

Gross domestic product preliminary estimate 4th Quarter 2010



Date: 25 January 2011

Coverage: United Kingdom **Theme:** The Economy

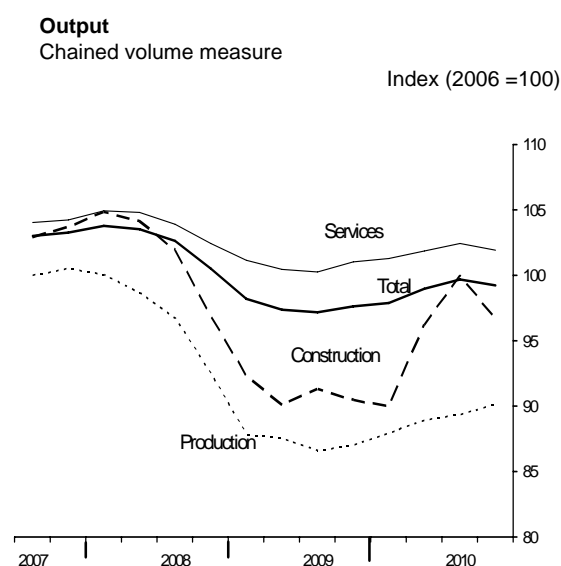
The chained volume measure of gross domestic product (GDP) decreased 0.5 per cent in the fourth quarter of 2010, following growth of 0.7 per cent in the previous quarter. Supplementary analysis of the impact of the bad weather in December is provided on page 7.

Output in the production industries increased 0.9 per cent.

Output in the construction sector decreased 3.3 per cent.

Output in the service industries decreased 0.5 per cent.

GDP increased 1.7 per cent in 2010 Q4 compared with 2009 Q4.



GDP at market prices

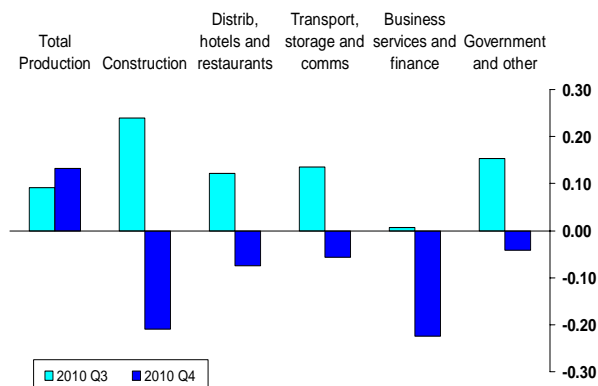
Percentage change: latest quarter on previous quarter

		Chained volume indices 2006=100	GDP	Total Production Industries	Construction	Total Services
		Seasonally adjusted				
2009	Q1	98.2	-2.2	-5.1	-4.8	-1.3
	Q2	97.4	-0.8	-0.3	-2.4	-0.7
	Q3	97.2	-0.3	-1.1	1.4	-0.2
	Q4	97.6	0.5	0.5	-0.9	0.7
2010	Q1	97.9	0.3	1.1	-0.6	0.3
	Q2	99.0	1.1	1.1	7.0	0.6
	Q3	99.7	0.7	0.5	3.9	0.5
	Q4	99.2	-0.5	0.9	-3.3	-0.5

Contributions to growth

Business services and finance, construction and distribution, hotels and restaurants were the largest contributors to the negative growth this quarter.

Contributions to GDP Growth
quarterly contributions



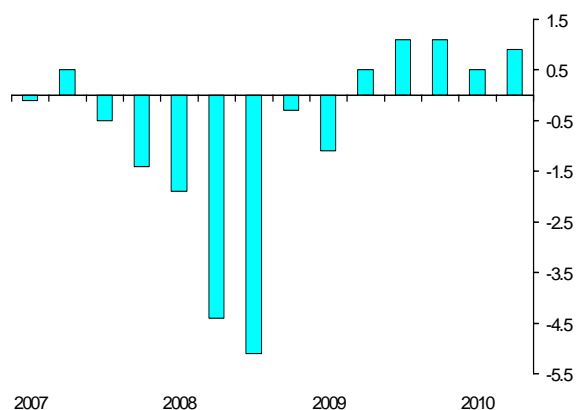
Index of Production

The production industries increased 0.9 per cent compared with an increase of 0.5 per cent in the previous quarter.

