Data Collection
Quality Assurance
in Cross-National
Surveys: The
Example of the ESS

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Abstract
The significance of cross-national surveys for the social sciences has increased over the past decades and with it the number of cross-national datasets that researchers have access to. Cross-national surveys are typically large enterprises that demand dedicated efforts to coordinate the process of data collection in the participating countries. While cross-national surveys have addressed many important methodological problems, such as translation and the cultural applicability of concepts, the management of the data collection process has yet had little place in cross-national survey methodology. This paper describes the quality standards for data collection and their monitoring in the European Social Survey (ESS). In the ESS data are collected via face-to-face interviewing. In each country a different survey organisation carries out the data collection. Assuring the quality across the large number of survey organisations is a complex but indispensable task to achieve valid and comparable data.

Zusammenfassung
1 Introduction

With growing globalisation the importance of cross-national data has increased and with it also the number of cross-national surveys (Kish 1994; Jowell 1998; Heath et al. 2005; Lynn et al. 2006). Cross-national surveys are large enterprises that demand considerable financial, human and infrastructural resources, at the country-level and the cross-national level. To assure reliable and valid measurement within each country as well as cross-country data comparability survey standards are specified and their implementation is monitored centrally. The participating countries are to adhere to the survey standards and provide proof of correct implementation. Cross-national surveys differ in the level of standardisation that they pursue. Whereas some surveys only specify a very limited set of survey standards (such as question wording and a minimum sample size), other surveys cover all aspects of the survey life-cycle. The present paper describes the quality standards for data collection and their monitoring in the European Social Survey (ESS).

It is uncontested that social measurements like quantitative surveys need some kind of standardisation of methods and processes to provide reliable and valid data (Jowell 1998). This holds both for national and for cross-national surveys except for one important difference. National surveys usually have a single design (Lynn et al. 2006). This means that there is one sample design and one questionnaire is administered in a standard way by interviewers who have received the same training and instructions. In cross-national surveys, designs differ across countries due to differences in financial resources, legislation regarding the survey business, available sampling frames, the geographical dispersion of the population, languages, the experience and capability of survey organisations and survey practices (like the typical methods and content of interviewer training or the prevailing mode of interviewing) (Park/Jowell 1997; Smith 2007). Consequently, even in highly standardised cross-national surveys some aspects of the survey design will be implemented differently across countries.

When differences in methods affect survey outcomes, comparisons across countries can be jeopardised, because observed cross-country differences may be mere methodological artefacts. If standardisation in methods leads to equivalent outcomes, cross-national surveys should therefore strive for perfect standardisation. However, for reasons mentioned above perfect standardisation is impossible. Moreover, occasionally the effect of methods can differ across countries. Skjåk and Harkness (2003) for instance argue that optimal modes of interview administration (face-to-face, telephone, self-completion, etc.) in one country may be quite
problematic in others. Therefore, sometimes comparability of results may best be achieved by a deliberate variation in design. Such considerations seem quite plausible also with regard to response and nonresponse. For instance, in order to achieve similar response rates between countries it can be prudent to allow for the use of different types of respondent incentives across countries. Or, given differences between countries in at-home-patterns of their population, it may be advisable to accept different call schedules to achieve similarly low noncontact rates in all countries.

‘[T]he challenge is to identify which aspects of design need to be identical, which should be allowed (encouraged) to vary – and within what parameters – and which may be less important, in the sense that relevant characteristics of the survey data may be insensitive to variations in design.’ (Lynn et al. 2006: 14f.)

With regards to equivalence in probability sampling Lynn et al. (2006) argue that different sampling strategies may be the best way to achieve equivalent samples (see also Kish 1994; Häder/Lynn 2007); while equivalence of measurement may be best achieved by standardising question wording and mode of interview. For other aspects of survey design, such as data collection practices, the authors note that little is known yet about the effects of different design options.

We look at quality assurance for data collection in cross-national surveys using the example of the ESS. The ESS is a biennial cross-national survey of social and political attitudes in Europe. Data are collected via face-to-face interviewing.¹ In the ESS standards for data collection are set by a Central Coordinating Team (CCT), which also produces guidelines, assists countries in preparing fieldwork, monitors the progress of fieldwork in all countries and evaluates the implementation processes. In each country a different survey organisation carries out the data collection.² Assuring the quality across such a large number of survey organisations is a complex but indispensable task to achieve valid and comparable data. We describe how the CCT of the ESS coordinates data collection in the more than 30 participating countries and how it tries to find a viable balance between standardisation and national adaptation.

¹ Cross-national surveys often rely on face-to-face interviewing. Apart from the ESS, for instance also the Adult Literacy and Life Skills Survey, the Eurobarometer, the European and World Values Surveys, the Survey on Health, Ageing and Retirement in Europe and the World Mental Health Survey are conducted face-to-face.
² A few ESS countries appoint local branches of globally acting groups like Ipsos, TNS or Gallup to carry out the ESS. In such a case, the national branches of global survey organisations usually act quite independently from each other. Some cross-national surveys (e.g. the Eurobarometer) subcontract the entire cross-national data collection to one global survey organisation. Here the cross-national coordination of the data collection is the task of the central office of the global survey organisation.
We first provide basic background information on the ESS and describe how standards for data collection are set and monitored. Subsequently, outcomes of this approach for key data collection features in the first three rounds of the ESS are presented. We describe to what extent countries adhered to data collection standards and discuss reasons for deviations from these standards. The conclusion provides some final considerations.

2 The ESS: Basic Features, Aims and Organisation

The ESS is an academically-driven social survey designed to chart and explain the attitudes, beliefs and behaviour patterns of its diverse populations (Jowell et al. 2007). In addition to monitoring and interpreting social change, the ESS also seeks to consolidate and improve cross-national quantitative measurements within Europe and beyond (O’Shea et al. 2003). Since 2002 the survey has been fielded every two years and now, in its fourth round, it covers more than 30 countries. Each of the participating countries conducts approximately 2000 face-to-face interviews in each round, either as paper-and-pencil interviews (PAPI) or as computer assisted personal interviews (CAPI). The ESS questionnaire includes two main sections: a 'core' module which remains relatively constant from round to round plus two or more 'rotating' modules repeated at intervals. The core module monitors change and continuity in a wide range of social variables. The rotating modules focus on particular academic or policy concerns, like ‘immigration’ or ‘family, work and well-being’. The average interview length is about 70 minutes.

