

Output, income and expenditure briefing note: 2003 Q3

This briefing document contains two parts:

Part 1: The standard briefing on the Output, income and expenditure dataset;

Part 2: Background information on the construction estimates used in the calculation of GDP. This material was prepared jointly by the ONS and the Department for Trade and Industry (DTI).

Part 1

Output, income and expenditure : 2003 Q3

Headlines

- The growth in real GDP for the **third quarter** of 2003 has been revised up to **0.7%** from 0.6% published last month. This upward revision of 0.1% reflects increases to the estimates of distribution services and construction output, and increases to the basic price adjustment following increases in the receipts of VAT. These increases are partially offset by downward revisions to manufacturing and mining and quarrying.
- The 4-quarter growth rate in the latest quarter is revised up to 2.0% from 1.9% published last month.
- The GDP deflator is 2.8% above the same quarter of last year.

There are no revisions to previous quarters.

Comparison of latest against last published growth rates:

	Previous quarterly	Now	Previous annual	Now
02 Q1	0.3	0.3	1.4	1.4
02 Q2	0.5	0.5	1.5	1.5
02 Q3	0.7	0.7	1.9	1.9
02 Q4	0.5	0.5	2.0	2.0
2002			1.7	1.7
03 Q1	0.2	0.2	1.8	1.8
03 Q2	0.6	0.6	2.0	2.0
03 Q3	0.6	0.7	1.9	2.0

Output (tables B1 and B2) in chained volume terms

In the latest quarter, the output of the agricultural and fisheries sector declined by 0.3%.

Output of the production industries decreased by 0.2% within which mining and quarrying fell by 2.5% and energy supply rose by 0.9%. The fall of 2.5% in mining and quarrying was the result of reduced oil production in the North Sea due to maintenance in the third quarter. The rise of 0.9% in energy supply was primarily driven by increased output of the gas and water industries. Within manufacturing, which remained at the same level as 2003 Q2, increases in output of eight of the subsectors were offset by falls in the remaining five subsectors. There was a significant fall in output in the transport equipment industries of 1.4%.

Construction output rose by 2.5% in the latest quarter, largely driven by repairs and maintenance. The growth of 2.5% in the latest quarter follows unusually high growth of 4.4% in the second quarter of 2003. Growth between the latest quarter and the corresponding quarter of the previous year is 6.9%, compared with 6.2% for the second quarter and 7.5% for 2002 overall. Further briefing is available in Part 2 of this briefing note.

Services rose by 0.8% over the quarter, compared to 0.2% in 2003 Q2, with growth driven by the business services and finance sector which rose by 1.0% as business services, in particular legal and architectural services, recovered in the second quarter. The distribution, hotels and restaurants sector rose by 0.7% over the quarter driven by growth of 1.5% in the retail sector and growth of 1.9% in motor trades. The transport and communications sector rose by 0.4% with growth in air transport and transport support (which includes travel agents). Elsewhere, government and other services rose by 0.6% over the quarter with steady increases across most sectors.

The output of services is now 2.3% above 2002 Q3.

Expenditure (C1, C2) in chained volume terms

Gross domestic expenditure rose by 1.0% in 2003 Q3.

Household expenditure rose by 0.7% with continuing strong growth in goods, especially durables and semi-durables.

Government expenditure rose by 0.6% in the latest quarter. The level of spending is 4.3% higher than in 2002 Q3.

Gross fixed capital formation declined by 1.3% driven by a decline of 4.5% in machinery and equipment excluding transport equipment. Investment in transport equipment rose by 0.7%. An increase in investment in dwellings of 1.4% was partially offset by a decrease of 0.4% in other buildings and structures. Business investment fell by 1.6% over the quarter and is now 0.7% above the level seen in 2002 Q3. Government investment fell by 0.8% in the latest quarter but remains 10.9% above 2002 Q3.

The level of inventories showed a rise of £1.0bn (table G) in the latest quarter as stocks held by the manufacturing and construction sectors increased over the quarter.

The deficit in net exports in 2003 Q3 worsened to £11.5bn from £10.8bn in the previous quarter. This increase in the deficit decreased GDP growth by 0.3% in the latest quarter.

