

Output approach to gross domestic product (GDP)

Contact:

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1 . Overview

Gross Domestic Product (GDP) is one of the main indicators of economic growth. GDP sits within the national accounts framework which provides an integrated description of all the UK's economic activity. Further details on the UK national accounts can be found on the [national accounts methodology](#) pages.

GDP can be estimated in three ways: the production or output approach, the expenditure approach and the income approach. For further details on all three approaches, see "[The short guide to national accounts](#) (136.8 Kb Pdf)". The output approach to measuring GDP, sometimes referred to as GDP(O), is the measure of output or production in the economy. It covers the whole economy and uses the same data that makes up the [index of production](#), [output in the construction industry](#), [retail sales index](#) and the [index of services](#) (IoS). Further details on all sections which make up GDP(O) can be found in the links below and in the [GDP\(O\) source catalogue](#).

Section A – Agriculture, forestry and fishing

ONS only publishes Section A as part of the output measure of GDP.

Methodology on how the estimate for agriculture is produced will be published later this year.

Sections B to E – Manufacturing and production

These industries are published separately in the monthly [index of production](#) (IoP) publication. Further details can be found on the [IoP methods](#) page.

Section F – Construction

Construction data are published separately in the monthly "[Output in the construction industry](#)" publication. Further details can be found on the "[Output in the construction industry](#)" method page.

Sections G to T – Services

These industries are published separately in the monthly [index of services](#) publication. Further details can be found on the [IoS method](#) page.

In 2014, the GDP(O) was reassessed (first review took place in 2010) by the UK Statistics Authority as part of its ongoing review to ensure that Official Statistics comply with the [Code of Practice for Official Statistics](#), see the full [2014](#) and [2010](#) reports for details of the requirements.

2 . Improvements

This section details the improvements currently being made to index of production (IoP), index of services (IoS) and the output approach to gross domestic product GDP(O) as part of the programme of work laid out in the articles below.

[GDP\(O\) Improvement Report 2016](#) This article provides an update of the work for Blue Book 2016 (BB16), the progress on industry reviews, and outlines wider work being undertaken by the GDP(O) Improvement Project, including the exploitation of HMRC VAT data.

[Improvements to the output approach to measure UK GDP, 2015](#) (946.2 Kb Pdf)

This article provides an update of the work for Blue Book 2015 (BB15), the progress on current industry reviews, announces the removal of experimental statistics status in the Index of Services and outlines wider work being undertaken by the GDP(O) Improvement Project.

[GDP\(O\) improvement report, September 2014](#) This article provides a detailed update of the work for Blue Book 2014 (BB14) and outlines the work being undertaken for the GDP(O) improvement project.

[Industry reviews Blue Book 14 implementation](#) This article covers the changes owing to industry reviews, the expansion of the monthly business survey (MBS) and improvements to public sector output that will be introduced when revised figures for the UK national accounts, consistent with blue book 14, are published in September 2014.

[GDP\(O\) improvement report, June 2013](#) (277.8 Kb Pdf)

Provides a detailed update of the work so far and outlines the greater scope of the project as part of the GDP continuous improvement programme.

[IoS – industry reviews, August 2012](#) (249.1 Kb Pdf)

Provides greater detail on how the process will proceed, including the industries chosen for review and the status of experimental industries within IoS.

[IoS – industry reviews, March 2012](#) (158.6 Kb Pdf)

Signals the intention to relaunch the industry review process and consult with users on how we should proceed.

[Summary of IoP improvements from October 2011](#)

3 . 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. For further information on this work please see the following articles:

[Feasibility study into the use of HMRC turnover data within Short-term Output Indicators and National Accounts](#)

(published 14 August 2015).

[Exploitation of HMRC VAT Data](#) (published 7 October 2015)

[HMRC VAT Update December 2015](#) (published 21 December 2015)

[HMRC VAT Update April 2016](#) (published 4 April 2016)

[HMRC VAT Update July 2016](#) (published 12 July 2016)

[HMRC VAT Update October 2016](#) (published 7 October 2016)

4 . Industry reviews

The industry review programme plays a significant part in the GDP(O) improvement project; the initial industry review programme was in place from 2002 to 2009. It played a significant role in moving the experimental index of services (IoS) to designated National Statistics status in 2007. In March 2012, the industry review programme was relaunched following a break in the programme for ONS to focus on other [methodological improvements](#) (158.6 Kb Pdf).

The approach for the new programme follows that adopted for the 2002 to 2009 programme, but the scope of industries has expanded to cover the whole economy. Individual industries are identified for review using a number of factors. Further details on these factors can be found in the latest GDP(O) improvement report which can be found under "improvements". The methodology of each industry is then evaluated and improved where appropriate. The industry review reports describe in detail the approach taken and any recommendations. As reviews are completed, the full reports will be available on this page. Reviews completed prior to 2016 are available on the [national archived page](#).