The ESS project is directed by the CCT, led by the Centre for Comparative Social Surveys at City University London (see Figure 1). The CCT is responsible for the design and coordination of the project. Its work is primarily funded by the European Commission. A multi-disciplinary team of researchers from seven European research institutes cooperates in the CCT. Each partner institute has pre-specified and self-contained responsibilities, some of which continue throughout the project’s life, others for shorter periods. The work comprises more than ten workpackages, including the general coordination and implementation of the project, sampling design, translation, fieldwork commissioning, piloting, archiving

3 Apart from City University, these institutes include NSD in Norway, GESIS in Germany, SCP in the Netherlands, the Universitat Pompeu Fabra in Barcelona, Spain, the University of Leuven in Belgium, and the University of Ljubljana in Slovenia.
and dissemination. The seven institutes are also jointly responsible for overall quality control and quality assessment.

Data collection and other national costs in each country are borne by national funding bodies. In each participating country the national funding agency appoints a National Coordinator (NC) and a survey organisation to implement the survey according to common ESS specifications. The NC and the survey organisation are responsible for the national implementation, including the sampling, translation, data collection, data editing and survey documentation.

Figure 1 Organisational Structure of the ESS

The two key actors – the CCT and NCs – are supplemented by a network of overseeing and supporting groups: the Scientific Advisory Board, the Question Design Teams, the Sampling Panel, the Translation Taskforce, a methodological advisory board (the Methods Group) and a group representing the national funding bodies and the European Commission (the Funders’ Forum).
3 Survey Standards in the ESS

3.1 Specification of Standards for Data Collection in the ESS

Cross-national surveys vary in the balance of responsibilities at the cross-national and national levels. Given the large number of participating countries and aspired methodological rigour, the ESS needs a strong cross-national organ (the CCT) that stipulates the survey design and monitors quality. A standard specification designed by the CCT establishes the methods and procedures to be followed in all participating countries. Regarding the data collection process these 'Specifications for Participating Countries' (European Social Survey 2001; 2003; 2005) cover three core areas: (1) the selection of a survey organisation, (2) data collection outcomes and (3) data collection procedures. In the following we summarise the ESS standards and describe the rationale behind them. Tables A1 and A2 in the appendix list the ESS data collection specifications distinguishing between required and recommended procedures. The tables also indicate the leeway for national adaptation for both groups of procedures.

Selection of a Survey Organisation

The ESS urges participating countries to contract the best European fieldwork organisations to ensure that its regular rounds of data collection are carried out to the same exacting standards (O'Shea et al. 2003). Survey organisations to be appointed for the ESS must be capable of conducting national probability-based face-to-face surveys to the most rigorous standards. Furthermore, the specifications stipulate that, if necessary, the survey organisations should be willing to change their routine procedures and methods to ensure cross-national comparability. Accordingly, the ESS requires some flexibility on the part of survey organisations intending to field the ESS. The advantage of the country-wise selection of survey organisations is that NCs are best aware of the quality that organisations in their country can produce. However, it can be a challenge to get survey organisations to replace their traditional approach with ESS standards. This is an important task for the NCs. Section 3.3 demonstrates how this aim was pursued.

Adherence to the ESS specifications is a prerequisite for each participating country and for each survey organisation selected to field the ESS. At times this may require a higher budget than is necessary for fielding a survey according to the usual standards in a country. Examples of fundamental changes to typical fieldwork practices come from France and Switzerland. In France the major challenge was to replace the traditional quota sampling by probability sampling, and in Switzerland the prevailing telephone mode had to be substituted by face-to-face interviewing.
Data Collection Outcomes

The ESS standards for data collection outcomes concern the sample size and the response and noncontact rate. The ESS specifications require a minimum effective sample size of 1500 interviews for each participating country based on a probability sample (Häder/Lynn 2007). Countries may use different sampling designs which may have a different effect on standard errors (independent from the size of the sample). To standardise the level of precision of results across countries the ESS prescribes an effective sample size, which takes account of the design effects associated with a country’s sample design. The concept of an effective sample size operated in the ESS requires countries with geographically clustered samples to provide a higher number of completed interviews than countries using a simple random sample.

Nonresponse is a major threat to sample surveys, since it decreases the net sample size and can lead to biased survey results (Groves/Couper 1998; Groves et al. 2002). In most Western countries response rates have been declining during the past decades (de Leeuw/de Heer 2002). The ESS specifies a minimum target response rate of 70 percent. When setting this target the CCT was aware that some countries would reach the target, while others would struggle. The CCT felt that specifying a target outcome rate to competing survey organisations would make the target a contractual obligation that the selected survey organisation must strive and budget for (Jowell et al. 2007).4 The rationale was to maximise response rates in each country and to reduce variation in response rates across countries in order to optimise comparability. In addition to setting a target response rate the ESS limits the noncontact rate to three percent of the eligible sample. The reason for specifying a maximum noncontact rate was that this source of nonresponse can be easier controlled by insisting on certain design features (especially the number and timing of contact attempts) than the other major source of nonresponse, i.e. refusals (Groves/Couper 1998).

