

# Gross Domestic Product Preliminary Estimate - Q4 2011



Coverage: **UK**

Date: **25 January 2012**

Geographical Area: **UK and GB**

Theme: **Economy**

## Key Points

- Updated 25/1/2012 - Correction Note: A production error was discovered in the GDP preliminary estimate Q4 2011, originally published at 9.30am on 25th January 2012. The series affected are the 2011 annual pounds million level (ABMI), and the annual index level (YBEZ). All associated growth rates were correct at the time of publishing, and the error has now been corrected.
- The chained volume measure of GDP decreased by 0.2 per cent in the fourth quarter of 2011
- Output of the production industries decreased by 1.2 per cent in Q4 2011, compared with an increase of 0.2 per cent in the previous quarter
- Construction sector output decreased by 0.5 per cent in Q4 2011, compared with an increase of 0.3 per cent in the previous quarter
- Output of the service industries was unchanged in Q4 2011, following a rise of 0.7 per cent in the previous quarter
- GDP in volume terms increased by 0.8 per cent in Q4 2011 compared with Q4 2010

## Key Figures

**GDP at market prices**

Percentage change: latest quarter on previous quarter

		<b>Chained Volume Measure</b>	<b>GDP</b>	<b>Total Production</b>	<b>Construction</b>	<b>Total Services</b>
2008=100						
<b>2010</b>	Q1	96.6	0.4	1.3	0.9	0.0
	Q2	97.7	1.1	1.2	8.1	0.5
	Q3	98.3	0.7	0.2	3.1	0.6
	Q4	97.9	-0.5	0.2	-1.4	-0.3
<b>2011</b>	Q1	98.3	0.4	-0.3	-1.6	0.8
	Q2	98.3	0.0	-1.4	3.1	0.1
	Q3	98.8	0.6	0.2	0.3	0.7
	Q4	98.6	-0.2	-1.2	-0.5	0.0

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**Supplementary analysis**

Gross Domestic Product (GDP) decreased by 0.2 per cent in the fourth quarter of 2011, driven by weakness in the Production sector and the Construction sector.

**The public sector strike on 30 November**

The public sector strike on 30 November is likely to have had some impact on GDP in the fourth quarter. It is not possible to measure the effect on GDP directly.

Information from the ONS's Labour Disputes Inquiry, which was published as part of the Labour Market release on 18 January, suggests that nearly one million working days were lost, representing about 0.2 per cent of the total number of working days for the public sector for the quarter. There are two categories to consider when thinking about the possible impact on output:

1. The lost output or production of those sectors directly affected by the strike (eg health, education, public administration)

2. The lost output or production of those businesses indirectly affected by the strike (eg employees having to take a day off to provide child care)

The effect of the first category on the official estimates does depend to some extent on how GDP(O) is measured:

- health sector output is in part measured by the number of operations and there are reports of delays as a result of the strike, thus reducing the number of operations (and therefore output) in the month. The impact is likely to have been small, even if we assume that there was no catch-up. A loss of one day's activity accounts for about 1.5 per cent of activity in the quarter and the extent of the disruption - looking at the number of operations which were postponed - was relatively small when considering the total number of operations in one day. In turn, this is quite a small part (about 16 per cent) of the health sector
- education output is measured by the number of pupils, adjusted for attendance. In practice strike days are often made up or partly made up (eg by adjusting teacher training days) so that the overall needs of the curriculum are still met. There is no specific adjustment made for strike days in the official estimates so there is no impact on education output
- public administration is measured by the number of staff (on a full-time equivalent basis). The strike has no measured impact on the data

The overall impact of the first category on GDP is therefore likely to be small. The impact of the second category is difficult to assess but is likely to have resulted only in moving activity within the quarter.

