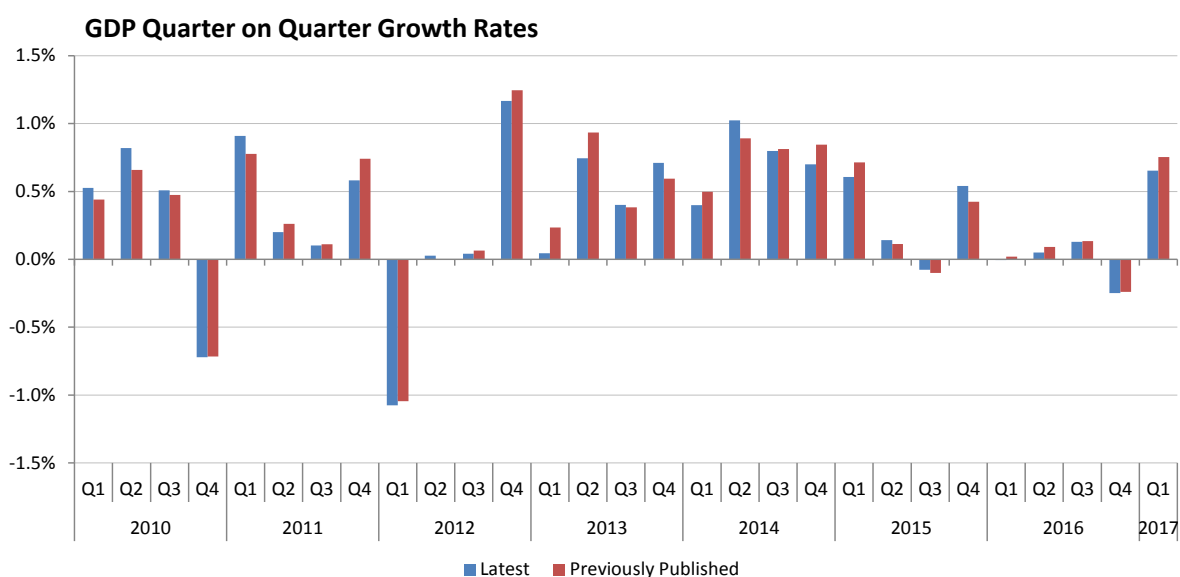


# Revisions to Scottish GDP - 2017 Quarter 1

## Introduction

The release of Quarterly National Accounts Scotland for 2017 Quarter 1 includes updates based on the latest Supply-Use Tables. This includes revised annual industry weights and benchmark data for 1998-2013, and the addition of new data for 2014. As a result, the based year of the GDP index has moved forward to 2014, and the chained volume index has been re-referenced to 2014=100. As is normal practice, we have also taken this opportunity to implement other annual data updates and methodology improvements to the Scottish estimates.

Revisions to quarterly growth rates for recent years are summarised below.



## Timing of GDP statistics and revisions

In previous years the reweighting of quarterly GDP statistics has been timed to coincide with the publication of the Supply and Use Tables from which the weights and annual benchmarks are sourced. The estimate of growth in the *Scotland's Gross Domestic Product* publication has then been used without revision in the subsequent *Quarterly National Accounts Scotland* publication (in which current price measures of GDP have been updated in line with the Supply and Use Tables).

However, during 2017 the Scottish Government has made progress on producing quarterly GDP statistics on a faster timescale than previously, with releases now generally published during the first full week of the month (less than 100 days after the end of the quarter) instead of the second or third full week of the month (around 110 days after the end of the quarter). To maintain this schedule for the latest quarter, the first release for 2017 Quarter 1 was published on 5 July 2017. This publication used the existing weights for 2013, and, exceptionally in this quarter, with no previous periods open for revision. The annual *Supply and Use Tables for 1998-2014* were then published on 26 July 2017.

An updated 'second estimate' of GDP growth for 2017 Quarter 1 has now been produced as part of Quarterly National Accounts Scotland, based on the new 2014 weights and including revisions to source data and annual benchmarks in all periods back to 1998 Quarter 1, at the same time as the current price measures have been updated on a consistent basis.

This revisions procedure very closely mirrors that followed by ONS during the quarterly GDP cycle and at the annual reweighting of UK GDP statistics. For UK GDP, growth in the latest quarter can be revised between each of the three estimates produced each quarter, but revisions to previous periods are usually only published in the Quarterly National Accounts. This approach allows for timely production of statistics for the latest quarter while minimising the number of times that estimates for previous periods are revised due to incremental inclusion of new or updated data, which could be potentially confusing or distracting for users. Each year, in the relevant quarter, ONS produces the first and second estimates of GDP growth using previous weights, and then revises the third estimate in the UK Quarterly National Accounts using new weights consistent with the forthcoming Blue Book. In 2017, these revisions will be in the QNA for 2017 Q2 (September), prior to the Blue Book 2017 in October.

### **Future developments on GDP statistics and revisions**

In recent periods the Scottish Government has generally published quarterly GDP growth statistics within 100 days from the end of the reference quarter. These statistics continue to be based on data consistent with the UK Quarterly National Accounts 'third estimate' of GDP.

