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**Response-based Quality Assessment of ESS Round 4:
Results for 30 Countries Based on Contact Files**

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RESPONSE-BASED QUALITY ASSESSMENT OF ESS ROUND 4: RESULTS FOR 30 COUNTRIES BASED ON CONTACT FILES

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1. Introduction

The European Social Survey is an academically driven social survey designed to capture the interaction between the changing institutions, attitudes, beliefs and behavioural patterns of Europe's diverse population. The survey started in 2002 and entered its 4th round in 2008-2009. It covers over 30 countries and employs survey methodologies that are rigorous by world standards. To achieve the highest methodological standards in cross-national and cross-cultural survey research, the ESS pays particular attention to the production and dissemination of survey documentation to both scientific and more general audiences.

1.1. Some Background on Data Quality Assessment

For the ESS to achieve the highest methodological standards, procedures and practices concerning a number of work activities must be assessed. These include, for instance, the sampling procedure, the development of the questionnaire (including translation), and the contact procedure during the fieldwork period. It is important that these activities are sufficiently documented so that data quality can be rigorously assessed. That is why the assessment focuses primarily on deviations from the stipulated procedure (protocol) in order to inform data users of how these may affect cross-country comparative research. Continued assessment and the study of deviations across countries are particularly crucial as they allow for identifying country-specific as well as universal factors hampering cross-national survey research.

Within the data quality framework, the ESS has since its inception paid special attention to the quality assessment of two issues: the quality assessment of the *obtained responses* (response rates) and the quality assessment of the *registered responses* (the responses to questions collected in the main integrated data file). The focus of this paper is on the first issue. The second issue is outside the scope of this paper, which mainly assesses the quality of the contact files. At a time when response rates in many surveys (including different rounds of the ESS) are decreasing, the first crucial task is to assess obtained response rates. Although no direct relation exists between the response rate and the level of non-response bias, it is preferable to achieve a higher response rate. The lower the response rate, the higher the likelihood of non-response bias (see discussion in Groves, 2006; Groves and Peytcheva, 2008). This is why the ESS aims for a response rate of at least 70% and a non-contact rate of maximum 3%.¹

It is not sufficient, however, to study only the obtained response rates. In order to truly understand the obtained response rates² from a cross-national perspective it is also fundamental to assess the fieldwork procedure on the basis of contact files and to check also whether certain stipulations in the protocol have been followed during national

¹ ESS Round 4 Specification for participating countries.

² Computation of this is documented in ESS specification document and quality assessment for Round 2 (Billiet & Pleyssier, 2007).

implementation managed by National Coordinators. Based on the classical approach to investigating survey data quality in terms of both sampling and non-sampling errors (coverage error, non-response error, measurement error) (Groves, 1989), the focus of the quality assessment in this report will be on measuring non-response errors.

While in the majority of cross-national research, it is assumed that non-response error is constant or stable across countries, this report - based on a quality assessment of contact files - will demonstrate that this cannot always be assumed (Billiet et al., 2009; Stoop et al., 2010). Non-response error affects descriptive statistics (e.g. country means, differences of means between variables) (Duncan and Stasny, 2001; Schonlau et al., 2007), the estimation of correlations between variables and model estimates.

The standardised contact files produced in the last 4 rounds of the ESS contain, for all sample units, information on the calling schedule, the contact outcomes, profile information (mainly refusers) and the dwelling and neighbourhood characteristics. These files (accompanied by documents facilitating their use: annotation documents and quality assessment documents studying contact procedure and non-response bias patterns) have been made available to the scientific community through the official ESS data archive website³ and have become a key source of information on non-response. These documents have been explored and analysed to a significant extent. Some studies carried out on the basis of this information belong to ESS research work packages (Billiet et al., 2007; Stoop et al., 2010) and some do not (i.e. Kreuter and Kohler, 2009). It is no exaggeration to say that the publication of the contact files and accompanying documentation has made the scientific community aware of the key importance of such files for survey methodology and the monitoring of fieldwork.

1.2. Contact Forms/Contact Files

The role that the contact forms play in the ESS data collection is multi-dimensional. First, they collect information on all sample units, including both response and non-response units. The contact forms also record details on the outcomes of each contact attempt. This makes it possible to identify patterns and trends in terms of 'contactability' and 'survey cooperation' and further potential obstacles in data collection.

What makes the contact forms particularly unique is the information collected from non-respondents. For refusals (one type of non-respondents), for instance, age and gender are collected as well as the interviewer's assessment of possible future cooperation and reasons for refusal. Third, for all sample units, they contain the interviewer's assessment of neighbourhood characteristics. Fourth, the contact files collect the aforementioned information during the entire fieldwork period, which usually takes around 3-4 months. All information is collected by the interviewer either on paper (PAPI) or by computer (CAPI). In order to upgrade the quality of the contact files, some changes were introduced

³ Two ESS sites are available to the public (<https://essdata.nsd.uib.no/>) and (<http://europeansocialsurvey.org/>).

to the ESS Round 4 contact forms⁴ and more specific instructions were provided to assist interviewers in completing the forms.

1.3. Outline of the Study

The quality assessment work discussed in this report builds on the experience accumulated through work carried out in ESS Rounds 1-3. This report will assess the quality/trends and patterns of response enhancing efforts and fieldwork strategies in participating countries, disentangle different aspects of non-response, provide detailed feedback to each country, and aim to make recommendations for the future. Concretely, it will thus involve:

- Assessing response and non-response rates in all countries;
- Assessing the implementation of fieldwork procedures especially concerning non-contacts;
- Assessing information on non-response units (including type of refusal);
- Assessing refusal conversion activities and their success rate;
- Assessing the relation between response behaviour and dwelling/neighbourhood characteristics;
- Providing tailored and country-specific feedback.

The structure of this report is as follows:

- Section 2 presents background information (data and method used) on the contact files at the country level;
- Section 3 presents an analysis of the contact files:
 - The focus of Section 3.1 is on the results obtained in terms of response and non-contact rates. An overview is also presented of the final contact status and of response rates and non-contact rates across different ESS rounds.
 - Section 3.2 discusses contactability in general as well as compliance with four basic rules included in the protocol.
 - Section 3.3 discusses refusal conversion efforts.
 - Sections 3.4 and 3.5 focus on information on non-response units. Section 3.4 briefly describes and assesses the information on refusers. Section 3.5 focuses on observable information, namely neighbourhood characteristics.

⁴ Six changes have been made to the contact forms in ESS Round 4 compared to ESS Round 3 (Billiet, 2009; Matsuo et al., 2008).

- Section 4 summarises and concludes with a few points for discussion. In the appendix, a short description is provided of country specific matters.

2. Data and method

This section provides a brief overview of the contact files (data) and of the methods used in this report. The focus is on three key issues:

- Documentation of contact file characteristics: type of sample frame, number of final sample units, number of finally obtained units, proportion of ineligibles;
- Documentation of deviating factors in the contact files concerning missing contact files, use of variables, use of value categories;
- Short description of methods.

2.1. Data

A comprehensive overview of the number and types of sample frame is presented in Table 1. More than one third of the 30 countries analysed here⁵ made use of an individual-based sample frame, fewer countries made use of a household- or address-based sample (9 countries respectively). Naturally, given varying population sizes across countries, the planned sample size also differed substantially across countries. The size of the final obtained sample (interviewed units), which depends on the quality of the sample frame and on the fieldwork effort, differed across countries. Compared to ESS Round 3, the proportion of ineligibles appears to have remained stable in most countries. Changes were observed for just a few countries: e.g. a lower proportion was noted in Belgium⁶, Hungary and Spain and a higher proportion in Cyprus (Table B).⁷

⁵ By the end of October 2010, 30 countries had deposited their contact files, which were revised and finalised in consultation with the KULeuven team. The data from these files are considered in this report. By that time, Austria has not yet finalized their contact file. This report is an update of quality assessment report which was based on 24 countries and made firstly publicly available in May 2010.

⁶ In Belgium, it was possible to obtain random sample from the national register in Round 4.

⁷ In Cyprus the sample frame used for Round 4 was of insufficient quality meaning that it was not possible for all addresses to be contacted.

Table 1: Sample types, planned and obtained sample sizes in 30 countries

Country	Type of sample frame	Number of sample units (planned sample)	Obtained sample size (%Ineligibles)
BE	Individual	3060	2983 (2.52%)
BG	Address	3200	2974 (7.06%)
CH	Household	3801	3726 (1.97%)
CY	Household	1600	1500 (6.25%)
CZ	Address	3000	2904 (3.20%)
DE	Individual	6716	6443 (4.06%)
DK	Individual	3008	2978 (1.00%)
EE	Individual	3077	2933 (4.68%)
ES	Individual	3962	3859 (2.60%)
FI	Individual	3300	3209 (2.76%)
FR	Household	4500	4157 (7.62%)
GB	Address	4640	4302 (7.28%)
GR	Household	2790	2790 (0%)
HR	Address	3280	3231(1.49%)
HU	Individual	2635	2515(4.55%)
IE	Address	3865	3589 (7.14%)
IL	Household	3255	3241(0.43%)
LT	Household	3616	3550(1.83%)
LV	Address	3629	3494 (3.72%)
NL	Address	3701	3568 (3.59%)
NO	Individual	2650	2563 (3.28%)
PL	Individual	2428	2278 (6.18%)
PT	Household	3258	3124 (4.11%)
RO	Household	3210	3120 (2.80%)
RU	Address	3785	3729 (1.48%)
SE	Individual	3000	2938 (2.07%)
SI	Individual	2250	2184 (2.93%)
SK	Address	2500	2491 (0.36%)
TR	Household	3990	3803 (4.69%)
UA	Address	3003	2996 (0.23%)

Note: IE&NL: According to the sample team, an additional sample was used due to the low response rates experienced during the fieldwork.

Another important issue is to document deviations from protocol stipulations occurring during the implementation of the fieldwork procedure. Below, the most common deviations affecting the contact forms are discussed. Deviations from the standardised fieldwork procedure in relation to four basic rules concerning non-contact and refusal conversion are discussed in the following section.

The amount of information in the contact forms differs across countries⁸ in terms of four main issues:

- First, contact forms should theoretically exist for all sample units. However, this is not the case in all countries. The number of sample units for which contact forms are missing is as follows: Cyprus (N=67), the Czech Republic (N=7), Croatia (N=914), Germany (N=188), Great Britain (N=81), Ireland (N=132), Israel (N=283), Latvia (N=409), Norway (N=5), Slovenia (N=59) Slovakia (N=89) and Turkey (N=2). Contact forms are missing to a large extent because of the number of non-response units. The reasons for this are discussed in Appendix 1 on a country basis.
- Second, the contact forms allow for recording the details of call attempts i.e. 4 timing variables (date, month, hour, minute), mode, 2 contact outcome variables [RESULB/OUTNIB] – of up to 10 contact attempts. Yet eight countries – Belgium, Switzerland, France, Germany, Great Britain, Ireland, Spain and Sweden - recorded the details of an even higher number of contact attempts. In addition, Switzerland recorded the details of the 59th contact attempt on one case. Of course, this additional information is an asset for analysis. There are of course a number of countries [ex. Latvia (3), Croatia, Greece and Turkey (4)] recording a smaller number of contact attempts because of more limited contact attempt efforts.
- Third, in ESS Round 4, compared to previous rounds, extra information was collected on refusers (refusal proxy) for up to the third refusal. This included order of the visit; age; gender; refuser proxy; interviewer's assessment of future cooperation; and as many as 5 reasons for refusal. Nevertheless, information was sometimes collected for more than 3 refusals (e.g. Switzerland) or for just 1 refusal (Denmark, Greece, Latvia, Lithuania, Portugal, Romania, Turkey and Ukraine).
- Fourth, information for some variables was not collected well e.g. number of telephone calls prior to first face to face visit (NUMTEL) and number of refusal conversion visits (RECONV). According to National Co-ordinators, refusal conversion activities did not take place in 11 countries (BG, CY, CZ, GR, HR, LT, LV, PT, SK, TR, UA). Even when this information was collected, the National Coordinator sometimes reports that the information is not valid (e.g. NUMTEL variable in Norway and Finland; RECONV variable in Sweden⁹).

⁸ See more in Appendix 1: Evaluation of contact files: Short overview of country report.

⁹ The NUMTEL variable in these countries (NO & FI) is likely to include telephone contacts after a face to face contact had already been achieved. The RECONV variable did not record the number of refusal conversion visits in Sweden.

Several deviations in the contact files have implications for the analysis of those files. When a specific variable is not collected at all or is collected insufficiently (10% threshold used) in a particular country, this country is omitted from the analysis. This is clearly indicated whenever relevant.

2.2. Method

The assessment presented in this report is mainly of a descriptive nature. In order to assess response and non-response rates, fieldwork implementation (especially focused on non-contacts), and refusal conversion activities (and their success rates), use was made of the same methods as applied in the quality assessment carried out since ESS Round 2. This enables a cross-round comparison by country. For the extra assessment made of the relation between response behaviour and dwelling/neighbourhood characteristics, test statistics (X^2) were used. Finally, in accordance with the practice instituted under Round 3, country-specific issues were documented in an appendix based on communication between the KULeuven team and respective National Coordinators and team members taking place after National Coordinators had deposited their contact files with the ESS Data Archive.

3. Results

In this section, we focus on the analysis of the contact files. As already mentioned, this section is divided in several sub-sections. First, for 30 countries, an overview is provided of the final response rates and the final contact statuses. Comparisons are made with previous ESS rounds. Second, issues are discussed concerning contact strategies: contactability, evaluation of the implementation of 4 golden protocols and optimal number of contacts in terms of achieving a higher response rate. Third, refusal conversion activities are discussed. Once more comparisons are made with previous ESS rounds. Finally, information on non-response units is discussed. This includes information on initial refusals as well as observable and dwelling information on all types of non-response units (initial refusers, non-contacts and reluctant respondents).

3.1. Response and Non-response Rates – A First Overview

Three sources contain information on the final response status: the National Technical Summaries (NTS)¹⁰ compiled by the National Coordinators, the contact files, and the main

¹⁰ It should be noted that there are discrepancies between the final codes documented in NTS and those obtained by the contact file analysis discussed in this report. There are two issues. First, reader should be aware that NTS reports non-contact cases that include cases such as 'respondent moved to unknown destination' and 'respondent has moved, still in country' in addition to usual 'non-contact' cases. In the contact form analysis, non-contact is strictly those 'non-contact' cases. Secondly, correspondence between NTS and final response code (NTS A4.1) is revised in October 2010 even though new codes were introduced in Round 4 (2008-2009).

integrated data file. It is possible that the information contained in these three sources does not correspond, particularly where non-response units (e.g. non-contact, refusal, and other types) are concerned. For checking purposes, particular attention was paid to the total number of sample units (response units, non-response units and ineligible units), the total number of interviewed units¹¹, and the consistency of the information for interviewed units included in both the main integrated data files and the contact files. It should be noted that, like in previous ESS rounds, 'interview' refers to a *valid and complete interview*.

For the calculation of final contact statuses and response rates, the same procedure was applied as under previous ESS rounds (Billiet and Pleysier, 2007). The response rate was calculated as follows:

$$\text{Response rate} = (\# \text{ of achieved valid \& complete interviews}) / (\# \text{ of eligible sample units})$$

This means that, in most cases, *the outcome of the last contact attempt was taken as the final response code*. An exception concerned *refusals*: even if the last contact attempt resulted in non-contact or another outcome, they were declared refusal. To ensure the comparability of response rates across countries and ESS rounds, the same categories of ineligible units were excluded from the response rate calculations as in previous ESS rounds, except for a few small changes made in the algorithm in ESS Round 4 (Billiet, 2009). In ESS Round 4, code 52 (respondent moved to unknown destination) and code 54 (respondent address not traceable) were considered as *eligible* sample (categorised as 'not able' and 'other') while code 51 (respondent moved out of country) was considered as *ineligible* sample. Additional changes and new final codes were introduced such as 30 (refusal because of drop out list) and 53 (respondent has moved and still in country). In this report, final contact statuses are presented in a more aggregated manner (valid and complete interview; non-contact; refusal; not able/other; ineligible groups).

Before presenting the responses broken down by the final status of the sample units, Figures 1 and 2 provide information on the deviations from the target minimum 70% response rate and maximum 3% non-contact rate. Substantial cross-country variation exists in terms of response rates, which range from 43% (Germany) to 81% (Cyprus). Seven of the 30 countries (Cyprus, Israel, Portugal, Bulgaria, Greece, Slovakia and Poland) achieved response rates higher than 70% while for another five countries (Czech Republic, Romania, Finland, Russia and Spain), response rates were between 65% and 70%. Overall, it is remarkable that the number of countries reaching (or almost reaching) a 70% response rate is quite high. Compared to previous rounds, the number of countries approaching or achieving a 70% response rate is higher.

¹¹ The consistency of the information on the timing of the interview (month and day) between the main integrated data file and the contact file was also controlled. In addition, for the final quality report, the consistency between the interviewer number recorded in the interviewer file and contact file is controlled.

Substantial cross-country variation also exists in terms of non-contact rates, which range from 0% (Czech Republic, Denmark) to 14.1% (Turkey). Thirteen countries had non-contact rates below 3%: Croatia, Czech Republic, Denmark, Israel, Norway, Cyprus, Poland, Belgium, Hungary, Spain, Finland, Lithuania, and the Netherlands. On the other hand, the rest had non-contact rates above 3%: Portugal, Sweden, Slovenia, Bulgaria, Russia, Greece, Germany, Estonia, France, Great Britain, Slovakia, Switzerland, Ireland, Ukraine, Romania, Latvia and Turkey. It should be noted, however, that the low non-contact rates achieved in some countries - for instance, Denmark, Finland and Norway – was due to the fact that, quite exceptionally, in those countries telephone information was available for all or nearly all sample units and that therefore it was possible to make the first contact attempts by telephone.

Figure 1: Response rates (%) of total eligible sample size compared with target response rate

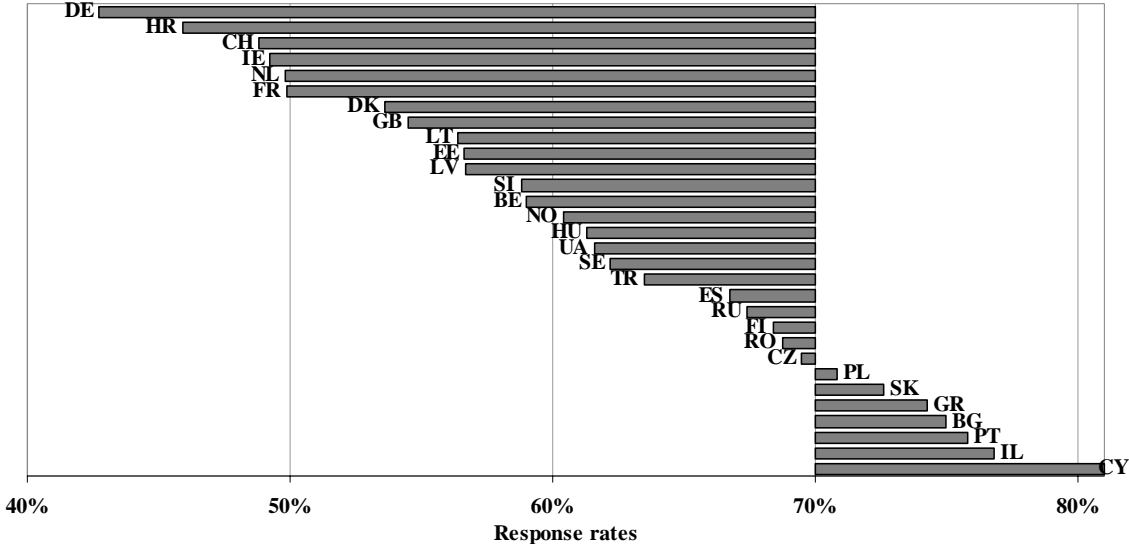
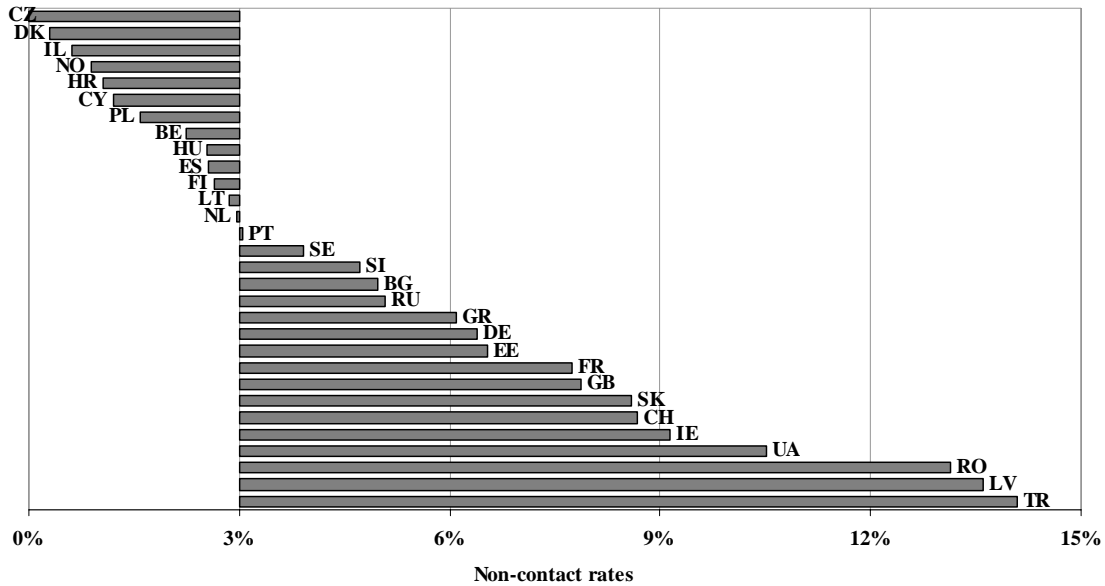


Figure 2: Non-contact rates (%) of total eligible sample size compared with target non-contact rate



It is interesting to note that, especially in ESS Round 4, countries with high response rates did not necessarily achieve low non-contact rates (see Table 2). Only 3 countries respected both the minimum 70% response rate and the maximum 3% non-contact rate: Cyprus, Israel and Poland. Another 4 countries reached the minimum 70% response rate but had non-contact rates higher than 3%: Slovakia, Greece, Portugal and Bulgaria. Countries with comparable response rates can have very different non-contact rates. For instance, Romania, Finland and the Czech Republic achieved response rates of 68.8%, 68.4% and 69.5% and non-contact rates of 13.1%, 2.6% and 0% respectively. On the other hand, countries with comparable non-contact rates can achieve quite different response rates. For instance, Belgium, Spain and Finland had non-contact rates of 2.3%, 2.6% and 2.7% and response rates of 59.0%, 66.8% and 68.4% respectively.

