DESAP

The European
Self Assessment Checklist
for Survey Managers

Name of the survey:

Name of the Survey Manager:

Date:

DESAP
Development of a Self Assessment Programme

Guidelines for the Use of the Checklist

What is DESAP?

DESAP is the generic checklist for a systematic quality assessment of surveys in the European Statistical System (ESS). It has been designed as a tool for survey managers and should support them in assessing the quality of their statistics and considering improvement measures. During its development, the checklist has been tested in a pilot study covering a large variety of survey areas. It is fully compliant with the ESS quality criteria and comprises the main aspects relevant to the quality of statistical data. The checklist is generic in the sense that it applies to all individual statistics collecting micro data, irrespective of the subject matter area and the specific survey methodology.

Who should fill in the Checklist?

The checklist has been designed to be filled in by the survey manager, i. e. the person responsible for the survey (or the main parts of it) without time consuming preparation. However, depending on the specific organisation of a statistical agency, it might be useful to involve other experts in the assessment process (e. g. the methodologist). Another option to carry out the self assessment is to fill it in together with the team responsible for the different aspects of the survey.

The objectives of DESAP

The DESAP Checklist has been designed in order to fulfil a number of quite different functions. First of all it is an **assessment tool**: It should be used to assess the overall quality of a survey and to compile a quality profile covering the ESS quality components. But this is not all. The checklist also provides guidance in the **consideration of improvement measures** and could facilitate a basic appraisal of the risk of potential quality problems. Additionally it provides a means for simple comparisons of the level of quality over time and across domains (given that data are stored centrally in the statistical agency). It could also provide support for resource allocation within statistical offices or be helpful for the training of new staff. **Please consider all potential uses for your survey before you start to complete the checklist.**

The structure of DESAP

DESAP is structured in a process-oriented way which means that it goes along with you in thought through the whole process of a survey from the very early stages until the final steps. In order to provide a manageable structure, seven main survey processes and 24 elements were defined. These processes and elements please are shown on page 4.

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Processes and process elements of DESAP

How to use the checklist

Please start to complete the checklist at page 7 with the first section and go through the checklist step by step. The survey manager can either answer the **questions on his or her own** or could go through the checklist **with the team** responsible for the respective survey. Alternatively he or she could hand out copies of the checklist to the colleagues so that everyone completes it on his or her own before discussing the results in the team. Furthermore, depending on the organisational structure of your survey, you might want to **contact experts from other departments** of your organisations for particular questions, e. g. a mathematical statistician concerning the questions about sampling design or the measures of accuracy.

The checklist aims to meet its objectives (mentioned before) by different types of questions. First of all there are the **assessment questions**. You will recognise them by a deep blue background and a dark blue bar at the side. They can be summarised to provide you with a graphical feedback by drawing the diagram on page 5. Detailed instructions for drawing the diagram are on page 4.

If you want to complete the checklist periodically, e. g. to achieve comparisons of the quality level of your survey over time you might not always want to go through the whole list but concentrate only on the assessment questions. In this case please note that the assessment questions are available separately in a condensed version. It is, however, recommended to go through the entire checklist, especially if you are carrying out the self assessment for the first time.

There are many other **questions with numerous response categories ("improvement questions")** which sum up to an inventory for (data) quality assurance measures in NSIs. Generally the response categories should make the process of completing the checklist less time consuming for you because you just can tick the item(s) that apply to your survey. However, regarding the different alternatives might give you some ideas of possible improvements for the survey production process.

In order to get a suitable documentation of the assessment ideas collected, it is recommended to write down all your ideas, possible methodological changes etc. already whilst you are going through the checklist. There is some space provided on page 6 where you can note down and thus gather your ideas. This page can be ripped out so that you can have it next to you while completing the checklist.

Finally there are **open questions**. For some of them no response categories could be given. However some of them aim to confront you with pertaining questions which might be useful for the development of improvement ideas (e. g. "What are the key unmet user needs in priority order?").

The glossary

While completing the checklist you might encounter some technical terms you are not familiar with. In such cases the glossary at the end of the checklist should provide you with explanations. Based on the standard glossary of the Eurostat Working Group "Assessment of quality in statistics" {doc. Eurostat/ A4/ Quality/ 03/ General/ Glossary} it was adjusted to the DESAP checklist.

How to draw the assessment diagram (on page 5):

1. Rip out page 5 and put it next to you when answering the checklist.

2. When you come to an assessment question (they are marked by a deep blue background and a dark blue bar at the side) copy your answer into the diagram.

3. The answers of the assessment questions are numbered and you find equivalent numbers in the diagram.

4. Make a cross in the diagram at the number according to your answer of the respective questions (see example below). If a question is not relevant for your survey, please just skip the respective item in the diagram.

5. When you have completed all assessment questions combine your crosses in the diagram as done in the example below.

6. The area which comes out by doing so reflects the quality profile of your statistic.
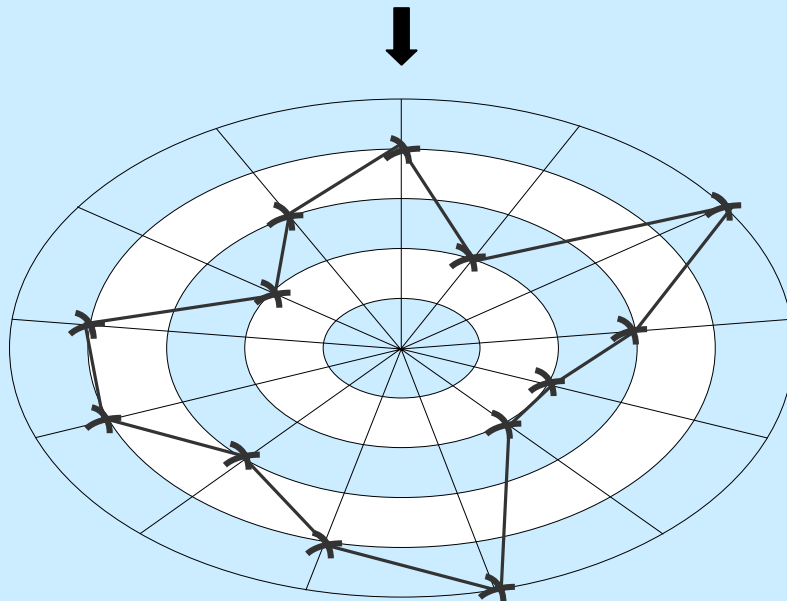
Have fun and many good ideas with the checklist!

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Assessment diagram

Accuracy

Relevance

Coherence

Comparability

Timeliness & Punctuality

Accuracy

Accuracy

Section II/7 undercoverage

Section II/8 misclassification

Section II/6 overcoverage

Section IV/4 necessity of editing

Section V/3 overall relevance

Section V/6 CVs for key variables

Section V/2 user satisfaction

Section V/15 unit non-response

Section V/28 Coherence within the same socio-economic area

Section V/18 item non-response

Section V/27 coherence for results of different frequencies

Section V/21 time lag reference period/ publication

Section V/25 comparability over time

Section V/24 comparability across non-geographical domains

Section V/22 Publication dates kept?

5 4 3 2 1

Notes for improvement ideas:

This space is thought to be used for noting down any improvement ideas for your statistic that you might have got while completing the checklist. If you have ripped the page out you can have it next to you while completing the checklist and you are able to gather your ideas on this page instead of noting them down in the checklist. For instance, this might be helpful if you wish to go back and look at them again.

Section I

Section II

Section III

Section IV

Section V

Section VI

Section VII

I. Decision to undertake a survey

Analysis of user needs

A statistical product is relevant if it meets users' needs. Thus user needs have to be established at the outset. The following questions refer to the different aspects of communication with the key users.

1   **On which legal basis is the survey carried out?**

National law ☐

European law ☐

No legal basis ☐

Others ☐

(Please name the constitutional basis)

☐ (text box)

2   **Are all key users of the survey known?**

Yes, we have a very good idea of our key users ☐

Yes, the key users are partly known ☐

No, our knowledge of the key users is insufficient ☐

3   **Who are the key users of the survey – please rank the users of your statistics from "1" (most important user) to "5".**

International organisation ☐		Trade association (s) ☐
International Monetary Found (IMF) ☐		Trade union (s) ☐
European Commission ☐		Employer association (s) ☐
Governmental department ☐		Newsletter or publisher ☐
Central Bank ☐		Companies ☐
Scientific institutes and universities ☐		Don´t know ☐

Others, ☐

(Please name the key users)

☐ (text box)

4   **How are the key users documented?**

User data base for management of user relationships (e.g. complaints) ☐

There is some information in the documentation of previous surveys ☐

Unmet user needs documented by statistics with similar subject ☐

No information ☐

Others, ☐

(Please name the information)

☐ (text box)

5   **Which of the following procedures are in place for user consultation?**

Relevant governmental departments are involved in the planning process ☐

Producer-user groups (e.g. sub-committees of statistical councils), discussing subject specific questions ☐

Scientific board/ council ☐

Customer survey exploring the needs of a larger group of users ☐

Formalised agreements (e.g. service level agreements) with priority key user(s) ☐

Available marketing concepts which mention the use of statistical information ☐

Co-operation with partners in social- and economic sciences as well as market research ☐

Informal contacts with relevant users ☐

Others, ☐
(Please name the procedures)

6   **Which of the following measures are undertaken in order to anticipate future user needs?**

Programme planning in a statistical council or a subcommittee of a statistical council ☐

Bilateral committees with government departments ☐

Access to the policy agenda of the government or to cabinet documents ☐

Bilateral committees with states/ regional governments in case of federal countries ☐

Attendance of agency staff at conferences of user organisations ☐

Bilateral meetings or workshops with other user groups ☐

User enquiries that could not be satisfied yet ☐

Publication review ☐

No measures in place ☐

Don´t know ☐

Others, ☐
(Please name the measures)

7   **What are the known key unmet user needs in priority order?**

Don´t know ☐

8   **Which plans are in place to react to the key unmet user needs?**

Survey objectives

Before the actual planning phase, it is vital to constitute a basis for specifying the contents, the characteristics, the fundamental definitions and classifications of the survey. In creating this basis it is highly important to clearly formulate the objectives of the survey in question.

