

**UNITED NATIONS
ECONOMIC COMMISSION FOR EUROPE**

CONFERENCE OF EUROPEAN STATISTICIANS

Work Session on Statistical Data Editing
(Oslo, Norway, 24-26 September 2012)

Topic (iv): Using metadata and paradata to analyse the efficiency of editing processes

Editing Staff Debriefings at Statistics Sweden

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I. Aims of editing staff debriefings

1. *Editing staff debriefing* is a qualitative method where people who work with data editing in a specific survey gather to discuss and report their experiences. A debriefing is similar to a focus group. The main aim is to find out how questions appear problematic in the questionnaire and possible causes of errors. The debriefing also aims to find out the reactions and problems that repeatedly occur among the respondents. The collected experiences and views from the editing group represent many different respondents, making it possible to separate out both frequent and serious problems. A debriefing complements the information obtained via paradata and log-book entries from the data collection and the editing.
2. The method is used in connection with evaluation of measurement instruments (questionnaires, introduction letters and separate instructions) or of the editing process (error signalling, manual review, IT tools, etc.) or both. The method is to be applied for continuous and intermittent business surveys and public sector surveys.
3. Often an editing staff debriefing gives much information in terms of the connection between the measurement instrument and errors that are discovered in the editing. Problems related to the layout and the content (definitions and instructions) can be detected, and also problems with the data collection method.
4. An editing staff debriefing can be used as a basis for an expert review of the measurement instrument that follows. Further, in combination with cognitive tests it can give a picture of problems with the measurement instrument and indicate where the focus of such a test should be. A debriefing can provide good input about how the topic guide (explained below) of the test should be formulated. The debriefing may indicate that it is difficult to know which types of response errors a question gives rise to. Then the test topic guide can be developed with more detailed probes to seek the causes of specific problems. Editing staff debriefings involve the editing staff, while cognitive tests involve respondents, so the two methods complement each other.
5. Editing staff debriefings have been conducted for about half a decade at Statistics Sweden. For a use at Office for National Statistics, UK, see Rowlands et al. (2002). Debriefing as a method is also used in other contexts within Statistics Sweden, such as for collecting experiences of interviewers, in interview debriefing.

II. When should an editing staff debriefing be carried out?

6. Statistics Sweden has implemented a rule saying that editing staff debriefing shall be applied for continuous and intermittent business surveys and public sector surveys. However, this applies only to production editing of data that have been captured in a process preceding the editing.

- Editing staff debriefing is an integral part of cognitive tests of *measurement instruments*. (Exceptions are given for ‘simplified expert reviews’ of instruments and for cases where a cognitive specialist makes an assessment that there is enough information already available, such as from log-book or paradata.) This means that debriefings, like cognitive tests, normally are performed if one or more of the following conditions are met:

- If the measurement instrument *is changed*, e.g. when questions are changed or added, or if a new collection mode is introduced in addition to or instead of the previous method(s).
- If there are *indications of problems* with the measuring instrument.
- If the measurement instrument *has not been tested* before.

- Editing staff debriefing is also conducted in cases where indications of deficiencies in the *editing process* makes it justified according to assessments by the governance team for the statistical product.

7. The responsibility for initiating an editing staff debriefing lies on the product manager. The product will bear the cost and the product manager is the client. Debriefings can also be initiated and funded by the data collection department.

III. How is an editing staff debriefing carried out?

8. An editing staff debriefing is led by a moderator who is a cognitive specialist and works at the Unit for Cognitive Methods. The moderator is prepared by having gone through questionnaire, introduction letter, respondent instructions and editing instructions. The moderator takes notes for unclear issues and other problems. If the debriefing may have to deal with complex issues, an assisting moderator may be in order. This person acts as support and sounding board for the moderator. In conducting the debriefing, a general checklist for editing staff debriefings (given in the intranet Business Support System) is utilised.

9. Before the debriefing the moderator contacts the product manager and other persons to get informed on the survey and any known problems. This also can contribute to the topic guide (cf. below).

10. There should not be too many participants in a debriefing, since everyone should have a fair chance to speak. A suitable number is 5–8 persons, but up to 10 may work. If a production group is larger, it is better to divide the debriefing into two meetings. At the debriefing it is preferable if the participants can be seated so that all can see each other.

11. The moderator uses a document known as *topic guide* to ensure that relevant problems are covered. The topic guide is to be designed with a chosen degree of structure. If a uniform structure of the discussion is deemed suitable, as in a relatively well-known field, several specific questions shall be addressed to the participants. The moderator may be clear as to which areas are most problematic, and then several questions about these may lead the discussion so that the sources of problems may emerge. A difficulty here is that the problem areas that the moderator asks specific questions on might receive too much attention compared to other areas. There is also a risk that problems are unnoticed in areas where specific questions are not asked.

12. When more free discussions may be held in a debriefing, without specific control of the moderator, the most apparent problems may be expected to be dealt with. Usually those are the problems

that the participants spontaneously remember and have the most experience of. But there are also risks with this. The problems mentioned spontaneously may be those that have just occurred, because the editors will remember the one closest in time best. They may also have made important observations without recognizing them as indicating problems and worth mentioning, and this information may get lost if not probing questions are asked.

13. It is therefore important to determine what level of structure the moderator and the discussion should stick to, in order to achieve relevant experiences that can be assessed in a proper way. Normally the debriefing begins with a more open and free discussion and then moves on to more structured questions, focusing on the different sections of the questionnaire.

14. The editing staff debriefing is recorded, so that the moderator can concentrate on the discussion, instead of being preoccupied with taking notes.

