



## **Response Based Quality Assessment in the ESS - Round 2.**

**An update for 26 countries**

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## INTRODUCTION<sup>1</sup>

The European Social Survey (ESS) is an academically driven research structure and instrument, funded jointly by the European commission, the European Science Foundation and scientific funding bodies in the participating countries.<sup>2</sup> The ESS aims at serving a multiplicity of purposes. The main long term aim of the project is to chart and explain the interaction between Europe's changing institutions, its political and economic structures, and the attitudes, beliefs and behaviour patterns of its diverse populations. An equally important short term objective is to develop and demonstrate an approach to the conduct of rigorous quantitative multinational social surveys in Europe that matches that of the best national surveys in Europe and the USA. Therefore, one of the distinguishing features of the ESS is undoubtedly its objective to achieve the highest methodological standards of cross-national and cross-cultural survey research, thereby striving for optimal comparability in the data collected across all participating countries.

In that perspective, the ESS, and more specifically the Central Coordinating Team (CCT)<sup>3</sup> –responsible for the general and methodological coordination of the ESS-, tries to ensure a high level of consistency and standardisation through a number of rigorous procedures and protocols concerning sampling design, questionnaire and translation issues, and fieldwork specifications. Owing to the magnitude and complexity of a study in such a large number of countries, the ESS has adopted a careful balance between *top-down* and *bottom-up* elements in its organisational structure. This balance involves full-time central coordination by a multinational team and several roving advisory panels –‘*top-down*’-, together with various expert groups and researchers from the participating countries –‘*bottom-up*’-, in which both parties play a central role in the varying aspects of the general ESS project.

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<sup>2</sup> More general information on the ESS concept, project and background can be found in several papers and publications documented and available at the ESS home page (<http://www.europeansocialsurvey.org>) under the section 'ESS docs', and on the ESS data website (<http://ess.nsd.uib.no>). Both pages list the most up-to-date versions of all the central ESS documents, fieldwork documents and survey documentation. Also, most of this introduction is based on the information in the papers and documents available there.

<sup>3</sup> The CCT is lead by the Centre for Comparative Social Surveys, City University, UK (Professor Roger Jowell); its partner institutions are: Katholieke Universiteit Leuven, Belgium (Professor Jaak Billiet), Zentrum für Umfragen, Methoden und Analysen (ZUMA), Germany (Professor Peter Mohler), the Norwegian Social Science Data Services (NSD), Norway (Bjørn Henrichsen), Social and Cultural Planning Office (SCP), the Netherlands (Ineke Stoop), and the University of Amsterdam, the Netherlands (Professor Willem Saris).

In order to achieve and maintain the high methodological standards the ESS has adopted, one must continue to assess its documents, procedures and practices. Notwithstanding the level of central oversight and the intense and institutionalised dialogue and communication with all parties at all levels, there will always inevitably be some departures from the specifications and standards set out. Following the end of Round 1 fieldwork, the ESS has produced a number of reports to assess and review all possible quality standards of the project. These Round 1 reports cover among others the requirement of random samples, rules for controlling the fielding institutes, the content of contact form documentation in order to assess the quality of fielding and to evaluate non-contacts and non-response, pilot studies in order to evaluate and improve the questions, methodological experiments set up to evaluate the reliability and validity of types of questions, rules for translation procedures and annotated translations and questionnaires, complete open documentation of all stages of the survey, etc. (Billiet & Philippens, 2004). This transparency is a crucial aspect in the ESS philosophy: successes as well as failures or deviations from standards or procedures are meticulously documented so that users are fully aware of what happened in each of the participating countries, but also, and perhaps more importantly here, for its own purpose: future self-improvement. Therefore, Round 1 reports and papers were taken into account in reviewing the Round 2 protocols, specifications and guidance given to National Coordinators (NCs).

With the exception of a small number of countries, a majority of the 26 countries participating in Round 2 completed their fieldwork during the last semester of 2004 and the first half of 2005<sup>4</sup>. For obvious reason, Round 2 is the start of the time series element to the ESS, allowing comparisons between attitudes in 2002 and 2004. However, these contextual comparisons are pointless, unless there is a sufficient equivalence in the quality of the fieldwork and collected data, between all participating countries, and between Round 1 and 2. Therefore, it is crucial to continue questioning and analysing the degree of trade-off between the ESS quality criteria and their implementation and practice within all 26 national fieldwork organisations. At the same time -in Round 2 of the study-, the ESS, within its spirit and philosophy, will continue to tackle and mitigate a number of longstanding problems faced by cross-national and cross-cultural studies<sup>5</sup>.

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<sup>4</sup> These 26 countries in Round 2 are: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, the U.K. and Ukraine. New countries compared to Round 1 (with 22 countries) were Estonia, Iceland, Slovakia, Turkey and the Ukraine. Israel was in Round 1 but is not participating in Round 2. Fieldwork in Turkey and Italy was in 2006 and data were delivered end of 2006.

<sup>5</sup> Such as: 'achieving comparable national samples using strict probability methods', 'attaining high response rates across nations', 'designing and translating rigorously-tested and functionally equivalent questionnaires', 'imposing consistent methods of fieldwork and coding', 'ensuring easy and speedy access to well-documented datasets',...

Generally, in the quality assessment of the obtained data we discern two tasks, i.e. the quality assessment of the obtained responses (response rates), and the quality assessment of the registered response (answers to questions). In the few months after the administration of the samples, primarily focus was on the first task since non-response is potentially a very important threat to the validity of all surveys, all the more within international and cross-cultural studies. Indeed, “only if we know how data quality is affected by non-response in each of the countries we can assess and improve the comparability of international and cross-national data” (Couper & de Leeuw, 2003). Although non-response issues and the strict standards applied in national surveys, are often ignored when it comes to cross-national studies, high standards and the comparability, as well as the evaluation and improvement, of response and contact procedures have, from the outset, been an important focus in the ESS (Jowell, 1998). However, before analysing and understanding non-response, it was necessary to analyse how far the field-work outcomes met the criteria that were drawn by the CCT. As in the Round 1 data quality assessment report (Billiet & Philippens, 2004), we will discuss the extent of trade-off between the ESS quality standards and the practices, ‘between wishes and reality’, with one notable difference: this Round 2 report adds a longitudinal element and therefore enables us not only to check the gap between ‘wishes and reality’, but also to see whether or not ESS is ‘closing the gap’ (Billiet & Pleysier, 2005).

The second task –quality assessment of the registered response- serves a more contextual objective, namely maximizing the reliability and validity of the final questionnaire across the participating countries. Again, the principle is all too clear (Stoop, Jowell & Mohler, 2002). The aim of the ESS survey is to discover and calibrate cross-cultural and cross-national differences in people’s responses, and to make sure that the stimulus of the questions is as stable (similar) as possible between respondents and over time. Primarily in cross-national surveys, where between-country variance is large, the problem is that there is no easy way of guaranteeing such equivalence of meaning across countries. It is clear that an advanced analysis of the obtained responses including the equivalence of measurement instruments, needs considerably more time than is available in the planning of ESS. There is thus ample room for further analysis by the qualified community of users.

## **PART I. THEORETICAL CONSIDERATIONS AND PRESCRIPTIONS**

### **NON-RESPONSE IN CROSS-NATIONAL SURVEYS: IMPROVING RESPONSE QUALITY IN ESS**

The growing importance of large scale, international survey projects within politics and media, has undoubtedly increased the awareness and concerns about the quality, validity and reliability of survey data. Although cross-national or cross-cultural survey research has traditionally neglected sampling and non-response issues, it is of the utmost importance to pay attention to the potential threat these forms of bias can

produce (Dillman, Eltinge, Groves & Little, 2002; Couper & de Leeuw, 2003; Stoop, 2005). In this respect, Groves (1989; Braun, 2003) distinguishes four types of survey error, i.e. *sampling error*, *coverage error*, *non-response error* and *measurement error*. “Sampling error results from using a sample instead of surveying the entire population. A coverage error results from the failure to give every element of the population on which information should be gathered a nonzero chance to be included in the sampling frame. Non-response error results from the fact that not all the units of the gross sample actually participate in the survey. Finally, different processes related to the instrument, the interviewer, the respondent, and the data collection mode contribute to measurement error” (Braun, 2003:137-138).

In this part of our paper, we shall concentrate on (unit) non-response problems only<sup>6</sup>. Non-response may be due to the inability to make contact with the selected sample unit, or because the sample unit is not able, not capable, or not willing to participate in the survey (Couper & de Leeuw, 2003; for further analysis, see Groves & Couper, 1998; Dillman e.a., 2002). Based on this information, and additionally, on what one considers being *eligible* and *ineligible* respondents, response, non-contact and refusal rates can be calculated in myriad ways (Smith, 2002; Stoop, 2005). The non-response, non-contact and refusal rates of a survey are generally considered to be a major – or the major – quality criterion (Stoop, 2005). Therefore, amongst the standards ESS has set out, one essential feature is the need to achieve high response rates in all participating countries. However, there is no agreed-upon benchmark figure or threshold value or standard to evaluate the response rate obtained in a specific survey. “A higher response rate is usually preferable to a lower one, but this is insufficient guidance for evaluating the response rate of a specific survey” (Loosveldt e.a., 2004:69). In the ESS, a target effective response rate of 70 per cent in each country has been specified. The ESS’s *Specifications for participating countries (Round 2)* are very clear on this topic: “The proportion of non-contacts should not exceed 3 per cent of all sampled units, and the minimum target response rate – after discounting ineligibles (and other ‘deadwood’, as defined by the CCT (...)) – should be 70%.” As seen in Round 1, this figure is likely to be exceeded in certain countries. Countries that participated in Round 1 and achieved lower response rates will nevertheless be expected to aim for the same 70% target in Round 2. Survey organizations should thus cost their surveys with this response rate in mind and consider what steps may be required to achieve it” (ESS, Round 2, Specifications for participating countries).

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<sup>6</sup> Couper & De Leeuw (2003) distinguish two types of non-response in surveys: unit non-response and item non-response. “Unit non-response is the failure to obtain any information from an eligible sample unit (e.g., person, household, business). (...) Item non-response or item missing data refers to the failure to obtain information for one or more questions in a survey, given that the other questions are completed. Questions may be inadvertently skipped, a respondent may not know the answer to a particular question, or a respondent may choose not to answer the item. Sometimes the information that a respondent has provided is not usable, or usable information is lost” (Couper & De Leeuw, 2003:157). Here, we will focus on unit non-response.

Furthermore, this and other ESS papers discuss at length –based on both literature and Round 1 experiences- some field procedures to be used in order to enhance response rates, such as the use of incentives, reissuing refusals and non-contacts, and so forth. Other important standards or specifications that guide ESS participating countries in the attempt to reach the highest quality in the field of non-response, are:

- fieldwork period between September and December, and at least one month
- face-to-face briefing and training of all interviewers
- limited interviewer workloads (max. 2 x 24 issued sampling units)
- face-to-face data collection
- at least 4 visits/calls on different days and at different times
- visits spread over at least 2 different weeks
- no substitution at any stage
- the use of refusal conversion strategies
- the use of detailed contact forms (see later)
- specified quality control back-checks

For two reasons however, response rates offer insufficient guidance for evaluating the quality of the response of a specific survey. First of all, according to Couper & de Leeuw (2003), “reporting a single percentage without a clear description of definitions and formulae used makes it extremely difficult to compare data from different countries” (Couper & de Leeuw, 2003:159). Obviously, in cross-cultural and cross-national research, it is crucial to be clear exactly how the response rate is calculated and which components of non-response were used in this calculation; in practice however, this information is often hard to find in cross-national survey enterprises (Couper & de Leeuw, 2003). Within the ESS, two response rates are used, i.e. the ‘ESS response rate’ and the ‘field response rate’; the calculation of these response rates is –as will be discussed later- straightforward and clearly documented in the ESS guidelines and specifications.

Second, a single-minded focus on response rates is not a fruitful approach for a more fundamental reason (Stoop, 2005). What is important is not so much the (non-)response rate *an sich*, but the potential bias non-response can cause. Bias due to non-response is a function of the amount of non-response and the differences between respondents and non-respondents. This logic implies that efforts to maximize a study’s response rate during data collection should not be extended at any cost; “Simply increasing the response rate for a study does not necessarily reduce the possibility of non-response error” (Couper & de Leeuw, 2003:159). A central question for the evaluation of the response quality is therefore whether those who cooperated with the interview differ from those who did not take part, in characteristics relevant to the survey (Loosveldt e.a., 2004:70). This final remark should not easily be discarded: generally, three types of non-response can be distinguished, MCAR, MAR

and NMAR (Molenberghs, 2004; Stoop, 2005). Firstly, respondents can be missing completely at random (MCAR); although MCAR would reduce precision due to smaller sample sizes, it has no implications on non-response bias. A second case is MAR - sample units are missing at random -, where specific identifiable (by socio-demographic, socio-economic or other characteristics) groups might have a lower probability of cooperating in a survey. Under the MAR condition there is no (strong) relationship between the response behavior and the target variables of the survey, and the influence on non-response bias can be apprehended by weighting (post-stratification) or over-sampling (pre-stratification)<sup>7</sup>. A typical example of this case would be “if women responded less often than men, but there are no differences between responding and non-responding women” (Stoop, 2005:34). The last, and perhaps most common case, NMAR, is the most problematic: here, non-response is not missing at random and therefore (closely) related to the survey target variables. A classical example would be when those interested in politics are eager to participate in election surveys, or when the socially isolated persons refrain from answering questionnaires on social participation, or when crime victims do not open the door to cooperate with a crime victim survey... (Stoop, 2005:35)<sup>8</sup>.

Considering the ESS, one can –and should- expect substantial differences between respondents and non-respondents: many of the variables covered in the first round of the ESS survey (e.g. ‘social participation’, ‘political interest and involvement’, ‘civic duties’,...) have been found or are believed to correlate substantially with survey participation (Philippens & Billiet, 2004; Voogt & Saris, 2003). Accordingly, we expect that nonparticipation in the ESS will be likely to cause biased estimates and limit generalization to each population. Cross-national research, such as the ESS, renders this already complex matter even more difficult; to illustrate this, consider formula (1) as the expression of the non-response error (Philippens & Billiet, 2004; Couper & de Leeuw, 2003):

$$\bar{y}_r - \bar{y}_n = \left(\frac{m}{n}\right)[\bar{y}_r - \bar{y}_m] \quad (1)$$

where  $\bar{y}_n$  is the sample mean,  $\bar{y}_r$  is the respondent mean,  $\bar{y}_m$  is the non-respondent mean, and  $m/n$  is the non-response rate. This is in essence the mathematical expression of what has already been phrased above: non-response error is a function of the amount of non-response and the difference between respondents and non-

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<sup>7</sup> Obviously, weighting comes with a statistical price: there will be an increase in the variance of the estimates, and therefore a decrease in the precision of the sample (Lynn, 1996; Stoop, 2005). Oversampling can adjust these estimates and could maintain the precision, however at a higher survey cost due to the larger sample; also, oversampling is not always an option since researchers would need to know this kind of response behaviour in advance in order to take it into account in designing the sample frame.

<sup>8</sup> Mainly based on this knowledge, Stoop (2005) concludes that perhaps *representative sampling* is a term to be avoided, and therefore to drop from the technical vocabulary.



respondents. “Theoretically, then, the biasing influence of non-response is eliminated under two conditions: either (a) the non-response rate is zero (there are no nonrespondents) or (b) there are no differences between respondents and nonrespondents on the statistic of interest” (Couper & de Leeuw, 2003:166). However, in cross-national research such as the ESS, this is somewhat more complicated<sup>9</sup>. Formula (2) illustrates the effects of non-response on cross-national survey estimates, in this case of the difference of two country means:

$$\bar{y}_{1r} - \bar{y}_{2r} = (\bar{y}_{1n} - \bar{y}_{2n}) + \left( \frac{m_1}{n_1} [\bar{y}_{1r} - \bar{y}_{1n}] - \frac{m_2}{n_2} [\bar{y}_{2r} - \bar{y}_{2n}] \right) \quad (2)$$

The subscripts 1 and 2 indicate country 1 and country 2. Most cross-national or cross-cultural research implicitly assumes that non-response error is equal across countries or subgroups. Again, such an assumption would give evidence of an infinite naïveté. In the case of equal response rates across countries, there is no additional (cross-nation) non-response bias if and only if non-respondents differ from respondents in the same way for all countries. In the other case, if response rates are not equal across countries, estimates will not be additionally biased only if there are no differences between respondents and non-respondents in all countries (Philippens & Billiet, 2004; Groves & Couper, 1998). Obviously, non-response bias is not only relevant for simple descriptive statistics such as country means and differences of these means, i.e. proportions. “Non-response can bias a variety of other estimates, including relationships among variables (as in regression or structural equation models) and comparative statistics (e.g., subgroup means)” (Couper & de Leeuw, 2003:166).

Based on Round 1 of the ESS, we now know that response rates between countries differed immensely, ranging from as low as 33% in Switzerland, up to almost 80% in Greece (Billiet & Philippens, 2004). Considering the above, it is therefore crucial to compare the respondents with non-respondents; only this direct comparison between both groups allows the non-response to be thoroughly evaluated. In order to better understand if and why response rates are different across different nations, and what impact this may have on comparative analyses, Couper & de Leeuw (2003) recommend distinguishing between the different components of non-response, i.e. non-contact, refusal, and ineligibility, and their subcomponents, and analyzing the reasons for and impact of different response rates, the differences between respondents and non-respondents, and the differences in response composition (Couper & de Leeuw, 2003; Stoop, 2005). Unfortunately, in most cross-national research, very little or no information is available on the non-participant group

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<sup>9</sup> In fact, since -as was already mentioned- we now deal with a second round of the ESS, there is additionally also a longitudinal aspect to further complicate this issue. “When studying non-response over time and over countries, there are three research questions that should be addressed: (1) does non-response differ between countries?, (2) does non-response increase over time?, and (3) is the increase different between countries?” (de Leeuw & de Heer, 2002:45).

(Loosveldt e.a., 2004). Therefore, aside from the already mentioned strain ESS puts on standardizing fieldwork practices, particular attention is paid to collecting as much information as possible on the non-respondents.

#### THE ESS CONTACT DESCRIPTION FORM

Within ESS, information on non-respondents is gathered both at the aggregate (country) and the individual (sample units) level. At the aggregate level, all NC's were asked to compose a National Technical Summary with information on the fieldwork and survey quality (e.g. length of fieldwork period, the selection, payment and briefing of interviewers, number of required (evening and weekend) visits, use of quality back-checks, use of special refusal conversion strategies, self-reported response rates,...). More importantly and informative however, is the gathering of information on non-response at the individual level in standardized 'contact form data'; these contact forms were developed by the ESS based on its own needs and a number of examples of contact forms used by other survey organizations. For more information and background on the construction and purposes of the ESS contact form, we refer to Stoop, Devacht, Billiet e.a. (2003), Devacht, Loosveldt & Billiet (2003), and Philippens, Loosveldt, Stoop & Billiet (2003). On these standardized ESS contact forms, interviewers had to record –for each executed contact attempt- their fieldwork efforts and results, as well as additional observational information on non-respondents. More in detail, the standardized contact form results in a standard data file comprising information on:

- interviewer and (potential) respondent's identification
- information of selection procedure (type of sample,...)
- date, month, day of the week, hour and minutes of visit
- mode of visit (telephone vs. face-to-face)
- result of each visit
- outcome when there was no interview
- reason of refusal
- estimation of future cooperation
- reason if outcome ineligible
- information on the neighborhood

Based on the first round experiences of the ESS, it is clear that these contact description forms are a valuable tool for monitoring and enhancing fieldwork efforts, and provide very interesting data to study cross-national differences in non-response processes (Philippens e.a., 2004:2). However, in designing and using the contact forms, several problems arose as well. "Firstly, although the ESS is based on strictly

random sampling, sampling frames differed across countries. Therefore, versions had to be developed for address, household, and individual samples” (Stoop, 2005:257). In Round 1 there were five versions: two for address samples, two for household samples (with Kish or birthday selection), and one for individual samples. In Round 2 there is one new version: household samples (with combined Kish *and* birthday selection). “Secondly, there were differences in fieldwork procedures across countries. In some countries, where sampling was based on a list of named individuals, first calls could be made by telephone” (Stoop, 2005:257). Since the number of telephone contact attempts is generally much higher (due to the lower cost), some countries (e.g. Sweden...) had problems with the prescribed data format which is limited up to a maximum of 10 contact attempts. Likewise, some countries (e.g. Switzerland...) that had a disappointing response rate in the first round of the ESS, tried to overcome this in round 2 by investing in more contact attempts. Thirdly, as Stoop (2005) rightly mentioned, not every fieldwork organization is familiar with keeping close track of the fieldwork by using contact description forms; the burden of recording and keying call or contact information is considered rather heavy by interviewers as well as fieldwork organizations, which is reflected in the variable quality of delivered and uploaded contact form data. This frequently resulted in data files with missing or additional unknown (country-specific) variables or ‘wild codes’. Furthermore, a number of countries could not deliver a complete dataset since some information (variables) was not accessible for privacy reasons, due to stringent national confidentiality laws (e.g. Norway, Iceland,...). And finally, several other problems emerged while doing the analyses; we will refer to these in due course when presenting the results.