Manufacturing increased 1.4 per cent. Mining and quarrying decreased 2.5 per cent and Electricity, gas and water supply increased 1.2 per cent.

The production industries increased 3.6 per cent between 2010 Q4 and 2009 Q4.

Index of Production
quarter on quarter growth per cent

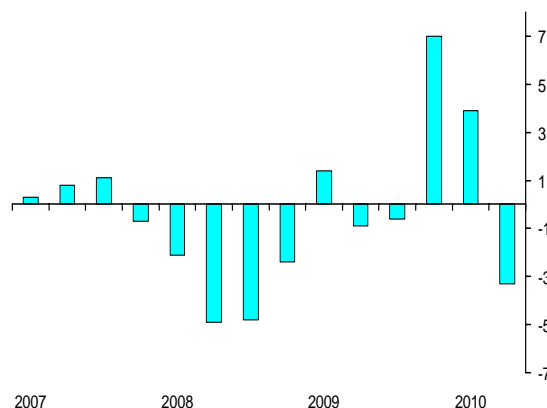


Construction

Construction decreased 3.3 per cent compared with an increase of 3.9 per cent in the previous quarter.

Construction increased 6.9 per cent between 2010 Q4 and 2009 Q4.

Construction
quarter on quarter growth per cent

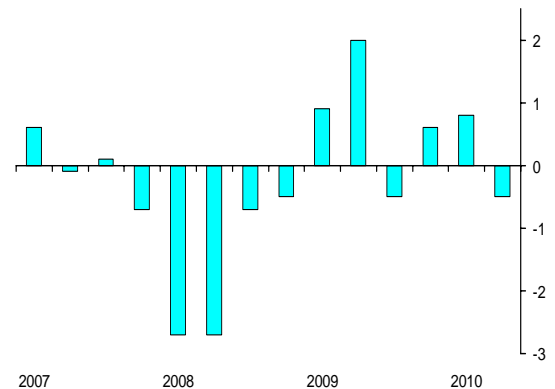


Distribution, hotels and restaurants

Distribution, hotels and restaurants decreased 0.5 per cent compared with an increase of 0.8 per cent in the previous quarter. Hotels and restaurants made the largest contribution to the decrease.

Distribution, hotels and restaurants increased 0.5 per cent between 2010 Q4 and 2009 Q4.

Distribution, hotels and restaurants
quarter on quarter growth per cent

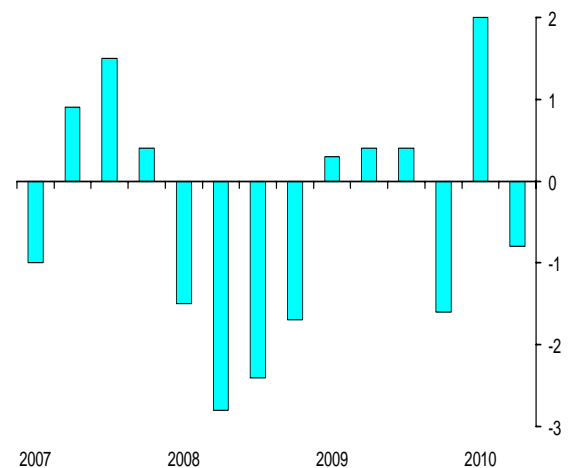


Transport, storage and communication

Transport, storage and communication decreased 0.8 per cent compared with an increase of 2.0 per cent in the previous quarter. The most significant negative contributions were from land transport and air transport.

Transport, storage and communication decreased 0.1 per cent between 2010 Q4 and 2009 Q4.

Transport, storage and communication
quarter on quarter growth per cent



Business services and finance

Business services and finance decreased 0.7 per cent, compared with no growth in the previous quarter. The most significant negative contribution was from computer services.

Business services and finance increased 0.9 per cent between 2010 Q4 and 2009 Q4.

