Statistiska centralbyrån
Statistics Sweden

Notes
May 8-9, 2014

Advisory Scientific Board
Suad Elezović, U/ARK
Tiina Orusild, PCA/MIH
Annika Fröberg, U/LEDN

Meeting with the Advisory Scientific Board of Statistics Sweden May 8-9, 2014

Board members

Stefan Lundgren, Statistics Sweden, chair
Lilli Japec, Statistics Sweden, co-chair
Tiina Orusild, Statistics Sweden, secretary
Suad Elezović, Statistics Sweden, secretary
Professor Jan Björnstad, Statistics Norway
Professor Sune Karlsson, Örebro University
Professor Edith de Leeuw, Utrecht University
Professor Thomas Laitila, Statistics Sweden and Örebro University
Professor Lars Lyberg, Stockholm University
Professor Daniel Thornburn, Stockholm University

Other attendees

Eva Bolin, Statistics Sweden
Annette Björnram, Statistics Sweden
Annika Fröberg, Statistics Sweden
Thomas Helgeson, Statistics Sweden
Philip Andö, Statistics Sweden
Karin Andersson, Statistics Sweden
Frida Videll, Statistics Sweden
Johan Eklund, Statistics Sweden
Fredrik Scheffer, Statistics Sweden
Andreas Persson, Statistics Sweden
Gustaf Strandell, Statistics Sweden
Mikaela Järnbert, Statistics Sweden
Maj Gothe Eriksson, Statistics Sweden

Current issues at Statistics Sweden

Speaker: Stefan Lundgren

Stefan Lundgren informed the Board about the most important activities at
Statistics Sweden, as listed below.
- A Census has been conducted during the last year, the first Census since
  1985 and has been delivered to Eurostat. The Census is considered to be
  of very good quality.
- Implementation of ESA (European System of Accounts), new standard,
  several NSI will follow. Implementation will be realized in September
  2014. The major change is in the investment series. GDP level is going
  to be altered but the growth rates will not be influenced by this

implementation. The results are likely to be used during the Swedish election campaign.
- Statistics Sweden is continuously working to standardise working methods, IT support and methods. As a part of this goal we have been working towards certification according to the international standard ISO 20252 for marketing, opinion and social surveys. In March 2014 we finally reached that goal and are now certified. The work will continue with Peer Reviews to ensure the quality of SCBs production.
- The General Director also spoke about the EU vision 2020 and the difficulties to shape the statistical system in order to achieve an agreement among the member states.

Reply to recommendations

Speaker: Lilli Japec

Lilli Japec mentioned that the recommendations from the Board have been well received by Statistics Sweden.
Concerning the methods to evaluate measurement error, Statistics Sweden agrees with the Board regarding the recommendation to include a discussion of how the techniques could be combined, especially the record check and the randomization techniques. Statistics Sweden agrees that more methods suitable for business surveys are needed. In line with that there has been an ongoing small project studying the Quasi-Markov Simplex Method and testing this method on two surveys. Another major comment from the Board was about the need for competence development, which has also been on the agenda in the process department, starting with methodologists and cognitive experts.
Concerning the comments from the Board on re-interview of LFS respondents, Statistics Sweden has improved the information about the measurement error in the labour force surveys by publishing a report about this topic on the webpage. Issues of data protection have been studied and the conclusion was that the full data protection statement must be read, as the Board suggested. Statistics Sweden has come to a conclusion that this issue needs to be analyzed even more as the same data protection statement and the same recording techniques have been used in other surveys with no effect at all on the interview time.
Concerning the paper about Markov LCA application to LFS & Comparison to Reinterview, Statistics Sweden agrees that a potential presentation of the paper to a wider public would definitely be valuable. All other suggestions will also be kept in mind when preparing the internal course with plans to present LCA as one of several methods to quantify measurement errors.

Statistics Sweden agrees with the main recommendations from the Board concerning the topic Big Data.

Lilli Japec invited Anders Norberg (PCA/MFOS) to clarify some issues about the SCB:s reply to recommendations regarding the topic "An alternative design for estimation of annual change in short term statistics" (discussed in April 2013).

Mix Mode

Speakers: Frida Videll, Johan Eklund, Fredrik Scheffer, Andreas Persson
Discussant: Edith de Leeuw

Summary of presentation
Due to the increasing levels of non-response Statistic Sweden are evaluating the possibilities to collect data using mixed mode, combining telephone interviews and web surveys. With respect to this work there are several issues to consider, considering the design of the survey and how to present the questions on the web.

Regarding the design we have to make decisions about how to construct and evaluate the experiment. At the scientific board meeting we wish to discuss the work that has been done so far with the experimental design and get feedback from the board and suggestions on the remaining work.

Concerning the construction of the questionnaire, one has to decide on a general design approach such as whether the web questionnaire should be as similar to the telephone interview as possible or optimized for the web. However, there are also several, more specific, decisions to be made concerning the question design. For example, should instructions and response options that are hidden to the respondent in the telephone interview be visible in the web questionnaire? Such design decisions are likely to have consequences. We have done a preliminary investigation of the design options involved when transferring the questionnaire to the web. However, questions still remain whether there are more options to be considered, the consequences of different options and how these best should be evaluated.