Obviously, as regards nonresponse the ultimate goal should be to minimise nonresponse bias. However, minimising bias is even more difficult than enhancing

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4 Of course, a certain response rate cannot be enforced. Individual target persons always have the right to refuse, may not be at home for a prolonged time or may not be able to participate in the survey because of illness, mental incapacities or language problems. If a survey organisation does not achieve the agreed upon rate, it has to be discussed whether additional fieldwork efforts and measures might be helpful when fielding the survey again in the future. Also a change of the survey agency might be considered. We should note that in the ESS only few countries included payment sanctions for not achieving the response rate target in their contract with the survey organisation.
response rates. Nonresponse bias is estimate-specific and can vary substantially across variables within the same survey (Groves/Peytcheva 2008). Estimating nonresponse bias requires comparative auxiliary information for both respondents and nonrespondents, which cross-national surveys have trouble providing (Blom et al., forthcoming). Furthermore, a target nonresponse bias is extremely difficult to budget for in fieldwork reality. Nonresponse bias targets are demanding in national studies (for an interesting attempt see Schouten et al. 2009), and nearly impossible to use – at least for the time being – in cross-national multi-topic surveys like the ESS.

Data Collection Procedures

In order to achieve the specified data collection outcomes and to improve comparability across countries the ESS defines data collection procedures that each participating country needs to follow. These procedures include the mode of interview, maximum interviewer workloads and interviewer briefings, a set fieldwork period, interviewer calling schedules, the collection of contact data and quality control back-checks.

Research has shown that the mode of data collection can affect survey results (Biemer/Lyberg 2003; Groves et al. 2004). Even within a country differential coverage, nonresponse and measurement errors across modes can cause mode effects; across countries the scope for differential errors are magnified. Consequently, the ESS collects its data in the same mode across all countries, namely by means of face-to-face interviews. For cross-national surveys face-to-face fieldwork offers several advantages over other modes including the best possible coverage of the target population and higher response rates (in most European countries). Furthermore, it is generally thought that the duration of a face-to-face interview can be longer than interviews in other modes.

In face-to-face surveys interviewers have a great potential to affect data quality.

‘The task of the interviewer is more comprehensive and complex than merely asking questions and recording the respondent’s answer. Interviewers implement the contact procedure, persuade the respondents to participate, clarify the respondent’s role during the interview and collect information about the respondent.’ (Loosveldt 2008: 202)

This can lead to interviewer effects in the resulting survey data, which the ESS tries to minimise via two main strategies: by training all interviewers in personal briefings (administered by NCs and/or researchers from the survey organisation) and by restricting the interviewer workload (at a maximum of 48 sample units per interviewer).
In each country interviewers should collect the ESS data in a fieldwork period of at least one month within a four-month period between 1st September and 31st December of the survey year. This serves to guarantee that the reference period of the ESS data is kept comparable, which is particularly important for an attitudinal survey like the ESS. At the same time the prescribed fieldwork period allows sufficient time for collecting data from difficult (in terms of contacting or gaining cooperation) sample units. Also practical considerations provide arguments in favor of a standardisation of the fieldwork period across countries. Lengthy and/ or non-concurrent fieldwork periods make the coordination of the survey more time-consuming and can lead to delays in the data release. The risk of perpetuating delays from one round to another is another concern for repeated cross-sectional surveys like the ESS.

The probability of contacting a sample unit depends on the interplay of the sample unit’s available at-home-pattern and the interviewer’s number and timing of contact attempts (Groves/Couper 1998). Therefore, the ESS carefully specifies interviewer calling schedules that include sufficient calls spread over two weeks, on different days of the week and different times of day (a minimum of 4 contact attempts, of which at least one on a weekday evening and one at the weekend). To achieve a standardised measurement of the response process and allow cross-country comparisons thereof, the ESS countries have to collect contact data by means of ESS model contact forms. These contact data include information on the timing, mode and outcome of each contact attempt and reasons for refusal, as well as information on the housing and neighbourhood of the sample unit. The ESS does not allow any substitution of difficult to reach or reluctant target persons and survey organisations are required to carry out checks of noncontacted, refusing and interviewed sample units.

The survey climate, that is the societal conditions that facilitate or mitigate survey participation, may vary between countries (Groves/Couper 1998), and in some countries the mandatory fieldwork specifications of the ESS may be insufficient to reach the response rate target. Therefore, ESS specifications suggest several additional measures (such as the selection of experienced interviewers, the use of respondent incentives or refusal conversion attempts, see Table A2 in the appendix). Each country is requested to consider these suggestions, but there is no general obligation to implement them.

5 The implementation of the ESS model forms is optional, provided countries deliver all mandatory variables described in the data protocol. ESS contact forms and contact data are available from http://ess.nsd.uib.no/.
With these standards and recommendations the ESS aims at a good balance between standardisation on the one hand and the provision of (some) leeway for national adaptation and customisation on the other hand. The same targets are set for all countries and minimum data collection standards are defined to help countries achieve these targets. These minimum standards may be complemented by optional measures. For example, countries can increase the number of call attempts interviewers make and use respondent and interviewer incentives of different types and values.

3.2 Support Documents Provided by the CCT

In addition to specifying details of survey design and implementation, the central coordination of the ESS also provides guidance and support documents\(^6\), and personal assistance in tailoring the ESS procedures to the national situation. The ESS documents are quality assurance tools (Lyberg/Biemer 2008) designed to help planning and implementing national data collection. They are updated each round to reflect experiences from previous rounds and the latest scholarly insights into process quality. In the following we provide a short overview of the most important documents.

The ‘Project Instructions’ guide the national teams in producing interviewer instructions. They cover information on the general background of the ESS, sampling, contact procedures and the use of contact forms, data protection, general interviewing principles and more specific aspects of individual survey questions. As circumstances and fieldwork traditions vary across countries, NCs are not supposed to produce verbatim translations of the ESS project instructions. Instead, NCs are advised to base their interviewer briefing agenda on these instructions and to ensure that all topics are covered.

A document on ‘Field Procedures in the European Social Survey: Enhancing Response Rates’ assists countries in deciding on fieldwork strategies when aiming for the high ESS target response rates. It summarises advice on interviewer recruitment, training and organisation, as well as specific measures for reducing the two main sources of nonresponse: noncontact and refusal. Some of the procedures discussed in the paper are mandatory measures specified in the ‘Specifications for Participating Countries’. Other measures are additional recommendations or suggestions for maximising response.

