It is dated April 2008.
- 95% confidence intervals are published.
- No information on micro-data is available to Regional Accounts.

4.5 Farm Business Survey (FBS)

This is a workplace based sample survey of the agricultural sector

Availability of information to Regional Accounts:

- The returns used are available.
- The sample design is available.
- Sample sizes are available.
- Standard quality reports are not available.
- Confidence intervals and coefficients of variation are not published.
- No information on micro-data is available except by specific request.

4.6 Income tax (PAYE) administrative data

Employees' income tax is deducted from their pay by their employers' wages departments and submitted to the tax authority (HMRC) under a system known as 'Pay As You Earn' (PAYE). Anonymised wages and salaries data from a 1% sample of PAYE records are supplied to ONS.

Availability of information to Regional Accounts:

- The PAYE forms sent to employers are consistently designed and available.
- The sample design is available.
- Sample sizes are available.
- Standard quality reports are not available.
- Confidence intervals and coefficients of variation are not published.
- A letter from HMRC discussing deviant micro-data and regional sample sizes is submitted each year to ONS with the data.

4.7 Defence Advice and Statistics Agency (DASA) administrative data

This agency provides information about the number of UK armed forces personnel and where they are based.

Availability of information to Regional Accounts:

- Standard quality reports are not available.
- A short discussion of quality issues is available with each issue of UK Defence Statistics.
- This includes discussion of deviant micro-data.

4.8 HMRC administrative data : self-assessment tax returns (SA)

Self-employed sole traders and partners complete Self-Assessment Tax returns which are submitted to HMRC. These are used to generate data about reported profits.

Information on source

- SA administrative data are used to create separate indicators for mixed income and gross trading profits (GTP) of partnerships in all industries except industry A01. The datasets used contain respectively reported profits of sole traders and partners, and these are used directly as indicators.
- The data are taken from self-assessment returns made by sole traders and partners for the purpose of paying income tax. They include 100% of self-assessment tax returns made in the UK, and so should cover all relevant firms, subject to tax evasion and other illegal activities. No adjustments are made for such activities by Regional Accounts; however, HMRC does make such adjustments to create its final estimates.
- In the last return, for 2006/07, the results were based on 3.15 million sole trader returns and 1 million partner returns.
- The address used to regionalise each return is the home address of the sole trader or partner who submits it, because this is the legal requirement of the self-assessment process. The indicators are therefore “residence” measures. However, no adjustment is made to produce the workplace-based figures published.
- As with PAYE, these addresses may be out of date because the data are not timely (the timescale is the same as for PAYE) and respondents may move between the collection and reference years. Unlike for PAYE, no study has been done to check for this, as there is no equivalent survey data to match records to.

Availability of information to Regional Accounts:

- Self-assessment forms are consistently designed and available.
- Respondent counts are not available except by specific request.
- Standard quality reports are not available. However, quality issues are briefly discussed in a letter included in each report by the HMRC employee responsible for supplying the data.
- This letter also contains information on deviant micro-data.
- Information on the exact estimation methods used is not available except by specific request.

4.9 DECC data : onshore oil and gas profits

The Department for Energy and Climate Change (DECC) provides data about onshore gas and oil profits. This is from a census of oil and gas licensees

Information on Source

- Data from DECC about onshore oil and gas profits are used to calculate extra regio gross trading profits of non-partnership corporations in industry CA. See section 3. 1. 7 for the exact methodology.
- The data are derived from a 100% census of oil and gas fields, terminals and pipelines.
- The last return was derived from figures for 426 fields, terminals and pipelines.
- Revenue and expenses are calculated separately. The former is not returned directly but is estimated using the amounts of oil or gas sold and average prices for the operator of each field. If field licensees who are not the operator get different prices, this will cause errors. There is no evidence that this phenomenon occurs.

Availability of information to Regional Accounts:

- The questions asked are not available.
- Respondent counts are available.
- Standard quality reports are not available.
- The micro-data are visible. However, there is no discussion of deviant numbers

Chapter 5: Other Processes used in the compilation of Regional GVA

5.1 Use of benchmarks and extrapolations

5.1.1 Benchmarks

This refers, in this context, to the post-survey weighting or stratification of data using auxiliary information.

- A multiplier of 0.8 is assigned to part-time civilian compensation of employees. This is not strictly a benchmark, but is in place to damp the volatility of this variable.
- Motor vehicle duty is only a tax on production if the vehicle is used in production. It is assumed that all vehicles are used in production except for private & light goods vehicles (20% of these are assumed to be used in production) and motorcycles, scooters and mopeds (none of these are assumed to be used in production).

5.1.2 Extrapolation

This refers to the carrying forward of existing structures, where no up-to-date data are available

- As mentioned above, compensation of employees figures are constrained to data from HMRC (at NUTS1 level only). This is available only to year t -1, so it is forecast using growth in wages & salaries by industry.

- HMRC residence-based compensation of employees data are used for the commuting adjustment; the figures for year t – 1 are attributed to year t.

- HMRC administrative data are used for mixed income and gross trading profit of partnerships; the figures for year t – 1 are attributed to year t.

