



This template was used for the

# Memobust Handbook

on Methodology of Modern Business Statistics

26 March 2014

## Method: <name of the Method>

### Contents

General section .....	3
1. Summary .....	3
2. General description of the method .....	3
3. Preparatory phase .....	3
4. Examples – not tool specific .....	3
5. Examples – tool specific.....	3
6. Glossary.....	3
7. References .....	3
Specific section.....	4
8. Purpose of the method.....	4
9. Recommended use of the method .....	4
10. Possible disadvantages of the method.....	4
11. Variants of the method.....	4
12. Input data .....	4
13. Logical preconditions.....	4
14. Tuning parameters .....	5
15. Recommended use of the individual variants of the method .....	5
16. Output data.....	5
17. Properties of the output data .....	5
18. Unit of input data suitable for the method .....	5
19. User interaction - not tool specific.....	5
20. Logging indicators .....	5
21. Quality indicators of the output data.....	5
22. Actual use of the method .....	5
Interconnections with other modules.....	5
23. Themes that refer explicitly to this module.....	5
24. Related methods described in other modules.....	5
25. Mathematical techniques used by the method described in this module .....	5
26. GSBPM phases where the method described in this module is used.....	5
27. Tools that implement the method described in this module.....	6

28.	Process step performed by the method.....	6
	Administrative section.....	7
29.	Module code.....	7
30.	Version history .....	7
31.	Template version and print date.....	7
	Instructions to the author .....	8



## **Specific section**

### **8. Purpose of the method**

### **9. Recommended use of the method**

- 1.
- 2.

### **10. Possible disadvantages of the method**

- 1.
- 2.

### **11. Variants of the method**

1.
  - 1.1
  - 1.2
2.
  - 2.1
  - 2.2

### **12. Input data**

- 1.

### **13. Logical preconditions**

1. Missing values
  - 1.
  - 2.
2. Erroneous values
  - 1.
  - 2.
3. Other quality related preconditions
  - 1.
  - 2.
4. Other types of preconditions
  - 1.
  - 2.

**14. Tuning parameters**

1.

**15. Recommended use of the individual variants of the method**

1.

**16. Output data**

1.

**17. Properties of the output data**

1.

**18. Unit of input data suitable for the method**

**19. User interaction - not tool specific**

1.

**20. Logging indicators**

1.

**21. Quality indicators of the output data**

1.

**22. Actual use of the method**

1.

**Interconnections with other modules**

**23. Themes that refer explicitly to this module**

1.

**24. Related methods described in other modules**

1.

**25. Mathematical techniques used by the method described in this module**

1.

**26. GSBPM phases where the method described in this module is used**

1.

**27. Tools that implement the method described in this module**

1.

**28. Process step performed by the method**

## Administrative section

29. Module code

30. Version history

Version	Date	Description of changes	Author	Institute

31. Template version and print date

Template version used	1.0 p 4 d.d. 22-11-2012
Print date	26-3-2014 16:22

## Instructions to the author

### General section

#### 1. Template item “Summary”

A short description of the contents of the module that every interested reader should be able to understand. At most one page, but preferably much shorter, e.g. 300-500 words.

#### 2. Template item “General description of the method”

The main description of the contents of the module, which should not be too technical. For technical details, references to existing documents and/or items from the list of references (Section 7) may be given, provided that these references are written in English and publicly available. Preferably no more than five pages. The author may give additional structure to this chapter by adding subsections. In order to keep the numbering of successive items, only subsections should be added. The General description provides the main text of the module.

#### 3. Template item “Preparatory phase”

This is an optional, design related item, useful when considering the use of the described method in a practical situation. For instance about obtaining the required input data and auxiliary data of sufficient quality, and about the tuning, design time or run time, of the parameters or the required user interaction of the method. A formal list of these items can be found in the Specific description in the second part of the module. If the item is not applicable, it should not be removed but left blank.

#### 4. Template item “Examples – not tool specific”

Simple and practical examples of the use of this method, including the name of the person who has provided the example, if this is not the author of the module. Preferably, each module should contain at least one example. In the Memobust project the examples concern business statistics. If an example on social statistics is given then also at least one example on business statistics must be included. If the item is temporarily not completed, it should not be removed but left blank.

