

Quality Report for the European Social Survey, Round 10

OVERALL FACE-TO-FACE FIELDWORK AND DATA QUALITY REPORT

ESS ERIC Core Scientific Team¹

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INTRODUCTION

WHAT THIS REPORT IS ABOUT

From its foundation in 2001, the European Social Survey (ESS) has prioritised methodological rigour and comparability across countries and over time. Quality assurance and control procedures have been adopted to verify and monitor quality at different stages of the survey lifecycle. At the end of each survey round, the quality of the collected data and the overall data collection process is assessed given both the ESS quality commitment to data users and continuous quality improvement.

This report—built on the previously compiled one by the former CST colleagues of KU Leuven (C. Wuyts and G. Loosveldt)—was adapted to the current round’s necessities. It offers an assessment of the data quality and collection process for all countries, which had participated in Round 10 (2020) and went into field with face-to-face mode².

The purpose of this report is to inform interested substantive data users, survey methodological researchers, survey sponsors, and practitioners on the quality of the ESS Round 10 data and data collection process. The report integrates and elaborates on the country-specific quality reports that were produced in 2022. The focus is on the strengths and relative weaknesses in the different stages of the (national) survey lifecycle for the participating countries rather than the cross-national survey lifecycle of the European Social Survey as a whole (which would include rotating topic selection, questionnaire design, the preparation of specifications, guidelines, and templates for participating countries etc.). For some elements in the survey lifecycle, the ESS Round 10 Specification (European Social Survey, 2020) provides clear benchmarks in the form of standards to adopt and targets to achieve. For other elements, the distribution of practices or quality indicators across countries may be informative.

The European Social Survey aims for cross-national comparability through standardisation of survey design and implementation (input harmonisation). Most of the specifications are formulated concerning survey design choices, procedures and documentation. Compliance is no guarantee for high data quality and falling short does not necessarily mean that data quality is poor, but deviations do increase the risk of serious threats to data quality. Contextual factors also have to be acknowledged. The survey climate and survey population characteristics (e.g. at-home patterns, language barriers), survey capability and infrastructure, available funding and regulations may facilitate or impede compliance, even if they do not justify deviations.

The assessment mainly draws on ESS data and documentation that is publicly available, i.e. the main questionnaire, interviewer questionnaire and contact form data, the data documentation report (based on the submitted National Technical Summaries), and documents such as advance letters to respondents. Stages in the survey lifecycle, which are sparsely documented, additionally draw on information from the ESS Sampling Expert Panel, Translation Team, Survey Quality Predictor Team, Fieldwork Team, and country contacts.

²As illustrated in the Section “The Covid-19 Pandemic and its effect on ESS Round 10”, nine countries were only able to collect Round 10 data using self-completion methods (online and paper). This report only focuses on the ESS countries that implemented Round 10 via face-to-face interviewing.

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- Chapter 2: Peter Lynn and Carla Xena (University of Essex, United Kingdom)
- Chapter 3: Brita Dorer (GESIS Mannheim, Germany), Mary Lillian Ambler & Hannah Schwarz (Pompeu Fabra University, Spain)
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The ESS can draw on a highly standardized blueprint for future reports thanks to the dedicated work of the former Core Scientific Team members of Katholieke Universiteit Leuven — Celine Wuyts and Geert Loosveldt.

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THE COVID-19 PANDEMIC AND ITS EFFECT ON ESS ROUND 10 – THE VIEW FROM HEADQUARTERS

Round 10 face-to-face data collection was heavily impacted by the different waves of COVID-19 pandemic in 2020-2021. As a result, the ESS Core Scientific Team adopted a more flexible approach, implementing progressive adaptations to the ESS face-to-face requirements. This was done to both facilitate the Round 10 implementation in each country with increased flexibility and ensure the safest possible standard for face-to-face data collection in the new pandemic scenario. The actions taken were discussed and agreed with the ESS Round 10 National Coordinators, the ESS Methods Advisory Board, and the ESS Research Ethics Board.

The first adaptations of the Round 10 requirements and timetable were collated in a new version of the ESS Round 10 Specification, released on 10 July 2020. These implemented the following actions to facilitate the face-to-face data collection:

- **New Fieldwork period:** the initially planned period for the Round 10 data collection (September 2020-January 2021) was revised to run from 1 September 2020 to 31 December 2021. As

a result, National Coordinators were encouraged to monitor the pandemic situation in their countries and plan for delayed and more extended fieldwork activities in 2021 when necessary.

- **Reserve samples:** drawing a reserve sample in advance of the fieldwork was strongly recommended in all the participating countries to reflect increased uncertainty over response rates due to the COVID-19 pandemic.
- **National pretest guidelines and scope:** the required national pretest, usually aimed to test the questionnaire translation and programming, was re-focused to assess fieldwork capacity and willingness of respondents to participate in the survey. To provide a realistic impression of the fieldwork conditions, National Coordinators were encouraged to plan their pretest activities as close as possible to the assumed mainstage starting date and to use a pretest sample design as close as possible to the design agreed in the ESS Round 10 Sample Design Summary
- **Video interviewing:** Video interviews were initially permitted in Round 10 as a backup option to the usual face-to-face approach due to concerns following the COVID-19 pandemic whether some groups would be able and willing to be interviewed face-to-face. They could be offered only in cases where a face-to-face interview was refused. Countries adopting the video interview mode were also required to conduct an additional pretest stage to test its feasibility.