\(^6\) These documents can be found at the ESS website: www.europeansocialsurvey.org.
The ESS specifications recommend the use of an advance letter to announce the upcoming interviewer call to the target persons. A model ‘Advance Letter’ is provided as a guide on how countries might draft such a letter. Again a verbatim translation of this letter is not recommended. Rather the model letter outlines all the issues to be included in a national advance letter.

To calculate consistent response rates, evaluate fieldwork procedures and analyse possible nonresponse bias the CCT requires countries to deliver detailed data on the contacting and cooperation process for both respondents and non-respondents. To standardise the collection of these data the CCT designs and provides countries with model ‘Contact Forms’. The provision of model contact forms is accompanied by instructions and examples of how to complete them, and by an algorithm demonstrating how to arrive at final outcome codes from the contact form data.

The document ‘Progress Reports from Survey Organisations’ instructs NCs on monitoring the implementation of fieldwork in their country. The survey organisations appointed for ESS have to provide regular feedback (at least every fortnight) regarding fieldwork progress during the data collection period. Such a close monitoring of the fieldwork progress allows for the early identification of difficulties and enables timely solving of problems.

3.3 Data Collection: Planning, Monitoring, and Documenting

Cross-national data collection management in the ESS broadly distinguishes three phases: before, during and after fieldwork (see Figure 2). First the CCT formulates the ESS specifications and supporting documents. Before the start of fieldwork the CCT also aids NCs in planning national data collection in accordance to the ESS standards and recommendations. During fieldwork NCs monitor the fieldwork progress in their country and pass information on to the CCT for cross-national progress monitoring. If necessary, problems and corrective actions are discussed between the CCT and NCs and put into practice. After fieldwork completion NCs document the data collection process and the CCT collects documentation from each participating country in the ESS Documentation Report (http://ess.nsd.uib.no/). For single cross-sectional surveys the documentation phase completes the survey life-cycle. The repeated cross-sections of the ESS, however, contain an additional phase of analysis, evaluation and feedback regarding the data collection process (as suggested by Lynn 2003). This aims at transferring experiences and improvements from one survey round to the next.
Figure 2 Phases of Survey Implementation in the ESS

Survey design

Centrally designed standards and support documents:
- Specification for Participating Countries
- Project Instructions
- Field Procedures in the European Social Survey
- Enhancing Response Rates
- Model Contact Forms
- Model Advance Letter
- Progress Reports from Survey Organisations

Data collection

Before fieldwork starts

Planning data collection:
- Selection of / contract with survey organisation
- Fieldwork questionnaire
- Fieldwork projections

During fieldwork

Monitoring data collection:
- Fortnightly progress reports
- Discussion of arising problems and possible remedies

After fieldwork is finalised

Documenting data collection:
- National Technical Summary (NTS) / Documentation Report
- Contact forms data
- Original fieldwork documents

Evaluation and feedback

Once current round has been completed, before next round starts

Evaluating data collection, feedback to countries:
- Analyses of NTSs and contact forms data; compilation of deviations; feedback to countries.
- Revision of standards and support documents.
Before the Start of Fieldwork: Planning Data Collection

The ESS data collection life-cycle starts with the receipt of funding from the national research council, the subsequent tender invitation and selection of the national survey organisation. Since the ESS fieldwork costs have to be borne by national funding agencies, the main work in this phase is carried out by the NCs; the CCT only oversees and supports the process of fieldwork commissioning. By means of a short fieldwork questionnaire covering the major parameters of fieldwork a CCT workgroup supports NCs in ensuring that the contracts with the survey organisations comply closely with the ESS specifications. The specifications provide the general framework for data collection in the ESS. However, in preparing national fieldwork NCs have to make a multitude of specific planning decisions, for example on the concrete target sample size and response rate, on fieldwork start and end dates, on the number of interviewers, on dates and contents of interviewer briefings, on the use of advance letters and incentives, etc. Each participating country has to fill in the fieldwork questionnaire before the contract with the survey organisation is signed. This will usually require the NC to consult with the national survey organisation. The fieldwork plan has to be discussed, any envisaged problems solved and an agreement on a final fieldwork strategy reached between the NC and the CCT. Once the fieldwork plan has been signed-off by the CCT, ensuring that at least the design of the survey is according to the rules, the respective country can start fieldwork and the NC needs to make sure that all agreed procedures are actually implemented.

In many ESS countries the process of fieldwork planning takes place without facing major problems. However, usually there are also some countries where the concrete fieldwork planning constitutes a compromise between conflicting targets or procedures. These conflicts arise against the background of national particularities, such as the available budget, personnel resources (including interviewers), or upcoming events like a national election. Typical issues in the fieldwork questionnaire discussions between the CCT and NCs include target response rates (if lower than 70 percent), the planned number of interviewers and their average workload, the timing of fieldwork, or the number and timing of contact attempts. In round 2, for example, one country was signed-off with a maximum interviewer workload of more than 48 sample units, to enable them to work with a small, but highly expe-
rienced and well-trained interviewer corps. In another country the fieldwork start was postponed to prevent fieldwork from coinciding with national elections.

Most countries participate in multiple ESS rounds. For these countries the CCT provides feedback on difficulties encountered in previous rounds of data collection at an early stage of planning. Countries are asked to explicitly address these deviations in the planning phase of the current round and demonstrate ideas for improvement.

The process of discussing and signing-off fieldwork plans of approximately 25 countries in each round of ESS is time-consuming. It often covers a period of more than 12 months due to differences in the timing of funding decisions and differences in data collection schedules across countries. The CCT’s involvement in the data collection planning phase is pivotal in coordinating ESS implementation in 25 different survey organisations across Europe; it contributes to the development of country-specific fieldwork plans and to preventing deviations from ESS survey standards from the outset.

