# GDP(O) Improvement Report

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Date: 30 September 2015

## Contents

## Introduction

Since the September 2014 report work has continued on the output approach to the measurement of Gross Domestic Product (GDP(O)) Improvement Project.  In October 2014 we published 3 industry review reports (Real Estate, Public Administration and Defence, and Human Health Care), the GDP(O) source catalogue, which details the methods and sources used to compile the short-term indicators, and updated the website with methodology information. This report outlines the progress taken place since September 2014 and describes:

- the work implemented for Blue Book 2015
- GDP(O) Improvement project priorities and emerging work
- progress on the current industry reviews
- wider improvements including:
  - the outcome of the UK Statistics Authority assessment of short-term output indicators
  - the move from Experimental to Official Statistics status for the final Index of Services series

# Section 1 - Implementation of improvements for Blue Book 2015

There are revisions for each UK National Accounts Blue Book publication. These revisions are caused by new data and data sources, improved statistical methods as part of the commitment to continuous improvements, and supply and use balancing.

When National Accounts estimates are derived from supply and use balancing, revisions to the output approach to measuring gross domestic product (GDP(O)) are a consequence of the balancing process rather than short-term indicators. These short-term indicators are the focus of this improvement programme.  For Blue Book 2015, the years up to and including 2013 were supply and use balanced. During this process the expenditure approach to measuring GDP (GDP(E)) was deemed to provide a better indicator of the annual GDP path.

The changes to the short-term indicators for Blue Book 2015 were the reclassification of Network Rail and the replacement of forecasted public sector employment (PSE) estimates with actual data for 3 UK SIC 2007 industries: 38 (waste collection, treatment and disposal activities; materials recovery), 91 (libraries, archives, museums and other cultural activities) and 93 (sports activities, amusement and recreation activities). These changes were not significant.

## 1.1 - Treatment of Network Rail

In December 2013 ONS published a bulletin on the change in classification of Network Rail Ltd from the private non-financial corporation (PNFC) sector to central government.  The change in classifications followed the European System of Accounts 2010 (ESA10) guidance.  This change

affects the UK SIC 2007 industry 52 – warehousing and support activities for transportation; revisions were made back to 2004.

The change from market output (PNFC) to non-market output (central government) has required a change in the method used to calculate the output of warehousing and support activities from measuring value added to the more appropriate measure of sum of costs, in line with international guidelines.

Under the Blue Book 2014 methodology, warehousing and support activities estimated value added by using turnover data collected from the Monthly Business Survey (MBS). This was deflated by a price index derived from 5 sources – 3 data series from Service Producer Price Index (road freight, business air fares and freight forwarding), a bespoke Consumer Price Index (car park charges) and a bespoke price index from the Department for Business, Innovation and Skills (labour and supervision in civil engineering). This produces a volume index in line with National Accounts conventions.

The revised methodology splits warehousing and support activities into market and non-market components. The market component continues to use MBS turnover data, while the non-market component utilised the more appropriate method of measuring public corporations activity through a sum of the costs approach.

Non-market output is difficult to value, as there is often no meaningful selling price. The sum of the production costs is used internationally to measure output where no market prices exist and assumes that output is equal to inputs. It is particularly useful in the measure of government activity and a number of the non-market industries in GDP(O) use this convention. Non-market output is valued as the sum of: intermediate consumption, compensation of employees, the consumption of fixed capital (defined below) and other taxes (less subsidies) on production. Summing costs in this way does not measure actual output, but this measure provides the best available approximation.

- Intermediate consumption is defined as all goods and services used up or transformed in a process of production. This includes raw materials, power and fuel, rental on buildings and business services such as advertising, recruitment consultancy and cleaning. It specifically excludes staff costs and capital investment which are handled elsewhere in the accounts
- Compensation of employees is the sum of all employment income, including wages and salaries, employers' pension and National Insurance contributions, bonuses and benefits in kind.
- Consumption of fixed capital is defined as the depreciation of fixed assets.

## 1.2 - Replacement of forecast data with actual data from PSE

In the Public Administration and Defence Industry Review Report published in October 2014, it was recommended that the short-term output measures for the 3 UK SIC 2007 industries: 38 (waste collection, treatment and disposal activities; materials recovery), 91 (libraries, archives, museums and other cultural activities) and 93 (sports activities, amusement and recreation activities), replaced the forecast data series with actual PSE data. This improvement was implemented into Blue Book 2015.

## 1.3 - Update on GVA Weights, describing any significant changes

Each industry within the output measure of gross domestic product (GDP(O)) has a weight representing its proportion of the sum of gross value added (GVA) produced by the economy in a given year. GVA is derived from outputs less inputs, or output less intermediate consumption. The weights used by GDP(O) are calculated as part of the supply and use balancing for each year from 1997 and revisions tend to be higher in the later years. For Blue Book 2015, balancing was applied to 2013 for the first time, but GDP(O) has only used weights for the years up to and including 2012. This is because weights must undergo 2 years of balancing to minimise the impact of any revisions. The weights for 2012 are also used in the later periods. Updated weights will decrease the importance of industries where GVA has fallen relative to the whole economy and increase the importance of industries where GVA has risen relative to the whole economy. This will necessarily produce the potential for revision to the overall GDP(O) index, although the growth rates of constituent industries remain unchanged, and their significance will vary each year. There were no significant changes to the GVA weights for 2012.

The Eurostat rating is guided by Eurostat 'Handbook on price and volume measures in national accounts' (2001 edition) and adopts a more pragmatic interpretation where this has proved necessary in setting guidelines for the more conceptually challenging industries. This rating of each industry has been re-assessed by our experts in line with new guidance which we understand is due to be published by Eurostat later this year. Each industry has been updated to reflect the change in GVA weight for Blue Book 2015.

The assessment for each industry can be found in annex 1 – the priority matrix 2015. It is important to note that this considers the weakest element of each industry where this breaches a 10% significance threshold and rates the measures as A, B or C quality. C rated industries need the most improvement, B rated industries are deemed acceptable and A rated industries are given the highest "appropriate" rating.