The Scottish Government is investigating the feasibility of producing GDP statistics on a more timely basis using earlier cuts of data, such as those consistent with the 'second estimate' of UK GDP, followed by an updated Scottish 'second estimate' in each *Quarterly National Accounts Scotland*.

Users will be updated on this work over the coming year, and consulted on any change to the current revisions policy and scheduling.

### **Annual reweighting**

In order to produce quarterly estimates of GDP we need information on the size and structure of the Scottish economy. This information comes from the Scottish Supply & Use tables which are updated annually each July. The Scottish Supply & Use tables assign weights, showing the proportion of the economy that each industry represents and these weights change over time as industries grow or contract. The introduction of revised weights for previous years and new weights for the latest years can change the relative contribution that each detailed industry makes to growth in each quarter, and therefore lead to revisions to the estimates of total GDP growth and to the aggregate industrial groupings.

### **Benchmarking**

Where we benchmark the output of an industry to the balanced estimates provided by the Scottish Supply & Use tables, we now use the 2017 edition of these tables (covering 1998-2014). This provides an additional year of balanced estimates (2014) as well as updates to the historic data, and we see historic revisions accordingly. More information on the Supply & Use tables is available here: <http://www.gov.scot/input-output>

### **New and Revised Data**

The latest GDP estimates for Scotland also incorporate a small number of methodology improvements this year. These allow our estimates to better reflect behaviour of the Scottish economy. By making these changes alongside data revisions and reweighting we can confine changes to the historical time series to one quarter each year.

There are a few reasons we may make a methodological change:

- (a) Where a more relevant or timely source of data is identified
- (b) Where there is a substantive change in the industry which our existing methods do not capture.
- (c) Where possible, to ensure consistency in methods with the UK National Accounts, ensuring that comparability with estimates for the UK as a whole is maintained.

In this year the main developments have been to:

(i) Public Administration & Defence

Within Public Administration and Defence, updates have been made to the output activity index used for Justice services in Scotland. This is to better reflect the way in which criminal justice social work orders are currently delivered.

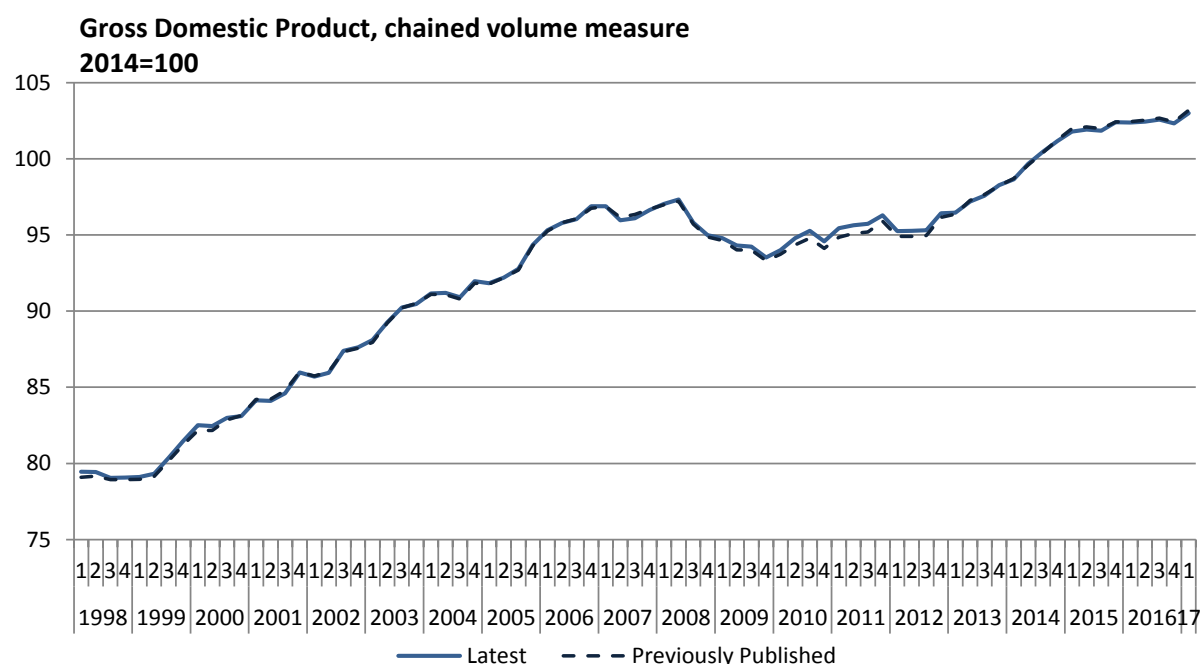
(ii) Other Services

Where we previously used data from UK Consumer Trends (household spend on services) as an indicator of production in some smaller industries, we now use UK output in these industries taken from the low level aggregates of UK GDP(o). This data source provides a more direct indicator of output of these industries, particularly for services such as gambling where household expenditure can include imports of foreign online services.