Exports of goods fell by 0.5% driven by falls in exports of fuels, intermediate and capital goods. Exports of cars, chemicals and consumer goods all rose over the quarter. Exports to the EU fell by 0.4% and exports to non-EU countries fell by 0.5% in 2003 Q3. Imports of goods rose by 1.0%, driven by increases in the imports of fuels and consumer goods (excluding cars). Imports from the EU rose by 0.7% and imports from non-EU countries rose by 1.3% in 2003 Q3.

Exports of services rose by 1.5% as exports of travel and other business services increased over the quarter. Imports of services rose by 1.2% as imports of travel services increased.

Income (D) expressed at current prices

Over the quarter, compensation of employees rose by 1.5% driven by an increase in average earnings, with little change in employment.

The gross operating surplus of corporations rose by 0.6% in 2003 Q3, with diverse movements across the industrial sectors.

Taxes on production less subsidies rose by 1.9% in the quarter.

The next National Accounts release is on 23 December 2003.

Part 2

Estimating construction output

Review of early estimates of construction output

Concern has been expressed over the size of recent revisions to estimates of quarter on quarter change in construction output. In response to this concern the Department of Trade and Industry (DTI) and the ONS have set up a project which will examine both the causes of these revisions (stage 1) and options for reducing them (stage 2). The review will be lead by statisticians in DTI supported by ONS methodologists. Stage 1 will be completed by the end of 2003.

How DTI makes early estimates of construction output for ONS

DTI is responsible for official statistics on quarterly and annual construction output details in GB. These data are both published by DTI and supplied to ONS to inform its releases on quarterly National Accounts. DTI publishes a National Statistics release on quarterly construction output in the first week of the third month following the end of the quarter to which the data relate. DTI also supplies ONS with estimates of construction output. These are included in ONS estimates of GDP published in the first and second months following the end of the quarter. DTI figures cover Great Britain only. ONS makes some changes to the DTI estimate to include Northern Ireland construction, and to adjust for definitional differences.

The Month 1 estimate

The Month 1 estimate is used by ONS to inform the GDP figures published in the *Gross Domestic Product – preliminary estimate First Release*. DTI is required to provide this estimate within the first week following the end of the quarter to which the estimate relates, at which point no DTI output information is available.

Lacking any relevant data for the latest quarter at this time, DTI uses proxy forecasting models. It currently uses two. The first takes information from the DTI Monthly Inquiry of Contracts and New Orders to model New Work output and uses a series of regressions of composite orders indicators for each sector. The weights and number of quarters used varies between sectors to reflect the different size and type of work carried out – for example infrastructure contracts tend to take longer than private housing work.

The second model was introduced implementing the recommendations of a working group of representatives from DTI, ONS, HM Treasury and the Bank of England. The need for this second model followed concerns about the reliability of estimating changes in output based on changes in orders. The model uses past trends in output and the results of a monthly survey of construction activity balances to estimate total output. The results of both models are compared and an estimate is supplied to ONS

The Month 2 estimate

The Month 2 estimate is supplied to ONS at the beginning of the second month following the end of the quarter to which it relates for inclusion in the *UK Output, Income and Expenditure First Release*. In part the Month 2 estimate is based on early returns to the DTI Quarterly Inquiry of Construction Activity. For the last two quarters these early returns received have been used to assist the estimate of quarterly growth.

DTI are still building up an understanding of how the information received at this stage compares to that received by a month later when the survey response is much greater and the Month 3 estimate is made.

The Month 3 estimate

The Month 3 estimate is also published by DTI as the Output and Employment in the Construction Industry Statistical Release, usually around three weeks before the ONS *Quarterly National Accounts First Release* is published. It is based on survey returns to the DTI Quarterly Inquiry of Construction Activity and the small quarterly Building and Civil Engineering Employment and Output Inquiry which covers directly employed public sector construction labour, for example local authority maintenance teams.

Changes made for Q3 2003

DTI were able to access early survey data for Month 2 stage at a later stage than normal, when response rates were higher. In addition the M1 models were rerun.

Revisions history

ONS publishes estimates of construction growth as a part of the GDP estimates released each quarter at Month 2 and Month 3. Chart 1 shows the revisions made to these estimates between Month 2 and Month 3 for all quarters from 1998Q1 to 2003Q2.

The revisions history shown in Chart 1 should be looked at in the context of the behaviour of the time series of construction activity (Month 3) shown in Chart 2 (below). This shows that the largest revisions occur around irregular movements in the series (1997Q4 and 1998Q1, most of 2000, and 2003Q1 and Q2) and during the period of strong growth during 2001 and 2002. It is quite usual for forecasting models to perform less well around irregular movements in a time series.