Table 1 shows the 2015 Eurostat ratings compared with 2014, the change in the total rating is due to the change in GVA weight for 2012 and not due to changes in methods for Blue Book 2015.

Table 1: 2015 Eurostat ratings compared with 2014

| Eurostat Rating | Blue Book 2014 | Percentage BB14 | Blue Book 2015 | Percentage BB15 |
|---|---|---|---|---|
| A | 253.2392 | 25.3 | 264.3726 | 26.4 |
| B | 628.0304 | 62.8 | 614.27634 | 61.4 |
| C | 118.7305 | 11.9 | 121.35136 | 12.1 |
| | 1000 | | 1000 | |

Annex 2 lists the 12 industries classified as C for 2015, which remains unchanged from 2014, and outlines the factors influencing that decision. There were 19 industries classified as C for Blue Book 2013.

# Section 2 – Progress on Output Measure of Gross Domestic Product (GDP(O)) Improvement Programme

## 2.1 - GDP(O) Improvement Project Priorities

In June 2015, in the Index of Production and Index of Services statistical bulletins, we announced that there would be a delay to the previously published industry review timetable.  The focus of the GDP(O) improvement project will still be industry reviews, which will continue to examine the concepts, methods and sources used in the measurement of short-term output across the economy as well as administrative data quality requirements.  However, in order to more closely align staff resource with the main strategies, as set out in the National Accounts work plan which was open for consultation between 13 July and 25 September 2015, additional tasks have been assigned to the team supporting the project. These include new work on the Framework Regulation Integrating Business Statistics (FRIBS), which will be finalised in 2016 and National Accounts long term aim to develop an annual volume based balanced supply and use tables (using previous year's prices), which will also require input to the deflator strategy.  We are also leading the development of the use of HMRC VAT data this could result in significant savings to ONS and businesses, and is a priority for the office. Further information on this work can be found in section 4.4: Exploitation of HMRC VAT data.

The inclusion of this additional resource intensive work has required that the industry review programme be extended by 3 years, with the aim to complete reviews covering the whole economy by 2021 rather than 2018, as previously expected. There will also be a delay in progressing with the outstanding recommendations from the 2014 reports.

The 3 industry reviews published in October 2014 (real estate, public administration and compulsory social security, and health) covered 22% of the economy (GVA weight 2012). There are 2 further reviews planned for December 2015, industry 50 (water transport) and 53 (post and courier services), and a further 3 planned for spring 2016, including industries 64 to 66 (financial and insurance), 69 to 75 (professional services), and 87 to 88 (social care), which will cover a further 18% of the economy (GVA weights 2012).  These publications are later than previously planned in the 2014 edition of the GDP(O) Improvement Report.  The review into industries 41 to 43 (construction) has also begun and is expected to be completed winter 2018, covering a further 6% of the economy (GVA weight 2012).

In addition to extending the timetable we have also revised the priority of the industry reviews to make sure we are making best use of resources.  We are aware that the Framework Regulation Integrating Business Statistics (FRIBS) will pose significant implications for the wholesale, retail and motor trades industries.  In order to utilise our resource as effectively as possible we have extended the time proposed for the motor trades, wholesale and retail trade industry review; it will now commence in spring 2016 with proposed completion in winter 2018 in advance of the expected implementation of FRIBS in 2019.

Other noticeable changes include:

- combining industry 41.1 (property developers) review with the review of industries 41 to 43 (construction) which commenced spring 2015.

- delaying the reviews into industries 49,51 and 52 (transport and storage), 77 to 78 (renting, leasing and employment) and 80 to 82 (security, services to buildings and landscapes and admin services)
- splitting the current review into industries 87 to 88 (social care) into 2 parts, with the initial part of the report explaining the current methods and issues publishing in spring 2016 and the second part, including recommendations, publishing in winter 2016

The detailed timetable can be found in annex 3.


## 2.2 - Priority matrix

An important feature of the industry review programme has been the use of a matrix to prioritise the industries in need of review. This has been driven primarily by the GVA weight of each industry and, with the publication of Blue Book 2015, the matrix has moved to using weights in proportion to gross value added for 2012, expressed as parts per thousand. The matrix has undergone methodological changes over time, but the new matrix for 2015 has been prepared using the same methodology as 2014.

However, the matrix is becoming less useful in informing reviews and, increasingly, emerging issues are informing where our resource must be focused.  We will continue to produce the priority matrix to capture the progress being made.  For details on how the matrix is produced please see the 2014 report.  Changes to the 2015 matrix are due to changes in GVA weights, revisions performance and changes in volatility.  The priority matrix can be found in annex 1.


## Section 3 – Industry Reviews

## 3.1 - Completed reviews
On 31 October 2014 we published 3 industry reviews covering 22% of the economy:
- Real Estate
- Public Administration and Defence
- Human Health Care

As part of the industry review process recommendations were included in the reports.  A full list of recommendations for the 3 reports can be found in annex 4 with an update on each recommendation.  Progress has been made on a number of recommendations; however, due to the change in the projects priorities, as outlined in section 2.1: GDP(O) Improvement Project Priorities, a number of recommendations will now be reviewed at a later date.


## 3.2 - Current reviews
Currently there are 6 reviews taking place covering 24% of the economy:
- industries 41 to 43 (construction)
- industry 50 (water transport)
- industry 53 (post and courier activities
- industries 64 to 66 (financial services)
- industries 69 to 75 (professional services)
- industries 87 to 88 (social care activities)

In December 2015 we plan to publish full reviews, including recommendations, for industry 50 (water transport) and industry 53 (post and courier activities).  We also aim to publish a full review for industries 69 to 75 (professional services) with the initial reviews of industries 64 to 66 (financial services) and 87 to 88 (social care activities) in spring 2016.  These initial reviews will detail the current methodology and discuss some of the issues that the full report will explore in more detail. The second part of the review, which will look at addressing the issues and proposing recommendations, will be published in winter 2016 for industries 87 to 88 (social care activities) and winter 2018 for industries 64 to 66 (financial services).  An update on each of the 6 reviews currently underway can be found below.