An article on Analysing the path of GDP in the presence of special events can be found at:

[Analysing the path of GDP in the presence of special events](#)

## GDP in detail

Gross Domestic Product measures the chained volume index movements of the UK. The service sector accounts for more than three quarters of total gross domestic product. Figures are adjusted for seasonal variations unless otherwise stated and the reference year is 2008=100. For an explanation of the terms used in this bulletin, please see the Background Notes section. An assessment of the quality of the services statistics is available in the background notes.

### Index of production

The seasonally adjusted index of production in Q4 2011 decreased by 1.2 per cent compared with an increase of 0.2 per cent in the previous quarter:

1. Output decreased in three of the four sub-sectors
2. Manufacturing contributed the most to the decline, followed by electricity, gas, steam and air conditioning supply

Production output decreased by 2.6 per cent between Q4 2010 and Q4 2011.

### **Construction**

Construction output in Q4 2011 decreased by 0.5 per cent compared with an increase of 0.3 per cent in the previous quarter. Construction increased by 1.3 per cent between Q4 2010 and Q4 2011.

### **Distribution, hotels and restaurants**

The seasonally adjusted index for distribution, hotels and restaurants in Q4 2011 decreased by 0.5 per cent compared with a 0.2 per cent increase in the previous quarter:

1. Output decreased in four of the five components
2. Wholesale and motor trades made the largest contributions to the decrease

Distribution, hotels and restaurants increased by 0.7 per cent between Q4 2010 and Q4 2011.

### **Transport, storage and communication**

The seasonally adjusted index for transport, storage and communication in Q4 2011 decreased by 0.1 per cent compared with a 0.3 per cent increase in the previous quarter:

1. Output decreased in six of the twelve components
2. Computer programming, consultancy and related activities and land transport made the largest contributions to the decrease

Transport storage and communication decreased by 0.1 per cent between Q4 2010 and Q4 2011.

### **Business services and finance**

The seasonally adjusted index for business, services and finance was unchanged in Q4 2011 following an increase of 1.2 per cent in the previous quarter:

1. Output increased in eight of the twenty-one components
2. Buying and selling of real estate made the largest positive contribution and legal & accounting activities made the largest negative contribution

Business services and finance increased by 2.1 per cent between Q4 2010 and Q4 2011.

### **Government and other services**

The seasonally adjusted index of government and other services increased by 0.4 per cent in Q4 2011 compared with an increase of 0.6 per cent in the previous quarter:

1. Output increased in nine of the thirteen components
2. Health, education and creative arts and entertainment made the largest positive contributions to the increase

Government and other services increased by 2.5 per cent between Q4 2010 and Q4 2011.

## Background notes

### 1. What's New?

#### Economic Analysis

Additional supporting economic analysis relating to the Preliminary Estimate of GDP can be found at:

[Economic Review - January 2012](#)

#### Special Events

An article on Analysing the path of GDP in the presence of special events can be found here:

[Analysing the path of GDP in the presence of special events](#)

### 2. Forthcoming changes

As a result of a review of the content and presentation of GDP statistical bulletins and following consultation with key users, the ONS will be making some presentational changes to future releases. From the second estimate of GDP for Q4 2011 published on 24 February. Table E (the detailed breakdown of changes to inventories) will no longer be included, but an additional table, equivalent to table M in the quarterly national accounts bulletin (quarterly alignment adjustments), will be included. Additionally, in all subsequent second estimate and quarterly national accounts bulletins, the aggregate income and expenditure tables will include the alignment adjustments as "of which" items within the relevant components - changes in inventories and gross operating surplus.

### 3. Understanding the data

#### Short Guide to GDP

Gross Domestic Product (GDP) is an integral part of the UK national accounts and provides a measure of the total economic activity in the UK. GDP is often referred to as one of the main 'summary indicators' of economic activity and references to 'growth in the economy' invariably refer to the growth in GDP during the latest quarter.

In the UK three different but equivalent approaches are used in the estimation of GDP.

GDP from the output or production approach - GDP(O) measures the sum of the value added created through the production of goods and services within the economy (our production or

output as an economy). This approach provides the first estimate of GDP and can be used to show how much different industries (for example, agriculture) contribute within the economy.