15. An editing staff debriefing normally takes about two hours. The topic guide should be used actively to move the discussion ahead and keep the time schedule. The moderator should have the following in mind during the actual debriefing:

- Point out that the purpose of the debriefing is to elicit the problems experienced with the survey, and that all views are welcome.
- Try to get everyone involved in the discussion.
- Control the discussion if it slides away from the subject.
- Keep control of time so that all key issues under discussion have time.
- Remember that the editing staff may have suggestions on how to solve some problems, and encourage them to take up such things.

IV. Topic guide

16. The topic guide shall be adapted to the type of editing staff debriefing conducted. Usually, the arrangement is quite broad, with discussion of both the measurement instrument and the editing process. Sometimes, focus is on *one* collection round, and the result is assessed versus the previous round.

17. There is a template for the topic guide, with possible questions to include in the guide. The questions are grouped under headings (e.g. the introduction letter, the variables/questions, the instructions, retrieving data, and the editing) and the idea is to choose a selection of these questions based on the type of debriefing that is planned. The topic guide is also adapted by the addition of survey specific questions.

18. Here are some examples of questions from the template for the topic guide:

- Do you think the respondents read the introduction letter?
- Is anything missing in the introduction letter?
- What types of respondents have problems? Why?
- How can the response burden be decreased?
- Can the respondents handle pre-printed figures properly?
- Do you think the respondents read the instructions? Are these understood?
- Is anything missing in the instructions?
- Do the businesses retrieve data from their own data systems?
- Are some variables estimated rather than calculated?
- Are there technical problems with the (electronic) questionnaire?
- Do the instructions for editing work well?
- What kind of problems motivates you to re-contact the respondent? And do you use email or telephone?
- How could the IT system for editing be improved?

V. Analysis and report writing

19. After the editing staff debriefing, a summary has to be written from the recording. The aim is to highlight the important findings and therefore the debriefing need not be written down in detail. The final report from the editing staff debriefing will include the most significant information.

20. The report of the editors' experiences can usefully be supported by quotations. It is often the most succinct way to illustrate a problem. Quotations that make it possible for someone outside the debriefing group to identify who said what should be avoided. This also applies to other aspects included in the report.

21. When there is a finished draft of the report, the production manager (and possibly others from the production team) shall have the opportunity to read it and leave comments and clarifications. The report is then finally sent to the client, most often the product manager. When the report is approved by the client, the recording of the debriefing is erased.

22. In order to have the editing staff debriefing serve its purpose, the results must be taken care of properly. The debriefing is a basis for the more general evaluation that is to be performed after the whole production process of the survey. The results need to be sent to the governance team for the product. Identified problems or opportunities for improvement of a more general character shall be conveyed to the appropriate process owner at Statistics Sweden.

VI. Examples of debriefing results

23. To indicate what kinds of findings can be made through an editing staff debriefing, some real examples are given from different surveys in the following:

- Many respondents in a survey use Excel spreadsheets to deliver data. In several cases the Excel questionnaires are not saved and downloaded in a correct way, due to technical problems.
- The 'other' category leads to a lot of re-contacts in the survey, since several recorded amounts in that category are very high. An extra edit is needed, and comments from the respondents should be asked for.
- The number of rows to specify the 'other' category is not enough.
- Some ceiling values of edits are set too low and lead to too many error signals.
- The production system is not streamlined or well-arranged and call for awkward shifts between different views.
- Related changes of variable values need to be done in different parts of the production system.
- Full variable names are not given to the editors, which is not efficient.
- The distribution of net turnover is error-prone and would need to be supported by new edits.
- The instructions to the respondents are very complex and should be shortened if possible.
- The instructions for the editing process are obsolete and must be updated.
- Several respondents have problems separating costs and investments in the survey.
- The study variable *Costs* is probably underestimated.
- Contact person is neither pre-printed nor filled in by the data provider.
- An exchange of experiences with other business surveys is asked for.
- Several respondents just return the pre-printed figures, without checking and adjusting.
- It is unclear which edits should be applied on the data.
- The respondent instructions would need to be better arranged and have a better layout.
- Respondents sending data through an Excel file would need to be given separate instructions.
- One of the variables causes a lot of problems; the survey client may have reason to re-consider it in design of future data collection.
- The production system is slow, due to low performance.

More examples of debriefing results are given in Hartwig (2009).

VII. Conclusions

24. Editing staff debriefings have many benefits:

- The editing staff can identify several problems with the measurement instrument and the editing process.
- The editing staff often has ideas concerning what causes problems or errors.
- Considerable information is obtained to a modest cost.
- The results give a unique contribution, complementing information obtained by other means.

25. The editing staff has unique knowledge which can contribute substantially to the questionnaire design process and the editing process. In effect they can provide 'proxy cognitive interviews' on behalf of a large number of business respondents. It is essential that the debriefing results are taken care of properly. Editing staff debriefing is preferably used in combination with other qualitative methods, like expert reviews or cognitive interviewing. Debriefings can contribute not only to an improvement in data quality but also to a reduction in the cost of editing business survey questionnaires.

VIII. References

Hartwig, P. (2009). "How to use edit staff debriefings in questionnaire design". Paper presented at the 2009 European Establishment Statistics Workshop (EESW09).

Rowlands O., Eldridge J., and Williams S. (2002). "Expert review followed by interviews with editing staff – effective first steps in the testing process for business surveys". Paper presented at the International Conference on Questionnaire Development, Evaluation, and Testing Methods (QDET 2002).