### Industry 41 to 43 – construction, including industry 41.1 - property developers

The measurement of construction output has undergone significant change, with new interim price indices representing an important conceptual improvement. Our Construction Output team are working on a programme of continuous improvement of construction output, which will be completed in 2018. Due to the large scale of this programme and recent changes it has been decided to combine the industry reviews into industry 41.1 (property developers) and the remainder of industries 41 to 43 (construction) as part of this programme. The review will run in alongside the overall construction project and the report is expected in 2018.

### Industry 50 – water transport

The water transport industry looks at the movement of passengers and freight.  The industry is currently estimated using annual administrative data from Department for Transport and quarterly data from Chamber of Shipping.  An important aspect of the review is to investigate and recommend more timely data series.  The final report is expected in December 2015.

### Industry 53 – post and courier activities

The post and courier activities industry is made up of 2 groups; 53.1, which measures the activities of postal services that are provided under the universal service obligation, and 53.2, which measures the activities of all other postal and courier services. Since the Postal Services Act 2011, the postal services industry has undergone significant structural and classification changes. The main changes include the separation of Post Office Limited from Royal Mail plc and the re-classification of Royal Mail plc as a private non-financial corporation.

Post and courier activities is currently measured using a combination of turnover and volume measures deflated by the Consumer Price Index (CPI) for postal charges, the Service Producer Price Index (SPPI) for parcels and the SPPI for courier activities.  The review has looked at the structural changes that have taken place in this industry over the last few years and will propose recommendations to move away from using volume data to measuring the whole industry using turnover data as a more appropriate method.  The final report is expected in December 2015.

### Industries 64 to 66 – financial services

The initial review of financial services will be published in spring 2016. This will describe current methods, summarise the significant change in methodology that has taken place since Blue Book 2007, quality assure administrative data and describe how the newly developed Financial Services Survey conducted by ONS could potentially improve methodology. The final report, in winter 2018,

will also consider the impact of the flow of funds project alongside the data from the new Financial Services Survey and consider how volume estimates could be improved.

### Industries 69 to 75 – professional services

The main focus of the professional services review is on improving the method for deflation to derive the volume of output. We are considering improving the deflation method by replacing some of the current wages measures with more conceptually appropriate business prices from SPPI and CPI.  The final report for this industry is now due in spring 2016.

### Industries 87 to 88 – social care

The social care industry is challenging to measure due to the different methods of payment for care. Social care is largely funded fully or subsidised by government, with individuals making contributions to top-up care.  However, it is difficult to meaningfully split the market and non-market aspects.  The non-market element is estimated using public sector output, which is internationally recognised. This measures total inputs as a proxy for total outputs, using general government final consumption expenditure (GGFCE) data, which is sourced at current prices from the HM Treasury's online system for central accounting and reporting (OSCAR) database on a UK basis.  The market element is currently estimated using workforce jobs data.

Traditionally market output is measured using turnover from the Monthly Business Survey (MBS). However, this may not be the most effective method for this industry.  It would require not only asking for business turnover, but how much of that was from government, which would increase our costs and contributor burden.  It would also require a new sample for MBS as social care is currently not collected.  To ensure the burden on business is not increased alternative sources are being reviewed that could potentially have an impact on Household Final Consumption Expenditure (HHFCE).

There are also a number of other areas that need to be considered as part of the review.  With new legislation from spring 2016 there will be more freedom of choice given to recipients of social care. More direct payments will be issued which may impact how the industry will be measured.  The review will also consider the measurement of non-core social care activities such as child care, pre-schooler and the housing element of social care.  Part one of the reviews, being published in spring 2016, will cover the current methodology and describe the most important issues. Part 2, being published in winter 2016, will outline recommendations and address the issues raised in part one.

## Section 4 - Wider Improvements

### 4.1 - UK Statistics Authority Assessment and admin data recommendation

Following the UK Statistics Authority assessment of Short-Term Economic Output Indicators: Preliminary Estimate of GDP, Indices of Production and Services, and Retail Sales, in March 2015 it was announced that these 4 indicators would retain their National Statistics status.  You can find further details in the confirmation letter.

The UK Statistics Authority made 13 recommendations with which the short-term economic output indicators must comply.  One of the recommendations is to review the administrative data used to

compile the short-term indicators.  This recommendation is part of the UK Statistics Authority's Regulatory Standard for the Quality Assurance of Administrative Data, published in January 2015.

We have agreed with the UK Statistics Authority to conduct a review of all administrative data sources to be completed by 2018.  This will continue to be part of the industry review process, where all data sources are reviewed for their quality and conceptual appropriateness. There are 4 industries, 01 (agriculture), 02 (forestry), 03 (fishing and aquaculture) and 94 (activities of membership organisations) that use admin data which will not have been reviewed by agreed deadline.  A separate review of these 4 industries, to look at administrative data sources only, will be completed by 2018.

Details of the sources used to compile the short-term indicators can be found in the GDP(O) source catalogue, first published in 2014 and revised for 2015.  The catalogue of sources will continue to be updated on an annual basis, and published alongside Blue Book 2015 on 30 October 2015.

## 4.2 - Experimental Statistics in Index of Services

The Index of Services (IoS) achieved National Statistic status in 2007. This was partly due to a series of industry reviews which underpinned short-term estimates.  However, a number of low-level industries were still designated as Experimental Statistics when the programme of industry reviews paused in 2008 to focus on the transition to UK SIC 2007, improved deflator methodology and the implementation of a new IT platform.

In 2011 IoS moved to UK SIC 2007 and the Experimental Statistics were re-assessed using detailed comments from methodologists who quality assured the progress of IoS to the National Statistics designation. This review was published in August 2012 and outlined the 17 industries that remained experimental. By implication it must also be noted that 2 sections (K - financial and insurance activities and T - activities of households as employers) are also Experimental Statistics as they contain industries that are wholly experimental - no other sections have experimental industries contributing more than 50% of the section weight.