- ABI data are available only to year t – 1. Because mixed income in industry D is calculated as a residual from ABI GVA estimates, ABI for t – 1 is used as ABI for t.

- Forces pay is estimated separately from civilian pay, to take advantage of DASA data on the number of forces by region. The last National Accounts estimate of forces pay was for 2002, in the Blue Book 2003. Since then only estimates of defence pay, which include civilians working in defence, have been available. The national total of forces pay for all years after 2002 is estimated by applying the growth rate of defence pay to forces pay.

5.2 Treatment of ancillary activities

The term ‘Ancillary activities’ refers to back-up functions such as administration, finance, or data processing. The products of ancillary activities are not themselves supplied to third parties. (Council Reg EEC 696 / 93).

The identification of ancillary units and the assignment of operating surplus are not the responsibility of Regional Accounts.

For compensation of employees and most elements of gross operating surplus, industry allocation of all units is determined by the enterprises which respond to the appropriate surveys and by the statistical survey branches, which apply consistent rules for units below enterprise level. This is necessary to ensure consistency with national totals. Regional allocation is determined by the addresses given by enterprises when they register to pay VAT (taxes on products) and/or PAYE (taxes on income) and by the addresses given by reporting units for local units on the business surveys.

For the mixed income and gross trading profits of partnerships elements of gross operating surplus, industry and regional estimates are supplied by HMRC.

5.3 Treatment of extra regio

5.3.1 Definition

The term ‘extra regio’ is applied to economic activity that cannot be assigned to any specific region within a country. The term derives from the European System of Accounts (ESA 95) and is used in national economic accounts throughout Europe. For the UK, extra regio consists of offshore oil and gas extraction and the activities of UK embassies and forces overseas. Regional Accounts calculates extra regio GVA, but not GDP.

5.3.2 Extra regio in the UK

UK extra regio is found in two industries (please refer to Appendix 2 for lists of industries and codes):

- public administration and defence (A60:75.1 and 75.2; A31:CA: A17:L), which accounts for UK military bases and embassies overseas.
- extraction of oil and gas, and related services (A60:11; A31:CA; A17:C), which reflects activities in the North Sea;

This is in accord with the Eurostat publication *Regional Accounts Methods,* section 1.2. Note that the numerical examples provided below are subject to rounding and may not appear to sum to totals.

5.3.3 Extra regio CoE in Public Administration and Defence

Extra regio military compensation of employees is calculated as the same proportion of forces pay, taken from the National Accounts, as the proportion of the number of military employees based overseas, as reported by the Defence Analytical Services Agency (DASA). For example, in 2005 forces pay was £8.3bn and the total number of service personnel was 199,630 of which 29,230 were based overseas. Military extra regio was therefore calculated as (29,230/199,630)*£8.3bn = £1.2bn. It should be noted that the last National Accounts forces pay estimate was for 2002, and for years after this the figures are extrapolated. National Accounts, not Regional Accounts, is responsible for this extrapolation.

Compensation of employees in UK embassies is available directly from the National Accounts. In 2005 the figure was £464m.

5.3.4 Extra regio CoE in the oil and gas extraction industry

Extra regio oil and gas compensation of employees is calculated as the same proportion of the National Accounts estimate of compensation of employees in industries 12 (mining of uranium and thorium ores) and 11 as the proportion of employees in industry 11 that is in 11.1 (extraction of oil and gas) rather than industry 11.2 (related services). For example, in 2005 13,013 people were employed in industry 11.1 and 17,135 were employed in industry 11.2; the National Accounts estimate of compensation of employees in industries 11 and 12 was £1.76bn. Extra

regio oil and gas compensation of employees was estimated as (13,013/[13,013+17,135])*£1.76bn = £861m. This assumes that all actual extraction is offshore and all related services are onshore, and that average pay is the same in both. The industrial mismatch is currently not significant because industry 12 has no presence in the UK. It derives from the National Accounts use of 123 input-output groups which group industries 11 and 12 together in input-output group 5. The data are taken from the ABI.

5.3.5 Extra regio GoS in the oil and gas extraction industry

Extra regio oil and gas gross operating surplus (GOS) consists entirely of gross trading profit of non-partnerships. It is calculated using figures for onshore oil profits from the Department of Energy and Climate Change (DECC), a UK government ministry. These data are subtracted from the National Accounts estimate of total gross trading profits (GTP) of non-partnerships in industries 11 and 12 to produce the extra regio estimate. For example, in 2005 the National Accounts estimate of GTP of non-partnerships in industries 11 and 12 was £23.3bn and the DECC estimate of onshore oil profits was £645m. Extra regio GOS was estimated at £23.3bn – £645m = £22.7bn. It will be apparent that this makes up the bulk of UK extra regio.

5.4 Approach to exhaustiveness

Non-exhaustiveness is dealt with at the national level, through estimates of such activities as smuggling, etc. No information is routinely available to Regional Accounts about the share of national GVA attributable to it. Because it is included in the national figures, it is regionalised in exactly the same way as any other GVA.

5.5 Calculation of FISIM by user industries

FISIM is calculated as part of the national figures, and is not the responsibility of Regional Accounts.

