## PUBLICATION OF RESULTS

### Introduction

1. The quality of a statistical output has several dimensions. Reliability and timeliness are the two that come immediately to mind but they are by no means the only ones. This Chapter deals with three other key aspects of statistical quality:

- *Transparency*. Are users sufficiently informed about the sources of the data and the methods used to edit and process them? Methodological information - metadata - is considered in the first part of this Chapter.

- *Interpretability*. Are users able to interpret the data easily and correctly? The next part considers the information needs of different users and how these can be met.

- *Accessibility*. Can users easily find the information they need? The final part of the Chapter offers guidance on dissemination of business tendency survey results.

### Information on the methodology (meta-data)

2. Users should be provided with sufficient information about the overall quality of the survey to enable them to draw accurate inferences from the data. Users may also need to determine whether the results of surveys conducted in different countries are comparable. In many cases, this information is provided in the survey report at least once a year, usually in the report for surveys conducted in January or for the first quarter. It is standard practice to include the questionnaire used for the survey and the instructions to respondents. In addition the following points should be covered.

*The frame*

3. Information about the coverage of the survey should be provided in terms of:

- what types of enterprises are covered;

- estimates of the extent of possible under–coverage e.g. late up-date of new enterprises, poor coverage of small firms, enterprises excluded because of misclassification.

- estimates of the extent of possible over–coverage e.g. extinct enterprises remaining in the frame, enterprises wrongly included because of faulty classification;

- age of the frame and how often is it updated.

*The units*

4. Information about the units should include details on:

- what are the response units i.e. what kind of unit is the questionnaire sent to;

- what are the reporting unit i.e. the unit for which data are collected - enterprise, kind of activity unit, local unit or establishment.

*The sample*

5. Information should be given on the sampling method:

- random or purposive selection;

- simple or stratified selection;

- if stratified selection is used, what are the criteria for stratification:

  - kind of activity;

  - size in terms of employment, turnover, etc.;

- updating of sample:

  - fixed panel;

  - fixed panel but with new enterprises introduced at regular intervals;

  - entire sample renewed at regular intervals.

*Weighting*

6. Methods for estimating universe totals from the sample need to be explained:

  - at the lowest aggregation level (the individual stratum);

  - for higher aggregation levels (industries, industry groups, grand total).

*Data collection methods*

7. A description of the data collection method should be provided e.g. mail, telephone interview, personal interview, e-mail return, etc. When several methods have been used, the approximate proportion of replies received with the different methods should be indicated

*Treatment of non–response*

8. Information on the extent of non–response should be provided by size groups according to the appropriate measures M1–M3 (see Chapter 4). Information is also required on the procedures used to deal with non-response. For example:

  - substitution (enterprises who have replied have been included as substitutes for non–responding enterprises). In this case the method for selecting substitutes should be explained;

- imputation (a completed questionnaire has been constructed). In this case the method of imputation should be explained;

- assumption that non–responding enterprises are a random sample of enterprises in the survey;

- other methods, details of which need to be specified.

*Precision*

9. The margins of error due to the use of a sample instead of complete enumeration should also be explained. Ideally, estimates of the variance and 95% confidence interval should be given for the total and the main kind of activity groups. These measures are only relevant when random sampling has been used.

*Comparability*

10. Information provided should include descriptions of survey comparability with regard to comparisons of data between:

- consecutive surveys, especially between the last quarter/month one year and the first in the following year, since this is when changes to questionnaires or survey methods are most often introduced;

- business tendency survey data and related quantitative statistics.

11. This *Manual* recommends that there should also be a brief discussion of the differences between the survey and the harmonised system.

*Policy for release of data*

12. The first of the United Nations *Fundamental Principles of Official Statistics* specifies that all users must be accorded access to official statistics on an impartial basis[1]. This implies that official statistics should be released simultaneously to all users. If there are some privileged users who are given prior knowledge of the results before they are released to the general public, this should be explained together with the reasons for making the exception.

*Supervision of "outsources"*

13. If the survey is partly or wholly "outsourced" - for example if the field interviews or the data editing has been outsourced to specialised companies or other government departments - details should be given of the control procudures out in place by the survey owners.

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1. The first of the "ten commandments" of the *Fundamental Principles of Official Statistics* states that: "*Official statistics provide an indispensable element in the information system of a democratic society, serving the government, the economy and the public with data about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honour citizens' entitlement to public information."* The principles can be view on the UNECE Website: http://www.unece.org/stats/documents/fund.principles/efund.pdf

**Needs of different users**

14. In considering what data to present and how it should be presented, it is helpful to consider the different kinds of users of business tendency survey data. Users and potential users are:

- Respondents to the survey;
- Senior business executives;
- Parliamentarians;
- Senior civil servants responsible for government policy;
- Senior personal in banks and financial institutions;
- Economists, researchers and analysts in general;
- The press and other media.