The countries that participated in Round 2 are listed below:

<i>Country</i>	<i>Sample type*</i>	<i>Country</i>	<i>Sample type*</i>
Austria (AT)	HH	Italy (IT)	AD
Belgium (BE)	IND	Netherlands (NL)	AD
Czech Republic (CZ)*	HH	Norway (NO)	IND
Denmark (DK)	IND	Poland (PL)	IND
Estonia (EE)	IND	Portugal (PO)	HH
Finland (FI)	IND	Slovakia (SK)	IND
France (FR)	HH	Slovenia (SI)*	IND
Germany (DE)	IND	Spain (ES)	IND
Greece (GR)	HH	Sweden (SE)	IND
Hungary (HU)	IND	Switzerland (CH)	HH
Ireland (IE)	AD	Turkey*	AD
Luxembourg (LU)	HH	Ukraine (UA)*	AD
Iceland (IS)*	IND	United Kingdom (UK)*	AD

\* IND: individual named sample; HH: Household sample; AD: address sample.

Most of these 26 countries of ESS that participated in Round 2 had finished their fieldwork and delivered data end 2005. At the end of 2006 the data of the 26<sup>th</sup> country (Turkey) was processed by NSD (*Norwegian Social Science Data Services*), and documented in “*ESS2-2004 Documentation Report, ed. 3.1*”. The precise description of each country sample is in this documentation.

Most of this report, deals with the countries that had delivered complete and usable call record data.<sup>10</sup> Depending of the kind of analysis, call record data of a changing number of four to six countries cannot be analyzed because of the risk of unreliable results. These countries are flagged with an asterisk. At this point we would also like to note that some countries had delivered updated datasets when problems were encountered. This was the case with Switzerland, Ireland, Slovenia, and United Kingdom. In all cases, the last versions of the data files are used. There are however still problems with the call record data of Czech Republic, Iceland, Slovenia, Turkey, Ukraine, and United Kingdom. Three of these countries cannot be used at all because the call record data are largely incomplete (IS), or completely missing (TU). Two other countries (UK, and UA) delivered call record data, but we could not use these data because of the risk of unreliable conclusions. The problems of the remaining two countries (CZ, and SI) are less serious, and do not prevent reliable conclusions in most of the analyses. These problems are documented in Table 1 in the appendix, and will be described later in this report.

## **PART II. DATA QUALITY ASSESSMENT IN ROUND 2 & COMPARISONS WITH ROUND 1**

The next part of this paper will focus on the analysis of the contact form data. In a first section, after a note on the reliability of the data, we will deal with the ESS round 2 achieved response, non-contact and refusal rates in the 26 aforementioned countries. Additionally, we will compare these with the ESS Round 1 response rates. In a further section, the focus will be on information concerning the number of contact attempts before initial contact, the number of attempts made to non-contacts, and the timing (day or evening, weekend) of the contact attempts. Finally, the usefulness of refusal

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<sup>10</sup> Estonia, Germany, Spain, Sweden, and Switzerland have adjusted the prescribed data format in order to allow more than 10 contact attempts. Apart from the necessarily adjustments to the program syntaxes (SAS), and the fact that for the same reason these five countries will sometimes presented separately some of the tables, this had no further influence on the outcomes of the analysis. This ‘adjustments’ have however serious implications on the data format; e.g. Switzerland has no less than 546 variables, instead of the 122 prescribed variables. Also, this confronts us with the practical inconveniency that the integrated dataset with contact form data for all countries would be very large (with many empty fields) if all the variables are kept. For that reason, in the integrated call record file, the number of visits is cut off at 10, but the information of later visits is saved in the 9<sup>th</sup> (refusal followed by non-contact) or 10<sup>th</sup> (interview) visit.

conversion attempts – if any - will be discussed. This part ends with some general conclusions.

#### ACHIEVED RESPONSE, NON-CONTACT AND REFUSAL RATES IN THE ESS

##### *The reliability of the call record data*

As mentioned above, the ESS has two sources of information on the achieved response, non-contact and refusal rates reached in each of the participating countries. A first one is the *National Technical Summary* each NC has to deliver simultaneously with the ESS data files. The version of this NTS that we have used in this report is the version which is documented in “*ESS2-2004 Documentation Report, ed. 3.1*”. This report contains for each country sample aggregated data based on counting the number of issued sampled units, refusals, non-contacts, ineligibles,... The results below are based on the ‘individual (sample unit) level’ *call record data* collected in the contact forms (CF); these data sets have the advantage that (non-)response, non-contact and refusal definitions and formulae can be uniformly and simultaneously applied and calculated across all countries, thereby rendering valid cross-national comparisons (Billiet & Philippens, 2004).

The results of both data sources should not differ too much when both are valid estimations of the field outcomes (see Table 1 in appendix). However, we have observed that there are serious problems in six countries (Czech Republic, Iceland, Slovenia, Turkey, Ukraine, United Kingdom). The problematic cases are reported in Tables 1 in 2b in the appendix. It is not possible to produce valid response rates, non-response rates, and non-contact rates for these countries at the basis of the call record data for these countries because of one or more of the following reasons: there are large deviations between gross sample size in NTS and CF; there are large deviations in the numbers of eligible cases between both sources; the number of interviews in the CF file is substantially smaller than the number of realised interviews in NTS or in main data file; there are serious problems with the matching of the identification codes (IDNO) in both files; considerably amounts of information in the call record data file (CF) are missing (See Table 1 in Appendix). In the presented statistics, response rates for Czech Republic, Iceland, Slovenia, Turkey, Ukraine, and United Kingdom are based on NTS source (“*ESS2-2004 Documentation Report, ed. 3.1*”). They are flagged with an asterisk (\*) in the figures and tables (see Figures 1, 2 and 3, and Tables 1, 2a and b, 3a and b) which deal with final response codes. The results of the two sources are merged in Figures 1 and 2 (an \* indicates the NTS source).

The results of more advanced analyses for Iceland, Turkey, Ukraine, and United Kingdom countries are not published in most other tables, since these results are unreliable. Whenever possible or relevant, some information about these samples is

offered in plain text (e.g. the section on response conversion). The call record data of Slovenia are useful for some analysis if one assumes that in spite of the mismatch of numerous identification numbers (IDNO) (see Table 1 in Appendix), most other data is reliable. There are 33 interviews missing in the call record data file, but this is 2.3% and thus less than the threshold (5%) that was used. There are also small deviations in the other final codes compared with NTS, but this is also the case in most call record data files. Czech Republic is a special case since a large portion of the brut sample was not even contacted.<sup>11</sup> The delivered call record data however seemed to be reliable for the portion of the gross sample that was used in the survey (4335 cases). We can obtain a good view of what happened in Czech Republic if abstraction is made of the sample fraction that was not contacted.

Since for all other 20 countries, the two kinds of computation of response rates, NTS by National Coordinators and CF in this analysis converge, we decided to trust the latter, even when there are slight differences between the two sources. The data that are presented here are the results of what the interviewers have recorded during their field work. This is a not so easy task, and classification errors (coding error) regularly appear. The deviations between other final response codes as non-contact, refusal, not able or other are larger than the deviations between the response rates in the two sources.

#### *Computation of response, non-contact, and non-response rates*

Generally speaking, there are three basic types of non-respondents: (1) 'non-contacts', those who cannot be contacted during the fieldwork period; (2) 'refusals', those who are contacted, but refuse to participate; and (3) 'other non-respondents', those who are not able to cooperate due to illness or language problems, those who are absent during the fieldwork period, those who moved,... Depending on what one considers eligible and ineligible units, response rates can be calculated in many ways (Couper & de Leeuw, 2002; Stoop, 2005). Therefore, before going through the actual achieved response rates, some words need to be spending on the definition and calculation of these response rates. For Round 2, the CCT has specified two separate response rates:

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<sup>11</sup> Although the Czech Republic sample counts 5531 addresses, 1196 addresses were 'not used' in any way, and therefore, do not appear in the contact form data. Assuming that the sample was used exactly as described, with no interviewer freedom to choose which addresses to use, and no contact attempts at any of the 1196 'unused' addresses, this design would in practice be (approximately) equivalent to a design where the variation in response rate is predicted in advance and in each area a sample size is selected that is inversely proportional to the predicted response rate. Although this is allowed by the ESS and done in a few countries, there is a fundamental difference in the Czech Republic case, since a) this was done at the level of the PSU, not just region or urban/rural, and b) it used the actual achieved response rate, not just an advance prediction. The CCT therefore cannot allow this to be a method controlling sample size especially as the implications were not agreed in advance of fieldwork with the sampling panel. The CCT has decided that the 1196 addresses were part of the selected sample and must be treated as such. In the NTS, these cases are classified as "number of sampling units not accounted for". Counting these cases as "other non-response" the true ESS response rate is based on 5,531 sampling unites is 55.3% (and not over 70%), which of course still is a fundamental improvement compared to the Round 1 response rate of 43% (see Table 3b).

an ‘ESS response rate’ and a ‘field response rate’, which have slightly different definitions of what counts as ineligible. The target response rate of 70% corresponds to the ESS response rate, as was the case in Round 1. Both the ESS response rate and field response rate are calculated as shown below:

$$\text{Response rate} = \frac{\text{number of achieved interviews}}{\text{number of eligible sampling units}}$$

For the ‘ESS response rate’ ineligibles comprise, for samples of individuals:

- respondent deceased
- unoccupied or demolished premises
- respondent emigrated or left the country long term
- respondent resides in an institution;

For samples of households or addresses, ineligible sample units are for obvious reason somewhat different, and comprise:

- unoccupied or demolished premises
- premises not yet built or under construction
- non-residential addresses (e.g. business, school, office, institution,...)
- address occupied, but no resident household (e.g., weekend homes)
- address occupied by resident household, but no eligible respondent

Although comparability between household and individual-named samples was a concern in designing and calculating the above ESS response rate, this comparison cannot be made waterproof and should therefore always be done with caution<sup>12</sup>. For the ‘*field response rate*’ the following extra categories will be counted as ineligible, and therefore be excluded from the denominator:

- untraceable or unreachable addresses<sup>13</sup>
- respondent away throughout the fieldwork period
- respondent ill throughout the fieldwork period

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<sup>12</sup> Possible examples of the potential lack in comparability of the response rates between household and individual-named samples are: in the case of an individual sample, deceased respondents, or respondents moved abroad, are immediately counted as ‘ineligible’; one can however imagine that in a household sample, there are other eligible respondents to choose, so the possibility of a completed interview in this event –and *ipso facto* the ‘response rate’- enlarges in household samples. Of the 24 countries in our analyses, only Austria, Czech Republic, France, Greece, Luxemburg, Portugal, and Switzerland have a household sample frame. Ireland, the Netherlands, Turkey, Ukraine, and United Kingdom used address samples. All other countries are individual-named samples.

<sup>13</sup> Since in the contacts forms of Round 2 the respondents that moved to unknown destination and the respondents that moved out of country cannot be distinguished, both kinds are classified under ‘ineligible’ although in principle, not traceable addresses should in individual named samples be counted as eligible in the ESS response rate.

- respondent cannot be interviewed in national survey language(s)

As for the numerator in both the ‘ESS’ and ‘field response rates’, only interviews in which the majority of questions are answered are qualified and counted as achieved interviews. In calculating the refusal rate, the numerator comprises ‘partial interviews (break-off)’, ‘refusals by respondent and/or by proxy’, ‘refusals before selection’ and ‘broken appointments’. Finally, non-contacts are also (potential) sample units where there was no contact at all with anyone at any visit.

Transparency in calculating these rates is also important in another way. Since the contact form data files do not have a single variable that is the expression of the final (non-)response code of each sample unit, this individual code is obtained by combining the outcome of several variables throughout all different visits to that unit. Essentially, there are two ways to calculate the response code (Billiet & Philippens, 2004): (1) the outcome of the last contact (with any member of the household) can be considered as the final response code, or (2) a priority system of visit outcomes can be constructed to select the outcome with the highest priority (for an example see Lynn, Beerten, Laiho & Martin, 2001). In our calculations, we gave preference -to a certain extent- to the second method. Thus the outcome of the last visit was used as the final (non-)response code, except when a refusal occurred at an earlier visit, although there was a subsequent contact with the household that would result in another eligible (non-)response outcome. In that case, the final (non-)response code was ‘refusal to participate’ because this code has priority over other non-response codes.<sup>14</sup> The divergence between both methods is presumably responsible for the (small) differences that are found when one compares the results presented here with the rates delivered by the NC’s in the National Technical Summaries. Although in practice, both methods are found to yield very similar results (Philippens, Billiet, Loosveldt, Stoop & Koch, 2003), we believe our calculation to be more informative because we collect more information about refusals than on other non-response (non-contact, other). This is certainly the case when because of refusal conversion attempts, a non-contacts comes later than a refusal.

The achieved Round 2 ESS response-, refusal-, and non-contact rates (both in percentages and absolute numbers) for all 26 countries are reported in Tables 1 and 2a,b of the appendix, and are all expressed as percentages of the total eligible sample size. As was already mentioned, during analysis we met a serious number of problems in analysing the contact forms (CF). An overview of these problems is provided in Table 1. We have tried to find a solution for most problems but some could not be solved.

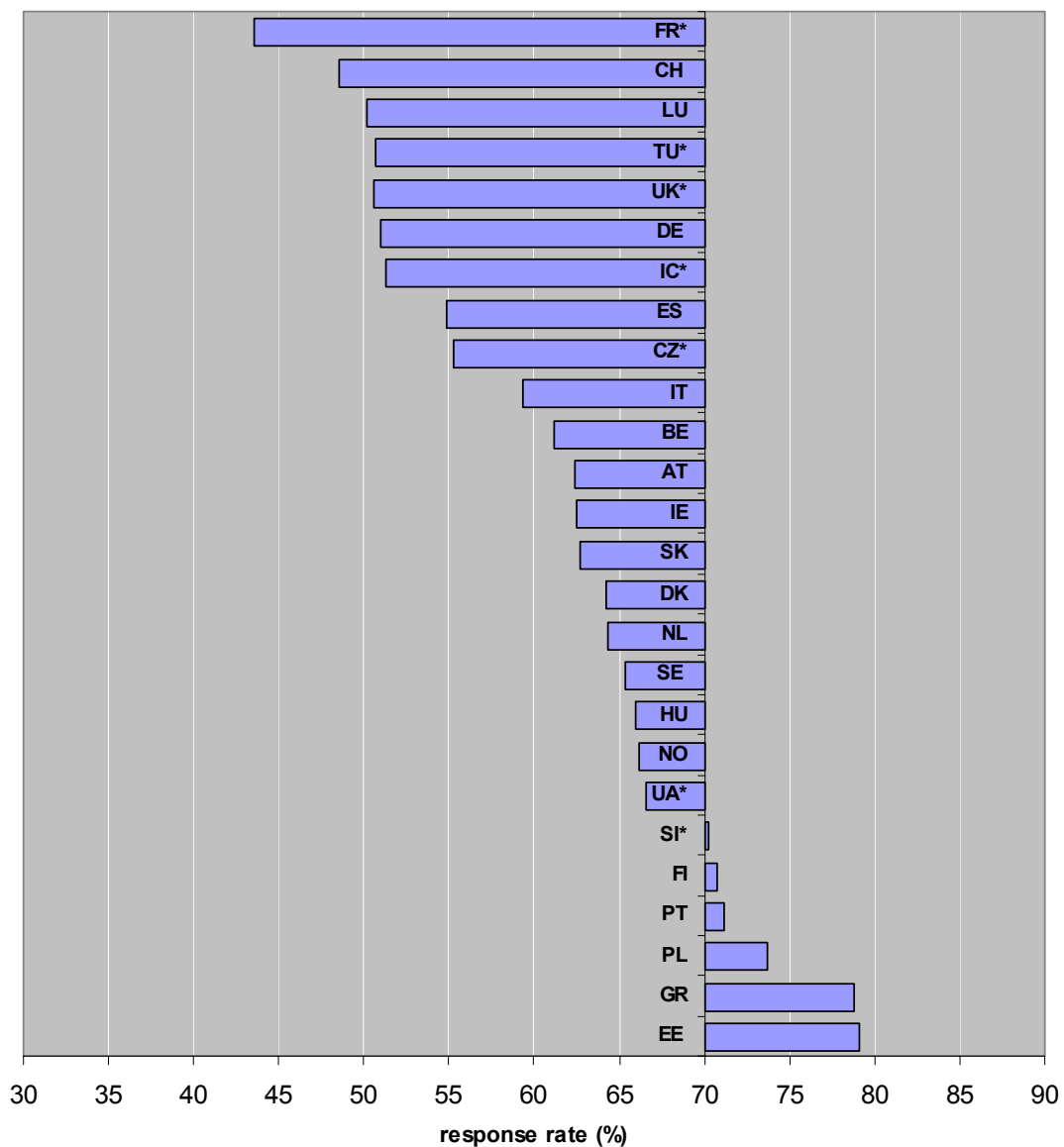
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<sup>14</sup> In these cases ‘*refusal to co-operate*’ has priority over other categories in subsequent contacts. In case that the later contact resulted in an interview, this is then considered as the result of refusal conversion, resulting in a (complete) interview.



Figure 1 depicts the response rates as deviations from the target response rate of 70%. As can be seen, both in the table and the figure, response rates range from as low as 43.6%, in France, to 79%, in Estonia. Furthermore, Figure 1 clearly illustrates that 6 out of 26 countries - Estonia, Greece, Poland, Portugal, Finland, and presumably Slovenia (based on NTS report) - obtained response rates higher than the specified target rate of 70%, and 10 out of 26 have rates higher than 65%.