5.6 Adjustments for commuting

Compensation of employees and therefore regional GVA, is adjusted for commuting. This is done at NUTS1 level and only for the following regions: East of England, London, and South East (UKH, UKI and UKJ). In practice, this reflects commuting into London from the other two regions. Previous studies, carried out in 2004 and 2005 and using ASHE data, indicate that all other NUTS1 regions experience negligible net flows of cash, people and jobs. A repetition of these studies is currently in progress.

Commuting adjustments are applied to the final estimates of civilian residence-based compensation of employees, using the workplace-based measure of hourly earnings from ASHE multiplied by employees from STES. The total residence-based figure for the three regions is divided among them by their shares of the corresponding workplace-based total; this gives workplace-based totals. For example, in 2005 the workplace-based figures for the East of England, South East and London were £44.8bn, £76.4bn, and £113.9bn respectively, for a total of £235.1bn; the equivalent residence-based figures were £65.8bn, £102.8bn, and £118.7bn, for a total of £287.3bn. The final workplace-based estimates were: (£44.8bn/£235.1bn)*£287.3bn =

£54.6bn for the East of England; (£76.4bn/£235.1bn)*£287.3bn = £93.4bn for the South East; and (£113.9bn/£235.1bn)*£287.3bn = £139.2bn for London.

There is no attempt to make commuting adjustments at any level lower than NUTS1, for two reasons: firstly, this would require a major re-working of the computer system; secondly, the sample sizes in the source surveys would probably be too low to make the results meaningful. All NUTS2 data are constrained to workplace-based NUTS1 and no residence-based HMRC benchmarks are used. Commuting adjustments are not applied to industries P and 01. This is because the data sources available mean that it is inappropriate to produce workplace-based figures for the former and residence-based figures for the latter. The workplace-based surveys do not cover industry P; and the best data for 01 are supplied by DEFRA on a workplace basis.

Regional Accounts publishes both residence-based and workplace-based figures at NUTS1 level. Below this all published figures are workplace-based, in accord with Eurostat requirements.

5.7 Transition from GVA to GDP

Regional Accounts does not calculate GDP. The Scottish Government publishes GDP estimates for Scotland (as a single NUTS1 statistical entity) based on the GVA figures published by Regional Accounts. GDP estimates at NUTS1 are not calculated for any other part of the UK. GDP estimates at geographical levels lower than NUTS1 are not published for any part of the UK.

Chapter 6: Specific methods and sources for compiling regional GVA by industry

6.1 Introduction

As Regional GVA is compiled on a top-down basis the general principles described in section 3.1 are followed with regard to all industries. The main difference between industries is therefore the data sources which are used. Where specific methods are applied to certain industries only, this is described in the following sections. A list of industry groupings at the various NUTS levels is provided in Appendix 2.

6.2 Agriculture, hunting and forestry (A) and fishing (B)

Source of indicators used to apportion national controls to NUTS1 level:

Compensation of employees:
Industry A01, farming: Farm Business Survey

Industry A01: non-farming activities carried out by farmers (e.g. income from bed & breakfast) and farming activities carried out by non-farmers (e.g. sale of garden produce). These are apportioned regionally based on regional proportions from a survey carried out in 1989. A new source is being sought for this indicator.

Industries A02, B05: A combination of data from two sample surveys of employers, ASHE and STES. See Chapter 4.

Gross operating surplus:
Industry A01: Farm Business Survey
Industries A02, B05: Components from a variety of sources. See Chapter 4.

Calculation of Mixed Income for agriculture (01)
Mixed Income for farming activities of non-farmers and for non farming activities of farmers are both regionalised using the DEFRA survey proportions. These are then both added to the DEFRA estimates of agricultural Mixed Income by region producing a total agriculture indicator by region. This is then used to regionalise the national agriculture Mixed Income extract to produce total agricultural Mixed Income by region.

Taxes on production less subsidies:
Components from a variety of sources. See Chapter 4

Comments
Because Regional Accounts branch publishes NUTS1 estimates at 31 industry level, industry A01 is processed separately. This is done because the FBS can provide a more detailed indicator for compensation of employees in this industry than is available from ASHE and STES.

Indicators are available separately for three categories of employee: family workers (family members of the farmer), hired labour (all other employees not in the last category) and “ancillary” workers (farmers’ employees engaged in non-farming activities and non-farmers’ employees engaged in farming activities; this is a different use of “ancillary” from the Eurostat definition). Separate regional figures for compensation of employees for the first two categories are available from the FBS. For the last, regional proportions dating from 1989 are used.

The National Accounts total for compensation of employees in industry A0 is regionally prorated by these indicators. These results are the final estimates. These estimates are published. Also published are five-year moving averages of them. The latter figures are referred to as “headline” estimates in Regional Accounts publications.

6.3 Mining and quarrying of energy-producing materials (CA)

Source of indicators used to apportion national controls to NUTS1 level:

Compensation of employees:
A combination of data from two sample surveys of employers, ASHE and STES. See Chapter 4.

Gross operating surplus:
Components from a variety of sources. See Chapter 4.

