Quality assurance in the 4th European Working Conditions Survey

Introduction

European Working Conditions Survey

Key elements of the quality assurance strategy

Paper presented at the First European association for survey research (EASR) conference, Barcelona, 18-22 July 2005

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Introduction

If the European Union is to become a reality in economic, social and political terms, it will need to have a good and reliable statistical system at a truly European level. It is impossible to govern or design policies without having proper statistical information about the society to be governed. The current situation at a European level in this respect is far from desirable, and this has led to an increasing emphasis in ensuring the highest quality and reliability of European data. However, the main obstacle to having a reliable European statistical system is embedded in the very nature of the system itself: the European data is not produced at a European level. The vast majority of Eurostat data is actually data coming from national sources, which is only ‘harmonised’ at a later stage to make it comparable at a European level. Of course, there are ways to try to overcome this obstacle (like implementing cumbersome and ever tighter quality standards). But the simplest way to ensure reliable EU data would be to produce it at an EU level, which is what will probably happen at some point if the EU goes ahead.

This is what makes surveys which are conducted at a truly European level most interesting from a forward looking perspective. Although not many, there are some surveys in this category. Most notably, we could mention the Eurobarometer, in which there is not much emphasis on data quality, being a survey more concentrated on getting quick snapshots of European public opinion; and the European Social Survey, in which the quality of the research process and the EU comparability of results were from the beginning core aims of the project. Among other EU data producing institutions, the European Foundation for the Improvement of Living and Working Conditions has been carrying out European wide surveys on various issues related to its mandate. The European Working Conditions Survey is probably the best known of the surveys carried out by the Foundation, as it is the oldest one (the first wave was carried out in 1991). In the context of the current trend towards increasing awareness of ensuring the highest quality standards, the Foundation is implementing a new quality assurance strategy in the 4th edition of its Working Conditions survey, which is being done this year. In this paper, we are going to outline the main elements of this strategy, emphasising the complexities of carrying out an European survey and the tools we have developed to tackle them.

European Working Conditions Survey

The main aim of the European Working Conditions Survey (EWCS) is to study the working conditions of persons in employment in the European Union. The definition of persons in employment is the one used by Eurostat for the Labour Force Survey, and basically refers to persons with 15 years or more who are either employees or self-employed. It has been carried out every five years since 1991, so this year’s wave will be the fourth. Although the total number of questions has been steadily increasing since the first wave, the core variables of the questionnaire have been maintained, so that trends and changes in working conditions in the EU in the last 15 years can be studied. The EWCS is the only data source for comparing working conditions in all EU countries; and in many countries, the only existing data for studying working conditions at all.

The sample has been designed with the aim of ensuring that comparisons between EU countries can be reliably done, as well as detailed in-depth analysis at EU level. The possibility to do in-depth analysis country per country is only a secondary concern. The sample size of 23,000 cases in the European Union (1,000 per country except in EE, CY, LU, MA, SI: 500) covers these objectives within the budgetary constraints which always have the last word in these matters.

The survey is organised by the European Foundation for the Improvement of Living and Working Conditions, a European Agency whose mandate is to contribute to the planning and design of better living and working conditions in Europe. The fieldwork is contracted out, in this 4th wave to Gallup Europe. We will see later how the work is organised among the different actors.
What makes the EWCS interesting from a (specially European) methodological point of view is the fact that it is one of the few truly European-wide surveys that exist nowadays. The questionnaire is exactly the same everywhere, as well as the methodology (with some variations to adapt to national specificities), and the whole research process is managed and coordinated centrally (by the Foundation and Gallup headquarters), with a network of contractors carrying out the work in each country. From the point of view of research at an EU level, this is the most desirable way to do it; but as we will see, this also creates some problems of complexity and puts more pressure in developing a good quality assurance strategy.

Key elements of the quality assurance strategy

As we said before, since the first wave of the EWCS was done 15 years ago, things have changed considerably in the field of European statistics and survey methodology. The European statistical agencies have been faced with an increasing scepticism about the reliability of European data, what has resulted in a considerable pressure on rising quality standards. In this context, the Foundation has taken considerable effort in developing a sound quality assurance strategy for the 4th EWCS, which will be adapted for its use in all the other surveys carried out by the Foundation from now on. This quality assurance strategy has four main pillars:

1. **Planning**: an effort has been put into systematically planning and mapping the whole research process in order to rationalise it and manage it properly.

2. **Consultation**: a big group of experts, social partners and users of the survey participate in the development of the questionnaire, key survey concepts and methodological strategy.

3. **Transparency**: the Foundation is ensuring that the whole process is open both internally and externally.

4. **Documentation**: an almost obsessive effort is being made into documenting every single step, decision or occurrence in the project, making sure that everything can be traced back.