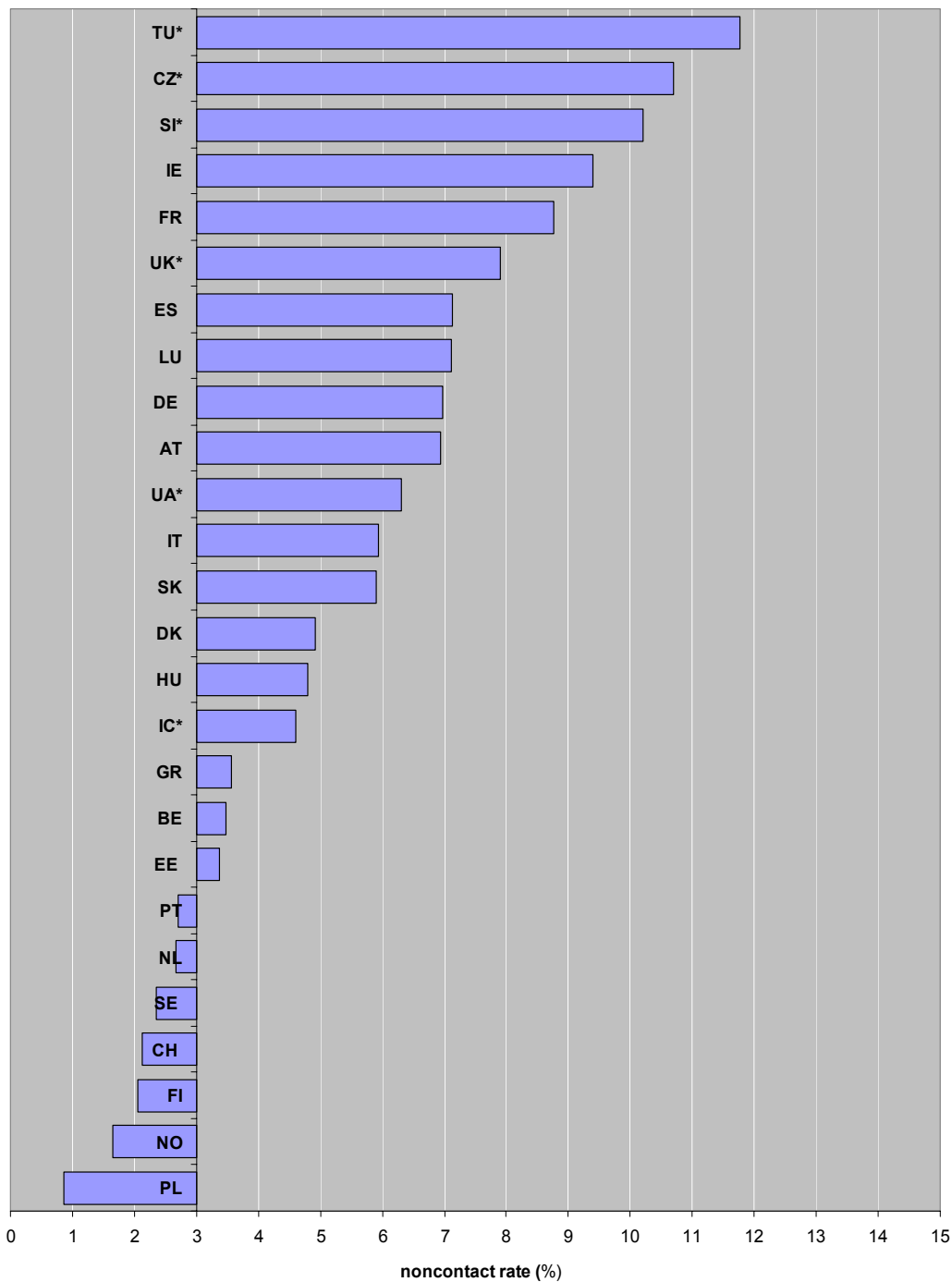
**Figure 1 – Response rate ESS Round 2 according to contacts forms information**  
(deviations from target response rate 70%)\*



\* Country outcomes based on NTS are identified by \*

A second standard the ESS has set is a maximum non-contact rate of 3%; although obviously not all countries can meet this strict criterion, the aim to keep the non-contact rate minimal seems to be successful in most countries.

**Figure 2 – Non-contact rate ESS Round 2**  
*(deviations from target non-contact rate 3%)*



\* Country outcomes based on NTS are identified by \*

Figure 2 represents the ESS non-contact rates in Round 2 as deviations from the target non-contact rate of 3%. Poland, Norway, Finland, Switzerland, Sweden, the Netherlands, and Portugal have non-contact rates below 3%; Estonia, Belgium, Greece, Iceland, and Denmark are added if the non-contact rate is raised to a

maximum of 5%. The highest non-contact rate is found in Turkey (13.5%). What is remarkable in Figure 2 is that Czech Republic has nearly the highest non-contact rate (10.7%) of the 26 countries, although the non-used addresses are counted as “other non-response” and not as “non-contact” (see Footnote 10). This could possibly be a latent outcome of the procedures and strategy followed during fieldwork in the Czech Republic.

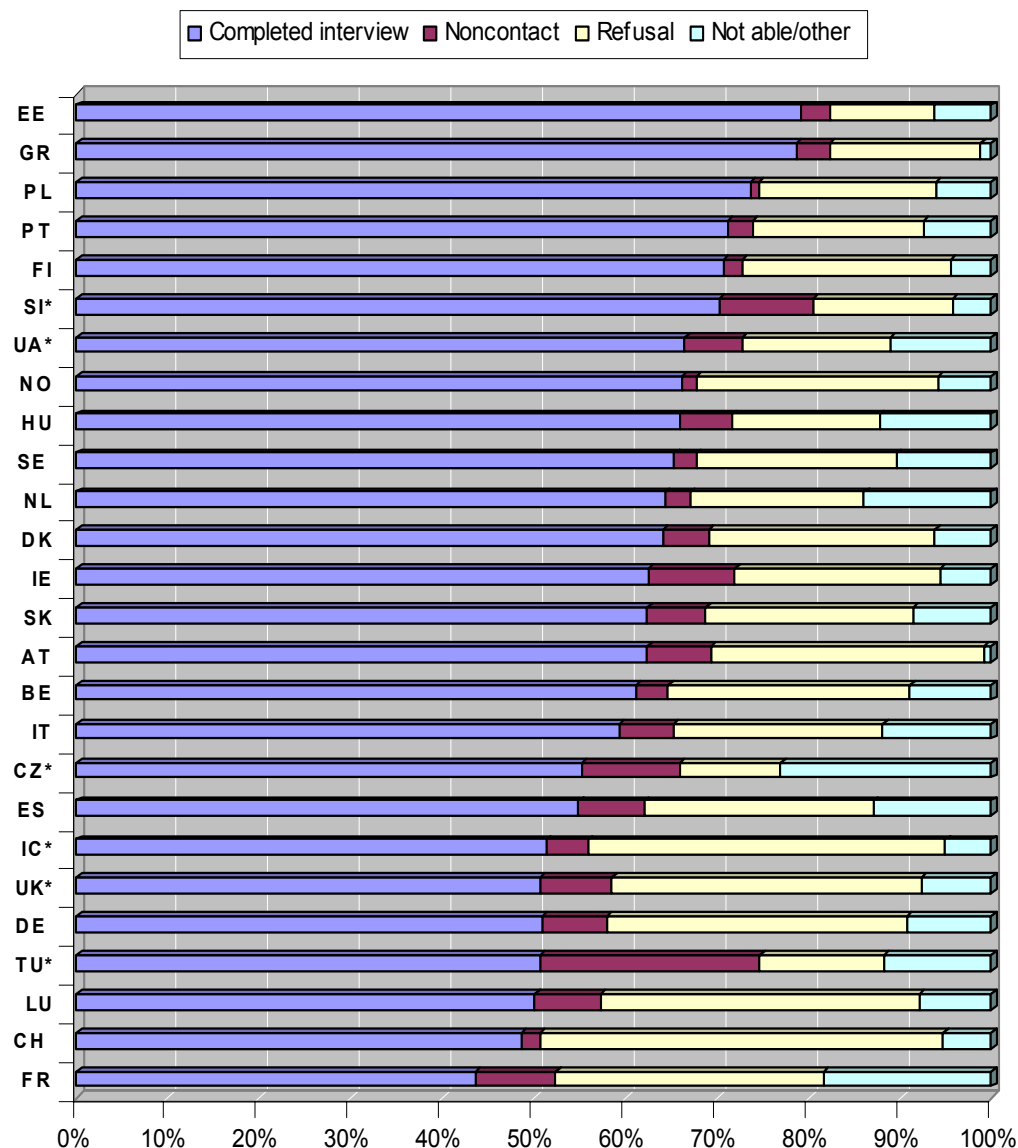
A final but nevertheless important point both Figure 1 and 2 evoke, is that countries with relative good response rates do not necessarily have low non-contact rates (e.g., Slovenia), or *vice versa* (e.g., Switzerland). In addition, countries with very similar response rates, for instance Denmark and the Netherlands, can have fairly dissimilar non-contact rates. This observation corresponds with the analyses in Round 1 (Stoop, 2005; Billiet & Philippens, 2004). It should be noticed however that the low non-contact rate of Norway can be explained by the fact that nearly all first contacts are realised by telephone, often after many attempts.

In a next step, we further differentiate between respondents and non-respondents, as the non-respondent group is decomposed in non-contacts, refusals, and “not able/other”. This is illustrated in Figure 3.

This Figure clearly shows that for most countries refusal to participate is the most important reason of non-participation. High refusal rates (above 30%) occurred in Iceland, Luxemburg, Switzerland, and the UK, intermediate refusal rates (20% to 30%) in Austria, Belgium, Denmark, Finland, France, Ireland, Norway, Spain, Sweden, and Turkey. Lowest refusal rates (under 20%) are obtained in Czech Republic, Estonia, Greece, Hungary, the Netherlands, Poland, Portugal, Ukraine, and Slovenia. Obviously, since these refusals outnumber the non-contacts, their impact on the response rate can not be underestimated; countries with higher refusal rates, clearly have lower response rates, and *vice versa*. The high number in the category “not able/other” is related to characteristics of the sampling method, or to decisions of the field work organisers (as in CZ, see footnote 10).

At this point, we should bring in mind what has been said in the earlier sections of this paper: the observed differences in both the response and refusal rates, between countries, raises questions with respect to the validity of cross-national comparisons in the ESS (Billiet & Philippens, 2004). We should also notice that in some countries, a large part of the non-response is also affected by high non-contact rates (Czech Republic, Slovenia) or to rather high non-contact rates (France, and Ireland). Bias is not the focus of this report although it is an important issue in cross-country research and between country comparisons. The study of bias requires in depth analyses and is highly specialised. It is therefore reserved to specific studies at occasion of Joint Research Activities in which ESS participates.

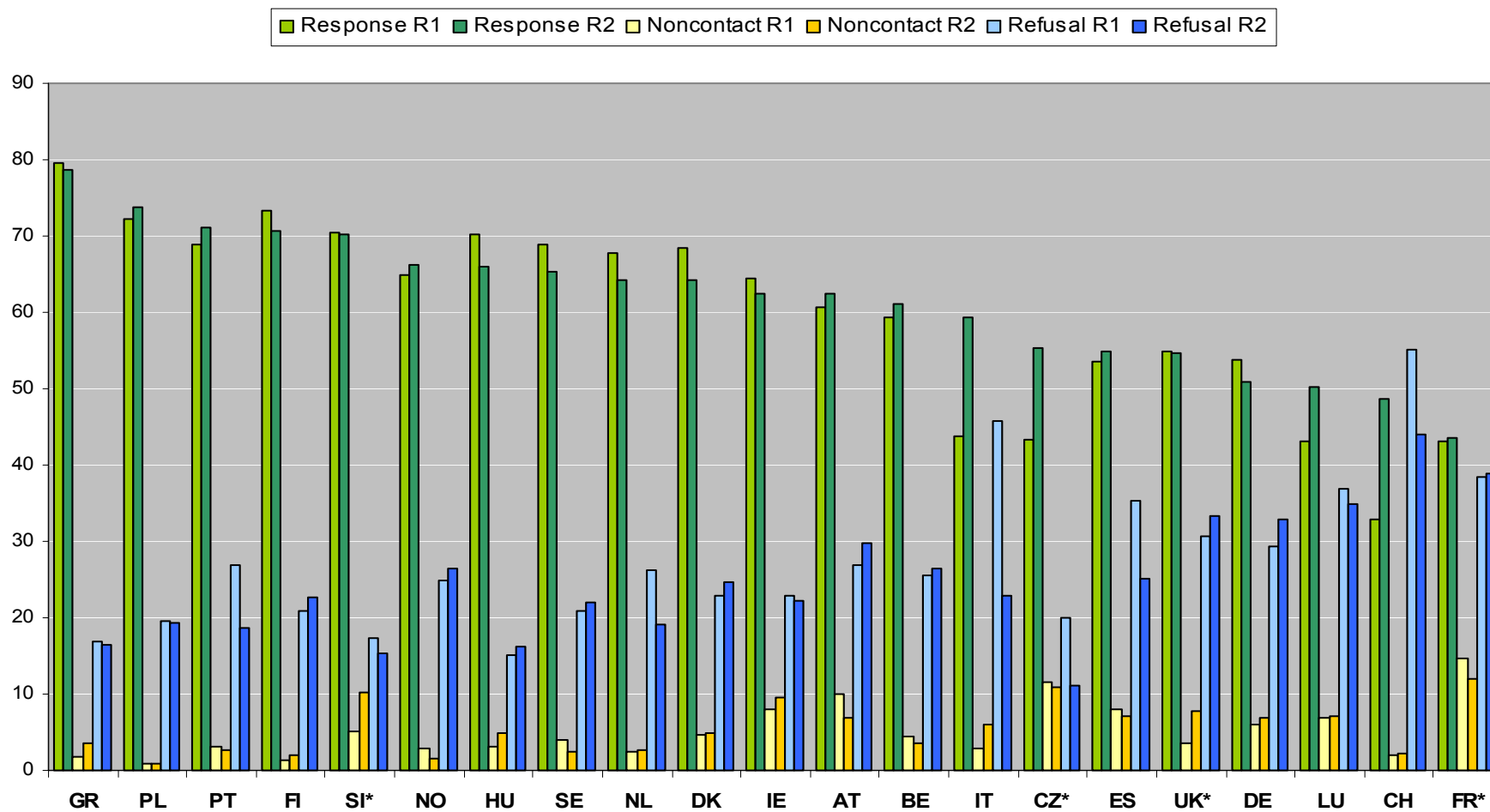
**Figure 3 – Achieved response, non-contact and refusal rates in ESS Round 2**



Country outcomes based on NTS are identified by \*

A final issue to deal with in this section is the comparison of the above ESS round 2 outcome with the achieved response, non-contact and refusal rates in Round 1. This comparison is depicted in Figure 4, below, and in Tables 3a and 3b in the appendix. Of course, we have to keep in mind that possible flaws in both Round 1 and Round 2 data sets of the same country, could potentially blur the real differences. Also, of the 26 countries in this Round 2 report, only 17 have valuable and comparable information based on call record data; 4 countries can be compared with information from NTS (UK and Slovenia for Round 2, France for Round 1, and Czech Republic because of both rounds). Estonia, Iceland, Slovak Republic, Turkey, and Ukraine did not participate in ESS Round 1. These five countries are therefore omitted from Figure 4.

**Figure 4 – Achieved response, non-contact and refusal rates for ESS Round 1 and Round 2 based call record data\***

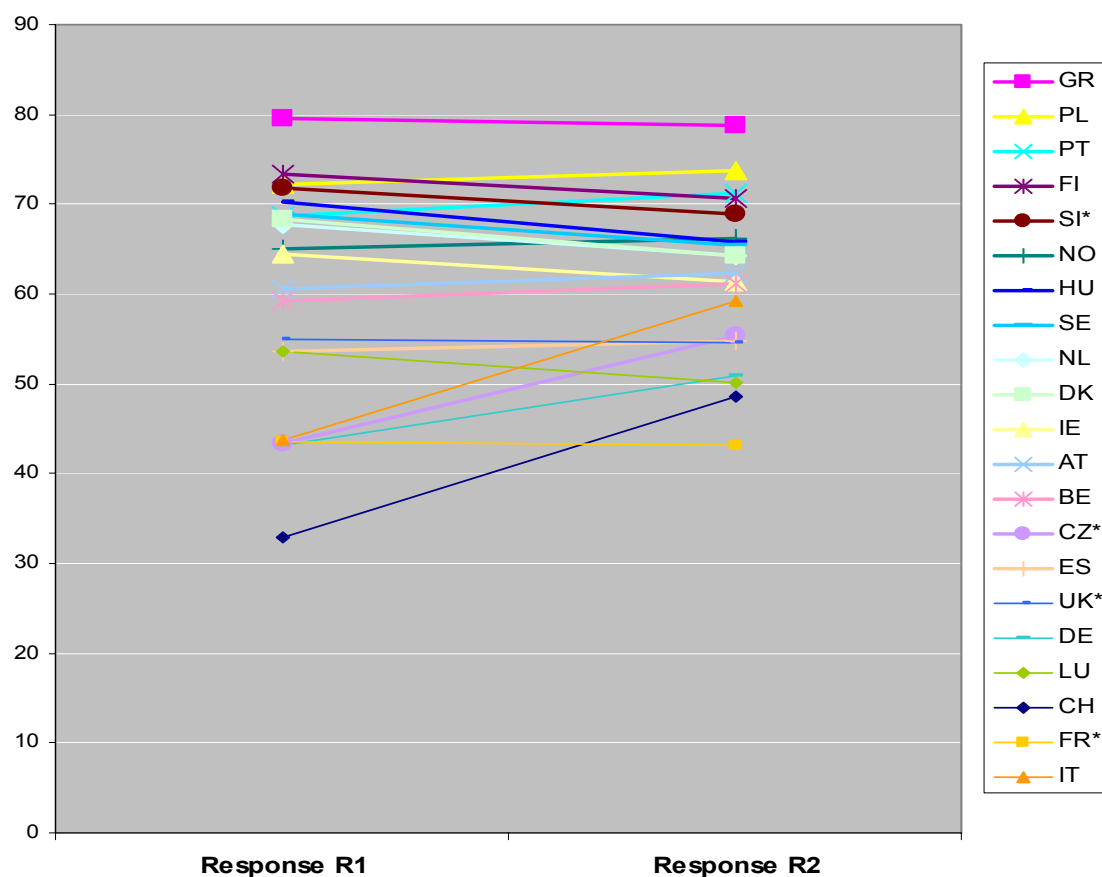


\* Computations for Rounds 1 & 2 both based on NTS (this is also the case for France because of comparability Table 3a, in contrast with Table 2a).

More countries show in second round a somewhat higher or even much higher (CH, CZ, and IT) then in first round, but the differences between countries in all response categories (response, non-contact, refusal, other) are serious. At this point, we should bring in mind what has been said in the first sections of this paper: the observed differences in both the response and refusal rates, between countries, raises questions with respect to the validity of cross-national comparisons in the ESS (Billiet & Philippens, 2004). We should also notice that in some countries, a large part of the non-response is also affected by high non-contact rates (Czech Republic, Slovenia) or to rather high non-contact rate (France, and Ireland).

The same could be said about both the non-contact and refusal rates, with some minor exceptions: the refusal rate of Spain dropped with almost 10% between Round 1 and round 2; the refusal rate of Portugal with a little over 8%. Finally, the non-contact rate of Slovenia seriously increased with 10 points.<sup>15</sup>

**Figure 5 - Achieved Response rates for ESS Round 1 and Round 2**



<sup>15</sup> We remind the reader of an earlier remark on the Slovenian data: although several contact form data files were uploaded by the NC's, the analyses of the last delivered data still reveal some problems with the data that have yet to be solved. At this point, the figures of the Slovenian results should be read with some precaution. It is also worthwhile to notice that fieldwork stopped for budgetary reasons once 70% response was obtained.

Figure 5 shows the evolution of the ESS response rates between round 1 and round 2 for 21 countries. Although in essence this figure brings no new information, it is perhaps useful as a round up of the above; although response rates clearly differ between countries, they stay fairly stable within countries between both rounds of the ESS. Finally, based on these 21 countries, one can see in Figure 5 that the between countries variation has decreased somewhat from Round 1 to Round 2; although most response rates hardly increase or decrease, the lowest response rates in Round 1 tend to increase more than the others, resulting in a smaller range of response rates and therefore somewhat less variation between countries in the response rates of Round 2.

#### NON-RESPONSE, FIELDWORK PROCEDURES AND EFFORTS

Differences between response rates across countries in cross-national survey research are the product of numerous reasons and underlying factors. According to Loosveldt e.a. (2004:69; see also Groves & Couper, 1998; Couper & de Leeuw, 2003), “differences occur depending on general characteristics of the survey (the survey design, the observation unit, the use of proxy respondents and so on) and on the practical format of the fieldwork (the contact strategy, the number of contacts, the supervision and monitoring of interviewers and the reward system for interviewers) among other factors”. Dillman e.a. (2002) concentrates on ‘design features that affect *contact* with sample units’, and also on ‘design features that affect *cooperation*’. Obviously, the possibility and probability to contact a potential respondent depends on the ‘call scheduling’, the ‘length of the data collection period’ and the ‘interviewer workload’. Factors that affect the cooperation of a potential respondent are the ‘agency of data collection’, an ‘advanced warning of the survey request’, ‘respondent incentives’, ‘follow-up procedures’ and ‘tailored design features to increase cooperation’ (Dillman et al., 2002:10-11).