GDP from the income approach - GDP(I) measures the total income generated by the production of goods and services within the economy. The figures provided breakdown this income into, for example, income earned by companies (corporations), employees and the self employed.

GDP from the expenditure approach - GDP(E) measures the total expenditures on all finished goods and services produced within the economy.

#### 4. **Interpreting the data**

Figures for the most recent quarter are provisional and subject to revision in light of (a) late responses to surveys and administrative sources, (b) forecasts being replaced by actual data and (c) revisions to seasonal adjustment factors which are re-estimated every quarter and reviewed annually (changes from the latest review are included in this release).

#### 5. **Definitions and explanations**

Definitions found within the main statistical bulletin are listed here:

##### **Chained volume measure**

An index number from a chain index of quantity. The index number for the reference period of the index may be set equal to 100 or to the estimated monetary value of the item in the reference period.

##### **Index number**

A measure of the average level of prices, quantities or other measured characteristics relative to their level for a defined base reference period or location. It is usually expressed as a percentage above or below, but relative to, the base index of 100.

#### 6. **Methods**

A link to the GDP methodology and a guide to UK National Accounts can be found at:

[Guide to National Accounts](#)

In the coming months ONS will be reviewing and updating existing guidance and methodology documents to reflect the move to SIC 2007.

#### 7. **Seasonal Adjustment**

The index numbers in this statistical bulletin are all seasonally adjusted. This aids interpretation by removing annually recurring fluctuations, for example, due to holidays or other regular seasonal patterns. Unadjusted data are also available.

Seasonal adjustment removes regular variation from a time series. Regular variation includes effects due to month lengths, different activity near particular events such as shopping activity before Christmas, and regular holidays such as the May bank holiday. Some features of the calendar are not regular each year, but are predictable if we have enough data - for example the number of certain days of the week in a month may have an effect, or the impact of the timing of Easter. As Easter changes between March and April we can estimate its effect on time series and allocate it between March and April depending on where Easter falls. Estimates of the effects of day of the week and Easter are used respectively to make trading day and Easter adjustments prior to seasonal adjustment.

## 8. **Deflation**

It is common for the value of a group of financial transactions to be measured in several time periods. The values measured will include both the change in the volume sold and the effect of the change of prices over that year. Deflation is the process whereby the effect of price change is removed from a set of values to derive the volume. These volumes are described as 'at constant prices'.

Within GDP, all series, unless otherwise quoted, are measured at constant market prices. Deflators adjust the value series to take out the effect of price changes to give the volume series.

## 9. **Quality**

Basic quality information

All estimates, by definition, are subject to statistical 'error' but in this context the word refers to the uncertainty inherent in any process or calculation that uses sampling, estimation or modelling. Most revisions reflect either the adoption of new statistical techniques, or the incorporation of new information, which allows the statistical error of previous statements to be reduced. Only rarely are there avoidable 'errors' such as human or system failures, and such mistakes are made quite clear when they do occur.

## 10. **Summary quality report**

A Summary Quality Report for this statistical bulletin can be found on the National Statistics website at:

[Summary Quality Report for Gross Domestic Product](#)

This report describes in detail the intended uses of the statistics presented in this publication, their general quality and the methods used to produce them.

## 11. **National Accounts revision policy**

In accordance with the National Accounts revision policy, there are no periods open for revision in this release.

This release includes information available up to 17 January 2012.

The National Accounts revision policy is available at:

[National Accounts: Revisions Statement](#)

## 12. Revision triangles

Spreadsheets giving revisions triangles (real time databases) of estimates from 1992 to date are available to download from the data section of this release. Revisions triangles for the main components of gross value added by industry are also available.

Revisions to data provide one indication of the reliability of key indicators. Tables 1 and 2 show summary information on the size and direction of the revisions which have been made to data covering a five year period. A statistical test has been applied to the average revision to find out if it is statistically significantly different from zero. The result of the test is that the average revision is not statistically different from zero.