9   **Are the survey objectives set out in a written form?**

Yes ☐

No ☐

Place for comments concerning the questions of process I "Decision to undertake a survey"

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II. Survey design -
Basis of quality assurance for all stages of collection and processing

Survey concepts

A careful selection and design of the survey concepts is particularly important to assure conceptual comparability, coherence and timeliness. The following questions reflect the main aspects to be clarified at the beginning of the planning phase.

1   **Are there any official or non-official surveys to which your survey can be compared to?**

Yes ☐

No ☐ ➡ Then go to question 3

2   **Are there any official or non-official surveys from which quality improving measures could be adopted?**

No ☐

Yes ☐

     (Please name the surveys)

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3   **Which standard frameworks, concepts, definitions and classifications are used?**

International standards ☐

National standards ☐

Survey specific concepts ☐

4   **Are there any standard classifications the survey is not compliant with?**

No ☐

Yes ☐

     (Please state)

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5   **Is the frame a common sampling frame employed in comparable surveys?**

Yes ☐

No ☐

A common frame does exist but is not used ☐

6   How do you appraise the problem of overcoverage?

1 - **Major overcoverage**: An unacceptably high number of units not belonging to the target population were included in the frame; or the overcoverage rate not known ☐

2 - **Considerable overcoverage**: Many units not belonging to the target population were included in the frame ☐

3 - **Some overcoverage**: Some units not belonging to the target population were included in the frame ☐

4 - **Slight overcoverage**: Few units not belonging to the target population were included in the frame ☐

5 - **Nearly no overcoverage**: There is only a very small difference between the frame and the target population ☐

7   How do you appraise the problem of undercoverage?

1 - **Major undercoverage**: An unacceptably high number of units belonging to the target population were not included in the frame; or the undercoverage rate not known ☐

2 - **Considerable undercoverage**: Many units belonging to the target population were not included in the frame ☐

3 - **Some undercoverage**: Some units belonging to the target population were not included in the frame ☐

4 - **Slight undercoverage**: Few units belonging to the target population were not included in the frame ☐

5 - **Nearly no undercoverage**: There is only a very small difference between the frame and the target population ☐

8   Are there any problems with misclassification of statistical units?

1 - There are is **a large number** of misclassifications ☐

2 - There is a **considerable number** of misclassification ☐

3 - There are **some misclassifications** ☐

4 - There is a **slight problem** with the number of misclassifications ☐

5 - There are **nearly no misclassifications** ☐

9   How long is the time gap between the reference period to the last update of the sampling frame?

3 months or less ☐

6 months or less ☐

9 months or less ☐

12 months or less ☐

More than a year and less than three years ☐

More than three years ☐

10   **Would the problems of under- or overcoverage be less if the time gap between the reference period to the last update of the frame was shorter?**

Yes ☐

No ☐

11   **Did you make sure that the frame is as close to the target population as possible by assessing the coverage via...?**

Matching the frame with comparable alternative sources for the target population ☐

Analysing survey returns for duplicates, deaths, out-of-scope units and changes in characteristics ☐

Using specific questions on the questionnaire to aid in monitoring coverage ☐

Verifying with local authorities (e.g. regional offices, field survey staff, the survey units themselves) ☐

Verifying the frame of subsets of it in the field (which could include verification of out-of-scope units) ☐

Comparing the frame with sample units from a corresponding area frame ☐

Updating the frame to determine the changes which occur during a certain time period ☐

Checking the consistency of counts with other sources or with data from specially designed replicates ☐

Using evaluative information obtained from other surveys with the same frame ☐

Contact with the people in charge of the administrative data when coverage changes are outside your control ☐

Map checks for area frames to ensure clear and non-overlapping delineation of the geographic areas used in the sampling design ☐

No monitoring ☐

Others, ☐
(Please name the method(s))

➡ *Please answer the following part " Sample design " only if your survey is a sample survey. Otherwise please go to the end of page 14.*

Sample design (for sample surveys only)

The maximal or required level of accuracy depends to a great extent on the sample design and therefore the sample design should be considered very carefully.

12   **For your survey, is a common technique of the National Statistical Institute (NSI) chosen for sampling?**

Yes ☐

No ☐

13   **Is the sample size optimised with regard to accuracy and cost?**

Yes ☐

No ☐

14   **What kind of sampling design is employed?**

Non-random-sampling ☐

Cut-off threshold ☐

Flow-sampling ☐

Random sampling ☐

Systematic random sampling ☐

(One-stage) Cluster sampling ☐

Two-stage cluster sampling ☐

Stratified sampling ☐

Two-phase (stratified) sampling ☐

Probabilities Proportional to Size (PPS) sampling

With replacement ☐

Without replacement ☐

Others or refinements ☐

Please name them:

15   **If non-random-sampling is chosen, please could you explain why?**

16   **Which allocation of the units to the strata is chosen in the case of a stratified sampling design?**

Proportional allocation ☐

Optimal allocation ☐

Neyman allocation ☐

Others or refinements ☐

Please name them:

17   **Do you use a rotation scheme to minimise the response burden?**

Yes ☐

No ☐

18   **What kind of software is used for sampling/ determining the sample size?**

A Tailor-made system ☐

A generalised sample selection software or sampling procedure, please state the software:

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19   **Are there any differences between the target and achieved sample size?**

No, there are no differences ☐

Yes, the achieved sample size is bigger than the target size ☐

Yes, the achieved sample is $\leq$ 5% smaller than the target size ☐

Yes, the achieved sample is > 5% smaller than the target size ☐

20   **Is substitution allowed in the case of missing units?**

Yes ☐

Yes, however only in defined limits ☐

No ☐

21   **Considering all topics so far, how do you appraise the efficiency of the survey design for this survey?**

Efficient ☐

Very satisfactory for the budget (and time) given, only minor improvements could be made ☐

Satisfactory for the budget (and time) given, but improvements should be made ☐

Inadequate ☐

Highly deficient ☐

22   **From a purely methodological point of view, would you recommend changes in the survey design?**

Yes, it should urgently be considered ☐

It might be appropriate but should be subject to further testing ☐

No ☐

➡ *Please answer the following part "Development and testing of the measurement instruments" only if your survey is questionnaire based. Otherwise go to section III.*

Development and testing of the measurement instruments

Well developed measurement instruments minimise measurement errors and optimise the relation to the respondents. The following questions focus on the main aspects concerning the quality of the questionnaire or interview.

23   **Which of the following measures are in place for the questionnaire design?**

Questions or question batteries that have been used before but have not been previously tested ☐

Harmonised questions or question batteries that have been previously tested ☐

Standardised drafts for the layout ☐

Standard software for programming an electronic questionnaire for computer assisted interviews ☐

An internal specialised questionnaire appointee of the institute who gives advice and checks the questionnaire ☐

A questionnaire expert external to the NSI who gives advice and checks the questionnaire ☐

The questionnaire is provided by Eurostat ☐

24   **How do you appraise the response burden considering the length for responding or completion?**

It is easily done within 20 Minutes ☐

It can be done within 45 Minutes ☐

It takes longer than 45 Minutes ☐

Longitudinal or panel surveys:
     Introduction interview:

               It is easily done within 20 Minutes ☐

               It can be done within 45 Minutes ☐

               It takes longer than 45 Minutes ☐

     Following interviews / completions of questionnaires or diaries:

               Easily done within 20 Minutes ☐

               Can be done within 45 Minutes ☐

               Take longer than 45 Minutes ☐

25   **How do you appraise the response burden of the questionnaire or interview concerning the compilation of information needed?**

Low response burden, the information can be provided easily ☐

Moderate response burden, some information needs to be retrieved ☐

Demanding response burden, the information required needs complicated retrieval ☐

26   **How do you appraise the response burden of the questionnaire or interview considering sensitive questions?**

Low response burden, all questions can be answered easily ☐

Moderate response burden, there are some sensitive questions ☐

Demanding response burden, there are many or very sensitive questions ☐

27   Items determining the quality of the questionnaire design include the ones listed below. Please tick the ones that apply to your survey

Attractive design appearing professional and businesslike ☐

In the introduction, the title or subject of the survey, the identification of the sponsor, the explanation of the purpose of the survey, the request of the respondent's co-operation, information about the conducting authority and confidentiality protection are provided ☐

There are titles or headings for the separate sections ☐

Graphic additives like colour use, shading, illustrations, symbols or bold writing are employed in an optimal way to indicate where the respondents should answer or to direct their attention ☐

The opening questions are applicable to all respondents and/ or easy to answer ☐

Words and concepts are always consistently used ☐

Each question is adequately justifiable ☐

Questions follow the respondents' logic ☐

The order of the questions does warrant an optimal direction through the filters ☐

Time reference periods and units of response are always clear ☐

On the last page there is space for additional comments by respondents ☐

On the last page there is an expression of appreciation to the respondent ☐

Instructions and additional guidance ☐

A free phone number for contact in the case of questions ☐

28   Given these requirements, how would you assess the quality of the questionnaire used for the survey in question?

The questionnaire meets all of these requirements and no improvements are necessary ☐

The questionnaire meets most of these items and can be considered sufficient although some items could be improved ☐

A view items of the questionnaire should be improved ☐

The questionnaire needs to be improved urgently because most of these items are failed ☐

29   Who has tested the questionnaire?

Testing was undertaken internally ☐

Testing was undertaken by the responsible committee of the NSI ☐

The internal survey laboratory ☐

An external survey laboratory has been consulted for the pretest ☐

The questionnaire was tested by external experts ☐

30   **Which methods for questionnaire testing have been used to assess the questionnaires' response burden in terms of length, requirements and its (graphic) design?**

Pretesting of the questionnaire with a small sample   ☐

Debriefing sessions with interviewers following a pretest   ☐

Qualitative testing of respondent behaviour/ understanding of the questions

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Focus groups interviews   ☐

In-depth interviews   ☐

Think-aloud interviews   ☐

Paraphrasing   ☐

Behaviour coding   ☐

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Split sample testing   ☐

<div align="right">

Others,   ☐

(Please name the method(s))

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Place for comments concerning the questions of process II "Survey design"

III. Data collection

Data sources

Different ways of obtaining data should be considered in order to get the most accurate data available. Survey managers should chose a data collection method which reduces measurement errors and response burden and which helps to minimise the expenses.

