

Revisions analysis for official statistics

1 Introduction

This note aims to serve the following two purposes:

1. to emphasise the importance of performing revisions analysis and to outline some of the issues associated with the data available in the [Main Economic Indicators Original Release Data and Revisions Database](#) which could affect revisions analysis studies performed on this data. These issues are outlined in section 2 below;
2. to present the causes of revisions, to emphasise the importance of national statistics institutes having a transparent revisions policy for the publication of economic statistics, and summarise international guidelines which are available on this issue. These issues are covered in section 3 of this note.

2 Performing revisions analysis

Analysis of revisions for key economic variables enables national statistical institutes (NSIs) to evaluate their performance against a key dimension of statistical quality – accuracy¹. Ultimately this can lead to a better understanding of the statistical compilation process and enable problems to be identified and improvements to be made. Consequently, the data provided in the *Main Economic Indicators Original Release Data and Revisions Database* together with the [automated programs available for performing revisions analysis](#) provide essential tools to aid NSIs and users of statistics for performing their own revisions analyses. Likely reasons for the revisions observed in the database due to national practices for the publication of data are summarised in Section 3 below.

However, as the data available in this database has been received from countries and subsequently processed and published by the OECD, there are a number of issues which may arise that could impact on any revisions analysis performed – in comparison to that based on actual nationally published data. Listed below are some such issues – in order of relative degree of importance – that users should take into account when performing revisions analysis from this database.

- For many countries and variables included in the database, seasonal adjustment has been performed by the OECD.
- The measure with which a variable is published (e.g. index or level, seasonally adjusted or not) can change in some cases for some countries' variables between successive editions of the monthly publication. Such cases are noted in the metadata for the variable concerned. In the case of a change from non seasonally adjusted to seasonally adjusted data, this will render analysis of revisions for month-on-previous-month growth rates invalid between these periods.
- Delays in data transmission by countries or by the OECD in processing data may affect timeliness of publication and as a consequence when a data point is first published by the OECD it may not be the nationally first published data point for a particular time period. Therefore some revision to the originally published national data by not be shown in the database and thus can impact on the accuracy

¹ The difference between first published estimates for an economic variable and subsequent release of estimates for the same variable – referred to as the revision – is an accepted measure of accuracy. The other most generally accepted measure of accuracy is the difference between an estimate of a variable derived from a survey and its true (unknown) value in the population. This measure of accuracy is the sampling error for an estimate. It may bear some relation to the size of revisions particularly if early estimates are based on smaller sample sizes than later estimates as sample size is a parameter in the calculation of sampling error.

of revisions analysis. This is most evident in the database where one observes that more than one new data point has been published between successive monthly editions.

- For some series, publication by the OECD may have been suspended for a period for time for a variety of reasons. If national publication was not also suspended during this period this can lead to an inconsistency between the nationally published data and that published in this database. Potential cases can be observed in the database where no new data is published for a variable for several months. Under these circumstances, summary statistics for the analysis of short-term revisions (e.g. 2 or 3 months after original publication) calculated by the automated programs may not be reliable.
- The OECD may have changed the series published for a particular variable for a particular country if a variable which is more comparable with other countries data is found. Examples of this exist for Hourly earnings in manufacturing for Japan, Spain and Hungary. Most of these cases should be noted in the metadata for the variable or the metadata for the series edition in the database.
- The OECD links historical versions of countries data for many variables to form long time series. Changes in linking methodologies over time, most notably one which occurred prior to the June 2004 publication, can lead to one off revisions.
- Errors in submitted data may have been inadvertently published (e.g. wrong series submitted, manual data entry errors etc.) and subsequently fixed in following period giving the false appearance of a revision by the country.
- For most published editions, Retail trade volume series for Japan, Greece, Netherlands, Poland, Spain and Switzerland have been compiled by the OECD by dividing a country series for Retail trade value by the Consumer price index. There may also be a small number of other cases where OECD calculations have been made for the variables included in the database.
- Data in some monthly editions may have shorter time series due to breaks in database links that were not noticed (e.g. Finland Retail Trade, Canada Retail Trade) or countries had submitted shorter time series without OECD realising (e.g. Greece and US Retail Trade). OECD tries to ensure the longest possible time series are published through linking historical data but in some cases data may have been lost or deemed no longer reliable. Consequently some earlier monthly editions may have longer time series for certain variables.
- For quarterly national accounts and balance of payments data, OECD only publishes the time series as provided by the countries each month or quarter. These time series lengths may change when a country alters their methodology and takes time to submit backcasted series. Consequently the length of time series may differ for different editions of these variables in some countries.
- There may be breaks in series at 1990 for some variables as published in the August 1999 edition when time series were extended as part of a historical statistics publication. This mainly concerns quarterly national accounts level series as other MEI time series are permanently linked and thus should always be consistent long time series.

3 Revisions analysis policy for producers of official statistics

The importance of understanding the impact of revisions on official statistics is highlighted by the recent attention being paid to the magnitude and predictability of revisions by users of official statistics compiled by national statistical institutes. This attention is one of the reasons why the International Monetary Fund's Special Data Dissemination Standards (SDDS) gives considerable prominence to the need for national agencies to develop a revisions policy that is both transparent (as to the underlying cause(s) of revisions) and consistent across the range of economic statistics (both structural and short-term) compiled.

The OECD *Data and Metadata Reporting and Presentation Handbook* (OECD, 2005), [Section 7.1](#) contains a detailed discussion outlining the main reasons for data revisions to official statistics, how they should be interpreted and actions NSIs should take to establish a transparent revisions policy as part of their statistical publication strategy². The handbook also stresses the usefulness of performing revisions analysis studies to better understand the compilation process and identify possible improvements that could be made to minimise the size of revisions and eliminate any potential direction bias.

The Handbook lists 8 principle reasons for revisions which are reproduced below and in general are applicable to the revisions one can observe for the variables included in the *Main Economic Indicators Original Release Data and Revisions Database*. The Handbook gives much more detail of the circumstances and types of economic variables for which the various reasons for revisions are likely to apply.

Reasons for revision of data

- Incorporation of source data with more complete or otherwise better reporting.
- Incorporation of source data that more closely match the concepts.
- Replacement of first estimates derived from judgmental or statistical techniques when data become available or as a result of benchmarking.
- Incorporation of updated seasonal factors.
- Updating of the base period.
- Changes in statistical methods.
- Changes in concepts, definitions, and classifications.
- Correction of errors in source data and computations.

² Much of the material on this topic in the OECD Handbook was derived from an IMF Working Paper, *Revisions Policy for Official Statistics: A Matter of Governance*, first presented at the August 2003 International Statistical Institute (ISI) and subsequently revised the following year.