Chart 1.

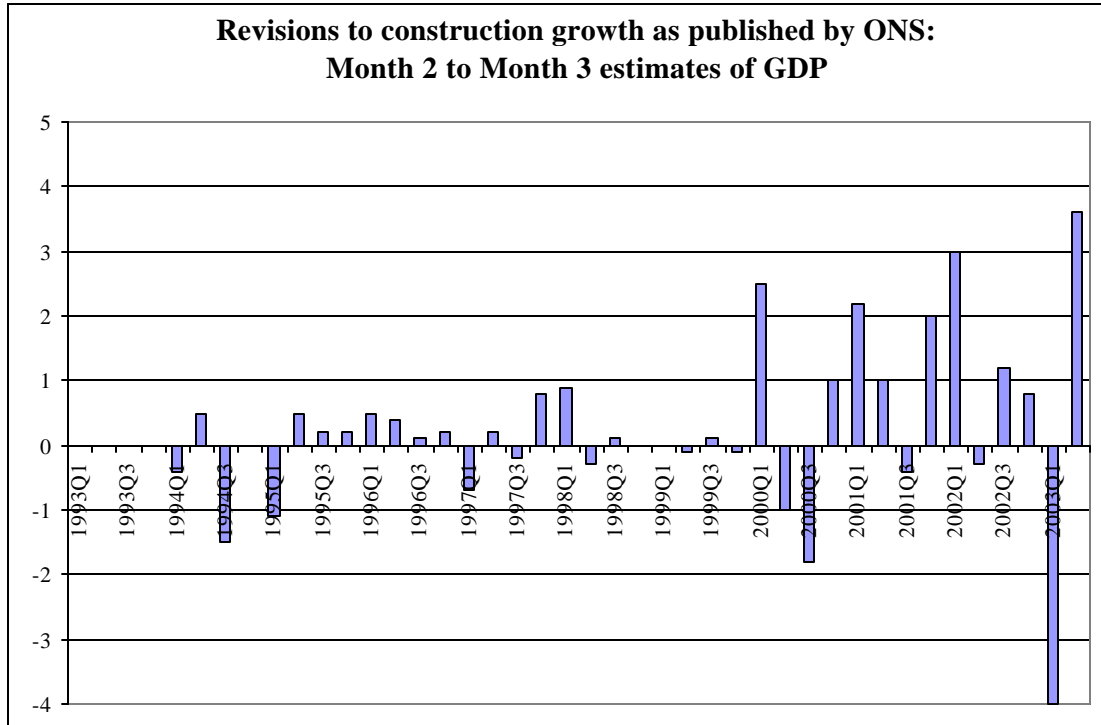
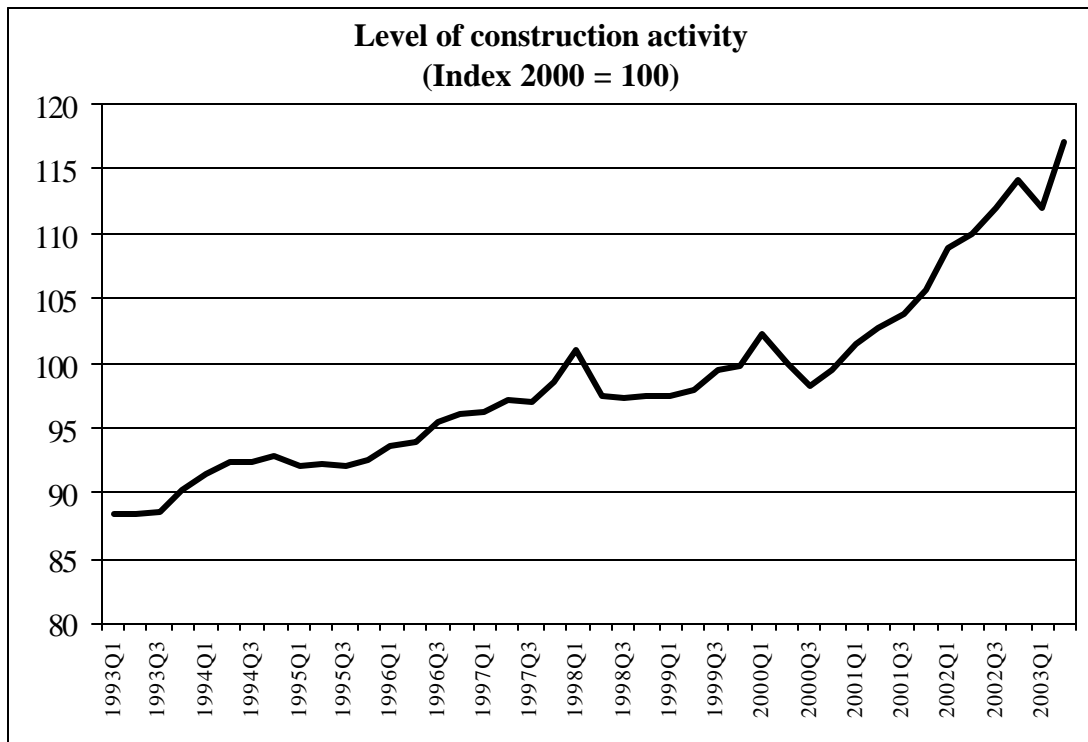
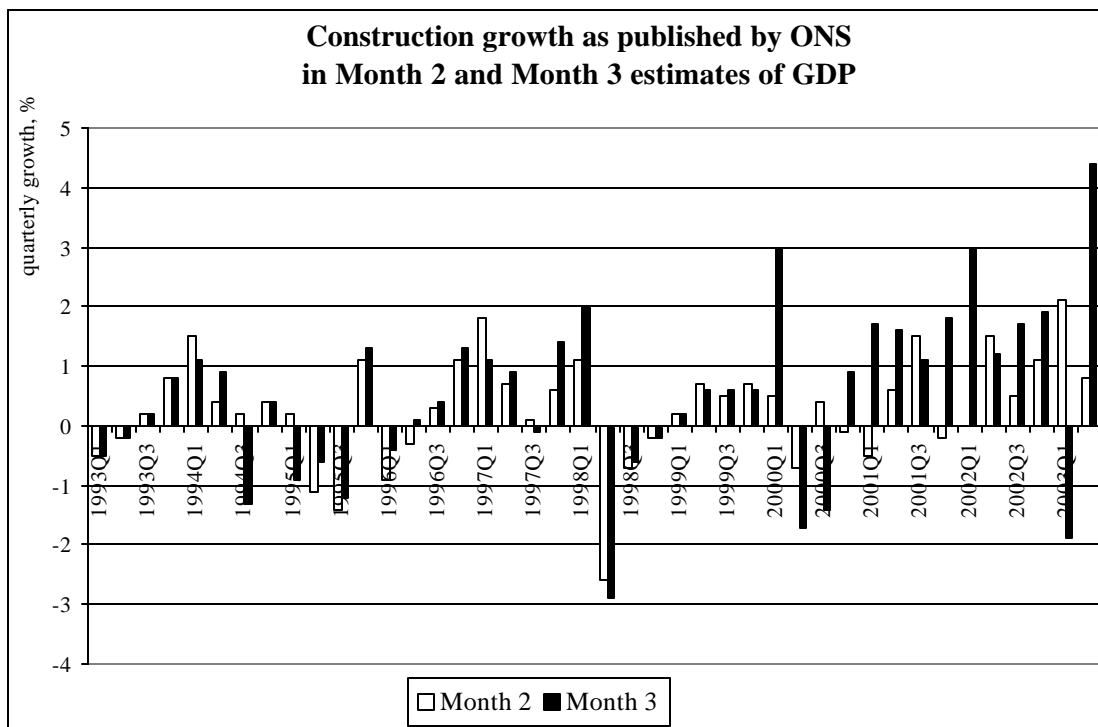


Chart 2.



To put the size of the revisions into context, Chart 3 shows the estimates of construction growth published by the ONS for the same period:

Chart 3.



Effect on GDP growth

Since a change in the growth of construction output of 1 percentage point leads to a change in GDP growth of 0.054 percentage points, the following table shows the effect on GDP growth of revisions to construction growth:

Revisions to quarterly growth rates :
percentage points

Revision to construction growth	Effect on GDP growth
-4.0	-0.22
-3.0	-0.16
-2.0	-0.11
-1.0	-0.05
0.0	0.00
1.0	0.05
2.0	0.11
3.0	0.16
4.0	0.22

N.B. the effect seen on the published GDP growth rates will depend on rounding.