Table 2: Overview of countries distinguished by target response and non-contact rates

	<70% response rates	70%+ response rates
<3% non-contact rates	BE CZ* DK ES FI HU LT* HR* NL* NO	CY* IL* PL
3%+ non-contact rates	CH* DE EE FR* GB* IE* LV* RO* RU* SE SI TR* UA*	BG* GR* SK* PT*

Note: Countries using household-based or address-based sample frame marked with *.

One possible reason for these substantial cross-country differences in terms of response and especially non-contact rates relates to the type of sample frame used. Generally speaking on the basis of Table 2, achieving contactability is more difficult in the case of a household- or address-based sample frame than in the case of an individual-based sample frame. Countries using household- or address-based sample frame and achieving rather high non-contact rates were: Portugal, Bulgaria, Russia, Greece, France, Great Britain, Slovakia, Switzerland, Ireland, Ukraine, Romania, Latvia and Turkey. Conversely, there were still a few countries with relatively low non-contact rates in spite of having used household- or address-based sample frames: Croatia, Cyprus, Czech Republic, Israel, Lithuania, and Netherlands.

Respondents vs. non-respondents

In this section, respondents and non-respondents are discussed. Non-respondents are broken down into non-contacts, refusals, not able, and other types of non-respondent groups. In the calculation, ineligible groups were excluded from the analysis.

Figure 3¹² shows that, for most countries, refusal to participate was the most important reason for non-response. High refusal rates (above 30%) occurred in 7 countries (Switzerland, Germany, Denmark, France, Lithuania, Netherlands, Norway) and medium level refusal rates (20-30%) in 12 countries (Belgium, Croatia, Czech Republic, Finland, Great Britain, Hungary, Ireland, Portugal, Russia, Sweden, Slovenia and Ukraine). Somewhat lower refusal rates (<20%) were obtained in 8 countries (Bulgaria, Spain, Estonia, Greece, Latvia, Poland, Slovakia and Turkey), and particularly low refusal rates (<10%) in three countries: Cyprus, Israel and Romania.

The impact of refusal rates on final response rates is more important than the impact of non-contact rates on final response rates. The Pearson correlation coefficient for the negative association between refusal rates and response rates is -0.69 ($p < .0001$) while that for the negative association between non-contact rates and response rates is -0.18 ($p = 0.33$). In other words, those countries which suffer from high refusal rates achieve low response rates. Switzerland, Germany, the Netherlands, Denmark and France are examples of countries with high refusal rates (over 30%) and low response rates (below 55%). Norway, achieving a response rate of 60.4% in spite of a high refusal rate, was exceptional.

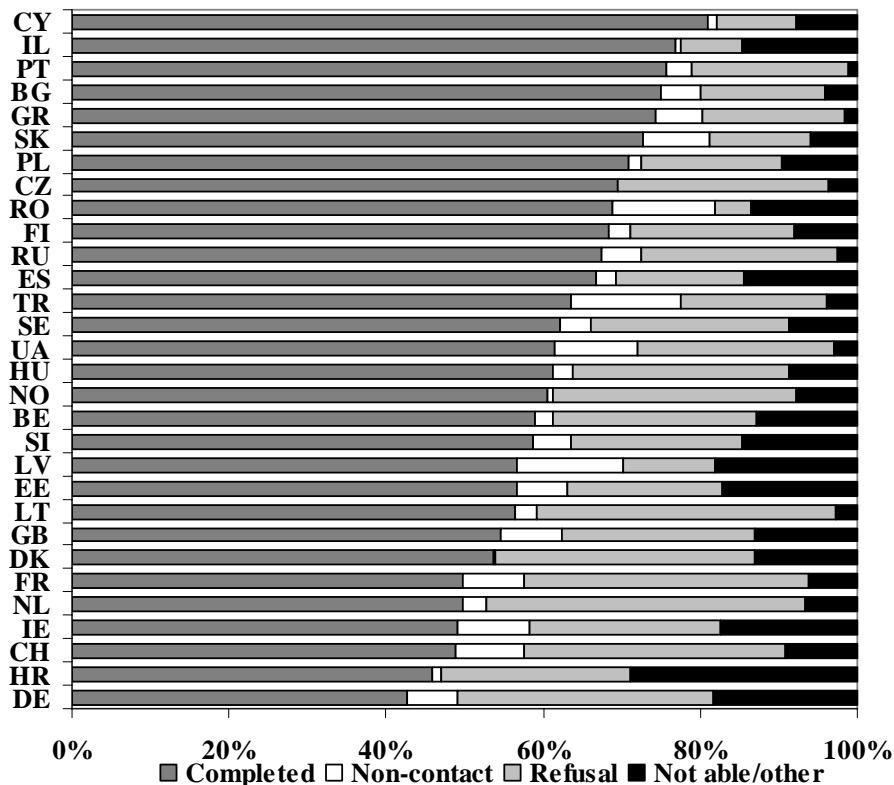
A high proportion (over 15%) of other types of non-response than non-contact and refusal (here it is classified as 'not able/other') were reported in, Croatia, Germany, Ireland, Latvia and Estonia¹³.

The aforementioned observed cross-country differences in terms of response, non-contact and refusal rates point to the fact that assuming in cross-national research, non-response bias to be the same in all countries may not be appropriate.

¹² See also Table A in Appendix 2.

¹³ For Croatia, Ireland and Latvia, this is mostly due to missing contact forms because the fieldwork stopped prematurely.

Figure 3¹⁴: Achieved response rates, non-contact, refusal and other non-response rates (%)



Response Rates in Different Rounds

A final objective of this sub-section is to compare final outcomes across different ESS rounds. This is illustrated by Figure 4. One must keep in mind that the differences in final outcomes across ESS rounds may be due to the evolving (improving) quality of the contact files. In addition, some countries did not submit contact files in previous ESS rounds (in this case, final outcomes/rates were based on their NTS) or only did so in some but not all ESS rounds, enabling only a partial comparison. That is why Figure 4 only includes those countries submitting contact files in at least two ESS rounds.

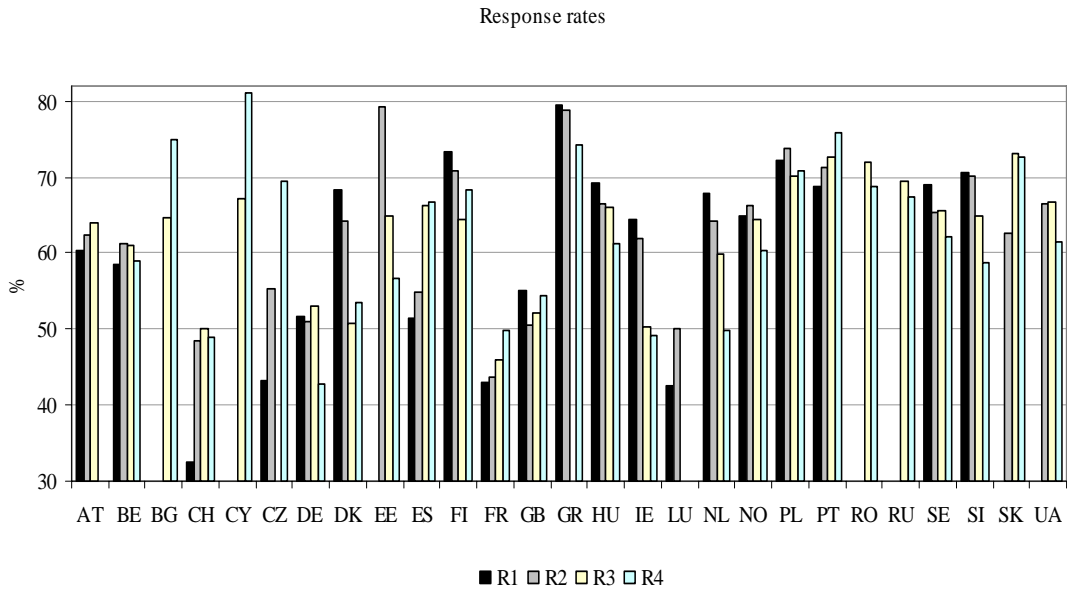
In addition to substantial intra-round cross-country variation, Figure 4 shows that, compared to ESS Round 3, more countries decreased their response rate (%) in Round 4 than increased it. For a number of countries, the change from ESS Round 3 to Round 4 was quite dramatic. Dramatic increases in terms of percentages concerned Bulgaria (+10.2) and Cyprus (+13.7) while dramatic decreases concerned Germany (-10.2), Estonia (-8.3)¹⁵, the

¹⁴ Corresponding with Table A.

¹⁵ The response rates in Round 3 are based on NTS.

Netherlands (-10.0) Slovenia (-6.1), and Ukraine (-5.1). From the communication with National Coordinators, some explanatory factors can be derived. In Germany, the survey climate deteriorated and difficulties were experienced with the survey organisation¹⁶. In Estonia, the quality of the sample frame deteriorated and difficulties were experienced with the survey organisation. Again, comparing rounds 3 to 4, the non-contact rate in terms of percentages decreased substantially in Denmark (-3.0) and increased substantially in Switzerland (+6.5), Slovakia (+4.7) Romania (+3.2) and Ukraine (+5.2%). According to the Swiss team, the increased non-contact rate was due mainly to the use of a different kind of household based sample frame using the mail box as unit. The final refusal rate decreased substantially in Switzerland (-7.3); Spain (-5.6); Denmark (-4.9) and France (-4.3) and increased substantially in Ireland (+10.4), Germany (+7.2), the Netherlands (+7.3), Norway (+5) and Slovenia (+5.9). In order to truly understand these changes in outcome rates (response, non-contact and refusal rates) across different rounds at the country level, a careful study is required making use of information provided by National Coordinators as well as analyzing data.

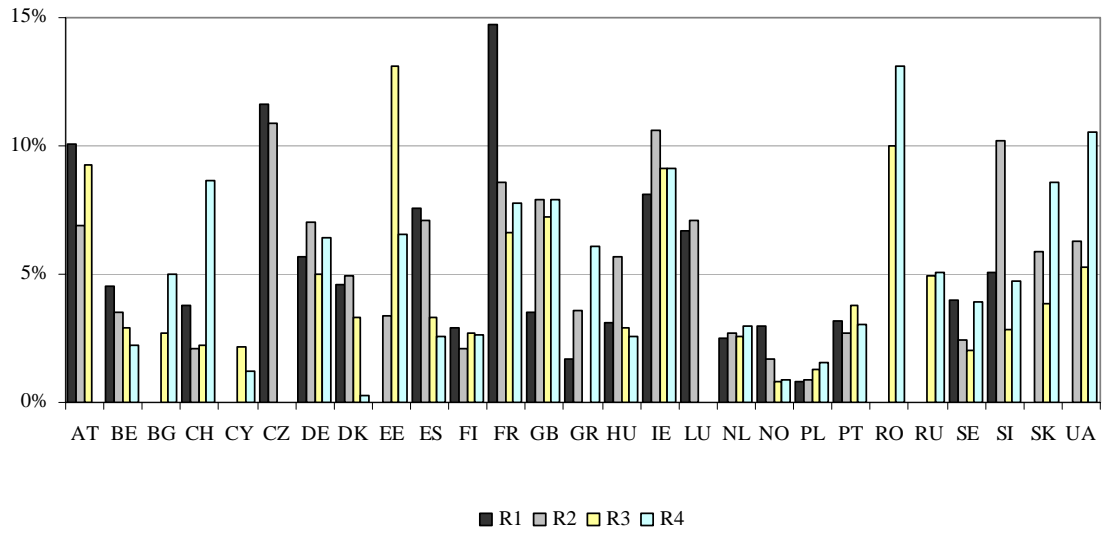
Figure 4¹⁷: Response rates, non-contact rates and refusal rates (%) in Rounds 1-4



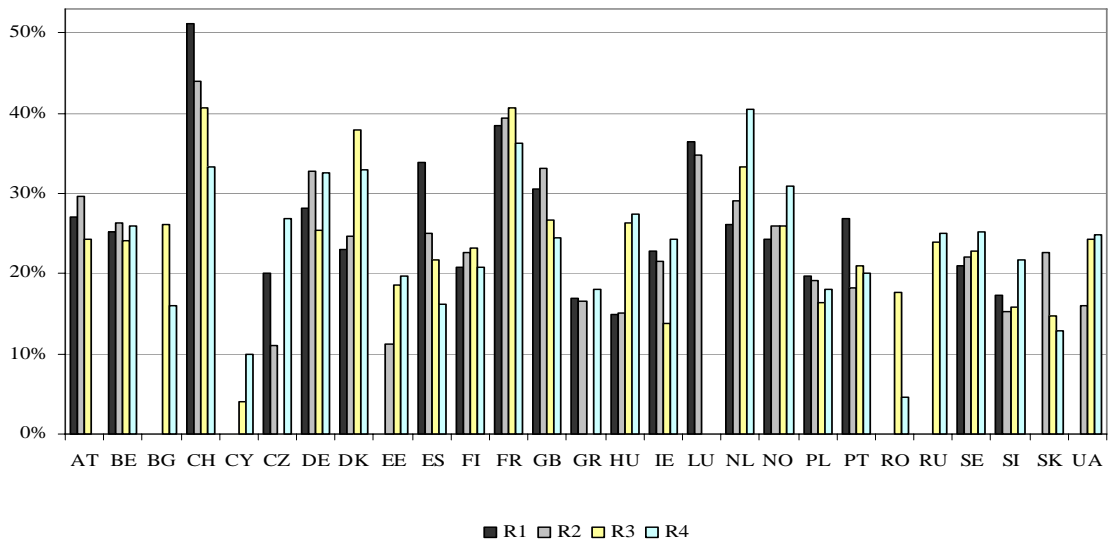
¹⁶ See more explanation on this in Appendix 1: Evaluation of contact file: short overview of country report.

¹⁷ Corresponding with Table B.

Non-contact rates



Refusal rates



3.2. Contact Strategies During the Fieldwork Period

Increasing Contactability

The first objective of the contact procedure is to establish direct contact with the sample unit. It is useful to analyse the number of contact attempts required to establish such direct contact. Figure 5 shows the *cumulative proportion of all contacted units that are contacted at each attempt*. The cumulative percentages noted next to each contact attempt show how many sample units direct contact had, cumulatively, been established with through the first, second, etc. contact attempt. Most of the increase in the cumulative proportion takes place between the first and the fourth contact attempt. The cross-country variation is substantial. In countries using individual based sample frames, the probability of establishing direct contact through the first contact is high ($0.90 <$) in Norway and Sweden. In countries using household-based sample frames, this probability is high ($0.90 <$) in Greece, Israel, Lithuania, Romania, and low (<0.60) in France, Switzerland and Portugal. And finally, those countries using address based sample frames, this probability is low (<0.60) in Great Britain, Ireland, Netherlands and Russia.

The timing of the contact attempts deserves some extra study. A distinction can be made between: (1) weekday afternoon or morning attempts; (2) weekday evening attempts; and (3) weekend attempts. Figure 6 shows the timing of the successful contact attempt on the basis of contact history variables.¹⁸

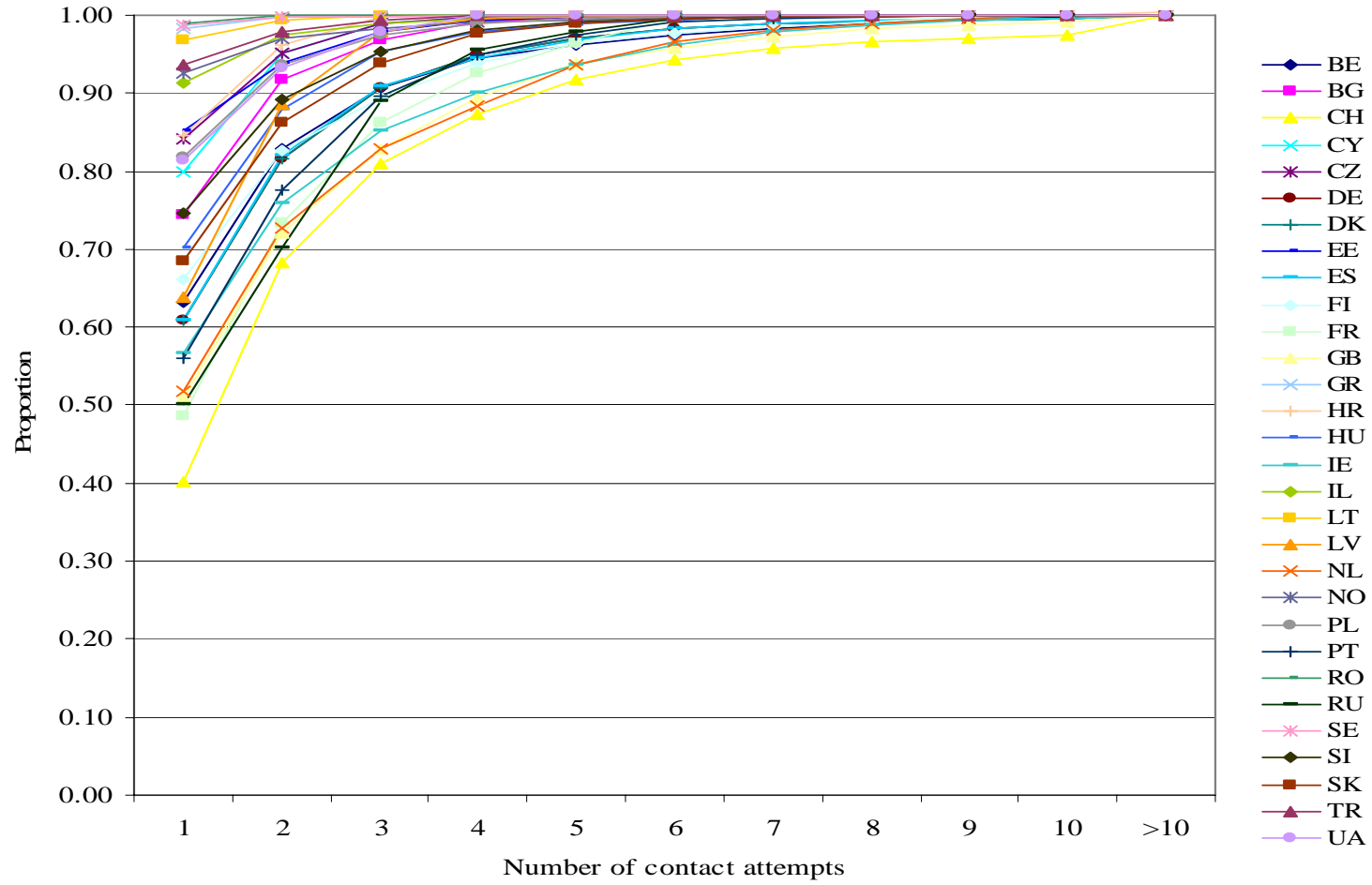
With regard to the first contact attempt, weekday evening contact attempts appear successful, though cross-country variation is substantial. High success rates for weekday evening contact attempts were found for Greece, Norway (92%) and Sweden (98%). In Bulgaria, Switzerland, Estonia, Latvia, Portugal¹⁹ and Slovakia, weekday morning and afternoon attempts were more successful than evening or weekend attempts.