In addition to these measures, the ESS ERIC Headquarters issued a new guideline for National Coordinators on delivering Round 10 fieldwork during the COVID-19 pandemic. This document collated several requirements (e.g. social distancing, use of facemasks) to allow the delivery of Round 10 in a way that ensured all respondents could be interviewed safely across all participating countries. Considering the cross-national differences in COVID-19 regulations, all the National Coordinators were also required to conduct a risk assessment and review the planned fieldwork procedures against the rules and guidelines issued by ESS and at the country level. This risk assessment was to be reviewed and signed off by ESS ERIC Headquarters, on behalf of the ESS Director, before any face-to-face data collection activity could start in the relevant country.

Despite the admirable efforts of all the ESS Round 10 National Coordinators in reacting to the challenges posed by the pandemic, only a fraction of the participating countries succeeded in completing the Round 10 data collection by the end of 2021. As a result, the ESS Core Scientific Team issued further adaptations to the ESS requirements in December 2021. These included:

- Allowing to offer video interviews as an equal alternative to in-person interviews. This meant that interviewers could give the option of a video interview to target respondents straightaway rather than only after the reluctance to take part in an in-person interview.
- More flexibility to the usual maximum of 48 sample units per interviewer was allowed to deal with fieldwork capacity issues.
- A recommendation to favour equally worked samples across over making the required minimum of four visits to non-contact addresses in some countries. However, to close fieldwork, it was still necessary to have made contact attempts with all of the sample units, with the only possible exception for any countries that issued samples in random batches.
- Increased flexibility for some countries to extend their fieldwork beyond their planned end dates, with the condition to still meet the second release data deposit deadline of 1 June 2022.

At the end of Round 10, the ESS Archive dealt with four types of deposits:

1. The first covered ten countries (Bulgaria, Croatia, Czechia, Estonia, Finland, France, Hungary, Lithuania, Slovakia, and Slovenia), which completed the data deposit and processing to allow for a data release in June 2022.
2. The second covered nine countries (Greece, Iceland, Italy, Montenegro, the Netherlands, North Macedonia, Norway, Portugal, and Switzerland) in which completed their data deposit and processing to allow for a data release in December 2022.
3. The third covered three countries (Belgium, Ireland, and the United Kingdom) that deposited their data at a later date. These countries were included in a third ESS Round 10 Data Release in May 2023.
4. Finally, nine countries (Austria, Cyprus, Germany, Israel, Latvia, Poland, Serbia, Spain, and Sweden) could not conduct the face-to-face fieldwork in Round 10. They adopted a self-completion methodology, following the specific design and guidance issued by the ESS Core Scientific Team in July 2021. The self-completion data were published in a separated integrated data file. These countries are not covered in this report.

1 TIMING OF ACTIVITIES

Round 10 was heavily impacted by the COVID-19 pandemic, with the ESS Round 10 Specification and deadlines being adapted several times to grant the necessary flexibility for the ESS Data collection. As a result, the timings of the survey implementation are more heterogeneous and hardly comparable with the original ESS Round 10 Specification and the previous ESS Rounds.

The sampling design was signed off by the end of 2020 in nine countries (out of 22 countries implementing face-to-face data collection), cApStAn verification was completed by the end of 2020 in nine countries, and pretesting was completed by the end of August 2020 only in three countries.

The fieldwork started in 2020 only in Slovenia, but the National Coordinator had to pause the data collection operations after a couple of months due to a new COVID-19 pandemic wave in Autumn 2020. The Round 10 face-to-face fieldwork started after March 2020 in the rest of the countries. The last countries to start were Greece, Ireland, and Montenegro in November 2022.

Nine countries concluded their fieldwork by 2021, and only in Belgium, Ireland, and the United Kingdom the data collection was still ongoing in September 2022. Ireland was the last Round 10 country in the field, with their data collection ending on 16 December 2022.

For ten countries (Bulgaria, Croatia, Czechia, Estonia, Finland, France, Hungary, Lithuania, Slovakia, and Slovenia), complete deposits were made by the end of April 2022. These countries were included in the first data release in June 2022.

For Greece, Iceland, Italy, Montenegro, Netherlands, North Macedonia, Norway, Portugal, and Switzerland, complete deposits were made by June 2022. These countries were added in the second data release in December 2022. Finally, Belgium, Ireland, and the United Kingdom completed the data deposit between November 2022 and January 2023, and they were included in a third data release in May 2023.

Taking the dates of the release of the ESS Round 10 Source Questionnaire or the confirmed participation in Round 10 as the start of the national survey lifecycle³ and the date at which the main data file was signed off by the National Coordinator as the end, we observe that the cycle took between about 25 months (Czechia, Lithuania, Slovakia, and Slovenia) and 37 months (Ireland). In the median country, the full cycle was about 31 months (Table 1.1). For comparison, the Round 9 cycle took between 13 months and 32 months, with the median being about 18 months.

