

ESS guidelines on revision policy for PEEs

2013 edition

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Foreword

The definition of a revision policy at ESS level is an essential step towards further harmonisation of infra-annual statistics, especially Principal European Economic Indicators (PEEIs). It follows the vision of an integrated European statistical system where the releases and the revisions of European statistics are coordinated and synchronised as far as possible, and transparency for the user is maximised via clear communication of revision policies and practices.

Harmonization of revision policies according to the ESS guidelines on revision policy follows the standards defined in the European Statistics Code of Practice, principle 6 "Impartiality and objectivity" (indicator 6.6: Advance notice is given on major revisions or changes in methodologies.), Principle 8 "Appropriate Statistical Procedures" (indicator 8.6: Revisions follow standard, well-established and transparent procedures) and Principle 12 "Accuracy and Reliability" (indicator 12.3: Revisions are regularly analysed in order to improve statistical processes.).

In this context the implementation of the ESS guidelines on revision policy will contribute to improvements in the quality of European statistics and as such is in line with the conclusions of the ECOFIN Council related to further development of statistics for the Economic and Monetary Union.

The purpose of the guidelines is to encourage the ESS to move, where necessary, from not recommended practices to better ones. They present theoretical and practical aspects of revision policies in relation to routine, major and non-scheduled revisions.

The ESS guidelines on revision policy also foster the transparency of revision practices encouraging the documentation of general and domain specific revision policies. Finally they have a pedagogical content as they allow for expertise development and capacity building.

The preparation of the guidelines has been preceded by a set of more general principles for a common revision policy endorsed by Eurostat in 2009 (annexed) and by the guidelines on the communication of major statistical revisions in the European Union adopted by the SPC in May 2007 (CPS 2007/62/8/EN) and endorsed by the ECOFIN Council in November 2007.

The ESS guidelines on revision policy, which have been finalised in 2011, have been endorsed by the ESSC in February 2012.

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Director

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0 – Revisions: benefits and costs

0.1 – Introduction

0.1.1 – Definition of revisions

Revisions are broadly defined as any change in a value of a statistic released to the public. They can occur either when new observations (one additional month or quarter) become available and some past values are modified or when the current and /or some past values are modified. Data are generally revised in order to incorporate new, improved information. Therefore, revisions are inevitable whenever statistics are produced that report promptly on economic developments despite the fact that some relevant information is still outstanding.

0.1.2 – Possible causes for revisions

Late incoming reports are the main reason why the original figures are revised. Usually, not all the data required to produce timely statistics are available at the current end of the series; therefore, the missing values are estimated. Since it is generally the case that the estimated values do not correspond precisely to the late incoming data, the original figures are revised.

In addition, benchmarking also gives rise to changes. Benchmarking is defined as the adjustment of (generally) higher frequency data to take account of more complete lower frequency results, which become available only later.

Classification changes are another, albeit rarer, trigger for revisions. They cause items to be redefined so that the results for the old and new items are different, if they are even comparable at all. However, even if the definitions of certain sections did not change, data in newly-defined subgroups might be assigned a different weighting meaning that, in practice, the result for the aggregated item (though identically defined) differed from that obtained previously.

Revisions can also be caused by changes to the base year, which together with new weighting systems or new projection boundaries, can also alter the paths of time series.

Alterations to data may also stem from changes made by respondents to correct erroneous reports. It is also not possible to rule out errors during the compilation process, which can necessitate revisions to published statistical results.

0.1.3 – Possible effects of revisions

From the user's perspective, revisions are something of a double-edged sword. On the one hand, they enhance the information available and are thus welcome. On the other hand, changes to current economic data may result in a different assessment of the state of the economy and/or (at the very least) cast doubt on past empirical results leading to adjustment measures being made to the economic analysis.

Revisions are a two-sided affair from the producer's perspective as well. The new information they provide is needed to describe economic developments more precisely, yet, frequent and/or major revisions can damage the credibility of the statistical data.

Both, producers and users have extra work caused by revisions. Producers have to develop revised and new data. Users have to update their database and to adjust their analysis.

0.1.4 – Revision policy and revision analysis

The importance of developing a revision policy and performing revision analysis is being increasingly recognised and considerable work has been done in this field over the past few years both by national and international statistical organisations.

Revisions have to be considered a normal phenomenon to increase progressively the quality and in particular the accuracy of the data. Revision policy should be recognized as an important aspect of good governance in statistics. Good governance in statistics, in turn, is part of public sector transparency and accountability more broadly.

In 2008, Eurostat suggested a set of nine principles for a European Statistical System (ESS) revision policy for European Statistics, comprising three general principles plus five principles related to the data production process (see Annex 1).

The endorsed principles constitute the grounds for an ESS revision policy, which should represent the reference for the development of domain specific revision policies. Such principles are necessary but are not on their own sufficient to allow the design and the practical implementation of domain specific revision policies at Eurostat and Member States level. This has to be performed in a second step.

0.2 – Scope of the Guidelines

The following Guidelines only cover raw data of the Principal European Economic Indicators, even if they could be easily generalised to other infra-annual statistics. The revision policy of seasonally adjusted data is described in the ESS Guidelines on Seasonal Adjustment (part 3). Changes in the member state composition of the European Union (EU) or the Economic and Monetary Union (EMU) are also not covered, because these effects cannot be treated as pure statistical revisions. A new geographical coverage creates new time series.

0.3 – Purpose of the Guidelines

The aim of this document is to provide guidance for developing revision policies for unadjusted data. It tries to find a balance between the demands for the best statistical information at all points in time (which then suggests a continuous revision policy) and avoiding unnecessary changes in the data. The basic principle is that significant information for politically or economically important data should be incorporated as quickly as possible into published data in order to avoid a wrong assessment of the economic development, whereas minor changes should first be collected before being implemented.

In practice a number of revision procedures have been devised, often taking the form of routine revisions, major revisions, and non-scheduled revisions. In the following, many aspects of these revisions and dissemination aspects are discussed, e.g. the extent and the frequency to which time series should be revised, the communication of revisions to users, the analysis of revisions. Even more, concrete alternatives are shown and classified as "best practices", "acceptable practices", and "practice to be avoided", following the successful example of the ESS guidelines on seasonal adjustment.

The guidelines shall be used at the member state and at the European level. Using the same revision principles will foster the harmonisation of European statistics and takes into account the national information requirements at the same time.

These guidelines are a public document but the aim is to be a reference for producers more than for users. The guidelines need to be put in concrete terms for individual statistics in order to take into account the specificities of each statistical area. This work has to be done by statistical agencies or international Working Groups (chaired by Eurostat).

0.4 – Advantages, cautions, costs and risks of an ESS revision policy

Description of advantages, cautions, costs and risks of revisions.

0.4.1 – Advantages

- Revisions represent an element to progressively increase the quality and in particular the accuracy of data;

- Producers use revision analysis (size and direction) to identify the presence of problems in estimations and, where possible, to modify the statistical production process;
- Producers use revision studies to identify particular methods that could be improved or replaced by another in order to achieve greater accuracy or timeliness;
- A public revision policy gives users confidence, providing in advance explanations for the reasons for revisions and the nature of them;
- An ESS revision policy facilitates the comparison of practices adopted among domains and countries;
- It promotes a common language when discussing revisions, also improves, as a matter of fact, the quality of the documentation;
- Common policy action among member countries promotes consistency of data at the national and international levels;
- Users need a detailed understanding of the revision process for their business cycle analysis and for forecasts.