With regard to the second (and subsequent) contact attempt, weekend attempts seem more successful than weekday morning, afternoon and evening attempts, although two timing slots are successful for Czech Republic, Germany and Finland. Patterns are quite context specific and illustrative of differences in the implementation of the contact procedure.

¹⁸ Additional amendment is made in ESS contact form Round 4 concerning the number of telephone calls prior to the first face to face (NUMTEL). While in principle it is possible to make use of this variable, because this was not collected thoroughly in many countries, here, this information is not taken into account.

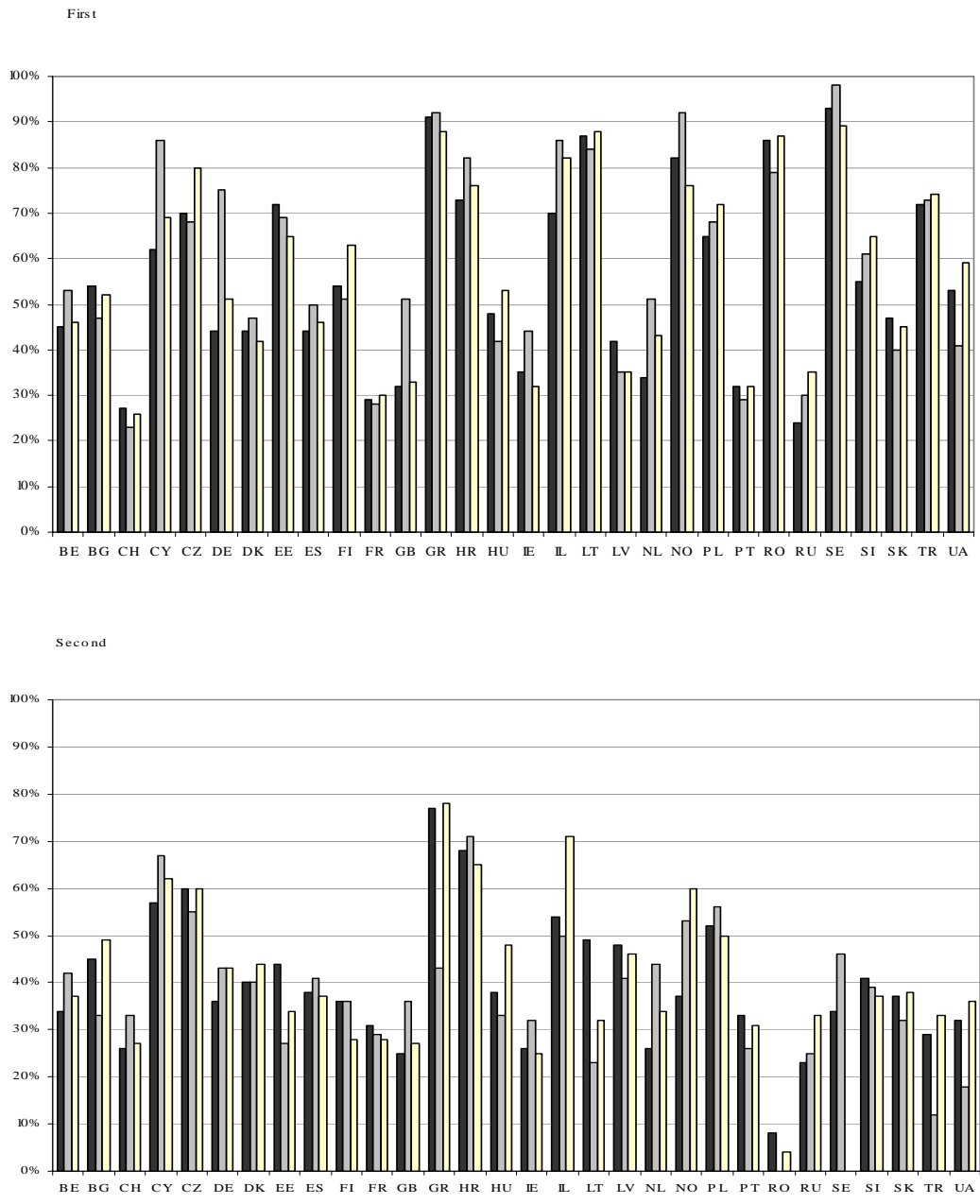
¹⁹ Both morning and weekend contact attempts are successful in Portugal.

Figure 5²⁰: Cumulative proportion of all contacted units that are contacted at each attempt



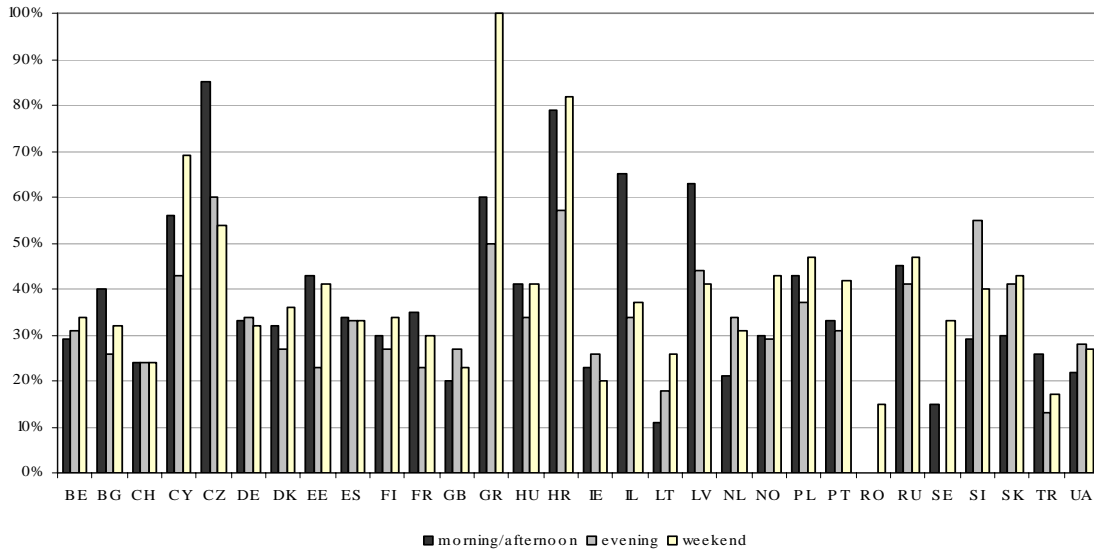
²⁰ Corresponding with Table C.

Figure 6²¹: Probability (%) of contact at 1st, 2nd and 3rd contact attempts according to the time of day



²¹ Corresponding with Figure 6.

Third



Optimal Number of Contact Attempts to Maximise Response Rates

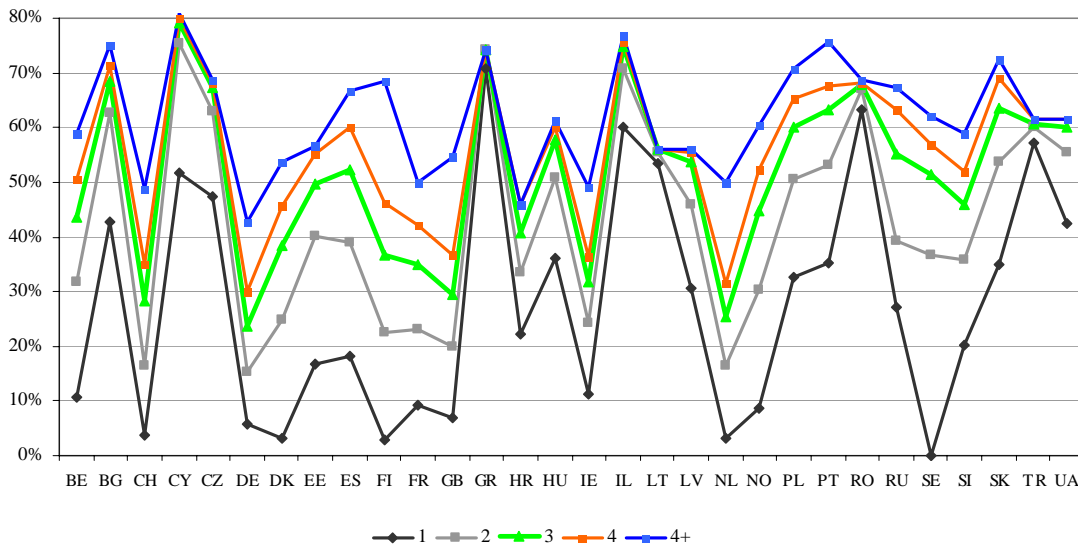
In this section, we assess the number of contact attempts needed to achieve the minimally required response rate. In other words, the focus is on the impact of the number of contact attempts on the final response rate by country.

Figure 7 presents the response rates obtained after the 1st, 2nd, 3rd, 4th and 4th+ contact attempts. Although cross-country variation exists, each additional visit contributes to an increase in the response rate. In many countries, each visit up to and including the 3rd visit increases the response rate substantially. Exceptions are Greece, Lithuania, Romania, Turkey, and to some extent Cyprus and Israel, where response rates achieved after the 1st contact attempt are high already. The response rates resulting from the initial contact attempt are quite low for some countries (Switzerland, Germany, Denmark, Finland, Netherlands and Sweden²²). Most of these countries, except for the Netherlands, make their first contact attempt through telephone.

Given the protocol stipulation to make at least 4 contact attempts (to minimise the non-contact rate) the added value of the 4th and the 4th+ contact attempt is studied more closely. The effect of the 4th contact attempt is particularly strong in Finland (+9%). Countries experiencing substantial gains in the response rate through 4 and more contact attempts are Switzerland, Germany, Finland, Great Britain and the Netherlands. In Croatia, the Czech Republic, Greece, Latvia, Lithuania, Romania, Turkey, Ukraine, the 4th visit did not have much impact (less than 1% increase). On average, these countries were characterised by a smaller number of contact attempts in the first place.

²² The obtained response rate after the initial contact attempt in Sweden is 0.07%.

Figure 7²³: Obtained response rates (%) after 1st, 2nd, 3rd, 4th and more contact attempts

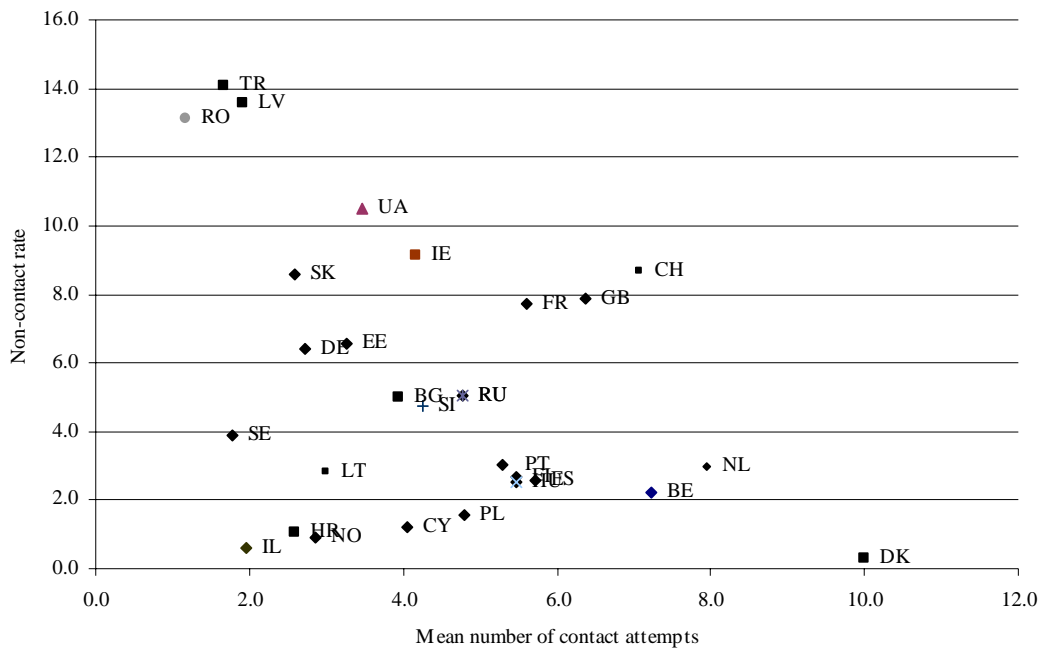


Non-contact Rate and Mean Number of Contact Attempts

While the great majority of sample units were contacted, with some sample units no direct contact was ever established. We refer to this as a ‘non-contact’ (for the overall non-contact results see section 3.1.). As already mentioned, the ESS protocol stipulates that the non-contact rate should not exceed 3%. In this respect, one could formulate a simple hypothesis: the higher the number of contact attempts, the lower the non-contact rate. But is this hypothesis supported by evidence? In Figure 8 the average number of contact attempts is plotted against the non-contact rate. The mean number of contacts is plotted along the x-axis while the final non-contact rate is plotted along the y-axis.

²³ Corresponding with Table E.

Figure 8²⁴: Scatter plot between non-contact rates and mean number of contact attempts



Although it is difficult to distinguish a clear trend on the basis of the above figure, a negative linear relationship can generally be observed between the two variables: the higher the number of contact attempts, the lower the non-contact rate. This negative association is found by the Pearson correlation coefficient (-0.30; p-value=0.12)²⁵.

²⁴ Corresponding with Table F.

²⁵ The negative relationship is however somewhat weaker than in the previous rounds (Round 1: -0.42 and Round 2: -0.47; Round 3: not noted).

Implementation of 'Four Golden Rules' before Assigning a 'Non-contact' Code

In this section, we focus on the implementation of the '4 golden rules' in relation to the final non-contact rate. These '4 golden rules' concern: (1) the number of contact attempts; (2) and (3) the number of contact attempts made in evenings and weekends; (4) the period of time the contacts have been spread over. The ESS Project Specifications outline the contact procedures as follows:

1. Fieldwork period of at least one month between September – December
2. Face-to-face briefing and training of all interviewers
3. Limited interviewer workloads (maximum of 48 assignments)
4. Face-to-face interviews must be conducted
5. *At least 4 visits/calls on different days– at least one in the evening and one at the weekend
6. *Visits spread over at least 2 different weeks
7. No substitution at any stage
8. Use of refusal conversion efforts are permitted

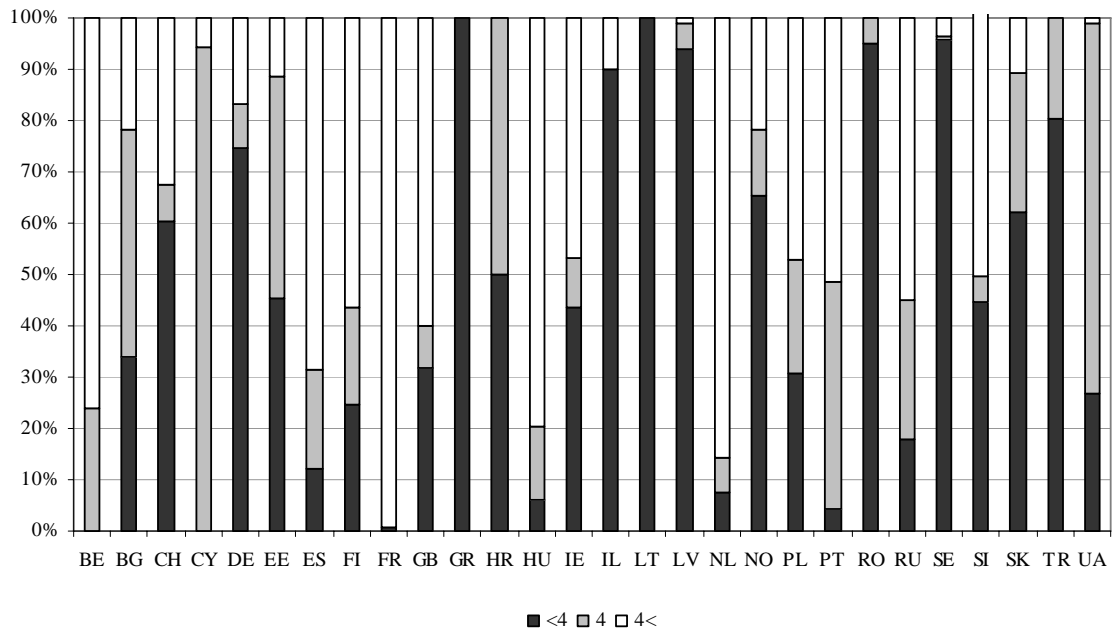
(Source: ESS Round 4 Specification for participating countries)

Items with * relate to the '4 golden rules' mentioned above. In the following section (3.3), issues related to refusal conversion efforts (item 8) are assessed.

Two countries were omitted from the analysis. For Denmark, and for the Czech Republic, non-contacts were either almost or completely non-existent.

First, the distribution of the number of attempts made to contact *non-contacts* is presented. Based on the specification, a distinction is made between 3 categories: (1) below 4 contact attempts; (2) 4 contact attempts; and (3) more than 4 contact attempts. Figure 9 shows that not all sample units were contacted before being declared 'non-contact'. With the exception of Belgium, Cyprus, France, Hungary, Netherlands and in some extent, Portugal, which tried to contact almost all non-contacts at least four times, all other countries failed to apply the '4 contact attempt rule' rule. Countries like Greece, Israel, Latvia, Lithuania, Romania and Sweden made a smaller number of contact attempts with non-contacts.