Annex 5 highlights comments made by methodologists in 2007 as to why these industries would remain experimental.  A review of the 17 industries has been conducted by experts in the business area against the Code of Practice for Official Statistics and, in noting the original comments, we are clear that the issues and requirements have been addressed where appropriate, details of this review can be found in annex 5.  Agreement has been given by the Director General for Economic Statistics to move these Experimental Statistics to Official Statistics.

## 4.3 - Website update

As in previous years we are continuing to make improvements to the information available to users on the short-term indicators web pages.  Last year we published the GDP(O) source catalogue for the first time and will be publishing an update alongside Blue Book in October 2015.  Over the coming

months additional improvements will also be made, including the publication of our methodology for the UK SIC 2007 industry 01(agriculture).

## 4.4 - Exploitation of HMRC VAT data

Over the last year significant progress has been achieved in exploring the use of administrative data as collected by Her Majesty's Revenue and Customs (HMRC) from Value Added Tax (VAT) returns. To date the work has focused on the use of the HMRC turnover variable as collected on a VAT return with exploration as to its possible use within short-term output indicators and across National Accounts.

The project has established a monthly process that takes the administrative data, as collected at VAT registration unit level, links and cleans it to produce reporting unit level HMRC turnover data. This micro-data provides the basis for interrogation and analysis behind top level industry aggregates. This work has significant potential to save money by reducing ONS survey costs and the burden on businesses, in terms of completing government questionnaires. To take this work forward, the proposed method is to combine administrative data with survey data and gain the advantages of both data sources. The proposed method being investigated over the next year is to use HMRC turnover data for smaller and medium sized businesses in conjunction with the Monthly Business Survey sample for larger businesses.

For further information on this work please see the following article:

'[Feasibility study into the use of HMRC turnover data within Short-term Output Indicators and National Accounts](#) (published 14 August 2015).

The next article, being published on 7 October 2015, will include consideration of the use of VAT data in an international context and a detailed description of how we process and derive the HMRC data.

# Section 5 - Emerging priorities

## 5.1 - Supply and use tables in previous year's prices and deflator strategy

ONS has a long term aim to develop balanced supply and use tables, based on volume (previous year's prices) in line with international best practice and is a requirement under European System of Accounts 2010 (ESA10). An important component of this process is the availability of appropriate output deflators that will also enable progress with "double deflation". ONS is working to develop the deflator strategy across a variety of areas of the National Accounts. This will also support the methodology that will underpin the derivation of volume based tables for supply and use, particularly where the balanced volume estimates are fed back to the various component parts of the National Accounts. The first balanced supply and use tables in previous year's prices will be produced to support Blue Book 2018.

## 5.2 – Framework Regulation Integrating Business Statistics (FRIBS)

The Framework Regulation Integrating Business Statistics (FRIBS) was included as part of the [European Statistical System vision](#) in 2014. It aims to apply consistent statistical definitions and ease the burden on business, for example through better use of administrative data. The regulation is still under discussion, but is expected that it will come into effect in 2019 at the earliest. The 2 most significant impacts for short-term indicators are to move the Service Producer Price Indices (SPPI) from "business to business" transactions to "'business to all" and to redefine the retail trade.

ONS will also consider how consumer and export purchases should be included, as well as business and government purchases of services in a redefined SPPI. The new definition of the retail trade is expected to include the wholesale and motor trades industries. The most important impact is that for these 2 additional industries data would have to be produced significantly earlier than at present. These estimates will also have to be on "retail" or "trade" turnover and not the total turnover of businesses (so that non-retail turnover is excluded). This represents a significant challenge; the review to cover these industries has been timetabled for spring 2016 alongside the work to meet the new FRIBS requirements. The completed industry review is expected in winter 2018.

# Section 6 – Next Steps

The next GDP(O) Improvement Report will be published in June 2016 alongside Quarterly National Accounts consistent with Blue Book 2016.  In December 2015 we will publish 2 final reports into industry 50 (water transport), and industry 53 (post and courier activities).  In spring 2016 we will publish a final report into industries 69 to 75 (professional services) and 2 initial reports into industries 64 to 66 (financial services) and industries (87 to 88) social care.

