

# SAEG

## Item: ESS guidelines on temporal disaggregation

Duncan Elliott

11 March 2019

# Guidelines

---

- *What:* Taskforce to develop guidelines on
  - Temporal Disaggregation
  - Benchmarking
  - Reconciliation
- *Why:* *harmonization* and defining *best practice* in line with European Statistics Code of Practice
- *Who:* Aimed at producers of official statistics

# Taskforce

---

- Institutes
  - Eurostat, AT, BE, CZ, DE, DK, IT, NL, UK
- Areas
  - Methodology, Labour Market and National Accounts
- People
  - Dario Buono, Riccardo Gatto, Enrico Infante, Markus Fröhlich, Jean Palate, Karel Safr, Erich Oltmanns, Peter Stoltze, Barbara Gualdabascio, Filippo Moauro, Reinier Bikker, Duncan Elliott

# Since SAEG March 2018

---

- 2018 November: written consultation at DIME/ITDG
- 2018 December: Eurostat published *ESS guidelines on temporal disaggregation*
- 2019 February: ESSC endorse guidelines on temporal disaggregation as an ESS standard

<https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-06-18-355>

# Guidelines

---

- Chapters

1. Terms and methods
2. General aspects
3. Temporal disaggregation
4. Benchmarking
5. Reconciliation and multivariate methods
6. Specific issues
7. Revisions
8. Presentation

- Similar style to *ESS guidelines on seasonal adjustment* (eg A, B, C alternatives)

# 1. Terms and Methods

---

## Subsections

1. Terminology
2. Problems to address
3. Methods for temporal disaggregation, benchmarking and reconciliation
4. Methods for variable selection and reduction
5. Principles for temporal disaggregation, benchmarking and reconciliation
6. Choice of software

## 2. General aspects

---

### Subsections

1. A general policy
2. Domain specific policies
3. Stability of policies
4. Quality assurance framework

# 3. Temporal disaggregation

---

## Subsections

1. Design of the temporal disaggregation exercise
2. The choice of estimation strategy
3. Choice of high frequency indicators
4. Hard and soft data
5. Data reduction
6. Choice of temporal disaggregation methods
7. Temporal disaggregation without indicators
8. Temporal disaggregation with indicators
9. Extrapolation with temporal disaggregation



# 4. Benchmarking

---

## Subsections

1. Choice of benchmarking method
2. Dealing with large discrepancies
3. Combining benchmarking and seasonal adjustment
4. Extrapolation with benchmarking

# 5. Reconciliation and multivariate temporal disaggregation

---

## Subsections

1. Choice of multivariate temporal disaggregation method
2. Choice of reconciliation method

# 6. Specific issues

---

## Subsections

1. Outliers identification and treatment
2. Treatment of short series
3. Dealing with chain-linked series
4. Calendarization

# 7. Revisions

---

## Subsections

1. Routine revisions
2. Period of routine revisions
3. Major revisions

# 8. Presentation

---

## Subsections

1. Quality assessment of temporal disaggregation
2. Accuracy of benchmarking and reconciliation
3. Metadata

# Consistency issues?

Inconsistency between *ESS guidelines on temporal disaggregation* section 4.3 and *ESS guidelines on seasonal adjustment* section 3.3?

- (A) Perform benchmarking on the unadjusted data and then seasonally adjust the benchmarked data following the ESS guidelines on seasonal adjustment.
  - (B) Seasonally adjust the data and then benchmark to an appropriately calendar adjusted low frequency series using a method that does not introduce seasonal or calendar effects into the final series only when required by legislation or other reasonable user requirements.
  - (C) Regardless of legislative or user requirements, always seasonally adjust the data and then benchmark to a low frequency series and/or do so in a way that causes residual seasonal and or calendar effects in the final series.
- (A) In principle do not constrain the seasonally adjusted data to the unadjusted data or the calendar adjusted data over the year, unless strong users requirements justify the benchmarking. In this case, in the presence of calendar effects, constrain the seasonally and calendar adjusted data to the calendar adjusted data over the year. Otherwise, constrain the seasonally adjusted data to the unadjusted data over the year. Recognised benchmarking methods preserving short-term movements should be used.
  - (B) Do not constrain the seasonally adjusted data to the unadjusted data or the calendar adjusted data over the year.
  - (C) Constrain data even in absence of users requirements; use a benchmarking technique that generates seasonality or a benchmarking technique that do not preserve short-term movements.

# Discussion points

---

- Is there a requirement to review and possibly update *ESS guidelines on seasonal adjustment*?
- Some member states have expressed an interest in documentation with practical examples of implementing *ESS guidelines on temporal disaggregation*.