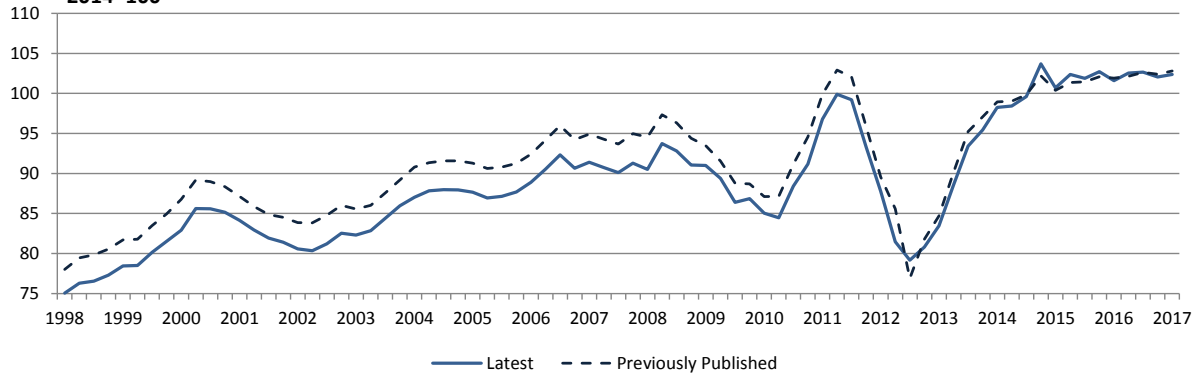
The Scottish Government continues to review the data sources available, and to explore the feasibility of developing more direct measures of output in Scotland for these industries. The UK GDP(o) low level aggregates are available from ONS alongside each GDP publication.

**Revisions to broad industry volume measures**

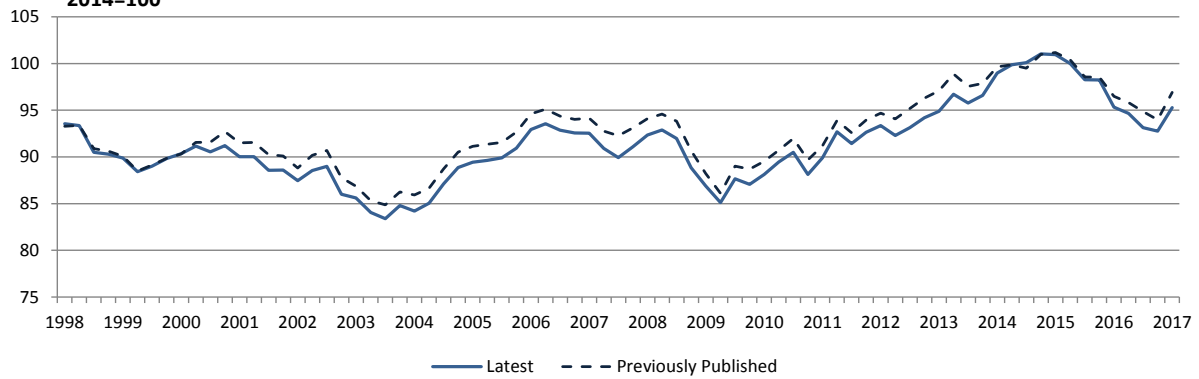
The charts below illustrate the net effect of revisions to the longer run time series at the level of the whole economy and for high-level industry groups. Previous statistics have been re-indexed to 2014=100 to allow for direct comparison to the latest figures. Detailed revisions tables are available at <http://www.gov.scot/Resource/0052/00523695.xlsx>



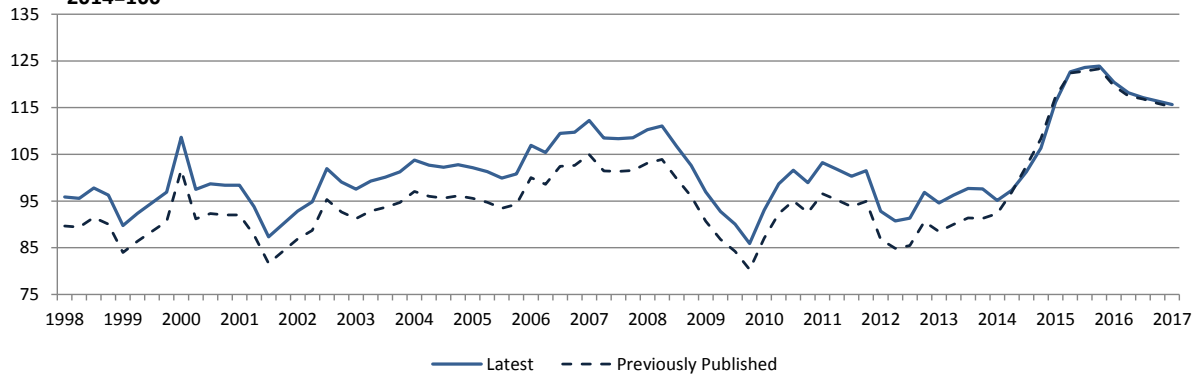
**Agriculture, Forestry & Fishing, chained volume measure  
2014=100**



**Index of Production, chained volume measure  
2014=100**



**Construction, chained volume measure  
2014=100**



**Index of Services, chained volume measure  
2014=100**