# Annexes

## 1 - Priority Matrix 2015

| UK SIC 2007 | Description | 2012 GVA wt | Eurostat rating | Volatility | Revisions | 2015 Rank | change in rank |
|---|---|---|---|---|---|---|---|
| 01 | 01:Crop And Animal Production, Hunting And Related Service Activities | 6.2708 | B | L | L | 45 | 0 |
| 02 | 02:Forestry And Logging | 0.2100 | B | L | L | 87 | -1 |
| 03 | 03:Fishing And Aquaculture | 0.3379 | B | L | L | 84 | -1 |
| 05 | 05:Mining Of Coal And Lignite | 0.2558 | B | M | L | 85 | 2 |
| 06 | 06:Extraction Of Crude Petroleum And Natural Gas | 15.8557 | B | M | H | 27 | -5 |
| 07 | 07:Mining Of Metal Ores | 0.0007 | A | L | H | 89 | 0 |
| 08 | 08:Other Mining And Quarrying | 2.0292 | A | M | M | 77 | -2 |
| 09 | 09:Mining Support Service Activities | 1.9061 | C | L | M | 33 | -1 |
| 10 | 10:Manufacture Of Food Products | 12.4306 | A | M | M | 42 | 1 |
| 11 | 11:Manufacture Of Beverages | 3.2064 | A | H | H | 67 | 6 |
| 12 | 12:Manufacture Of Tobacco Products | 0.6939 | A | L | L | 83 | 1 |
| 13 | 13:Manufacture Of Textiles | 1.7977 | A | M | L | 78 | 0 |
| 14 | 14:Manufacture Of Wearing Apparel | 1.1644 | A | M | L | 82 | 0 |
| 15 | 15:Manufacture Of Leather And Related Products | 0.3904 | A | M | L | 86 | -1 |
| 16 | 16:Manufacture Of Wood and Products Of Wood and Cork, Except Furniture; Manuf. Of Articles Of Straw | 1.5426 | A | M | H | 81 | 0 |
| 17 | 17:Manufacture Of Paper And Paper Products | 2.6431 | A | M | L | 73 | -2 |
| 18 | 18:Printing And Reproduction Of Recorded Media | 3.4601 | A | M | L | 66 | 0 |
| 19 | 19:Manufacture Of Coke And Refined Petroleum Products | 2.8948 | A | M | L | 72 | 4 |
| 20 | 20:Manufacture Of Chemicals And Chemical Products | 5.6759 | A | M | M | 61 | 1 |
| 21 | 21:Manufacture Of Basic Pharmaceutical Products And Pharmaceutical Preparations | 9.0195 | A | H | M | 51 | -1 |
| 22 | 22:Manufacture Of Rubber And Plastic Products | 5.3770 | A | M | M | 64 | -1 |
| 23 | 23:Manufacture Of Other Non-Metallic Mineral Products | 2.9096 | A | M | L | 71 | -1 |
| 24 | 24:Manufacture Of Basic Metals | 2.1969 | A | M | M | 74 | -2 |
| 25 | 25:Manufacture Of Fabricated Metal Products, Except Machinery And Equipment | 9.3601 | A | M | M | 50 | -3 |
| 26 | 26:Manufacture Of Computer, Electronic And Optical Products | 6.4088 | A | M | L | 58 | 1 |
| 27 | 27:Manufacture Of Electrical Equipment | 3.1357 | A | M | M | 69 | -1 |
| 28 | 28:Manufacture Of Machinery And Equipment N.E.C. | 7.9743 | A | M | L | 54 | 0 |
| 29 | 29:Manufacture Of Motor Vehicles, Trailers And Semi-Trailers | 5.8340 | A | M | L | 60 | -2 |
| 30 | 30:Manufacture Of Other Transport Equipment | 5.6785 | B | L | H | 48 | -7 |
| 31 | 31:Manufacture Of Furniture | 2.1854 | A | M | L | 76 | -2 |
| 32 | 32:Other Manufacturing | 3.1660 | A | M | L | 70 | -1 |
| 33 | 33:Repair And Installation Of Machinery And Equipment | 3.7193 | A | M | M | 65 | -1 |
| 35 | 35:Electricity, Gas, Steam And Air Conditioning Supply | 13.9193 | B | M | M | 32 | 4 |
| 36 | 36:Water Collection, Treatment And Supply | 3.1479 | A | H | L | 68 | -1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 37 | 37:Sewerage | 3.2751 | B | M | L | 62 | -2 |
| 38 | 38:Waste Collection, Treatment And Disposal Activities; Materials Recovery | 5.5520 | B | M | L | 49 | 3 |
| 39 | 39:Remediation Activities And Other Waste Management Services | 0.1043 | B | M | L | 88 | 0 |
| 41 | 41:Construction Of Buildings | 25.9117 | B | L | L | 18 | 0 |
| 42 | 42:Civil Engineering | 11.0124 | B | L | L | 36 | -2 |
| 43 | 43:Specialised Construction Activities | 21.7738 | B | L | L | 20 | -1 |
| 45 | 45:Wholesale And Retail Trade And Repair Of Motor Vehicles And Motorcycles | 17.9630 | B | M | L | 24 | 1 |
| 46 | 46:Wholesale Trade, Except Of Motor Vehicles And Motorcycles | 33.3455 | B | L | L | 16 | 0 |
| 47 | 47:Retail Trade, Except Of Motor Vehicles And Motorcycles | 56.7649 | B | L | L | 8 | 0 |
| 49 | 49:Land Transport And Transport Via Pipelines | 18.0599 | B | L | M | 23 | 6 |
| 50 | 50:Water Transport | 4.0127 | B | L | M | 44 | 5 |
| 51 | 51:Air Transport | 4.3492 | B | L | L | 56 | 0 |
| 52 | 52:Warehousing And Support Activities For Transportation | 9.9820 | B | L | M | 29 | -1 |
| 53 | 53:Postal And Courier Activities | 6.5225 | B | L | H | 37 | 0 |
| 55 | 55:Accommodation | 6.8792 | A | L | L | 57 | -4 |
| 56 | 56:Food And Beverage Service Activities | 20.5697 | A | M | L | 34 | -1 |
| 58 | 58:Publishing Activities | 7.4917 | A | M | L | 55 | 2 |
| 59 | 59:Motion Picture, Video and TV Programme Production, Sound Recording and Music Publishing Activities | 5.9821 | B | M | L | 39 | 0 |
| 60 | 60:Programming And Broadcasting Activities | 2.9762 | C | L | L | 21 | 0 |
| 61 | 61:Telecommunications | 17.6891 | B | L | M | 25 | 2 |
| 62 | 62:Computer Programming, Consultancy And Related Activities | 25.2764 | C | L | L | 1 | 0 |
| 63 | 63:Information Service Activities | 3.2387 | C | M | L | 28 | -5 |
| 64 | 64:Financial Service Activities, Except Insurance And Pension Funding | 44.9704 | B | L | M | 2 | 0 |
| 65 | 65:Insurance, Reinsurance And Pension Funding, Except Compulsory Social Security | 18.1716 | B | L | L | 14 | -4 |
| 66 | 66:Activities Auxiliary To Financial Services And Insurance Activities | 12.9151 | C | L | L | 5 | 1 |
| 68.1/2 | 68:Real Estate Activities  (non-fee or contract) | 111.3735 | A | L | L | 7 | 0 |
| 68.3 | 68:Real Estate (fee or contract basis) | 5.3413 | B | L | M | 52 | -1 |
| 69 | 69:Legal And Accounting Activities | 24.8624 | B | M | L | 15 | -1 |
| 70 | 70:Activities Of Head Offices; Management Consultancy Activities | 11.0064 | B | L | M | 26 | 0 |
| 71 | 71:Architectural And Engineering Activities; Technical Testing And Analysis | 16.6889 | C | L | L | 4 | 0 |
| 72 | 72:Scientific Research And Development | 6.2257 | B | M | L | 38 | -3 |
| 73 | 73:Advertising And Market Research | 6.1342 | C | M | L | 17 | 0 |
| 74 | 74:Other Professional, Scientific And Technical Activities | 5.5823 | B | M | M | 40 | 0 |
| 75 | 75:Veterinary Activities | 1.7136 | A | L | L | 79 | 1 |
| 77 | 77:Rental And Leasing Activities | 9.3985 | B | L | L | 31 | 0 |
| 78 | 78:Employment Activities | 10.1691 | A | L | L | 47 | -3 |
| 79 | 79:Travel Agency, Tour Operator And Other Reservation Service And Related Activities | 6.3401 | B | M | M | 43 | 3 |
| 80 | 80:Security And Investigation Activities | 2.2271 | A | L | L | 75 | 2 |
| 81 | 81:Services To Buildings And Landscape Activities | 6.1295 | B | L | L | 46 | 2 |
| 82 | 82:Office Administrative, Office Support And Other | 11.6787 | B | L | L | 22 | 2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Business Support Activities | | | | | | |
| 84 | 84:Public Administration And Defence; Compulsory Social Security | 53.6958 | B | L | L | 9 | 0 |
| 85M | 85:Education (market) | 20.2137 | C | L | L | 3 | 0 |
| 85NM | 85:Education (non-market) | 44.7820 | B | L | L | 6 | -1 |
| 86 M | 86:Human Health (market) | 7.9371 | B | L | L | 41 | 1 |
| 86 NM | 86:Human Health (non-market) | 46.4264 | B | L | L | 12 | 1 |
| 87 | 87:Residential Care Activities | 8.7281 | C | L | L | 13 | 2 |
| 88 | 88:Social Work Activities Without Accommodation | 9.7895 | C | L | L | 10 | 1 |
| 90 | 90:Creative, Arts And Entertainment Activities | 3.1378 | B | M | M | 63 | 2 |
| 91 | 91:Libraries, Archives, Museums And Other Cultural Activities | 2.1881 | B | L | L | 59 | 2 |
| 92 | 92:Gambling And Betting Activities | 6.8429 | B | L | L | 30 | 0 |
| 93 | 93:Sports Activities And Amusement And Recreation Activities | 3.3249 | B | M | L | 53 | 2 |
| 94 | 94:Activities Of Membership Organisations | 9.4126 | C | L | L | 11 | 1 |
| 95 | 95:Repair Of Computers And Personal And Household Goods | 1.5844 | A | M | H | 80 | -1 |
| 96 | 96:Other Personal Service Activities | 11.4062 | B | M | L | 35 | 3 |
| 97 | 97:Activities Of Households As Employers Of Domestic Personnel | 4.0719 | C | M | L | 19 | 1 |