1   On which basis did you decide on the data collection technique used in your survey?

Testing ☐

Literature review ☐

Legal requirements ☐

Available capacity ☐

Consistency with former surveys ☐

Others ☐

(Please name the basis of your decision)

2   Which kind of data collection technique is used in your survey?

Interviewer–administrated survey

Face-to-face:	Electronic questionnaire (CAPI)	☐	Please go to question **28**
	Paper questionnaire (PAPI)	☐	
Telephone:	Electronic questionnaire (CATI)	☐	Please go to question **24**

Self-administrated survey

	Web questionnaire	☐	
	Electronic questionnaire (CASI)	☐	Please go to question **17**
	Paper questionnaire or diary	☐	

Administrative data or registers ☐ ➡ Please go to question **4**

Mixed mode (in this case please tick as many items from above as necessary, go to the respective questions and answer question 3) ☐

Others ☐

(Please name the technique(s))

Mixed mode surveys

3   Did you assess the measurement effects due to different data collection modes?

Yes, they are fully assessed ☐

Yes, they are sufficiently assessed ☐

They are assessed, however it could be improved ☐

No they are not assessed at all ☐

Administrative data or registers

4   Where are the data you use maintained?

In your unit ☐

In an other unit in your organisation ☐

In an other unit outside your organisation ☐

5   Are you able to assess the quality of the data yourself?

Yes ☐ ➡ please go to question 8

No ☐

6   Do you have external quality assessment available?

Yes ☐

Partly ☐

No ☐

(Please specify which information would be needed)

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7   Do you have sufficient information on the quality of the data?

Yes ☐

No ☐

8   Do you need to link the data with other data?

Yes ☐

No ☐ ➡ please go to question **12**

9   **Which kind of record linking methods are used?**

Direct matching (Deterministic or Probabilistic) ☐

Statistical matching ☐

Others, please state:

☐ (large text box)

10   **Do you evaluate the success rate of the linkage?**

Yes ☐

No ☐ ➡ please go to question **12**

11   **How do you assess the success rate of the linkage?**

Nearly error free ☐

Satisfactory ☐

Acceptable but to be improved ☐

Not acceptable ☐

12   **If you use different data sources, are there problems with....?**

coverage ☐

classifications ☐

definitions ☐

Updates and timeliness ☐

Units which are duplicates or multiple units ☐

13   **How do you assess the security aspects during the data collection/ exchange?**

Satisfactory ☐

Acceptable but to be improved ☐

Not acceptable ☐

14   **Are you able to identify units which are duplicates or multiple units?**

Yes ☐

No ☐ ➡ please go to question **16**

15 **If you are able to identify units which are duplicates or multiple units, do you take care of them before sampling?**

Yes ☐

No ☐

16 **Are you able to ensure efficient use of registers and administrative data in your survey?**

No ☐

Yes ☐

   (Please specify how)

➡ **please go to question 50 (unless mixed mode survey)**

Self administrated surveys

17 **How do you appraise the instructions or guidance of the questionnaire?**

Excellent ☐

Good ☐

Sufficient ☐

Needs some improvements ☐

Inadequate ☐

18 **Do you provide a free phone number for contact in the case that the respondents have questions?**

Yes ☐

No ☐

19 **Do you have an organised contact team to deal with incoming questions?**

Yes ☐

No ☐

20 **Is your survey computer assisted?**

Yes ☐

No ☐ ➡ please go to question **45** (unless mixed mode survey)

21   Have you implemented any consistency check in the questionnaire?

Yes   ☐

No   ☐

22   Are there any modules implemented to prevent item non-response?

Yes   ☐

No   ☐

23   Do you use computer assisted coding?

Yes   ☐

No   ☐

➡   **please go to question 45 (unless mixed mode survey)**

Computer Assisted Telephone Interviews (CATI)

24   Where is the telephone field work accomplished? (multiple choice possible)

Inhouse   ☐

In a call centre   ☐

Out-sourced   ☐

Interviewers are allowed to work from home   ☐

25   Is there any call schedule programme implemented for the field work?

Yes   ☐

No   ☐

26   Do you conduct any statistics on the contacts?

Yes   ☐

No   ☐

27   Which method is used for the selection of the phone numbers?

Selection directly from the frame   ☐

From previous data collection   ☐

Random digit dialling   ☐

Other source   ☐

(Please name the selection method)

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Interviewer deployment and training

The way an interview is conducted influences the relation to the respondent(s) to a large extent. To optimise this relation and to minimise the measurement error, care should be taken how to deploy and train the interviewers.

28   Is there a special recruiting procedure for interviewers?

Yes, the interviewers are specially selected for CAPI, PAPI or CATI ☐

Yes, there is a list of personal requirements the interviewer should have ☐

Yes, there is a list of minimum qualifications the interviewer should have ☐

No, there are no binding minimum qualifications ☐

29   How are the interviewers prepared?

They get an intensive training which consists of different training phases, at minimum a preparatory training (for example communication), a special course of instruction and they are provided with a well organised interviewer manual ☐

They are adequately trained within one session and they are provided with some interviewer material ☐

The interviewers get a special training in refusal conversion techniques and how to motivate people to participate in surveys ☐

They do get some training and/ or a interviewer manual, but they are not really sufficiently prepared ☐

Others ☐
(Please state)

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30   Do the interviewers get a bonus for each successfully accomplished interview?

Yes ☐

No ☐

31   How is the interviewer deployment organised?

Central ☐

Not central ☐

32   Is there any support for interviewers?

Yes, every group of interviewers has a specially trained support and contact person ☐

Yes, there are regular meetings ☐

Yes, support is provided on demand of the interviewer ☐

No, there is no support for the interviewers ☐

33   **Is there any means of control for the interviewers?**

Yes, the interviewers get special feed–back periodically ☐

Yes, the newly recruited interviewers are generally checked during their first couple of missions ☐

Yes, there are special controls in case of suspicious facts ☐

Yes, there are accomplishment controls concerning the failures, the compliance of the deadlines and the exhaustion ☐

Yes, there are routine accomplishment controls of ⬚ % of the interviews

Yes, there are basic controls of the compliance of the sample instructions, the sample persons and/ or the prescribed way of completing the questionnaire ☐

No, there are no means of control for the interviewers ☐

Others ☐

(Please state which other control is used) ⬐

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34   **Is the interview announced to the household in advance via mail, e–mail or telephone?**

Yes ☐

No ☐

35   **How many interviews are conducted by one interviewer on average?**

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36   **What is the maximum number of interviews conducted by one interviewer?**

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37   **Do you have any demographic information about the interviewers?**

Yes ☐

No ☐

38   **Are there any analyses about the possible influence of the interviewers' demographic attributes and the response pattern of the target groups?**

Yes, the interviewers' demographic attributes do have a significant influence on the participation behaviour ☐

Yes, the interviewers' demographic attributes do have a slight influence on the participation behaviour ☐

Yes, the interviewers' demographic attributes have no influence on the participation behaviour ☐

No, there is no such information ☐

39   Is there any information about the timing of the interviews?

Yes ☐

No ☐

40   What kind of time information do you have?

The month ☐

The week–day ☐

The calendar day ☐

The rough time, like forenoon, afternoon, evening ☐

The exact time ☐

Others ☐

(Please name the kind of information)

[ ]

41   Is your survey computer assisted?

Yes ☐

No ☐ ➡ please go to question **45**

42   Have you any consistency check implemented in the questionnaire?

Yes ☐

No ☐

43   Are there any modules implemented to prevent item non-response?

Yes ☐

No ☐

44   Do you use computer assisted coding?

Yes ☐

No ☐

Reducing non–response
The reduction of non–response is crucial to avoid the reduction of sample size and to minimise the bias.

45 **Which procedures are taken in order to prevent non–response, i.e. to encourage response?**

There is one follow–up cycle after [ ] days ☐

There are two or more follow–up cycles after [and] days ☐

The follow–up activities are prioritised in a way that large influential units are preferentially treated in the case of business studies or similar surveys ☐

The follow–up activities are prioritised in a way that units in domains with high potential for non–response bias are preferentially treated ☐

A standard procedure and infrastructure for the resolution of the respondents' queries is established ☐

The response process is designed according to monitoring results of a previous survey ☐

Others ☐

(Please state)

[ ]

46 **Are any pre–programmed plausibility checking systems integrated for computer assisted interviews (CAPI, CATI or CASI)?**

Yes ☐

Partly ☐

No ☐

47 **If the respondents or data suppliers have the option to chose between a computer assisted and an other (conventional) method, how many percent chose the computer assisted method?**

[ ]

Not known ☐

48 **If computer assisted methods with integrated pre–programmed plausibility checking systems are employed, is there any additional checking in the office necessary?**

No, no additional checking is necessary because the data are (nearly) error free ☐

Although there are some errors, additional checking is not necessary ☐

Additional checking is needed to correct a couple of errors ☐

Additional checking is indispensable to correct the data ☐

49   Are the respondents re–contacted (e.g. via telephone) in the case that an answer is not plausible?

Yes ☐

No ☐

Fieldwork

Planning the fieldwork is important in order to realise the data collection at minimal expenses and to choose the optimal time period.

50   If you use survey data, did you check if you could use already available data sets like administrative records in the future?

Yes ☐

No ☐

51   To what extent do legal aspects restrict the use of administrative data or registers?

Not at all ☐

Somehow, but they can still be used ☐

Very much ☐

Completely prohibited in the survey area ☐

52   Is the complete reference period covered by the fieldwork period?

Yes ☐

No ☐

53   How long does the period of fieldwork take?

☐

54   Does the collection period cover any holidays or unpredictable events (e.g. a strike) which might influence the survey results?

No, there was no such influence ☐

Yes, there are ☐ weeks of holidays during the collection period

Yes, there was a ☐ during the collection period

55   What is the ratio of people in supervisory positions to the people accomplishing the fieldwork?

☐

56 What kind of arrangements do you have organised for potential problems that might arise during the progress of the survey?

There are supervisors that can be contacted immediately ☐

Continuous monitoring by the supervisors ☐

There are feedback reports containing information about frequencies and causes of errors for

        managers ☐

        subject matter specialists ☐

        methodologists ☐

The participants opinion is taken ☐

There are sample control procedures for all data collection operations which track the status of sampled units from the beginning through the completion of data collection ☐

Others ☐
(Please state)

---

57 In case of establishment surveys: Did you make sure that

the appropriate person within the organisation is contacted ☐

at the appropriate time for the information to be easily available ☐

the respondents are allowed to provide the data using a method and format that is convenient for them? ☐

58 How do you assess the process of handling incoming data?

Best practice ☐

Satisfactory ☐

Acceptable but to be improved ☐

Not acceptable ☐

59 How do you ensure data protection of incoming and outgoing microdata?

Encryption of electronic files ☐

Exclusion of identification information on incoming paper questionnaires ☐

Others ☐
(Please state)

Place for comments concerning the questions of process III "Data collection"

IV. Data capture and data processing

Data capture

Converting the original data into a computer-readable format and coding them are processes susceptible to errors. Therefore different methods need to be regarded to minimise them.