The final tool for planning fieldwork is the fieldwork projections, which each NC sends to their designated CCT contact person one month prior to the start of fieldwork. At a minimum these projections comprise the expected number of interviews per fortnight. The projections are used by the CCT (and the NC) as a standard to evaluate actual fieldwork progress against.

**During Fieldwork: Monitoring Data Collection**

Collecting data via face-to-face interviews in a cross-national survey usually consists of decentralised operations of thousands of (mostly) free-lance interviewers. Implementing strict quality standards can be demanding and close monitoring of the fieldwork progress is crucial. Only a close supervision allows for an early identification of difficulties, and makes it easier to diagnose and remedy problems within the fieldwork period. For this purpose all ESS countries are assigned a CCT contact person who monitors and discusses fieldwork progress with their country. During fieldwork the NCs are required to regularly check the fieldwork progress in their country. Survey organisations and NCs have to produce a progress report at least fortnightly and discuss this report with their designated CCT contact person. At a minimum the progress report includes the number of completed interviews conducted each week. The CCT contact person and the NC can compare this information to the fieldwork projections to identify possible problems and a need for action. Further essential information includes a breakdown of the issued sample into major outcome codes (like ‘noncontact’, ‘refusal’, ‘language barrier’, etc.) and an assessment of the overall response rate.
The progress reports give a broad overview of how fieldwork develops. In addition, NCs are required to ask the survey organisation to provide or have accessible more detailed information that can be consulted for national fieldwork monitoring. This detailed information is particularly relevant for providing advice on trouble shooting. Important additional information might include response rates for regions or individual interviewers, response rates for demographic subgroups of target persons, data on the number and timing of contact attempts or information about re-issues of reluctant target persons.

Typical problems encountered during fieldwork monitoring include delayed start dates for data collection, too few available interviewers or lower response rates than expected. This phase often requires decisions between conflicting targets: for example extending the fieldwork period to increase the response rate or allowing successful interviewers to work on additional sample units to decrease refusal rates. Budget constraints frequently complicate finding viable solutions, for example when discussing the training of additional interviewers or when considering respondent incentives.

The cross-national monitoring of data collection in the ESS covers a long time period. All national fieldwork periods taken together ESS fieldwork is considerably longer than the core four months between September and December. Both delayed start dates of fieldwork (especially in countries with problems in receiving funding on time), and (in some countries) fieldwork extensions well into the next year contribute to this. Figure 3 (see next page) shows the timing and duration of fieldwork in ESS 3.

After Completing Fieldwork: Documenting Data Collection

Meticulous documentation of procedures is an imperative for each survey aiming at high quality. For a survey like the ESS detailed documentation is even more important. The reason for this is twofold. First, in cross-national surveys the 'distance' between data producers and data users is larger than in national surveys (Lynn et al. 2006). Considering the multinational character of data collection with diverse survey organisations all over Europe, it is more challenging for a researcher to gain insight into the relevant aspects of the survey design and implementation. Second, this is even more relevant when the cross-national data are not primarily analysed by the researchers involved in designing and producing the survey, but constitute a public good available for interested researchers all over the world. Such datasets require an especially comprehensive documentation, so that secondary data analysts can evaluate the quality of the data.
In the ESS each country has to deliver its data to the ESS data archive (at NSD in Norway) once fieldwork, data entry and editing is completed. In addition to the interview data further documents (e.g. the original questionnaires, showcards, contact forms, interviewer instructions and advance letters) and data sets (e.g. the contact data) have to be delivered. Especially relevant for the documentation of fieldwork are the National Technical Summary (and the Documentation Report based thereon) and the contact data. The Documentation Report provides standardised information on the survey implementation and fieldwork procedures in each country: about the length of the fieldwork period, the selection, payment and briefing of interviewers, the call schedule, the use of advance letters, respondent incentives, refusal conversion strategies, the distribution of response outcomes, the use of quality control back-checks, etc. In addition to this aggregate-level process information the ESS makes micro-level process information available in the contact data. This includes information on the timing, mode and outcome of each contact attempt and reasons for refusal, as well as information on the housing and neighbourhood of the sample unit. The CCT uses these data, for example, to calculate response rates in all ESS countries in a consistent way and it publishes detailed reports on cross-national fieldwork processes (Symons et al. 2009).
contact data are made publicly available via the ESS archive, and anyone interested can analyse them.

From One ESS Round to the Next – Aiming for Continuous Improvement

The ESS aims for charting and explaining social change. In order to achieve this, the study is based on cross-sectional surveys repeated at regular intervals. In contrast to single cross-sections the systematic and planned replication every two years allows for learning from round to round. Striving for continuous improvement is a key feature of the ESS as a long-term project. This requires a dedicated effort to analyse fieldwork parameters in the ESS and to implement feedback processes to convey information about successes and shortcomings from round to round.

A team within the CCT is concerned with the analysis and evaluation of fieldwork procedures. Researchers review and assess the fieldwork and interviewing procedures in all ESS countries by means of the contact data. The CCT particularly studies interviewer calling patterns and refusal conversion efforts (Symons et al. 2009). In addition, the CCT documents and seeks to improve adherence to the ESS specifications. Information on data collection is assembled for each country and compared to the ESS specifications. These activities are mainly based on the Documentation Report, but also draw on analyses of the ESS interview and contact data sets.

The ESS documentation and evaluation activities form part of a round-to-round improvement process, whose basic features are described below.

Transparency: The ESS aims at making explicit all survey standards and at documenting all departures from these standards that occur during survey implementation. For this the ESS website publishes rich information: the original fieldwork documents for each country are provided; the Documentation Report is generated for every survey round; contact forms data are made publicly available; and reports on methodological analyses with the data are produced in a timely fashion.

Feedback: As mentioned above, at the beginning of each round all countries in the ESS receive individualised feedback about their performance in previous rounds. Problems and deficiencies such as low response rates, deficient calling patterns or high interviewer workloads are raised and individual strategies for future improvement are discussed.