Taxes on production less subsidies:
Components from a variety of sources. See Chapter 4.

Comments
Gross trading profits from extra regio oil and gas extraction are calculated by subtracting the total onshore profits supplied by DECC from the national total. Extra regio compensation of employees is estimated buy applying the proportion of employment in industry CA that is extra regio (from the ABI/1 survey) to the national total.

6.4 Other mining and quarrying (CB)

Source of indicators used to apportion national controls to NUTS1 level:

Compensation of employees:
A combination of data from two sample surveys of employers, ASHE and STES. See Chapter 4.

Gross operating surplus:
Components from a variety of sources. See Chapter 4.

Taxes on production less subsidies:
Components from a variety of sources. See Chapter 4.

6.5 Manufacturing (D)

Note that this group includes 14 sub-groups that are used when final data are published at NUTS1 by 31 industries. These sub-groups are listed in Appendix 2.

Source of indicators used to apportion national controls to NUTS1 level:

Compensation of employees:
Wages and salaries estimates are supplied from the Annual Business Enquiry (ABI/2).

Gross operating surplus:
Annual Business Inquiry 2

Calculation of Mixed Income for manufacturing industries (DA-DN)
ABI wages and salaries for DA-DN are subtracted from ABI gross value added for DA-DN to produce an ABI estimate of profits for DA-DN.

The manufacturing IO extract is then two-way prorated with the IO manufacturing industry total by region data and ABI estimate of profits data to produce Mixed Income for manufacturing by region.

Taxes on production less subsidies:
Components from a variety of sources.

Comments
The indicator for these industries is constructed using data from the ABI, which includes detailed manufacturing accounts which estimate compensation of employees for these industries rather than wages and salaries and are also of better quality.
Note that because Regional Accounts publishes NUTS1 level data at A31, separate estimates are needed for all subsections of industry D. These are available from the ABI.
These figures go into a two-way prorating process.
These estimates are published. Also published are five-year moving averages of them. The latter figures are referred to as “headline” estimates in Regional Accounts publications.

6.6 Electricity, gas and water supply (E)

Source of indicators used to apportion national controls to NUTS1 level:

Compensation of employees:
A combination of data from two sample surveys of employers, ASHE and STES. See Chapter 4.

Gross operating surplus:
Components from a variety of sources. See Chapter 4.

Taxes on production less subsidies:
Components from a variety of sources. See Chapter 4.

6.7 Construction (F)

Source of indicators used to apportion national controls to NUTS1 level:

Compensation of employees:
A combination of data from two sample surveys of employers, ASHE and STES. See Chapter 4.

Gross operating surplus:
Components from a variety of sources. See Chapter 4.

Taxes on production less subsidies:
Components from a variety of sources. See Chapter 4.

6.8 Wholesale and retail trade, including motor trade (G)

Source of indicators used to apportion national controls to NUTS1 level:

Compensation of employees:
A combination of data from two sample surveys of employers, ASHE and STES. See Chapter 4.

Gross operating surplus:
Components from a variety of sources. See Chapter 4.

Taxes on production less subsidies:
Components from a variety of sources. See Chapter 4.

6.9 Hotels and restaurants (H)

Source of indicators used to apportion national controls to NUTS1 level:

Compensation of employees:
A combination of data from two sample surveys of employers, ASHE and STES. See Chapter 4.

Gross operating surplus:
Components from a variety of sources. See Chapter 4.

Taxes on production less subsidies:
Components from a variety of sources. See Chapter 4.

6.10 Transport, storage and communication (I)

Source of indicators used to apportion national controls to NUTS1 level:

Compensation of employees:
A combination of data from two sample surveys of employers, ASHE and STES. See Chapter 4.

Gross operating surplus:
Components from a variety of sources. See Chapter 4.

Taxes on production less subsidies:
Components from a variety of sources. See Chapter 4.

6.11 Financial intermediation (J)

Source of indicators used to apportion national controls to NUTS1 level:

Compensation of employees:
A combination of data from two sample surveys of employers, ASHE and STES. See Chapter 4.

Gross operating surplus:
Components from a variety of sources. See Chapter 4.

Taxes on production less subsidies:
Components from a variety of sources. See Chapter 4.

6.12 Real estate, renting and business activities (K)

Source of indicators used to apportion national controls to NUTS1 level:

Compensation of employees:
A combination of data from two sample surveys of employers, ASHE and STES. See Chapter 4.

Gross operating surplus:
Components from a variety of sources. See Chapter 4.

Taxes on production less subsidies:
Components from a variety of sources. See Chapter 4.

6.13 Public administration and defence (L)

Source of indicators used to apportion national controls to NUTS1 level:

Compensation of employees:
Administrative data about numbers and location of armed forces personnel are supplied by Defence Analytical Services and Advice (DASA), a government statistical agency dealing with the armed forces.

Gross operating surplus:
Components from a variety of sources. See Chapter 4.

Taxes on production less subsidies:
Components from a variety of sources. See Chapter 4.