Discussion
- Main survey mode SCB: telephone interview
- Biggest challenges:
    - Increasing non-response
    - Increasing costs (as a result of previous point)
- Proposed mix SCB:
    - Telephone + Online survey
- Does mix increase response:
    - Include R (representativity indices) in comparison
- Response vs costs
    - Rising costs due to wages
    - Rising costs due to increasing non-response.
- Several cost components
    - Front end: sampling, questionnaire development, implementation etc.
    - Field work cost
    - Back-end: editing, coding, etc.
- Cost components differ for different survey designs.
- Party preference survey: rotating panel survey.
- Mode effects: non-observation & selection error.
- Key issue: Will reducing non-response improve overall estimate or will differential measurement error lead to worse overall estimate?
- Telephone mode posed as open question.
- Proposed design options online:

- - - o Closed question: Response options ordered from left-wing to right-wing + other, …
    - o Closed question: Response options parties (partially) randomized.
  - Do not know option not part of the experiment.
    - o Inclination at SCB: Include do not know; perhaps separated regular responses.
  - Empirical evidence
    - o Not wise according to Stat Netherlands experience.
    - o Experience Hox/De Leeuw in Holland & Germany.
  - Some recommendations
    - o Compare experimental and control group not only on response rates, include representativity indices.
    - o Include paradata: e.g. response times per question
    - o Include evaluation questions.
    - o Compare also sub-groups.
    - o Costs: front-end vs back-end costs.
    - o Rethink including do-not-know option in web.

Other issues raised during the discussion

- This study is important because of using web and web is the future for this kind of investigation.
- Important because of getting rid of interviewer effect of telephone mode.
- Rethink about disparity in implantation between web and telephone mode.
- There is a need for supervising and checking during all phases of the study.

SILC/ULF

Speakers: Thomas Helgesson, Philip Andö
Discussant: Sune Karlsson

Summary of presentation
EU-SILC (Statistics on Income and Living Conditions) is a EU regulated statistical survey incorporated in the Swedish Living Conditions Survey (ULF/SILC). As a part of the modernization of European social statistics Eurostat is working on streamlining and improving the methodology and timeliness of the EU-SILC.

To meet the new targets on timeliness (ie earlier delivery of Swedish data to Eurostat) Statistics Sweden would need to shorten the field work period for ULF/SILC from what is now basically 11 months to the first half of the year (possibly January – June), in line with the majority of other SILC-countries. From a study performed by the department for Social Welfare it is quite clear a change in the field work period will result in seasonal effects on some indicators.

From the results of the study performed by the department for Social Welfare it is quite clear that a change in the field work period would result in seasonal effects on some indicators.

- Statistics Sweden is interested in opinions from the board with regards to potential use of substantially shorter field work period. Does the board have any opinion on the methodology used in this study?
- How to handle the expected seasonal effects that in some cases might cause breaks in time series if the shorter field work period is to be implemented?
- Does the board have any other suggestions on how Statistics Sweden should proceed?

Discussion
- The main concerns of the scientific board are the lack of accounting for the correlation between half-yearly and yearly estimates and the very large number of significance tests. For the latter a proper procedure for multiple comparisons that controls the false discovery rate should be used.
- It is clear from the report presented to the board that the data collection period has an effect on the estimates although the magnitude in general is small and the approach used makes it difficult the asses the statistical significance of the differences. It should also be kept in mind that there are probably other issues that affect the comparability over time more than a one-time change in the data collection period.
- Focus seems to be on practical significance. A recommendation is to first look at statistical significance and then check for practical significance.
- Regarding shorter field work: The methodology is not optimal but question is whether there is a choice.
- How to handle breaks:
  - Method with minimal requirements – publish estimates of size of breaks.
  - Better: Revise backwards.
  - Best procedure (?) would be to publish historical half-year estimates.
- Other suggestions: Study more years to validate patterns of differences.

Other issues raised during the discussion

- Daniel:
  - Work with significance within each group separately.
  - Make more comparisons.
  - Expecting higher differences: what do these differences depend on?
  - Seasonal effect will probably be present but this will only depend on weather.
  - Potential problem: Some seasonal effects will vary much over the years.
  - Is it possible to continue with the whole year but deliver data only for half a year. Answer: Not possible since the survey is made as combination of Swedish ULF and EU's SILC.

- Lars:
  - Strong requirements from EU-SILC and the worry is if this will destroy ULF.
  - Remark: Things are done in different ways in different countries but the process still allows for collecting the data in different ways. Some other countries use proxies due to language problems.
  - Question: How many years back in time are users interested in and how long time is interesting to study these time series? Probably not so many people are interested in very long time series.
- Jan:
  - Main issue is timeliness. It is becoming more important because we are so late.
  - There is no way around that (to publish data collected earlier).
  - Faster delivery is necessary.

Lilli closed the meeting by thanking everyone for participating.