In Round 1, a general distinction was made between factors that can be influenced by the researcher and those that are fixed and cannot be manipulated (Billiet & Philippens, 2004). Amongst the latter, the most notable are the ‘survey climate’ and ‘at-home patterns’. The survey climate refers to the survey practice and the general extent to which people consider survey research and interviews to be useful and legitimate (Croves & Couper, 1998). The survey climate might strongly influence survey cooperation and refusal rates. In general, the assumption is that the percentage of respondents prepared to cooperate with surveys in most (European) countries is declining (Loosveldt e.a., 2004; de Leeuw & de Heer, 2002; Stoop, 2005)<sup>16</sup>. However,

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<sup>16</sup> In this respect, Stoop (2005) cites Bradburn’s Presidential Address at the 1992 meeting of the American Association for Public Opinion Research: “‘We all believe strongly that response rates are declining and have been declining for some time’. Empirical evidence for declining response rates is not unambiguous, however” (Stoop, 2005:31). Firstly, non-response rates are –as was already mentioned- not always calculated uniformly and published transparently, which renders comparisons very dubious. Also,

this climate for survey taking and the survey burden may also change at differing speed or vary from country to country (Couper & de Leeuw, 2003). Survey climate may depend on values (e.g. individualism). At-home behavior refers to the patterns of time use that may influence the number of hours that people spend at home (Billiet & Philippens, 2004; Stoop, 2005). These patterns are self-evidently a function of household and individual characteristics (e.g. single/large families, working/not working, old/young, male/female, outside activities), but also of demographic, socio-economic and cultural differences between regions and countries (e.g. age composition, % of women at work, % unemployment, working hours (cf. Mediterranean vs. North-European countries)). These at-home patterns affect the accessibility of households or individuals and therefore require different strategies and efforts across countries to bring down non-contact rates (de Heer & de Leeuw, 2002). Although the survey climate and at-home patterns are fixed factors and therefore cannot be manipulated in survey research, they are interesting and important to study also from a practical point of view since their effects can to a certain extent be mitigated by sensibly adapting fieldwork strategies to this knowledge. This brings us to a second group of factors that are, at least in principle, under the control of the researcher or research organization (Billiet & Philippens, 2004). According to de Heer (1999:136-137), these factors can be divided into three groups:

- *general design factors*: e.g. mode of data collection, survey method (panel vs. cross-sectional) and observational unit (household vs. individual),...
- *fieldwork efforts*: the number and timing of contact attempts, refusal conversion efforts, interviewer training, interviewer and respondent incentives,...
- *survey organization*: e.g. employment condition of interviewers, voluntary or mandatory participation,...

Parallel to the Round 1 Data Quality report, we will primarily focus on the analysis of fieldwork efforts and differences across countries; in the remainder of this section, we will pay attention to the number of contact attempts prior to initial contact, to the

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sampling and fieldwork procedures may have changed considerably over time. Furthermore, stability of non-response rates may hide potential large changes in the composition of the non-response. "And finally, it may well be that response rates have been maintained at a similar level due to increasing fieldwork costs. As Bradburn said later in this Presidential Address: 'The problem of declining response rates is better described as a problem of increasing costs to get the same response rates'" (Stoop, 2005:31). On the other hand, the conclusions of de Leeuw & de Heer (2002) on this issue are far more outspoken: "In sum: (1) countries differ in response rate; (2) the response rates have been declining over the years; (3) the trends differ by country; (4) there are no differences between countries in the rate in which the non-contacts are increasing; and (5) the difference in response trends is caused by differences between countries in the rate at which the refusals are increasing" (de Leeuw & de Heer, 2002:48)



number and timing of attempt efforts to non-contacts, to the timing of calls for the first four attempts, and to the probability of contact by timing of attempt.

### *Contact procedures and attempts*

The specifications for participating countries in round 2 of the ESS are rather clear and tight; this is done in order to minimize fieldwork variation and non-response differences between countries, and therefore enhance the validity and comparability of the survey. They include at least four personal, face-to-face visits<sup>17</sup>, following a possible advance letter, by interviewers to each sampling unit before it is abandoned as non-productive ('non-contact'), including at least one visit in the evening and at least one at the weekend. Furthermore, these visits should be spread over at least two different weeks. Similarly, to allow difficult-to-contact people to be located, and to minimize non-contacts due to holidays or short absences, fieldwork period should not be less than 30 days.

During analysis of call record data, a serious problem was met. At first glance, Norway came out as the most successful country since in most of the cases (+ 95%) contact was already made after only one call. However, this result was an artifact of the used procedure. In Norway, it was accepted to have first contact by telephone since it was an individual named sample. A telephone attempt that did not result in a contact was not counted as a 'contact attempt' in Round 2 (apparently in Round 1 it was different); an attempt was defined as a telephone call when somebody answers, or an attempt on the doorstep. We learned from the NC that there were often many calls before the first contact, but that these calls were not registered. It is possible that to a certain extent that this also happened to a certain extent in other countries. The data show however no indication that other countries with telephone contact have followed the same procedure. In next round, it will be asked to notice the number of calls before a contact has been made. For the reasons mentioned, we will not report the contact results for Norway in the tables and figures. The reader should notice that there may also be some bias in the countries in which high numbers of telephone calls are reported at occasion of first visit. Table 4 shows (Appendix) the way of contacting respondents at occasion of first visit.

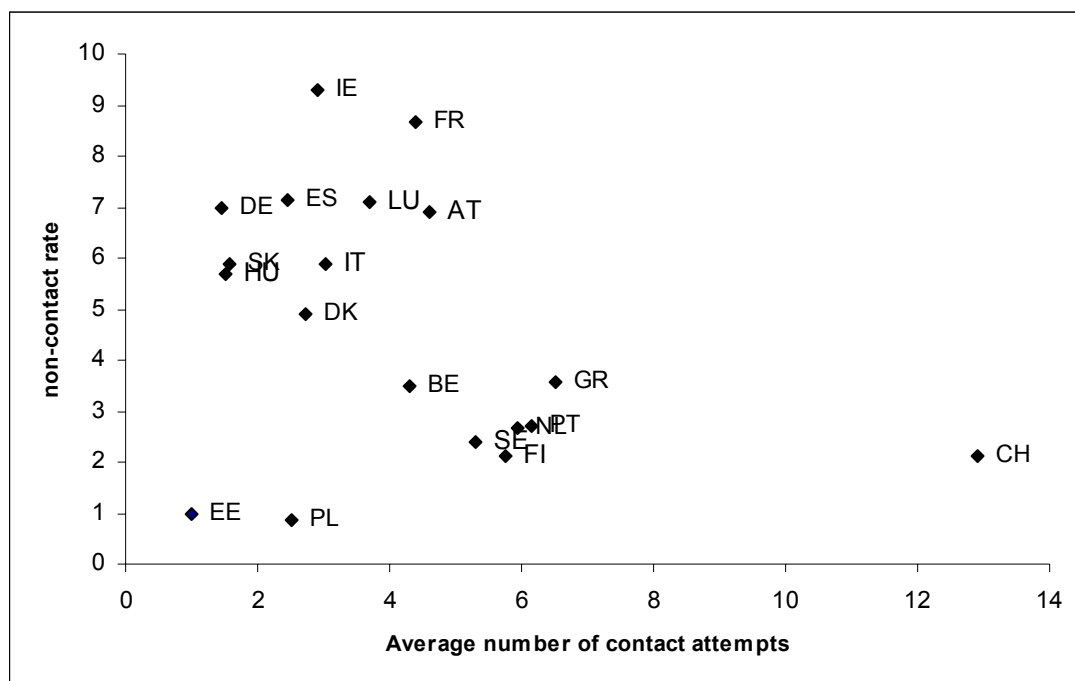
Based on the analyses of the contact form data from Round 1 (Billiet & Philippens, 2004), it is clear that people are harder to contact in some countries than in other countries. In order to reduce non-contact rates –preferably below the target rate of 3%–, countries could, if applicable, raise the minimum number of calls, or the amount of evening and/or weekend calls. As was already mentioned while discussing the contact forms, a few countries extended the prescribed contact data format in order to

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<sup>17</sup> The one exception to this is where the country's sample is one of named individuals with telephone numbers. Here the first contact may be made by telephone, in order to make appointments to visit the respondent.

allow more than 10 contact attempts for each potential respondent. One could assume that increasing the number of contact attempts would be an important strategy to decrease the non-contact rate (Phillipens & Billiet, 2004). In figure 6, we have plotted the average number of contact attempts made to non-contacts against the non-contact rate (percentage). With exception of two countries (EE, and PL), a negative linear relationship is found between average number of contacts and the non-contact rate. The negative relationship between the achieved non-contact rate and the average number of attempts made to the non-contacts for the 19 countries expressed in Pearson correlation = -0.47. The negative relationship is somewhat stronger than in Round 1 (-0.42). A negative relationship was expected since more contact attempts result normally in less non-contact at the end.

**Figure 6 – Scatterplot of average number of contact attempts to non-contacts versus achieved non-contact rate\***



\* Only countries for which reliable call record data; Norway dropped because of non documented telephone contact.

Figure 6 shows that meeting – at average - the required number of 4 contact attempts to non-contacts, is obviously not a sufficient guarantee for a country to achieve the 3% non-contact rate.<sup>18</sup> Switzerland had nearly no non-contacts, but many contact attempts were realized in order to obtain this result. This is in sharp contrast with

<sup>18</sup> The number of non-contacts for Hungary is based on technical summary since it was not obtained in the contact forms data file because of some coding inconsistencies that resulted in zero non-contacts.

Estonia that realized a very low number of non-contacts with a minimum of visits. Poland obtained also low numbers of non-contacts for only a few attempts. This figure shows that there are serious differences in contactability. All by all, countries that in future rounds can reduce their non-contact rate by organizing more attempts are Ireland, France, Germany, Spain, Luxemburg, Austria, and Slovakia and presumably a number of countries of which we have not enough information to compute reliable figures (e.g. Czech Republic, United Kingdom, Slovenia, Ukraine...). However, if one compare the contacts attempts and the results in the two rounds in some countries, some reservation must be made: Poland, for example, had less contacts to non-contacts, but the non-contact rate decreased seriously; Spain had less contact attempts and the non-contact rate decreased somewhat; more contact attempts were made in Greece and Italy where the number of non-contacts increased. These examples indicate that other factors than the number of contact attempts affect the non-contact rate.

For all countries with call record data in the two rounds, the difference scores between mean numbers of contacts and the response rates were computed. The Pearson correlation between differences in response rates and differences in mean numbers of contact is 0.46. Simple regression shows that 21% of the variation in ‘differences in response between rounds 1 and 2’ might be explained by the differences in mean numbers of contacts between rounds. This indicates that the invest in contacting potential respondents has a serious effect on the response rates, but it is certainly not the only explanation for the improvement of response rates.

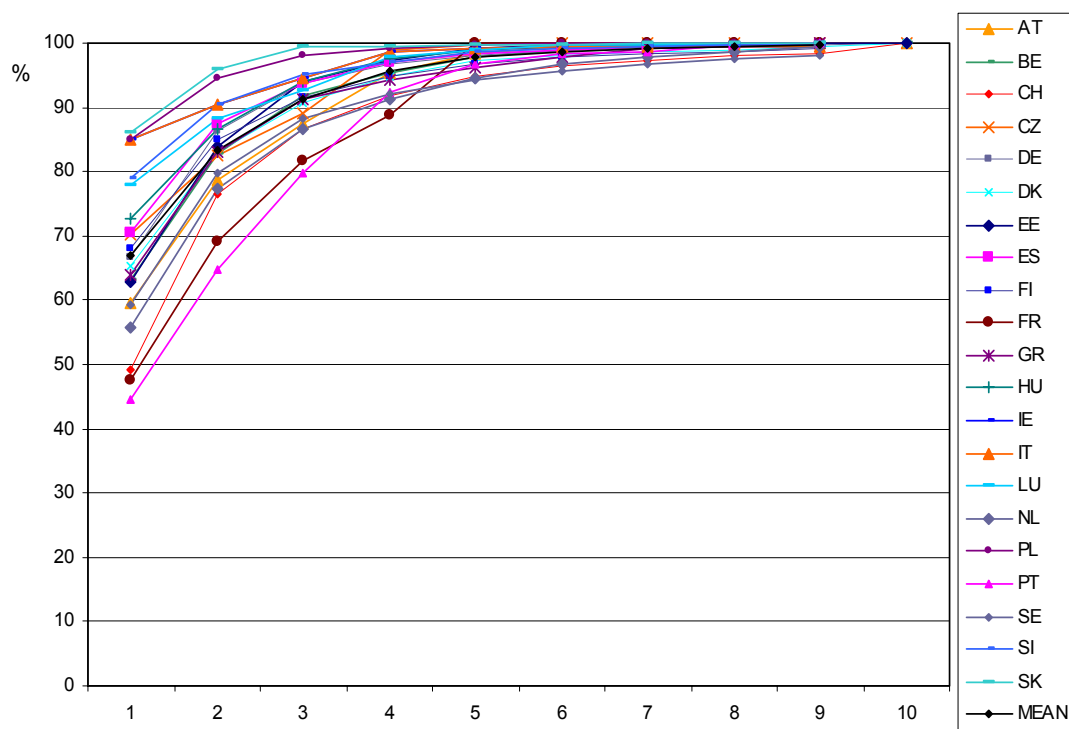
Contactability or the probability that a household can be contacted by an interviewer at a given moment is not simply a respondent characteristic (Stoop, 2005). According to Groves & Couper (1998) it is a function of the at-home behaviour of the respondent, the call pattern of the interviewer, and possible physical impediments in trying to contact the respondent (e.g. locked apartment entrances). As was already mentioned above, the at-home patterns are affected by both individual socio-demographic and economic factors, as well as region- or nationwide social, cultural or economic differences (de Heer & de Leeuw, 2002). In this paragraph, we will assume that country-differences in non-contact rates are partly due to differences in contactability of the respondents, and partly due to country-differences in contacting efforts. In order to evaluate the ESS field efforts to contact sample units, and the contactability, the focus will be on the number of calls to first contact, the number of calls to non-contacts, and the timing of calls. The ESS specifications clearly prescribed that at least four personal visits to each sampling unit were required before the respondent could be qualified as a non-contact; of these four visits, at least one call should take place in the evening, and at least one in the weekend.

Generally speaking, the number of calls to first contact is acknowledged to be the best indicator of contactability, since it comprises primary contact attempts only and excludes additional calls to contacted households that should be chalked up to

reluctance to cooperate rather than being hard to reach (Stoop, 2005; Groves & Couper, 1998)<sup>19</sup>.

The distribution of number of attempts before initial contact is made in each country, is reported in both Table 5 (in the Appendix), and Figure 7 below. The figures are computed on the total number of sampling units that were contacted at the end, and the percentages express how many of these are contacted at moment of each contact attempt (first, second, etc...). From the table we learn that the chances to contact someone are highly variable across countries; the probability of contacting someone of the household at first attempt is the lowest in Portugal (44.5%) and Switzerland (49.1%), and the highest in Slovak Republic (86.1), and Poland (85.0). The latter result is remarkable since there were no contact attempts by telephone at occasion of first call.

**Figure 7 – Cumulative percentages of all contacted sampling units that are contacted at each visit (ESS Round 2)\***



\* Computed on total number of sampling units that were contacted

<sup>19</sup> Although generally acknowledged as the best indicator of contactability, according to Stoop, it is not a perfect measure, "(...) as the timing of calls in face-to-face surveys is not randomly assigned but may be based on local knowledge of the interviewer or on information from previous calls" (Stoop, 2005:51). Also, as we will see, the definition of what a 'single call or contact attempt' is, was not understood uniformly across countries. Obviously, the latter raises serious questions on the (practical) value of this indicator in measuring 'contactability'.

Figure 7 plots the number of attempts to first contact as cumulative percentages. The call record data of 20 countries were useful for this analysis. Norway for the reason mentioned earlier (96% contact at first reported attempt), and three countries with defective call record data are not in this figure (United Kingdom, Iceland, and Ukraine). The figure is a good illustration of the discussed variation in the probability to contact someone already at the first attempt, ranging from +/- 44.5% in Portugal to 86.1% in Slovakia with an (un-weighted) average of 66.9%. Remember, these figures are computed at basis of all who are contacted after all visits (100%). Although the problems above cannot be denied, the figure clearly illustrates that some countries face populations that are harder to reach than others. This was also observed in Round 1 (Philippens e.a., 2004).

Furthermore, Figure 7 and Table 5 (Appendix) show that all countries were able to contact at least 90% (with a average of 97%) of all contacted sampling unites (and potential respondents) after four contact attempts. Although we have restricted the figure at 10 attempts, a few countries (i.e. Switzerland, Germany, Estonia, and Spain) provided in their contact forms the possibility to exceed the prescribed number of 10 contact attempts; although only 1% (at most) of all contacted and potential respondents needed more than 10 contact attempts. Germany needed more than 30, and Switzerland no less than 45 attempts to reach a final potential respondent.

#### *Contact attempts to non-contacts*

Before discussing the timing of the contact attempts as a possible explanation for the large differences with respect to contactability, we look into the number of contact attempts made to non-contacts (as a final outcome). Twenty countries, Norway included, are used in this analysis since this analysis applied only to the non-contacts, this means the selected units that are not contacted at all. Only countries with more than 5% missing records or missing realized interviews (UA, UK) in the call record data, or where the contact variable is missing (IC, HU<sup>20</sup>), are dropped from this analysis.

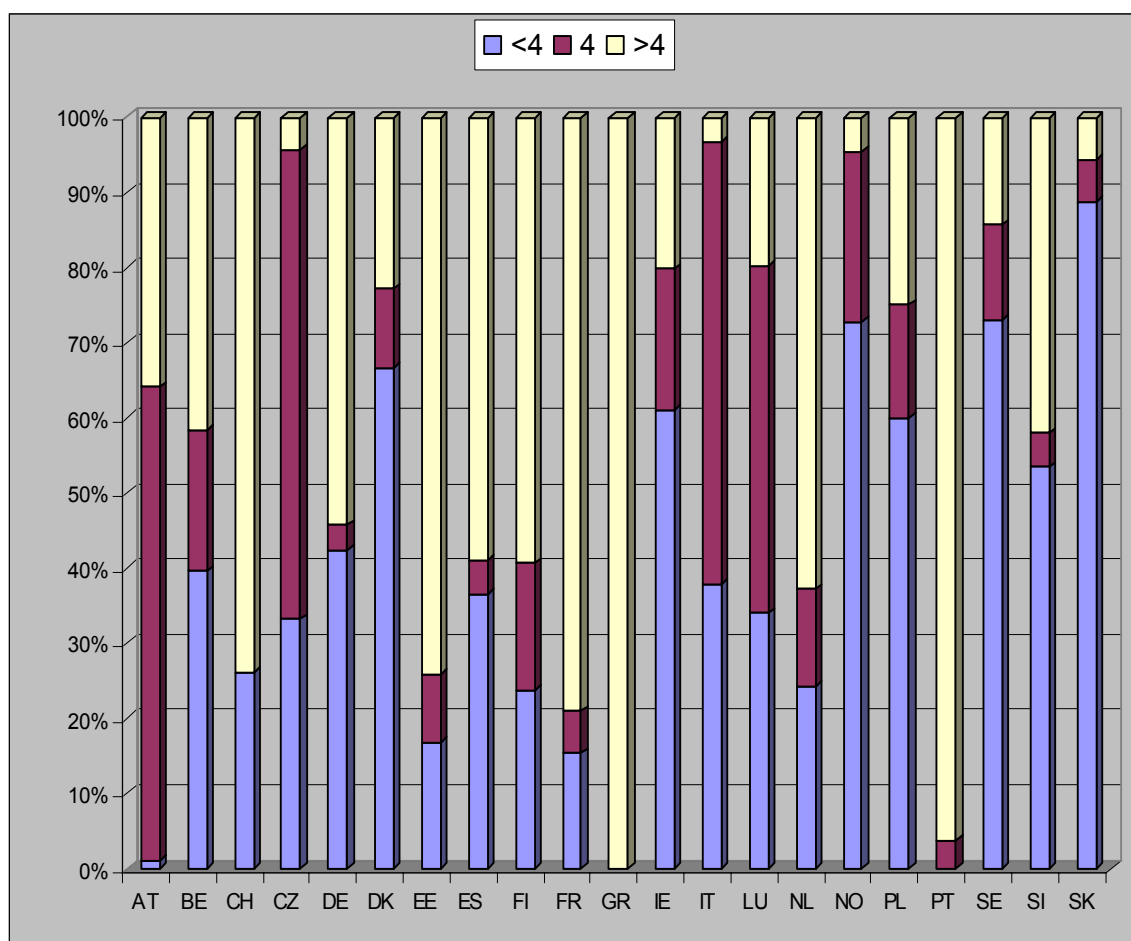
The distribution of the number of calls made to non-contacts is displayed in Figure 8 (see also Table 6 in the appendix). The distinction in less than four contact attempts, four, and more than four is suggested by the rule that at least four attempts is the minimum requirement. Although perhaps Figure 6 might give the impression that if one tries long enough, all sample units will eventually be contacted, this discards the fact that not all potential respondents can be contacted; as we have already shown, there is always a small but substantial number of sample units where no contact at all

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<sup>20</sup> Hungary is a special case in this respect since the contact variables are present, but in the computing of the final codes, there are in the call record data no sample units left that are not contacted at all, but there are non-contacts in the NTS. This is presumably due to coding inconsistencies.

could be established with anyone of the household. (ranging from 0.9% in Poland to 10.9% in Czech Republic and 9.5% in Ireland) Figure 3 shows that, as far as the eventual non-contacts are concerned, the prescribed minimal number of 4 contacts to all non-contacted sample units before abandoning is clearly not a common practice. With the exception of Greece and Portugal, that have tried to contact (nearly) all non-contacts at least four times or more, all other countries have not applied the ‘4 attempts rule’ to at least 20% of the non-contacts. Czech Republic, Germany, Norway, Slovakia, and Sweden even approached a smaller number of non-contacts four times or more.