Figure 9²⁶: Distribution of number of contact attempts made to non-contact



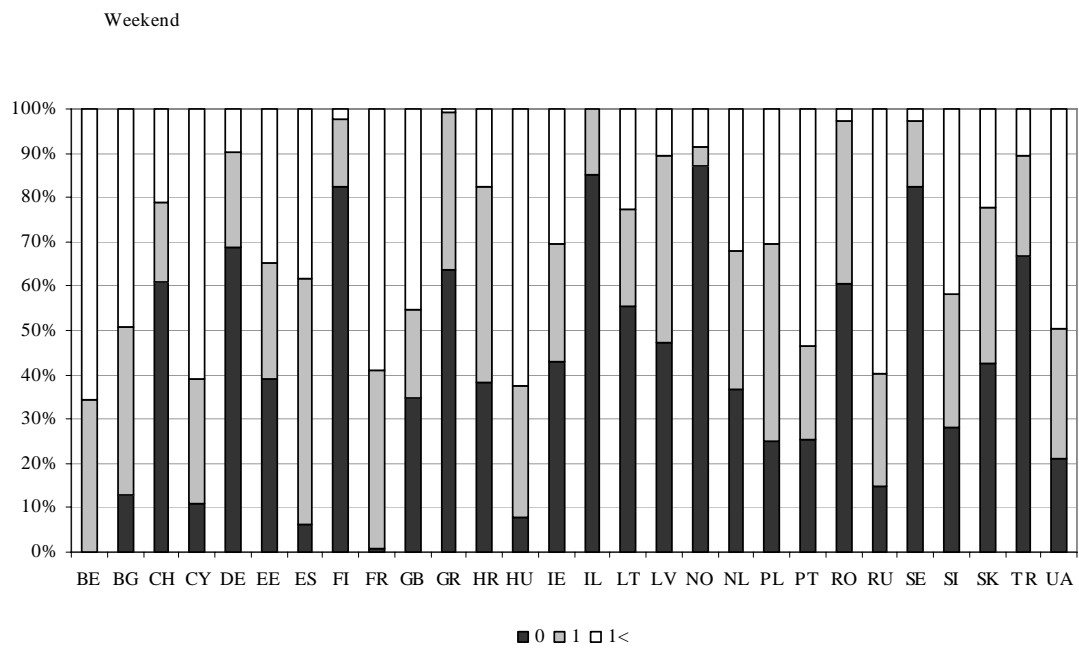
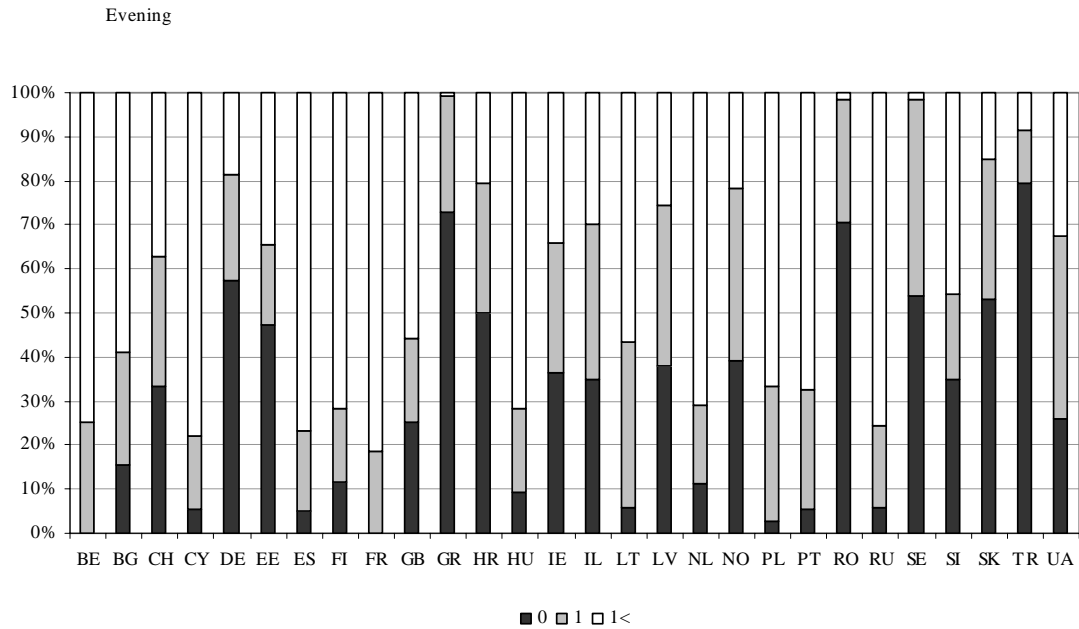
Next, we assess the implementation of ‘golden rules’ 2 and 3 (see Figure 10). In other words, we check whether one evening and one weekend contact attempt was made before declaring a sample unit as a ‘non-contact’. The assumption underpinning these rules is that contact attempts at these times of the day can further reduce the non-contact rate.

The corresponding tables show that the only countries to respect the rules concerning evening and weekend contact attempts were Belgium and France. All of the other countries did not completely respect rules 2 and 3²⁷. Countries not respecting the rule concerning *evening* contact attempts (rule 2) and with high proportions of non-contacts were Germany, Greece, Romania, Sweden, Slovakia and Turkey. For more than half of the non-contacts, no evening contact attempt was made. Countries not complying with the rule concerning weekend contact attempts (rule 3) were Finland, Germany, Greece, Israel, Lithuania, Norway, Romania, Sweden, Switzerland and Turkey. In these 9 countries, more than half of the non-contacts did not receive a weekend visit.

²⁶ Corresponding with Table G.

²⁷ We took a strict measure here. In some countries, more than 80% of the non-contacts were contacted in the evening (e.g. BE, BG, CY, ES, FI, FR, HU, LT, NL, PL, PT, and RU) and in the weekend (e.g. BE, BG, CY, ES, FR, HU, RU).

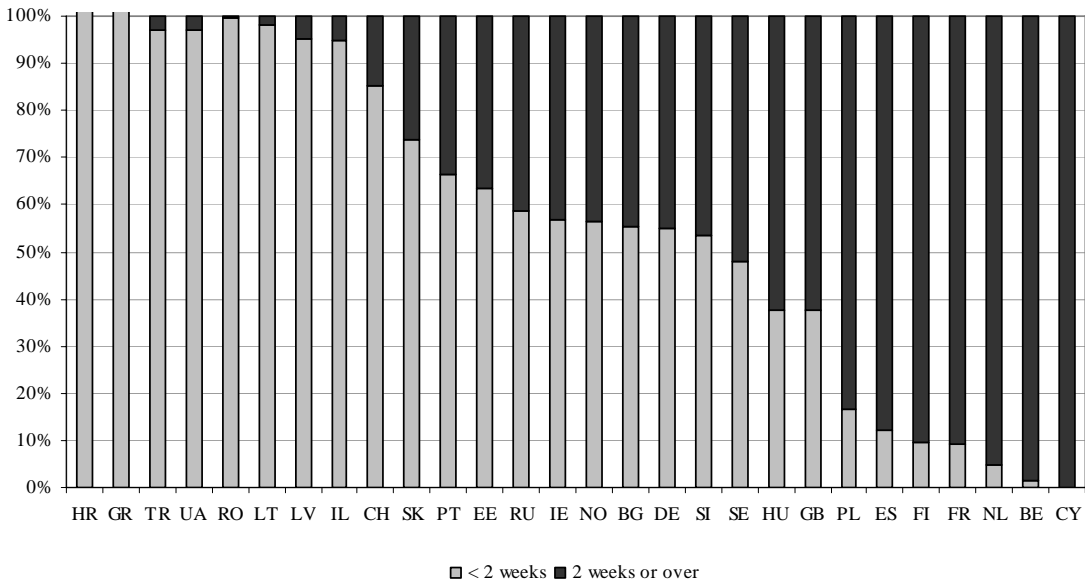
Figure 10²⁸: Distribution of number of evening and weekend contact attempts made to non-contacts



²⁸ Corresponding with Table H.

The 4th ‘golden rule’ concerns the spread of contact attempts over a period of at least 2 different weeks before declaring a sample unit as ‘non-contact’. Figure 11, which distinguishes between below 2 weeks and over 2 weeks, shows that 18 countries did not comply with this rule. In these countries, at least 50% of the non-contacts were assigned that status in less than two weeks. In the other 10 countries, more than half of non-contacts were contacted over a period of 2 weeks or more.

Figure 11²⁹: Period when contact attempts made to contact non-contacts (%)

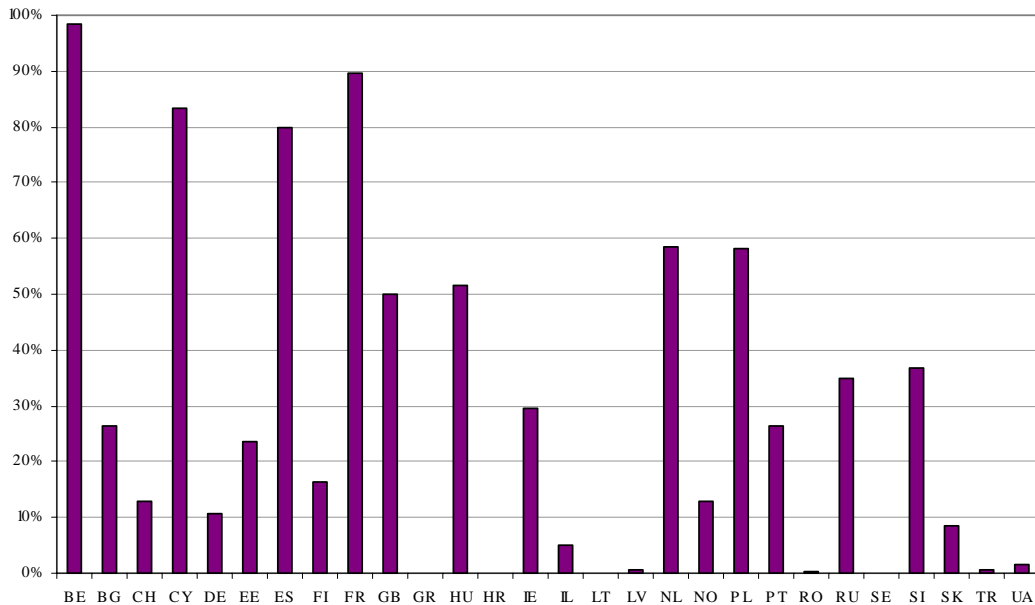


And lastly, Figure 12 summarises the assessment of compliance with the 4 ‘golden rules’. Substantial cross-country variation emerges. In some countries (Belgium, Cyprus, Spain and France), the 4 rules were complied with for a large proportion of non-contacts (80% or more). In other countries (Switzerland, Germany, Finland, Greece, Croatia, Israel, Latvia, Lithuania, Norway, Romania, Sweden, Slovakia, Turkey and Ukraine), the 4 rules were complied with for a small proportion of non-contacts (below 20%)³⁰.

²⁹ Corresponding with Table I.

³⁰ Note that this takes the compliance on all 4 rules into account. Therefore the proportion can differ when a more lenient measure, e.g. 3 rules are considered.

Figure 12³¹: Combined contact efforts (total 4 rules) made to number of final non-contacts (%)



By linking compliance with the 4 ‘golden rules’ (Figure 12) to final non-contact rates (Figure 2), an interesting ‘expected outcome’ is observed. On the one hand, it appears that countries with high compliance rates (e.g. Belgium, Cyprus and Spain) had non-contact rates lower than 3%. An exception was France, which, in spite of a high level of compliance, had a non-contact rate above 3%. France worked on the basis of a household sample, however, which, as discussed above, complicates the establishment of direct contact with the sample unit. On the other hand, most countries with low compliance rates (e.g. Switzerland, Germany, Greece, Latvia, Romania, Slovakia, Sweden, Turkey and Ukraine) also had non-contact rates above 3%. Exceptions to this were Croatia, Finland, Israel, Lithuania and Norway.

3.3. Refusal Conversion Activities

An important stipulation in the Specification for Participating Countries concerns the implementation of refusal conversion activities in order to maximise response rates. Refusal conversion consists of re-approaching initially reluctant respondents in order to persuade them to reconsider participating in the survey. Refusal conversion can be useful for increasing the response rate as it can be assumed that many initial refusals, in particular in countries with high proportions of such refusals, are ‘soft’ refusals instigated

³¹ Corresponding with Table J.

by particular circumstances (e.g. timing, interviewer's tailoring technique, etc). The ESS specifies that both 'soft' and 'hard' refusers (as assessed subjectively by the interviewer) should be re-approached. It is recommended that refusal conversion activities are conducted by more experienced interviewers. This leaves the National Co-ordinator and national survey organisation with a measure of freedom to organise the refusal conversion activities as it sees fit. This means that the coverage of initial refusals as well as the type of interviewer (experienced or not) contacting the initial refusers can vary across countries, which results in substantial cross-country variation in the proportion of initial refusers contacted for refusal conversion and in the refusal conversion activity success rate.

To facilitate the study of national refusal conversion activities, an extra variable 'RECONV' (defined as the number of refusal conversion attempts started during the contact procedure) was added to the ESS Round 4 contact forms. However, in many countries, data for this variable was not sufficiently recorded to enable cross-country comparisons. For this reason, this variable has been excluded from analysis³².

We therefore based the analysis of refusal conversion activities on the same approach as used in previous ESS rounds where the target group for analysis consists of initial refusals³³.

Figure 13 breaks the group of initial refusals down into the following categories: (1) not re-approached; (2) re-approached but no contact; (3) re-approached but refusal; (4) re-approached and interview completed. Substantial cross-country variation is observed with regard to the coverage of refusal conversion activities. On the one hand, a large proportion (over 80%) of initial refusers was re-approached in the Netherlands (91.23%) and Switzerland (86.51%)³⁴. On the other hand, almost no effort was made to convert initial refusers in Bulgaria, Cyprus, the Czech Republic, Denmark, Greece, Latvia, Lithuania, Portugal, Romania and Ukraine. In these countries, less than 10% of initial refusals were re-approached. However, this is understandable because these countries reported that they carried out hardly any refusal conversion activities. In contrast, Slovenia and Slovakia reported that they carried out hardly any refusal conversion activities but our analysis suggests that they did.

The Netherlands and Switzerland, countries with substantial refusal conversion activities, converted 25.39% and 21.9% respectively of the initial refusers re-approached into complete interviews³⁵. Other effective countries³⁶ were Slovakia (0.58), Croatia (0.44), Germany (0.40), Spain (0.42), Ukraine (0.30), Slovenia (0.37), Poland (0.25), Ireland (0.23), Great Britain (0.21) and Norway (0.21). Following the same procedure carried out in

³² Only the occurrence of refusal conversion activities is checked.

³³ Estonia was not included in this analysis as it suffered from insufficient contact information concerning refusal conversion.

³⁴ See Table L in Appendix 2.

³⁵ See Table L column 'success rate on reapproached' in Appendix 2.

³⁶ By 'effective' we mean countries not necessarily with a high coverage of initial refusers but successful in converting a large (0.20<) proportion of those contacted.

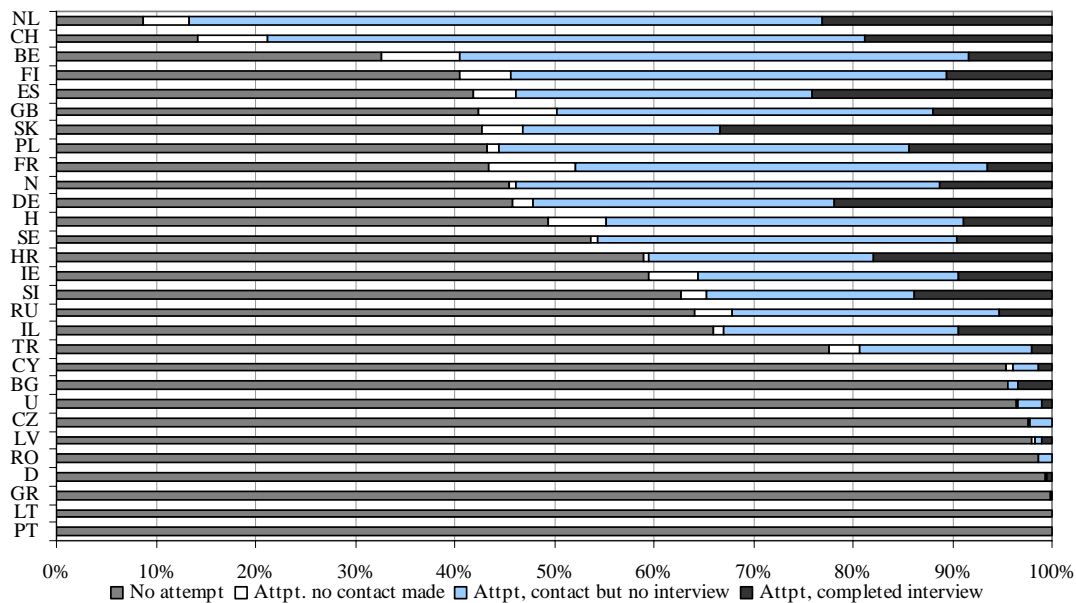
Round 3, the overall refusal conversion success rate is calculated by multiplying the proportion of successfully converted refusals among all re-approached initial refusals with the share of initial refusals which were re-approached. This results in the share of the total number of initial refusals which was successfully converted. Countries with 100 or more converted respondents were Switzerland, Croatia, Germany, Spain, France, Great Britain, the Netherlands, Norway and Slovakia³⁷. Among these countries, the success rate did not exceed 20% only in France.

Compared to Round 3, a mixed picture emerges. Half of the observed countries - e.g. Slovakia (0.18), Ukraine (0.14), Switzerland (0.08) and Finland (0.07) - have increased their success rates while the other half - e.g. Sweden (0.17), Belgium (0.08) and Slovenia (0.06) - have decreased theirs (see Matsuo et al., 2009). Truly understanding these changes requires further study, of the organisation of refusal conversion activities – e.g. rate of coverage of initial refusers, conversion rate, quality of interviewers - and of contextual factors in each country in each round.

A final note on refusal conversion activities is in order. In some countries, interviewers accept a refusal more easily than in other countries. That means that a degree of cross-country variation exists as far as the meaning of ‘soft’ and ‘hard’ refusals is concerned. This has implications for certain types of analysis, for instance, those that distinguish between ‘cooperative respondents’ and ‘reluctant respondents’. An example is the analysis concerning the measurement and the correction of non-response bias (see research completed for the ESS i3 Joint Research Activities work packages), where ‘cooperative respondents’ (respondents who have agreed to survey cooperation without refusal conversion activities) are used as reference group.

³⁷ See Table K in Appendix 2.

Figure 13³⁸: Outcome of refusal conversion attempts



3.4. Information on Refusers

Through the contact form, some information can be collected on refusers: demographic information (age, gender), reasons for refusal, and interviewer assessment of likelihood of future survey cooperation. In ESS Round 4, small adjustments were made to collect more information on refusers.³⁹ This information provides an insight into refusal (one type of non-response), which is truly unique.

Collecting information from refusers is not easy. This has already been discussed in the incomplete information among refusers (see section 2.1). Like in previous ESS rounds, the proportion of item non-response for refuser's age and gender is non-negligible and generally higher in countries making use of household and address types of sample frame. Table 3 provides an overview of the percentage of item non-response (here counted as those which are recorded as code 8, 9⁴⁰ or missing: the interviewer was unable to make an assessment). Substantial cross-country variation exists. Countries with reasonably complete (percentage item non-response <5% for final refusers) information on age and gender are Croatia, Denmark, Finland, Hungary and Norway. Countries with a very high number of incomplete cases (percentage item non-response >50%) are Switzerland, Israel, Latvia, Sweden and Turkey. That the proportion of item non-response is related to the type of sample frame is clear from the fact that most high item non-response countries made use of either a household or an address type of sample frame. Compared to previous ESS rounds, most countries decreased these percentages of item non-response.

³⁸ Corresponding with Table K.

³⁹ New contact forms used for Round 4 made it possible to collect information up until the 3rd refusal.

⁴⁰ Code 8 means 'do not know' and code 9 means 'not available'.

Table 3: Item non-response: information missing for either one of age or gender variables by final refusers (%)

Countries	% item non-response	Countries	% item non-response
BE	5.68	IE	25.75
BG	9.87	IL	56.30
CH	54.18	LT	23.39
CY	8.05	LV	84.33
CZ	29.43	NL	24.33
DE	64.01	NO	1.39
DK	1.33	PL	5.61
EE	6.24	PT	45.45
ES	7.23	RO	15.28
FI	0.00	RU	22.08
FR	17.90	SE ⁴¹	93.27
GB	14.46	SI	27.10
GR	11.98	SK	35.94
HR	0.26	TR	75.64
HU	4.63	UA	22.42

The information on the reasons for refusal was collected differently in different countries. While some countries recorded multiple reasons for refusals (it is possible to record up to 5 reasons), other countries recorded just one reason. Table 4 presents the frequency of each possible reason of refusal for the first refusal among initial refusers. Overall, the primary reasons for refusal are 'not interested', 'bad timing, otherwise engaged' and 'waste of time'. 'Never do surveys' and 'co-operate too often' are also recorded often. 'The interviewer also has to assess whether initial refusers would be willing to participate in the future. In most cases, the interviewer's assessment is negative. In all countries, for more than 70% of initial refusers, the interviewer assessment was 'definitely not' or 'probably not' with regard to future survey cooperation.

⁴¹ National Co-ordinator reports that this information is not collected by the fieldwork organization.