0.4.2 – Cautions

- It may be wise to adopt a revision policy that avoids unnecessary changes in the data: too many revisions create uncertainty;
- When important errors occur, corrections have to be made as soon as possible;
- There is a need to balance the stability of a time series against the need to revise series because of the introduction of new methodologies, concepts, classifications, etc.;
- Estimates that are not subject to revision could wrongly be considered more accurate and reliable than revised ones;
- Relatively small revisions in aggregate could hide big revision in more detailed breakdowns of data;
- Determining turning points with provisional data could be misleading;
- If estimates are affected by sampling or non-sampling errors, revision analysis cannot definitively demonstrate the accuracy of initial estimates.

0.4.3 – Costs and risks

- Some users consider revisions as a disturbing phenomenon to be taken into account in their analysis, particularly when there is no pre-announced revision policy;
- The revisions process is resource and time-consuming. Producers look at revisions caused by changes in classifications as extra work, to develop new series while continuing to prepare and disseminate the to-be-revised series and to carry time series back. Users have to adjust their databases and their analysis

1 – General aspects

1.1 – A revision policy for the ESS Members

Description

Revisions are a two-sided affair from the producer’s perspective. The new information they provide is needed to describe economic developments more precisely. However, too frequent and/or large revisions can damage the credibility of the statistical data.

The sixth indicator of principle 8 of the ESS Code of Practice requires that “Revisions follow standard, well-established and transparent procedures”. ESS Members are in charge of informing users about their practices on revisions and correction of errors. This public declaration promotes confidence among users and accuracy for data producers. It is then essential to endorse a general revision policy applicable to all statistics, to adopt compliant domain specific revision policies and to promote the transparency of revisions practices.

ESS Members should adopt and keep updated a general and transparent revision policy defining standard rules for data revisions, according to the eight principles presented in Annex 1.

This general policy will also describe reasons for data revisions, how to manage scheduled revisions, and deal with non-scheduled ones such as errors.

It will list furthermore indicators subject to scheduled revisions. For those indicators that are not subject to revisions, a list could also be compiled, including reasons for not revising.

This statement engages ESS Members in informing data users of any forthcoming revisions as soon as possible, and without delay when revisions are made and errors detected.

Options

- Adoption of a public general revision policy applicable to all statistics and fully compliant with the general principles
- Adoption of a public revision policy at the level of statistical agencies not compliant with the general principles
- Adoption of a public revision policy at the level of statistical agencies only partially compliant with the general principles
- Dissemination of documents stating principles on revisions without adopting explicitly a revision policy
- Absence of any form of public general revision policy

Alternatives (*)

A) Adopt a general revision policy fully compliant with the principles

B) Adopt a revision policy only partially compliant with the general principles

C) No general revision policy adopted or adoption of a revision policy at statistical agency level not compliant with the general principles

(*) A) Best alternative; B) Acceptable; C) To be avoided

1.2 – Domain specific revision policy for the ESS Members

Description

Each statistical domain is characterised by data/survey specificities as well as by constraints derived from existing legal acts, a domain specific revision policy then needs to be defined. Domain specific revision policies have to be agreed as far as possible at the level of statistical domains by Eurostat and Member States. They have to be compliant with the general revision policy principles and will also have to take into account data specificities as well as constraints derived from legal acts in force.

A domain specific revision policy should include: the frequency of revisions, timing of revisions, reasons for revisions, depth, revision length, series affected, communication issues, link between revision policy and revision analysis.

Information about the domain specific revision policy should be publicly available and maintained updated.

Options

- Adoption of a domain specific revision policy fully compliant with the general principles and agreed at ESS level
- Adoption of a domain specific revision policy only partially compliant with the general revision policy
- Adoption of a domain specific revision policy not compliant with the general revision policy
- Absence of any public domain specific revision policy

Alternatives (*)

A) Adopt a domain specific revision policy compliant with the general one and agreed at ESS level including at least the following elements: frequency of revision, timing of revision, reasons for revision, depth, revision length, communication issues, link between revision policy and revision analysis

B) Adopt a domain specific revision policy, agreed at ESS level, only partially compliant with the general one, or not covering all the required elements (see A). Reasons for the non-full compliance with the general one should be clearly stated

C) Lack of domain specific revision policy, or domain specific revision policy not compliant with the general one, or domain specific policies adopted at statistical agency level non including all required elements (see A)

* A) Best alternative; B) Acceptable; C) To be avoided

1.3 – Consistency across domains and countries of domain specific revision policy

Description

When defining domain specific revision policies, statistical agencies should aim to reach as much consistency as possible across statistical domains and countries at least concerning the frequency, timing, depth and length of revisions.

A domain specific revision policy will take into account internal consistency (geographical or within sector) and external consistency (across domains and countries). Also, consistency of geographical or within sector aggregation at European level has to be considered.

However, there is a trade-off between consistency in all aspects and accuracy. This is because time is needed to produce statistics which are consistent from regional/national prime statistics to European aggregates. During this time, prime statistics are “frozen” (cannot be revised). However, late incoming reports and other new information may give a clear indication that politically or economically important data published in press releases should be changed significantly. In such a situation, since a standardised and consistent revision policy could contradict the aim of accuracy for national prime statistics, a balance between accuracy and consistency has to be found.

When ESS Members define a domain specific revision policy, they will need to take into account the implications that this action could introduce to other domains at national and European level.

Options

- A domain specific revision policy is adopted ensuring the maximum degree of consistency across countries and domains
- A domain specific revision policy is adopted taking into consideration consistency across countries and domains constraints only partially
- A domain specific revision policy is defined looking only at internal consistency
- No domain specific revision policy

Alternatives (*)

A) ESS Members adopt domain specific revision policies ensuring the maximum degree of consistency across countries and domains, without contradicting the aim of accuracy at a national level

B) Each statistical organization adopts its own domain specific revision policy taking into account implications for other domains at national and European level

C) Domain specific revision policies are adopted regardless of internal and external consistency or lack of domain specific revision policy

(*) A) Best alternative; B) Acceptable; C) To be avoided

1.4 – Stability over time of revision policies

Description

Maintaining the stability of general and domain specific revision policies over time is important because it fosters user confidence and the transparency of the revision process. A general revision policy should rarely be revised; when this happens, domain specific revision policies should be reviewed accordingly.

When looking at the data production side, the stability of a domain specific revision policy is an essential element of a well-established production process which will foster the possibility of better planning activities and resources. When looking at the user side, the stability of a domain specific revision policy ensures that users generally know in advance when, which and why data will be revised.

However, it could be necessary to change domain specific revision policies in order to keep them in line with relevant improvements in the production process. This could be the case when changes could enhance accuracy and/or reduce the statistical burden.

When the revision policy needs to be changed, it is better to adopt the new policy in correspondence with major revisions. Changes in revision policies should be communicated in advance, well documented and justified.

Changes in revision policies should be, as far as possible, coordinated at ESS level.