**Figure 8 – Distribution of number of calls made to non-contacts (ESS Round 2)\***



\* United Kingdom and Ukraine are not in this Figure for reasons explained before. Hungary is also not included because there are no ‘no contacts’ found in the call record data, presumably because of coding inconsistencies.

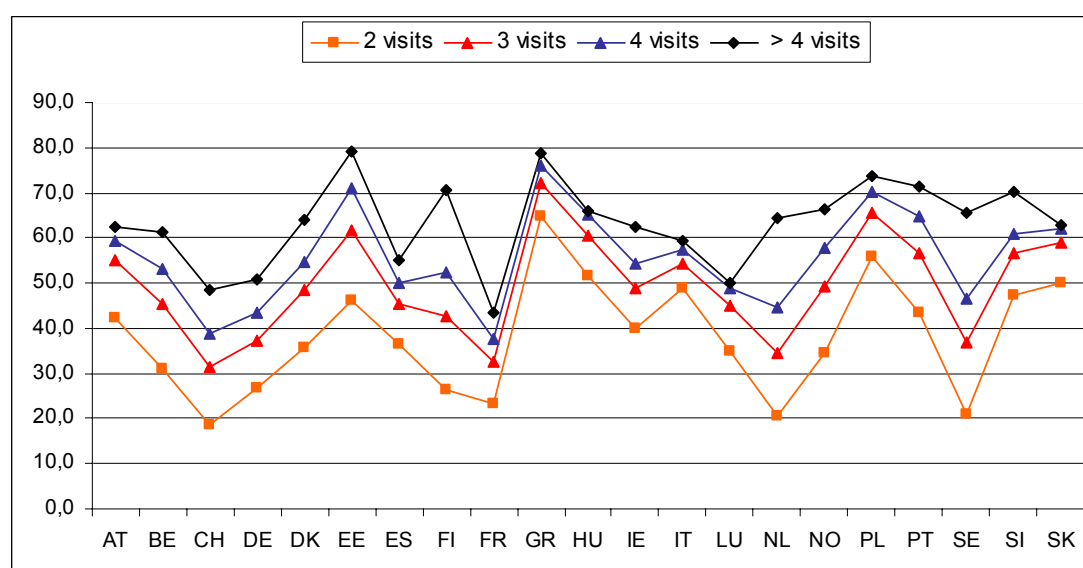
As in Round 1, the number of attempts made to non-contacts and the achieved non-contact rate do not show a clear-cut relationship (Philippens e.a., 2004). Of the five above mentioned countries that explicitly did not meet the required four contact

attempts, Sweden and Norway easily obtained the prescribed non-contact rate of maximum 3%. On the other hand, of the four countries that show the most effort in contacting non-contacts, only Portugal and Switzerland have non-contacts rate below 3%, while Greece and Austria have non-contact rates respectively of 3.6% and 6.9%.

### *Impact of number of contacts on response rate*

As was already explained, ESS employs a ‘minimum four contacts rule’. It is interesting to know what the implication of exactly four, or less than 4 contacts would be on the response rates in the countries. This is shown in Table 7 in Appendix and in Figure 9 below.

**Figure 9. Obtained response rate after 2, 3, 4, and 4 or more visits (realized response rate)\***



\* Only countries in which reliable results are obtained with call record data.

It is clear that for nearly all countries, each additional visit results in an improvement of the response rate, although there are some differences in the additional effects of each visit according to the countries. The effects are lowest for Greece, but the increase in response between two or less visits and four or more visits is there still 11.5 percent points. The increase between four visits and more than four visits is in Greece, Luxemburg, Hungary, Italy, and Slovakia small (less than 3 percent points). In countries as Italy, In Table 7, we have also computed the un-weighted average between the different numbers of visits. In average, the increase is highest between two and three visits (11.5 percent points), but it is still substantial when the number of visits increased. Countries in which the gain of additional visits once there are three visits realized is smallest are Austria, Greece, Hungary, Italy, Luxemburg, and Slovakia, although these had all up to ten visits in a (small) number of cases.

### *Timing of contact attempts (visits)*

In this paragraph, the timing of these contact attempts (visits) is explored in depth. Therefore, attempts to contact potential respondents are divided in ‘weekday afternoon or morning attempts’ (A/M), ‘weekday evening attempts’ (EV) and ‘weekend attempts’ (WE)<sup>21</sup>. The ESS specifications state that at minimum four contact attempts should take place, with at least one visit in the evening and at least one at the weekend. It is assumed that countries, in which interviewers made many evening and weekend calls, might potentially need less calls to make initial contact with households.

Table 8 in the Appendix shows the timing of weekday morning and afternoon, evening and weekend contact attempts, for the first four visits or calls. The percentages shown in this table are conditional upon the previous calls being a non-contact (no contact with anyone of the household or address), so that the distribution of times at each attempt is only based on those households that have not been contacted previously (Philippens e.a., 2004). Even from a quick screen of the table, it is obvious that weekday morning and afternoon contact attempts are generally preferred throughout these first four contact attempts. At the first attempt, the percentages of weekday morning and afternoon calls varies from 38% (Estonia) to 67% (Greece and Austria), and even 77% in France. Only in Norway and Estonia, the evening calls outnumber the morning and afternoon attempts. The percentage of evening attempts at the first call was highest in Norway (56%), Switzerland (44%) and Finland (43%). As in Round 1, the countries with the highest proportion of evening attempts extensively used telephone calls. Weekend calls at this first attempt are very rare in Sweden (2%), Finland (4%), and Norway (5%), and most popular in Slovenia (34%), Poland (29%) and Slovak Republic (29%).

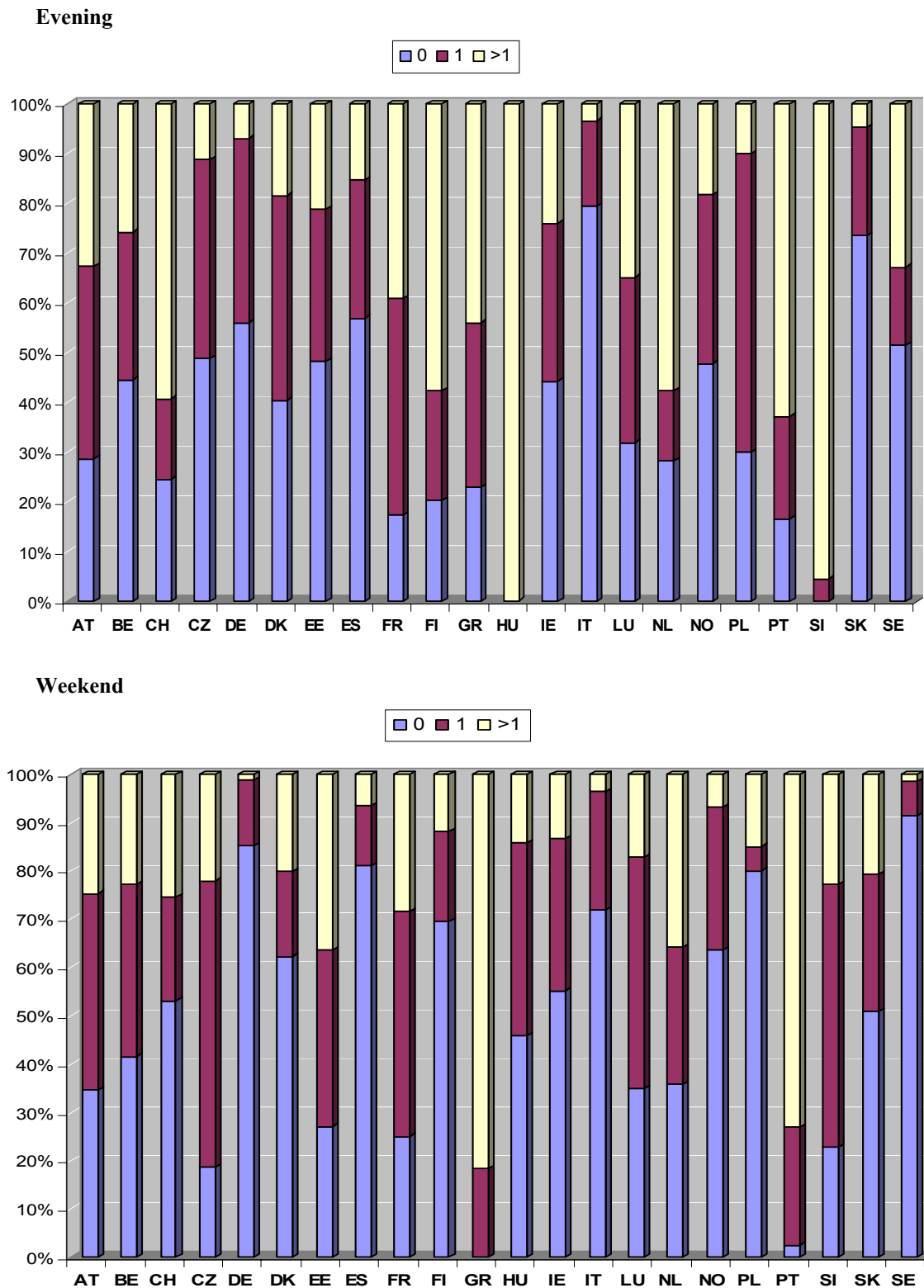
If we look at the distribution of calls in the second, third and fourth contact attempt, it can be observed that – generally speaking - the percentage of calls made on weekday morning and afternoon drops in favor of more evening and weekend attempts. Slovenia is in this respect perhaps the most outspoken case: although at the first contact attempt most calls were on weekday morning or afternoon (47%), the number of evening attempts gradually increases from 52% at the second attempt, over 79% at the third attempt, to 87% at the fourth attempt.

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<sup>21</sup> At this point, we wish to add a note on the arbitrary distinction of the notions ‘afternoon’ and ‘evening’. In our analyses, we fixed the boundary between ‘afternoon’ and ‘evening’ at 6 p.m.; although this is perhaps common sense in most Northern and Western European countries, it makes less sense in Mediterranean countries. This is not just a conceptual issue, since lifestyle and socio-economic patterns (working hours,...) are engrafted onto this different understanding and conception of time.



**Figure 10 – Distribution of number of evening contact attempts (above) and weekend contact attempts (below) made to non-contacts (ESS Round 2)**



To evaluate whether or not interviewers made the prescribed number of evening and weekend calls to non-contacts, Figure 10 (see also Table 9 in the Appendix) shows the overall number of evening and weekend calls to non-contacts. It is clear from

Figure 10 that, at least to a certain degree, all countries violate the prescribed number of evening and weekend contact attempts, with the exception of Hungary and Slovenia in the case of evening calls, and Greece in the case of weekend calls since both countries have no zero calls at these moments. The minimum of 1 evening contact attempt was least complied with in Slovak Republic, Italy, Germany, Spain and Sweden, where more than half of the non-contacts did not receive an evening visit. The evaluation of the ‘at least 1 contact attempt rule’ concerning the weekend calls, points at even larger deviations from what is prescribed.

With the exception of Greece, and to a lesser extent also Portugal and the Czech Republic, all other countries have not attempted to contact non-contacts during the weekend in at least 20% of the cases. In Denmark, Finland, Italy, and Norway 60% or more of the non-contacts did not receive a weekend visit; in Poland, Germany, Spain and Sweden, this figure even raises above 80%.

Finally, we evaluate the success rate of realizing a contact depending on the timing of contact attempts. Table 10 in the Appendix contains the success rate by timing of attempt for the first three contact attempts; again however, we advice to read these figures with the necessary precautions, since we know from the Norwegian case (cf. supra) that ‘contact attempt’ is understood in different ways across countries, leading to doubts over the reliability and comparability of this data.

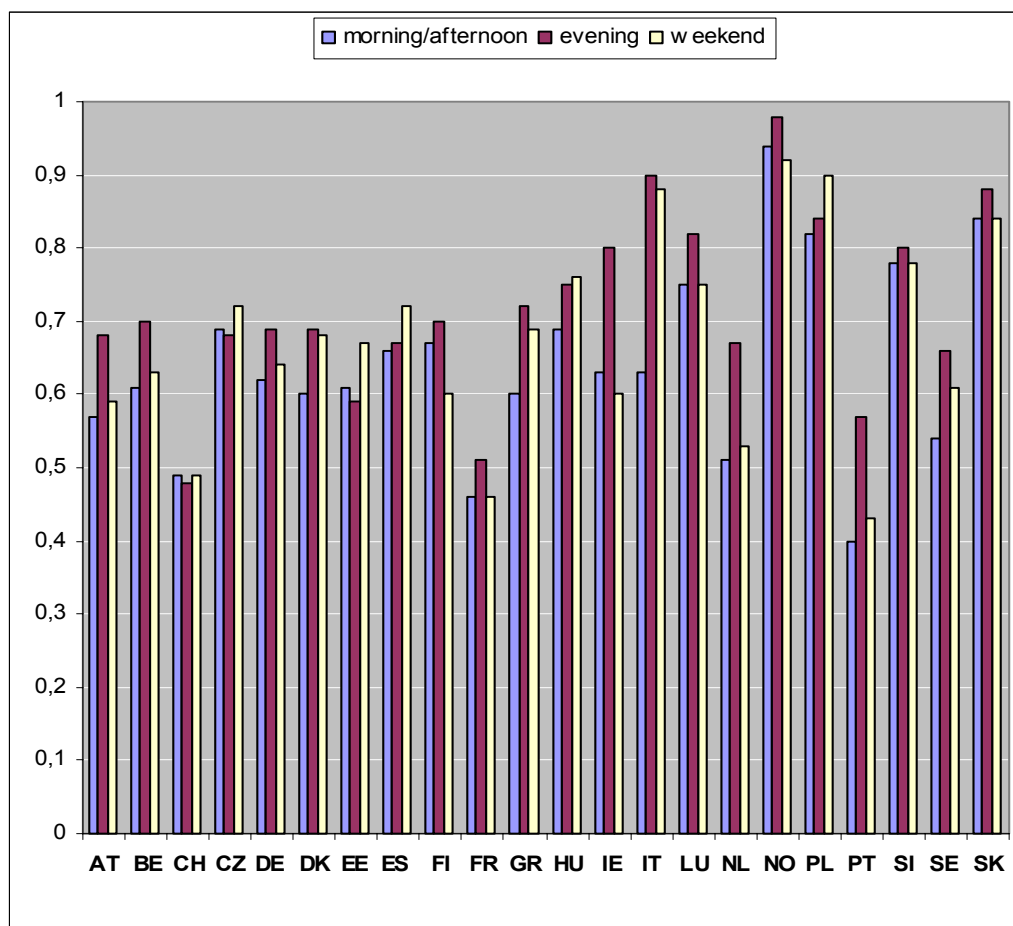
Figure 11 illustrates the success rate of contacting a household by timing of the call, for the first attempt. We refer to Figure 12 for the success at the second and third contact attempt. As in Round 1 – and in line with previous research-, a general –but cautious- conclusion based on Figure 11 would be that in most countries weekday evening contact attempts –and to a lesser extent weekend attempts also- are more productive than weekday morning and afternoon calls. Although evening calls are mostly more productive than weekend attempts as well, this pattern does not return uniformly from the figure.

In Austria, Belgium, Denmark, Greece, Ireland, Luxemburg, the Netherlands, Portugal, and Sweden, evening attempts are clearly more productive than morning or afternoon attempts. Perhaps the most notable benefit of evening contact attempts, compared to both weekday morning or afternoon, and weekend calls, can be found in Germany; considering this knowledge however, it would perhaps be advisable to enhance the number of evening calls, since Germany is amongst the countries that make relatively little evening calls.

In general, based on this kind of analyses, survey organizations could –where applicable- compensate for less favorable at-home patterns by adapting calling strategies towards making more contact attempts in the evening and/or the weekend.

The success rates of contacting selected units are in generally highest during the first attempt (Figure 11).