1   How are the data captured?

Manually   ☐

Electronically

　　　　　　　　Mark character recognition (MCR)   ☐

　　　　　　　　Intelligent character recognition (ICR)   ☐

　　　　　　　　Optical character recognition (OCR)   ☐

　　　　　　　　Voice recognition entry (VRE)   ☐

　　　　　　　　Electronic data interchange (EDI)   ☐

During their collection (Computer Assisted Interviewing)   ☐

Others   ☐

                                                        (Please state)

```



```

2   How are the data coded?

Manually   ☐

Automatically by specially designed software   ☐

Others   ☐

                            (Please state)

```



```

3   If the data are manually coded, are there any means of control or consistency checks of the codes?

No   ☐

Yes

　　　　　　Dependent verification   ☐

　　　　　　Independent verification   ☐

Editing procedures

Editing procedures should be employed to identify missing, invalid, inconsistent entries and to indicate potentially erroneous data. Here editing simply means the identification of the potentially erroneous data.

4 **How do you appraise the necessity of editing the raw data?**

1 - A lot of errors were discovered in the original data material and checking is indispensable ☐

2 - Few errors were discovered in the original data material which need to be corrected ☐

3 - Few errors were discovered in the original data material; however they need not be corrected ☐

4 - The raw data have already been sufficiently checked during the collection process by integrated pre–programmed plausibility checking systems ☐

5 - As far as possible the raw data material is error free and no data editing is necessary ☐

Please go to question 20

5 **Is the chosen editing method**

automated or ☐

manual or ☐

a combination of both? ☐

6 **Does the chosen editing method rely**

solely on data available for the non–respondent and/ or other auxiliary data ☐

solely on the observed data of other responding units for the given survey ☐

on a mixture of data available for the non–respondent, other auxiliary data and observed data of other responding units for the given survey ☐

Others, ☐
(Please state)

7 **Do you pretest your editing procedures?**

Yes ☐

No ☐

8 **Which of the following editing procedures are applied to the raw data? (Please tick as many items as necessary)**

A value range check for every variable ☐

Logical editing (based on logical relationships) ☐

Statistical tests of procedures, e.g. outlier analysis techniques ☐

Combination of logical and statistical editing ☐

Comparisons with data from previous collections of the same statistics or from other sources ☐

Empirical procedures ☐

Others ☐
(Please state)

9 **Are the persons in charge of manual editing provided with written, clear and detailed instructions?**

Yes, they have accurate and up-to date instructions ☐

Yes, however the instructions are only partly concise ☐

No ☐

10 **Is there a distinction between the concepts of missing values, zero values and impossible information?**

Yes ☐

No ☐

11 **Did you organise your editing procedures by priority?**

No ☐

Yes, severe errors are generally edited manually and more effort is spent on these while less attention is paid to the minor errors that are mostly edited automatically ☐

Yes, priority is given to the correction of variables used as identifiers (if the survey data are to be merged with auxiliary data for weight constructions and/ or estimation purposes) ☐

Yes, others ☐
(Please state)

12   Are there any measures taken in order to avoid over–editing and introduction of new errors into the data?

Yes, there is an error recognising mechanism assessing the influence of the corrections on the final result thus allowing to determine an "optimum of editing" ☐

Yes, edits were reapplied to units to which corrections were made ☐

No measures were taken in order to avoid over–editing ☐

Yes, others ☐
(Please state)

13   Could the editing procedures be conducted continuously, for example getting started when a part of the data are available?

Yes ☐

No ☐

14   Are there any error statistics available from previous surveys that you can built upon to improve your editing procedures?

Yes ☐

No ☐

15   Do you calculate any error statistics as a quality measure of the survey in question and to suggest improvements for future surveys?

Yes ☐

No ☐

16   How do you appraise the flexibility of your data editing system?

Very flexible – a new or modified procedure can be incorporated easily ☐

Sufficient flexible – a new or modified procedure can be incorporated without major problems ☐

Not flexible – incorporating a new or modified procedure is time consuming and expensive ☐

Others ☐
(Please state)

17   Do you have any information about the source(s) of error?

No, the sources of error are **not known**   ☐

Yes, the sources of error are **partly known**, they are

Measurement errors   ☐

Coding errors   ☐

Others   ☐
(Please state)

Yes, the sources of error are **known**, they are

Measurement errors   ☐

Coding errors   ☐

Others   ☐
(Please state)

Imputation procedures

Imputation procedures should be used to correct erroneous and replace missing data while preserving the course of the underlying distributions

18   How do you correct the errors detected by the editing procedure? If you employ several methods please indicate how many errors (in percent) are corrected how.

Interviewers or respondents are re-contacted   ☐ %

The erroneous variable is suppressed   ☐ %

The erroneous or missing variable is replaced with a more suitable value   ☐ %

The erroneous or missing variable is replaced with a imputed value   ☐ %

Don't know   ☐ %

Others   ☐ %
(Please state)

19   Do you impute any values for your statistic

Yes   ☐

No   ☐   ➡   please go to section V.

20   **Is the chosen imputation method**

automated or ☐

manual or ☐

a combination of both? ☐

21   **Does the chosen imputation method rely**

solely on data available for the non–respondent and/ or other auxiliary data (logical and historical)? ☐

on a mixture of data available for the non–respondent, other auxiliary data and observed data of other responding units for the given survey? ☐

solely on the observed data of other responding units for the given survey? ☐

Others ☐
(Please state)

22   **Is the chosen imputation method an**

autogenerative (e.g. calculating the mean) or ☐

a predictive (e.g. calculating a regression) one? ☐

23   **Which of the following imputation methods are chosen for the survey?**

A deterministic one:

Logical imputation ☐

Historical imputation ☐

Mean imputation ☐

Ratio and regression imputation ☐

Nearest–neighbour imputation ☐

A stochastic one:

Hot deck method ☐

Regression with random residuals ☐

Methods of artificial intelligence, e.g. neural networks ☐

Any other deterministic method with random residuals added ☐

24   **Do you use a**

single (the missing value is replaced with one imputed value) or ☐

a multiple (several values are used) imputation method? ☐

25   Do you employ a generalised system to implement the algorithms?

Yes, the [   ] is employed for all imputations   ☐

Yes, the [   ] is employed for most imputations   ☐

Yes, the [   ] is employed for some imputations   ☐

No generalised system is employed   ☐

26   If several methods and/ or donors could have been applied, have they (their results) been evaluated against each other to assess the best method?

Yes   ☐

Partly   ☐

No   ☐

27   Is the imputation internally consistent and plausible in the sense that the relationships between the variables and the underlying distributions are preserved?

Yes   ☐

No   ☐

Don't know   ☐

28   Are the imputed values flagged?

Yes   ☐

No   ☐

29   Are the original values retained?

Yes   ☐

No   ☐

30   Which percentage of the records from the raw material has been imputed?

[   ] % of the records have been imputed

31   Has it actually been assessed if the imputation process does limit the bias caused by not having observed all the desired values?

Yes   ☐

No   ☐

32   **Have you made efforts to measure the variance introduced by imputation?**

Yes, the variance introduced by
imputation has the following value

as analysed by the following technique:

Yes, several techniques are tested but it is not possible to measure the variance introduced by imputation because:

No efforts are made to measure the variance introduced by imputation because:

33   **Are the available software packages or procedures flexible enough allowing to easily make adjustments during the imputation process?**

Yes

Partly

No

Place for comments concerning the questions of process IV "Data capture and data processing"

V. Data Analysis and output quality –
Data quality assessment

Each statistical agency needs to evaluate data quality. Although the basic conditions and targets for the quality dimensions were set already during the design phase (compare to II) the data need to be treated and assessed with respect to the ESS quality dimensions relevance, accuracy, timeliness, accessibility and clarity, comparability and coherence and after their collection and processing. This section contains the main part of the questions aiming at an assessment of data quality as well as a number of questions relating to further aspects of data analysis.

Relevance

Relevance is the degree to which statistics meet current and potential users' needs. It refers to whether all statistics that are needed are produced and the extent to which concepts used (definitions, classifications etc.) reflects user needs.

1   Do you use one of the following means to measure user satisfaction for your survey?

Regular specific user satisfaction survey ☐

Systematic assessment of user feedback ☐

Feedback in the context of regular user consultation ☐

Calculation of a user satisfaction index ☐

No measures ☐

Others ☐

(Please describe)

[ ]

2   How do you appraise the information available on user satisfaction of (key) users?

1 – **Little information** on key users and on other users available ☐

2 – **Some** information on key users and **little** information on other users available ☐

3 – **Some** information on key users and **some** on other users available ☐

4 – **A lot of** information on key users and **some** on other users available ☐

5 – **Complete** information on key users and other users available ☐

3   How do you appraise the overall relevance of your survey?

1 – The survey is **of little relevance** ☐

2 – Key areas are relevant to some extent, other areas covered are **of little relevance** ☐

3 – Key areas and other areas covered are **relevant to some extent** ☐

4 – Key areas are highly relevant, other areas covered are **relevant to some extent** ☐

5 – Key areas and other areas covered are **both highly relevant** ☐

Accuracy

Accuracy in the general statistical sense denotes the closeness of computations or estimates to the (unknown) exact or true values. Achieving and assessing accuracy is basically done via assessing the sampling and the non–sampling errors which result from coverage errors, measurement errors, processing errors, model assumption errors and bias due to non–response.