Options

- Revision policy is stable over time. If changes occur, they are announced in advance and coordinated as far as possible at ESS level
- Revision policy is validated from year to year and eventually revised
- Changes in domain specific revision policies happen at higher frequency

Alternatives (*)

A) Revision policies are stable over time at ESS level; when changes are required (new legal acts, new definitions, adoption of new sources, new methods of estimation, innovation, etc.), they should be coordinated as far as possible at ESS level and announced in advance. Important changes at the member states level which are necessary to foster accuracy, to reduce the reporting burden or to fulfil national laws should be pre-announced too

B) Revision policies are validated annually, eventually revised and coordinated as far as possible at ESS level

C) Lack of coordination of changes in domain specific revision policies or revision policies not stable over time

(*) A) Best alternative; B) Acceptable; C) To be avoided

1.5 – Dissemination of general and specific revision policy

Description

It is highly important to disseminate widely general and domain specific revision policies. Documents describing the domain specific revision policy foster the transparency of revisions practices, encouraging improvements on documentation and dissemination, promoting the consistency of practices used by international and national agencies through the standardisation of format, terminology and dissemination.

Information will be incorporated in metadata prepared for Eurostat. Effective communication with the media and with the public has to be ensured through appropriate means, e.g. press releases, online documents, and publications.

Eurostat and other statistical organisations will disseminate general and domain specific revision policies on their websites.

Options

- Wide dissemination: general revision policy and documents describing domain specific revision policies will be easily available on agencies' websites. This information will be incorporated in the ESMS metadata file associated to data in the Statistical database
- Partial dissemination: documents on the domain specific revision policy will be disseminated using the most appropriate means related to the specific revised indicator, e.g. press releases, online documents, publications. Revision policy information will be included into existing standard metadata files
- The revision policy adopted is described only in the corresponding press release or it is not disseminated at all

Alternatives (*)

A) Documents describing general and specific revision policy are easily available on the agencies' websites and follow standardised rules. Their visibility should be fostered widely, e.g. through links accessible from press releases, publications, metadata of statistical database

B) Documents describing general and specific revision policy are easily available on the agencies' websites

C) No information is disseminated

(*) A) Best alternative; B) Acceptable; C) To be avoided

2 – Routine revisions

2.0 – Definitions

Description

Routine revisions are changes in published data which are related to the regular data production process (e.g. estimated values for missing responses are replaced by reported figures). Normally, these routine revisions follow a revision policy and are published according to a publicly available pre-announced release/revision calendar (e.g. each time a new data point is published, the revised result for the previous month is also published).

The revision policy of routine revisions contains the following elements:

- a publicly available, pre-announced release/revision calendar with the date and the time for the next publication;
- the length of the revision period (e.g. last data point, values of the current year);
- the depth of revisions (all positions of an indicator or only a subset of positions).

Options

- Revision policy of routine revisions including all elements
- Revision policy of routine revisions with gaps
- No revision policy

Alternatives (*)

A) The revision policy of routine revisions is described on the webpage of the statistical agency responsible for the respective indicator. The description contains a publication release/revision calendar, the length of the revision period and the depth of revisions. Changes of these elements are communicated in advance

B) Like A) However, changes are not pre-announced

C) No revision policy

(*) A) Best alternative; B) Acceptable; C) To be avoided

2.1 – Implementation of a release/revision calendar

Description

The availability of national and European release/revision calendars is a crucial element of a revision policy. It will increase the transparency of the revision process and will help users to better understand the process. A release/revision calendar should include the following information: date and time of new data releases; date and time of data revisions.

The calendar should cover a full calendar year; it should be published before the beginning of the reference year and updated, if needed, on a regular base (e.g. every one or two weeks) by statistical agencies.

The release/revision calendar should be available on the agency's website.

Release dates and times for revisions are not only relevant for national statistics and national users; they also play an important role for European aggregates. Hence, there is a need to provide Eurostat and hence European users with the national release/revision calendars as well as the length and depth of routine revisions.

Eurostat will then publish the collected information and add the release dates and times of European aggregates as well as their revision length and depth.

Options

- Release/revision calendars are compiled and include all the elements mentioned above
- Release/revision calendars are available but do not cover the whole year
- No release/revision calendar is compiled

Alternatives (*)

A) Release/revision calendars are disseminated on the website of the statistical agency and include all the elements mentioned above

B) Release/revision calendars are disseminated on the webpage of statistical agencies, but they do not include all required information

C) No Release/revision calendar is compiled and disseminated

(*) A) Best alternative; B) Acceptable; C) To be avoided

2.2 – Concurrent versus current revision policy

Description

On the one hand, statistics should provide the best possible information at any point in time. However, this would require permanent revisions in practice because there is a continuous flow of new information and new incoming data related to the past (a concurrent revision policy). Therefore, this strategy would come at a high cost to both data producers and users, as the data would need to be continually updated. This would also create a barrier to communication with society.

On the other hand, late incoming reports and corrections of data can be collected first. Then, revisions for a longer period - e.g. twelve months of the previous year - are published simultaneously in a single revision (current revision policy). This method tries to avoid unsettling the user with a barrage of new economic data. However, there is a price to pay for this approach: Users have to wait a long time before they get better informed.

Furthermore, even if basic data are not revised, the re-estimation of all parameters of statistical procedures entering in the production process could generate data revisions.

In order to determine the optimal timing and the frequency of routine revisions empirical investigations on the revision process of important macroeconomic aggregates (which are mentioned in press releases) are needed. Thresholds – derived from a consultation of important users of the data - can be used to split important from minor revisions.

Options

- Concurrent revision policy
- Current revision policy
- Mixed approach

Alternatives (*)

A) Routine revisions should occur in a way that important information is published as soon as possible without confronting users with too many revisions. Minor changes should be collected and published in annual intervals (mixed approach). In order to determine the timing and the frequency of routine revisions empirical investigations are needed. The focus of such investigations should be on important macroeconomic aggregates which are mentioned in press releases

B) Like A) but without empirical investigations

C) An a priori decision for a concurrent or a current approach or not to revise at all

(*) A) Best alternative; B) Acceptable; C) To be avoided

2.3 – Length of routine revisions

Description

Late incoming reports are among the main reasons for routine revisions. In order to produce timely statistics it is not possible to wait until the last report arrives at the statistical office. Hence, missing values have to be estimated. Since the estimated values normally do not correspond exactly to the late incoming data, the published figures have to be subsequently revised.

Normally, the amount of late incoming reports decreases over time. Therefore, the revisions become smaller for periods in the past than for periods close to the end of the time series. In order to publish significant new information as soon as possible on the one hand and to avoid confusing users with meaningless data revisions in the past on the other hand, a revision length has to be defined based on empirical investigations for important macroeconomic aggregates which are mentioned in press releases of the statistics in question.

Options

- The whole time series is revised
- Data are not revised
- Only a few periods back in time are revised at each release and longer revisions take place at a lower frequency, e.g. annually
- All past data for which additional or more accurate information become available are revised at each release

Alternatives (*)

A) Only a few periods back in time are revised at each release and longer revisions take place at a lower frequency. The length of revisions taking place each month/quarter and of lower frequency revisions have to be defined on the basis of empirical investigations and of existing legal acts for all important macroeconomic aggregates (mentioned in press releases). The length of revisions is part of the revision policy. Data in press releases and databases should be flagged accordingly

B) As A) but without empirical investigations and/or without flagging revised data

C) The whole series is always revised; data are never revised even if new or more accurate past information became available; absence of clear indication of the revision length

(*) A) Best alternative; B) Acceptable; C) To be avoided

2.4 – Depth of routine revisions

Description

Accounting constraints are important in order to keep consistency between an aggregate and its components for a given regional coverage. For example, the production index for the manufacturing sector is the weighted sum of the indices for the NACE-positions 10 – 33. In order to fulfil those constraints, the revision policy should be applied to all component series of a given indicator.