Business services and finance
quarter on quarter growth per cent

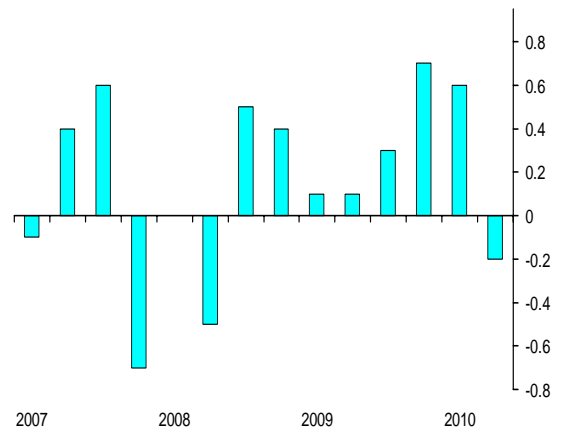


Government and other services

Government and other services decreased 0.2 per cent, compared with an increase of 0.6 per cent in the previous quarter. Recreation made the largest contribution to the decrease.

Government and other services increased 1.5 per cent between 2010 Q4 and 2009 Q4.

Government and other services
quarter on quarter growth per cent



GDP QUARTERLY TABLES

Quarter-on-quarter percentage growth

Component	2009 Q4	2010 Q1	2010 Q2	2010 Q3	2010 Q4
Agriculture	-1.0	-1.8	2.9	-0.3	0.3
Total Production	0.5	1.1	1.1	0.5	0.9
Manufacturing	1.0	1.4	1.6	1.1	1.4
Extraction	-0.1	-0.5	-0.4	-1.7	-2.5
Utilities	-2.2	1.2	-0.7	-0.5	1.2
Construction	-0.9	-0.6	7.0	3.9	-3.3
Total Services	0.7	0.3	0.6	0.5	-0.5
Distribution, hotels & restaurants	2.0	-0.5	0.6	0.8	-0.5
Transport, storage & communications	0.4	0.4	-1.6	2.0	-0.8
Business services & finance	0.8	0.6	0.9	0.0	-0.7
Government & other	0.1	0.3	0.7	0.6	-0.2

Quarter-on-quarter contribution to growth

Component	2009 Q4	2010 Q1	2010 Q2	2010 Q3	2010 Q4
Agriculture	0.0	0.0	0.0	0.0	0.0
Total Production	0.1	0.2	0.2	0.1	0.1
Manufacturing	0.1	0.2	0.2	0.1	0.1
Extraction	0.0	0.0	0.0	0.0	0.0
Utilities	0.0	0.0	0.0	0.0	0.0
Construction	-0.1	0.0	0.4	0.2	-0.2
Total Services	0.6	0.2	0.5	0.4	-0.4
Distribution, hotels & restaurants	0.3	-0.1	0.1	0.1	-0.1
Transport, storage & communications	0.0	0.0	-0.1	0.1	-0.1
Business services & finance	0.3	0.2	0.3	0.0	-0.2
Government & other	0.0	0.1	0.2	0.2	0.0

GDP ANNUAL TABLES

Year-on-year growth

Component	2006	2007	2008	2009	2010
Agriculture	0.8	-4.8	-0.2	-4.9	-1.6
Total Production	0.0	0.1	-3.1	-10.1	2.2
Manufacturing	1.6	0.5	-2.9	-10.7	3.8
Extraction	-7.9	-1.9	-6.3	-9.4	-4.6
Utilities	-0.5	0.2	0.0	-6.1	-0.5
Construction	1.0	2.7	-0.7	-10.7	5.1
Total Services	4.0	3.5	0.5	-3.2	1.2
Distribution, hotels & restaurants	3.3	2.8	-2.1	-3.6	2.1
Transport, storage & communications	2.5	3.7	0.6	-6.1	0.0
Business services & finance	7.0	5.6	2.0	-4.9	0.9
Government & other	1.2	1.1	0.1	0.4	1.3

Year-on-year contribution to growth

Component	2006	2007	2008	2009	2010
Agriculture	0.0	0.0	0.0	0.0	0.0
Total Production	0.0	0.0	-0.5	-1.6	0.3
Manufacturing	0.2	0.1	-0.4	-1.3	0.3
Extraction	-0.2	-0.1	-0.2	-0.2	-0.2
Utilities	0.0	0.0	0.0	-0.1	0.0
Construction	0.1	0.2	0.0	-0.7	0.3
Total Services	3.0	2.7	0.4	-2.4	0.9
Distribution, hotels & restaurants	0.5	0.4	-0.3	-0.5	0.3
Transport, storage & communications	0.2	0.3	0.0	-0.4	0.0
Business services & finance	2.1	1.7	0.6	-1.6	0.3
Government & other	0.3	0.3	0.0	0.1	0.3

Impact of the bad weather

Introduction

The figures published today show that GDP declined by 0.5 per cent in 2010 Q4.