³The ESS Round 10 Source Questionnaire was released to the NCs on 6 April 2020. This can be considered the survey start date for most Round 10 countries. However, Montenegro joined ESS10 after this release. In that case, the confirmed participation date is considered the start date.

Table 1.1 National lifecycle duration, ESS10

Country	Start of Round preparations	Final data sign-off	Duration (months)	Duration (years)
Belgium	06 April 2020	04 April 2023	36	3.0
Bulgaria	06 April 2020	07 June 2022	26	2.2
Croatia	06 April 2020	17 June 2022	26	2.2
Czechia	06 April 2020	18 May 2022	25	2.1
Estonia	06 April 2020	16 June 2022	26	2.2
Finland	06 April 2020	17 June 2022	26	2.2
France	06 April 2020	16 June 2022	26	2.2
Greece	06 April 2020	25 November 2022	32	2.6
Hungary	06 April 2020	21 June 2022	27	2.2
Iceland	06 April 2020	13 October 2022	30	2.5
Ireland	06 April 2020	04 May 2023	37	3.1
Italy	06 April 2020	28 October 2022	31	2.6
Lithuania	06 April 2020	25 April 2022	25	2.1
Montenegro	16 April 2020	04 November 2022	31	2.6
Netherlands	06 April 2020	13 October 2022	30	2.5
North Macedonia	06 April 2020	05 December 2022	32	2.7
Norway	06 April 2020	20 October 2022	30	2.5
Portugal	06 April 2020	09 December 2022	32	2.7
Slovakia	06 April 2020	09 May 2022	25	2.1
Slovenia	06 April 2020	09 May 2022	25	2.1
Switzerland	06 April 2020	01 November 2022	31	2.6
United Kingdom	06 April 2020	14 April 2023	36	3.0

Note:

Based on ESS10 Data Documentation Report and information from the ESS Core Scientific Team.

2 SAMPLING

The ESS Sampling Guidelines specify the minimum quality criteria that must be met by an ESS sampling design and provide national teams with advice and guidance on how to achieve those criteria. Key components of the criteria are the following:

1. Random probability sampling methods must be used at all stages;
2. The sampling frame and sample design must provide excellent coverage of the ESS target population (persons aged 15 or over living at private addresses);
3. The sample should be designed to achieve a minimum effective sample size of 1,500 (or 800 for countries with a population of fewer than 2 million persons aged 15 or over).

2.1 SAMPLING QUALITY ASSURANCE AND CONTROL

The national team develops the sample design for each country in close co-operation with the ESS Sampling and Weighting Expert Panel (SWEP), who must ultimately “sign off” each design, indicating that it meets the ESS Specification and is the best possible design that can be achieved. Full details of the design are recorded in the ‘Sample Design Summary,’ a form that is completed iteratively with the involvement of both the national team and the SWEP. A key parameter in the sample design is the gross sample size. This is based on assumptions about eligibility rate, response rate and design effect, all of which have to be approved by the SWEP as appearing realistic.

After the completion of fieldwork, national teams must provide a ‘Sample Design Data File’ (SDDF), containing a range of relevant variables reflecting the sample design and implementation. The contents of the SDDF are specified on the SDS and agreed upon between the national teams and the SWEP. Upon receiving the SDDF, the SWEP carries out a range of quality control checks and reverts to the national teams with queries if necessary.

The original objective was to sign off the sample designs of all countries by the end of July 2020, in advance of fieldwork starting in September 2020. However, the COVID-19 pandemic disrupted the survey timetable as face-to-face interviewing was not possible in most countries during 2020. Six of the 22 countries that eventually participated to Round 10 with a face-to-face data collection had signed off their designs by July 2020 and nine by the end of 2020. A further four were signed off between February and April 2021, six between May and August, and two in September (Greece and Ireland). The sign-off date for each country is shown in Table 2.1.

Table 2.1 Date of sample sign-off, ESS10

Country	Sign-off date
Belgium	04 April 2020
Bulgaria	05 February 2021
Croatia	03 December 2020
Czechia	09 June 2021
Estonia	07 July 2020
Finland	24 December 2020
France	10 May 2021
Greece	06 September 2021
Hungary	19 April 2021
Iceland	19 April 2021
Ireland	24 September 2021
Italy	04 August 2021
Lithuania	15 September 2020
Montenegro	27 August 2021
Netherlands	29 July 2020
North Macedonia	23 August 2021
Norway	22 June 2020
Portugal	29 March 2021
Slovakia	18 August 2020
Slovenia	22 June 2020
Switzerland	23 March 2020
United Kingdom	09 June 2021

Note:

Based on internal records of the Sampling and Weighting Expert Panel.

2.2 SAMPLING FRAMES

The sampling frames used by ESS countries can be broadly classified into one of three categories. There are frames of individual persons, frames of residential addresses, and frames of very small geographical areas, which are used in combination with field enumeration to produce a list of addresses (area sampling).

Sampling frames of persons, such as a population register, are generally the preferred type of frame for the ESS. The main reasons for preferring population registers as a sampling frame are that coverage is typically excellent, and equal-probability samples can be implemented, which minimises the number of interviews needed to meet the effective sample size requirement.