#### 5. Template item “Examples – tool specific”

This is an optional item. It provides simple and practical examples of the use of the method using syntax and options of some standard tool, including the name of the person who has provided the example, if this is not the author of the module. In the Memobust project the examples concern business statistics. If an example on social statistics is given then also at least one example on business statistics must be included. If the item is not completed, it should not be removed but left blank.

#### 6. Template item “Glossary”

Mention all relevant “local terms” in this module-specific “local glossary”. That are terms independent of a particular tool and with no SDMX equivalent. Copies of standard SDMX definitions from the Statistical Data and Metadata Exchange, or some other global glossary, can also be included for the convenience of the reader if they are not common knowledge. All terms in this module with a non-standard definition (homonyms) and all unconventional terms should be included and marked by an asterisk (\*). These module glossaries serve as input for an integrated and harmonized global glossary.

This harmonisation of terms is coordinated first at topic level by the topic leaders. In the published modules the local glossaries will be replaced by the global glossary, to prevent double maintenance.

#### 7. Template item “References”

All literature references should be written in English and should be publicly available. References to other Memobust modules are provided in section “Interconnections with other modules”. References should be provided in alphabetical order and in the following format (example from theme module “Imputation-T-Imputation”):

##### *Example*

Andridge, R.R. and R.J. Little (2009), The Use of Sampling Weights in Hot Deck Imputation. *Journal of Official Statistics* **25**, pp. 21-36.

Chambers, R.L., J. Hoogland, S. Laaksonen, D.M. Mesa, J. Pannekoek, P. Piela, P. Tsai, and T. de Waal (2001a), *The AUTIMP-Project: Evaluation of Imputation Software*. Report, Statistics Netherlands, Voorburg.

Chambers, R.L., T. Crespo, S. Laaksonen, P. Piela, P. Tsai, and T. de Waal (2001b), *The AUTIMP-Project: Evaluation of WAID*. Report, Statistics Netherlands, Voorburg.

Daniels, J., M.J. Daniels, and J.W. Hogan (2008), *Missing Data in Longitudinal Studies*. Taylor & Francis, Philadelphia.

etc.

## **Specific section**

The General description of the method, item 2, gives a more easily readable and accessible account of the more formal items covered in the following Specific section. The Specific section can be used to check if the General description (item 2) is complete and well balanced concerning several relevant aspects. Each item in the Specific section should be completed. If the item is temporarily not completed, or if the item is not applicable, it should not be removed but left blank. No items or sections should be added. If desired, subsections may be added, but the numbering and structure of the items and sections must stay the same.

#### 8. Template item “Purpose of the method”

This is the purpose for which the method is used in exactly one process step. If variants of the method can be applied for different intentions, then write different modules, each module describing a different method in the context of each process step. The content of this item should enable a reader with a particular application in mind to decide whether this method is of interest to him/her. This is not a description of the method itself, but of its purpose. Also it should not contain recommendations on the optimal tuning of the method for a particular situation, as covered in item 9 ‘Recommended use’.

#### 9. Template item “Recommended use of the method”

This item contains recommendations on the optimal use of the method for a particular situation. This is apart from recommendations on the use of each individual variant of the method, as described in item 11, and their optimal use, as explained in item 15.

#### 10. Template item “Possible disadvantages of the method”

This item explicitly describes possibly undesirable side effects if the method is applied, and what type of error or practical disadvantage is to be expected then. These are unwanted properties (post-conditions) of the output data.

#### 11. Template item “Variants of the method”

Describe only variants of a method that are of practical relevance. Do not give variants of the method that are described in other modules, for they are considered separate methods. The variants in a first parameter are number 1.1, 1.2, etc, the variants of a second type in a second parameter, are 2.1, 2.2, etc. In item 15 the recommended use of each variant is described for practical situations.

#### 12. Template item “Input data”

A description of the input data used by the method. For instance: the type of input data (e.g. micro, macro, longitudinal data), and the type of information used as input by the method, as regards content. This includes also auxiliary data, if applicable. Label the datasets as Ds-input1 etc.

#### 13. Template item “Logical preconditions”

These are conditions on the input data purely by the method, i.e. not restrictions implied by a tool or a process step, such as that an input data set has to be present. Items 13.1 and 13.2 contain, respectively, the types of missing values and the types of erroneous values that may be present in the input data. The items 13.1 to 13.4 are not a complete list, but can be extended when appropriate.

#### 14. Template item “Tuning parameters”

User-specified values that are used as auxiliary information in an implementation of the method. For instance: a user-specified cut-off value in an outlier detection method. The optimal values of these parameters in particular cases are for each variant specified in 15.