We are going to discuss each one of these pillars in some detail, explaining why and how they are implemented.

**Planning – Quality Control Framework**

The first thing that was done in relation to the development of the strategy for rising the quality of the survey was an in-depth reflection on how it was before. This served as the starting point of a methodological discussion about how to do it in the 4th wave. As a result, a detailed framework for the quality control of all the steps in the survey process was designed. This quality control framework contains a detailed mapping of every step in the research process, specifying who does what and how to control in each step the quality of the process. The logic behind this planning effort is quite obvious: is that it rationalises and systematises the whole research process, serving as a guide for the actors involved.

The document was based in the Eurostat concept of data quality as well as on the seminal paper by Morganstein and Marker 1, adapting it to the complex situation of the EWCS. It was developed using business modelling methods and UML (Unified Modelling Language) tools, ensuring that the quality control process complies with the established scientific standards.

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The framework is basically a detailed mapping of the whole research process, identifying who does what and how to ensure the highest quality standards. The main elements of the framework are:

1. Identification of the key characteristics of the survey (what it has to be, the key requirements from its users).
2. Identification of the key actors and their roles.
3. A map of the overall process, dividing it into its main sub-processes.
4. For each of these sub-processes, a detailed flowchart specifying:
   a. Who does what.
   b. What are the key process variables and how to measure them. Process variables are factors that can vary with each repetition of the process and that have an important effect on critical characteristics of the survey (for instance, the response rate). They can be measured with more and less accuracy, which has to be also specified in order to guide the control of its results in each case.
   c. How to monitor the quality of each of these processes. Basically, this is done specifying the desired results of key process variables and how to produce these desired results. For each process, a Current Best Method (basically, the best way to do the process that is known to researchers) is described.

Although the EWCS is a project which is really managed and organised centrally at a European level, it does not mean that there is only a single organisation carrying out the whole work. The complexity of the European Union itself, consisting of 25 different countries with different cultures, traditions, social and economic systems, etc, is reflected in the complexity of the organisation of a European survey like the EWCS: there are many different actors at different levels and layers, carrying out different tasks. One of the main reasons behind a quality control framework is to specify clearly who are the different actors, what are their roles, what they have to do in each step of the process and how they have to interact with each other. The main actors of the EWCS are:

1. The Foundation, which takes the role of managing and coordinating the whole process, as well as the role of quality controller.
2. The Contractor, who is responsible for the practical implementation of the survey. The contractor itself is an organisation composed by:
   a. The Coordinating Centre, which is responsible for the day-to-day management of the survey practical implementation, coordinating and managing the work of the National Network Members.
   b. The National Network Members, which are the actors that actually carry out the data collection in each country.
3. External advisors/experts. Two different groups:
   a. The group of experts (from different statistical and international organisations) who are involved in the development of the questionnaire and different conceptual and methodological aspects of the survey (as we will see in the next section).
   b. A quality assurance advisor, who helps the Foundation in carrying out the quality control of the survey.

The amount of actors involved in the project and the complexity of the organisation of work poses a risk if the communication among them does not flow correctly. For that reason, a key aspect of the quality assurance strategy is ensuring the highest transparency, as we will see soon.
As we have seen, it is the Foundation itself who takes the role of quality controller, monitoring the quality of the research process. The Coordinating Centre of the Contractor does also some quality controls, which are reported to the Foundation for review and approval. The process of quality monitoring is basically the following: the methodology of the survey has to follow the description of the Current Best Methods specified in the Framework; this implementation yields an observable result, which is reflected in its corresponding quality control report; this report includes an evaluation of whether the process followed the specifications of the Framework. This system of quality control was already implemented in the tender for the survey implementation; and is part of the contract with the organisation carrying out the fieldwork.

Consultation
The second key element of the strategy for ensuring that the EWCS is of the highest quality is the strong emphasis put on consultation. The Foundation itself, being a tripartite organisation (with an Administrative Board formed by members of trade unions, employer organisations, and governments from all EU Member States, as well as EU social partners) has a very long tradition of involving experts and stakeholders in its research. In this sense, since the very beginnings of the EWCS, there was a very intensive consultation process of the whole research process, from conceptual design to the analysis of results. The extent and intensity of the consultation process around the EWCS has always been quite exceptional compared to other similar surveys. And indeed, we consider this one of the most important tools for ensuring the highest quality of the survey.

As we have already said, the Foundation has an Administrative Board which is involved in the conceptual development of most research projects, including the EWCS. So representatives from trade unions, employer associations, governments and EU-level social partners have been involved in the development of the questionnaire and of survey concepts. Apart from that, the Working Conditions Team of the Foundation (responsible for the EWCS) has organised a network of international experts that are involved both formally and informally in almost every step of the research process. This is what we call the EWCS Expert Development Group. It is formed by a national expert from each EU Member State (normally from a public Research Institute), representatives from related international organisations (ILO, OECD, Eurostat, European Commission), and researchers who have been working with the EWCS before.