The change in GDP in Q4 was clearly affected by the extremely bad weather in December last year. The disruption caused by the bad weather in December is likely to have contributed to most of the 0.5 per cent decline, that is, if there had been no disruption, GDP would be showing a flattish picture rather than declining by 0.5 per cent. We should emphasise that this assessment of the effect of the bad weather is the best we can make it at this stage, but is still inevitably uncertain.

The preliminary estimate is subject to revision in our next GDP release on 25 February (UK Output, Income and Expenditure). The full Quarterly National Accounts for Q4 is released on 29 March. Revisions tend to be fairly small on average, typically less than +/-0.2. Clearly, the bad weather creates more uncertainty than usual and increases the chance that the GDP estimate will be revised.

Calculating GDP

The normal procedure used to calculate GDP at the time of the preliminary release is to project forward the data - where monthly data is available - for the first two months, making use of such data as is available for the third month. We do normally have some information on the third month at this stage although it is fairly limited and much less than is available for the first two months.

In a normal quarter, this works quite well but Q4 was far from normal and the abnormal impact hit the third month where there would in general be little information. We have therefore had to change our approach. We have put a lot more resources into the estimate this time - because of the problems caused by the bad weather in the third month. We have:

- brought forward response chasing where we can in order to increase the response
- taken on data for the third month later in order to increase the response
- done more analyses of the data in the third month, particularly in sectors where there is likely to have been an impact, for example hotels/restaurants and transport

We have also looked in detail at what happened last January, which was also disrupted by bad weather, and last April, where the transport sector was affected by the ash cloud.

Method of estimation for effect of bad weather

We have estimated (using standard statistical techniques) what would have happened in December for each of the main aggregates in the services sector, given the data up to and including November. We have then compared this with the estimates that we actually produced.

The distribution of the difference across the sectors suggests that most of this difference is likely to be due to the effect of the bad weather.

Clearly, we do not actually know what would have happened in December had the weather been normal for the time of year and there may be other factors at play for example the VAT change but it is important to explain what we have done in case others want to take a different view.

Impact of bad weather on the sectors

The estimated impact of -0.5 per cent due to the bad weather is roughly split across the sectors as follows:

Construction	-0.1
Services	-0.4

Within services, the main areas affected are hotels and restaurants, the various transport industries (particularly land transport and air transport) and recreation. There may well have been impacts in other areas.

Background Notes

Release policy

1. This release includes information available up to 19 January 2011.

Estimates of UK output, income and expenditure will be published on 25 February 2011. A full set of quarterly national accounts will be published on 29 March 2011. The preliminary estimate of GDP for the first quarter of 2011 will be published on 27 April 2011.

2. 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:

<http://www.statistics.gov.uk/cci/article.asp?ID=1694>

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 2006 (2005 Q4) to November 2010 (2010 Q3). The analysis of revisions between month 2 and month 3 uses month 3 estimates published from March 2006 (2005 Q4) to December 2010 (2010 Q3).

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	-0.5	0.02	0.05
Between M2 and M3	-0.5	-0.04	0.08

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 2003 (2003Q1) to December 2007 (2007Q3).

Table 2: Revisions to month 3 estimates of GVA growth

	Value in latest period (per cent)	Revisions between first publication and estimates three years later	
		Average over the last five years	Average over the last five years without regard to sign (average absolute revision)
GVA growth (quarterly, CVM)	-0.5	0.07	0.19

Spreadsheets giving revisions triangles (real time databases) of estimates from 1992 to date, and the calculations behind the averages in both tables is available on the National Statistics website at:

<http://www.statistics.gov.uk/statbase/Product.asp?vlnk=13560>

Revisions triangles for the main components of gross value added by industry are also available at the link above.