6.13.1 Comments

The pay of UK armed forces is regionalised separately. For obvious reasons, this is all assigned to industry L. The rest of compensation of employees in industry L is regionalised in exactly the same way as the industries described in this section, except that extra regio (i.e., the compensation of employees assigned to UK embassies overseas, calculated as described in section 3. 1. 4.) is deducted from the National Accounts industry control in exactly the same way as for industry C as discussed in that section; this is not further described here. But forces pay is processed separately, and this process is explained in what follows.

The indicator is the number of forces employees in each region, supplied by DASA. There is also an “overseas” entry, which is assigned to extra regio; this is the same process as described in section 3. 1. 4. The control is the forces pay total taken from the National Accounts. This total was last estimated from up-to-date figures for 2002. For years after that it is extrapolated from National Accounts. National Accounts, not Regional Accounts, is responsible for this extrapolation.

The control is prorated by the indicator, including the “overseas” total.
The results are the final regional and extra regio estimates of forces pay. They are added into the rest of industry L to provide the final estimates for this industry.
These estimates are published. Also published are five-year moving averages of them. The latter figures are referred to as “headline” estimates in Regional Accounts publications.
It would be preferable to include information on earnings, but this is not currently possible. An investigation into doing so is in progress.

6.14 Education (M)

Source of indicators used to apportion national controls to NUTS1 level:

Compensation of employees:
A combination of data from two sample surveys of employers, ASHE and STES. See Chapter 4.

Gross operating surplus:
Components from a variety of sources. See Chapter 4.

Taxes on production less subsidies:
Components from a variety of sources. See Chapter 4.

6.15 Health and social work (N)

Source of indicators used to apportion national controls to NUTS1 level:

Compensation of employees:
A combination of data from two sample surveys of employers, ASHE and STES. See Chapter 4.

Gross operating surplus:
Components from a variety of sources. See Chapter 4.

Taxes on production less subsidies:
Components from a variety of sources. See Chapter 4.

6.16 Other activities (O)

Source of indicators used to apportion national controls to NUTS1 level:

Compensation of employees:
A combination of data from two sample surveys of employers, ASHE and STES. See Chapter 4.

Gross operating surplus:
Components from a variety of sources. See Chapter 4.

Taxes on production less subsidies:
Components from a variety of sources. See Chapter 4.

6.17 Persons employed by private households (P)

Source of indicators used to apportion national controls to NUTS1 level:

Compensation of employees:
Labour Force Survey (LFS). This is used as the sole indicator for the apportionment of CoE in industry P as neither STES nor ASHE cover employees in this industry. LFS is residence-based.

Gross operating surplus:
Components from a variety of sources. See Chapter 4.

Taxes on production less subsidies:
Components from a variety of sources. See Chapter 4.

Comments
ASHE and STES are surveys answered by enterprises, so they cannot pick up compensation of employees in industry P, employees of staff by private households. For this reason, the regional indicator is LFS employees. The National Accounts control for compensation of employees in industry P is prorated by LFS employees in the industry.

6.18 Extra-territorial organisations and bodies (Q)

This is not applicable.

Chapter 7: Quality Assessment and Improvement

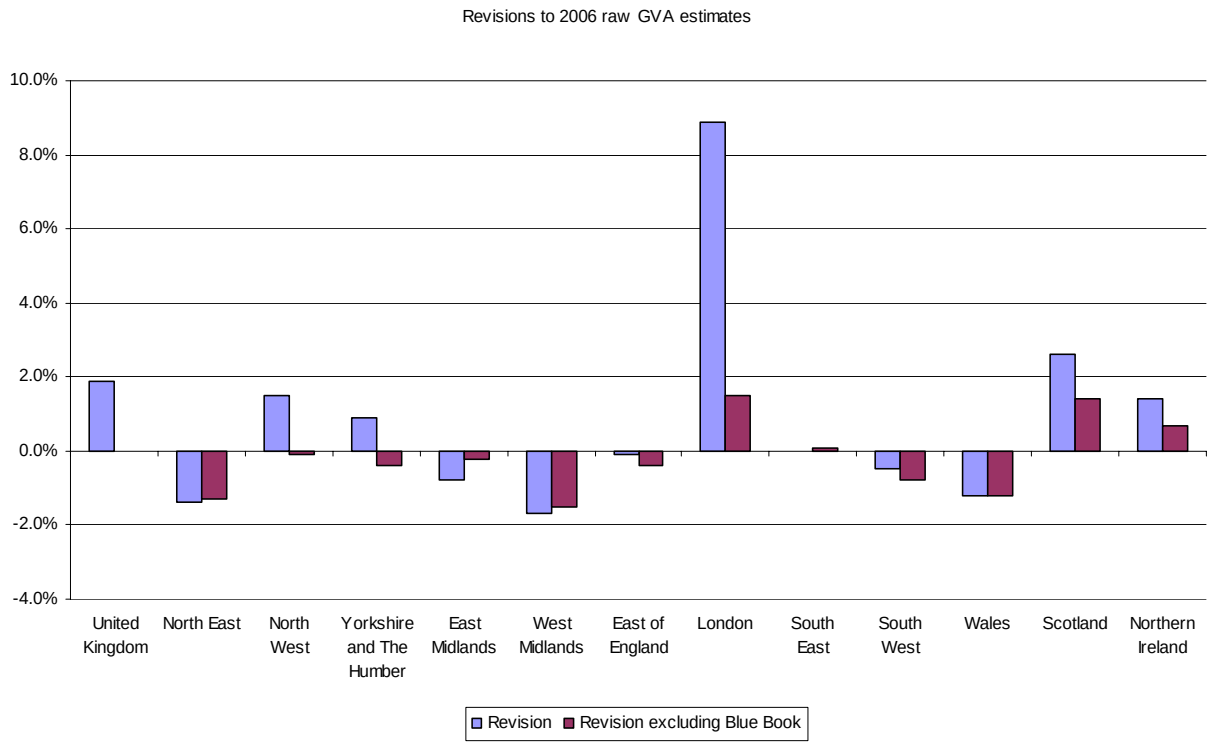
A quality assessment of the methodology used in the compilation of regional GVA