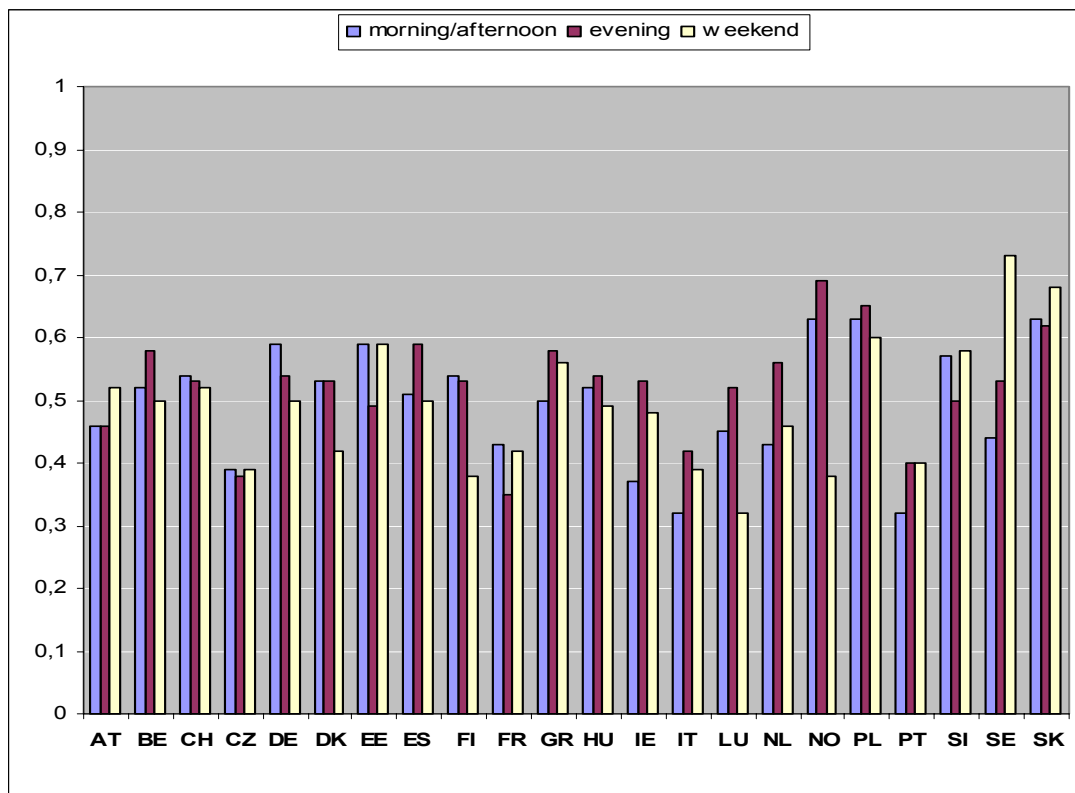
**Figure 11 Probability of contact at occasion of first visit (contact attempts) according to timing of visit (ESS Round 2)**



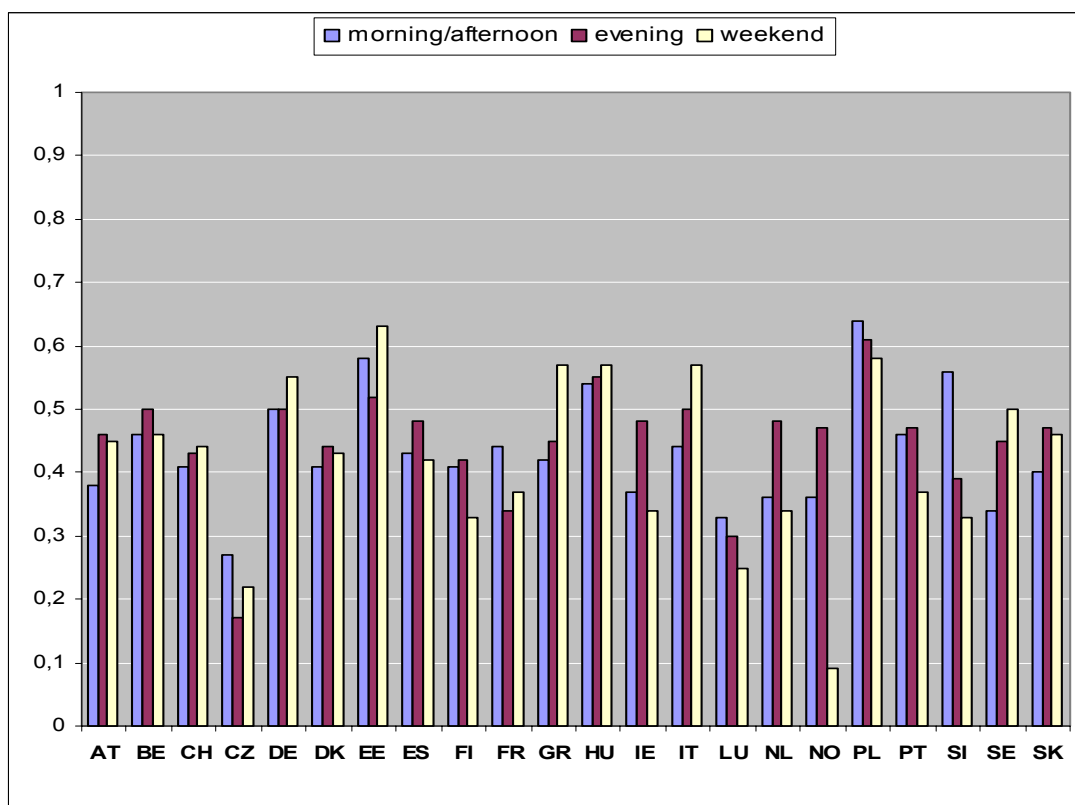
In a number of countries, evening contact attempts seem to be most successful during a second contact as well (Figure 12). This is again the case in Belgium, the Netherlands, Ireland, Italy, Luxemburg, Norway, and Spain. Most remarkable is the high probability of a contact during second attempt in Sweden during weekends, and to a lesser extent in Slovakia, and Austria (Figure 12). However, there were only few visits in weekends at second occasion in Sweden (see Table 8). The figures are somewhat different for the third attempt. One may expect this since failure at earlier contact attempts may be associated with failure at a successive attempt.

**Figure 12 – Probability of contact of at occasion of second visit (above) and third visit according to timing of visit (ESS Round 2)\***

**Second visit**



**Third visit**



\* Computed on total number of contact attempts (vitis) at each occasion.

The ESS advises all participating countries to consider refusal conversion strategies in order to maximise response rates and minimise refusal rates.<sup>22</sup> Refusal conversion can be defined as re-approaching initially reluctant respondents to persuade them to reconsider participating in the survey. “Contacting non-participants in a renewed attempt to interview them is less absurd than it may seem. After all, refusing cooperation is not a permanent state” (Loosveldt e.a., 2004: 73). Since refusals are often ‘soft refusals’, and therefore influenced by the circumstances and the mood of the potential respondent at the time of the participation request, refusal conversion attempts can be quite successful (Philippens e.a., 2004). In this final section, the focus will be on analysing refusal conversion procedures in the ESS, by examining differences in the implementation and practices of refusal conversion strategies.

Within the ESS specifications for participating countries, it is recommended that all ‘soft’ refusals and as many ‘hard’ refusals as possible, should be reissued; it is also advised that conversion cases should be reissued to another, more senior interviewer. Obviously, and this should not be underestimated, reissuing a refusal to another interviewer on the basis of fieldwork process information collected by previous interviewers requires a serious effort. Whatever refusal conversion practice is implemented, each strategy will also have to tackle pragmatic and organizational barriers. Considering both these barriers –and the varying strength of research organisations to overcome this-, and the fact that the guidelines on refusal conversion strategies remain relatively general, one can expect –and the round 1 results affirmed this- that refusal conversion practices will diverge to a considerable extent across countries (Philippens & Billiet, 2004). Also, the large differences between initial response and refusal rates across countries –preceding refusal conversion- can understandably lead to different refusal conversion efforts.

Table 11 in the appendix, and Figure 13, below, shows the decomposition of potential respondents that explicitly refused to participate at least once, into (1) refusals that were not re-approached, (2) re-approached refusals who could not be contacted, (3) re-approached refusals who were contacted but not converted, and finally (4) re-approached refusals that cooperated. Parallel to Round 1, and in line with our expectations, rather large differences in the efforts and results of refusal conversion strategies across countries can be observed.

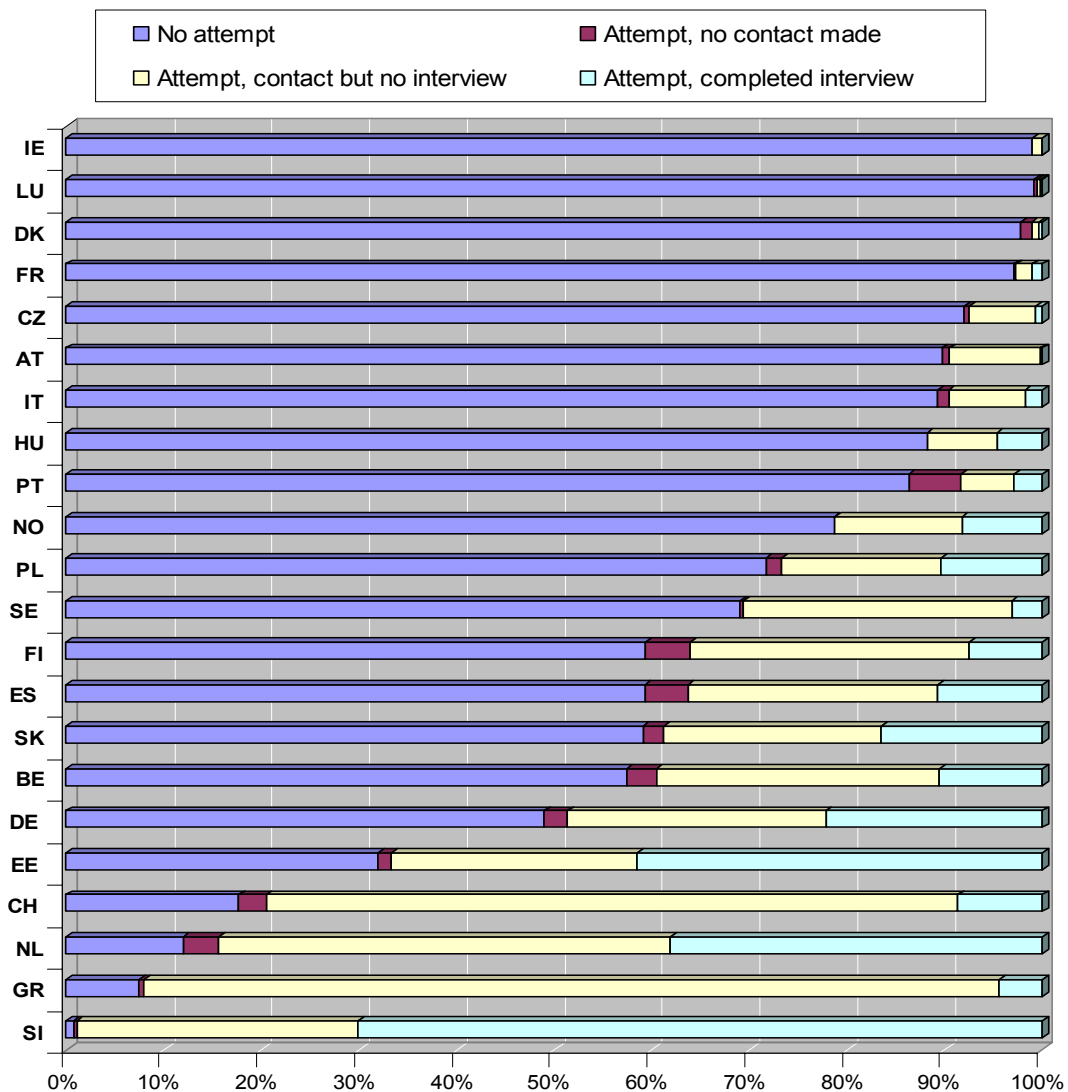
Figure 13 clearly shows how countries vary from contacting almost every single refusal, to putting hardly any effort in reissuing sample units who refused participation. At the first side of the continuum, an extraordinary high percentage of refusals are reissued in Slovenia (99%), in Greece (97%); in the Netherlands (88%), and also in Switzerland in which a large number of refusals (82%) is contacted for at

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<sup>22</sup> ESS also notes that as a general rule, one should keep in mind that refusal conversion is only the second best way to deal with refusals: the better route is to simply avoid refusals.

least one refusal conversion attempt. In the latter case, this strategy is undoubtedly inspired by the high number of refusals and therefore low response rate both in Round 1 and, to a lesser extent, in Round 2. At the other side of the continuum, almost no effort at all is done to convert sampling units who refused: in Ireland, Luxembourg, Denmark and France respectively less than 3% of all refusals has been reissued; in the Czech Republic, Austria and Hungary less than 10% of their respective refusals were subjected to a new visit in view of conversion.

**Figure 13 – Outcome refusal conversion attempts in Round 2 of the ESS**

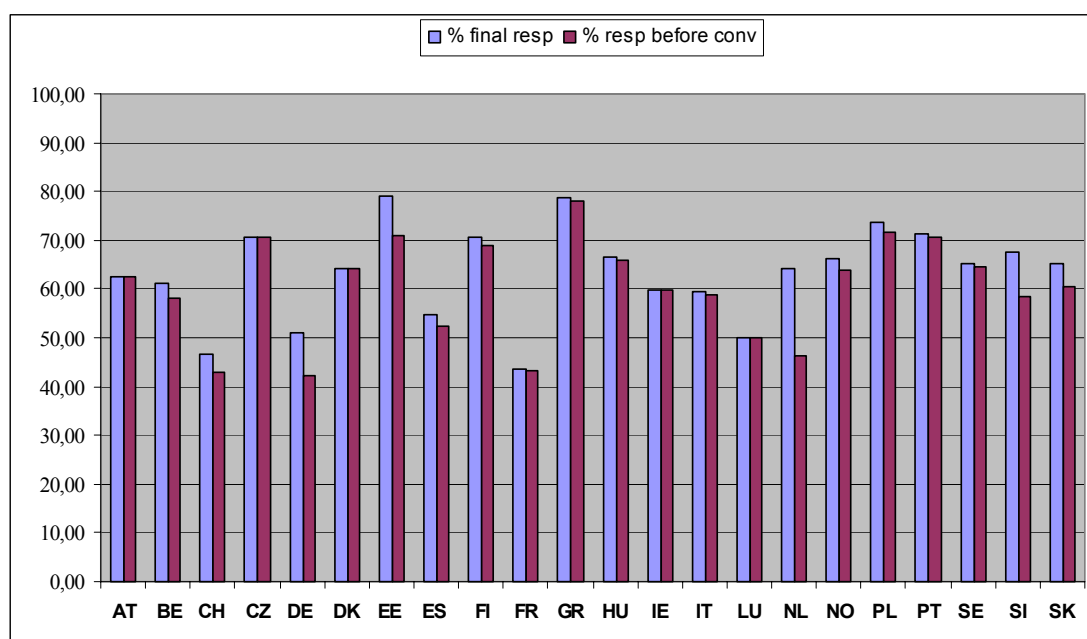


It is also interesting to see whether or not the efforts (if any) that have been done, resulted in success (completed interview), or were merely a high additional cost or time investment without any significant refusal conversions. In the latter group, we tend to count Greece and Switzerland. Although both countries had invested substantially in refusal conversion attempts, only a fraction of the refusals that were successfully contacted again could be converted into completed interviews. Slovenia,

Estonia, and Germany where in this respect highly efficient. Of all refusals – not just those that were reissued- no less than 70% could be converted into successful interviews in Slovenia, 42% in Estonia and 22% in Germany. The Netherlands was also relatively successful with 38% completed interviews obtained from all refusals, and 43% of the re-approached refusals.

With respect to the remaining countries, only Norway and Poland seem to approach more or less similar results; the outcome of refusal conversion efforts in these countries is however less impressive for at least two good reasons: first of all, Norway and Poland are amongst the countries that have focused efforts on a relatively small and presumably ‘soft’ group of refusals, while Germany, Estonia, and notably Slovenia have reissued a much higher percentage of refusals. Without a doubt, high conversion rates will be harder to obtain in the latter case. Secondly, and related to the first reason, successful refusal conversions in Norway and Poland are less impressive in absolute numbers, since they hardly amount up to 10% of the total number of refusals.

**Figure 14 – Effects on final response rates of refusal conversion in Round 2 of the ESS**



A last note on refusal conversion deals with the way in which converted refusals are obtained. It is clear that a strict definition (and acceptance) of a refusal results in a lower number of successes since each re-approached refusal is then a real refusal. When the interviewers are too easily accepting refusals in first stage, they can more easily have successful refusal conversions in a later stage. The refusal conversion outcomes may also be affected by the attitudes of respondents. Higher numbers of reluctant respondents (converted refusals) are also obtained when respondents quickly refuse a first time because they expect at least a second attempt. According to the NC,

this seems somewhat the situation in Germany where a very large number of reluctant respondents has been registered. This had implications for bias analysis since one may expect smaller differences between cooperative and reluctant respondents in that case.

## CONCLUSIONS

This report covers 24 country samples. In comparison with the first Round of ESS, several remarks can be made.

There is still a large amount of variability in response rates, contact rates, and refusal conversion rates. The highest response rates are obtained by Greece (78.8%) like in the first Round, and by Estonia (79.1%), a newcomer. At the other end of the continuum, we find again France (43.6%), Switzerland (48.6%) and Luxemburg (50.1%). But these two countries have substantially improved the response. The third country with a rather low response rate is Germany, and this is somewhat lower than in the first Round. Ireland also obtained a lower response rate in Round 2 (59.7% against 64.4% in Round 1) because of higher refusal rates and non-contact rates. This time, six countries out of 24 of reached the norm, and two others are very close to it. We expect that at the end the global pattern of response will be about the same as in the previous Round. Of all 20 countries that participate in the two rounds, six obtained higher response figures, eight obtained lower figures, and seven are more or less stable.

The variability is also observed in the numbers of non-contacts. A maximum non-contact rate of 3% was set out. Seven countries had lower non-contact rates; three countries obtained more than three but less than four. The twelve remaining countries obtained more than four non-contacts. Ireland, Czech Republic and Slovenia realized no contact with more than 12% of the sampling units who were approached. All six countries with low non-contact rates were also in this category in the first round. Seven of the ten countries with more than 4 non-contacts had also a higher number of non-contacts in previous round. In some countries, the number of non-contacts can probably reduced by planning more visits. We must be careful with the information about the relationship between number of attempts to contact a respondent, and number of successful contacts. Norway seemed to have a success rate of more than 95% at first contact; however we assume that this figure is artificial because of different definitions of 'contact attempt'. It is possible that 'first attempt' is defined as first personal attempt, even after several phone calls. This should be clarified in view of next round in order to be able to compare the figures over the rounds (see also Part III Lose ends).

In the data quality report of the first round, it was shown that the probability of successful contacts depends on the moment of the contact, and it was also shown that some countries could improve the success-rate by changing the moment of the visits. However, also in this round, we can see that the planning of the moments of the visits



is not optimal. Evening visits are more likely to result in a contact in most countries but the amount of evening visits is often low in some of these countries. It is also shown that the requirement of a minimum of at least four contact attempts is legitimated by the fact that every new visit results in a significant increase of the response rate.

As in the first rounds, a lot of efforts were done in order to persuade respondents who initially refused. In the first round, we obtained more than 470 converted respondents in two countries, and more than 115 in three other countries. These data are crucial in order to have a view on the direction of non-response bias for attitudinal variables that are not documented in population statistics (see: Billiet & Philippens, 2004). The second round datasets are not yet completed, but we have now two samples with more than 435 converted refusals, and three with more than 150 converted refusals. We expect that we will be able to analyze more country samples than in the first round.

### **PART III. LOSE ENDS**

This paper deals with all 26 countries that participated in Round 2. Some countries had only recently delivered their data. Call record data of some countries is completely, or largely, missing, and some data of some other countries is not reliable enough in order to use it in this report. We have however included some information of these countries too as far as it is reported in “*ESS2-2004 Documentation Report, ed. 3.1*” (published end January 2006). During the research period, countries delivered their data at different moments, and more than once call record data is not their prime priority. This is reflected both in the fact that contact form data is most of the time the final data file to deliver, and in the quality of the dataset. As we set out earlier in this paper, we fully acknowledge that, although very valuable, insisting on and using contact forms puts an additional strain on National Coordinators and field work agencies. However, compared to the elaborate screening and editing of the main data sets by the NSD, we do not have prewritten syntax files to deal with, and screen the incoming contact form data, nor was there time to pick up such an immense task.

As a result, several countries corrected their contact form data (either as a result of our analyses and subsequent queries, or at one’s own initiative), and uploaded adjusted data. Since this is (even at this point) an ongoing process and although we checked data as much as possible, we cannot fully guarantee the above results are 100% free of error. In this sense, the report at hand is not the result of a single, elaborate calculation, but the outcome of an iterative process of repeatedly doing the same analyses. Additionally, we have illustrated in this report that due to different understanding or variable definitions of some of the concepts used here, not all analyses can be safely compared across countries. We remind the reader of the difference in how a single ‘contact attempt’ is defined (e.g. the Norway case), or at the somewhat arbitrary definition and timing of ‘afternoon’ and ‘evening’. Probably

more fundamental is the incomparability due to the different sampling frames used in the ESS (i.e. individual named, household or address samples).

Unfortunately, we are urged to finish with some 'lose ends'; in essence, these are a few less or more important minor issues that were not yet picked up during the course of this project, or did not rise to the surface until the final stages of the project, and even of writing up this report. These points have all been mentioned already in the above; here therefore, a short synthesis will suffice.

A first point to mention are the incomplete or completely missing call record data. The contact forms data file was not complete for Iceland and Turkey, and we were not able to use these data for our analysis. For the central tables, the information from the National Technical Summary (NTS) was used, and this may not be completely comparable with the information of the other samples.