Options

- All positions of a statistical indicator for a given region are revised at the same time
- Aggregates are revised in advance and components are revised later
- Individual revision policies for different time series of the same indicator

Alternatives (*)

A) All aggregates and component series of a given indicator should be revised at the same time and with the same revision length

B) Aggregates are revised before the components. However, the resulting discrepancies disappear in a subsequent revision of the aggregates and the components

C) Lack of coordination between revisions of aggregates and components

(*) A) Best alternative; B) Acceptable; C) To be avoided

2.5 – Coordination of releases and revisions across countries

Description

The timely publication of accurate European aggregates requires a strong coordination of releases and revisions scheduling at European level. Obviously, a full synchronisation could be achieved by choosing the latest country as target, but this will penalise the timeliness of the information with very negative consequences for policy making and analysis.

On the other hand, not all the countries will be able to speed up their production processes to be in line with the fastest countries. The most appropriate balance between timeliness and synchronisation has to be found at domain level.

Options

- Routine revision policies in Europe and at the national level are fully coordinated across countries and in line with these guidelines
- Routine revision policies in Europe and at the national level are partially coordinated across countries or only partially in line with these guidelines
- Routine revision policies in Europe and at the national level are based on different principles

Alternatives (*)

A) Full coordination of releases and revisions for a given aggregate at European and national level, according to domain specific revision policies in line with these guidelines

B) Partial coordination of releases and revisions for a given aggregate or adoption of revision policies only partially compliant with the guidelines

C) Lack of coordination either of releases or of revisions, or both

(*) A) Best alternative; B) Acceptable; C) To be avoided

2.6 – Coordination of releases and revisions across sectors

Description

It is a long way from collecting primary data at a regional or national level to European national accounts. A consistent and coherent framework for all statistics, which produces data always in line with all information reported to statistical agencies, would require a continuous and simultaneous updating of all source statistics and derived statistics. However, this is not possible in practice. Therefore, some inconsistencies always remain. These inconsistencies can be between the values reported and the released statistical results (as a result of late incoming reports that are not immediately published), between national and European results, and/or between primary statistics and derived statistics (such as national accounts). In this context the question appears at which stage the production process should be interrupted in order to allow for a revision policy.

One of the basic ideas of routine revisions is that important information should be published as soon as possible and in accordance with the release/revision calendar. However, the meaning of “important” depends on the perspective (European vs. national, national accounts vs. short term statistics). This should be taken into account in the revision policy.

Options

- Routine revision policies in Europe and at the national level are fully coordinated across sectors and in line with these guidelines
- Routine revision policies in Europe and at the national level are partially coordinated across sectors or only partially in line with these guidelines
- Domain specific routine revision policies in Europe and at the national level are based on different principles

Alternatives (*)

A) All statistical domains adopt domain specific revision policies fully in line with these guidelines in order to minimise inconsistencies across sectors, to ensure accuracy and to avoid revising the figures too often; they also coordinate releases with domains in charge of derived statistics such as National Accounts, as far as possible

B) Statistical domains adopt domain specific revision policies partially in line with these guidelines, or releases are only partially coordinated between domains in charge of basic indicators and those in charge of derived statistics

C) Lack of coordination of releases and revisions across statistical domains

(*) A) Best alternative; B) Acceptable; C) To be avoided

2.7 – Annual and infra-annual benchmarking revisions

Description

Some indicators are available at different frequency, e.g. National Accounts. Benchmarking means adjusting higher frequency data to the corresponding lower frequency results, based on more complete information which become available only later.

Since high frequency indicators are benchmarked to the corresponding low frequency ones (and low frequency indicators are sometimes also subject to revisions), high frequency ones are revised accordingly in order to ensure a full consistency. If the benchmarking process takes place with some delay or if no benchmarking at all is performed, temporary or permanent discrepancies between the low and high frequency versions of the same indicators, can appear.

A precondition for a benchmarking revision policy is a release and revision policy for the lower frequency statistics, especially release and revision calendars for these statistics are needed.

Options

- High frequency indicators are always benchmarked to low frequency ones, whenever the second ones are released
- No benchmarking process
- Delayed benchmarking: high frequency indicators are benchmarked to low frequency ones with some delay

Alternatives (*)

A) High frequency indicators are benchmarked to low frequency results and the revision process of low frequency indicators is rebound into high frequency ones. The existence of a revision policy for low frequency indicators is a precondition of a transparent benchmarking process of the high frequency results. Users are informed of benchmarking revisions

B) High frequency indicators are benchmarked to lower frequency ones with some delay. Users are informed of the benchmarking process and of the possible presence of temporal discrepancies

C) High frequency indicators are not benchmarked to the low frequency ones

(*) A) Best alternative; B) Acceptable; C) To be avoided

3 – Major revisions

3.0 – Definitions

Description

Major revisions are changes in published data, often substantial, due to one of the following reasons:

- Availability of a new structural source that is only collected at long intervals (5 to 10 years), such as the census, input-output tables, labour cost surveys, etc.
- An update of the weights of the base year of an index series, often every five years
- A change in the concepts, definitions and/or classifications used to produce the series. Some examples are the adoption of a new classification or changes in international statistical standards
- The enter in force of a new legal act

Usually data producers take the opportunity of a forthcoming major revision to introduce methodological improvements. This should be considered as good practice as it avoids revisions occurring too often. Therefore it is common that major revisions are not determined by one single cause but by a combination of them. Producers should identify the impact of each single change on the total revisions of the time series and inform the users. However, a change in the methods specific to a country or a group of countries, which helps to produce significantly more reliable results for important macroeconomic variables, should be implemented rapidly in order to foster accuracy, if in line with European legal acts.

Major revisions affect a large part of the time series and sometimes even the complete time series. Therefore it is necessary to back-cast the series, otherwise major revisions will produce breaks and inconsistencies in the time series.

Major revisions are expected and planned well in advance. The users should be informed in advance of the forthcoming major revisions and warned that considerable changes in the time series are to be expected. A policy for major revisions should specify at least the following elements: the pre-announcing strategy, how to communicate in advance information on causes and foreseen impact of major revisions, expected length and depth of major revisions.

Options

- Revision policy of major revisions including all elements
- Revision policy of major revisions with gaps
- No revision policy

Alternatives (*)

A) The revision policy of major revisions is described on the webpage of the statistical agency responsible for the respective indicator sufficient time before it takes place. The description contains: the pre-announcing strategy, the elements cause of the major revision, the length of the revision period, and the depth of revisions. Changes are communicated well in advance

B) Like A) However, some elements are missing

C) Users are not informed in advance that a major revision will take place

(*) A) Best alternative; B) Acceptable; C) To be avoided

3.1 – Major revisions in the release/revisions calendar

Description

In order to foster transparency, it is necessary not only to inform the user about the occurrence of a major revision in advance of the release date, but also to publish the date of implementation at a country and European level, for each statistical domain.

Implementation dates should be inserted in the release/revision calendar as soon as possible, so that the user can be aware of the synchronisation, or lack of synchronisation, across countries and domains. Dates related to major revisions should be clearly identifiable.