Revision of standards and protocols: When planning the next ESS round all specifications and protocols are evaluated in the light of experiences and results in previous rounds. As a consequence, several – mostly slight – revisions and additions have been implemented in the past.
It is obvious that improvements in such a large-scale enterprise as the ESS can only take place gradually. The ESS involves multiple players that need to coordinate their actions for sustained success. In the following section we provide an overview of adherence to fieldwork standards in the first three rounds of the ESS.

4 Adherence to Data Collection Standards in ESS Rounds 1, 2 and 3

Participation in the ESS was high from the very beginning. Already in the first round in 2002/2003 22 countries took part (see Table A3 in the appendix). In rounds 2 and 3 the participation was even higher with 26 and 25 countries, respectively. 17 countries can be described as perennial ESS participants, having taken part in each of the first three biennial rounds. A total of 32 countries have fielded at least one round.

Table 1 provides an overview of compliance with a number of data collection targets and procedures for all countries in ESS rounds 1 to 3. The selection of criteria is guided by the idea that the more ESS countries adhere to each of these, the better the quality and comparability of the resulting data will be. For example, we expect that achieving the same (minimum) effective sample size across countries assures a similar (minimum) level of precision of results, independently from differences in the sampling design which may exist between countries. Similarly, low noncontact rates and high response rates contribute to low or comparable nonresponse biases across countries. Insisting on the same mode of interviewing (face-to-face) in all countries is a basic requirement to foster comparability. The duration of fieldwork is expected to be related in particular to the noncontact rate: the longer the fieldwork period, the higher the probability of finding someone at home. A joint fieldwork period (i.e. completion by the end of the year) minimises the chance of major events (like the credit crunch) impacting on survey results differentially across countries. In-person briefings of interviewers ensure that interviewers understand the meaning of the questions, promote a higher response rate and prevent substitution and other interviewer misconduct. The maximum interviewer assignment size is a means to minimise the chance of large interviewer effects. Taken together these targets and procedures give some idea of compliance and deviations in the ESS. In this overview we do not focus on individual countries but just present general patterns. Detailed information on individual countries (e.g. response rates, length of fieldwork, etc.) is available on the ESS data website (http://ess.nsd.uib.no/).
Table 1 shows that only a minority of countries in rounds 1 to 3 managed to reach the ambitious ESS targets concerning the effective sample size, the response rate and noncontact rate. Between eight and eleven countries achieved an effective sample size of at least 1500 interviews. In several countries budget constraints limited the possibilities for increasing the (effective) sample size. The proportion of countries obtaining a response rate of 70 percent or higher is lower. Five to six countries in each round achieved a response rate of 70 percent or higher. However, if we relax the criteria slightly, we find that ten to twelve countries in each round achieved a response rate of 65 percent or higher. Of course, a high response rate cannot be legislated for. The response rate of a country is the result of the at-home-patterns and the willingness to participate of its population on the one hand, and the efforts of the survey organisation and the interviewers on the other hand (Groves/Couper 1998). Between seven and eleven countries achieved the
noncontact rate target of three percent or less. Therefore, more countries reached the ESS noncontact rate target than the ESS response rate target. Apparently, it is easier to control the number of noncontacted sample units than the number of sample units refusing to participate.

Turning to some of the ESS fieldwork procedure requirements one finds that in each round all countries complied with fielding the ESS face-to-face. Similarly, with the exception of one country in ESS 1, all countries had a fieldwork period which lasted at least one month. A reasonably long fieldwork period is one prerequisite for achieving a low noncontact rate. On the other hand, the number of countries adhering to the maximum duration of fieldwork of four months is lower. In rounds 1 to 3 between eleven and fifteen countries completed fieldwork within four months. In several countries difficulties in achieving high response rates led to prolonged fieldwork periods.

Prolonging the fieldwork period beyond the limit of four months is one reason for a delayed end of fieldwork. Another reason are delayed start dates (see also Figure 3), often caused by difficulties in receiving funding in time. Both processes contribute to the finding that only five countries completed fieldwork in time (i.e. by the end of the year) across rounds 1 to 3. Fortunately, especially in rounds 2 and 3, several of the remaining countries managed to finish fieldwork by the end of January of the following year. Therefore, in ESS rounds 2 and 3 approximately half the countries completed fieldwork by the end of January at the latest.

The ESS specifications require that all interviewers are briefed during in-person briefing sessions before carrying out an assignment. In each ESS round, four-fifth of the countries complied with this requirement. One-fifth of the countries, however, did not brief all their interviewers personally (including in each round one country that did not conduct any interviewer briefings). In addition the interviewer workload is limited in the ESS: no interviewer should work on more than 48 issued sampling units. A somewhat weaker criterion for adherence to the interviewer workload limit is that no interviewer may complete more than 48 interviews. According to this criterion between twelve and sixteen countries complied with the ESS requirement in each round.

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8 Even in this country the fieldwork period took nearly one month, namely 29 days.
9 This is a somewhat weaker criterion, since usually interviewers that have completed 48 interviews worked on more than 48 issued sampling units. However, using this criterion simplifies our analysis, because calculating the number of interviews conducted is easier than calculating number of sample units worked on.
Table 2  Adherence to Targets and Procedures in ESS Rounds 1, 2 and 3 of Perennial Countries

<table>
<thead>
<tr>
<th>Target / Procedure</th>
<th>Round 1 (# of countries)</th>
<th>Round 2 (# of countries)</th>
<th>Round 3 (# of countries)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective sample size of at least 1500 (800) interviews*</td>
<td>7</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Response rate 70 percent or higher</td>
<td>3</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Response rate 65 percent or higher</td>
<td>9</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Noncontact rate 3 percent or less</td>
<td>5</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Noncontact rate 5 percent or less</td>
<td>12</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>Interview mode: face-to-face</td>
<td>17</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Fieldwork period at least one month (30 days)</td>
<td>16</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Fieldwork period 4 months (122 days) at maximum</td>
<td>8</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Fieldwork completed by the end of the survey year</td>
<td>5</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Fieldwork completed by the end of January of the following year</td>
<td>7</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>All interviewers briefed in person</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>No interviewer with more than 48 realised interviews</td>
<td>10</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Total number of countries</td>
<td>17</td>
<td>17</td>
<td>17</td>
</tr>
</tbody>
</table>

*Information not available for one country in rounds 1, 2 and 3.