Sampling frames of addresses vary in nature. Some are official registers of dwellings, some are lists of addresses used by the postal delivery service to organise mail delivery, some are lists of dwellings identified in the most recent population census, and some are lists of domestic properties supplied with electricity. Such lists tend to have the advantage of good population coverage. However, a disad-

vantage is that it is not usually possible to select equal-probability samples of persons, leading to the need to carry out a more significant number of interviews. Furthermore, the final stage of selection must be carried out by the interviewer in the field, who must implement a procedure to select one person to interview at each address randomly. This step can introduce errors.

If neither a person list nor an address list is available, then area sampling must be used. The first stage in such a design is to select a probability sample of small areas such as villages, grid squares, streets or city blocks. At the second stage, an enumerator makes a complete listing of the dwellings in the area from observation. The list is then returned to the central field office, where a random selection of dwellings is made to constitute the survey sample.

Half of the countries participating to Round 10 with face-to-face interviewing (12 out of 22) used a sampling frame of persons, such as a population register, while the rest used a sampling frame of addresses. Two countries, Slovakia and North Macedonia, used an area sampling approach. The sampling frames used are summarised in Table 2.2.

Table 2.2 Sampling frames, ESS10

Country	Frame units	Frame
Belgium	Person	Belgian national population register
Bulgaria	Address	2011 population census list of dwellings
Croatia	Person	Registry of inhabitants provided by the Ministry of the Interior
Czechia	Address	Czech Statistical Office register of houses and apartments
Estonia	Person	Eesti rahvastikuregister
Finland	Person	Kansallinen väestörekisteri (national population register)
France	Person	Tax Registry
Greece	Address	2011 population census of building blocks
Hungary	Person	Magyar Népeesség Nyilvántartás (National Population Registry from the BM NYHÁT)
Iceland	Person	Icelandic Population Register
Ireland	Address	GeoDirectory
Italy	Person	National Register of Resident Population (NRRP)
Lithuania	Address	Address register of the Republic of Lithuania
Montenegro	Address	Geoportal and eRegistry (combined)
Netherlands	Person	Dutch population register
North Macedonia	Address	List of dwellings constructed by field enumeration
Norway	Person	Norwegian National Population Register
Portugal	Address	List of addresses of domestic clients of Energias de Portugal (EDP)
Slovakia	Address	List of dwellings constructed by field enumeration
Slovenia	Person	Central Register of Population (CRP)
Switzerland	Person	Stichprobenrahmen für Personen- und Haushaltserhebungen (population register)
United Kingdom	Address	Postcode address file (small users)

Note:

Based on the ESS10 country-specific Sample Design Summaries.

2.2.1 Coverage of the target population

The target population of ESS in Round 10 was:

All persons aged 15 and over (no upper age limit) live in private dwellings in each country, regardless of their nationality, citizenship or language.

Living in a dwelling unit means that the accommodation was currently the person's primary residence at the time of the survey fieldwork. ESS survey organisations were provided with the following working definition of a private dwelling:

A dwelling unit is a self-contained place to live with its own lockable front doors, such as an apartment or an undivided house. A dwelling unit will usually include basic facilities such as sleeping, cooking, washing, and toilet.

Thus, the target population excludes people living abroad or whose main residence is in a different country and people living in institutions such as military barracks and nursing homes for the elderly. However, the target population includes people of all nationalities, regardless of citizenship or legal status.

In general, the only undercoverage with population registers is likely to consist of residents without legal status. However, there can also be delays in new emigrants joining the register in some countries. Address lists should not suffer from this under-coverage, but they may exclude some persons living in non-standard accommodation such as caravans or boats. Some address lists may suffer delays in newly-built or newly-converted dwellings being added to the list. Undercoverage due to the list not being up-to-date tends to be substantial only in the case where the list consists of dwellings enumerated in the last population census, in which case the extent of the mainly under-coverage depends on how long ago the census was last conducted. At Round 10, Bulgaria relied on lists of dwellings enumerated for the 2011 Census, so these lists have the potential for substantial under-coverage.

In addition to under-coverage caused by the sampling frames' inherent properties, some countries deliberately excluded certain geographical areas, mainly because fieldwork would have been prohibitively expensive in those areas. The areas concerned typically account for very small proportions of the target population. Examples include the German-speaking area of Belgium (0.7% of the Belgian population), islands in France (0.5% of the French population), the Isle of Man, the Channel Islands and the area north of the Caledonian Canal in Scotland (0.7% of the population of the United Kingdom), and small islands in Croatia (1.6% of Croatian population).

Undercoverage in each country is summarised in Table 2.3.