#### 15. Template item “Recommended use of the individual variants of the method”

Parameter values and tuning values (best practices) that are recommended in specific situations (e.g. input data sets, population units, unit properties) for the method. Refer explicitly to the described variants. When the method does not have parameters, no recommendations on the best parameter values can be made. When the method does not have any variants, no recommendations on the recommended use of a particular variant can be made.

#### 16. Template item “Output data”

A description of the output data generated by the method. For instance: the type of output data and the type of information in the output provided by the method, as regards content (so not a log file or quality indicators; these are specified in items 20 and 21). Label the datasets as Ds-output1 etc.

#### 17. Template item “Properties of the output data”

These are the desired useful properties (post-conditions) of the output data sets on methodological grounds, i.e. not implied by a tool. Item 10 mentions possible undesired side effects.

18. Template item “Unit of input data suitable for the method”

Please choose one of the following: Incremental processing, Processing groups of units, or Processing full data sets. For instance when adding or updating one record of input data, some methods must process the complete input data, other methods append or update the existing output data by one record.

19. Template item “User interaction - not tool specific”

The necessary not tool specific user interaction before, during, and after use of the method.

20. Template item “Logging indicators”

Indicators that may be used for logging.

21. Template item “Quality indicators of the output data”

For instance: the precision of the output data set (in the form of a confidence interval) for a given precision of the input data set, or the number of significant digits in the output data, or a level of consistency achieved by the method.

22. Template item “Actual use of the method”

Instance where this method is used in practice, i.e. a particular statistical process in a particular country in year yyyy. If possible, provide references to more detailed documentation of the application.

## **Interconnections with other modules**

23.-28. Template item “Interconnections with other modules”

The links to other modules yield additional information of various type relevant to the method described in this module. It also indicates to the author which information is covered by other modules and should therefore not be repeated in this module. The links are provided as Module codes, available in the first item in the Administrative section. This is a reference without author(s) and without version number, i.e. the actual version of a module. Connections between modules within the same topic can be provided by the author and also by the topic leader.

- Tools that implement the method described in this module

A description of the tools or their technical limitations or possibilities is not part of a method module. The links included here are meant for easy reference and as a summary of commonly used (standard) tools implementing the method.

- The Process step performed by the method

This is a very short description of the purpose of the method. It can be found when comparing the output data to the input data of the method. It can be some type of correction, for quality improvement of data. Or it can be an estimation or derivation of output data for a different concept compared to the input data, that is some type of conceptual transformation.

## Administrative section

### 29. Template item “Module code”

This is a code used to identify this module and to refer to it from other modules. It is provided in the following standard way by the author. The module code is obtained by concatenating:

- The topic name
- The module type between hyphens without spaces: -M- for a method module
- The <Name of the Method> as stated in the first line on the first page of the module, after the colon

The terms in the method name are capitalised. If the method name is rather long it can be shortened, but it has to remain unique within the topic.

The module *file name* is the combination of the module code and version number, followed by the file extension. In the Memobust project the author chooses the topic name from the following list, in alphabetical order:

### Topic names

Business Demography
Coding
Data Collection
Derivation of Statistical Units
Design of Statistical Concepts
Dissemination
Evaluation
General Observations
Imputation
Introduction
Macro Integration
Micro-Fusion
Overall Design
Quality Aspects
Questionnaire Design
Repeated Surveys
Response
Sample Selection
Seasonal Adjustment
Statistical Data Editing
Statistical Disclosure Control
Statistical Registers and Frames
User Needs
Weighting and Estimation

*Example of a module code and a file name*

A Method module with first line: “Method: Generalised Regression Estimator”, that is part of the topic “Weighting and Estimation”:

- module code: “**Weighting and Estimation-M-Generalised Regression Estimator**”
- file name: “**Weighting and Estimation-M-Generalised Regression Estimator-v1.doc**”

In section “Interconnections with other modules” the module codes are used to refer to other modules. That is without version number, so always the actual versions are referred.

30. Template item “Version history”

31. Template item “Template version and print date”

The template can be updated to a new version when necessary. However, for search functionality it should be backward compatible with the former versions. The print date is the date at which this module is printed, for instance as a chapter of a handbook or for other reasons. Each time a module is printed, it will show the updated, actual day and time of printing.