This is a rather cursory overview of adherence to fieldwork procedures in the ESS. We conclude this section by comparing the results across rounds to see whether compliance with procedures and targets has improved. For this we restrict our analyses to those 17 countries that participated in each of the first three ESS rounds (Table 2).

The overarching finding of Table 2 is stability. At this general level there is no clear indication of improved compliance with the ESS data collection rules and targets across the first three rounds. Regarding the response rate target (70 percent) and the maximum length of the fieldwork period (four months) even a slight deterioration may be observed in round 3 compared to rounds 1 and 2. Only the maximum noncontact rate (three percent) describes a modest improvement in round 3 compared to rounds 1 and 2.

This result is not surprising. Improvements in cross-national surveys can only be achieved incrementally, given the nature and complexity of such enter-
prises. They require the successful interplay of numerous survey organisations, dozens of researchers, hundreds of interviewers and thousands of respondents. For several survey specifications that we examined external constraints limit the possibilities for improvement. If, for example, funding decisions in a country are made too late, there is no way to resolve a delayed start of fieldwork (unless one excludes the country from taking part in that round). Similarly, a sampling design causing lower design effects may simply not be available in a country, where no up-to-date register of residents exists. Increasing the sample size or the number of primary sampling units might be alternatives, but usually these options are associated with higher costs. Therefore, some deviations will inevitably occur, despite all parties' dedication to improvement. In addition one has to note that some non-adherence to survey specifications is the result of deliberate trade-off decisions: in order to (better) comply with one specification, another specification has to be sacrificed. Examples for this are lengthy fieldwork periods to enhance response rates or too large workloads for the most experienced, well-trained interviewers. However there are also other deviations, resulting from errors, misunderstandings or deliberate non-adherence to the specifications because of local/national traditions or procedural habits of survey organisations. Such issues need attention, because in these cases improvements are essential and possible.

5 Final Considerations and Conclusion

The present paper investigated data collection quality standards and their monitoring in the ESS. We gave an overview of the different steps which can be distinguished when implementing a cross-national survey, and described the various documents and tools designed to provide support during the ESS data collection process. The first three rounds of the ESS showed that adherence to data collection targets and procedures was not perfect and that despite dedicated efforts no clear evidence of improvement from round to round is found. It should be noted, however, that this only holds for the examination at a rather general level as we did.
It does not mean that no improvements in more specific areas and/or in individual countries took place.\textsuperscript{10} However, to what extent does non-adherence to the data collection standards set in the ESS matter? Of course, one can easily imagine that some deviations have negative practical consequences. For instance, a notable delay in the time schedule because of a prolonged fieldwork period endangers the timely delivery of data to the users. However, the more basic question is: Does better compliance with the ESS data collection targets and procedures also come along with better quality and comparability of the data? Or vice versa: Does increasing non-compliance mean a worsening of data quality and comparability? It is obvious that this question cannot be answered satisfactorily within the scope of the present paper since that would require conducting various experiments and detailed data analyses. Nevertheless, it should be mentioned that there are some, admittedly scattered pieces of evidence that adherence to fieldwork standards really matters – from experiences within the ESS and beyond. Vehovar and Zupanič (2007), for example, report that ESS countries with a lower response rate are characterised by a larger nonresponse bias, when bias is measured as the difference between unweighted and weighted survey outcomes (using a post-stratification weight for sex, age and education). Billiet and Pleysier (2007) find that the number of interviewer visits makes a difference for the response rate achieved. According to their analyses the average response rate in ESS 2 would have been 7.5 percentage points lower, if all countries had stopped contacting target persons after four visits. Finally, Heath et al. (2009) show with data from the International Social Survey Programme (ISSP) that differences between countries in response rates and the mode of interview affect the substantive outcomes and can be a threat for the validity of cross-national comparisons.

\textsuperscript{10} An example is interviewers' contacting habits. Detailed analyses of the ESS contact data (Billiet/ Pleysier 2007; Symons et al. 2009) show that adherence to the ESS call schedule (at least four visits to noncontacts, including at least one visit in the evening and at least one at the weekend) is far from perfect. For 14 countries comparable information on the number and timing of contact attempts to noncontacts is available for ESS rounds 2 and 3. In round 2 on average 58 percent of the noncontacted cases were attempted at least four times (unweighted mean across all 14 countries). And on average 73 percent of the noncontacted cases were visited at least once in the evening, and 44 percent at least once at the weekend. The CCT fed back this information to NCs on an individual basis and in round 3 compliance with the call schedule was improved. On average 72 percent of all noncontacted cases in round 3 were visited at least four times and 83 percent of the noncontacted cases received at least one visit in the evening and 68 percent at least one visit at the weekend. These additional investments in contact efforts came along with a (slight) increase in the number of countries achieving a low noncontact rate between ESS 2 and 3 (see Table 2).
We conclude our paper with three further considerations regarding the evaluation of standards and improvements in ESS fieldwork over time. First, it is worth mentioning that the ESS aimed for high standards from the very beginning. In a way, already continuing to pursue these standards can be seen as a success. Retaining the response rate target of 70 percent, for instance, is valuable in an environment where the general trend is towards decreasing response rates (de Leeuw/de Heer 2002). In the first three rounds of the ESS we find that especially countries with above-average response rates face difficulties maintaining their response rate level.

Second, the paper focused on data collection issues. However, these are only one aspect of the survey process, which unfortunately the researcher has limited control over. Designing reliable and valid survey questions and instruments, translating them adequately into all survey languages and selecting efficient probability samples are other aspects which also need careful planning and implementation to assure high survey quality. Kohler (2008), for example, showed that the sampling quality of the ESS is higher than in other cross-national surveys.