An article by E George and D Obuwa 'National Accounts' Revisions Analyses: A summary to April 2005' is available on the National Statistics website at :

<http://www.statistics.gov.uk/cci/article.asp?ID=1140>

This article presents a summary of revisions analyses published up to April 2005 in ONS First Releases, including some more detailed analysis of revisions to GDP.

3. National Well-being – what matters to you ? Jon the debate at:

<http://www.ons.gov.uk/well-being>

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Gross Domestic Product by Gross Value Added¹ chained volume measures of industry output at basic prices

2006 = 100

Analysis by categories of output³

	Production						Service industries						Gross domestic product at market prices ^{4,5}	Gross value added excluding oil & gas
	Agriculture, hunting, forestry and fishing	Mining & quarrying inc oil & gas extraction	Manufacturing	Electricity gas and water supply	Total loP	Constr uction	Distribution hotels and restaurants	Transport, storage and communication	Business services and finance	Government and other services	Total Services			
2006 Weights ²	7	27	128	17	172	63	144	71	310	234	758	1000	975	
Index numbers	GDQA					GDQB	GDQE	GDQH	GDQN	GDQU	GDQS	YBEZ	JUNT	
2006	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	
2007	95.2	98.1	100.5	100.2	100.1	102.7	102.8	103.7	105.6	101.1	103.5	102.7	102.9	
2008	95.0	91.9	97.6	100.3	97.0	101.9	100.6	104.3	107.7	101.2	104.0	102.6	103.0	
2009	90.4	83.2	87.2	94.1	87.2	91.0	97.0	98.0	102.4	101.6	100.7	97.6	98.2	
2010	88.9	79.4	90.5	93.6	89.1	95.7	99.0	97.9	103.4	102.9	101.9	99.0	99.8	
2007 Q1	95.6	97.8	100.3	98.4	99.7	101.6	102.2	103.7	103.4	101.3	102.6	101.9	102.1	
Q2	96.0	98.7	100.5	99.1	100.1	102.6	102.6	104.1	105.0	100.9	103.2	102.5	102.7	
Q3	94.3	98.5	100.2	100.7	100.0	102.9	103.2	103.0	107.0	100.8	104.0	103.0	103.3	
Q4	95.0	97.3	100.9	102.8	100.5	103.7	103.2	104.0	107.0	101.2	104.2	103.3	103.6	
2008 Q1	94.8	93.5	101.3	101.2	100.1	104.8	103.3	105.5	107.9	101.8	104.9	103.8	104.3	
Q2	96.1	92.8	99.3	102.4	98.6	104.1	102.5	105.9	108.5	101.1	104.8	103.5	103.9	
Q3	95.3	92.5	97.3	99.1	96.7	101.9	99.7	104.4	107.8	101.2	103.9	102.6	102.8	
Q4	93.9	88.6	92.6	98.3	92.5	96.9	97.1	101.4	106.6	100.6	102.5	100.5	100.8	
2009 Q1	92.4	85.1	87.4	94.7	87.8	92.3	96.4	99.0	103.9	101.2	101.2	98.2	98.7	
Q2	90.7	85.4	87.2	93.6	87.6	90.1	95.9	97.3	102.4	101.6	100.5	97.4	97.9	
Q3	89.6	81.3	86.6	95.1	86.6	91.3	96.8	97.6	101.4	101.7	100.2	97.2	97.8	