Options

- To announce major revisions well in advance and inform users about their implementation dates; such dates are included in the release/revision calendar, where they are clearly identifiable as related to a major revision
- To announce major revisions well in advance and inform users about their implementation dates, but without updating the release/revision calendar
- To announce major revisions well in advance, but the exact dates of implementation do not appear in the release/revision calendar
- To announce major revisions well in advance, but the exact dates of implementation are unknown

Alternatives (*)

A) Occurrence of major revisions are announced well in advance of their implementation and implementation dates are inserted in the release/revision calendar

B) Occurrence of major revisions are announced well in advance of their implementation and implementation dates are publicly known but not inserted in the release/revision calendar

C) Occurrence of major revisions is not pre-announced and/or implementation dates of major revisions are not known in advance

(*) A) Best alternative; B) Acceptable; C) To be avoided

3.2 – Back calculation and major revisions

Description

Major revisions tend to imply significant changes in the published series. When the major revision is not applied to the complete time series, users are not satisfied because either the series are shorter or they are affected by structural breaks, which allows for shorter time span analysis only. On the other hand, these revisions are complex and far-reaching and it is not always feasible to implement the major revision for the whole time series (lack of resources, missing source data, etc.). How far the series are back casted should be the result of taking into account both the costs and benefits of the work involved.

When the major revision is only due to the availability of structural data not collected on an annual basis, it should be feasible to back-cast the time series until the previous benchmark, keeping the whole time series free of breaks and inconsistencies. When the weights of an index series are updated, the new index using the updated weights should be calculated for an overlapping period with the old series so that the two can be linked.

If the revision is only due to the introduction of a new classification, the back casting should be done preferably by reclassifying the micro data, at least for the closest years. The use of an aggregated conversion matrix between the old and new classification or of statistical and econometric back-casting techniques could be adopted, to reduce the burden, for more distant periods. From one hand, data producers should be aware of risks of back-casting too many periods as it cannot be granted that the conversion matrix would remain valid in the past. From the other hand, they should take into account users' needs for long time series, especially for main macroeconomic indicators.

Options

- The whole time series is completely back-casted
- Time series are back-casted until the point where it's feasible and the costs remain reasonable
- Time series are not back casted

Alternatives (*)

A) When major revisions occur, the whole time series for all indicators and components is recalculated according to new standards, classifications, source data etc. in order to avoid breaks. In case of an update of the weights of an index series, the new index using updated weights is calculated for an overlapping period with the old series so that the two can be linked

B) A full reconstruction of the whole time series only takes place for main macroeconomic indicators, while for component series a decision on the back-casting length is taken on the basis of a cost/benefits analysis, and any existing break is clearly indicated and explained

C) Major revision is implemented but the time series are not back-casted or only partially back-casted for a short length

(*) A) Best alternative; B) Acceptable; C) To be avoided

3.3 – Synchronisation of major revisions across countries and domains

Description

Major revisions resulting from new concepts, manuals and definitions internationally adopted should be synchronised across countries and coordinated between different statistical domains.

As such major revisions are quite known in advance, they should be carefully co-ordinated. It would be preferable to regulate the implementation date and the length and scope of the time series to be provided by Member States, making it binding for all Member States to comply with their obligations. If some Member States are able to provide more complete back-casted series they should be encouraged to do so, but the required minimum length should be provided by all Member States. This will also constitute the minimum length for the European aggregates.

A staggered introduction of such major revisions across countries should be avoided as these will cause unpredictable changes to European aggregates and affect data comparability across countries.

Accuracy is one of the key issues mentioned in the European Statistics Code of Practice. Therefore, new and better estimation models as well as new information on the structure of an indicator (weighting pattern), which have a significant impact on important macroeconomic variables mentioned in press releases, should be implemented as soon as possible. When a methodological change is of major relevance for a country, leading to more accurate figures, the country could introduce the methodological change as soon as possible provided that the consistency with existing European legal acts is maintained.

Because of the importance of such changes, the timing, the length, the depth of the revision and, whenever possible, an evaluation of the impact, should be communicated well in advance.

Options

- Major revisions stemming from the introduction of new definitions, manuals etc. are pre-announced and synchronised. Methodological revisions, which foster accuracy of important indicators mentioned in press releases, are implemented as soon as possible and pre-announced.
- Major revisions coming from the introduction of new definitions, manuals etc. are coordinated. Methodological revisions, which foster accuracy of important indicators mentioned in press releases, are implemented as soon as possible but not pre-announced.
- No coordination

Alternatives (*)

A) Major revisions coming from the introduction of new definitions, manuals etc. are pre-announced and synchronised at the ESS level, within the same domain and coordinated between different domains. Methodological revisions at a country level, which foster accuracy of important indicators mentioned in press releases, are implemented as soon as possible and pre-announced, provided that the consistency with existing European legal acts is maintained

B) Major revisions coming from the introduction of new definitions, manuals etc. are pre-announced and coordinated at the ESS level. Methodological revisions at country level, which foster accuracy of important indicators mentioned in press releases, are implemented as soon as possible but not pre-announced.

C) Lack of coordination across countries and sectors

(*) A) Best alternative; B) Acceptable; C) To be avoided

3.4 – Documentation and the impact of major revisions

Description

The release of major revisions should be accompanied by documentation which allows users to assess the new time series. The documentation shall detail the reasons for the revisions, estimate their impact on the aggregated series, offer a comparison between the "new" and the "old" series and detail the length and depth of the revisions.

Simulation studies before the implementation of the major revision as well as ex-post studies on the impact on past and future figures should be performed and published, at least for main macro-economic indicators.

Options

- Full documentation including comparative analysis and simulation studies
- Partial documentation available and some in-depth investigation, provided only later after the release date
- Partial documentation available without any kind of in-depth investigation
- No assessment is provided at the release date or after

Alternatives (*)

A) A complete documentation package is provided at the time the major revision is implemented, including all elements mentioned in the description

B) As A) but some elements such as comparative studies, simulation etc. are missing or are produced later on

C) No documentation is provided

(*) A) Best alternative; B) Acceptable; C) To be avoided

4 – Non-scheduled revisions

4.0 – Definitions

Description

Non-scheduled data revisions are, by definition, not announced in advance either because they are a result of unforeseeable events such as errors or accidents, or because of the lack of a scheduling procedure. The term “non-scheduled” does not refer to the cause of the revision but to the timing. Non-scheduled revisions are not pre-announced or reflected in dissemination plans.

As non-scheduled revisions can confuse users and undermine confidence in the quality of statistics, it is important to be committed in avoiding as much as possible non-scheduled revisions and to limit them to the case of important errors. When significant mistakes occur, the communication of the mistake should be frank and the revised data should be published at the earliest possible date.

A statistical agency should have a written and public policy for dealing with non-scheduled revisions. Within the ESS, a general strategy for correction of errors should be agreed, including the significance levels for error corrections, commitment to correct errors as soon as possible, the communication strategy and the strategy for corrections of past errors.

The policy should cover at least:

- a procedure for determining whether an error is significant enough to warrant a non-scheduled revision;
- guidelines on how to inform users about non-scheduled revisions and their underlying causes.