Finally, a perennial question in cross-national surveys aiming at high quality is how to deal with countries not complying with the standards. This will, of course, depend on the type, the severity and the reasons for non-compliance, as well as on the relative importance of a specific quality aspect. The strictest reaction is excluding these countries’ data from the integrated dataset. A milder reaction is flagging such breaches alongside the data. In the ESS, for example, deviations from question formulations resulted in the removal of the question from the combined dataset for the respective country. Deviations from random sampling were not accepted at all. Low response rates were accepted, as were deviations from the fieldwork period.

When considering reactions to non-compliance one needs to take into account what effect these may have on a country’s ability (and sometimes also its willingness) to participate in subsequent rounds. Excluding a country’s data from the integrated dataset can impact on the country’s eligibility for future funding (and thus denying it the chance to improve survey quality). However, including data that deviate too far from the cross-national standards endangers comparability. Furthermore, accepting deviations once can easily lead to institutionalising their acceptance overall. This is one of the trade-off decisions faced in cross-national surveys like the ESS.
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European Social Survey, 2001: Round 1 specification for participating countries. London: Centre for Comparative Social Surveys, City University London.

European Social Survey, 2003: Round 2 specification for participating countries. London: Centre for Comparative Social Surveys, City University London.

European Social Survey, 2005: Round 3 specification for participating countries. London: Centre for Comparative Social Surveys, City University London.


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Appendix

Table A1  Data Collection Standards in the ESS

<table>
<thead>
<tr>
<th>Target/Procedure</th>
<th>International Standard</th>
<th>Leeway for National Adaptationa)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data collection outcomes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective sample size</td>
<td>1500 (800) interviewsb)</td>
<td></td>
</tr>
<tr>
<td>Response rate</td>
<td>Target 70 % (minimum)</td>
<td></td>
</tr>
<tr>
<td>Noncontact rate</td>
<td>Target 3 % (maximum)</td>
<td></td>
</tr>
<tr>
<td><strong>Data collection procedures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mode of data collection</td>
<td>Face-to-face</td>
<td>Countries to decide whether PAPI or CAPI.</td>
</tr>
<tr>
<td>Fieldwork period</td>
<td>1 - 4 months between September and December</td>
<td>Only in substantiated circumstances may a country deviate from this timetable (after discussion with the CCT).</td>
</tr>
<tr>
<td>Briefing of interviewers</td>
<td>In-person briefing sessions (administered by NCS and/or researchers from the survey organisation). Briefings should cover respondent selection procedures (if applicable) and recording of the fieldwork process using the standard contact forms. Sections of the questionnaire that require special attention should be pointed out and explained carefully to interviewers. A practice interview should be conducted.</td>
<td>Countries free to decide on the specific content and the length of briefing sessions. Countries may for example provide training in response-maximisation techniques and doorstep interactions.</td>
</tr>
<tr>
<td>Interviewer workload</td>
<td>Maximum of 48 issued sampling units per interviewer</td>
<td></td>
</tr>
<tr>
<td>Number and timing of contact attempts</td>
<td>At least four personal visits, including one visit on a weekday evening and one visit at the weekend, spread over at least two weeks.</td>
<td>Additional contact attempts possible.</td>
</tr>
<tr>
<td>Mode of first contact</td>
<td>In person</td>
<td>In countries using a sample of named individuals with telephone numbers, first contact may be made by phone (in order to make an appointment to visit the respondent).</td>
</tr>
<tr>
<td>Contact forms</td>
<td>Each country to provide a dataset with the timing, mode and outcome of each contact attempt, reasons for refusals and a number of specified observable area, dwelling and household characteristics.</td>
<td>Use of model contact forms recommended; but countries free to use own forms as long as all required data are delivered in required format.</td>
</tr>
<tr>
<td>Quality control back-checks</td>
<td>To be carried out and documented on at least 5 % of respondents, 10 % of refusals and 10 % of noncontacts.</td>
<td>Some discretion in the way the back-checks are carried out.</td>
</tr>
</tbody>
</table>

a) It should be noted that in addition to the leeway described in the table countries that have trouble achieving certain standards (e.g. the effective sample size or the target response rate) may discuss alternatives with the CCT.
b) Minimum of 800 interviews, if the target population of a country is less than 2 million people.
Table A2 Further Recommendations Concerning Data Collection in the ESS

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Recommendation and Leeway for National Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection of interviewers</td>
<td>Selection of experienced interviewers recommended.</td>
</tr>
<tr>
<td>Payment of interviewers</td>
<td>Recommended to discuss interviewer pay arrangements with the survey organisation. The pay rates for ESS should be attractive for interviewers, both with respect to the study difficulty and with respect to the pay on other studies.</td>
</tr>
<tr>
<td>Advance letter</td>
<td>Use of advance letters (personalised, if possible) recommended; model advance letter provided; recommended to include letter in interviewer workpackages and instructing them to post the letter a few days before they intend to call at the address.</td>
</tr>
<tr>
<td>Respondent incentive</td>
<td>Use of incentives recommended; type and handling of incentives to be decided by individual countries.</td>
</tr>
<tr>
<td>Refusal conversion</td>
<td>Use of refusal conversion procedures recommended for all countries. Countries ultimately to decide whether they re-issue refusals. If possible, experienced interviewers should carry out the conversion attempts. Interviewers should be familiar with refusal avoidance techniques.</td>
</tr>
<tr>
<td>Other response enhancing measures</td>
<td>All potential survey organisations should be invited to suggest a range of techniques that they believe would enhance the final response rate.</td>
</tr>
</tbody>
</table>
Table A3  Participating Countries in ESS Rounds 1 to 3

<table>
<thead>
<tr>
<th>Country</th>
<th>R1 Participant</th>
<th>R2 Participant</th>
<th>R3 Participant</th>
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Total 22 26 25