## Key

| Eurostat rating | Volatility | Revisions |
|---|---|---|
| A = appropriate | H = high | H = high |
| B = acceptable | M = medium | M = medium |
| C = improvement required | L = low | L = low |

## 2 - Eurostat C Ratings – requiring improvement 2015

| UK SIC 2007 | GVA weight 2012 | Description |
| --- | --- | --- |

The following industries use employment data in a market setting

| | | |
| --- | --- | --- |
| **09** | 1.9061 | 09:Mining Support Service Activities |
| **85M** | 20.2137 | 85:Education  (market) |
| **87** | 8.7281 | 87:Residential Care Activities |
| **88** | 9.7895 | 88:Social Work Activities Without Accommodation |
| **94** | 9.4126 | 94:Activities Of Membership Organisations |
| | **50.0500** | |

The following industries use wage data in a market setting as deflators

| | | |
| --- | --- | --- |
| **62** | 25.2764 | 62:Computer Programming, Consultancy And Related Activities |
| **63** | 3.2387 | 63:Information Service Activities |
| **71** | 16.6889 | 71:Architectural And Engineering Activities; Technical Testing And Analysis |
| **73** | 6.1342 | 73:Advertising And Market Research |
| | **51.3382** | |

The following industries use deflation data which are weak proxies

| | | |
| --- | --- | --- |
| **60** | 2.9762 | 60:Programming And Broadcasting Activities |
| **66** | 12.9151 | 66:Activities Auxiliary To Financial Services And Insurance Activities |
| | **15.8913** | |

The following industry uses Household Final Consumption Expenditure data.

| | | |
| --- | --- | --- |
| **97** | 4.0719 | 97:Activities Of Households As Employers Of Domestic Personnel |
| | **4.0719** | |

Note: The analysis is based on our expert assessment of the weakest elements in an industry where these contribute more than 10% to its weight. It does not necessarily reflect the overall view of an industry.