Options

- A policy for non-scheduled revisions is publicly available describing how the statistical agency deals with such revisions
- Internal guidelines for correcting errors
- Domain or indicator specific practices for correcting errors
- No revision policy for non-scheduled revisions

Alternatives (*)

A) Statistical agencies have, on their webpage, a publicly available revision policy for non-scheduled revisions, as much as possible agreed at ESS level. It describes how and in which circumstances errors in the data are corrected and guarantees that users are informed about non-scheduled revisions in an appropriate way. The policy should contain at least the following elements: significance levels for errors correction, commitment to correct significant errors as soon as possible, the communication strategy and the strategy for corrections of past errors

B) Statistical agencies have a public policy for non-scheduled revisions non fully consistent at ESS level and/or not covering all elements mentioned above

C) Statistical agencies have general or domain specific policies for non-scheduled revisions not agreed at ESS level or guidelines for internal use only or no policy at all

(*) A) Best alternative; B) Acceptable; C) To be avoided

4.1 – Timing of correction of erroneous data

Description

Significant errors detected immediately after their release should be corrected without delay or as soon as possible. The same audience who received the original information on the data should be informed about the error and the upcoming revision. Erroneous data in online databases have to be removed whenever necessary. In this case, the reason for the removal should be posted. When erroneous data appear in published texts a note about the errors may be added to the beginning of the text or the text may be entirely removed. Users should be notified about the upcoming revision using the same channels as in the actual releases. Furthermore, an additional entry to the release/revision calendar should be added to reflect ex-post the error's correction date.

A non-scheduled revision may not be necessary if the error is not significant. Before revising, the impact of the error should be assessed using prior empirical knowledge of revisions. For example, the magnitude of the correction could be compared to the magnitude of expected average revision of the next release. If the error does not substantially affect the interpretation of released data, it may be corrected in the next release or, if the agency has adopted a current revision policy, in an annual revision. It should be noted that depending on the user's needs, a marginal error to one user might be a major issue for another.

In the case of significant errors detected with delay (referring to past or sometimes even far past data), the correction can be scheduled with the next release date or, when affecting politically relevant figures, released as soon as possible with a pre-announcement. In the case of past errors affecting several observations of a time series, e.g. due to erroneous implementation of a methodology, the correction should be considered as a major revision.

Options

- Correct significant errors affecting recent data rapidly
- Correct significant errors affecting past data at the next data release
- Correct significant errors affecting past data rapidly when errors affect politically relevant data
- Correct errors always regardless their significance
- Do not correct any error affecting past data

Alternatives (*)

A) Significant errors affecting recent data are corrected preferably immediately, or as soon as possible. In case of significant errors affecting past data a decision is taken based upon the relevance of the data and the trade-off between accuracy and excessive number of revisions. The correction of several erroneous past data is considered as a major revision. Not significant recent errors are corrected later according to the release revision calendar. As soon as a non-scheduled revision is planned, the users are informed about it

B) All errors are corrected, regardless any significance level, within few days after the initial release or with the next release when errors affect past data

C) Lack of any revision policy for non-scheduled revisions

(*) A) Best alternative; B) Acceptable; C) To be avoided

4.2 – Use of a standard template to communicate errors corrections

Description

To foster transparency and to facilitate user understanding of the underlying cause of a revision, the revision itself and its reasons should be well reported in a standard way. To harmonise this communication within the ESS, statistical agencies should agree on a standard template for reporting the detection of serious errors in published statistics. The template should provide details on the error, an assessment of its impact on the published results, the actions taken to correct the error, and the timing of the correction. For internal purposes, the agency should record the measures to prevent the error's reoccurrence. When feasible, causes and reasons for the error should be mentioned. A draft example of a harmonised template is presented in Annex 2.

Options

- Reporting significant errors by using the standard template and optionally by providing other relevant information
- Reporting errors in a non-standard form or by providing only some of the information specified by the standard template
- Absence of any report of errors

Alternatives (*)

- A) When an error is detected, users are informed by means of a standard template agreed at ESS level. The report is made available on the statistical agency's website, with all specified information filled in
- B) When an error is detected, users are informed using a non-standard report, made available on the agency's website, or using the standard report only partial filled in
- C) Statistical agencies do not use any template to report errors or they use it only internally

(*) A) Best alternative; B) Acceptable; C) To be avoided

5 – Tracking vintages

5.0 – Definition and role of vintages database

Description

A vintages, or real-time, database is a statistical repository which archives data revisions and inflow of new data extracted from primary sources with vintages identification procedures. It assures convenient access to sequences of vintages recorded for monitored datasets.

A vintages database should be closely linked to primary data repositories. Taking into account the resource-consuming process of historical vintages identification and extraction, real-time databases usually cover only subsets of variables available in primary sources (key indicators), on the base of lists agreed at ESS level. The scope of real-time databases' contents should take into account users' needs. Moreover, it is important to determine variables and vintages sequences' time spans: they should be long enough to make statistical inference about variables and revisions' characteristics. Vintages databases should also have metadata and navigation schemes consistent with primary data sources from which they are derived.

An alternative to the maintenance of individual vintages databases, at the level of each statistical agency, is the development of a vintages database managed by Eurostat with the contribution of statistical agencies.

Vintages databases are an essential tool for revision analysis; they are used by data producers to monitor and improve data quality and by data users to analyse the impact of data revisions.

Options

- Identifying data vintages for a broad panel of economic data and storing them in dedicated repositories
- Identifying data vintages of key economic indicators only, agreed at ESS level, and storing them in dedicated repositories
- Identifying data vintages of key economic indicators agreed with Eurostat and contributing to the common vintages database managed by Eurostat

Alternatives (*)

A) Statistical agencies maintain their own vintages database covering at least a set of key indicators agreed at ESS level and they contribute to the ESS vintages database

B) Statistical agencies regularly send key indicators vintages, agreed at ESS level, to Eurostat and eventually maintain own vintages databases

C) Statistical agencies do not contribute to the ESS vintages database and do not maintain any vintages database

(*) A) Best alternative; B) Acceptable; C) To be avoided

5.1 – Identification of data vintages to be tracked

Description

Data vintages allow the monitoring of the process of change of a given variable caused by revisions of existing observations or inflow of new observations. They are snapshots of a variable's observations containing all information available to data producers at the time of their identification.

Data vintage identification should be consistent with data releases (for new observations) and data revisions. To give data users a full insight into variables update time patterns, each publicly available change of variable should be identified and registered (after validation) in a data vintage repository (real-time database). It is also possible to identify and store data vintages with a fixed interval frequency.

During data vintage identification, data producers should gather revision metadata, especially information about the causes of observations' updates and changes in the methods for estimating replacement values which directly influence the revision pattern. This metadata should be stored and made available together with stored vintages.

Because of the resource intensive character of data vintages' identification process for big datasets, it is advisable to establish semi-automatic or supervised automatic identification routines detecting changes to primary variables.

Options

- Identification of data vintages immediately after any publicly available update of variables
- Identification of data vintages at fixed intervals
- No identification of data vintages

Alternatives (*)

A) Identifying data vintages according to the dates of publication. Maintaining detailed metadata describing updates and methodological changes related to particular data vintages

B) As above but identifying and storing data vintages at fixed intervals

C) Lack of determined and pre-announced scheme of data vintages identification; no revision metadata is gathered together with the identification process

(*) A) Best alternative; B) Acceptable; C) To be avoided

5.2 – Construction and maintenance of a vintage database

Description

Simple vintages (real-time) database solutions are built as sets of standardized spreadsheets/statistical package files which allow the tracking of subsequent data vintages. More sophisticated repositories are built as multi-layer information systems. The base layer of such a system consists of data vintages identification and validation procedures. The next layer is used for storing sequences of data vintages. The layers above are responsible for providing end users with interfaces and APIs assuring easy access to stored contents.