Secondly, two special cases are Ukraine and United Kingdom since there are two problems that made a comparable analysis very difficult. In both cases a large number of sampling units was not in the call record data, and there was no correspondence between interviews in main file and call record data file because of incongruence between number of cases and case identification variable (IDNO). In previous tables, the data of Ukraine and United Kingdom were not used because of these problems, although we have tried to use the data as much as possible. The problems that we met are best illustrated by the analysis of refusal conversion, the UK realised a large number of converted refusals. When main file and call record data are merged, we obtain 1,275 conversion attempts of which 25% are successful, this is 324 cases. In this situation, a number of records classified as interviews is lost because of non-correspondence with interviews in main file. If we do not try to find correspondence between main file and call record data, and only use the latter, then we obtain 1,581 attempts for refusal conversion of which 27.6% are successful, this is 437 units. This example illustrates that the results are not reliable, but it is possible to use the smallest number of cases (324) in an analysis of reluctant respondents in view of bias estimation since this smaller number correspond to effective interviews. In other parts of the analysis, the results for Ukraine and United Kingdom are not so clearly unreliable, but because of the previous, we take no risk by discarding them from the tables and figures.<sup>23</sup>

A third problem also mentioned, deals with the contact data from Slovenia and Switzerland. The latter delivered a new contact data file (04/08/2005), where small corrections are made, also to variables that were used within the above analyses (e.g.

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<sup>23</sup> For example, the probability of contacts at first visit is about 0.53 in UK and this is not so different (0.51) with another way of analysing (without merging CF and main file, and not using the gross sample size) but many other results are very different. Ukraine has even a success rate of 0.62 at first attempt, but for this sample, there is a large difference 0.82) with the alternative method (not merging and not using the gross sample size). These experiences justify our choice not to report these data in the tables.

‘the household who had moved were taken out of the variable OUTINELI (7 other), and put into categories 08 and 09 of the variable OUTINIA’ – mail from NSD at 11/08/2005). Although perhaps negligible (e.g. small percentage of ‘movers’), this nevertheless could result in response, non-contact and refusal rates that are not completely accurate. As for Slovenia, the implications are somewhat unclear and could therefore be more seriously. Slovenia uploaded a new contact data file (at 07/07/2005) for the third time; although for most variables (at least for these needed in our analyses) problems seemed to be largely solved. Repeating the calculation of the response rates on the new data, resulted in impossible figures in some parts of the analysis. This is the case in the refusal conversion section, and because of this bias analysis in which reluctant and cooperative respondents are compared, will not be possible for Slovenia. At this point, we have used the NTS for reporting on the response, non-contact and refusal rates, while for all other analyses, the most recent data is used. Obviously, this would need a closer look in order to have a clear view at the scope and potential impact of the problem.

A fourth problem concerns the contact data of the Czech Republic and the 1196 addresses or sample units that were not used during fieldwork, and did not appear in the contact form data. As was mentioned, the CCT decided to count these ‘unused’ addresses as “other non response”, which results in different response, non-contact and refusal rates. In this report, response rates are based on the accepted NTS, but for some further analysis the call record data could be used since it appeared reliable for that part of the sampling units that were visited.

All by all, for all other countries the results obtained from the National Technical Summaries and the response rates obtained from the analysis of the contact forms are mostly very close to each other as can be seen in Table 1 in Appendix. However, the other statistics like non-contacts, refusals and ineligibles in the NTS show in a number of cases larger differences compared with the call record data. We showed in most tables and figures the results of the call record data, but it is possible that some of the non-response categories, especially the non-contacts, are underestimated. All by all is the application and recording of the correct categories belonging to the outcomes of each visit a not so easy task for the interviewers that leads to error in the data. Serious deviations between the NTS figures and those in this report are signals of potential unreliability.

Finally, we wish to add some ‘loose ends’ that could in future work perhaps be picked up; the above section on refusal conversion efforts for example, offers the opportunity to check for differences between so called cooperative (no refusal) and reluctant (at least one refusal) respondents on some background variables and contextual items. This could be valuable since one can assume or hypothesize that reluctant respondents are more similar to those that finally refused and therefore, that persuading these reluctant respondents with refusal conversion efforts is a valuable strategy since this yields a more representative or balanced sample (Billiet & Philippens, 2004; Billiet, Philippens, Fitzgerald, & Stoop, forthcoming). Furthermore, this could bridge the

section on non-response and the analyses of the registered response; as for the latter, it is clear that this report offers only an exploratory view at some relatively simple possibilities to screen for conspicuous cross-country or cross-cultural deviations. We have also referred to more elaborate and sophisticated techniques that could follow this initial screening. And finally, a rather straightforward point: as more participating countries deliver data that will become available soon, the comparison between ESS round 1 and round 2 on the issues presented in this report should become more valuable and richer. Doing so would obviously not only serve a methodological goal or interest, but would undeniably allow ESS, as a project and a survey, to learn from this for future rounds to come.

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## APPENDIX

**Table 1. Comparison of response rates reported based on “ESS2-2004 Documentation Report, ed. 3.1” (ESS2 Docu) and in analysis of call record data in contact form files (CF)**

CNTRY	Response rates (ESS2 DOCU)	Response rates (CF)	Eligible sample size (ESS2 DOCU)	Eligible sample size (CF)	Comments on call record data files (CF)
EE	79.3	79.1	2,509	2,515	2,867 records in CF and in gross sample (ESS2 DOCU); more than 10 visits
GR	78.8	78.8	3,054	3,055	3,056 records in CF and in gross sample (ESS2 DOCU)
PL	74.4	73.7	2,308	2,329	2,399 records in CF and in gross sample (ESS2 DOCU)
PT	70.5	71.2	2,910	2,883	3,094 records in CF and in gross sample (ESS2 DOCU); some coding inconsistencies
CZ**	55.3	-	5,473	-	Problems: 4,355 records in CF but gross sample (ESS2 DOCU) has 5,531 sample units; correspondence between 3,011 interviews in CF on total of 3,026 realised in main file; usable for a part of the analysis.
FI	70.8	70.7	2,857	2,859	2,900 records in CF and in gross sample (ESS2 DOCU) but confusion between system missing (zero) and codes 9 (or 99) for some variables
UA*	66.6	-	3,050	-	2,866 records in CF but 3,050 in gross sample (ESS2 DOCU); loss of 164 records in CF; no correspondence with interviews in main file; inconsistency in coding; not usable.
SI*	70.2	-	2,053	-	2,206 in CF (new file) , but only 2,201 in gross sample (ESS2 DOCU); Many missing values, wild codes; 1,409 realised interviews in CF; 1,442 in main file (33 missing); 539 missing IDNO's of interviews in CF; only usable for part of analysis.
NO	66.2	66.2	2,657	2,660	2,750 records in CF and in gross sample (ESS2 DOCU); no neighbourhood info; different structure of annotation file
HU	66.5	65.9	2,252	2,248	2,463 records in CF and in gross sample (ESS2 DOCU); inconsistencies in coding.
SE	65.8	65.4	2,962	2,980	3,000 records in CF and in gross sample (ESS2 DOCU); no neighbourhood info; problem with number of contacts because number of deceased units detected by interviewer consulting official records (problem only with contacts computation). Problems solved in annotation for Round 3 (additional code for MODEVB).
SK	63.3	62.7	2,389	2,410	2,500 records in CF and in gross sample (ESS2 DOCU); 9 interviews in CF missing.

CNTRY	Response rates (ESS2 DOCU)	Response rates (CF)	Eligible sample size (ESS2 DOCU)	Eligible sample size (CF)	Comments on call record data files (CF)
NL	64.3	64.3	2,924	2,924	3,009 records in CF and in gross sample (ESS2 DOCU)
DK	65.1	64.2	2,284	2,317	2,441 records in CF and in gross sample (ESS2 DOCU); inconsistencies in coding of reasons for refusal.
AT	62.4	62.4	3,615	3,615	3,672 records in CF and in gross sample (ESS2 DOCU); no completed interview on first visit but many appointments – was by phone. This practice is not recommended because of HH sample.
IE	62.5	62.5	3,657	3,657	3,981 records in CF and in gross sample (ESS2 DOCU); most problems solved after analysis of CF's based on updated CF data-file.
IT	60.8	59.3	2,513	2,577	Not delivered in time, unreliable coding of 'non-contacts' and not' able other'. Underestimation of non-contacts, is presumably 10,8% and not 5,9%.
BE	61.4	61.2	2,897	2,906	3042 in ESS2 DOCU but only 3018 in CF; reason 24 invalid interviews not in CF (deleted cases), must be counted as 'other' non-response.
ES	54.8	54.9	3,033	3,031	3,213 records in CF and in gross sample (ESS2 DOCU); different names of some variables, some wild codes (7,77); more than 10 visits.
UK*	50.6	-	3,746	-	4,117 records in updated CF but only 4032 in gross sample (ESS2 DOCU); 3727 in Cf analysis after merging with main file. Reason, IDNO's of CF and main file do not correspond one by one; 1930 realised interviews in CF, but 1897 in main file; not possible to solve problems after delivering of new file because of inconsistent IDNO's and incomplete CF file; not usable for any analysis of call record data.
DE	52.6	51.0	5,456	5,633	5,868 records in CF and in gross sample (ESS2 DOCU); more than 10 visits; suggestion of additional codes.
IS*	51.3	-	1,129	-	446 records in CF but 1,200 in gross sample (ESS2 DOCU); Two different files for CF and neighbourhood info. CF very incomplete; not usable for any analysis of call record data.
LU	50.0	50.1	3,269	3,261	3,497 records in CF and in gross sample (ESS2 DOCU); many appointments at first visit because of acceptable first telephone contact (IND
TU*	50.7	-	3,661	-	No call record data delivered to ESS.
CH	46.9	48.6	4,569	4,600	4,863 units in CF and in gross sample (ESS2 DOCU); more than 10 visits; some inconsistencies in coding.
FR	43.6	43.6	4,145	4,144	4,400 units in CF and in gross sample (ESS2 DOCU); some var names different .

- \* Not possible to compute response and non-response rates with call record data.
- \*\* Czech Republic is a special case: a large number of selected units were systematically dropped near the end of fieldwork. These are not in the contact forms and that is the reason for the higher response rate of 70.8% obtained in the CF analysis. If these missing records are included in the contact forms we obtain about the same low response rate as in the ESS2 DOCU. Apart from this systematic loss of a part of the gross sample, the data is usable for analysis of all cases that are included in the call record data file because there is nearly complete match between interviews IDNO's in CF and in main file. The reason of 15 missing interviews in the CF is because these are broken off, or incomplete interviews.

**TABLE 2a - Achieved response, non-contact and refusal rates according to call record data** (*Contact forms information*)

Country		Completed interview	Noncontact	Refusal	Not able/other	Total eligible sample
AT	n	2,256	251	1,076	32	3,615
	%	62.41	6.94	29.76	0.89	100
BE	n	1,778	101	768	259	2,906
	%	61.18	3.48	26.43	8.91	100
DK	n	1,487	114	573	143	2,317
	%	64.18	4.92	24.73	6.17	100
FI	n	2,022	59	650	128	2,859
	%	70.72	2.06	22.74	4.48	100
FR	n	1,806	363	1,653	322	4,144
	%	43.6	8.8	29.3	18.3	100
GR	n	2,406	109	504	36	3,055
	%	78.76	3.57	16.5	1.18	100
HU	n	1,482	128*	364	274	2,248
	%	65.9	5.7	16.2	12.2	100
IE	n	2,286	347	817	207	3,657
	%	62.51	9.49	22.34	5.66	100
IT	n	1,529	153	590	305	2,577
	%	59.33	5.94	22.89	11.84	100
LU	n	1,635	232	1,135	259	3,261
	%	50.14	7.11	34.81	7.94	100
NL	n	1,881	78	852	113	2,924
	%	64.3	2.7	19.1	13.9	100
NO	n	1,760	44	701	155	2,660
	%	66.17	1.65	26.35	5.83	100
PL	n	1,716	20	452	141	2,329
	%	73.68	0.86	19.41	6.05	100
PT	n	2,052	78	538	215	2,883
	%	71.18	2.71	18.66	7.46	100
CH	n	2,234	98	2,025	243	4,600
	%	48.6	2.1	44.0	5.3	100
DE	n	2,870	393	1,848	522	5,633
	%	50.95	6.98	32.81	9.27	100
EE	n	1,989	85	285	156	2,515
	%	79.09	3.38	11.33	6.2	100
ES	n	1,663	216	762	390	3,031
	%	54.87	7.13	25.14	12.87	100
SE	n	1,948	70	654	308	2,980
	%	65.37	2.35	21.95	10.34	100
SK	n	1,511	143	547	209	2,410
	%	62.70	5.93	22.7	8.67	100

\* Hungary: noncontact rate based on NTS because of inconsistencies in CF for this variable.

**TABLE 2b - Achieved response, non-contact and refusal rates according to National Technical Summaries (“ESS2-2004 Documentation Report, ed. 3.1”)\***

Country		Completed interview	Noncontact	Refusal	Not able/other	Total eligible sample
CZ	n	3,026	598	607	1,243	5,474
	%	55.29	10.9	11.09	22.71	100
IC	n	579	52	441	57	1,129
	%	51.3	4.6	39.1	5.0	100
SI	n	1,442	210	315	86	2,053
	%	70.2	10.2	15.3	4.2	100
TU	n	1,856	495	880	430	3,661
	%	50.7	13.5	24.0	11.8	100
UA	n	2,031	191	490	338	3,050
	%	66.6	6.3	16.1	11.1	100
UK	n	1,897	296	1,263	290	3,746
	%	50.6	7.9	33.7	7.7	100

\* Country samples for which it is impossible to obtain reliable estimations based on analysis of call record data. See also comments in Table 1b and footnotes 11 and 12. Countries for which deviations of obtained interviews or sample sizes between both sources (CF and *ESS2-2004 ed. 3.1 document*) are larger than 2.5 percent points are in Table 2b. These samples are retained from a number of analysis.

**TABLE 3a - Achieved response, non-contact and refusal rates for ESS Round 1 & Round 2 according to call record data**  
*(Contact forms information)*

Country		Response rate		Non-contact rate		Refusal rate		Eligible sample size		Total sample size	
		Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
<b>EE</b>	%	-	79.1	-	3.4	-	11.3	-	2,515	-	2,861
<b>GR</b>	%	79.6	78.8	1.7	3.6	16.9	16.5	3,222	3,055	3,227	3,056
<b>PL</b>	%	72.2	73.7	0.8	0.90	19.6	19.4	2,921	2,329	2,978	2,392
<b>PT</b>	%	68.8	71.2	3.2	2.7	26.9	18.7	2,196	2,883	2,366	3,079
<b>FI</b>	%	73.3	70.7	1.4	2.1	20.9	22.7	2,728	2,859	2,766	2,893
<b>NO</b>	%	65.0	66.2	3	1.7	25	26.4	3,109	2,660	3,215	2,750
<b>HU</b>	%	70.3	65.9	3.2	5.7	15.1	16.2	2,398	2,248	2,484	2,463
<b>SE</b>	%	69.0	65.4	4	2.4	21	22.0	2,878	2,980	3,000	2,997
<b>SK</b>	%	-	62.7	-	5.9	-	22.7	-	2,410	-	2,500
<b>NL</b>	%	67.8	64.3	2.5	2.7	26.2	19.1	3,486	2,924	3,570	3,009
<b>DK</b>	%	68.4	64.2	4.6	4.9	23	24.7	2,143	2,317	2,150	2,433
<b>IE</b>	%	64.4	62.5	8.1	9.5	22.9	22.3	3,179	3,657	3,185	3,981
<b>AT</b>	%	60.6	62.4	10.1	6.9	27	29.8	3,725	3,615	3,828	3,672
<b>BE</b>	%	59.3	61.2	4.5	3.5	25.6	26.4	3,204	2,906	3,340	3,018
<b>IT</b>	%	43.7	59.3	2.8	5.9	45.8	22.9	2,778	2,577	3,000	2,613
<b>ES</b>	%	53.6	54.9	7.9	7.1	35.3	25.1	3,227	3,031	3,657	3,206
<b>DE</b>	%	53.7	51.0	5.9	7.0	29.3	32.8	5,436	5,633	5,796	5,868
<b>LU</b>	%	43.2	50.1	6.9	7.1	37.0	34.8	3,589	3,261	3,773	3,497
<b>CH</b>	%	33.0	48.6	2.0	2.1	55.1	44.0	4,652	4,600	5,086	4,863

**TABLE 3b - Achieved response, non-contact and refusal rates for ESS Round 1 & Round 2 according to National Technical Summaries**  
*(“EES1-2002 Documentation Report, ed. 6.0” and “ESS2-2004 Documentation Report, ed. 3.1”)*

Country		Response rate		Non-contact rate		Refusal rate		Eligible sample size		Total sample size	
		Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
<b>CZ</b>	<b>%</b>	43.3	55.3	11.6	10.9	20.0	11.1	3,139	5,474	3330	5531
<b>FR*</b>	<b>%</b>	43.1	43.6	14.7	11.6	38.5	38.9	3,488	4,145	3748	4400
<b>IC</b>	<b>%</b>	-	51.3	-	4.6	-	39.1	-	1,129	-	1200
<b>SI</b>	<b>%</b>	70.5	70.2	5.1	10.2	17.3	15.3	2,154	2,053	2222	2201
<b>TU</b>	<b>%</b>	-	50.7	-	13.5	-	24.0	-	3,661	-	4,326
<b>UA</b>	<b>%</b>	-	66.6	-	6.3	-	16.1	-	3,050	-	3050
<b>UK</b>	<b>%</b>	55.5	50.6	4.9	7.9	30,6	33.2	3,693	3,746	4013	4032

\* For reason of comparability, figures for France are based on NTS for both rounds because of Round 1 (call record data were missing for France).

**Table 4. Percentage contact attempt (visits) by telephone at first and at all visits**  
*(call record data)\**

<b>Country</b>	<b>% first calls by phone</b>	<b># of first vizits</b>	<b>% all calls by phone</b>	<b># of all vizits</b>
AT	54.5	3,672	41.4	9,811
BE	13.1	3,018	21.8	8,865
CH	0.1	4,863	36.7	21,862
CZ	2.9	4,335	2.9	8,292
DE	22.0	5,738	25.5	15,550
DK	36.2	2,420	41.2	6,513
EE	5.2	2,864	14.7	7,627
ES	12.5	3,213	7.5	8,286
FI	90.3	2,873	74.8	11,561
FR	0.0	4,400	0.0	11,520
GR	0.1	3,056	1.3	6,539
HU	4.3	2,462	7.3	4,827
IE	0.7	3,676	5.2	8,570
IT	0.6	2,613	11.6	7,866
LU	47.2	3,497	41.2	7,522
NL	1.8	3,006	20.4	12,487
NO**	84.0	2,659	65.1	7,298
PL	0.0	2,393	11.3	4,815
PT	0.0	3,094	1.2	8,042
SE	95.1	3,000	80.4	12,726
SK	8.6	2,467	15.2	4,705
SI	11.7	2,190	40.3	5,244

\* Only countries with reliable call record data on mode of contact (CZ and SI are also reliable analysis of contacts).