4   Are the following measures of the estimates' precision provided?

Mean Square Error (MSE) ☐

Coefficient of variation or relative standard error ☐

Confidence intervals ☐

Qualitative accuracy statement only ☐

No precision measure is provided ☐

5   If the mean square error is calculated, does it meet the user needs?

No ☐

Yes ☐

6   How do you appraise the coefficients of variation (CVs) for key variables?

1 - CVs are **very high** for the entire statistics ☐

2 - CVs are **high** for a lot of items and items and/or in a large part of the subdivisions ☐

3 - CVs are **medium** both for relevant items and some important subdivisions ☐

4 - CVs are **small** for most of the relevant items and important classification levels ☐

5 - CVs are **small for all key items** and all important classification levels ☐

7   Is the level of the CVs acceptable for the purpose of the survey?

Yes ☐

No ☐

Party ☐

(Please explain)

8   Is the Horvitz–Thompson estimator (= sample weighting with a weight variable which is equal to the inverse of the inclusion probability of a selected element) constructed for the data set to be analysed?

Yes ☐

No ☐

9   Was the planned sample size sufficiently large to finally obtain the desired precision?

Yes ☐

No ☐

10   **Which of the following sources of bias are adjusted for by using auxiliary information in the estimation process (calibration or re–weighting)?**

Non–response bias ☐

Errors in the sampling frame ☐

Measurement errors ☐

No re–weighting procedure is employed ☐ ➡ please go to question 12

Other types of errors ☐
(Please state)

11   **If re–weighting is undertaken, what kind of calibration procedures are used?**

Post-Stratification ☐

Regression estimation ☐

Ratio estimation ☐

Others ☐
(Please specify)

12   **If model-assisted estimation is employed, how did you assure that your auxiliary or benchmark variables correlate with the variable that is estimated?**

13   **Do you use a generalised estimation software?**

No, tailor-made system ☐

Yes ☐
(Please specify)

14 **Is the correctness of weights established via calculating the sum of the weight variable over the sample data set?**

Yes ☐

No ☐

15 **How do you appraise the extent of unit non-response in your survey?**

N. B.: Due to the fundamentally different pre–conditions of different survey types, unit non–response assessment criteria for mandatory surveys, short voluntary surveys and demanding voluntary surveys have to be distinguished. Please use the following categories of unit non–response for your assessment:

	mandatory survey	short voluntary survey	demanding voluntary survey
low non-response rate	< 5 %	< 20 %	< 40 %
medium non-response rate	5 % up to 15 %	20 % up to 40 %	40 % up to 60 %
high non-response rate	> 15 %	> 40 %	60 %

1 – The rate of unit non–response is **not known** or unacceptably high ☐

2 – **High** unit non-response rate ☐

3 – **Medium** unit non-response rate ☐

4 – L**ow** unit non response-rate ☐

5 – There is **nearly no unit non-response** ☐

16 **Is there – in the process of evaluating the non–response – any breakdown of the non–responses into sub–categories (like refusals, not contacted, not at home, not found, incapacity, lost schedule)?**

Yes ☐

Partly ☐

No ☐

17 **Are there any means to estimate the bias due to unit non–response?**

Yes, via linkage with external data sources (e.g. administrative data files) ☐

Yes, through an ad hoc control survey (sub-sample of non-respondents) ☐

Yes, by the help of background information about the non–respondents to be used for comparisons ☐

No, there are no means to determine the bias due to non–response ☐

Other means than listed ☐
(Please specify)

DESAP
Development of a Self Assessment Programme

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18   **How do you appraise the extent of item non-response in your survey (for key variables)?**

1 – The rate of item non–response is **not known** or unacceptably high (>50%) ☐

2 – There is **a lot of** item non-response (15% to under 50%) ☐

3 – There is **some** item non-response (5% to under 15%) ☐

4 – There is **little** item non-response (<5%) ☐

5 – There is **nearly no item non-response** ☐

Timeliness and Punctuality

For any statistic it is vital to produce timely results and to keep the time schedule. It is perhaps one of the most important user needs, maybe because it is so obviously linked to an efficient use of the results.

Timeliness of information reflects the length of time between its availability and the event or phenomenon it describes. **Punctuality** refers to the time lag between the release date of data and the target date (e. g. dates announced in an official release calendar, laid down by Regulations or previously agreed among partners).

19   **Please indicate the time lag between the end of the reference period and the publication of the results in days or months.**

20   **Please indicate the time lag between the planned publication date and the actual publication date in days or months.**

21   **How do you appraise the time lag between the reference period and the first publication of the preliminary or final results?**

1 – There is a **substantial** time lag ☐

2 – There is a **larger** time lag ☐

3 – There is a **certain** time lag (within the agreed time schedule) ☐

4 – There is a **small** time lag ☐

5 – There is a **very** small time lag ☐

22   **Are the planned publication dates for the main publication (e. g. comprehensive tables with results including web publications) usually kept?**

1 – There is **frequently a large delay** ☐

2 – They are **frequently not met with a certain delay** ☐

3 – They are **mostly** kept (> 50% of the publications) ☐

4 – They are **usually** kept (> 80% of the publications) ☐

5 – They are (nearly) **always** kept ☐

23   **Which kind of changes would be necessary to substantially improve timeliness?**

Minor internal changes ☐

Major internal changes ☐

Changes involving external partners ☐

Others ☐

(Please specify)

Comparability

Comparability aims at measuring the impact of differences in applied statistical concepts and measurement tools/procedures when statistics are compared between geographical areas, non-geographical domains, or over time. We can say it is the extent to which differences between statistics are attributed to differences between the true values of the statistical characteristic.

24   **How do you appraise the comparability of your statistical product across non-geographical domains (relating to concepts and survey design of important other statistics)?**

1 – There are **serious** differences to other important related statistics ☐

2 – There are **larger** differences to other important related statistics ☐

3 – There are **some** differences to other important related statistics ☐

4 – There are **slight** differences to other important related statistics ☐

5 – There are **no major** differences to other important related statistics ☐

25   **How do you appraise the comparability of your statistical product over time (relating to preceding reference periods of your survey)?**
Comparability over time can be restricted due to changes in concepts and/or survey design.

1 – The survey is **not comparable** over time due to fundamental changes or problems ☐

2 – Comparability over time is seriously restricted ☐

3 – Comparability over time is restricted **to some extent** ☐

4 – Comparability over time is **slightly** restricted ☐

5 – There are **no restrictions** concerning comparability over time ☐

Coherence

Coherence of statistics is their adequacy to be reliably combined in different ways and for various uses.

When originating from a **single source**, statistics are normally coherent in the sense that elementary results derived from the concerned survey can be reliably combined in numerous ways to produce more complex results.

When originating from **different sources**, and in particular from statistical surveys of different nature and/or frequencies, statistics may not be completely coherent in the sense that they may be based on different approaches, classifications and methodological standards. Conveying neighbouring results, they may also convey not completely coherent messages, the possible effects of which, users should be clearly informed of.

26   Is the survey carried out with different frequencies at the same time (e. g. on a monthly and a yearly basis)?

Yes   ☐

No   ☐   ➡️   please go to question 29

27   Concerning the results for different frequencies, how do you appraise the coherence of your statistics – in other words can the results of different frequencies for the same reference period be reliably combined?

1 – There are **substantial problems**   ☐

2 – There are **a lot of** contradictions   ☐

3 – There are **some** contradictions   ☐

4 – There are **few** contradictions   ☐

5 – There are **no major** contradictions   ☐

28   How do you appraise the coherence of your statistic within the same socio–economic area? Can results be reliably combined with statistics originating from other sources (also including important non-official statistics)?

1 – There are **substantial** differences   ☐

2 – There are **a lot of** differences   ☐

3 – There are **some** differences   ☐

4 – There are **few** differences   ☐

5 – There are **no major** differences   ☐

Data analysis

Data analysis aims to explore key findings of the data and prepare data for dissemination in a way suitable for the target group.

29   How do you appraise your ability to react quickly and flexibly to user demands for tailor made analysis?

There is great potential to react quickly and flexibly to user demands for tailor made analysis because the capacity and expertise for nearly all analysis concerning the statistic in question is available   ☐

In most cases user demands for tailor made analysis can be satisfied because the capacity and expertise for most analysis concerning the statistic in question is available for nearly all analysis concerning the statistic in question is available   ☐

Unfortunately most user demands for tailor made analyses can not be satisfied because of a lack of capacity or expertise   ☐

It is not our duty to satisfy user demands concerning the analysis of the data   ☐

30   **Which of following approaches of follow–up analysis do you employ?**

Modelling ☐

Spatial Analysis ☐

Index calculation ☐

Seasonal or trend analysis and extrapolation ☐

Others ☐

(Please specify)

```
[                                                                    ]
[                                                                    ]
[                                                                    ]
[                                                                    ]
[                                                                    ]
[                                                                    ]
```

31   **Did you introduce new and innovative methods or extensions of existing methods for your data analysis in the last year?**

Yes ☐

No ☐

Disclosure control

The confidentiality of the respondents' information needs to be protected preserving the usefulness of the data outputs to the greatest extent possible.

32   **Which types of data do you have for publication or (semi)public access?**

Frequency tables ☐

Tables of magnitude ☐

Microdata – Scientific Use File ☐

Microdata – Public Use File ☐

33   **Which criteria do you agree to define a cell sensitive to delete it from a table (cell suppression)?**

The minimum number of respondents in a cell must exceed some minimum value, the minimum value is: [＿＿＿＿] ☐

Measures of concentration of predominance for the distribution of the respondents' values within the cell:

The C–times rule, ensuring that the second–ranking respondent cannot obtain a good estimate of the largest unit ☐

Linear combinations of the order statistics, e.g. the (n, k) rule: a cell is sensitive if the largest n respondent account for at least $k\%$ of the total cell value ☐

Zero frequencies which must not reveal information about respondents above or below certain threshold levels, e.g. profits that never exceed a certain value for a certain class of business ☐

34   **Did you need to suppress complementary cells in order to protect the sensitive cell?**

Yes ☐

No ☐

35   **Did you use existing software to accomplish cell suppression?**

Yes ☐

No ☐

Place for comments concerning the questions of process V "Data Analysis and output quality"

VI. Documentation and Dissemination

Metadata documentation

A complete and unambiguous description of the production process including data sources, concepts, definitions and methods used needs to be achieved. This is crucial for the NSIs internal use to ensure and improve quality and to take over other people's processes as well as for the users to better understand and use the data.