The consultation process goes from the beginning to the end of research. First, the questionnaire and survey concepts are discussed in the Foundation’s Administrative Board, throughout the year before the survey is actually implemented. At the same time, there are a series of seminars with the Expert Development Group, in which the questionnaire is further refined, as well as the methodology of the project. During the survey implementation and the analysis phases, there are meetings with the EDG and with the Administrative Board for updates and discussion of next steps. And on a continuous basis, there are informal contacts and consultations related to specific issues or problems that might appear during the survey implementation (for instance, the translations to the national languages are double-checked by the experts).

Transparency
We have already discussed the fact that one of the main problems of a survey like the EWCS is the complexity of the organisation of the work. There are many different actors involved at different layers, each one implementing tasks which are critical for the overall result, and which depend on each other. In this situation, it is absolutely critical for the success of the project to ensure that there are no problems in the flow of information. Most of the risks in a project like this derive of this simple fact; or at least, they could be probably solved if the information flew freely. For this reason, a very special emphasis has been put into making the whole process as transparent as possible.

The rationale behind making the process as transparent as possible internally is quite clear. But our commitment has been to make it also transparent externally. We think that this is a further element of a comprehensive quality control strategy, one which can potentially bring the best results. Our idea is to make public all the methodological documents that we
can, opening the research process to external criticism. Indirectly, this can only increase the quality of research, both by making it more honest, and by allowing us to have the extra check of the general public being able to spot themselves any problems which they might find.

But how is this general objective of transparency actually implemented? The use of some new developments in information technologies have made this transparency much easier to implement that ever before. Internally, the flow of information is basically organised through a web-based private network that links the main actors involved in the research process. This makes possible a very high level of involvement of the management of the project in every step of the research process, and facilitates to a great extent the activity of quality control. For instance, the questionnaire translation process, which has almost finished, is completely web-based, so that for controlling whether the work has followed the specifications there is no need to actually go to the research centres; it is as simple as checking on the internet that everything has been done properly. The day-to-day management of the project is completely web-based, so it can be checked in real-time, and any communication in the system reaches all actors immediately. Most of the subprocesses are also completely web-based (like the translation of the questionnaire or the interviews control) so that they can also be checked in real time. Other tools that are being used for increasing the internal transparency of the research process are mailing lists for any internal communication (so that everyone is aware of all communications), and a blog which serves both as a diary of the survey and as an internal communication tool for the whole Foundation.

Externally, we also want to be as transparent as we can. The main tool that we will use in this case is also web-based. Following the very good practice of the European Social Survey, we will create a public web page about the methodology of the project, in which we will make most of the documentation of the project freely available. Apart from documents like the questionnaire, the sampling plan, the Quality Control Framework, etc, we intend to make also available all the quality control reports that do not contain any sensitive information. The dataset itself will be made also available in two years (this is the minimum allowed in our organisation). This web page will be available from autumn 2005 on the Foundation’s website (http://www.eurofound.eu.int/ewco/surveys/index.htm).

Documentation

And the final element of our quality strategy, the last line of defence against threats to the quality of the data, is the documentation of everything. The commitment here is to be obsessed with documenting every single step, every small decision taken. As we have made very clear from the beginning of this paper, an international survey like this is a very complex process, full of small decisions with very big consequences. No matter how good is the planning, how much consultation we do, how transparent the communication is, some errors will occur. The best way to confront this is to document every single decision taken, so that eventually any error or problem can be traced back and some kind of solution can be found.

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2 In this case, the Current Best Method of the Quality Control Framework specified that two independent translations should be made, then they should merged into one draft translations, then checked by the Foundation and its experts, and then finalised by the Contractor. All this was done through the web system, so that the Foundation could check in real time whether there were actually the two independent translations, the merged version, whether the proposed changes were actually implemented, etc.

3 It is only available in the intranet of the Foundation. For future versions of the survey, we will try to make this blog available to everyone through the web.
Apart from a last line of defence against problems in the research process, documenting everything makes the survey design and implementation much more scientifically sound and facilitates considerably the replication of the process (which is quite important in a project which is carried out every five years). And as anyone doing applied research surely knows, documenting everything requires an extra effort of reflection which makes much more effective (and less error-prone) the whole research process.

In fact, together with transparency, documentation is the ultimate quality control assurance. Documenting everything and making it open to criticism is the best possible way to ensure that errors will be spotted and problems will be solved. If they can be solved. If not, at least it makes us honest.

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