\*\* Countries not used in analysis of contact information about number of calls



**TABLE 5 – Distribution of number of attempts before initial contact is made in each country (expressed as percentage of total number of contacted sampling units)\***

Country		Contactattempts										Total
		1	2	3	4	5	6	7	8	9	10	
<b>AT</b>	%	59.50	19.20	8.85	7.68	3,00	1.12	0.33	0.14	0.08	0.11	100
<b>BE</b>	%	63.09	19.72	8.91	3.74	2.45	0.93	0.53	0.27	0.27	0.10	100
<b>CH</b>	%	49.15	27.47	9.99	5.28	2.82	1.85	0.84	0.56	0.43	1.60	100
<b>CZ</b>	%	70.29	12.2	6.51	9.09	0.85	0.21	0.02	-	-	0.02	100
<b>DE</b>	%	66.60	19.66	7.40	3.02	1.54	0.76	0.42	0.29	0.12	0.19	100
<b>DK</b>	%	65.18	17.8	7.68	4.25	2.31	0.91	0.62	0.25	0.37	0.62	100
<b>EE</b>	%	62.88	21.05	9.99	3.35	1.99	0.56	0.07	0.07	0.03	-	100
<b>ES</b>	%	70.43	17.06	6.22	3.24	1.40	0.68	0.40	0.16	0.09	0.31	100
<b>FI</b>	%	68.14	16.9	6.45	3.24	2.03	0.93	0.59	0.34	0.45	0.93	100
<b>FR</b>	%	47.55	21.57	12.45	7.16	11.27		-	-	-	-	100
<b>GR</b>	%	63.94	19.18	8.05	3.21	1.70	1.73	1.37	0.26	0.43	0.13	100
<b>HU</b>	%	72.72	13.97	7.35	3.41	1.50	0.37	0.32	0.16	0.04	0.16	100
<b>IE</b>	%	65.54	15.46	10.32	5.36	1.80	0.84	0.44	0.11	-	0.14	100
<b>IT</b>	%	84.88	5.51	4.17	4.17	0.46	0.19	0.04	0.04	-	-	1.00
<b>LU</b>	%	77.92	10.21	4.60	4.98	1.29	0.66	0.11	0.03	0.14	0.06	100
<b>NL</b>	%	55.73	21.5	9.41	4.59	3.42	2.06	1.06	0.9	0.66	0.66	100
<b>PL</b>	%	85,00	9.49	3.47	1.34	0.50	0.13	0.08	-	-	-	100
<b>PT</b>	%	44.51	20.23	15.09	12.51	4.43	1.55	0.45	0.87	0.36	-	100
<b>SE</b>	%	59.4	20.5	8.23	3.93	2.13	1.43	1.17	0.87	0.43	1.90	100
<b>SI</b>	%	78.92	11.41	4.74	1.82	1.64	0.64	0.27	0.18	0.23	0.14	100
<b>SK</b>	%	86.11	9.91	2.15	1.22	0.20	0.20	0.04	0.12	-	0.04	100
<b>Mean**</b>	%	66,90	16,54	7,66	4,49	2,29	0,88	0,47	0,30	0,27	0,44	100

\* Cut off at 10 calls ; \*\* Unweighted average

**TABLE 6 - Number of attempts made to non-contacts**

Countries with 10 or less attempts		Contactattempts											Total
		0	1	2	3	4	5	6	7	8	9	10	
<b>AT</b>	<b>n</b>	-	1	1	1	158	20	28	9	1	1	1	251
	<b>%</b>	-	0.4	0.4	0.4	62.95	19.92	11.16	3.59	0.4	0.4	0.4	100
<b>BE</b>	<b>n</b>	-	12	5	23	19	19	8	5	3	5	2	101
	<b>%</b>	-	11.88	4.95	22.77	18.81	18.81	7.92	4.95	2.97	4.95	1.98	100
<b>CZ</b>	<b>n</b>	13	42	35	109	373	20	4	1	-	-	1	598
	<b>%</b>	2.17	7.02	5.85	18.23	62.37	3.34	0.67	0.17	-	-	0.17	100
<b>DK</b>	<b>n</b>	20	42	3	11	12	11	3	2	1	4	5	114
	<b>%</b>	17.54	36.84	2.63	9.65	10.53	9.65	2.63	1.75	0.88	3.51	4.39	100
<b>FI</b>	<b>n</b>	-	-	8	6	10	13	3	1	1	2	15	59
	<b>%</b>	-	-	13.56	10.2	16.95	22.03	5.08	1.69	1.69	3.39	25.42	100
<b>FR</b>	<b>n</b>	-	35	9	12	20	287	-	-	-	-	-	363
	<b>%</b>	-	9.64	2.48	3.31	5.51	79.06	-	-	-	-	-	100
<b>GR</b>	<b>n</b>	-	-	-	-	-	19	40	34	7	8	1	109
	<b>%</b>	-	-	-	-	-	17.43	36.70	31.19	6.42	7.34	0.92	100
<b>IE</b>	<b>n</b>	56	54	22	80	65	32	17	12	4	-	5	373
	<b>%</b>	16.14	15.56	6.34	23.05	18.73	9.22	4.90	3.46	1.15	0.00	1.44	100
<b>IT</b>	<b>n</b>	-	44	7	7	90	4	1	-	-	-	-	153
	<b>%</b>	-	28.76	4.58	4.58	58.82	2.61	0.65	-	-	-	-	100
<b>LU</b>	<b>n</b>	-	37	7	35	107	23	14	2	1	4	2	232
	<b>%</b>	-	15.95	3.02	15.1	46.12	9.91	6.03	0.86	0.43	1.72	0.86	100

(continued)

(Table 6: continuation)

Countries with 10 or less attempts		Contactattempts											Total
		0	1	2	3	4	5	6	7	8	9	10	
NL	n	-	10	6	3	10	2	12	4	8	12	11	78
	%	-	12.82	7.69	3.85	12.82	2.56	15.38	2.13	10.26	15.38	14.1	100
NO	n	16	4	5	7	10	2	-	-	-	-	-	44
	%	36.36	9.09	11.36	15.91	22.73	4.55	-	-	-	-	-	100
PL	n	6	2	2	2	3	4	1	-	-	-	-	20
	%	30.00	10.00	10.00	10.00	15.00	20.00	5.00	-	-	-	-	100
PT	n	-	-	-	-	3	31	19	7	12	6	.	78
	%	-	-	-	-	3.85	39.74	24.36	8.97	15.38	7.69	.	100
SK	n	37	49	30	11	8	2	4	-	1	-	1	143
	%	25.87	34.27	20.98	7.59	8.59	1.40	2.80	-	0.70	-	0.70	100
Countries up to 10 or more attempts		Contactattempts											Total
		0	1	2	3	4	5	6	7	8	9	+10	
CH	n	-	23	15	3	-	4	5	7	8	3	32,	95
	%	-	24.21	15.79	3.16	-	4.21	5.26	7.37	8.42	3.16	33.7	100
DE	n	99	171	58	27	27	18	11	1	4	1	2	419
	%	23.63	40.81	13.84	6.44	6.44	4.30	2.63	0.24	0.95	0.24	48	100
EE	n	3	9	4	19	19	21	23	6	-	-	-	104
	%	2.88	8.65	3.85	18.27	18.27	20.19	22.12	5.77	-	-	-	100
ES	n	-	109	39	21	21	22	6	4	5	3	4	234
	%	-	46.58	16.67	8.97	8.97	9.40	2.56	1.71	2.14	1.28	1.8	100
SE	n	-	22	16	8	8	3	-	1	2	3	15	78
	%	-	0.28	0.21	0.10	0.10	0.04	0.00	0.01	0.03	0.04	19.2	100

**TABLE 7 - Obtained response rates after two, three, four, and four and more visits (ESS Round 2)\***

Country	2 visits	3 visits	4 visits	> 4 visits (effective rate R2)
AT	42.2	55.2	59.4	62.4
BE	31.1	45.3	53.1	61.2
CH	18.8	31.3	38.9	48.6
DE	26.6	37.4	43.5	50.9
DK	35.7	48.6	54.8	64.2
EE	46.2	61.8	71.0	79.1
ES	36.4	45.5	50.1	54.9
FI	26.3	42.7	52.2	70.7
FR	23.2	32.4	37.8	43.6
GR	64.7	72.2	76.2	78.8
HU	51.6	60.6	65.2	65.9
IE	39.8	48.8	54.2	62.5
IT	35.4	49.0	54.4	57.3
LU	34.7	45.0	48.9	50.1
NL	20.7	34.7	44.8	64.3
NO	34.4	49.2	57.7	66.2
PL	55.8	65.5	70.1	73.7
PT	43.3	56.5	64.9	71.2
SE	21.0	36.7	46.4	65.4
SI	47.5	56.7	61.0	70.2
SK	49.9	58.9	61.9	62.7
Mean**	38.0	49.5	55.7	63.1
Diff		11.5	6.2	7.5

\* Only countries where reliable results are obtained.

\*\* Un-weighted means.

**TABLE 8 - Distribution of timing of calls for the first four call attempts (ESS Round 2)**

Country		Timing attempt 1				Timing attempt 2				Timing attempt 3				Timing attempt 4			
		A/M	EV	WE	TOTAL	A/M	EV	WE	TOTAL	A/M	EV	WE	TOTAL	A/M	EV	WE	TOTAL
<b>AT</b>	<b>%</b>	66.96	16.19	16.85	100	58.21	23.19	18.60	100	54.27	25.60	20.13	100	47.05	32.17	20.79	100
<b>BE</b>	<b>%</b>	56.80	23.60	19.60	100	51.20	28.40	20.40	100	50.80	30.40	18.80	100	50.40	31.60	18.00	100
<b>CZ</b>	<b>%</b>	58.03	16.27	25.70	100	58.03	17.56	24.41	100	50.96	17.56	31.48	100	50.96	16.70	32.33	100
<b>CH</b>	<b>%</b>	46.24	43.63	10.14	100	36.56	46.24	17.20	100	39.48	45.47	15.05	100	41.01	42.55	16.44	100
<b>DE</b>	<b>%</b>	56.28	26.50	17.21	100	50.82	30.87	18.31	100	55.19	28.14	16.67	100	46.17	31.69	22.13	100
<b>DK</b>	<b>%</b>	62.83	19.03	18.14	100	54.42	24.34	21.24	100	47.79	33.19	19.03	100	46.90	34.51	18.58	100
<b>EE</b>	<b>%</b>	37.93	40.23	21.84	100	39.66	37.36	22.99	100	36.21	37.93	25.86	100	36.78	29.89	33.33	100
<b>ES</b>	<b>%</b>	60.40	25.25	14.36	100	55.94	29.70	14.36	100	51.98	34.65	13.37	100	49.50	35.64	14.85	100
<b>FI</b>	<b>%</b>	52.59	43.03	4.38	100	45.02	53.39	1.59	100	55.38	42.23	2.39	100	54.58	39.84	5.58	100
<b>FR</b>	<b>%</b>	77.07	7.27	15.66	100	51.66	31.81	16.52	100	41.43	32.06	26.52	100	36.74	33.42	29.42	100
<b>GR</b>	<b>%</b>	67.04	10.74	22.22	100	55.56	16.30	28.15	100	45.56	27.78	26.67	100	35.93	21.11	42.96	100
<b>IE</b>	<b>%</b>	69.66	15.48	14.86	100	68.73	19.50	11.76	100	66.25	20.74	13.00	100	44.27	39.01	16.72	100
<b>IT</b>	<b>%</b>	78.17	2.11	19.72	100	68.31	11.97	19.72	100	55.63	11.27	33.10	100	54.93	13.38	31.69	100
<b>HU</b>	<b>%</b>	63.27	10.20	26.53	100	56.46	13.61	29.93	100	46.26	18.37	35.37	100	36.73	19.73	43.54	100
<b>LU</b>	<b>%</b>	62.20	22.83	14.96	100	40.16	34.65	25.20	100	39.76	35.04	25.20	100	40.55	36.61	22.83	100
<b>NL</b>	<b>%</b>	63.18	21.64	15.17	100	48.51	31.84	19.65	100	42.04	38.56	19.40	100	36.82	41.54	21.64	100
<b>NO</b>	<b>%</b>	38.89	55.56	5.56	100	61.11	22.22	16.67	100	27.78	33.33	38.89	100	38.89	33.33	27.78	100
<b>PL</b>	<b>%</b>	61.22	10.20	28.57	100	48.98	20.41	30.61	100	38.78	24.49	36.73	100	44.90	24.49	30.61	100
<b>PT</b>	<b>%</b>	58.08	16.80	25.12	100	44.80	23.84	31.36	100	38.08	20.80	41.12	100	34.24	25.60	40.16	100
<b>SE</b>	<b>%</b>	62.54	35.49	1.97	100	49.58	49.30	1.13	100	55.49	43.10	1.41	100	49.86	47.04	3.10	100
<b>SI</b>	<b>%</b>	47.06	18.82	34.12	100	28.24	51.76	20.00	100	14.12	78.82	7.06	100	9.41	87.06	3.53	100
<b>SK</b>	<b>%</b>	57.78	13.33	28.89	100	51.11	17.78	31.11	100	48.89	15.56	35.56	100	35.56	24.44	40.00	100

**TABLE 9 - Number of evening, weekend and morning/afternoon attempts made to non-contacts (ESS Round 2)\***

Country		Weekend calls			TOTAL	Evening calls			TOTAL	Morning/afternoon calls			TOTAL
		0	1	>1		0	1	>1		0	1	>1	
AT	%	34.66	40.64	24.70	100	28.69	38.65	32.67	100	7.57	15.14	77.29	100
BE	%	41.58	35.64	22.77	100	44.55	29.70	25.74	100	5.94	26.73	67.33	100
CH	%	53.06	21.43	25.51	100	24.49	16.33	59.18	100	5.10	45.92	48.98	
CZ	%	18.59	59.38	22.03	100	48.88	39.93	11.19	100	11.53	27.02	61.45	100
DE	%	85.24	13.49	1.27	100	55.98	37.15	6.87	100	33.08	46.82	20.10	100
DK	%	62.28	17.54	20.18	100	40.35	41.23	18.42	100	35.96	30.70	33.33	100
EE	%	27.06	36.47	36.47	100	48.24	30.59	21.18	100	12.94	42.35	44.71	100
ES	%	81.02	12.50	6.48	100	56.94	27.78	15.28	100	21.30	46.76	31.94	100
FI	%	69.49	18.64	11.86	100	20.34	22.03	57.63	100	1.69	30.51	67.80	100
FR	%	25.07	46.56	28.37	100	17.36	43.53	39.12	100	93.93	20.11	69.97	100
GR	%	-	18.35	81.65	100	22.94	33.03	44.04	100	2.75	11.01	86.24	100
HU	%	45.84	39.91	14.25	100	-	0.16	99.84	100	-	40.32	21.32	100
IE	%	79.06	14.80	6.14	100	24.73	16.25	59.03	100	55.78	12.45	31.77	100
IT	%	71.91	24.55	3.54	100	79.39	17.15	3.46	100	25.53	25.66	21.87	100
LU	%	34.91	47.84	17.24	100	31.90	33.19	34.91	100	11.64	37.07	51.29	100
NL	%	25.90	28.21	35.90	100	28.21	14.10	57.69	100	8.97	11.54	79.49	100
PL	%	80.00	5.00	15.00	100	30.00	60.00	10.00	100	35.00	25.00	40.00	100
PT	%	2.56	24.36	73.08	100	16.67	20.51	62.82	100	15.38	34.62	50.00	100
SE	%	91.43	7.14	1.43	100	51.43	15.71	32.86	100	8.57	31.43	60.00	100
SI	%	22.73	54.55	22.73	100	-	4.55	95.45	100	50.00	22.73	27.27	100
SK	%	50.94	28.30	20.75	100	73.58	21.70	4.72	100	36.79	42.45	20.75	100

\* Absolute numbers of finally non contacts are rather small for each occasion. The total numbers of non-contacts in each country are in Tables 2a & b, and Table 6.

**Table 10. Success rate of contact by timing of contact in each country (ESS Round 2)\***

	Timing attempt 1					Timing attempt 2					Timing attempt 3		
	morning/ afternoon	evening	weekend			morning/ afternoon	evening	weekend			morning/ afternoon	evening	weekend
<b>AT</b>	0,57	0,68	0,59		<b>AT</b>	0,46	0,46	0,52		<b>AT</b>	0,38	0,46	0,45
<b>BE</b>	0,61	0,70	0,63		<b>BE</b>	0,52	0,58	0,5		<b>BE</b>	0,46	0,5	0,46
<b>CZ</b>	0,69	0,68	0,72		<b>CZ</b>	0,39	0,38	0,39		<b>CZ</b>	0,27	0,17	0,22
<b>CH</b>	0,49	0,48	0,49		<b>CH</b>	0,54	0,53	0,52		<b>CH</b>	0,41	0,43	0,44
<b>DE</b>	0,62	0,69	0,64		<b>DE</b>	0,59	0,54	0,5		<b>DE</b>	0,5	0,5	0,55
<b>DK</b>	0,6	0,69	0,68		<b>DK</b>	0,53	0,53	0,42		<b>DK</b>	0,41	0,44	0,43
<b>EE</b>	0,61	0,59	0,67		<b>EE</b>	0,59	0,49	0,59		<b>EE</b>	0,58	0,52	0,63
<b>ES</b>	0,66	0,67	0,72		<b>ES</b>	0,51	0,59	0,5		<b>ES</b>	0,43	0,48	0,42
<b>FI</b>	0,67	0,70	0,60		<b>FI</b>	0,54	0,53	0,38		<b>FI</b>	0,41	0,42	0,33
<b>FR</b>	0,46	0,51	0,46		<b>FR</b>	0,43	0,35	0,42		<b>FR</b>	0,44	0,34	0,37
<b>GR</b>	0,6	0,72	0,69		<b>GR</b>	0,50	0,58	0,56		<b>GR</b>	0,42	0,45	0,57
<b>HU</b>	0,69	0,75	0,76		<b>HU</b>	0,52	0,54	0,49		<b>HU</b>	0,54	0,55	0,57
<b>IE</b>	0,63	0,80	0,6		<b>IE</b>	0,37	0,53	0,48		<b>IE</b>	0,37	0,48	0,34
<b>IT</b>	0,81	0,90	0,88		<b>IT</b>	0,32	0,42	0,39		<b>IT</b>	0,44	0,50	0,29
<b>LU</b>	0,75	0,82	0,75		<b>LU</b>	0,45	0,52	0,32		<b>LU</b>	0,33	0,3	0,25
<b>NL</b>	0,51	0,67	0,53		<b>NL</b>	0,43	0,56	0,46		<b>NL</b>	0,36	0,48	0,34
<b>PL</b>	0,82	0,84	0,90		<b>PL</b>	0,63	0,65	0,6		<b>PL</b>	0,64	0,61	0,58
<b>PT</b>	0,40	0,57	0,43		<b>PT</b>	0,32	0,4	0,4		<b>PT</b>	0,46	0,47	0,37
<b>SE</b>	0,54	0,66	0,61		<b>SE</b>	0,44	0,53	0,73		<b>SE</b>	0,34	0,45	0,5
<b>SI</b>	0,78	0,80	0,78		<b>SI</b>	0,57	0,5	0,58		<b>SI</b>	0,56	0,39	0,33
<b>SK</b>	0,84	0,88	0,84		<b>SK</b>	0,63	0,62	0,68		<b>SK</b>	0,4	0,47	0,46

\* Contrary to Table 5 computed on total number of contact attempts (vitis) to those who where not previously contacted at each occasion.

**TABLE 11 - Outcome refusal conversion attempts (ESS Round 2)**  
*Ordered according to number of attempts\**

Country	% No attempt (AC)	% Attempt, no contact made	% Attempt, contact but no interview	% Attempt, completed interview	(AC)	Total initial non- response	(AC)
SI	0.72	0.36	28.88	70.04	(194)	100	(277)
GR	7.41	0.57	87.64	4.37	(23)	100	(526)
NL	11.96	3.72	46.17	38.15	(526)	100	(1,371)
CH	17.73	2.76	70.89	8.6	(175)	100	(2,030)
EE	32.02	1.24	25.21	41.53	(201)	100	(484)
DE	48.95	2.42	26.47	22.16	(494)	100	(2,229)
BE	57.41	3.06	29.01	10.53	(86)	100	(817)
SK	59.09	2.19	22.26	16.46	(105)	100	(638)
ES	59.28	4.4	25.58	10.73	(78)	100	(727)
FI	59.37	4.65	28.49	7.5	(50)	100	(667)
SE	69.09	0.3	27.49	3.12	(21)	100	(673)
PL	71.69	1.63	16.29	10.39	(51)	100	(491)
NO	78.68	0.13	12.98	8.21	(62)	100	(755)
PT	86.31	5.32	5.51	2.85	(15)	100	(526)
HU	88.22	0	7.12	4.66	(17)	100	(365)
IT	89.36	1.06	7.80	1.77	(10)	100	(564°)
AT	89.75	0.77	9.29	0.19	(2)	100	(1,044)
CZ	92.07	0.5	6.78	0.66	(4)	100	(1,352)
FR	97.42	0.12	1.74	0.98	(16)	100	(1,629)
DK	97.87	1.06	0.71	0.35	(2)	100	(564)
LU	99.12	0.35	0.35	0.18	(2)	100	(1,133)
IE	99.85	0	1	0	(0)	100	(686)

\* Reliable computing in UK, UA ,and IS not possible, although UK had more than 350 converted refusals but these are nor all identified in the main data file.