The data used are consistent with that used in more detailed analysis that have been published in Economic Trends. The most recent article was published on the National Statistics website on 11 December 2006 and can be found at:

[Revisions to quarterly GDP growth and its production \(output\), expenditure and income components](#)

Table 1 below shows the revisions between the early estimates of GVA. The analysis of revisions between month 1 and month 2 uses month 2 estimates published from February 2007 (Q4 2006) to November 2011 (Q3 2011). The analysis of revisions between month 2 and month 3 uses month 3 estimates published from March 2007 (Q4 2006) to December 2011(Q3 2011).

**Table 1: Revisions to early estimates of GVA growth**

Revisions to GVA growth	GVA Growth in the latest period (per cent)	Revisions between early estimates of GVA growth (quarterly, CVM)	
		Average over the last five years	Average over the last five years without regard to sign (average absolute revision)
Between M1 and M2	-0.2	0.01	0.05
Between M2 and M3	-0.2	-0.04	0.08

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Table 2 below shows the revisions to GVA growth between the estimate published three months after the end of the quarter and the equivalent estimate three years later. The analysis uses month 3 estimates first published from March 2004 (Q3 2004) to December 2008 (Q3 2008).

**Table 2: Revisions to month 3 estimates of GVA growth**

Revisions to GVA growth	GVA growth in the latest period (per cent)	Revisions between early estimates of GVA growth (quarterly, CVM)	
		Average over the last five years	Average over the last five years without regard to sign (average absolute revision)
GVA growth (quarterly CVM)	-0.2	-0.10	0.27

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(27 Kb)

An article titled 'Understanding the quality of early estimates of Gross Domestic Product', which was first published in December 2009, is available on the National Statistics website at:

Understanding the quality of early estimates of Gross Domestic Product.

This article presents an analysis of revisions to the early estimates of GDP based on a long period database of real time GDP back to 1955. This database is regularly updated and is available on the ONS website.

**13. Following ONS**

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View the latest podcasts here [www.youtube.com/ONSstats](http://www.youtube.com/ONSstats)

**14. Publication Policy**

Details of the policy governing the release of new data are available from the press office. Also available is a list of those given pre-publication access to the contents of this release:

### [RPTD - Pre Release Contacts](#)

A complete set of series in the statistical bulletin are available to download within the data section of this publication.

Alternatively, for low-cost tailored data, call Online Services on 0207 5335675 or email [tailored@statistics.gov.uk](mailto:tailored@statistics.gov.uk)

## 15. Code of Practice for Official Statistics

National Statistics are produced to high professional standards set out in the code of practice. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from any political interference.

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### [Code of Practice](#)

## 16. Next publication date: Friday 24 February 2012 (Second Estimate of GDP)

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# B1 Gross Domestic Product by Gross Value Added<sup>1</sup>