Table 4: Reasons of 1st refusal indicated by all possible reasons among initial refusers (1-14) (%)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	N
BE	9.42	35.76	3.03	12.86	1.24	3.44	8.53	0.83	3.23	1.38	1.51	2.68	1.24	14.86	1454
BG	7.81	26.08	1.44	17.19	0.36	13.10	7.09	1.08	8.77	0.72	0.24	5.05	5.77	5.29	832
CH	15.72	35.98	1.11	3.44	0.65	8.23	8.15	0.61	3.60	0.82	0.61	1.06	0.41	19.61	2443
CY	9.27	27.03	2.70	13.90	1.16	7.34	12.74	4.63	6.18	4.63	3.86	1.54	3.47	1.54	259
CZ	5.80	40.04	1.42	11.27	0.98	12.47	9.19	0.44	6.78	1.64	1.20	2.63	3.50	2.63	914
DE	12.57	30.20	0.00	0.00	0.00	2.77	24.26	1.92	3.72	0.00	3.47	4.57	0.00	16.52	2712
DK	21.82	0.00	3.04	9.12	0.72	1.07	17.17	5.01	1.79	0.54	1.43	0.72	2.68	34.88	559
EE	9.98	38.58	1.56	14.54	0.72	7.21	4.93	1.32	6.37	0.96	1.80	2.28	1.68	8.05	832
ES	10.78	45.45	2.17	14.08	1.05	3.38	7.88	0.40	3.62	0.40	2.57	0.97	0.88	6.36	1243
FI	17.92	35.14	3.60	10.11	0.50	2.90	5.81	1.60	1.50	0.70	2.10	1.50	0.80	15.82	999
FR	3.84	52.23	1.05	16.36	0.19	2.42	7.06	0.68	2.73	0.43	0.68	2.29	2.97	6.96	1614
GB	17.27	34.36	2.27	4.92	0.80	6.95	9.04	0.80	2.34	0.43	1.84	1.11	2.52	15.37	1627
GR	4.76	39.43	6.70	11.76	4.02	10.12	8.48	2.98	2.38	1.04	2.23	1.93	3.27	0.89	672
HR	30.39	25.42	2.81	12.10	6.57	7.97	2.25	3.47	0.66	0.84	3.56	0.38	0.38	3.19	1066
HU	15.22	35.92	1.88	9.90	1.72	8.18	9.66	1.06	4.91	1.64	1.55	4.42	3.85	0.08	1222
IE	13.13	35.55	1.97	4.03	3.38	0.94	8.35	1.03	1.69	0.09	1.13	1.97	1.59	19.51	1066
IL	13.24	35.18	4.55	7.71	0.99	11.86	7.51	0.59	4.74	0.99	1.98	1.78	1.58	7.31	506
LT	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	33.33	0.00	0.00	0.00	33.33	0.00	1828
LV	9.76	17.56	4.88	18.05	2.93	9.76	7.32	0.49	5.37	1.46	3.41	1.46	15.61	1.95	205
NL	6.26	43.50	2.51	11.68	0.68	3.71	6.78	1.71	2.47	0.72	2.07	1.24	1.20	15.47	2508
NO	8.32	50.78	1.65	5.81	0.61	2.08	9.27	1.04	0.43	0.43	0.61	0.69	0.00	18.28	1154
PL	2.23	37.16	1.52	16.53	2.11	7.03	6.92	0.59	3.87	0.94	0.23	3.75	1.41	15.71	853
PT	2.51	55.15	2.39	14.45	2.26	4.65	9.30	0.00	4.52	1.13	0.88	2.14	0.63	0.00	796
RO	10.33	36.41	10.87	8.70	5.98	2.17	8.15	1.63	1.63	3.26	0.54	2.17	4.35	3.80	184
RU	10.08	21.80	2.18	17.53	1.09	14.35	11.17	1.00	5.63	1.00	1.27	0.00	10.81	2.09	1101
SK	16.82	32.73	0.91	9.85	1.97	13.03	6.97	0.00	4.85	1.97	0.91	4.55	2.42	3.03	660
SI	24.81	34.02	3.20	11.65	0.19	5.83	7.71	1.13	2.07	0.56	0.56	2.07	0.56	5.64	532
SE	33.86	37.39	0.85	1.34	0.24	2.07	6.94	1.10	0.61	0.37	1.46	1.83	0.00	11.94	821
TR	2.29	51.39	1.15	4.91	0.00	8.51	7.36	0.49	5.24	2.13	1.96	1.64	11.95	0.98	611
UA	4.38	20.11	2.81	22.58	1.24	11.91	7.19	0.34	8.09	0.56	2.47	3.93	8.99	5.39	890

Note: 1. Bad timing, otherwise engaged; 2. Not interested; 3. Do not know subject, too difficult for me; 4. waste of time; 5. waste of money, 6. Interferes with privacy; 7. Never do surveys; 8. Co-operate too often; 9. Do not trust surveys; 10. Previous bad experience; 11. Don't like subject; 12. Refusal because no approval to cooperate; 13. Do not admit strangers to my house/afraid; 14. Other.

3.5. Observable Information among Response and Non-response units

Proportion Item Non-response for Observable Data

Table 5 shows the percentage of item non-response for observable information by final contact status. The last column presents the percentage of item non-response for non-respondents. The next but last column presents the percentage of item non-response where at least one of the 4 neighbourhood variables is missing for all eligible sample units. Like in previous ESS rounds, this information was not collected in Norway and Sweden since this is prohibited by privacy law.

It is clear from the table that the percentage of item non-response for observable information was much higher for non-respondents than for respondents. As for interviewed units, most countries, except for Germany, Estonia and Turkey, were able to collect this information. Countries with percentages item non-response for all types of non-response units (refusal; not able/other; non-contact) above 10% were Israel (51.13%),⁴² Estonia (51.65%), Germany (40.01%), Latvia (35.22%), Slovenia (36.44%), Croatia (28.99%), Turkey (25.70%), Poland (19.73%), Slovakia (16.13%) Spain (10.99%), Ireland (10.48%) and Cyprus (10.18%). Countries with percentages of item non-response for all eligible sample units above 10 percent were Germany (32.44%), Croatia (30.33%), Estonia (28.91%), Ireland (11.31%), Israel (12.68%), Latvia (40.78%), Slovenia (18.32%) and Turkey (16.04%). While it is true that all of the above proportions were generally much lower in Round 4 than in previous ESS rounds (see Cincinatto et al., 2008 and Matsuo and Billiet, 2009) - it does not diminish the fact that for some countries substantial information is missing, in particular for non-response units. This is a pity because this information is valuable not only for detecting and correcting non-response bias but also for feeding into a responsive fieldwork design.

⁴² This includes those units where the fieldwork stopped prematurely.

Table 5: Item non-response: information missing for one of the neighbourhood variables by final contact status (%)

	Eligible sample (N)	Final contact status				Eligible sample	All non-response
		Interview	Non-contact	Refusal	Not able/other		
BE	2983	0.45	0.00	0.65	12.30	2.01	4.25
BG	2974	0.00	0.00	0.00	23.33	0.94	3.76
CH	3726	0.88	3.72	1.37	2.35	1.42	1.94
CY	1500	0.08	0.00	2.01	22.03	2.00	10.18
CZ	2904	0.00	0.00	0.00	67.59	2.51	8.24
DE	6443	22.28	53.16	27.07	58.38	32.44	40.01
DK	2978	0.38	0.00	5.81	2.81	2.48	4.92
EE	2933	11.50	35.42	41.42	69.58	28.91	51.65
ES	3859	0.74	2.02	0.48	24.20	4.15	10.99
FI	3209	0.41	15.29	4.93	12.36	2.71	7.69
FR	4157	1.64	2.17	2.59	11.81	2.65	3.65
GB	4302	0.60	18.58	0.76	12.70	3.65	7.31
GR	2790	0.00	0.00	0.00	0.00	0.00	0.00
HR	3231	1.95	8.82	2.82	100.00	30.33	28.99
HU	2515	0.06	0.00	0.14	7.34	0.72	1.75
IE	3589	0.06	32.93	4.83	40.67	11.31	10.48
IL	3241	1.08	5.00	8.66	75.68	12.68	51.13
LT	3550	0.00	0.00	0.00	0.00	0.00	0.00
LV	3494	7.42	80.42	71.14	95.76	40.78	35.22
NL	3568	0.67	2.83	1.73	6.33	1.54	2.40
PL	2278	1.80	2.78	6.59	47.25	7.02	19.73
PT	3124	0.34	0.00	0.00	0.00	0.26	0.00
RO	3120	0.65	3.41	2.78	2.62	1.38	2.98
RU	3729	0.00	0.00	0.00	0.00	0.00	0.00
SI	2184	5.61	17.48	40.55	36.45	18.32	36.44
SK	2491	1.93	1.87	4.06	62.84	5.82	16.13
TR	3703	10.48	10.26	29.75	62.59	16.04	25.70
UA	2996	0.27	1.27	0.27	6.59	0.57	1.04

Note: Missing contact forms are noted for the following countries: Cyprus (N=67), the Czech Republic (N=7), Croatia (N=914), Germany (N=188), Great Britain (N=81), Ireland (N=132), Israel (N=283), Latvia (N=409), Norway (N=5), Slovenia (N=59) Slovakia (N=89) and Turkey (N=2).

Distributions for Observable Data

Tables 6 and 7 present distributions for a number of variables among eligible samples. The variable 'Type of housing' can take ten different values in the contact form but Table 6 presents the information in a more aggregated manner, namely in 4 broader categories. The Table shows that most housing is either single unit or multi-unit. In 16 out of 30 countries, the percentage of single units is higher than the percentage of multi-units. In some of these countries, the percentage of single units approaches or exceeds 70% (Belgium, Cyprus, France, Great Britain Hungary and Ireland). In the other 12 countries (Switzerland, Estonia, Spain, Greece, Israel, Latvia, Lithuania, Poland, Portugal, Russia, Slovakia and Turkey), the percentage of multi-units exceeds the percentage of single units. In some countries, Poland for instance, the percentage of farm housing is not negligible (like in previous rounds).

The variable 'physical condition of housing' can take five different values in the contact form - from '1: in a very good state' to '5: very bad state') but Table 6 once more presents the information in a more aggregated manner, namely in 3 broader categories.

In all countries, the majority of sample units live in housing that is in either a 'good & very good state' or a 'satisfactory state'. In some countries - for instance, Belgium, the Czech Republic, Denmark, Finland, France, Ireland, Netherlands, Romania and Slovakia - the percentage of housing in a 'very good & good state' is much higher (70% and above) than in other countries (below 50%) - for instance, Germany, Estonia⁴³, Latvia, Russia Turkey and Ukraine.

⁴³ Note that the proportion of item nonresponse in the observable data among eligible sample units was high in Germany, Estonia and Latvia.

Table 6: Type of housing and physical condition of housing (row percentages), distributions among eligible sample

	Type of housing				INR%
	farm	single unit	multi-unit	other	
BE	2.08	76.16	18.91	0.84	2.01
BG	0.00	54.34	44.18	0.54	0.94
CH	2.28	31.27	64.12	0.91	1.42
CY	0.13	72.47	24.40	1.00	2.00
CZ	1.83	49.41	45.83	0.41	2.51
DE	2.23	33.76	30.41	1.47	32.13
DK	8.09	59.13	30.26	1.07	1.44
EE	4.88	21.89	46.68	0.14	26.42
ES	4.12	31.38	59.86	0.49	4.15
FI	4.92	57.59	34.75	0.62	2.12
FR	1.11	70.58	26.27	0.41	1.64
GB	0.91	78.24	16.90	0.56	3.39
GR	0.25	47.96	51.54	0.25	0.00
HR	1.70	53.36	15.44	0.56	28.94
HU	1.07	71.21	26.96	0.04	0.72
IE	6.07	72.58	9.70	0.39	11.26
IL	0.22	33.72	53.22	0.31	12.53
LT	0.06	29.44	70.51	0.00	0.00
LV	2.07	16.06	38.87	0.54	40.15
NL	2.07	64.55	31.39	0.64	1.35
PL	23.53	22.61	47.89	0.09	5.88
PT	0.51	48.21	50.86	0.16	0.26
RO	0.77	62.28	35.74	0.00	1.22
RU	0.00	20.68	79.32	0.00	0.00
SI	7.14	51.97	22.66	0.09	18.13
SK	0.04	46.33	48.17	0.20	5.26
TR	0.34	38.42	44.10	1.10	16.04
UA	0.10	56.21	43.29	0.03	0.37

	Physical condition of housing			INR%
	good&very good state	satis.state	Bad & very bad state	
BE	73.42	20.92	4.19	1.48
BG	63.72	28.65	6.69	0.94
CH	57.97	36.98	5.05	0.00
CY	64.53	27.13	6.33	2.00
CZ	73.66	20.18	3.65	2.51
DE	46.19	17.20	4.35	32.27
DK	76.29	18.33	3.09	2.28
EE	46.64	22.23	3.75	27.38
ES	62.43	28.61	5.44	3.52
FI	74.79	20.32	2.37	2.52
FR	81.36	14.46	3.32	0.87
GB	64.60	29.68	2.53	3.18
GR	65.23	30.47	4.30	0.00
HR	50.51	17.02	3.44	29.03
HU	56.82	35.35	7.32	0.52
IE	76.96	9.72	2.31	11.01
IL	59.36	23.67	4.84	12.13
LT	50.65	44.59	4.76	0.00
LV	31.20	25.87	4.06	38.87
NL	71.86	24.33	2.38	1.43
PL	57.64	30.33	5.84	6.19
PT	56.05	38.38	5.57	0.00
RO	71.86	23.27	4.26	0.61
RU	43.36	50.93	5.71	0.00
SI	64.65	15.38	3.21	16.76
SK	74.83	17.62	1.85	5.70
TR	35.84	49.22	14.94	0.00
UA	43.09	48.53	8.11	0.27

Table 7 shows that, for the majority of sample units, litter and vandalism are generally not common ('not very or not at all common'). These variables can also take four different values in the contact form - from '1: very common' to '4: not at all common') but Table 7, presents the information in a more aggregated manner, namely in 2 broader categories. In general, litter is observed more often than vandalism. Countries with a relatively high percentage (10% and above) presence of either litter and/or vandalism are Bulgaria, Cyprus, the Czech Republic, Greece, Hungary, Israel, Latvia, Russia, Turkey and Ukraine.

Table 7: Presence of litter and vandalism (row percentages), distributions among eligible samples

	Presence of litter			Presence of vandalism		
	not common	common	INR%	not common	common	INR%
BE	92.19	6.34	1.48	95.04	3.49	1.48
BG	76.70	22.36	0.94	85.68	13.38	0.94
CH	97.48	2.52	0.00	98.39	1.61	0.00
CY	86.53	11.47	2.00	88.60	9.40	2.00
CZ	83.02	14.46	2.51	87.57	9.92	2.51
DE	62.89	5.03	32.08	64.54	3.38	32.08
DK	94.33	3.32	2.35	96.14	1.44	2.42
EE	69.11	2.22	28.67	71.43	1.09	27.48
ES	90.85	5.62	3.52	90.44	6.04	3.52
FI	93.14	4.52	2.34	93.42	4.18	2.40
FR	96.49	2.26	1.25	96.18	2.41	1.42
GB	87.12	9.81	3.07	92.21	4.60	3.18
GR	69.32	30.68	0.00	73.94	26.06	0.00
HR	66.98	3.96	29.06	64.44	6.56	29.00
HU	85.61	13.88	0.52	89.78	9.70	0.52
IE	83.51	5.46	11.03	86.07	2.90	11.03
IL	66.65	21.20	12.16	69.58	18.20	12.22
LT	95.92	4.08	0.00	97.69	2.31	0.00
LV	49.97	10.88	39.15	53.35	7.50	39.15
NL	92.77	5.91	1.32	96.24	2.38	1.37
PL	87.62	6.19	6.19	86.26	7.16	6.58
PT	94.21	5.79	0.00	95.04	4.96	0.00
RO	91.70	7.63	0.67	94.04	5.29	0.67
RU	84.02	15.98	0.00	85.89	14.11	0.00
SI	80.68	2.66	16.67	82.83	0.46	16.71
SK	86.43	7.87	5.70	87.88	6.46	5.66
TR	88.22	11.78	0.00	93.08	6.92	0.00
UA	78.24	21.40	0.37	89.85	9.68	0.47

Measurement of significant differences between different types of respondents

The analysis that follows is based on countries with percentages of item non-response for all eligible sample units of less than 10%. Therefore, eight countries - Germany (32.4%), Croatia (30.3%), Estonia (28.9%), Ireland (11.3%), Israel (12.7%) Latvia (40.8%), Slovenia (18.3%), Turkey (16.0%)⁴⁴, in addition to Norway and Sweden (because of privacy reasons) - are not included. In addition, Denmark and the Czech Republic are excluded from the analysis on non-contacts and cooperative respondents (shown in Table 9). For Denmark, non-contacts were almost, and for the Czech Republic completely, non-existing. Moreover, the analysis on reluctant respondents and cooperative respondents is restricted to countries with a sufficiently high number of reluctant respondents. Therefore, countries such as, Bulgaria, Cyprus, Greece, Portugal, Romania and Ukraine, are excluded from this analysis. Tables 8 and 9 compare survey distributions by type of respondent. As we are particularly concerned about potential differences between response and non-response units, results are presented from three comparisons: (1) cooperative respondents vs. initial refusers, (2) cooperative respondents vs. final non-contacts and (3) cooperative respondents vs. reluctant respondents.

Table 8 shows that cooperative respondents differ substantially from initial refusers. This is observed for all variables (Bulgaria, Spain, Finland, Hungary, Lithuania, Poland, Portugal, Russia), for just a few variables (Denmark, Greece and Ukraine), or for just one variable (Belgium, Cyprus, Czech Republic, France and Slovakia). In the other countries (Great Britain, Switzerland, Netherlands, and Romania), the two types of respondents did not differ. Also, cooperative respondents differ from final non-contacts, at least in one variable, in 18 countries (Table 9). This is observed for all variables (Switzerland, Hungary, Lithuania, Netherlands, Russia and Slovakia), for just a few variables (Belgium, Bulgaria, Finland, France, Great Britain and Greece, and Ukraine), or for just one variable (Spain, Cyprus, Portugal). In the other countries (Poland, Romania), on the basis of available observable data, cooperative respondents and final non-contacts did not differ from each other. Lastly, cooperative respondents do not differ much from reluctant respondents in most countries (Table 10). Differences are observed for all variables for Spain, for just a few variables for Poland, and or for just one variable for Finland, Great Britain and Slovakia. These tables show differences between cooperative respondents and initial refusers, between cooperative respondents and final non-contacts, and to some extent, between cooperative respondents and reluctant respondents. Still, some issues need to be addressed with regard to observable data (e.g. quality aspects). In Round 5, specific instructions on observable data are given to National Coordinators and specific training on the issue to interviewers to ensure the quality of such data.

⁴⁴ Proportions item non-response for these countries are constant across these 4 observable and dwelling variables except for Turkey where proportion missing is high in 'type of housing'.