7.1 Accuracy

This refers to the closeness between an estimated result and the (unknown) true value.

As the GVA estimates are constrained to the Blue Book totals, the accuracy of the UK GVA estimates is dependent on the quality of the Blue Book UK GVA estimates. Below the UK level, NUTS 1 to NUTS 3 estimates are constrained to the UK totals.

Due to the complex process by which the GVA estimates are produced, it is not currently possible to define the accuracy of the estimates in terms of detailed statistical properties, for example through their standard errors. Therefore the reliability of the estimates, as measured by the extent of revisions, is often used as a proxy for their accuracy. Headline UK estimates will be affected by revisions to the Blue Book control totals, whilst revisions to NUTS 1 estimates will come from revisions to the data used to apportion the UK GVA estimates and revisions to the Blue Book. The chart below shows the revision (of provisional to final data) between the 2006 and 2008 GVA publications to the UK estimates (including Extra regio) and the NUTS 1 regions. The chart shows both the overall revisions and revisions excluding the Blue Book (that is revisions to the underlying data used to apportion the UK estimates):



The Regional Accounts revisions policy is that the latest year's data are provisional and may be subject to revisions the following year from data used to allocate GVA to the regions. The whole time series is open to revisions from the Blue Book (which is use to constrain the UK totals and hence may lead to revisions to the sub-regional estimates).

It is important to note that there are other aspects of accuracy, which revisions analysis cannot attempt to measure. A value can be reliable (meaning 'not revised') without being accurate.

7.2 Timeliness and punctuality

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

Provisional estimates of GVA at NUTS 1 level are published around 12 months after the reference period, or between 3 and 6 months after publication of the UK National Accounts Blue Book (published for year t-1). Accompanying the main GVA release are the sub-regional releases which tie in with the first Blue Book balanced year (year t-2). The GVA estimates are published annually in December.

The GVA release is published around 100 weeks after the reference period for NUTS 2 and 3, which ranks the UK 18th (out of 27) compared to other EU countries (based on the latest release from each EU country at 01/07/2008). It is important to note that although some countries publish estimates at NUTS 2 and NUTS 3 for t-1, the EU requirement is for t-2 for these NUTS levels.

The GVA releases have been published on time since 2004. The National Statistics release calendar is the official calendar of releases published by ONS and provides advance notice of releases.

7.3 Accessibility

Accessibility is the ease with which users (including those with disabilities) are able to access the data, also reflecting the format(s) in which the data are available and the availability of supporting information.

The GVA first release can be downloaded free at 9.30am on the day of publication. Regional GVA time series data can also be downloaded for free from the National Statistics website.

All new releases are published on the National Statistics Publication hub. This website has been designed to meet the Web Content Accessibility Guidelines (WCAG) v1.0 Level Double-A standard. There are three different screen viewing schemes available, including a view to help visitors with dyslexia, and a high visibility and low graphic view.
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General enquiries about the GVA estimates, compilation methods, quality information or difficulties in finding the latest figures can be e-mailed to the Regional Accounts team at regionalaccounts@ons.gov.uk or by telephoning 01633 456 878. A textphone facility (for the deaf or hearing impaired) is also available.

7.4 Comparability

This refers to the degree to which data can be compared over time and domain.

Data are available on a consistent basis at a NUTS 1 level back to 1989 and at NUTS 2/NUTS 3 level back to 1995. Prior to 1989 data are not comparable as ESA 95 replaced ESA 79, resulting in conceptual, geographical and methodological changes.

The GDP estimates published by Eurostat use the unsmoothed figures with extra regio apportioned across the NUTS regions using their relative proportions of UK GVA (less Extra regio). Taxes less subsidies on products are apportioned to NUTS 1 regions using GVA proportions by regions to convert from GVA to GDP.

Since international standards such as ESA 95 are used in the production of the Regional Accounts, the figures should be directly comparable with the Regional Accounts of other EU countries. However the revisions policies of these countries should be examined before comparing data for back periods. It should also be noted that the UK estimates GVA using the income approach (along with Ireland), all other EU countries use the production approach; the UK is currently developing GVA estimates on a production basis. Although the two methods differ, they are conceptually equal.

7.5 Coherence

The degree to which data are similar that are derived from different sources or methods, but refer to the same phenomenon.