Table 2.3 Sample undercoverage, ESS10

Country	Exclusions (undercoverage)
Belgium	Persons not in the National Register. Also the nine German-speaking municipalities (approx. 0.7% of total Belgian population)
Bulgaria	Persons residing at dwellings not included in the 2011 Bulgarian Census or at dwellings where all Census 2011 residents have since died
Croatia	Islands that are not connected by bridge to the mainland. Residents of such islands constitute around 1.6% of target population.
Czechia	Persons residing at addresses not included in Czech Statistical Offices register of residential dwellings e.g. homeless persons, persons living in non-standard dwellings (total of 1.5 - 2% of total residents)
Estonia	Persons not in the population register
Finland	Persons not in the population register
France	Persons residing at addresses not included in the 2017 rotating Census of population, overseas department and territories of France. Also all islands (incl. Corsica constituting 0.5% of the target population).
Greece	Persons not registered with any municipality
Hungary	Persons who are homeless and institutionalized individuals (e.g. military service, people living in prisons or shelters).
Iceland	Persons living under institutional circumstances (prison, barracks, social home, hospital, etc.)
Ireland	Persons not in the population register.
Italy	Persons residing at addresses not included in the GeoDirectory
Lithuania	Persons living outside any localities (0.6% of the total population).
Montenegro	Persons not in the public register of individuals National Register of Resident Population (NRRP).
Netherlands	Persons with unknown declared living place (1.2%) and persons with incorrect declared address (0.3%).
North Macedonia	Persons who are homeless, living in institutions or collective households
Norway	Persons not residing in a recognised dwelling
Portugal	Persons living in institutional households.
Slovakia	Persons not residing in a private dwelling.
Slovenia	Persons not in the population register
Switzerland	Persons not included in the National Register of Citizens (e.g. non-registered immigrants).
United Kingdom	Persons living at addresses without an electricity supply from the national grid and persons living in postcodes with fewer than 40 addresses (0.01% of all households).

Based on the ESS10 country-specific Sample Design Summaries.

Unlike under-coverage, over-coverage should not introduce any error to survey estimates, provided that all cases of over-coverage (ineligible units) are identified as such either in advance of fieldwork or during fieldwork. Such units do, however, increase field costs. Ineligible units on population registers include people who have died, reside in institutions, or moved overseas. Ineligible units on address lists consist of addresses at which no persons reside. These can include business premises, second homes and vacant or demolished properties.

Table 2.4 shows the extent and nature of ineligibility in each country. The outcomes “died” and “abroad” should only apply to person frames but have been (wrongly) used in some address frame countries, notably Bulgaria and North Macedonia. Similarly, vacant, demolished and non-residential

addresses are outcomes that should only apply to address frames but have been used quite extensively in Croatia, France, Italy, Slovenia and Hungary.

Table 2.4 Sample overcoverage (%), ESS10

Frames	Country	Total Ineligible	Died	Abroad	Demolished	Vacant	Non-residential	Other
Person	Belgium	3.5	0.7	0.7	0.8	0.7	0.2	0.5
Person	Croatia	12.7	0.1	3.7	6.8	1.7	0.4	0.0
Person	Estonia	3.0	0.9	2.0	0.0	0.0	0.0	0.0
Person	Finland	1.6	0.6	0.7	0.1	0.0	0.1	0.1
Person	France	6.7	1.6	0.6	1.4	0.5	0.6	2.1
Person	Hungary	4.4	0.4	2.4	0.7	0.6	0.3	0.0
Person	Iceland	2.6	0.1	1.8	0.1	0.0	0.0	0.6
Person	Italy	4.1	0.4	0.7	1.4	0.3	0.2	1.2
Person	Netherlands	1.8	0.3	0.3	0.0	0.5	0.3	0.3
Person	Norway	3.1	0.2	1.2	0.4	0.0	0.2	1.1
Person	Slovenia	5.0	0.8	2.1	0.5	0.4	0.8	0.5
Person	Switzerland	0.9	0.4	0.4	0.0	0.0	0.2	0.0
Address	Bulgaria	2.6	0.5	0.8	0.3	0.6	0.1	0.3
Address	Czechia	0.1	0.0	0.0	0.0	0.1	0.0	0.0
Address	Greece	0.9	0.2	0.2	0.1	0.4	0.0	0.0
Address	Ireland	2.6	0.1	0.1	0.3	0.7	0.4	0.9
Address	Lithuania	23.9	0.0	0.3	5.3	7.6	7.7	3.0
Address	Montenegro	6.7	0.0	0.0	4.6	1.6	0.1	0.3
Address	North Macedonia	9.7	0.2	1.2	2.3	4.6	0.8	0.6
Address	Portugal	25.3	0.0	0.1	9.2	14.4	1.0	0.6
Address	Slovakia	2.2	0.1	0.2	0.4	1.1	0.3	0.1
Address	United Kingdom	6.7	0.0	0.0	0.4	4.0	0.9	1.4

Note:

Based on ESS10 data from Contact Forms, edition 3.0.

Analysis is based on the variable 'foutcod' in the contact form data file, coded as follows: Died (63), Abroad (51), Demolished (54, 61), Vacant (63), Non-residential (64, 65) Other (67).

No overcoverage estimates are available for the 9 countries that used self-completion in Round 10 as no outcome variable is available for these countries: it is rare that ineligible sample units are identified as such in a self-completion context.

Overall ineligibility rates were highest in Portugal (25.3%) and Lithuania (23.9%) and lowest in Switzerland and Greece (0.9%) and Czechia (0.1%).

2.3 SELECTION PROCEDURES

Sample designs vary considerably between countries, from unstratified, simple random samples to multi-domain designs with multiple stages, unequal selection probabilities and complex stratification schemes. Section 2.3.1 describes the selection procedures used to draw the sample of individual persons or addresses/dwellings assigned to interviewers in the field. These persons or addresses are hereafter referred to as 'field units'. For countries where the sample consists of addresses, the interviewers additionally have to apply selection procedures to determine the target respondents. The

household and within-household selection procedures used for address-based samples are described in Section 2.3.2.