15. The potential users listed above do not all need the same type of information. In general they can be divided into two categories: those who intend to analyse the statistics in detail and those who simply want to know the main results. The first category – "analysts" for short – includes economists, researchers, other analysts and the respondents to the survey. The second category may be labelled "executives" and consists of senior business executives, politicians, senior civil servants responsible for government policy, senior personal in banks and financial institutions, and the press and other media. "Executives" probably make up the majority of business tendency survey data users.

*Analysts*

16. Analysts are people who are have the time and knowledge to study the survey results in detail. They may work for statistical institutes, economic research institutes and companies that have their own in-house research department. The main requirements for analysts are:

- to have access to the data quickly after publication.
- to have the figures clearly printed and laid out;
- to have concise, easily absorbed, methodological information and a telephone number or address to write to with queries and to have access to the more detailed methodological information as described above;
- to receive historical data for a few years back so they do not have to waste time looking through too many back issues of the survey reports;
- to have any breaks in the series properly dealt with and noted, with at least one period on both the old and the new base;
- and, when revisions are made, to have access to the full run of revised data.

17. Survey respondents are a particularly important group among the *analysts* since they need to be motivated to continue filling in the questionnaires. In order to provide incentives for enterprises to

participate in the surveys, many agencies conducting business surveys provide their regular respondents with special services in order to persuade participants to remain in the sample. These services include:

- forecasts for the respondent's kind of activity based on the survey series alone or in combination with quantitative statistical series;

- forecasts for the respondent's potential customers so as to provide information on incoming orders;

- disequilibrium analysis on branch level: this approach focus on the micro data from the surveys and has the advantage that both cyclical and structural phenomena can be analysed at the same time.

*Executives*

18. Analysts are a minority, though an important one, of all users. Executives are a much greater potential user group. Executives do not want to look at the results as such, but want to know what the results mean. They need their information "pre-digested". If the agency conducting the business surveys does not publish the results in a way that appeals to executives, the majority of potential users will never know about the survey.

19. The results for executives should be presented in a way that makes it easy for them to absorb the material and encourage them to read it. They do not have time to read everything and will select only that which seems important. They will hardly look at statistical tables. Statistical tables should be included in the presentation as they add credibility to the analysis, but they should play a relatively minor role or be put in an annex. The main requirements for a report for executives may by summarised in the following points:

- the main part of the report should devoted to text;

- the main results should be presented in a simple way and give a good overview of the main developments. The presentation could focus on the results based on confidence indicators for broad sectors of the economy;

- it should be brief, two or three pages of text with a few graphs (business survey data are particularly suitable for graphical presentation);

- one or two pages of statistical tables attached in annex;

- it will need to explain why the survey results can be important guides to economic activity as well as reflecting the views of the business community, and any relevant technical points. (This is most important in the early days of the survey).

**Dissemination of survey results**

20. Three main types of reports, on paper or electronic, form the ideal basis for a publication strategy for presenting business tendency survey data to different users:

- press release;

- publication for analysts;

- reports for respondents.

21. The main focus and content of these reports are summarised in Table 2 and explained in more detail in what follows.

22. The **press release** should be very short - one or two pages maximum. Only the main features should be covered in the text. The press notice will also include methodological information dealing with the number of respondents and coverage of the survey in terms of employment, value added, sales or turnover. A table summarising key indicators and a graph showing the overall development of one or two main indicator could also be included. A telephone contact number should be given.

23. The **report for analysts** should contain a complete presentation of the survey results. This will include an overview of the main results and main features by sectors, regions etc. The text should be complemented with graphs and tables of key results. This report should contain detailed results with full data presentation in tables for all variables by sectors, regions etc. and covering a reasonable period of past data. These tables could show quarterly or annual averages of data for a longer period of years so that the analysts can easily compare current results with past trends.

24. The methodological description should be rather extensive and give more technical and detailed information. The previous section in this Chapter describes the kind of methodological information that is required. This information will usually be updated once a year.

25. The **report for respondents** to the survey should include the same information as the one prepared for analysts. In addition, it could contain enterprise-specific information, if such information is available. For example it could include sectoral and branch forecasts for key sectors of interest to particular enterprises in a particular industry. Specific forecast for individual enterprises participating in the survey could also be prepared on request.

**Business survey reports for different users**

| Reports/users | Focus of information | Content |
|---|---|---|
| Press release | Main features | Text, survey characteristics |
| Analysts | Overview<br>Main features by sectors | Text, graphs, tables<br>Detailed data<br>Survey characteristics<br>Interpretation of results<br>Methodolgical information |
| Respondents | Overview<br>Main features by sectors<br>Enterprise specific information | Text, graphs, tables<br>Detailed data<br>Special tabulations<br>Survey characteristics<br>Interpretation of results<br>Methodological information |

26. Production of three different reports for each survey may be beyond the means of many agencies carrying out business tendency surveys. In this case, the second publication could serve both analysts and survey respondents, with the latter also being offered, on demand, a limited range of tabulations giving information specific to the responding enterprise.