The GVA estimates are benchmarked to the UK Blue Book totals for gross value added and are consistent with table 6.1.3 of the Blue Book.

Estimates of approximate GVA are also published as part of the Annual Business Inquiry (ABI) release. These estimates are used in the production of annual supply and use tables for the compilation of the UK GDP. The ABI GVA estimates differ from the UK Regional Accounts estimates as the ABI does not allow fully for National Accounts issues and concepts such as taxes or subsidies or income earned-in-kind.

Eurostat requirements are that estimates should be available on a workplace and a residence basis at the NUTS 1 level. For most regions these two estimates are the same, however significant commuting effects have been found in London, the East and the South East. These three regions are adjusted to take account of commuting between these regions.

7.6 Plans for further improvement

Methodology is constantly being improved and improved methods will be introduced as and when appropriate. For example, we are currently researching the following topics:

Industry CA, in respect of onshore oil and gas processing;
Compensation of employees relating to armed forces personnel;
Industry A in respect of non-farming activities of farmers.

7.7 The development of Regional GVA at constant prices

At present (2009) regional GVA is not available at constant prices. As the regional GVA which is currently compiled is income-based, it is not suitable for deflation, as satisfactory deflators for profits (which constitute some forms of the income used in the compilation of GVA) are not available.

A project is currently underway to develop regional GVA compiled on a production basis. This will allow for deflation and for the development of a constant price series.

Based on current plans it is likely that such data will become available in 2011 or 2012.

Appendix 1 : Compilation Table

See separate spreadsheet.

Appendix 2 : Lists of Industries

Regional GVA data are published at the following level of breakdown:

- 13 **NUTS1** regions (including extra regio) by **31 industries**;
- 37 **NUTS2** sub-regions by **15 industries** (equates to 17 industries, but in two cases small industries are combined);
- 133 **NUTS3** local areas by **6 industries**.

The first publication of data for reference year *t – 1* (provisional estimates) is published at NUTS1 with no industry breakdown.

Final regional GVA data at the **NUTS1** level are published with the following industry breakdowns.

Section	Division	Industry
A	01	Agriculture
A	02	Forestry
B	05	Fishing
CA	10 – 12	Mining and Quarrying of Energy Producing Materials
CB	13, 14	Mining and Quarrying Except Energy Producing Materials
DA	15, 16	Manufacture of Food Products; Beverage and Tobacco
DB	17,18	Manufacture of Textiles and Textile Products
DC	19	Manufacture of Leather and Leather Products
DD	20	Manufacture of Wood and Wood Products
DE	21, 22	Manufacture of Pulp, Paper and Paper Products Publishing and Printing
DF	23	Manufacture of Coke, Refined Petroleum and Nuclear Fuels
DG	24	Manufacture of Chemicals, Chemical Products and Man-made Fibre
DH	25	Manufacture of Rubber and Plastic Products
DI	26	Manufacture of other Non-metallic products
DJ	27, 28	Manufacture of Basic Metals and Fabricated Metal Products
DK	29	Manufacture of Machinery and equipments not elsewhere classified
DL	30 – 33	Manufacture of Electrical and Optical Equipment
DM	34, 35	Manufacture of Transport Equipment
DN	36, 37	Manufacture not elsewhere classified
E	40, 41	Electricity, Gas and Water Supply
F	45	Construction
G	50 – 52	Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods
H	55	Hotels and Restaurants
I	60 – 64	Transport, Storage and Communication
J	65 – 67	Financial Intermediation
K	70 – 74	Real Estate, Renting and Business Activities
L	75	Public Administration and Defence; Compulsory Social Security
M	80	Education
N	85	Health and Social Work
O	90 – 93	Other Community, Social and Personal Service Activities
P	95	Private Households with Employed Persons

Regional GVA data at the **NUTS2** level are published with the following industry breakdowns:

Section	Division	Industries
A,B	01-05	Agriculture, hunting, forestry & fishing
CA	10 – 12	Mining and quarrying of energy producing materials
CB	13, 14	Other mining and quarrying
D	15-37	Manufacturing
E	40, 41	Electricity, gas and water supply
F	45	Construction
G	50 – 52	Wholesale and retail trade (including motor trade)
H	55	Hotels and restaurants
I	60 – 64	Transport, storage and communication
J	65 – 67	Financial intermediation
K	70 – 74	Real estate, renting and business activities
L	75	Public administration and defence; compulsory Social Security
M	80	Education
N	85	Health and social work
O,P	90 – 93, 95	Other services

Note that the category 'Other services' consists of O 'other activities', combined with P 'persons employed by private households'.