2.3.1 Field unit selection

In nine countries, a 2-domain sample design was implemented. In eight of these countries, an unclustered sample was selected in a domain consisting of urban areas or larger towns and cities, while a clustered sample was selected in the rest of the country. The one exception was Slovakia, where clustered samples were selected in both domains. However, the clustering units differed, being whole municipalities in the rural domain but streets or groups of streets in the urban domain. The other 13 countries had a single-domain design. Of these, seven were multi-stage clustered designs, and six were single-stage unclustered designs (six of persons and two of addresses). These design features are summarised in Table 2.5.

Table 2.5 Sample design features, ESS10

Country	Domains	Clusters (primary sampling units)
Belgium	2	Municipalities (domain of smaller municipalities)
Bulgaria	1	Census control regions
Croatia	2	Settlements (rural domain)
Czechia	1	Basic Settlement Units (2-4 geographically adjacent)
Estonia	1	-
Finland	1	-
France	2	Primary units (PU) - geographical areas (domain 2)
Greece	1	Building blocks
Hungary	2	Settlements (smaller settlements domain)
Iceland	2	2-digit postcode areas (rural domain)
Ireland	1	Clusters of Electoral Divisions
Italy	2	Municipalities (smaller municipalities domain)
Lithuania	2	Polling stations (rural domain)
Montenegro	1	Polling stations
Netherlands	1	-
North Macedonia	1	Census Enumeration Areas (Eas)
Norway	1	-
Portugal	2	Postcode areas (small postcode areas domain)
Slovakia	2	Streets (large municipalities domain); Municipalities (small municipalities domain)
Slovenia	1	Clusters of enumeration areas
Switzerland	1	Dwellings
United Kingdom	1	Postcode sectors

Note:

Based on the ESS10 country-specific Sample Design Summaries.

2.3.2 In-Field selection

For countries where the field units are addresses (whether selected from an existing list of addresses or a list created through enumeration in the field), a target respondent has to be selected by the interviewer at the doorstep using a random selection procedure. If each address corresponds to a single

dwelling, a target respondent must be selected from the eligible persons resident in the dwelling (within-household selection). If an address is found to correspond to multiple dwellings (for example, a house containing three separate apartments), one or more dwellings must first be selected (dwelling selection). Random probability selection procedures also have to be used in these steps of the sample design. For dwelling selection, the Kish grid method is used.

Three acceptable methods used for within-household selection of a respondent are the Kish grid method, the Rizzo method, and the (last, next, or nearest) birthday method. Birthday methods were used for within-household selection in five countries, and the Kish grid method was used in three countries (Table 2.6). Further, two countries used the standardised CAPI SCRIPT provided by ESS ERIC and Centerdata, which effectively selects a simple random sample of size 1. Table 2.6 additionally highlights the considerable between-country variation in the household size distribution, which means that the scope for error in the within-household selections also varies significantly between countries.

Table 2.6 Within-household selection methods, ESS10

Country	Selection method			Number of eligible persons in dwelling (row %)				
	Kish	SRS (FMS)	Last Birth-day	1	2	3	4	5+
Bulgaria			X	28.5	29.9	22.9	13.9	5.5
Czechia			X	35.3	43.8	13.9	6.1	0.9
Greece	X			34.0	46.7	12.6	5.7	1.1
Ireland			X	28.6	46.3	14.1	7.9	3.1
Lithuania			X	34.5	39.5	16.4	7.1	2.5
Montenegro			X	17.0	29.6	22.0	19.7	11.7
North Macedonia		X		22.9	39.7	17.4	14.1	5.9
Portugal		X		25.8	47.8	17.6	6.8	2.0
Slovakia	X			30.6	44.7	14.4	7.3	3.1
United Kingdom	X			46.5	42.0	7.0	3.2	1.3

Note:

Selection method is based on the Round 10 country-specific Sample Design Summaries.

The distribution of the number of persons aged 15 or older resident in the dwelling is based on Sample Design Data File for participating units only.

2.4 EFFECTIVE SAMPLE SIZE

The ESS requires each participating country to achieve a minimum effective sample size (n_{eff}) of 1,500, with an exception for countries with a total population of fewer than 2 million people aged 15 or over: for these “small” countries, the minimum is 800. The effective sample size is defined as the size of a simple random sample that would provide the same precision as the actual design under consideration.

During the process of agreeing on the sample design for each country at each ESS round, n_{eff} is estimated by adjusting the predicted net sample size (number of interviews achieved, n) by the predicted *design effect* ($deff$), a measure of the impact of two factors, sample clustering and variability in selection probabilities. These factors will always reduce precision, reflected in a value of $deff$ greater than

one. Consequently, the greater the variability in selection probabilities, and the larger the cluster sample sizes, the larger the number of interviews that will be needed to deliver the required effective sample size, $n_{eff} = n/d_{eff}$.