## 3 - Industry Review Timetable 2012 to 2021

| SIC | GVA weights 2012 | Description | Commence | Finalise |
|---|---|---|---|---|
| 68 | 116.7148 | Real estate | | published Oct 2014 |
| 84 | 53.6958 | Public administration, defence and compulsory social security | | published Oct 2014 |
| 86 | 54.3635 | Human health activities | | published Oct 2014 |
| | **224.7741** | | | |
| 50 | 4.0127 | Water transport | Apr-2014 | Dec-2015 |
| 53 | 6.5225 | Postal and courier activities | Nov-2014 | Dec-2015 |
| | **10.5352** | | | |
| 64-66 | 76.0571 | Financial and insurance activities - **part 1** | Feb-2013 | Spring 2016 |
| 69-75 | 72.2135 | Professional services | Jun-2014 | Spring 2016 |
| 87/88 | 18.5176 | Social work activities - **part 1** | Jun-2014 | Spring 2016 |
| | **166.7882** | | | |
| 35-39 | 25.9986 | Electricity, gas, water and waste | Jan-2016 | Winter 2016 |
| 60 | 2.9762 | Broadcasting | Spring 2016 | Winter 2016 |
| 79 | 6.3401 | Travel agencies | Spring 2016 | Winter 2016 |
| 87/88 | 18.5176 | Social work activities - **part 2** | Spring 2016 | Winter 2016 |
| | **53.8325** | | | |
| 05-09 | 20.0475 | Mining and quarrying | Winter 2016 | Winter 2017 |
| 49/51/52 | 32.3911 | Transport and storage | Winter 2016 | Winter 2017 |
| 85 | 64.9957 | Education | Winter 2016 | Winter 2017 |
| | **117.4343** | | | |
| 41-43 | 60.8793 | Construction | Spring 2015 | Winter 2018 |
| 45-47 | 110.6113 | Motor trades, wholesale and retail | Spring 2016 | Winter 2018 |
| 64-66 | 76.0571 | Financial and insurance activities - **part 2** | Winter 2017 | Winter 2018 |
| | **247.5477** | | | |
| 01-03 | 6.865 | Agriculture, forestry and fishing | To be completed by winter 2021 | |
| 10-33 | 103.1774 | Manufacturing | To be completed by winter 2021 | |
| 55-56 | 25.4864 | Accommodation and food service activities | To be completed by winter 2021 | |
| 58-59 | 13.285 | Publishing and motion pictures | To be completed by winter 2021 | |
| 61-63 | 47.1454 | Telecomms, computing and information services | To be completed by winter 2021 | |
| 77-78 | 19.57 | Renting and leasing and employment | To be completed by winter 2021 | |
| 80-82 | 19.4224 | Security, services to buildings and landscapes and admin services | To be completed by winter 2021 | |
| 90-93 | 14.0014 | Arts, entertainment and recreation | To be completed by winter 2021 | |
| 94-97 | 26.2631 | Other service activities | To be completed by winter 2021 | |
| | **275.2161** | | | |

## 4 - Industry review recommendations
### Real estate activities

| Recommendation number | Recommendation | Status | Completion | Notes |
|---|---|---|---|---|
| 14-1 | The use of the Investment Property Databank (IPD) UK Monthly Index as the indicator for non-dwelling rentals is considered conceptually appropriate. | Complete | Oct 2014 | |
| 14-2 | To inform users about the methodological improvements in the production of rentals price data from the perspective of the output approach to measuring gross domestic product implemented at Blue Book 2013 and Blue Book 2014. | Complete | Oct 2014 | |
| 14-3 | Implement the change of indicator for UK SIC (2007) 68.3 – real estate agencies for Blue Book 2014.  This has changed from a workforce jobs (productivity adjusted) series to a monthly turnover series as collected by the Monthly Business Survey (MBS).  This has led to an improvement in quality and increased frequency of data. | Complete | Oct 2014 | |
| 14-4 | To be completed by Blue Book 2018 - An indicator will be implemented to appropriately measure UK SIC (2007) 68.1 – buying and selling of own real estate.  This will be included alongside the industry review of UK SIC (2007) 41.1 – development of building projects. | In progress | | Work has started on the possible proxy for SIC07 41.1.  Resource has been timetabled to ensure SIC07 68.1 is included within this work. |
| 14-5 | To be completed by the next industry review into real estate - To continue to explore the possible use of administrative data and its appropriateness as to the indicator for non-dwelling rentals.  This will be included as part of the GDP(O) Improvement project. | In progress | | |
| 14-6 | To be completed by the next industry review into real estate - To continue to monitor the ongoing development work at UK and international level in the area of commercial property prices.  This recommendation is part of the Services Producer Price Index (SPPI) improvement programme. | In progress | | |

| 14-7 | To be completed by Blue Book 2015 - To inform users about the methodological improvements in the production of rentals price data from the perspective of the output approach to measuring gross domestic product planned to be implemented at Blue Book 2015. | Complete | | Article published on 30 January looking at 'Consumer Price Inflation - Improvements to the measurement of Owner Occupiers' Housing costs and Private Housing Rental Prices'<br><br>'Section 7 - Impact on National Accounts' (pg.45 and 46) explores some of the issues for BB15 and BB16. |

**Public administration, defence and compulsory social security**

| Recommendation number | Recommendation | Status | Completion | Notes |
|---|---|---|---|---|
| 14-8 | There is good coherence between the GDP(O) and GDP(E) measures as they share the same methodology and data sources. | Complete | Oct 2014 | |
| 14-9 | Continue to use the existing current price data sources to measure the output of the six UK SIC 2007 classes: 84.1-21 (administration of the state), 84.22 (defence), 84.23 (justice), 84.24 (police), 84.25 (fire) and 84.30 (social security administration). | Complete | Oct 2014 | |
| 14-10 | Continue to use the existing input volume data source (Public Sector Employment survey) to measure the output of the three UK SIC 2007 classes 84.1-21 (administration of the state), 84.22 (defence), and 84.24 (police). | Complete | Oct 2014 | |
| 14-11 | Continue to use the existing cost-weighted activity indices to measure the output of the three UK SIC 2007 classes 84.23 (justice), 84.25 (fire), and 84.30 (social security administration). | Complete | Oct 2014 | |

| | | | |
|---|---|---|---|
| 14-12 | Improve the short-term output measures for the three UK SIC 2007 industries: 38 (waste collection, treatment and disposal activities; materials recovery), 91 (libraries, archives, museums and other cultural activities), and 93 (sports activities and amusement and recreation activities) by replacing the forecast data series with PSE data; with the aim to implement this in Blue Book 2015. | Complete | Forecasted data has been replaced with actual data for BB15 and handover of the data collection to GDP has been completed. |
| 14-13 | Develop a wage drift model for local government for the UK SIC 2007 class *'84.1-21'* to specifically adjust local government employment data for skill level, with the aim to implement this model in Blue Book 2018. | In progress | |
| 14-14 | Introduce a market and non-market split to UK SIC 2007 division 90 'creative, arts and entertainment activities', with a view to implement this change in Blue Book 2018. | In progress | |
| 14-15 | The current cost-weighted activity measures are appropriate for the short-term measure of output. However, the following is recommended with a view to implement in Blue Book 2018:<br><br>- Ensure all legal aid cases are captured in the output measure.<br><br>- Continue collaborating with DWP to ensure a smooth transition of the administration of Universal Credit once the scheme is implemented. | To be reviewed | For review in 2018 |
| 14-16 | The current cost-weighted activity measures form a good proxy for UK. However, the feasibility of improving UK geographical coverage of the following output measures is recommended; with a view to review in 2019:<br><br>- Prison output to include Northern Ireland estimates<br><br>- Legal aid to include Scotland and Northern Ireland estimates<br><br>- Law courts (magistrates', Crown and County) to include cases from Scotland and Northern Ireland.<br><br>- Fire response activities to include Scotland and Northern Ireland estimates. | To be reviewed | For review in 2019 |

| | | | | |
|---|---|---|---|---|
| | - Fire special services and fire prevention activities to include Scotland and Northern Ireland estimates. | | | |
| 14-17 | The feasibility of updating cost weights to correspond with expenditure in 2010 is recommended; with a view to be review in 2019:<br><br>- Update the Legal aid and Crown court cost weights which are currently based on 2000. | To be reviewed | | For review in 2019 |