Table 8: Cooperative respondents vs. initial refusers, chi-square test of independence for 4 variables

	Coop. respondent	Initial refusers	Type of housing			Physical condition			Presence of litter			Presence of vandalism		
			Chi ²	p-value	DF	Chi ²	p-value	DF	Chi ²	p-value	DF	Chi ²	p-value	DF
BE	1690	844	26.35	0.002	9	1.92	0.75	4	1.70	0.64	3	0.89	0.83	3
BG	2213	493	133.07	<0.0001	5	20.06	0.001	4	26.10	<0.0001	3	23.59	<0.0001	3
CH	1528	1535	7.88	0.55	9	5.09	0.28	4	0.90	0.83	3	1.00	0.80	3
CY	1213	151	10.52	0.16	7	16.00	0.003	4	2.16	0.54	3	5.41	0.14	3
CZ	2018	778	6.87	0.67	9	18.16	0.001	4	0.68	0.88	3	2.62	0.45	3
DK	1591	986	40.34	<.0001	8	66.25	<.0001	4	15.10	0.002	3	5.38	0.15	3
ES	2378	820	50.26	<.0001	9	10.20	0.04	4	25.00	<.0001	3	20.47	0.0001	3
FI	2115	750	22.00	0.005	8	42.71	<.0001	4	10.41	0.02	3	12.90	0.005	3
FR	1967	1614	20.97	0.01	8	4.26	0.37	4	5.68	0.13	3	0.56	0.91	3
GB	2198	1196	9.09	0.43	9	2.83	0.59	4	6.47	0.09	3	6.49	0.09	3
GR	2071	502	23.49	0.001	7	31.41	<.0001	4	4.82	0.19	3	1.74	0.63	3
HU	1475	758	28.14	0.0002	7	15.88	0.003	4	22.29	<.0001	3	21.83	<.0001	3
LT	2002	1347	412.66	<.0001	4	58.08	<.0001	4	96.53	<.0001	3	143.91	<.0001	3
NL	1343	1882	13.04	0.16	9	3.05	0.55	4	2.84	0.42	3	1.03	0.79	3
PL	1545	481	73.52	<.0001	8	11.24	0.02	4	16.81	0.001	3	18.68	0.0003	3
PT	2367	627	18.82	0.02	8	24.91	<.0001	4	8.84	0.03	3	11.23	0.01	3
RO	2146	144	1.28	0.73	3	2.64	0.62	4	0.80	0.85	3	7.49	0.06	3
RU	2459	986	163.39	<.0001	2	37.94	<.0001	4	53.52	<.0001	3	82.82	<.0001	3
SK	1648	481	26.62	0.0002	6	9.23	0.06	4	2.41	0.49	3	2.23	0.53	3
UA	1837	753	25.61	0.001	7	13.28	0.01	4	1.40	0.84	4	7.39	0.06	3

Table 9: Cooperative respondents vs. non-contacts, chi-square test of independence for 4 variables

	Non-contact	Type of housing			Physical condition			Presence of litter			Presence of vandalism		
		Chi ²	p-value	DF	Chi ²	p-value	DF	Chi ²	p-value	DF	Chi ²	p-value	DF
BE	67	80.11	<0.0001	9	6.18	0.19	4	20.43	0.0001	3	11.38	0.01	3
BG	148	72.14	<0.0001	5	8.17	0.09	4	8.59	0.04	3	2.57	0.46	3
CH	323	128.63	<0.0001	9	54.06	<0.0001	4	148.23	<0.0001	3	178.25	<0.0001	3
CY	18	6.30	0.51	7	1.87	0.76	4	1.34	0.72	3	8.94	0.03	3
ES	99	25.06	0.003	9	1.56	0.82	4	2.50	0.48	3	1.91	0.59	3
FI	85	55.94	<0.0001	8	6.88	0.14	4	6.33	0.10	3	7.86	0.05	3
FR	322	67.06	<.0001	8	6.27	0.18	4	11.95	0.01	3	9.08	0.03	3
GB	339	55.28	<.0001	9	42.86	<.0001	4	6.50	0.09	3	16.38	0.009	3
GR	170	13.77	0.06	7	51.89	<.0001	4	8.08	0.04	3	29.86	<.0001	3
HU	64	24.50	0.001	7	12.03	0.02	4	29.55	<.0001	3	42.99	<.0001	3
LT	101	55.82	<.0001	4	44.23	<.0001	4	19.12	0.0003	3	48.35	<.0001	3
NL	106	81.15	<.0001	9	32.08	<.0001	4	39.40	<.0001	3	28.27	<.0001	3
PL	36	4.94	0.55	6	5.46	0.24	4	2.50	0.48	3	1.80	0.62	3
PT	95	15.92	0.03	7	2.37	0.67	4	3.26	0.35	3	1.83	0.61	3
RO	410	1.24	0.74	3	2.36	0.67	4	5.95	0.11	3	1.47	0.69	3
RU	189	46.08	<.0001	2	14.82	0.01	4	15.87	0.001	3	35.86	<.0001	3
SK	214	22.60	0.002	7	13.44	0.01	4	14.30	0.003	3	14.09	0.003	3
UA	316	1.91	0.96	7	15.04	0.01	4	5.18	0.27	4	10.43	0.02	3

Table 10: Cooperative respondents vs. reluctant respondents, chi-square test of independence for 4 variables

	reluctant	Type of housing			Physical condition			Presence of litter			Presence of vandalism		
		Chi ²	p-value	DF	Chi ²	p-value	DF	Chi ²	p-value	DF	Chi ²	p-value	DF
BE	70	2.44	0.98	9	2.57	0.63	4	3.04	0.39	3	1.54	0.67	3
CH	291	8.82	0.45	9	5.63	0.23	4	0.71	0.87	3	0.08	0.99	3
ES	198	28.90	0.0007	9	12.76	0.013	4	24.00	<.0001	3	10.90	0.01	3
FI	80	11.52	0.17	8	25.52	<.0001	4	3.79	0.28	3	7.23	0.07	3
FR	106	8.92	0.35	8	3.62	0.46	4	6.73	0.08	3	6.51	0.09	3
GB	146	9.88	0.36	9	5.29	0.26	4	8.06	0.05	3	3.68	0.30	3
HU	67	2.78	0.90	7	6.57	0.16	4	2.78	0.43	3	0.36	0.95	3
NL	435	5.21	0.82	9	5.68	0.22	4	2.29	0.51	3	4.50	0.21	3
PL	69	28.77	<.0001	6	7.95	0.09	4	5.61	0.13	3	13.49	0.004	3
RU	53	1.94	0.38	2	1.44	0.84	4	1.45	0.69	3	3.15	0.37	3
SK	161	12.04	0.06	6	1.57	0.81	4	3.52	0.32	3	8.72	0.03	3

4. Conclusion and Discussion

This report summarises the quality assessment of the contact files, which capture the contact procedure during fieldwork, from 30 countries⁴⁵ participating in ESS Round 4 (2008-2009). These contact files contain, for each sample unit, substantial information on the contact procedure during the fieldwork data collection period. Quality assessment is important because, ultimately, through the identification of sources of potential bias, it helps users of the main integrated data file to better understand their origin, potential and limitations.

The contact files are deposited by National Co-ordinators into the ESS data archive at the end of the fieldwork period. Thereafter, communication takes place between, on the one hand, the National Coordination team or fieldwork director as appropriate and, on the other hand, the contact file controller (based at KULeuven) in order to ensure that mistakes and inconsistencies are kept to a minimum.

The quality of the contact files determines the feasibility of the evaluation, analysis and study of important issues concerning non-response and contact procedures in cross-national settings. While substantial efforts were made to ensure the quality of the contact files, which is a representation of fieldwork procedure, some mistakes and inconsistencies are unavoidable. Some information could not be collected because of privacy concerns, certain procedures were implemented differently, or interviewer performance varied across countries. These caveats should be kept in mind when reviewing the analysis presented in this report. Readers should also refer to the appendix, which contains country specific deviations and inconsistencies. For countries where deviations and inconsistencies are observed, this information is useful for monitoring the contact procedures in the coming rounds⁴⁶.

The contact files show that the target minimal response rate of 70% was achieved by 7 countries (Cyprus, Israel, Portugal, Bulgaria, Greece, Slovakia and Poland) and the maximum 3% non-contact rate respected by 13 countries (Croatia, the Czech Republic, Denmark, Israel, Norway, Cyprus, Poland, Belgium, Hungary, Spain, Finland, Lithuania and Netherlands). Compared to previous rounds, the number of countries achieving the minimum response rate of 70% was considerable. However, the spread of high and low response rates between countries was noteworthy. Consistent with previous rounds, the largest share of non-response units was accounted for by refusals. High refusal rates (over 30%) were observed for 7 countries (Switzerland, Germany, Denmark, France, Lithuania, Netherlands, Norway) and all these countries (except Norway) achieved response rates below 60%. At the country level, final response rates were generally rather stable except for some countries experiencing substantial increases (plus 5+%) (Bulgaria and Cyprus) or decreases (min 5%+)(Germany, Estonia, Netherlands, Slovenia and Ukraine) compared to previous rounds. Not all countries participated in every round, which makes the observation partial. Some context specific factors seem to have played a role in the atypical Round 4 response rates.

⁴⁵ Note that, in total, 31 countries participated in Round 4 but that 30 countries had delivered and discussed with the KULeuven team their contact files by the end of October 2010. By this time, Austria has not yet delivered their contact file due to the delay of data collection.

⁴⁶ See Appendix 1: Evaluation of contact file: short overview of country report.

These include a negative survey climate during fieldwork, an insufficiently high quality sample frame, and an unsatisfactorily performing survey organisation (Germany, Estonia and Turkey) reported by the National Co-ordinator.

These aforementioned differences in response, non-contact and refusal rates are to an important extent the result of differences across countries in terms of contact procedure. Overall sample units in some countries (ex. Greece, Israel, Lithuania, Norway, Romania and Sweden) are more contactable than those in other countries (ex. France, Great Britain, Ireland, Netherlands, Portugal, Russia, and Switzerland). Contactability depends to an important extent on the timing of contact attempts (mornings, weekdays, evenings and weekends). Also, each visit up to and including the 3rd visit increases the response rate, although the response rate obtained from the initial contact attempts is already high for some countries (ex. Greece, Lithuania, Romania, Turkey and to some extent, Cyprus and Israel). This shows that countries need to develop specific strategies that are in line with the ESS data protocol but also adapted to local circumstances. However, the analysis at the aggregate level clearly shows that complying with the so-called '4 golden rules' minimises non-contact rates and increases response rates.

Since refusals account for most of the non-response units, decreasing final refusal rates through refusal conversion activities offers substantial scope for increasing final response rates. The effort put into refusal conversion (e.g. degree of coverage of initial refusers) differs substantially by country, however, and so do success rates. While it is possible to standardise the former, the latter depends to a large extent on interviewer technique and motivation as well as initial refuser willingness. Refusal conversion activities are comparatively costly but the level of effort seems to be positively related to the increase in the response rate achieved, especially for countries with high levels of initial refusal. Some countries (e.g. Switzerland, Germany, Spain, France, Great Britain, Croatia, the Netherlands, Norway and Slovakia) were able to convert over 100 initial refusers. This may be due to the fact that the initial refusal was accepted too easily but the gains are nevertheless noteworthy.

Compared to previous ESS rounds, countries participating in ESS Round 4 have put much effort into providing good quality contact files. Yet some problems remain. For some countries, (e.g. Cyprus, Croatia, Czech Republic, Germany, Great Britain, Ireland, Israel, Latvia, Norway, Slovenia, Slovakia and Turkey) contact forms are missing (especially for non-response units), which hampers the entire evaluation of the contact procedure. Related to this issue, for some countries, such as Germany, Great Britain, Slovenia and Hungary, the information on the occurrence of the interview does not match between the main integrated data file and the contact file. There exist inconsistencies as far as the timing of the interview is concerned for some countries. For a number of countries, the information collected for two variables (RESULB/OUTNIB) concerning the outcome of each contact attempt is incomplete. This may be due to poor interviewer performance but it may also be due to difficulties experienced by the interviewer when trying to mark the appropriate code during the contact procedure. Incomplete information is also observed for refusals, especially in countries making use of household- or address-based sample frames.

With regard to the interviewer assessment of future cooperation, even though the proportion of refusers differed quite substantially across countries, the majority being considered as 'hard refusers' ('definitely not cooperate' or 'probably not cooperate'). Three primary reasons for refusal among initial refusers were 'not interested', 'bad timing, otherwise engaged', and 'waste of time', pointing to limited scope for further negotiation. Visits by experienced interviewers can probably decrease the number of final refusals. The importance of interviewer training - including doorstep interaction techniques, techniques for tailoring to individual sample units, etc. - is, therefore, important.

Attention was also paid to observable data available for all types of non-response units. Since neighbourhood characteristics may provide an insight into response behaviour (initial refusers, non-contacts or reluctant respondents in cooperation with cooperative respondents) as underpin a responsive fieldwork design - and may be used to correct for non-response bias - complete observable information is necessary. Since this information is collected through the interviewer's subjective assessment, specific attention is paid to the minimisation of measurement errors (i.e. interviewer variance) by developing additional instructions in ESS Round 5.

5. Appendix 1: Evaluation of Contact File: Short Overview of Country Report

This section should be read together with the main report on contract adherence (ESS4 Deliverable 09). Several problems are common to a number of countries: incomplete information for refusers and observable data and insufficient information concerning the 2 types of contact outcome variables.

1. Belgium

No substantial problems should be noted. Two less important issues concern (1) the final contact status 'respondent ill' (quite a high proportion) and (2) the second contact outcome variable in the contact form (OUTNIB) (a relatively high number of cases (N=726 in total) is noted as 'other' (code 12).

2. Bulgaria

No substantial problems should be noted. One issue is that the percentage for 'missing' (code 8) is comparatively high for the interviewer's assessment of age (but not gender) possibly due to the use of an address-based sample.

3. Croatia

Contact forms are missing for 914 sample units because the contact procedure stopped prematurely due to lack of funding. This results into number of missing information (timing; result outcome; observable information) and consequently, hampers the analysis of contact file.

4. Cyprus

Contact forms are missing for 67 sample units. This is because the sample frame provided by the Cyprus Electricity Authority suffered from missing information (address was not sufficient to trace the unit). Missing information of age/gender for final refusers (8.05%) and observable data among non-response units (10.18%) should also be noted. In contradiction with the ESS specification for participating countries, some interviewers were assigned more than 48 sample units.

5. Czech Republic

Contact forms were missing for 7 sample units. Privacy concerns initially prohibited linking the main integrated data file and the contact files. This was permitted in the end. Missing information for one of the timing variables (N=141) and incomplete information concerning the 2 contact outcome variables (N=334) should be noted. In addition, missing information for final refusers (29.43%) and missing observable data for non-response units (8.24%) should also be noted. The National Co-ordinator reports

that the sample design changed (the sample frame published by the national statistical office was used) during Round 4 fieldwork.

6. Denmark

No substantial problems should be noted except for two issues. Refusal information is only available for the first refusal and only one reason for refusal is recorded for limited number of refusers. Again, in contradiction with the ESS specification for participating countries, some interviewers had been assigned more than 48 sample units.

7. Estonia

Some issues reported by the National Co-ordinator need to be noted. The sample frame was not of the required quality, affecting the contact procedure and final contact status. An additional issue concerns the quality of the survey organisation, which did not comply with the ESS specification for participating countries. Missing information for neighbourhood characteristics (among eligible sample units: 28.9%) was notably high. Most of the refusal conversion activities were not recorded in the contact files. This is why the analysis concerning refusal conversion activities were not included in this report. Furthermore at least 6% of final refusal information was missing in the contact forms but were completed on the basis of the sample frame. Complete timing information on (minute, hour, day, date and month) is missing for 675 contact attempts.

8. Finland

Refusal information on age and gender was only collected for the first refusal (though it was possible to include information up to the 3rd refusal). The variable NUMTEL (number of automatic calls before face to face contact or contact attempts) included calls made after the 1st face to face contact. Like in other countries, substantial information was missing for 2 contact outcome variables (N=963).

9. France

Due to the use of household-based sample, the percentage of refusal information missing for age and gender is somewhat high (17.9%). Only one reason for refusal is collected, and only for the first and second refusals, but this, according to National Coordination team, was due to the national design of the contact form. For the 2nd contact outcome variable, some information was missing (N=346).

10. Germany

Originally, for 188 sample units, the contact forms were missing, although among them, 25 cases had interviews. Related to this, in some contact forms, no interview was recorded while in fact an interview had taken place. The percentage of information

missing for age and gender (64%) and for observable data among non-respondents was high (40%) but this information, according to the National Coordinator, could not be thoroughly collected because of privacy reasons. Compared to the previous round, a decrease in the response rate was noted by the National Coordination team and explained by a deteriorating survey climate during the fieldwork period.

11. Great Britain

Contact forms were missing for 81 sample units. Some contact forms did not record an interview while in fact an interview had taken place. The percentage of information missing for final refusers is relatively high (15%). Finally, substantial information was missing for the 2 contact outcome variables (RERSB and OUTNIB variables): for code 12 ('other'), N=1104.

12. Greece

Information among refusals for age and gender is missing (12%). In contradiction with the ESS specification for participating countries, some interviewers were assigned more than 48 sample units. The number of contact attempts per sample unit is generally low. It is notable that the response rate obtained from the initial contact attempt is very high.

13. Hungary

No major problems are observed except that some contact forms did not record an interview when an interview had in fact taken place.

14. Ireland

Contact forms are missing for 132 sample units. Much information is missing on refuser's age and gender (25.8%) and on observable data among non-respondents (10.48%). Information on the visit order for refusers, the interviewer's assessment, and the reasons for refusal were not sufficiently collected (N=189).

15. Israel

The contact files suffer from a number of problems. 283 sample units were not contacted at all as the contact procedure was stopped prematurely. For those who were contacted, substantial information was missing for final refusers and observable information (both above 50%). Concerning the timing variable, minutes were not recorded for each contact attempt and the day and the date did not always match.

16. Latvia

Contact forms are missing for 409 sample units: the fieldwork was stopped because, according to the National Co-ordinator team, the target number of interviews had been achieved. The percentage of information missing for age and gender (84.33%) and for observable data among non-respondents is high (35.22%). Information for refusers on the visit order, on the interviewer's assessment, and on the reasons for refusal was not sufficiently collected (N=338).

17. Lithuania

No information was collected at all on the mode of contact.. No item non-response is observed for observable and dwelling data. Information for refusers on age and gender was only collected for the first refusal (though it was possible to include information up to the 3rd refusal) and even so much information is missing (23.39%).

18. Netherlands

Like in other countries, due to the use of an address-based sample (note that in the contact file it is noted as a 'household based' sample), the percentage of information missing for the age and gender of refusers is quite high (24%). Another concern is that information for the second contact outcome variable is incomplete (a relatively high number of cases coded as 'other' (12) (N=1433).

19. Norway

Because of technical problems experienced in the first few days of the fieldwork period, five contact forms are missing. For a large number of cases initially suffering from incomplete information (coded as 'other') for the 2nd contact outcome variable (OUTNIB), this information was later completed (often changed into 'respondent not available/away') after an explicit request. As reported for Finland, the NUMTEL variable is likely to include telephone contacts after a face to face contact had already been achieved. Finally, like in previous rounds, no observable data were collected due to privacy reasons.

20. Poland

No substantial problems should be noted. Like in other countries, the percentage of information missing for neighbourhood variables is high (non-response units - 19.73%). The National Coordinator noted that this could be due to poor contactability (person has moved) of the sample unit and/or poor interviewer performance.

21. Portugal

No substantial problems should be noted except for a high percentage (45%) of information missing on the age and gender of refusers probably due to the type of

sample frame (household-based) used. Only the first refusal was noted. Compared to other countries, a high coverage of observable data can be noted. Some interviewers were assigned more than the recommended maximum of 48 sample units.

22. Romania

Around 15% of information is missing on the age and gender of final refusers. The number of contact attempts per sample unit is generally low. It is noted that the response rate obtained from the initial contact attempt is extremely high.

23. Russia

No substantial problems should be noted except for a substantial percentage (22.08%) of information missing on the age and gender of final refusers.

24. Slovakia

Information is significantly incomplete. Contact forms were missing for 89 sample units. For 35% of final refusers, age and/or gender information was missing. Like in other countries, the percentage of information missing for neighbourhood variables, particularly for non-response units, should be noted (16%), as well as the incomplete information (code 12) for the contact outcome variable OUTNIB (N=1060).

25. Slovenia

Contact forms were missing for 59 sample units, and some contact forms did not record an interview when in fact an interview had taken place. For each refusal, only one reason was collected. Incomplete information was also observed for several timing variables (n=292). Like in other countries, information for the contact outcome variables RESULTB and OUTNIB was incomplete (N=376). Information is also missing for refusers (age and gender estimation; 27.10%) and for observable data among non-respondents (36.44%).

26. Spain

No substantial problems should be noted except for some information missing for observable data among non-response units (11%) and refusal information (7%).

27. Switzerland

An important issue noted by the National Coordinator is the increase in the non-contact rate compared to the previous round due to the use of a different kind of household-based sample frame (mailbox used as a unit). This type of sample frame also affects refusal information: much information is missing on age, gender, reason for refusal (54.18%). In addition, for 653 contact attempts, information is missing for one of

the timing variables, most probably due to the high number of contact attempts recorded in the contact form (up to 59 contact attempts).

28. Sweden

Like in Norway, no observable data were collected because of privacy reasons. Information on the age and gender of refusals was not collected either. Refusal conversion activities took place but the number of refusal conversion visits was not recorded (code 99 is given instead).

29. Turkey

Contact forms were missing for 2 sample units. Substantial information is missing for refusers (order, age and gender estimation) (75.64%) and age and gender information for refusers was only collected for the first refusal (though it was possible to include information up to the 3rd refusal and refusal proxy). Much information is missing as far as observable and dwelling data for non-respondents are concerned (25.70%). Some interviewers were assigned more than the recommended maximum of 48 sample units. In addition, timing information (hour, minute) was missing for 518 contact attempts. Finally, it is noted that a substantial number of interviewer numbers (INTNUM) is inconsistent across data files (interviewer file and contact file; N=2338).

30. Ukraine

Age and gender information for refusers was only collected for the first refusal (though it was possible to include information up to the 3rd refusal and also refusal proxy) and much information is missing (22.42%). For refusers, information on the visit order, on the interviewer's assessment, and on the reasons of refusal was not sufficiently collected (N=206). Finally, it is noted that number of interviewer number (INTNUM) is inconsistent across data file (interviewer file and contact file; N=147).