chained volume measures of industry output at basic prices

2008=100

Analysis by categories of output <sup>3</sup>																
Production										Services					Gross domestic product at market prices <sup>4,5</sup>	Gross value added exc oil & gas
Agriculture, forestry and fishing	Mining & quarrying	Manu- facturing	Electricity gas, steam and air	Water supply, sewerage etc	Total IOP	Constru- ction	Distribu- tion, hotels and restaurants	Transport, storage and commu- cation	Business services and finance	Govern- ment and other services	Total Services					
2008 Weights <sup>2</sup>	7	25	102	14	12	154	76	137	112	292	222	763	1000	978		
<b>Index numbers</b>																
	L2KL						L2N8	L2PZ	KI8M	KI80	KI8Q	L2NC	YBEZ	KLH7		
2007	86.1	107.0	102.7	99.5	101.8	102.9	102.9	102.9	100.2	100.2	99.6	100.5	101.1	100.8		
2008	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
2009	84.8	91.0	90.4	95.2	91.9	91.0	86.5	95.4	94.3	95.7	102.3	97.4	95.6	95.6		
2010	83.5	86.5	93.7	98.5	90.4	92.7	93.6	96.8	97.1	96.9	103.1	98.7	97.6	97.7		
2011	85.5	73.7	95.8	94.6	92.8	91.8	96.5	97.4	97.8	98.8	104.8	100.2	98.5 †	99.0		
2008 Q2	100.7	101.3	101.6	102.2	100.5	101.5	102.6	102.4	101.5	100.9	99.9	<b>100.9</b>	101.2	101.2		
Q3	99.8	100.6	99.9	99.1	102.2	100.1	98.8	98.9	99.6	99.1	99.9	<b>99.3</b>	99.2	99.4		
Q4	100.5	96.5	94.9	97.6	95.5	95.5	93.8	95.7	98.2	97.8	99.1	<b>97.9</b>	97.0	97.2		
2009 Q1	84.2	94.1	90.7	95.2	92.3	91.8	87.8	95.1	94.4	96.1	101.1	<b>97.1</b>	95.5	95.5		
Q2	84.4	94.0	90.4	94.5	91.4	91.5	85.6	94.8	93.1	95.7	101.7	<b>96.9</b>	95.3	95.1		
Q3	84.3	88.6	89.7	96.5	92.2	90.3	86.1	94.8	93.7	95.5	103.1	<b>97.3</b>	95.5	95.4		
Q4	86.3	87.5	90.7	94.7	91.6	90.6	86.4	96.9	95.9	95.5	103.4	<b>98.1</b>	96.2	96.2		
2010 Q1	86.5	88.3	91.8	99.9	89.1	91.8	87.1	96.3	96.5	96.1	102.8	<b>98.1</b>	96.6	96.5		
Q2	85.7	88.8	93.3	98.7	90.8	92.9	94.2	97.1	96.7	96.7	103.1	<b>98.6</b>	97.7	97.7		
Q3	85.2	86.7	94.6	95.0	91.3	93.1	97.1	97.5	97.2	97.5	103.5	<b>99.2</b>	98.3	98.4		
Q4	76.7	82.4	95.2	100.7	90.5	93.2	95.8	96.4	97.9	97.4	102.9	<b>98.9</b>	97.9	98.1		
2011 Q1	86.0	78.5	95.9	95.6	95.0	93.0	94.2	97.4	97.8	98.1	104.2	<b>99.7</b>	98.3	98.7		
Q2	85.0	72.5	96.0	94.3	92.4	91.7	97.2	97.4	97.6	98.2	104.5	<b>99.8</b>	98.3	98.8		
Q3	85.4	72.3	96.0	96.4	91.9	91.8	97.5	97.6	97.9	99.4	105.1	<b>100.5</b>	98.8	99.4		
Q4	85.5	71.6	95.1	92.4	92.1	90.8	97.0	97.1	97.8	99.4	105.5	<b>100.5</b>	98.6	99.2		
<b>Preliminary Estimate</b>																
2011 Q4	85.5	71.6	95.1	92.4	92.1	90.8	97.0	97.1	97.8	99.4	105.5	100.5	98.6	99.2		
<b>Percentage changes: annual and latest quarter on previous quarter</b>																