1   **Is there a proper documentation concerning the administrative registers in case of the use of administrative data?**

Yes   ☐

No   ☐

2   **If you document the production process please state which of the following items are included:**

Assessment of needs   ☐

A copy of the questionnaire   ☐

The variables including

    Variable name   ☐

    Origin of the variable, specifying

        If the variable is obtained by coding an answer to a question in a statistical questionnaire or in an administrative document   ☐

        If the variable is obtained from a calculation based on other variables (derived variable)   ☐

        If the variable comes from an external source   ☐

        The statistical nature of the variable (i.e. whether it is categorical, ordinal, metric)   ☐

        The length of the corresponding record   ☐

        The level of detail of the observed variable   ☐

        The unit of measure (when it has a meaning)   ☐

        The list of values taken (codes and headings) when a not standard classification is used   ☐

        The description of the external source (when a variable comes from it)   ☐

        The description of the calculations made in the case of a derived variable   ☐

Classifications describing

    The references to the classifications, when standard or general classifications are used   ☐

    The texts of the classifications when a specifc classification has been adopted   ☐

    Information explaining particular points in the processing of some items of the referenced classifications   ☐

Definitions of concepts (e.g. unemployment) and of the statistical units (e.g. enterprise or local unit) including

    The title of the defined concepts   ☐

    The text of the definition   ☐

    The links between these definitions and the variables to measure the concepts   ☐

Survey methodologies and techniques used during the production process ☐

Any changes of survey design during process of survey ☐

Results including all files produced starting from the files of raw data up to the files for data dissemination, whereby the required documentation is:

The name of the file ☐

The storage format ☐

The dissemination status ☐

A description of the file (design, number of records) ☐

Quality report ☐

3   How do you disseminate metadata and quality indicators?

Metadata in paper publications ☐

Metadata on the internet ☐

Quality indicators in paper publications ☐

Quality indicators on the internet ☐

4   Do you have a documentation of the quality assurance measures (e.g. follow–up procedures of non–response or cite of training manuals for interviewers)?

No, there is no documentation of the qualitative assurance measures ☐

Yes, there is a documentation of all relevant quality assurance measures ☐

Yes there is a documentation of the following quality assurance measures:

....however the documentation is inadequate due to:

5   Is there any systematic documentation of the administrative processes and the procedures that should be followed supporting the statistical production process, such as getting the funds and spending them for a given survey including the economic follow–up, printing the questionnaires, recruiting staff, contacting local authorities, contacting media...?

Yes ☐

No ☐

6 **Below you find a list of theEurostat quality criteria. Please indicate for which of the following criteria you document the quality indicators?**

Relevance:

   User Satisfaction Index ☐

   Number of publications disseminated and/or accesses to databases ☐

Accuracy:

   Coefficient of variations (CVs) ☐

   Unit response rates ☐

   Item response rates ☐

   Editing rates and ratios ☐

   Imputation rates and ratios ☐

   Over-coverage and misclassification error rates ☐

   Average size of revisions ☐

Timeliness and Punctuality:

   Punctuality of time schedule of effective publication ☐

   Average time between the end of reference period and the date of the first results ☐

   Average time between the end of reference period and the date of the final results ☐

Accessibility and Clarity:

   Number and types of means used for disseminating statistics ☐

Comparability:

   Number and proportion of differences in concepts or/and measurement from the European norms ☐

   Number and length of comparable time series ☐

   Asymmetries for statistics mirror flows ☐

Coherence:

   Number and proportion of products that satisfies the requirements for the main secondary use ☐

7 **Do you have a systematic documentation about the probable limitations in the use of the data, e.g. any break in the time series?**

Yes ☐

No ☐

8 **Do you have information about the degree of satisfaction of the external users with the documentation?**

Yes ☐

No ☐

9   **Do you have reliable information about the degree of satisfaction of the internal staff?**

Yes ☐

No ☐

10   **Which of the following items of the production process would you wish to have a better documentation on?**

None ☐

Data collection ☐

Data processing operations ☐

Methodology ☐

Quality control ☐

Staff deployment ☐

Software used ☐

Others ☐

(Please state)

Dissemination strategies

Results are of high value when they are easily accessible and available in forms suitable to the users. The data provider should also assist the users in interpreting the results.

11   **Are there user friendly corporate "catalogue" systems and information services available to search for information concerning recently produced and archived data?**

Yes ☐

No ☐

12   **Are there corporate "delivery" systems in your office providing access to data in formats, that suit users?**

Yes ☐

No ☐

13   **Are there any presentation standards used for tables and graphs?**

Yes ☐

No ☐

14   **Are preliminary or early estimates as well as revisions clearly marked and explained and is there any information provided on limitations or the expected level of revisions for preliminary data?**

Yes ☐

No ☐

Data management

Many data need to be archived, e.g., for future reuse or time series analysis and this data archive should be managed in a systematic and elaborated way.

15   **Do you have a systematic approach for managing and archiving the data?**

Yes ☐

No ☐

16   **Is there any means of data protection in the archive against unusual conditions?**

Yes ☐

No ☐

Place for comments concerning the questions of process VI "Documentation and Dissemination"

VII. Improvement cycle

Quality management needs to be incorporated into the management process of the statistical agency because the agency is responsible to balance the trade–offs between user data quality, user needs, budget restrictions and response burden for all statistical programmes. The effort to evaluate and improve the operational procedures continuously influences the quality of the statistics produced which is called the improvement cycle. The following items are particularly prone for the improvement cycle with respect to the quality of individual surveys.

Adaptability / flexibility

Keeping the survey up–to–date means to maintain and improve the capability of collecting information and reacting flexible to new demands.

1   How do you appraise the adaptability of your statistical software packages and procedures to collect different information and the time it takes for these systems to respond to new demands or information needs?

Satisfactory, if necessary, nearly all improvements can be made ☐

Satisfactory, but there is some space for improvements, concerning the following statistical processes: ☐

Not satisfactory, the adaptability of the data input systems needs to be improved ☐

2   Do you have a data collection infrastructure for the flexible implementation of ad hoc surveys (e. g. an Access Panel, a permanent sample of voluntary respondents)?

Yes ☐

No ☐

3   How do you appraise the burden and costs for quick response to changing demands?

Acceptable, nearly no reductions are possible ☐

Acceptable, but the costs for quick response could still be reduced ☐

Too high ☐

Others ☐

please state:

Expertise in relevant areas

The NSIs should aim to maintain and improve the available capacity to produce good quality statistical information

4   Does the staff in charge of the survey have good knowledge and understanding of the subject field, the source data, concepts and classifications, current and emerging issues and the necessary operations which are relevant for the survey in question?

Yes, the staff has a profound expertise for all subject matters relevant for the survey in question ☐

Yes, the staff has a sufficient knowledge for most subject matters relevant for the survey in question ☐

No, there is no sufficient expertise for all requirements in our office but the missing expertise can be contracted in ☐

No, there is no sufficient expertise ☐

5   How do you appraise the training of your staff?

There is excellent training for the staff available ☐

The training of staff is sufficient but could be improved ☐

The situation of the staffs training should urgently be improved ☐

6   Can the expertise in charge of the survey be maintained without being vulnerable to key staff changes?

Yes, the expertise in our statistical office can be maintained without being vulnerable to staff changes ☐

The expertise in our statistical office can generally be maintained although there might be shortcomings due to key staff changes ☐

No, there are shortages due to key staff changes ☐

7   How do you appraise your contacts to other agencies or professional associations?

Very good, there are a lot of contacts to various national and international agencies and associations ☐

Satisfactory, although the contacts could be intensified, we have enough contacts to be up to date with the latest developments ☐

Not satisfactory, our contacts to other agencies or professional associations need to be improved ☐

Quality management

The overall aim of the quality management should be to achieve cost–effective outputs satisfying reasonable demands.

8   Does a regular monitoring of your survey takes place concerning the efficiency of all production processes in the sense that the quality and expenses for the input vs. the quality of the output are evaluated?

No monitoring takes places ☐

Yes, all production processes are reviewed ☐

Yes, the following processes are reviewed ☐

Please state the processes:

9   **Is the latest IT technology available and used to achieve efficiency, timeliness or quality?**

No, there should be a changeover of the IT technology for most processes ☐

Yes, the latest IT technology is used for nearly all processes ☐

Yes, generally the latest IT technology is employed but improvements could be made using the following technique for the following processing:

10   **Is it possible for you to achieve an extensive overview of all existing resources which could potentially improve the efficiency of your survey, e.g. financial resources, human resources, existing data that could be used?**

Yes ☐

No ☐

11   **Is the efficiency of the statistical production process reviewed by any independent experts?**
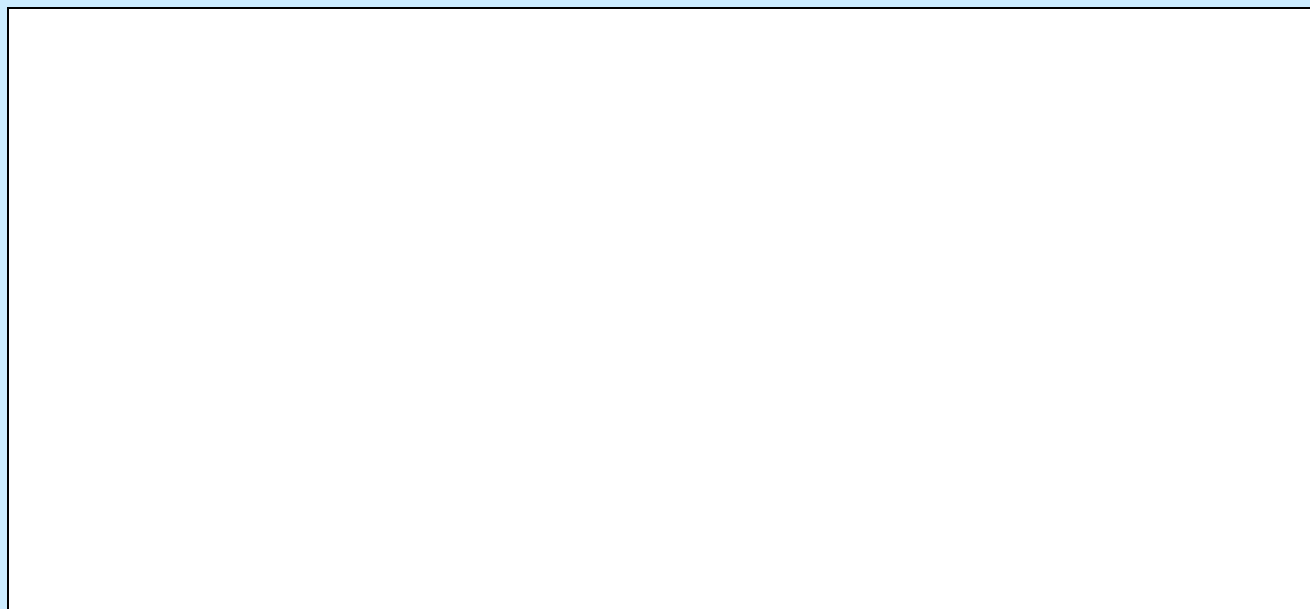
Yes, it is reviewed by Eurostat ☐