Q4	88.7	81.2	87.4	93.0	87.0	90.4	98.8	98.0	102.2	101.8	101.0	97.6	98.4	
2010 Q1	87.1	80.8	88.6	94.1	87.9	89.9	98.3	98.3	102.8	102.1	101.3	97.9	98.7	
Q2	89.6	80.4	90.1	93.4	88.9	96.2	98.9	96.8	103.8	102.8	101.9	99.0	99.8	
Q3	89.4	79.1	91.1	92.9	89.4	100.0	99.7	98.7	103.8	103.4	102.4	99.7	100.6	
Q4	89.6	77.1	92.4	94.0	90.1	96.7	99.2	97.9	103.1	103.2	101.9	99.2	100.1	
Preliminary estimate														
2010 Q4	89.6	77.1	92.4	94.0	90.1	96.7	99.2	97.9	103.1	103.2	101.9	99.2	100.1	
Percentage changes: annual and latest quarter on previous quarter														
	GDQV					GDQW	GDQZ	GDRC	GDRI	GDRP	GDRN	IHYP	JUNW	
2006	0.8	-7.9	1.6	-0.5	-	1.0	3.3	2.5	7.0	1.2	4.0	2.8	3.2	
2007	-4.8	-1.9	0.5	0.2	0.1	2.7	2.8	3.7	5.6	1.1	3.5	2.7	2.9	
2008	-0.2	-6.3	-2.9	-	-3.1	-0.7	-2.1	0.6	2.0	0.1	0.5	-0.1	-	
2009	-4.9	-9.4	-10.7	-6.1	-10.1	-10.7	-3.6	-6.1	-4.9	0.4	-3.2	-4.9	-4.6	
2010	-1.6	-4.6	3.8	-0.5	2.2	5.1	2.1	-	0.9	1.3	1.2	1.4	1.6	
2007 Q1	-2.8	1.6	-0.6	0.9	-0.2	0.4	0.9	2.0	1.9	0.8	1.4	IHYQ	JUNU	
Q2	0.4	0.9	0.2	0.7	0.4	1.0	0.4	0.4	1.5	-0.5	0.6	1.0	1.0	
Q3	-1.7	-0.1	-0.3	1.6	-0.1	0.3	0.6	-1.0	2.0	-0.1	0.8	0.6	0.6	
Q4	0.7	-1.2	0.7	2.1	0.5	0.8	-0.1	0.9	-	0.4	0.2	0.3	0.3	
2008 Q1	-0.2	-3.9	0.3	-1.5	-0.5	1.1	0.1	1.5	0.9	0.6	0.7	0.5	0.6	
Q2	1.3	-0.8	-1.9	1.1	-1.4	-0.7	-0.7	0.4	0.5	-0.7	-0.1	-0.3	-0.3	
Q3	-0.8	-0.3	-2.0	-3.2	-1.9	-2.1	-2.7	-1.5	-0.6	-	-0.9	-0.9	-1.1	
Q4	-1.5	-4.2	-4.9	-0.8	-4.4	-4.9	-2.7	-2.8	-1.1	-0.5	-1.4	-2.1	-2.0	
2009 Q1	-1.6	-4.0	-5.5	-3.6	-5.1	-4.8	-0.7	-2.4	-2.5	0.5	-1.3	-2.2	-2.1	
Q2	-1.8	0.3	-0.2	-1.2	-0.3	-2.4	-0.5	-1.7	-1.4	0.4	-0.7	-0.8	-0.7	
Q3	-1.2	-4.8	-0.8	1.6	-1.1	1.4	0.9	0.3	-1.0	0.1	-0.2	-0.3	-0.1	
Q4	-1.0	-0.1	1.0	-2.2	0.5	-0.9	2.0	0.4	0.8	0.1	0.7	0.5	0.6	
2010 Q1	-1.8	-0.5	1.4	1.2	1.1	-0.6	-0.5	0.4	0.6	0.3	0.3	0.3	0.4	
Q2	2.9	-0.4	1.6	-0.7	1.1	7.0	0.6	-1.6	0.9	0.7	0.6	1.1	1.1	
Q3	-0.3	-1.7	1.1	-0.5	0.5	3.9	0.8	2.0	-	0.6	0.5	0.7	0.8	
Q4	0.3	-2.5	1.4	1.2	0.9	-3.3	-0.5	-0.8	-0.7	-0.2	-0.5	-0.5	-0.5	
Preliminary estimate														
2010 Q4	0.3	-2.5	1.4	1.2	0.9	-3.3	-0.5	-0.8	-0.7	-0.2	-0.5	-0.5	-0.5	
Percentage changes: latest quarter on corresponding quarter of previous year														
	GDRQ					GDRR	GDRU	GDRX	GSDS	GDSK	GDSI	IHYR	JUNV	
2010 Q4	1.0	-5.0	5.7	1.1	3.6	6.9	0.5	-0.1	0.9	1.5	0.9	1.7	1.8	

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 taxes less 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.

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