Real-time databases should store complete metadata describing the nature of revisions enclosed in identified data vintages. Additionally, when missing observations of particular variables are estimated it is important to include information of these methods changes as it has direct impact on the revision pattern. Moreover it is required to provide users with information about vintage identification procedures.

Options

- Building a real-time database, with an interface allowing flexible revision analysis (e.g. data dimensions pivoting, computing revisions' statistics and identification of their pattern, extraction of revised data with broad range of most popular data formats)
- Building a centralised real-time database, with an interface allowing the viewing of data revisions in the form of predefined tables (e.g. “data triangles”) and to export them in selected data formats
- Building a real-time database as a set of standardized and consistent spreadsheet/statistical package files with a proper description of revision metadata presenting sequences of vintages as standard “data triangles”. Update constructed files with vintage identification procedures adding new vintages as subsequent rows/columns of these files

Alternatives (*)

A) Building a real-time database as a repository or consistent set of standardized data files with flexible interfaces providing different views of vintages sequences and an easy way to export data. Linking covered variables with general and revision metadata. Updating them according to a vintages identification pattern. Ensuring users have information on validation rules

B) As above but data vintages are available only in predefined tables

C) Real-time database built with set of ad hoc file structures and formats, lack of consistence between database updating and vintages identification procedures, lack of metadata and access to vintages validation rules

(*) A) Best alternative; B) Acceptable; C) To be avoided

6 – Revision analysis

6.1 – Revision analysis for data producers

Description

Revision analysis is an important tool for data producers as it gives essential insights on the quality of the data and of the production methodology and process.

Bias or unusual behaviour in the revision process of preliminary data might reveal some problems in the production or in the estimation processes.

It is therefore of utmost importance to look at revisions, not only of the main aggregated indicators but also of all supporting series on a regular basis in order to further improving data quality.

Revision analysis for data producers should tackle the problem of the consequences of the revision process on the quality of aggregated data. It can be applied to tracking potential sources of systematic data anomalies and identifying areas of data collection and compilation process which should be improved.

A revision analysis can be “summary”, based on a limited number of descriptive measures, or “in-depth”, based on a wide set of descriptive parametric and non-parametric measures.

Options

- A summary revision analysis is performed at fixed intervals: either each time the data is released or once a year, etc.
- An in-depth revision analysis is performed at fixed intervals: either each time the data is released or once a year, etc.
- Revision analysis is carried only occasionally
- No revision analysis at all

Alternatives (*)

A) A summary revision analysis is carried out for key indicators at each release date. An in-depth analysis is carried out once a year, possibly for the complete set of published data

B) A summary revision analysis is performed on key indicators at least once or twice a year

C) No revision analysis or revision analysis performed only occasionally

(*) A) Best alternative; B) Acceptable; C) To be avoided

6.2 – Revision analysis for data users

Description

Users should be informed about the revisions process of relevant statistics in order to evaluate the impact of revisions on their estimates and models (e.g. business cycle analysis and forecasts). Hence, statistical agencies should publish reports and technical papers containing results on a user-oriented revision analysis.

From the perspective of data users, three key aspects are important for the evaluation of revision impact on the overall data quality:

- Accuracy
- Reliability
- Stability (number of revisions within a given unit of time)

A comparison of revision process characteristics in different periods should be performed for similar economic conditions – for example for comparable phases of business cycle, seasonal and calendar situations (when business cycle, seasonal, and working day effects are present in revised data respectively).

Options

- Use descriptive statistics, statistical tests and econometric frameworks for detailed analysis of the data revisions impact on characteristics and quality of all revised variables provided to data users
- Use statistical tests and econometric frameworks only for analysis of selected subset of revised variables provided to data users
- Use only descriptive statistics for revision analysis for data users

Alternatives (*)

A) Identifying and disseminating a framework, agreed at ESS level as much as possible, for a user oriented revision analysis including a list of descriptive, non-parametric and parametric measures to be used. Regular dissemination, covering at least the key indicators, of the revision analysis when data are released. Dissemination of technical papers containing in-depth revision analysis which take into account the elements mentioned in the description and important methodological changes (like a change in the definition of a time series, base year etc.)

B) Dissemination of revision analyses at lower frequency than data releases and/or not fully consistent with a harmonised framework

C) Lack of revision analysis or lack of their dissemination, or performing ad-hoc analyses based on a non-harmonised framework

(*) A) Best alternative; B) Acceptable; C) To be avoided

6.3 – Use of alternative views on vintages in data revision analysis

Description

The revision process for a time series is usually represented in a table where columns are the various vintages, each corresponding to a release date, and lines are the successive values of a given reference period.

The revision process can be studied looking at the matrix from three different points of view:

- It is possible to compare a vintage to another and to summarize the differences between the two columns (“vertical” or “classical” view);
- It is also possible to look to the revisions of a specific reference period (“horizontal view”) and therefore to study the convergence of the value;
- Finally, it is possible to focus on the diagonals looking for example to the differences between the first release (a flash estimate) and the second release (a first estimate). This kind of analysis is very important when a flash estimate that is mainly or partly based on an econometric model is released.

Options

- Perform revision analysis only on the basis of a vertical view
- Perform revision analysis on the basis of all three views
- Do not perform any revision analysis

Alternatives (*)

A) Revisions are analysed according to the three views. Different views are used according to the aspects that revision analysis aims to evidence. In particular, the “diagonal view” is used when the quality of provisional estimates or flash estimates has to be assessed

B) Only the “classical view” comparing consecutive vintages is used in the analysis

C) No revision analysis is performed

(*) A) Best alternative; B) Acceptable; C) To be avoided

6.4 – Standard templates for revision analysis

Description

Comprehensibility and usefulness of revision analysis both for producers and users will be enhanced by the use of a template agreed at ESS level. Furthermore, this template will contribute to a higher degree of comparability for analysis made by various member states and/or production sectors.

Ideally, the proposed template should be flexible and modular enough to present summary revision analysis as well as detailed and advanced ones.

On the basis of already existing templates, such as those already developed by the ECB and the OECD, the ESS is required to agree on a template for revision analysis and to promote its use at a wider level.

Options

- Adopt one of the existing templates as ESS model
- Develop a new ESS template
- Do not adopt any template at ESS level

Alternatives (*)

- A) Adopt an ESS template to present revision analysis results
- B) Adopt a template only partially consistent with the ESS template to present revision analysis results
- C) Do not use any template to present revision analysis results

(*) A) Best alternative; B) Acceptable; C) To be avoided

6.5 – Metadata template for revision analysis and policies

Description

It is important that revised data are appropriately documented using a standard format, using concepts in line with the ESMS (Euro SDMX Metadata Structure). Metadata for revised data will be very useful not only for exchange of information within the ESS and for dissemination purposes, but also to monitor the implementation of the revision policy guidelines. All necessary metadata should be included in the ESMS attached to each data release and kept regularly updated.