	L3BB						L3DW	L3GP	KI8L	KI8N	KI8P	L3E2	IHYQ	KLH8		
2007	-3.7	-2.5	0.8	0.8	3.0	0.5	2.1	4.8	5.8	6.4	1.0	4.4	3.5	3.7		
2008	16.2	-6.5	-2.6	0.5	-1.8	-2.8	-2.8	-2.8	-0.2	-0.2	0.4	-0.5	-1.1	-0.8		
2009	-15.2	-9.0	-9.6	-4.8	-8.1	-9.0	-13.5	-4.6	-5.7	-4.3	2.3	-2.6	-4.4	-4.4		
2010	-1.5	-4.9	3.7	3.5	-1.6	1.9	8.2	1.5	3.0	1.3	0.7	1.4	2.1	2.2		
2011	2.3	-14.8	2.2	-4.0	2.7	-1.0	3.1	0.6	0.7	1.9	1.7	1.4	0.9	1.4		
													IHYQ			
2008 Q2	1.7	-0.3	-1.9	1.1	-1.2	-1.4	-2.0	-0.6	0.6	-1.3	-1.2	-0.9	-1.3	-1.0		
Q3	-0.8	-0.7	-1.6	-3.0	1.6	-1.4	-3.7	-3.4	-1.9	-1.8	-	-1.6	-2.0	-1.7		
Q4	0.7	-4.1	-5.0	-1.5	-6.5	-4.7	-5.1	-3.1	-1.4	-1.3	-0.8	-1.5	-2.3	-2.2		
2009 Q1	-16.3	-2.5	-4.5	-2.5	-3.4	-3.9	-6.4	-0.7	-3.8	-1.8	2.0	-0.8	-1.6	-1.8		
Q2	0.2	-0.1	-0.2	-0.8	-1.0	-0.3	-2.5	-0.2	-1.4	-0.4	0.6	-0.2	-0.2	-0.4		
Q3	-0.1	-5.7	-0.9	2.2	0.9	-1.3	0.6	-	0.6	-0.2	1.4	0.4	0.2	0.3		
Q4	2.4	-1.3	1.2	-1.9	-0.6	0.3	0.3	2.2	2.3	0.1	0.3	0.8	0.7	0.8		
2010 Q1	0.2	0.9	1.2	5.5	-2.7	1.3	0.9	-0.6	0.6	0.6	-0.6	-	0.4	0.4		
Q2	-0.9	0.6	1.6	-1.2	1.9	1.2	8.1	0.7	0.3	0.7	0.3	0.5	1.1	1.2		
Q3	-0.5	-2.3	1.3	-3.7	0.5	0.2	3.1	0.4	0.5	0.8	0.3	0.6	0.7	0.7		
Q4	-10.0	-5.0	0.7	6.0	-0.8	0.2	-1.4	-1.1	0.7	-0.1	-0.5	-0.3	-0.5	-0.3		
2011 Q1	12.1	-4.7	0.8	-5.1	5.0	-0.3	-1.6	1.0	-0.1	0.7	1.3	0.8	0.4	0.6		
Q2	-1.1	-7.7	-	-1.4	-2.8	-1.4	3.1	-	-0.2	0.2	0.2	0.1	-	0.2		
Q3	0.5	-0.2	0.1	2.2	-0.5	0.2	0.3	0.2	0.3	1.2	0.6	0.7	0.6	0.6		
Q4	0.1	-1.1	-0.9	-4.1	0.2	-1.2	-0.5	-0.5	-0.1	-	0.4	-	-0.2	-0.2		
<b>Preliminary Estimate</b>																
2011 Q4	0.1	-1.1	-0.9	-4.1	0.2	-1.2	-0.5	-0.5	-0.1	-	0.4	-	-0.2	-0.2		
<b>Percentage changes: latest quarter on corresponding quarter of previous year</b>																
	L3ZZ						L44M	L47F	KI12	KI19	KI18	L44Q	IHYR	KLH9		
2011 Q4	11.5	-13.2	-	-8.3	1.7	-2.6	1.3	0.7	-0.1	2.1	2.5	1.7	0.8	1.1		

1 Estimates are not accurate to the last digit shown

2 Weights may not sum to the totals due to rounding

3 Components of output are valued at basic prices which excludes subsidies on products, whereas GDP is valued at market prices

4 Includes an implicit statistical discrepancy compared with the sum of the previous columns, because the GDP aggregate takes account of other information based on income and expenditure

5 In this, the preliminary estimate of GDP, series YBEZ (GDP chained volume indices) appears alongside GVA industry components as output is the sole contributor to GDP change for the latest quarter at this stage

† This series has been corrected from the previously published index of 98.3. All associated growths were correct at the time of publishing.