In this section, we present for each country the effective sample size predicted prior to fieldwork and the effective sample size achieved in practice. The latter is estimated in the same way that the pre-fieldwork prediction is made, so that differences between the two arise solely from differences in the sample design parameters, not as artefacts of different estimation methods. The parameters that influence n_{eff} are the following, so a difference between the predicted and realised values of n_{eff} implies that at least one of these parameters differed from its pre-fieldwork expected value:

- Gross sample size;
- Eligibility rate;
- Response rate;
- Mean number of interviews per cluster;
- The relative homogeneity of interviews within a cluster (ρ);
- Coefficient of variation of selection probabilities.

It can be seen (Table 2.7) that 15 of the 22 countries went into the field with a design predicted to meet the minimum requirement for effective sample size. Of these 15, only ten of them achieved at least 95% of the minimum target. Of the seven countries with below-minimum predicted n_{eff} , four achieved better than predicted, but three achieved less. The net result was that eleven of the 22 countries achieved the specified minimum n_{eff} to within a tolerance of 10% (i.e. at least 1,350, or 720 for smaller countries). Six countries achieved less than 80% of the specified minimum effective sample size: Bulgaria (68%), Greece (45%), Ireland (58%), North Macedonia (53%), Slovakia (60%) and the United Kingdom (57%).

Table 2.7 Predicted and estimated effective sample sizes, ESS10

Country	Target minimum n_{eff}	Pre-fieldwork predicted n_{eff}	Post-fieldwork estimated n_{eff}
Belgium	1500	1746	1253
Bulgaria	1500	1366	1018
Croatia	1500	1500	1441
Czechia	1500	1379	1701
Estonia	800	2000	1550
Finland	1500	2102	1577
France	1500	1566	1743
Greece	1500	1500	672
Hungary	1500	1441	1460
Iceland	800	996	881
Ireland	1500	1485	875
Italy	1500	1387	1560
Lithuania	1500	1500	1253
Montenegro	800	800	795
North Macedonia	800	801	426
Netherlands	1500	1800	1468
Norway	1500	1504	1415
Portugal	1500	1254	1425
Slovakia	1500	985	893
Slovenia	800	1075	1141
Switzerland	1500	1500	1523
United Kingdom	1500	1500	848

Note:

Based on the ESS10 country-specific Sampling Design Summaries and the ESS10 Sample Design Data File.

The accuracy of the predictions of the impact of sample clustering on design effects, and hence on effective sample size, are summarised in Table 2.8, which therefore lists only the countries/domains with clustered designs. The two relevant parameters are the mean number of interviews per cluster (\bar{b}) and the mean intra-cluster correlation ($\bar{\rho}$). The latter is calculated across a set of 74 core variables using the `loneway` command in Stata 15.1. The predictions of both parameters were generally good. However, in a few cases, the predicted value of $\bar{\rho}$ turned out to be unnecessarily pessimistic (realised values were 70% or less of the predicted values for Czechia, France domain 2, and Lithuania domain 2).

On the other hand, the predicted value of $\bar{\rho}$ was overly optimistic in four countries. Two of these, Greece and North Macedonia, had not taken part in Round 9 and, therefore, did not have a prior estimate based on recent ESS data. In Greece, it turned out to be 3.5 times the predicted value and in North Macedonia 2.3 times higher.

Predictions of \bar{b} were rather less accurate than in Round 9. Three countries (Belgium, United Kingdom, Ireland) saw a sizeable over-estimation (realised value less than 80% of predicted value) due to undue optimism about the likely response rate. The rest of realised values were in the range of 80% to 120% of the predicted value.

Table 2.8 Predicted and estimated parameters of clustering, ESS10

Country	Pre-fieldwork predicted \bar{b}	Post-fieldwork realised \bar{b}	Pre-fieldwork predicted $\bar{\rho}$	Post-fieldwork estimated $\bar{\rho}$
Belgium	6.01	4.20	0.04	0.04
Bulgaria	5.28	5.66	0.15	0.14
Croatia (domain 2)	3.28	3.48	0.06	0.08
Czechia	4.02	4.37	0.13	0.06
France (domain 2)	6.61	7.32	0.03	0.02
Greece	13.72	14.22	0.04	0.14
Hungary (domain 2)	6.30	6.36	0.12	0.12
Iceland (domain 2)	15.29	14.25	0.02	0.02
Ireland	3.59	2.83	0.08	0.08
Italy (domain 2)	12.01	12.01	0.10	0.07
Lithuania (domain 2)	3.31	2.82	0.11	0.07
Montenegro	2.87	2.98	0.15	0.18
North Macedonia	7.76	8.35	0.06	0.14
Portugal (domain 1)	5.49	6.28	0.04	0.03
Slovakia (domain 1)	3.00	2.55	0.16	0.14
Slovakia (domain 2)	3.26	2.89	0.16	0.17
Slovenia	4.29	4.17	0.06	0.03
United Kingdom	5.87	2.94	0.05	0.05

Note:

Based on the ESS10 country-specific Sampling Design Summaries and the ESS10 Sample Design Data File.