Yes, it is reviewed by independent experts outside Eurostat ☐
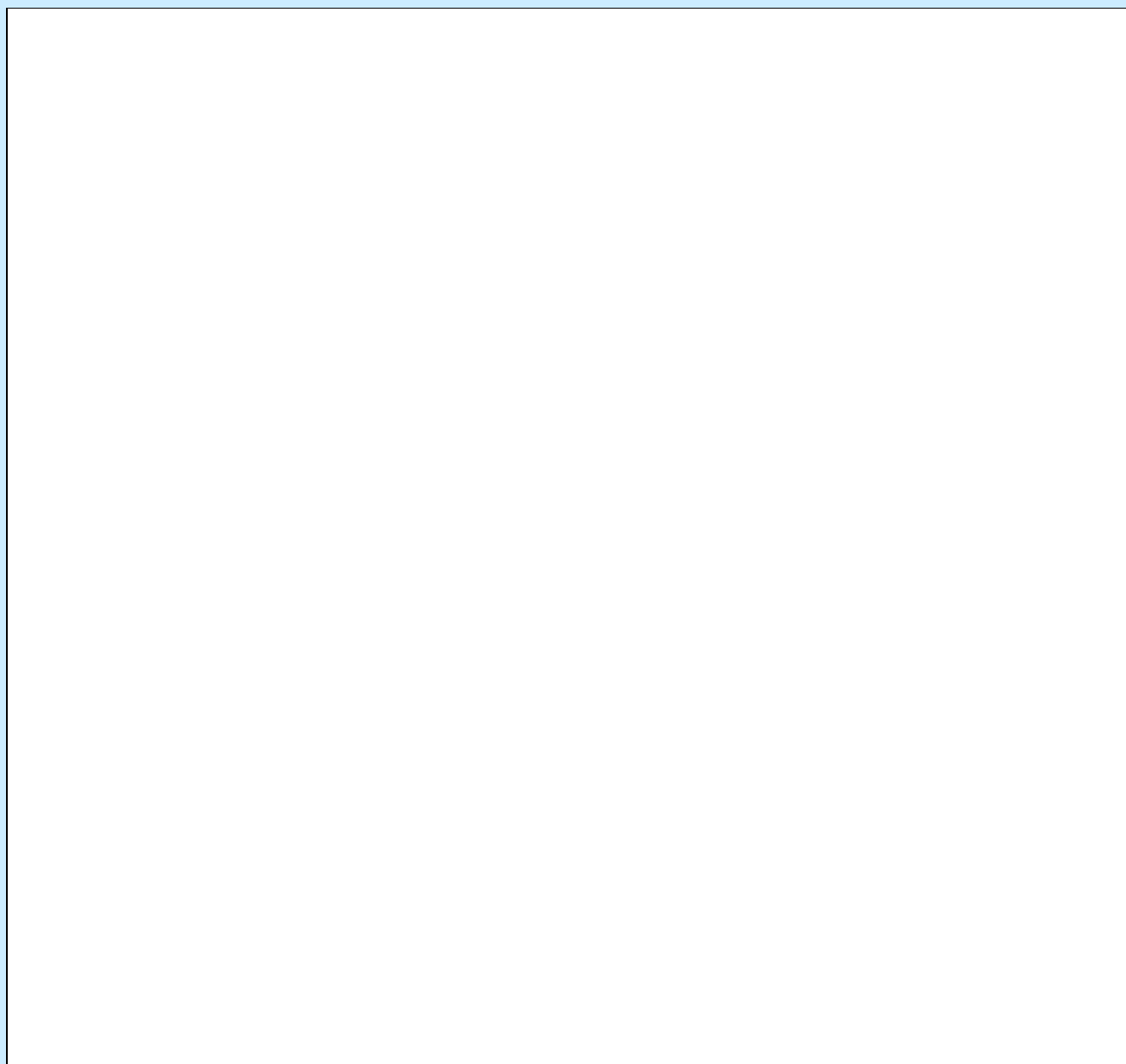
No ☐

12   **If you would have 20% more or 20% less of your budget, what would you do?**

Space continues on the next page ➡

Place for comments concerning the questions of process VII "Improvement cycle"

DESAP Glossary of technical terms

Accessibility	Accessibility refers to the physical conditions in which users can obtain data: where to go, how to order, delivery time, clear pricing policy, convenient marketing conditions (copyright, etc.), availability of micro or macro data, various formats (paper, files, CD-ROM, Internet…), etc.
Accuracy	Accuracy in the general statistical sense denotes the closeness of computations or estimates to the exact or true values.
Administrative record	Refers to any data collected primarily for some other purpose than official statistics production. They contain information used in making decisions or determinations or for taking actions affecting individual subjects of the records. Compare to → "Register"
Behaviour coding	Frequency of certain types of behaviours that interviewers and/or respondents exhibit during an interview are systematically recorded via codes.
Bias	Generally, an effect which deprives a statistical result of representativeness by systematically distorting it, as distinct from a random error which may distort on any one occasion but balances out on the average.
Clarity	Clarity refers to the data's information environment whether data are accompanied with appropriate metadata, illustrations such as graphs and maps, whether information on their quality also available (including limitation in use…) and the extend to which additional assistance is provided by the NSI.
Cluster sampling (One–stage)	The frame is divided into groups (clusters) which are usually naturally occurring divisions of the population. All elements from each selected cluster are included in the sample.
Cluster sampling (Two–stage)	A sub–selection from within the selected clusters is included in the sample.
Coding	Coding is a technical procedure for converting verbal information into numbers or other symbols, which can be more easily counted and tabulated.
Coding error	The attribution of an incorrect code to a survey response.
Coefficient of variation	A measure of spread for a set of data defined as the ratio of the standard deviation to the mean.
Coherence	Coherence of statistics is their adequacy to be reliably combined in different ways and for various uses. It is, however, generally easier to show cases of incoherence than to prove coherence. When originating from a single source, statistics are normally coherent in the sense that elementary results derived from the concerned survey can be reliably combined in numerous ways to produce more complex results. When originating from different sources, and in particular from statistical surveys of different nature and/or frequencies, statistics may not be completely coherent in the sense that they may be based on different approaches, classifications and methodological standards. Conveying neighbouring results, they may also convey not completely coherent messages, the possible effects of which, users should be clearly informed of.
Comparability	Comparability is the extent to which differences between statistics from different geographical areas, non-geographical domains, or over time, can be attributed to differences between the true values of the statistics.

Completeness	Completeness is the extend to which all statistics that are needed are available. It is usually described as a measure of the amount of available data from a statistical system compared to the amount that was expected to be obtained.
Confidence Interval	A a% confidence interval for an unknown population parameter •, is an interval, calculated from sample values by a procedure such that if a large number of independent samples is taken, a% of the intervals obtained will contain •.
Consistent estimator	An estimator which converges in probability, as the sample size increases, to the parameter of which it is an estimator.
Coverage error	Coverage error is the error associated with the failure to include some units of the target population in the frame used for sample selection (undercoverage) and the error associated with the failure to identify units represented in the frame more than once (overcoverage).The source of coverage error is the sampling frame itself.
Cut-off threshold	A cut-off threshold is used, mainly for cost or burden reasons, to exclude units from the target population (hence from the frame) contributing very little to the requested statistics, small businesses for instance. The contribution from the population below the threshold can either be deemed negligible or be estimated by using a model.
Editing, Edits	Data editing is the application of checks that identify missing, invalid or inconsistent entries or that point to data records that are potentially in error.
Electronic Data interchange (EDI) *Electronic document interchange*	Electronic Data Interchange (EDI) is the computer-to-computer exchange of data in a publicly published and globally standardised format.
Error	In general, a mistake or error in the colloquial sense. There may, for example, be a gross error or avoidable mistake; an error of reference, when data concerning one phenomenon are attributed to another; copying errors; an error of interpretation. In a more limited sense the word error is used in statistics to denote the difference between an occurring value and its true or expected value. There is here no imputation of mistakes on the part of a human agent; the deviation is a chance effect. In this sense we have, for example, errors of observations, errors in equations, errors of the first and second kinds in the testing hypothesis, and the error band surrounding an estimate; and also the Normal curve of errors itself.
Estimate	In the strict sense an estimate is the particular value yielded by an estimator in a given set of circumstances.
Estimator	An estimator is a rule or method of estimating a constant of a population. It is usually expressed as a function of sample values and hence is a variable whose distribution is of great importance in assessing the reliability of the estimate to which it leads.
Expected Value (expectation value, expectation)	The hypothetical averages from the conceived replicates of the survey all conducted under the same essential conditions.
Flow-sampling	Selecting a sample unit per time unit, e.g. questioning somebody every 15 Minutes from a stream of people passing a border.
Focus groups interviews	Interviewers meet in a group which is moderated to identify any problems or successes of the survey and to suggest how potential problems could be solved.