Options

- Include revisions metadata into existing standard metadata files in ESMS format
- Include information on revisions into existing standard metadata files at national level, consistent with the SDMX
- Do not supply any information on revised data

Alternatives (*)

A) Use of the ESMS format to report at each release on data revisions possibly for all groups of series or, at least, for the most relevant ones. The information has to be regularly updated to reflect changes in the revision process

B) Include information on revisions within existing standard metadata files at national level, consistent with the SDMX

C) No meta-information is supplied for revised data or use of adhoc documents

(*) A) Best alternative; B) Acceptable; C) To be avoided

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6 – Revision analysis

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Annex 1

Principles for a common revision policy for European Statistics

This annex presents the principles for an ESS revision policy which should be applied to data revisions at Eurostat and at ESS level. Revision policies compliant with these principles should be defined at institutional and domain level, taking care of data specific characteristics for each production process when considering domain revision policies.

The principles presented in this annex are structured in two groups: general principles and principles related to the data production process at Eurostat and Member States level. The general principles aim to identify the pillars of the set of principles, defining its scope, limits and main characteristics. The second group includes more operational principles related to the implementation of revision policies at domain level.

1.1 – General principles

The following three general principles describe the foundation of an ESS revision policy. They can be considered the essential core of a general and transparent revision policy.

Principle 1 – General and domain specific revision policies

Each statistical institution within the ESS defines, communicates and publicly releases well documented general revision policies and domain specific ones applicable to European statistics under its responsibility.

Description: The general revision policy should be applicable to all European statistics. It should be adaptable to the characteristics of different statistics and allow the definition of domain specific revision policies, compliant with the general principles. The domain specific revision policies should be defined at the level of statistical domain taking into account data specificities as well as constraints deriving from existing legal acts.

The general revision policy and the domain specific ones should be documented and disseminated by Eurostat as well as by other ESS statistical organisations on their websites. The information to be compiled for domain specific revision policies will be incorporated in the ESMS metadata structure. Effective communication with the media and with the public has to be ensured through appropriate means, e.g. press releases, online documents, publications and so on.

Principle 2 – Consistency and stability of domain specific revision policies

Domain specific revision policies should be kept consistent across statistical domains and countries as far as possible and stable over a sufficiently long time period.

Description: When laying down the revision policies for statistical domains, as much consistency as possible should be searched across statistical domains and countries. Users should know in advance when future revisions will take place. Once the domain specific revision policies are defined, they should be kept stable over time. Changes to domain specific revision policies should be pre-announced, well documented and justified.

Principle 3 – Communication of revisions

Statistical institutions within the ESS should define a common strategy for each statistical domain to communicate qualitative and quantitative information on data revisions of European statistics.

Description: Statistical institutions within the ESS should define a communication strategy on data revisions at domain level, taking in consideration the characteristics of the data generating process. Such strategies should complement the information disseminated on revision policy with quantitative information on data revisions and be harmonised as far as possible.

1.2 – Principles related to the data production process

The following principles are directly related to the revisions process.

Principle 4 – Routine and annual revisions

Routine and annual revisions should be published in the framework of well defined, synchronised and regularly updated release/revision calendars at national and European level. Releases of European and national data aggregates should be synchronized as far as possible.

Description: It is important that for relevant data, such as PEEIs first and progressively other European statistics, the users are informed in advance on when data will be released. When a public release calendar is available, then it will also play the role of revision calendar; otherwise a public revision calendar has to be established. The full harmonisation of release dates at national and European level will improve the quality of European aggregates.

Principle 5 – Major revisions

Major revisions should only take place in larger intervals. They should be pre-announced, backwards implemented and coordinated across statistical domains and institutions.

Description: Major revisions are often linked to changes in definitions, classifications, etc. They normally take place in intervals of 5 years or more. Major revisions should be announced widely in advance and included in the release/revision calendars at national and European level. Reasons for major revisions should be clearly explained to the public together with, if possible, their potential impact on the most important data. After the revision, an analysis should be published showing the impact of the changes that have been made.

Principle 6 – Non-scheduled revisions

Non-scheduled revisions should be reduced over time to the case of errors and unforeseeable accidents occurring in the production process. Correction should be released without waiting for scheduled revisions. They should be accompanied by appropriate explanation.

Description: When an error or an unforeseeable event occurs, its impact on data should be assessed before revising; if necessary additional information on the non-scheduled revision should be published, in particular on the reason of this on-scheduled revision.

Principle 7 – Definition of domain specific revision policies

Domain specific revision policies should rely on sound and homogenous methodological choices covering i.a. scheduling of revisions, possible use of thresholds, length, depth, and seasonal adjustment whenever applicable.

Description: When defining domain revision policies, particular attention has to be paid to the choices made concerning the scheduling of revisions (e.g. concurrent versus current approach, see Annex 2 for more details), the adoption of a significance threshold, the extent of revisions in terms of periods back in time, and the consistency between the revision of an aggregate and the revisions of its components. Moreover, choices concerning the revisions of seasonally adjusted data must comply with the ESS guidelines on seasonal adjustment. Eurostat and Member States have to agree as much as possible on such issues in order to ensure the maximum possible consistency at domain level.

Principle 8 – Data vintages and monitoring of revisions

As far as appropriate, each statistical institution within the ESS carries out and disseminates regular revision analysis at statistical domain level. For this purpose the adequate vintage databases consistent with release/revision calendars should be implemented, maintained and disseminated.

Description: The availability of historical information on revisions represents the main requirement for a regular monitoring of the revision process and for the production of revisions analysis. Member States and Eurostat have to identify the most appropriate way to manage such historical information as well as the suitable level of breakdown. For certain statistical domains it could be useful that the various versions of the data produced are made available to the public. This will apply mainly to infra-annual statistics and other selected European statistics. Revisions analysis should be regularly performed and disseminated.

Annex 2 – Template for error reporting

ERRORS IN PUBLISHED STATISTICS REPORTING FORM	
<p>Objectives: To document errors that occurred on published data. Errors can be minor, (e.g. smaller data updates changing values which were disseminated beforehand, adding flags to data values, etc.) or more relevant such as larger data updates changing data values disseminated beforehand, errors in headlines indicators, etc.</p>	
1. Identification of affected series and periods	
1.1 Published Statistics:	1.2 Release date(s):
1.3 Reference period(s):	1.4 Metadata:
<p>2. Dissemination mean(s): please tick where appropriate</p> <p><input type="checkbox"/> Press release:</p> <p><input type="checkbox"/> Dissemination database/ data warehouse:</p> <p><input type="checkbox"/> Official website page text:</p> <p><input type="checkbox"/> Publication:</p> <p><input type="checkbox"/> DVD / CD-ROM:</p> <p><input type="checkbox"/> Download tool:</p> <p><input type="checkbox"/> Other:</p>	
3. Short error(s) description:	
<p>4. The error(s) was (were) detected by:</p> <p><input type="checkbox"/> Data producer</p> <p><input type="checkbox"/> Validation unit</p> <p><input type="checkbox"/> Dissemination unit</p> <p><input type="checkbox"/> Users</p> <p><input type="checkbox"/> Media/ journalists</p> <p><input type="checkbox"/> Other:</p>	
<p>5. Indicate where in the production process the error occurred and describe the reason for the error:</p> <p><input type="checkbox"/> Data collection</p> <p><input type="checkbox"/> Data intermediate calculation</p> <p><input type="checkbox"/> Compilation and estimation</p> <p><input type="checkbox"/> Data treatment (e.g. seasonal adjustment)</p> <p><input type="checkbox"/> Documentation</p> <p><input type="checkbox"/> Dissemination</p>	

Reason:

6. Describe the actions undertaken or planned to correct the error:
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