**Human health activities**

| Recommendation number | Recommendation | Status | Completion | Notes |
|---|---|---|---|---|
| 14-18 | Continue to use the existing current price and volume data sources to measure non-market health output | Complete | Oct 2014 | |
| 14-19 | With effect from Blue Book 2014 - Re-classify National Health Service (NHS) non-market sub-contracted clinical care from the market sector to the non-market sector | Complete | Oct 2014 | |
| 14-20 | With effect from Blue Book 2014 - change the data source for market health output from a productivity adjusted workforce jobs series to the monthly turnover series collected by the Monthly Business Survey | Complete | Oct 2014 | |
| 14-21 | Review the treatment of government funding to local authorities as part of the social care industry review | To be reviewed | | Forms part of the social care review |
| 14-22 | Review the Monthly Business Survey questionnaire guidance used for this industry to ensure that income from sub-contracted activities is excluded.  For review 2018. | To be reviewed | | For review in 2018 |
| 14-23 | Review the quarterly government health services non-market output index to evaluate methodological improvements conducted as part of on-going Public Sector Outputs development work.  For review 2018. | To be reviewed | | For review in 2018 |

# 5 - Experimental Statistics

| Reason for experimental label | Industry | Short-term indicators response |
|---|---|---|
| "New data sources to become established before moving to National Statistics status." These commonly refer to a point in time 2006 to 2007. | 50 water transport | Current data source is now established and has been in place for a significant amount of time. This industry is currently under review with a report due to be published in December 2015. |
| | 60 programming and broadcasting activities | Current data source is now established and has been in place for a significant amount of time. For Blue Book 2008 BBC and S4C were reclassified to the public sector. A proxy for advertising prices was suggested, which is now fully established. |
| | 66 activities auxiliary to financial intermediation | At the time of the initial review methodologists stated that "We accept that the new data sources and methodologies appear to be of sufficient quality to warrant National Statistics status" |
| | | Current data source is now established and has been in place for a significant amount of time. This industry is currently under review with a report due to be published in spring 2016. |
| | 77 renting of machinery and equipment | Current data source is now established and has been in place for a significant amount of time. |
| "New methodology required." This has now been enacted. | 64 financial services | New methodology for financial services indirectly measured (FISIM) was introduced in Blue Book (BB) 2011 and updated BB14. This industry is currently under review with a report due to be published in spring 2016 |
| | 65 insurance, reinsurance and pension funding | New methodology was introduced for insurance in BB12 and pension funds in BB14 |
| "The use of workforce jobs" in the absence of a more | 68.3 real estate activities on a fee or contract basis | This industry review was completed in October 2014 and resulted in a move from using Workforce Jobs estimates |

| appropriate output indicator | | to Monthly Business Survey (MBS). |
|---|---|---|
| | 86 human health: market sector | This industry review was completed in October 2014 and resulted in a move from using workforce jobs estimates to MBS. |
| | 87 residential care activities (industry review report in March 2016) | Workforce jobs are still used as the indicator for this industry but this is an effective indicator of inputs.  This industry is currently under review with a report due in Spring 2016. |
| | 88 social work activities without accommodation (industry review report in March 2016) | Workforce jobs are still used as the indicator for this industry but this is an effective indicator of inputs.  This industry is currently under review with a report due in Spring 2016. |
| | 94 activities of membership organisations - trade union activity measured by membership from BB10 | This industry is split into 2 – trade unions and other organisations.  For BB10 trade union activity moved from using workforce jobs as an indicator to trade union membership numbers as a proxy.  The remaining part of the industry continues to use workforce jobs. |
| "The use of wage data at section rather than industry level for deflation purposes." | 62 computer programming | A review of the Average Weekly Earnings data has taken place and we have confirmed that data at section level is more robust than at industry level, it has therefore been agreed to continue using the section level data. |
| | 63 information services | A review of the Average Weekly Earnings data has taken place and we have confirmed that data at section level is more robust than at industry level, it has therefore been agreed to continue using the section level data. |
| "Review required of own-account R&D" as QA Board unsure whether short-term growth of businesses classified to the industry was an appropriate proxy for own-account R&D | 72 scientific research and development | This industry is currently under review with a report due for publication in Spring 2016. The review will consider the price of own-account R&D and its impact on the output of R&D businesses. Own-account R&D is not measured separately as part of the output approach to measuring GDP - it is only measured in this way through |

| | | |
|---|---|---|
| | | the expenditure approach to measuring GDP. |
| "Use of data from HHFCE not considered appropriate" | 97 activities of households as employers of domestic personnel | The use of Household Final Consumption Expenditure is the best estimate available for measuring the short term movements in this industry. The measure has good coherence with the Expenditure measure of GDP. |
| "Significant changes as a result of SIC 2007". | 75 veterinary activities | As a result of the move to UK SIC 2007 this industry is now measured in its own right. The industry is measured using turnover data from the MBS. |
| | 81 services to buildings and landscape activities | As a result of the move to UK SIC 2007 this industry is new and has not previously been reviewed. The industry is measured using turnover data from the MBS and a combined deflator from the Service Producer Price Index. No specific issues have been identified and the industry will be reviewed as part of the industry review programme. |