Appendix 2: Tables

Table A: Achieved response rates, non-contact, refusal and other non-response rates (%), Round 4 (corresponding with Figure 3)

Table B: Achieved response, non-contact, refusal rates (%) and sample sizes, Round 1-4

Table C: Cumulative proportion of all contacted units that are contacted at each attempt (corresponding with Figure 5)

Table D: Probability of contact at first, second and third visit according to the time of day (corresponding with Figure 6)

Table E: Obtained response rates (%) after 1st, 2nd, 3rd, 4th and more contact attempts (corresponding with Figure 7)

Table F: Scatter plot between non-contact rates and mean number of contact attempts (corresponding with Figure 8)

Table G: Distribution of number of contact attempts made to non-contacts (corresponding to Figure 9)

Table H: Distribution of number of evening and weekend contact attempts made to non-contacts (corresponding with Figure 10)

Table I: Period when contact attempts made to contact non-contacts (corresponding to Figure 11)

Table J: Combined contact efforts (total 4 rules) made to non-contacts by final non-contacts (corresponding with Figure 12)

Table K: Outcome of refusal conversion attempts (corresponding with Figure 13)

Table L: Outcome of refusal conversion attempts: success rate and overall success rate

Table A: Achieved response rates, non-contact, refusal and other non-response rates (%), Round 4 (corresponding with Figure 3)

	N					%			
	Completed	Non-contact	Refusal	Not able/other	eligible	Completed	Non-contact	Refusal	Not able/other
BE	1760	67	774	382	2983	59.00	2.25	25.95	12.81
BG	2230	148	476	120	2974	74.98	4.98	16.01	4.03
CH	1819	323	1244	340	3726	48.82	8.67	33.39	9.13
CY	1215	18	149	118	1500	81.00	1.20	9.93	7.87
CZ	2018	0	778	108	2904	69.49	0.00	26.79	3.72
DE	2751	412	2098	1182	6443	42.70	6.39	32.56	18.35
DK	1596	9	981	392	2978	53.59	0.30	32.94	13.16
EE	1661	192	577	503	2933	56.63	6.55	19.67	17.15
ES	2576	99	622	562	3859	66.75	2.57	16.12	14.56
FI	2195	85	670	259	3209	68.40	2.65	20.88	8.07
FR	2073	322	1508	254	4157	49.87	7.75	36.28	6.11
GB	2345	339	1051	567	4302	54.51	7.88	24.43	13.18
GR	2072	170	501	47	2790	74.27	6.09	17.96	1.68
HR	1484	34	779	934	3231	45.93	1.05	24.11	28.91
HU	1542	64	691	218	2515	61.31	2.54	27.48	8.67
IE	1764	328	870	627	3589	49.15	9.14	24.24	17.47
IL	2490	20	254	477	3241	76.83	0.62	7.84	14.72
LT	2002	101	1347	100	3550	56.39	2.85	37.94	2.82
LV	1980	475	402	637	3494	56.67	13.59	11.51	18.23
NL	1778	106	1447	237	3568	49.83	2.97	40.55	6.64
NO	1549	23	791	200	2563	60.44	0.90	30.86	7.80
PL	1614	36	410	218	2278	70.85	1.58	18.00	9.57
PT	2367	95	627	35	3124	75.77	3.04	20.07	1.12
RO	2146	410	144	420	3120	68.78	13.14	4.62	13.46
RU	2512	189	933	95	3729	67.36	5.07	25.02	2.55
SE	1827	115	743	253	2938	62.19	3.91	25.29	8.61
SI	1284	103	476	321	2184	58.79	4.72	21.79	14.70
SK	1809	214	320	148	2491	72.62	8.59	12.85	5.94
TR	2414	536	706	147	3803	63.48	14.09	18.56	3.87
UA	1845	315	745	91	2996	61.58	10.51	24.87	3.04

Table B: Achieved response, non-contact, refusal rates and sample sizes, Round 1-4

Country	Response rate (%)				Non-contact rate (%)				Refusal rate (%)				Eligible sample size (N)				Total sample size (N)			
	R1	R2	R3	R4	R1	R2	R3	R4	R1	R2	R3	R4	R1	R2	R3	R4	R1	R2	R3	R4
AT	60.4	62.4	64.0		10.1	6.9	9.2		27.0	29.7	24.3		3739	3615	3760		3828	3672	3800	
BE	58.4	61.2	61.0	59.0	4.5	3.5	2.9	2.2	25.2	26.4	24.1	25.9	3252	2906	2947	2983	3340	3018	3249	3060
BG			64.8	75.0			2.7	5.0			26.1	16.0			2162	2974			2357	3200
CH	32.5	48.5	50.0	48.8	3.8	2.1	2.2	8.7	51.2	44.0	40.7	33.4	6283	4600	3601	3726	5086	4863	3710	3801
CY			67.3	81.0			2.2	1.2			4.1	9.9			1479	1500			1481	1600
CZ	43.3	55.3		69.5	11.6	10.9		0.0	20.0	11.1		26.8	3139	5474		2904	3330	5531		3000
DE	51.7	51.0	52.9	42.7	5.7	7.0	5.0	6.4	28.2	32.8	25.4	32.6	5642	5633	5508	6443	5796	5868	5712	6716
DK	68.4	64.2	50.8	53.6	4.6	4.9	3.3	0.3	23.0	24.6	37.9	32.9	2143	2313	2964	2978	2150	2433	3000	3008
EE		79.3	65.0	56.6		3.4	13.1	6.5		11.3	18.6	19.7		2515	2335	2933		2861	2800	3077
ES	51.5	54.9	66.2	66.8	7.6	7.1	3.3	2.6	33.9	25.1	21.7	16.1	3360	3031	2832	3859	3657	3206	3290	3962
FI	73.3	70.7	64.4	68.4	2.9	2.1	2.7	2.6	20.8	22.7	23.2	20.9	2732	2859	2946	3209	2766	2893	3000	3300
FR	43.1	43.6	46.0	49.9	14.7	8.6	6.6	7.7	38.5	39.3	40.6	36.3	3488	4145	4320	4157	3748	4400	4680	4500
GB	55.0	50.6	52.1	54.5	3.5	7.9	7.2	7.9	30.6	33.2	26.7	24.4	3763	3746	4402	4302	4013	4032	4752	4640
GR	79.5	78.8		74.3	1.7	3.6		6.1	16.9	16.5		18.0	3226	3055		2790	3227	3056		2790
HR				45.9				0.0				25.3				3231				3280
HU	69.3	66.6	66.0	61.3	3.1	5.7	2.9	2.5	14.9	15.0	26.4	27.5	2430	2248	2298	2515	2484	2463	2635	2635
IE	64.4	62.0	50.4	49.2	8.1	10.6	9.1	9.1	22.9	21.6	13.8	24.2	3179	3689	3227	3589	3241	3981	3400	3865
IL				76.8				0.6				7.8				3241				3255
LT				56.4				2.85				37.9				3550				3616
LV				56.7				13.6				11.5				3494				3629
LU	42.6	50.1			6.7	7.1			36.5	34.8			3641	3261			3773	3497		
NL	67.8	64.3	59.8	49.8	2.5	2.7	2.6	3.0	26.2	29.1	33.3	40.6	3486	2924	3159	3568	3570	3009	3254	3701
NO	65.0	66.2	64.4	60.4	3.0	1.7	0.8	0.9	24.2	25.9	25.9	30.9	3131	2657	2718	2563	3215	2750	2750	2650
PL	72.1	73.7	70.0	70.9	0.8	0.9	1.3	1.6	19.6	19.1	16.3	18.0	2927	2329	2451	2278	2978	2392	2574	2428
PT	68.8	71.3	72.7	75.8	3.2	2.7	3.8	3.0	26.9	18.2	21.0	20.1	2196	2879	3054	3124	2366	3079	3135	3258
RO			71.9	68.8			10.0	13.1			17.7	4.6			2975	3120			3120	3210
RU			69.5	67.4			5.0	5.1			23.9	25.0			3507	3729			3551	3785
SE	69.0	65.4	65.5	62.2	4.0	2.4	2.0	3.9	21.0	22.0	22.9	25.3	2878	2980	2939	2938	3000	2997	3000	3000
SI	70.5	70.2	64.9	58.8	5.1	10.2	2.9	4.7	17.3	15.3	15.9	21.8	2154	2053	2273	2184	2222	2201	2340	2250
SK		62.7	73.2	72.6		5.9	3.9	8.6		22.7	14.8	12.8		2410	2413	2491		2500	2500	2500
TR				65.2				14.5				16.4				3703				3990
UA		66.6	66.7	61.6		6.3	5.3	10.5		16.1	24.2	24.9		2845	3011	2996		3050	3014	3003

Table notes shown on the following page.

Note: (DE): In R1, there exists discrepancy between NTS and CF about number of selected sample units that are moved out of the country. NTS reports 339 cases but no trace of this in CF. This is the reason for discrepancy between response rates based on NTS (55.7) and on CF (51.7%).

(EE): Figures for R3 are based on NTS.

(FR): Figures for R1 and R2 are based on NTS. Figure for R3 and R4 are based on CF.

(GB): Figure for R2 based on NTS.

Table C: Cumulative proportion of all contacted units that are contacted at each contact attempt (corresponding with Figure 5)

	1	2	3	4	5	6	7	8	9	10	>10
BE	0.63	0.83	0.91	0.94	0.96	0.98	0.98	0.99	1.00	1.00	1.00
BG	0.74	0.92	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CH	0.40	0.68	0.81	0.87	0.92	0.94	0.96	0.97	0.97	0.98	1.00
CY	0.80	0.95	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CZ	0.84	0.95	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DE	0.61	0.82	0.91	0.95	0.97	0.98	0.99	0.99	0.99	1.00	1.00
DK	0.61	0.82	0.91	0.95	0.97	0.98	0.99	0.99	0.99	1.00	1.00
EE	0.85	0.94	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ES	0.61	0.82	0.91	0.94	0.97	0.98	0.99	0.99	1.00	1.00	1.00
FI	0.66	0.83	0.89	0.94	0.96	0.98	0.99	0.99	1.00	1.00	1.00
FR	0.49	0.73	0.86	0.93	0.96	1.00	1.00	1.00	1.00	1.00	1.00
GB	0.51	0.72	0.83	0.89	0.94	0.96	0.97	0.98	0.99	0.99	1.00
GR	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HR	0.85	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01
HU	0.70	0.88	0.95	0.98	0.99	0.99	1.00	1.00	1.00	1.00	1.00
IE	0.57	0.76	0.85	0.90	0.94	0.96	0.98	0.99	0.99	1.00	1.00
IL	0.91	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LT	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LV	0.64	0.89	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NL	0.52	0.73	0.83	0.88	0.94	0.97	0.98	0.99	1.00	1.00	1.00
NO	0.93	0.97	0.98	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
PL	0.82	0.94	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PT	0.56	0.78	0.90	0.95	0.97	0.99	1.00	1.00	1.00	1.00	1.00
RO	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RU	0.50	0.70	0.89	0.96	0.98	1.00	1.00	1.00	1.00	1.00	1.00
SE	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SI	0.75	0.89	0.95	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00
SK	0.69	0.86	0.94	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00
TR	0.94	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
UA	0.82	0.93	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Table D: Probability of contact at first, second and third visit according to the time of day (corresponding with Figure 6)

	First contact attempt			Second contact attempt			Third contact attempt		
	morning/afternoon	evening	weekend	morning/afternoon	evening	weekend	morning/afternoon	evening	weekend
BE	0.45	0.53	0.46	0.34	0.42	0.37	0.29	0.31	0.34
BG	0.54	0.47	0.52	0.45	0.33	0.49	0.40	0.26	0.32
CH	0.27	0.23	0.26	0.26	0.33	0.27	0.24	0.24	0.24
CY	0.62	0.86	0.69	0.57	0.67	0.62	0.56	0.43	0.69
CZ	0.70	0.68	0.80	0.60	0.55	0.60	0.85	0.60	0.54
DE	0.44	0.75	0.51	0.36	0.43	0.43	0.33	0.34	0.32
DK	0.44	0.47	0.42	0.40	0.40	0.44	0.32	0.27	0.36
EE	0.72	0.69	0.65	0.44	0.27	0.34	0.43	0.23	0.41
ES	0.44	0.50	0.46	0.38	0.41	0.37	0.34	0.33	0.33
FI	0.54	0.51	0.63	0.36	0.36	0.28	0.30	0.27	0.34
FR	0.29	0.28	0.30	0.31	0.29	0.28	0.35	0.23	0.30
GB	0.32	0.51	0.33	0.25	0.36	0.27	0.20	0.27	0.23
GR	0.91	0.92	0.88	0.77	0.43	0.78	0.60	0.50	1.00
HR	0.73	0.82	0.76	0.68	0.71	0.65	0.79	0.57	0.82
HU	0.48	0.42	0.53	0.38	0.33	0.48	0.41	0.34	0.41
IE	0.35	0.44	0.32	0.26	0.32	0.25	0.23	0.26	0.20
IL	0.70	0.86	0.82	0.54	0.50	0.71	0.65	0.34	0.37
LT	0.87	0.84	0.88	0.49	0.23	0.32	0.11	0.18	0.26
LV	0.42	0.35	0.35	0.48	0.41	0.46	0.63	0.44	0.41
NL	0.34	0.51	0.43	0.26	0.44	0.34	0.21	0.34	0.31
NO	0.82	0.92	0.76	0.37	0.53	0.60	0.30	0.29	0.43
PL	0.65	0.68	0.72	0.52	0.56	0.50	0.43	0.37	0.47
PT	0.32	0.29	0.32	0.33	0.26	0.31	0.33	0.31	0.42
RO	0.86	0.79	0.87	0.08	0.00	0.04	0.00	0.00	0.15
RU	0.24	0.30	0.35	0.23	0.25	0.33	0.45	0.41	0.47
SE	0.93	0.98	0.89	0.34	0.46	0.00	0.15	0.00	0.33
SI	0.55	0.61	0.65	0.41	0.39	0.37	0.29	0.55	0.40
SK	0.47	0.40	0.45	0.37	0.32	0.38	0.30	0.41	0.43
TR	0.72	0.73	0.74	0.29	0.12	0.33	0.26	0.13	0.17
UA	0.53	0.41	0.59	0.32	0.18	0.36	0.22	0.28	0.27

Table E: Obtained response rates after 1st, 2nd, 3rd, 4th and more contact attempts (corresponding with to Figure 7)

	BE	BG	CH	CY	CZ	DE	DK	EE	ES	FI	FR	GB	GR	HR	HU
1	0.11	0.43	0.04	0.52	0.47	0.06	0.03	0.17	0.18	0.03	0.09	0.07	0.71	0.22	0.36
2	0.32	0.63	0.17	0.75	0.63	0.15	0.25	0.40	0.39	0.23	0.23	0.20	0.74	0.33	0.51
3	0.44	0.68	0.28	0.79	0.67	0.24	0.38	0.50	0.52	0.37	0.35	0.29	0.74	0.41	0.58
4	0.51	0.71	0.35	0.80	0.68	0.30	0.46	0.55	0.60	0.46	0.42	0.37	0.74	0.46	0.60
4+	0.59	0.75	0.49	0.81	0.69	0.43	0.54	0.57	0.67	0.68	0.50	0.55	0.74	0.46	0.61
	IE	IL	LT	LV	NL	NO	PL	PT	RO	RU	SE	SI	SK	TR	UA
1	0.11	0.60	0.54	0.30	0.03	0.09	0.33	0.35	0.63	0.27	0.00	0.20	0.35	0.57	0.43
2	0.24	0.71	0.56	0.46	0.16	0.30	0.51	0.53	0.67	0.39	0.37	0.36	0.54	0.60	0.56
3	0.32	0.75	0.56	0.54	0.25	0.45	0.60	0.63	0.68	0.55	0.51	0.46	0.64	0.61	0.60
4	0.37	0.76	0.56	0.56	0.32	0.52	0.65	0.68	0.68	0.63	0.57	0.52	0.69	0.61	0.62
4+	0.49	0.77	0.56	0.56	0.50	0.60	0.71	0.76	0.69	0.67	0.62	0.59	0.73	0.61	0.62

Table F: Scatter plot between non-contact rates and mean number of contact attempts (corresponding with Figure 8)

	Mean number contact attempts	Non-contact rate
BE	7.2	2.2
BG	3.9	5.0
CY	4.1	1.2
CH	7.1	8.7
DE	2.7	6.4
DK	10.0	0.3
ES	5.7	2.6
EE	3.3	6.6
FI	5.5	2.7
FR	5.6	7.7
GB	6.4	7.9
GR	1.0	6.1
HR	2.6	1.1
HU	5.5	2.5
IE	4.2	9.1
IL	2.0	0.6
LT	3.0	2.9
LV	1.9	13.6
NL	8.0	3.0
NO	2.9	0.9
PL	4.8	1.6
PT	5.3	3.0
RU	4.8	5.1
RO	1.2	13.1
SE	1.8	3.9
SI	4.3	4.7
SK	2.6	8.6
TR	1.7	14.1
UA	3.5	10.5

Table G: Distribution of number of contact attempts made to non-contacts (corresponding with Figure 9)

	<4	4	4<
BE	0.00%	23.88%	76.12%
BG	33.78%	44.59%	21.62%
CH	60.37%	7.12%	32.51%
CY	0.00%	94.44%	5.56%
DE	74.51%	8.74%	16.75%
EE	45.31%	43.23%	11.46%
ES	12.12%	19.19%	68.69%
FI	24.71%	18.82%	56.47%
FR	0.62%	0.00%	99.38%
GB	31.86%	7.96%	60.18%
GR	100.00%	0.00%	0.00%
HR	50.00%	50.00%	0.00%
HU	6.25%	14.06%	79.69%
IE	43.60%	9.76%	46.65%
IL	90.00%	0.00%	10.00%
LT	100.00%	0.00%	0.00%
LV	93.89%	5.05%	1.05%
NL	7.55%	6.60%	85.85%
NO	65.22%	13.04%	21.74%
PL	30.56%	22.22%	47.22%
PT	4.21%	44.21%	51.58%
RO	95.12%	4.88%	0.00%
RU	17.99%	26.98%	55.03%
SE	95.65%	0.87%	3.48%
SI	44.66%	4.85%	56.31%
SK	62.15%	27.10%	10.75%
TR	80.22%	19.78%	0.00%
UA	26.67%	72.38%	0.95%

Table H: Distribution of number of evening and weekend contact attempts made to non-contacts (corresponding with Figure 10)

	Evening			Weekend		
	0	1	1<	0	1	1<
BE	0.00%	25.37%	74.63%	0.00%	34.33%	65.67%
BG	15.54%	25.68%	58.78%	12.84%	37.84%	49.32%
CH	33.44%	29.41%	37.15%	60.99%	17.96%	21.05%
CY	5.56%	16.67%	77.78%	11.11%	27.78%	61.11%
DE	57.52%	24.03%	18.45%	68.93%	21.36%	9.71%
EE	47.40%	18.23%	34.38%	39.06%	26.04%	34.90%
ES	5.05%	18.18%	76.77%	6.06%	55.56%	38.38%
FI	11.76%	16.47%	71.76%	82.35%	15.29%	2.35%
FR	0.00%	18.63%	81.37%	0.93%	40.06%	59.01%
GB	25.07%	19.17%	55.75%	34.81%	20.06%	45.13%
GR	72.94%	26.47%	0.59%	63.53%	35.88%	0.59%
HR	50.00%	29.41%	20.59%	38.24%	44.12%	17.65%
HU	9.38%	18.75%	71.88%	7.81%	29.69%	62.50%
IE	36.28%	29.57%	34.15%	42.99%	26.52%	30.49%
IL	35.00%	35.00%	30.00%	85.00%	15.00%	0.00%
LT	5.94%	37.62%	56.44%	55.45%	21.78%	22.77%
LV	37.89%	36.42%	25.68%	47.37%	42.11%	10.53%
NL	11.32%	17.92%	70.75%	86.96%	4.35%	8.70%
NO	39.13%	39.13%	21.74%	36.79%	31.13%	32.08%
PL	2.78%	30.56%	66.67%	25.00%	44.44%	30.56%
PT	5.26%	27.37%	67.37%	25.26%	21.05%	53.68%
RO	70.73%	27.80%	1.46%	60.49%	36.59%	2.93%
RU	5.82%	18.52%	75.66%	14.81%	25.40%	59.79%
SE	53.91%	44.35%	1.74%	82.61%	14.78%	2.61%
SI	34.95%	19.42%	45.63%	28.16%	30.10%	41.75%
SK	53.27%	31.78%	14.95%	42.52%	35.05%	22.43%
TR	79.29%	12.13%	8.58%	66.98%	22.57%	10.45%
UA	26.03%	41.27%	32.70%	21.27%	29.21%	49.52%