Frame	The frame consists of previously available descriptions of the objects or material related to the physical field in the form of maps, lists, directories, etc., from which sampling units may be constructed and a set of sampling units selected; and also information on communications, transport, etc., which may be of value in improving the design for the choice of sampling units, and in the formation of strata, etc. However a frame is needed for censuses, too. In this case the frame is ideally congruent with the target population.
Imputation	Imputation is the process used to resolve problems of missing, invalid or inconsistent responses identified during editing. This is done by changing some of the responses or missing values on the record being edited to ensure that a plausible, internally coherent record is created.
In–depth interviews	A conversation conducted by trained staff that usually collects specific information when not much is known about a population to get preliminary ideas from the participants.
Inlier	An inlier is a data value that lies in the interior of a statistical distribution and is in error. Because inliers are difficult to distinguish from good data values they are sometimes difficult to find and correct. A simple example of an inlier might be a value in a record reported in the wrong units, say degrees Fahrenheit instead of degrees Celsius.
Interviewer error	Interviewer errors are associated with effects on respondents' answers stemming from the different ways that interviewers administer the same survey. Examples of these errors include the failure to read the question correctly (leading to response errors by the respondent), delivery of the question with an intonation that influences the respondent's choice of answer, and failure to record the respondent's answer correctly.
Item non-response	Item non-response occurs when a respondent provides some, but not all, of the requested information, or if the reported information is not usable.
Item response rate	The item response rate is the ratio of the number of eligible units responding to an item to the number of responding units eligible to have responded to the item.
Macro-editing	A macro-edit detects individual errors by checks on aggregated data, or checks applied to the whole body of records. The checks are typically based on the models, either graphical or numerical formula based, that determine the impact of specific fields in individual records on the aggregate estimates.
Mean square error	The total Mean square error (MSE) for an estimate is equal to the bias squared plus the variance. There are several sources of error contributing both to the bias and to the variance components of the total MSE. These are the specification error, frame error, nonresponse error, measurement error, data processin error and the sampling error.
Measurement error	Measurement error refers to errors in survey responses arising from the method of data collection, the respondent, or the questionnaire (or other instruments). It includes the error in a survey response as a result of respondent confusion, ignorance, carelessness, or dishonesty; the error attributable to the interviewer, perhaps as a consequence of poor or inadequate training, prior expectations regarding respondents' responses, or deliberate errors; and error attributable to the wording of the questions in the questionnaire, the order or context in which the questions are presented, and the method used to obtain the responses.
Micro editing	Finding errors by inspection of individual observations. Editing done at the record, or questionnaire level.

Misclassification	Misclassification refers to allocating statistical units in a wrong class, in relation to a given classification. For instance, a business is classified in trade instead of industry.
Model assumption error	Model assumption are errors that occur due the use of methods, such as calibration, generalised regression estimator, calculation based on full scope or constant scope, benchmarking, seasonal adjustment and other models not included in the preceding accuracy components, in order to calculate statistics or indexes.
Non probability sample	A non-probability Sample is a sample in which the selection of units is based on factors other than random chance, e.g. convenience, prior experience or the judgement of the researcher. Examples of non-probability.
Non response	Non response is a form of nonobservation present in most surveys. Nonresponse means failure to obtain a measurement on one or more study variables for one or more elements k selected for the survey. The term encompasses a wide variety of reasons for nonobservation: "impossible to contact", "not at home", "unable to answer", "incapacity", "hard core refusal", "inaccessible", "unreturned questionnaire", and others. In the first two cases contact with the selected element is never established.
Non response bias	see non response error
Non response error	Nonresponse errors, which occur when the survey fails to get a response to one, or possibly all, of the questions. Nonresponse causes both an increase in variance, due to the decrease in the effective sample size and/or due to the use of imputation, and may cause a bias if the non-respondents and respondents differ with respect to the characteristic of interest.
Non sampling error	An error in sample estimates which cannot be attributed to sampling fluctuations. Such errors may arise from many different sources such as defects in the frame, faulty demarcation of sample units, defects in the selection of sample units, mistakes in the collection of data due to personal variations or misunderstandings or bias or negligence or dishonesty on the part of the investigator or of the interviewee, mistakes at the stage of the processing of the data, etc.
Out of scope units	Units that should not be included in the sampling frame because they do not belong to the target population in the reference period. If enumerated, they cause over-coverage.
Outlier	In a sample of *n* observations it is possible for a limited number to be so far separated in value from the remainder that they give rise to the question whether they are not from a different population, or that the sampling technique is a fault. Such values are called outliers.
Overcoverage	Overcoverage arises from the presence of units in the frame not belonging to the target population or appearing in the frame more than once.
Over–editing	Extensive editing that does not achieve noticeable quality improvements.
Paraphrasing	Let the respondent repeat the question in his or her own words.

Population	Population is the total membership or population or "universe" of a defined class of people, objects or events. There are two types of population, viz., target population and survey population. A target population is the population outlined in the survey objects about which information is to be sought and a survey population is the population from which information can be obtained in the survey. The target population is also known as the scope of the survey and the survey population is also known as the coverage of the survey. For administrative records the corresponding populations are: the "target" population as defined by the relevant legislation and regulations, and the actual "client population".
Probability sample	Probability sampling is an approach to sample selection that satisfies certain conditions, which, for the case of selecting elements directly from the population, are described as follows: 1) we can define the set of sample, {S1, S2, ...,Sm}, that are possible to obtain with the sampling procedure. 2) a known probability of selection p(s) is associated with each possible sample s. 3) the procedure gives every element in the population a nonzero probability of selection. 4) we select one sample by a random mechanism under which each possible s receives exactly the probability p(*s*). A sample realised under these four requirements is called probability sample.
Probabilities Proportional to Size (PPS) sampling	Attaching an inclusion probability to each element that is related to the element size.
Processing error	Once data have been collected, they pass through a range of processes before the final estimates are produced: coding, keying, editing, weighting, tabulating, etc. Errors introduced at these stages are called processing errors.
Punctuality	Punctuality refers to the time lag existing between the actual delivery date of data and the target date when it should have been delivered, for instance, with reference to dates announced in some official release calendar, laid down by regulations or previously agreed among partners.
Quality control survey	A replicated survey carried out on a small scale by very experienced staff in order to obtain some "zero-default" results with which the actual results of the survey can be compared.
Quality index	A one-dimension synthetic information on quality, possibly calculated as a weighted mean of all available quality indicators.
Random sampling	All elements in a population have a given probability of being included in the sample.
Record linkage	Record linkage is the bringing together for statistical and research purposes of information about individual respondents or units of observation such as persons, households or businesses from two or more different sources in order to form combined individual micro records. Record linkage is a potentially important source of valuable statistical information, for example, to shed light on the effectiveness of certain cancer screening methods or the long-term effects of heart surgery.
Reference period (reference time)	The period of time for which data are collected.
Refusal rate	In the sampling of human populations, the proportion of individuals who, through successfully contacted, refuse to give the information sought. The proportion is usually and preferably calculated by dividing the number of refusals by the total number of the sample which it was originally desired to achieve.

Register	(Administrative) Registers are a sub-group of → administrative records. If an administrative record consists of unit-level data, it can be called a register. Administrative registers come from administrative sources and become statistical registers after passing through statistical processing in order to make it fit for statistical purposes (production of register based statistics, frame creation, etc.)
Relative standard error	The relative standard error (RSE) is a measure of an estimate's reliability. The RSE of an estimate is obtained by dividing the standard error of the estimate (SE(r)) by the estimate itself (r). This quantity is expressed as a percent of the estimate and is calculated as follows: RSE=100 x (SE(r)/r).
Relevance	Relevance is the degree to which statistics meet current and potential users' needs. It refers to whether all statistics that are needed are produced and the extent to which concepts used (definitions, classifications etc.) reflect user needs.
Reweighting	Reweighting consists of raising the original weights for the respondent values when estimates are computed. Reweighting concerns mainly unit non-response. It may also be used to increase precision through the use of auxiliary information. Standard methods include post-stratification, calibration and response propensity modelling.
Sampling error	The part of the difference between a population value and an estimate thereof, derived from a random sample, which is due to the fact that only a sample of values is observed; as distinct from errors due to imperfect selection, bias in response or estimation, errors of observation and recording, etc.
Standard error	The positive square root of the variance of the sampling distribution of a statistic.
Statistical characteristics	A numerical value (like turnover, average income) defined by a statistical measure that is used to summarise the values for a specific quantitative variable (like turnover, disposable income) for all statistical units in a specific group.
Statistical measure	A summary of the individual quantitative variable values for the statistical units in a specific group (study domains).
Statistical unit	An object of a statistical survey and the bearer of statistical characteristics. The statistical unit is the basic unit of statistical observation within a statistical survey.
Stratified sampling	The population is first divided into mutually exclusive homogenous sub–populations (strata) and from each stratum a probability sample is drawn with the aim to reduce the total variance.
Study domains	Statistics are presented for different sub-groups of the population, so called study domains. These study domains are usually defined according to some classification (e.g. territorial units, economic activity etc.)
Success rate of the record linkage	When records are linked the success rate expresses in percent how many records could be matched. See also → "record linkage"

Survey design (Sampling plan Sample design)	Survey design defines the fixed properties of the data collection over all possible implementations within a fixed measurement environment. The usage is not uniform as regards the precise meaning of this and similar terms like "sample plan," "survey design," or "sampling design". These cover one or more parts constituting the entire planning of a (sample) survey inclusive of processing, etc. The term "sampling plan" may be restricted to mean all steps taken in selecting the sample; the term "sample design" may cover in addition the method of estimation; and "survey design" may cover also other aspects of the survey, e.g. choice and training of interviewers, tabulation plans, etc. "Sample design" is sometimes used in a clearly defined sense, with reference to a given frame, as the set of rules or specifications for the drawing of a sample in an unequivocal manner.
Systematic random sampling	Every element is selected over the whole sampling frame on the basis of a selection interval (r, r+k, r+2k,...).
Target population	The target population is the population we wish to study, that is, the set of elements about which estimates are required.
Think–aloud interviews	Respondents think out loud how they interpret a question, retrieve information, formulate a response and select a response alternative.
Timeliness	Timeliness of information reflects the length of time between its availability and the event or phenomenon it describes.
True value	The actual population value that would be obtained with perfect measuring instruments and without committing any error of any type, both in collecting the primary data and in carrying out mathematical operations.
Two–phase (stratified) sampling	If stratification information is not available from the frame, a first large sample is selected to get it.
Undercoverage	Undercoverage results from the omission of units from the frame belonging to the target population.
Unit non response	Unit non response is a complete failure to obtain data from a sample unit.
Unit response rate	The ratio, expressed in percentage of the number of interviews to the number of eligible units in the sample. The weighted response rate calculates the ratio using the inverse probability of inclusion in the sample as a weight for each unit. In some occasions a value that reflects the importance of the unit is also used as a weighting factor (like size of workforce for establishments).
User Satisfaction survey	A statistical survey aiming to assess the satisfaction of users of statistics.
Variance	Variance estimation provides a measure of the quality of estimates, is used in the computation of confidence intervals and helps draw accurate conclusions. The sampling variance is one of the key indicators of the quality in sample surveys and estimation. Sampling variance helps the user to draw better conclusions about the statistics produced, and it is also important information for the design and estimation phases of surveys.