Industries reviewed	Blue Book recommendations were implemented
Water transport[s1]	2016
Postal and courier activities[s2]	2016
Professional, scientific and technical activities	(recommended for implementation in 2018)

5 . Programme changes

In autumn 2016, changes were announced to the ONS GDP(O) improvement programme: [Announcement of Changes to GDP\(O\) Improvement Programme](#). The changes were agreed with the UK Statistics Authority, and were made in order to align the improvement programme more closely with the ONS Economic Statistics Transformation Programme (ESTP). In short, the programme of GDP(O) industry reviews was superseded by a more holistic approach to improvements across National Accounts as a whole. The new approach focuses on comparative analysis of the monthly and annual approaches to the measurement of the output measure of GDP, to inform the development of the new National Accounts target operating model, including the introduction of quarterly supply use balancing. Additionally, ONS remain committed to reviewing and providing more detail on the wide range of administrative data sources used in the production of the short term output indicators, in line with the UK Statistics Authority's [Regulatory Standard for the Quality Assurance of Administrative Data](#).

6 . Methods and sources

This page provides links on the methods and sources relating to the output approach to gross domestic product (GDP(O)).

Details on the users and uses of the GDP(O) and other short-term economic indicators can be found in the "[Users and uses of short-term economic indicators](#)" (47 Kb Pdf) report.

Full details on the sources and weights used to calculate the index of production (IoP), index of services (IoS) and output approach to measuring GDP can be found in the [GDP\(O\) source catalogue](#).

An overview of the 4 types of weights used in the calculation of the IoP, IoS and GDP(O) including a summary table can be found in the "[Overview of weights](#)" (27.6 Kb Pdf) report.

Details on the aggregation of low-level industries, including detailed information on the weights and how they are derived and applied, can be found in the "[Low-level industry aggregation](#)" (88.6 Kb Pdf) report.

Information on the concept of deflation and how deflation weights are derived and applied, as well as details of how deflation is applied to IoP, IoS and GDP(O), can be found in the "[Deflation](#)" (163.5 Kb Pdf) report.

Details on how the gross value added (GVA) weights are derived can be found in the "[Derivation of GVA weights](#)" (68.7 Kb Pdf) report.

Details of how the GDP(O) is revised, the revisions cycle, short & long-term revisions and revisions triangles can be found in the "[GDP\(O\) revisions](#)" (30.8 Kb Pdf) report.

Details on the quality of the GDP(O), including accuracy, sampling & non-sampling errors, improvements and quality assurance can be found in the "[Quality of the GDP\(O\)](#)" (33.8 Kb Pdf) report.

Details on how the first estimate of GDP is created can be found in "[Creating the preliminary estimate of GDP](#)" (72.4 Kb Pdf) report.

Information on the annual and quarterly balancing processes, see the "[Balancing the output approach to measuring GDP](#)" (16.2 Kb Pdf) report.

[Impact of quarterly employment on monthly survey response](#) (163.7 Kb Pdf) .

[Monthly business survey variance of change paper](#) (110 Kb Pdf) .

[Initial results of the short-term output indicators user survey](#) (51 Kb Excel sheet) .

[ONS response to feedback from the short-term output indicators user survey](#) (110 Kb Pdf) .

7 . Engagement

The Office for National Statistics is keen to engage with our users and value your input in shaping the future of our outputs. Effective user engagement is fundamental both to the trust in statistics and in securing maximum public value. Protocol 1: User engagement in the Code of Practice for Official Statistics (2009) details the practices set out elsewhere in the Code and expands on the requirement in relation to consultation.

This page provides details of recent engagement with users and how to get in touch with ONS leads.

One of the primary areas of engagement for the short-term output indicators, namely the output approach to measuring gross domestic product GDP(O), the index of production and the index of services, is the GDP(O) improvement project. The main focus of this project is a programme of reviews covering all industries carried out with a prioritised approach. Further information on the GDP(O) improvement project can be found on the dedicated improvements page and includes plans and progress articles and reports.

Other engagement with users – seminars and articles

[Users seminar 19 June 2014](#)

[The challenges of measuring the UK service sector](#) (102.7 Kb Pdf)

[Users seminar 2 October 2013](#)

[Feedback from the index of production and index of services user engagement strategy - 2011](#) (37.3 Kb Pdf)

Stakeholder groups

Stakeholder groups for ONS short-term output indicators (the output approach to measuring GDP, index of services, index of production, retail sales and the output measure of construction).

[Short-term Output Indicators Stakeholder Group](#)

[Bank of England/HM Treasury/Office for Budget Responsibility/Department for Business, Innovation and Skills /ONS review of quarterly national accounts](#)

Getting in touch

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