Table I: Period when contact attempts made to contact non-contacts (corresponding with Figure 11)

	< 2 weeks	2 weeks or over
HR	100	0
GR	100	0
TR	97.20%	2.80%
UA	97.14%	2.86%
RO	99.76%	0.24%
LT	98.02%	1.98%
LV	95.37%	4.63%
IL	95.00%	5.00%
CH	85.14%	14.86%
SK	73.83%	26.17%
PT	66.32%	33.68%
EE	63.54%	36.46%
RU	58.73%	41.27%
IE	56.71%	43.29%
NO	56.52%	43.48%
BG	55.41%	44.59%
DE	55.10%	44.90%
SI	53%	47%
SE	47.83%	52.17%
HU	37.50%	62.50%
GB	37.46%	62.54%
PL	16.67%	83.33%
ES	12.12%	87.88%
FI	9.41%	90.59%
FR	9.32%	90.68%
NL	4.72%	95.28%
BE	1.49%	98.51%
CY	0.00%	100.00%

Table J: Combined contact efforts (total 4 rules) made to non-contacts by final non-contacts (corresponding with Figure 12)

BE	0.99
BG	0.26
CH	0.13
CY	0.83
DE	0.11
EE	0.23
ES	0.80
FI	0.16
FR	0.90
GB	0.50
GR	0.00
HU	0.52
HR	0.00
IE	0.30
IL	0.05
LT	0.00
LV	0.01
NL	0.58
NO	0.13
PL	0.58
PT	0.26
RO	0.00
RU	0.35
SE	0.00
SI	0.37
SK	0.08
TR	0.01
UA	0.02

Table K: Outcome of refusal conversion attempts (corresponding with Figure 13)

	N					%			
	No attempt	Attpt. no contact made	Attpt, contact but no interview	Attpt, completed interview	Total	No attempt	Attpt. no contact made	Attpt, contact but no interview	Attpt, completed interview
BE	276	66	432	70	844	32.70	7.82	51.18	8.29
BG	471	0	5	17	493	95.54	0.00	1.01	3.45
CH	219	110	927	291	1547	14.16	7.11	59.92	18.81
CY	145	1	4	2	152	95.39	0.66	2.63	1.32
CZ	762	2	17	0	781	97.57	0.26	2.18	0.00
DE	1283	53	849	611	2796	45.89	1.90	30.36	21.85
DK	981	0	1	5	987	99.39	0.00	0.10	0.51
ES	344	35	244	198	821	41.90	4.26	29.72	24.12
FI	304	39	328	80	751	40.48	5.19	43.68	10.65
FR	704	141	669	106	1620	43.46	8.70	41.30	6.54
GB	511	95	457	146	1209	42.27	7.86	37.80	12.08
GR	501	0	0	1	502	99.80	0.00	0.00	0.20
HU	374	45	272	67	758	49.34	5.94	35.88	8.84
HR	559	5	215	170	949	58.90	0.53	22.66	17.91
IE	584	49	257	93	983	59.41	4.98	26.14	9.46
IL	188	3	67	27	285	65.96	1.05	23.51	9.47
LT	1347	0	0	0	1347	100.00	0.00	0.00	0.00
LV	398	1	3	4	406	98.03	0.25	0.74	0.99
NL	165	87	1195	435	1882	8.77	4.62	63.50	23.11
NO	405	7	379	101	892	45.40	0.78	42.49	11.32
PL	207	6	197	69	481	43.22	1.25	41.13	14.41
PT	627	0	0	0	627	100.00	0.00	0.00	0.00
RO	142	0	2	0	144	98.61	0.00	1.39	0.00
RU	632	37	265	53	987	64.03	3.75	26.85	5.37
SI	348	14	115	77	554	62.82	2.53	20.76	13.90
SE	442	6	296	79	823	53.71	0.73	35.97	9.60
SK	206	20	96	161	483	42.65	4.14	19.88	33.33
TR	482	19	107	13	621	77.62	3.06	17.23	2.09
UA	726	1	18	8	753	96.41	0.13	2.39	1.06

Table L: Outcome of refusal conversion attempts, success rate and overall success rate

	Reapproached (N)	Reapproached among initial refusers (%)	Success rate on reapproached	Overall success rate
BE	568	67.30	0.12	0.08
BG	22	4.46	0.77	0.03
CH	1328	86.51	0.22	0.19
CY	7	4.64	0.29	0.01
CZ	19	2.44	0.00	0.00
DE	1513	55.85	0.40	0.23
DK	6	0.61	0.83	0.01
ES	477	58.17	0.42	0.24
FI	447	59.60	0.18	0.11
FR	916	56.75	0.12	0.07
GB	696	58.24	0.21	0.12
GR	1	0.20	1.00	0.00
HU	384	50.66	0.17	0.09
HR	390	41.10	0.44	0.18
IE	399	41.43	0.23	0.10
IL	97	34.52	0.28	0.10
LT	0	0.00	0.00	0.00
LV	8	1.97	0.50	0.01
NL	1717	91.23	0.25	0.23
NO	487	54.60	0.21	0.11
PL	272	56.78	0.25	0.14
PT	0	0.00	N.A.	N.A.
RO	2	1.39	0.00	0.00
RU	355	36.00	0.15	0.05
SK	277	57.59	0.58	0.33
SI	206	37.25	0.37	0.14
SE	381	46.35	0.21	0.10
TR	139	19.33	0.09	0.02
UA	27	3.59	0.30	0.01

Appendix 3: Interviewer network characteristics across ESS countries – implications for data quality

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1. Objectives

One of objectives of WP7 was to add emphasis on data quality and improved understanding of the factors that affect it. This report aims to explore, at a superficial level at least, an aspect of data quality that has so far remained relatively unobserved. This is the likely impact of interviewer demographic characteristics on ESS data validity. To this end the report first identifies age and gender patterns of interviewers across ESS countries, it then examines potential effects for data quality and response rates and finally, offers some tentative recommendations.

2. Interviewer age and gender patterns

Interviewer characteristics have long been recognised as a potential source of non-sampling error in social surveys. Among the specific variables that have been examined most frequently are interviewer race, gender, age, experience and others. Numerous experiments have revealed that respondents may attempt to hide their true preferences when they believe their answer goes against perceived societal norms, or may not give an honest answer in order to avoid being embarrassed by their responses, a situation particularly common in less private modes of interviewing, such as face-to-face, which is the mode employed by the ESS.

It is therefore a welcome move that the Round 4 ESS interviewer questionnaire documented interviewers' age and gender for the first time, making it possible to directly observe demographic patterns of national interviewer networks, as well as analyse the presence and size of the age and gender-of-interviewer effect.

Data for the following 24 countries were available at the time of making the report:

Belgium	Denmark	Hungary	Romania
Bulgaria	Spain	Israel	Russia
Switzerland	Finland	Netherlands	Sweden
Cyprus	France	Norway	Slovenia
Czech Republic	UK	Poland	Slovakia
Germany	Greece	Portugal	Ukraine

2.1. Age

The table below presents the structure of interviews according to interviewer's age in 24 ESS countries in Round 4. The unit of information is therefore not an interviewer, but a completed questionnaire, which means that figures do not directly reflect the age structure of national interviewer networks, but do so indirectly by revealing the proportions of interviews in a particular ESS country that were carried out by a particular interviewer age cohort.

To make the picture of interviewer-age dispersion across interviews easier to read the countries in Table 1 are listed in a descending order according to the size of the largest interviewer-age category. This generally means that countries with relatively low interviewer age dispersion are clustered in the top sections of the table, while countries with relatively high interviewer age dispersion are clustered in the bottom section.

Table 1: Percentages of completed interviews by interviewer's AGE across ESS countries in Round 4							
	<i>under30</i>	<i>31-40</i>	<i>41-50</i>	<i>51-60</i>	<i>61-70</i>	<i>over 71</i>	<i>No. of interviews</i>
<i>(50 – 75 % of interviews conducted by a single age group of interviewers)</i>							
Slovenia	75,5	11,7	9,2	0,9	2,3	0,0	1286
Denmark	0,0	1,7	5,4	27,8	58,6	6,5	1610
Portugal	9,6	22,0	53,8	11,1	3,4	0,0	1619
Cyprus	52,7	0,4	27,0	10,8	9,1	0,0	1215
Sweden	23,7	52,3	23,8	0,0	0,1	0,1	1830
Finland	0,0	6,4	30,5	50,4	12,7	0,0	2195
Germany	1,2	5,7	23,2	50,7	16,7	2,6	2751
<i>(35 – 49 % of interviews conducted by a single age group of interviewers)</i>							
Norway	0,3	3,6	13,2	34,2	48,7	0,0	1549
UK	1,0	4,2	13,8	43,6	34,5	2,8	2352
Slovakia	2,2	13,5	43,6	24,1	14,9	1,5	1810
Greece	5,2	29,6	39,2	21,2	4,8	0,0	2072
France	5,5	11,2	38,3	38,7	5,4	0,9	2073
Romania	35,5	22,9	17,0	15,3	8,1	1,2	2146
<i>(less than 35 % of interviews conducted by a single age group of interviewers)</i>							
Hungary	3,6	20,5	34,8	25,8	13,7	0,8	1544
Belgium	1,4	7,0	34,4	33,2	18,9	5,1	1170
Poland	2,0	19,6	19,1	33,8	24,5	0,9	1619
Spain	17,7	29,0	33,5	16,1	1,7	1,7	2576
Israel	33,5	7,1	29,8	12,0	17,6	0,0	2490
Czech Rep.	5,0	14,5	19,8	31,5	19,5	9,7	2018
Bulgaria	7,9	11,9	29,4	23,7	20,9	6,2	2230
Ukraine	24,6	12,2	24,0	28,4	10,0	0,8	1845
Switzerland	2,9	3,6	26,6	23,8	27,3	15,9	1819
Russia	27,0	20,6	23,1	22,3	7,0	0,0	2512
Netherlands	5,1	8,3	16,1	22,8	25,3	15,7	1778
ESS	13,1	14,3	26,5	25,4	16,0	2,9	47447

Overall percentages reveal a fairly good spread of interviewer age groups across the combined ESS sample, with the largest proportion of interviews (25.4%) carried out by interviewers aged between 51 and 60. This is a welcome result, indicating that age effects are probably not particularly strong, at least not overall.

There is however a number of ESS countries with heavy proportions of interviews conducted by a particular interviewer age group, in particular the 7 countries in the top group in Table 1 in which between 50 and 75% of all interviews were carried out by a single interviewer age cohort. Slovenia is the most notable example with the heaviest aggregation of interviewers in a single age category (75.5%), while in the other 6 countries percentages of aggregation are lower, but nevertheless larger than 50%.

The middle group consists of 6 countries where 35–49 % of all interviews were carried out by a single interviewer age cohort, while the third group exhibits the best spread of interviewer age groups, with less than 35% of all interviews conducted by a single interviewer cohort.

Countries with a predominantly junior or senior interviewer network

The lack of interviewer age-spread in some countries is therefore rather significant and may indicate the existence of validity issues. Slovenia in particular has an extremely large share of interviews conducted by a single young interviewer cohort, with three quarters of all interviews carried out by those aged 30 or less (Table 2). In Cyprus the respective share is 52.7%. Sweden and Romania also have a predominantly young interviewer structure, but in their cases the largest proportion of interviews was carried out by the 31-40 interviewer age cohorts.

Table 2: Countries with large shares of interviews conducted by interviewers under 40 (30) years of age		
	<i>% under 40</i>	<i>(% under 30)</i>
Slovenia	86.2	75.5
Sweden	76.1	23.7
Romania	58.4	35.5
Cyprus	53	52.7

On the other hand there are countries where the opposite issue is present, i.e. disproportionate shares of interviews completed by older interviewer cohorts. In 10 out of 24 ESS countries under observation more than 50% of all interviews were carried out by interviewers aged 50 or more.

The most extreme cases are Denmark and Norway with more than 80% of all interviews completed by interviewers older than 50 years, while in 8 other countries the shares of such interviews are somewhat lower, but still over 50% (see Table 3).

Table 3: Countries with large shares of interviews conducted by interviewers over 50 (60) years of age		
	<i>% over 50</i>	<i>(% over 60)</i>
Denmark	92.9	65.1
Norway	82.9	48.7
Germany	70.0	19.3
Netherlands	63.8	41.0
Switzerland	67.0	43.2
Finland	63.1	12.7
Czech Rep.	60.7	29.2
Poland	59.2	25.4
Belgium	57.2	24.0
Bulgaria	50.8	27.1

In countries with notably predominant proportions of interviews conducted by either younger or older interviewer cohorts the situation could potentially lead to more pronounced interviewer age effects, i.e. may affect the validity of age-sensitive items. Experiments with interviewer demographics often reveal that social desirability, norms of politeness and political correctness can result in suppressing or adjusting attitudes that are viewed as ‘provocative’ with respect to observable interviewer characteristics. In this case age-sensitive concepts could be affected if national interviewer networks are heavily dominated by a particular interviewer age cohort. This could be particularly problematic if a large number of questionnaire items are likely to be age-sensitive, as was the case with one of the Round 4 modules (Experiences and Expressions of Ageism) and one of the Round 3 modules (The organisation of the life course in Europe) – both of which included numerous items on age-related normative preferences.

Accordingly, a more balanced interviewer age structure across interviews would be desirable in some ESS countries. This is, however, at this point merely a general recommendation. A more reliable picture of the actual presence and size of age-related interviewer effects should be obtained statistically, i.e. by examining associations between age-sensitive items and the age-of-interviewer variable.

In cases of very young interviewer networks (e.g. Slovenia and Cyprus), there could be additional implications for data quality in terms of relatively low interviewer experience, an element that could also affect response rates and general quality of work.

2.2. Gender

Another important interviewer characteristic in a face-to-face survey situation is gender. Experimental observations have often revealed that answers to potentially threatening or sensitive questions may be influenced by interviewer gender. Male respondents may offer significantly different answers to male and female interviewers

on questions dealing with gender equality and employment; similarly female respondents interviewed by female interviewers may report less traditional opinions than those interviewed by male interviewers, while male respondents interviewed by male interviewers may report more traditional attitudes.

Like in the case of age, data from Round 4 of the ESS provides the first direct opportunity to analyse gender patterns of national interviewer networks. The figures presented in Table 4 (overleaf) reveal there is some room for caution. Roughly two thirds of all ESS interviews in Round 4 were carried out by female interviewers and only one third by male interviewers, which is a less favourable overall picture than in the case of interviewer age distribution. Only five out of 24 countries display a relatively balanced interviewer gender structure, while in most countries there are disproportionate shares of interviews conducted by female interviewers – in 6 extreme cases larger than 80%. There is also a small group of countries (Israel, Belgium and Norway) where a significant majority of interviews (over 60%) were carried out by male interviewers.

Table 4: Percentages of completed interviews by interviewer's GENDER across ESS countries in Round 4		
	<i>Male interviewer</i>	<i>Female interviewer</i>
<i>Male dominated</i> <i>(more than 60% of interviews conducted by male interviewers)</i>		
Israel	64.9	35.1
Belgium	64.6	35.4
Norway	62.4	37.6
<i>Balanced</i> <i>(40-60% interviews in both groups)</i>		
UK	52.6	47.4
Switzerland	51.0	49.0
Denmark	50.1	49.9
Germany	48.5	51.5
Netherlands	41.3	51.7
<i>Female dominated</i> <i>(more than 60% of interviews conducted by female interviewers)</i>		
Poland	37.6	62.4
Czech Republic	33.2	66.8
Spain	30.0	69.9
Portugal	28.8	71.2
Romania	28.3	71.7
France	28.0	72.0
Hungary	26.2	73.8
Greece	26.1	73.9
Bulgaria	22.8	77.2
<i>Extremely female dominated</i> <i>(more than 80% of interviews conducted by female interviewers)</i>		
Slovakia	14.0	85.6
Cyprus	13.7	85.7
Ukraine	11.9	87.9
Slovenia	10.2	88.3
Russia	9.9	90.1
Finland	4.6	95.4
ESS	31.7	62.7

We can therefore expect that ‘gender-of-interviewer’ effects could be quite significant in cases of gender-sensitive items or modules (e.g. Round 2 and Round 5 modules on Family, Work & Wellbeing), with respondents potentially more likely to suppress politically incorrect gender-related attitudes in front of either female or male interviewers. Again the actual existence and size of the gender-of-interviewer effect could only be explored and estimated statistically, by examining associations between specific gender-sensitive items and the gender-of-interviewer variable.

3. Is there an interviewer demographics effect on response rates?

As already indicated, questions on age and gender of interviewers were included in the ESS Round 4 questionnaire for the first time, so no cross-time comparisons of interviewer demographic characteristics are available. Therefore no direct conclusions can be made as to how and if variations in interviewer age and gender composition affect response rates in a particular country.

However, in order to obtain at least some qualitatively-descriptive clues about patterns of association between interviewer demographic characteristics and response rates across ESS countries we have selected a group of low and a group of high response-rate countries from Round 4 and attached two structural descriptors of their interviewer network, i.e. the general typology of its age and gender structure (Table 5).

Table 5: Response rates in relation to interviewer network descriptors			
<i>High response rate countries</i>			
	<i>Response rate ESS R4</i>	<i>Interviewer age structure</i>	<i>Interviewer gender structure</i>
Cyprus	78,7	young	extremely female dominated
Israel	77,7	balanced	male dominated
Portugal	75,7	middle-aged	female dominated
Bulgaria	75,0	balanced	female dominated
Slovakia	72,5	middle-aged	extremely female dominated
Poland	71,2	balanced	female dominated
<i>Low response rate countries</i>			
Switzerland	49,9	old	balanced
Netherlands	49,8	old	balanced
France	49,4	middle-aged	female dominated
Germany	48,0	old	balanced

With respect to age structure the results in the descriptive matrix indicate that high response rate countries come with various types of interviewer networks - young, middle-aged, or balanced. A tentative observation could be made that predominantly old interviewer networks (50 years and above) do not seem to be associated favourably

with high response rates as most low response-rate countries seem to be characterised by a relatively 'old' interviewer structure, while most high response-rate countries seem to employ interviewers from predominantly younger and middle-aged cohorts. This could, of course, be a mere coincidence or a result of other intervening factors, e.g. level of economic development, with the more developed countries typically having lower response rates due to raised privacy awareness and having older interviewer network due to more flexible part-time work legislation arrangements. The relationship between age and gender could explain the findings hence a much more reliable analytical model would be needed in order to draw more explicit conclusions.

In case of gender structure there seems to be no universal patterns either – high response rate countries come with both male and female dominated interviewer networks though the overwhelming majority of these networks are female dominated. On the other hand it could again be tentatively observed that balanced interviewer networks are less favourably associated with high response rates than female dominated, since a disproportionately large number of low response-rate countries come with balanced interviewer gender structure, as opposed to female-dominated, which is typical of most countries. Some research outside the ESS where respondents were offered an option to select between a male and female interviewer revealed that they disproportionately choose female interviewers when the topic was gender-sensitive – this was especially true of female respondents (Catania et. al. 1996) - or found that male interviewers have a significantly higher non-response rate in face-to-face interviews (O'Muircheartaigh and Campanelli 1999). However, the observed patterns are again not reliable enough to allow making definite conclusions. Moreover, even if female-dominated interviewer networks did prove to have favourable effects on response rates, recommending unbalanced interviewer-drafting solutions would not be prudent as this is likely to increase interviewer related non-sampling error, as indicated in the previous section.

Further analysis was beyond the scope of the work package this time, however, studying interviewer effects on refusal rates might be something that ESS could consider examining in more depth in the future.

4. Conclusions

The analysis of interviewer demographic characteristics revealed that there are structural elements in a number of ESS countries that suggest the existence of possible age and gender-of-interviewer effects. The inclusion of age and gender of interviewer variable into ESS questionnaires is therefore a welcome addition and should provide an opportunity to detect the presence and size of interviewer related effects –research that can be carried out by the ESS itself, as well as by individual users as soon as interviewer age and gender information is made available.

National Coordinators and Field Directors should be alerted to potential validity problems created by extremely disproportionate representation of a certain demographic characteristic in country's interviewer network and asked, if possible, to produce a more balanced solution.

Data users should be alerted to the possibility of cross-country differences in attitudes arising from significant differences in interviewer network characteristics between ESS countries, as well as of the possibility to assess these effects – the relevant interviewer-related variables are now incorporated into the ESS instrument.

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