



# Draft Manual for ISP

## [ Section E : Index Compilation ]

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## Section E

- Identifies a list of practical issues that can be encountered during the actual ISP compilation process
- Proposes methods to cope with the practical issues

# Contents of Section E

## E.1 Types of Index

## E.2 Issues related to transformation on input data

- Missing input variables
- Ruptures in data
- Harmonisation of variables forms before aggregation
- Adjustments (for seasonality, number of working days)

## E.3 Issues related to consolidation

- Weighting
- Quality
- Productivity
- Comparability with GDP

# Types of Index (1)

## Advantages and disadvantages of various types of volume indices

Generally agree with the evaluation in the table E.1.a.

However,

- The work on comparing indices in the new international PPI manual should be referenced
- Some criteria may not be essential, e.g. a strong factor reversal test

## Types of Index (2)

# Recommending Chain linked Laspeyres Index

Agree that Chain linked Laspeyres is the most practical solution while Chain linked Fisher is theoretically preferable

However, there is no agreement on the emphasis to be given to Fisher index in the recommendations. i.e.

- Should NSOs compile a Fisher index if they are in position to?
- Should we strongly recommend Laspeyres index to achieve better comparability across countries ?

## Types of Index (3)

### Rebasing and chaining periodicity

#### No clear agreement on chain-linking periodicity

Although it is recognised that structural changes could be very important between two base years, rebasing and chaining every 5 years is judged realistic by several members

Other members think that advantages of annual chain-linking should be strengthened and that there should be more emphasis on the weakness of 5-yearly rebasing

# Transformation of input data (1)

## Missing input variable

Nature of problem	Preferred solution
The frequency of the input series corresponds to the frequency of the ISP	Backasting, Interpolation or Forecasting, possibly using information from other variables
The frequency of the input series is lower than the frequency of the ISP	Forecasting quarterly or annual data for three periods ahead and Interpolating a monthly or quarterly path from the forecasted data
There is no data for a given activity	Use information from other variable if suitable.

# Transformation of input data (2)

## Breaks in time series

- Detecting Breaks: Relevant statistical tests and consultation with economists and data providers
- Fixing Breaks:

Type of break	Preferred solution
Errors	Get the correct data from the data provider
Permanent break with level shift only	Link both parts of the series by using a factor to remove the effects of change in the level
Permanent breaks with changes in level and slope	Only keep data after the break and estimate the data before by backcasting

## Transformation of input data (3)

### Seasonal and working day adjustment

	Preferred solution
Method	X12-ARIMA or TRAMO-SEATS
Level of adjustment	4-digit level or higher, provided suitable accuracy of the data
Frequency of adjustment	Concurrent adjustment every month or quarter; once a year for all period
Treatment of series with short historical data	Estimate seasonally adjusted data from their imputed raw data, when possible

# Transformation of input data (4)

Generally agree on recommendations proposed

However it is thought that

- In some sections (e.g. E.2.3), too much discretion is left to NSOs
- Benchmarking of the quarterly estimates to the annual estimates should be recommended
- Recommendations on ruptures are fine but it might be a problem to decide when a rupture should be fixed
- For seasonal adjustment, model parameters should be checked and updated if necessary once a year. Concurrent factors should be calculated and applied every period

# Weighting

Gross value added seems appropriate variable for most STESEG Members

However

- Eurostat STS recommend to use turnover
- No strong agreement on the periodicity of updating for weights as some Members rather recommend annual updating
- It is suggested that weights should be updated with the same frequency for the different levels

## Other important issues

### Quality

This section is judged useful by STESEG Members, but it is proposed to consider harmonising this section with Section D2 – Evaluation of a variable: quality measures

### Productivity

This section is considered useful by STESEG Members and some of them even consider it should be further developed

## Questions for discussion

- How far should we push country to harmonisation ?
- Laspeyres (practical) / Fisher (theoretical) ?
- 5-years chain-linking / annual chain-linking ?
- 5-years updating of weights / annual updating of weights ?
- Further development of the paragraph on productivity ?  
(Do we need ? Any volunteer ?)