Final Regional GVA data at the **NUTS3** level are published with the following industry breakdowns:

Section	Division	Industry
A, B	01-05	Agriculture, forestry and fishing
C D E	10-41	Production
F	45	Construction
GHI	50-64	Distribution, transport and communication
JK	65-74	Business services and finance
LMNOP	75-95	Public administration, education, health and other services

Appendix 3 : Glossary of terms / acronyms

ABI/1	Annual Business Inquiry 1. A structural business survey which collects employment information. The survey is carried out by ONS. It is being replaced by a new survey, the Business Register and Employment Survey (BRES) in 2009. See section 3.1.1.9.
ABI/2	Annual Business Inquiry 2. A structural business survey which collects financial information. The survey is carried out by ONS. It is being re-named Annual Business Survey (ABS) in 2009. See section 3.1.1.9.
ASHE	Annual Survey of Hours and Earnings**.** A workplace-based sample survey of wages and salaries. The survey is carried out by ONS. See section 3.1.1.9.
Blue Book	The main annual publication of National Accounts in the UK. It is available both on-line and in a printed version.
CoE	compensation of employees. This represents the total remuneration payable to employees in cash or kind, including the value of social contribution paid by the employer.
Control	A control is a national (UK-level) total for an industry or region to which the regional or industrial estimates calculated by the ONS Regional Accounts branch must sum.
DASA	Defence Advice and Statistics Agency. This agency provides information about the number of UK armed forces personnel and where they are based.
DECC	Department for Energy and Climate Change. A UK government department.
DEFRA	Department for Environment, Food and Rural Affairs. A UK government department. Carries out the Farm Business Survey for England. Collates agricultural statistics provided by the agricultural departments of the three devolved countries, which carry out their own FBS.
DVLA	Driver and Vehicle Licensing Agency. The agency registers drivers and vehicles, and collects vehicle taxation for the whole of the UK.
ESA 79	European System of Integrated Accounts 1979. The former basis for National Accounts.
ESA 95	European system of Accounts 1995. The basis for National Accounts in the UK from 1995 onwards.
Extra regio	Economic activity that cannot be assigned to any specific region. For the UK this consists of offshore oil and gas extraction and the activities of UK embassies and forces overseas.

FBS Farm Business Survey. The Farm Business Survey provides information on the financial position and physical and economic performance of farm businesses. It is carried out separately in England, Scotland, Wales and Northern Ireland by the relevant government departments.

FISIM Financial Intermediation Services Indirectly Measured. The imputed charge for the output of many financial intermediation services paid for by an interest rate differential (rather than by direct charges).

FSA Financial Services Authority. A regulatory body dealing with the finance industry.

GB Great Britain. The collective name for England, Scotland and Wales. (Excludes Northern Ireland)

GDP The value of goods and services before providing for capital consumption. Equal to GVA plus taxes less subsidies on products.

GOS Gross Operating Surplus. The sum of income from self-employment ('mixed income'), gross trading profits and surpluses, non-market capital consumption, and rental income; less holding gains and FISIM.

GTP Gross Trading Profits. Profits of partnerships and privately owned corporations, gross of deductions for capital consumption.

GTS Gross Trading Surplus. Surpluses of local authorities, central government bodies and public corporations.

GVA Gross Value added. The gross value added generated by any unit engaged in production activity can be calculated as the residual of the unit's total output less intermediate consumption,

HMRC Her Majesty's Revenue and Customs. The government department responsible for the collection of most taxes throughout the UK.

Holding gains Profit obtained by virtue of the changing price of assets being held.

IDBR The Inter-departmental Business Register. A list of UK businesses maintained by ONS. It provides a sampling frame for surveys of businesses.

Indicator In the context of Regional Accounts, this means a variable measurable at the relevant regional level that is used to assign proportions of the component of GVA at national (UK) level to the regional level, i.e. a divisor.

Intermediate consumption Goods and services used up in the production process.

I-O Input-Output. The Input-Output framework of ESA95 consists of three types of tables: supply tables, use tables and symmetric Input-Output tables. The tables provide a complete picture of the flows of goods and services (products) in the economy for a given year. They detail the relationship between producers and consumers and the interdependencies of industries.

LFS	Labour Force Survey. A residence-based sample survey answered by employees. The survey is carried out by ONS. See section 3.1.1.9.
MVD	Motor Vehicle Duty. A tax on motor vehicles.
NACE	Statistical classification of economic activities in the European community
National	The term 'national' as used in this document refers to UK level .
NISRA	The Northern Ireland Statistics and Research Agency. The statistical agency of the Northern Ireland executive.
NMCC	Non-market capital consumption. There are a number of non-market bodies in central and local government and the NPISH sector that do not generate a profit or surplus but do consume capital.
NNDR	National non-domestic rates accrued receipts. Consists of the total amount paid in tax in Great Britain by businesses for owning commercial property.
NPISH	Non-profit institutions serving households. Includes organisations such as charities, universities, religious institutions, trade unions and members' clubs.
ONS	The Office for National Statistics. Independent official UK body that compiles and publishes economic and demographic statistics.
PAYE	Pay-as-you-earn income tax. Income tax withheld from the wages of employees and paid to HMRC by their employers. This is the standard method of taxing employees in the UK.
STES	The Short-Term Employment Surveys. These collect information on the number of employees from a sample of 9,000 businesses in production industries each month and 30,000 businesses in the service and distribution industries each quarter. The surveys are also used to collect turnover information, used in the compilation of National Accounts. The surveys are carried out by ONS. See section 3.1.1.9.
UK	United Kingdom. The collective name for England, Scotland, Wales and Northern Ireland.