Table 2.9 compares the predicted (pre-fieldwork) and realised (post-fieldwork) variation in the design weights. This variation determines the impact of variation in selection probabilities on the variance of survey estimates, $deff_p$, thus: $deff_p = 1 + CV(w)^2$. In most cases, the predictions are very close to the realised values. There are five instances of $CV(w)^2$ being under-estimated by 20% or more, namely Bulgaria where the realised $deff_p$ is 40% greater than predicted, Greece (18%), Ireland (41%), North Macedonia (63%) and Slovakia domain 2 (17%).

Table 2.9 Predicted and estimated variation in design weights, ESS10

Country	Domain	Pre-fieldwork predicted $CV(w)^2$	Post-fieldwork predicted $CV(w)^2$
Belgium	domain 1	0.000	0.000
Belgium	domain 2	0.000	0.001
Bulgaria		0.147	0.603
Croatia	domain 1	0.000	0.004
Croatia	domain 2	0.010	0.014
Czechia		0.186	0.223
Estonia		0.000	0.000
Finland		0.000	0.000
Greece		0.268	0.492
Hungary	domain 1	0.000	0.015
Hungary	domain 2	0.000	0.000
Iceland	domain 1	0.000	0.000
Iceland	domain 2	0.000	0.000
Ireland		0.251	0.764
Italy	domain 1	0.000	0.000
Italy	domain 2	0.000	0.003
Lithuania	domain 1	0.203	0.260
Lithuania	domain 2	0.215	0.276
Montenegro		0.261	0.246
North Macedonia		0.209	0.641
Netherlands		0.000	0.004
Norway		0.000	0.000
Portugal	domain 1	0.201	0.201
Portugal	domain 2	0.203	0.194
Slovakia	domain 1	0.265	0.243
Slovakia	domain 2	0.265	0.475
Slovenia		0.000	0.000
Switzerland		0.000	0.000
United Kingdom		0.230	0.235

Note:

Based on the ESS10 country-specific Sampling Design Summaries and the ESS10 Sample Design Data File.

3 TRANSLATION AND PRE-TESTING

3.1 SPECIFICATIONS

Each country translates the source questionnaire into those languages spoken by 5% or more of the population as their first language. ESS follows the TRAPD translation approach, consisting of the steps: Translation, Review, Adjudication, Pre-testing and Documentation. NCs are required to find suitable individuals to fulfil the three critical roles in the approach: at least two translators, one reviewer, and one adjudicator (with the option of having one reviewer-cum-adjudicator, thus two roles provided by one person). In the case of languages fielded in more than one country, the so-called ‘shared languages’, countries should engage in shared language harmonisation (e.g. French in Belgium, France, and Switzerland).

High-quality questionnaire translation is of utmost importance in a cross-cultural survey design. Comparability across the national data requires that questions are understood equally, independent of the language in which they are asked. Therefore, ESS-ERIC adopted the strategy that, in addition to the TRAPD approach, two external expert evaluation procedures are carried out. On the one hand, the external service provider cApStAn carries out a linguistic, pragmatic, and semantic quality assessment and enhancement step (verification). On the other hand, the Survey Quality Prediction (SQP) system⁴ detects formal inconsistencies between the source and translated questionnaire.

Even though this report only concerns countries surveyed face-to-face, shared languages require considering a more comprehensive selection of countries. For this specific purpose, countries surveyed in self-completion mode are also used as references.

3.2 LANGUAGE VERSIONS

Table 3.1 lists all languages the questionnaire was translated into in each country for face-to-face mode. Overall, 20 countries—in which languages other than English were fielded in face-to-face mode—participated in Round 10, with overall 23 language versions other than English. Ireland and the United Kingdom also participated in Round 10 and used an English questionnaire. Nine countries carried out fieldwork in more than one language: Belgium, Estonia, Finland, Iceland, Lithuania, Montenegro, North Macedonia, Slovakia, and Switzerland.

The following ‘shared languages’ were fielded in more than one country:

- Albanian (Montenegro, North Macedonia)
- Dutch (Belgium, Netherlands)
- French (Belgium, France, Switzerland)
- German (Austria, Germany, Switzerland)
- Greek (Cyprus, Greece)
- Hungarian (Hungary, Slovakia)
- Italian (Italy, Switzerland)
- Polish (Iceland, Poland)

⁴The service is openly available for researchers under <https://sqp.gesis.org>

- Russian (Estonia, Israel, Latvia, Lithuania)
- Swedish (Finland, Sweden)

Shared language harmonisation steps were carried out for all shared languages except for Albanian, Polish and Swedish.

Table 3.1 Languages versions per country, ESS 10

Country	Language version number	Language version
Belgium	1, 2	Dutch, French
Bulgaria	3	Bulgarian
Croatia	4	Croatian
Czechia	5	Czech
Estonia	6, 7	Estonian, Russian
Finland	8, 9	Finnish, Swedish
France	10	French
Greece	11	Greek
Hungary	12	Hungarian
Iceland	13, 14	Icelandic, Polish
Italy	15	Italian
Lithuania	16, 17	Lithuanian, Russian
Montenegro	18, 19	Albanian, Montenegrin
Netherlands	20	Dutch
North Macedonia	21, 22	Macedonian, Albanian
Norway	23	Norwegian
Portugal	24	Portuguese
Slovakia	25, 26	Hungarian, Slovak
Slovenia	27	Slovene
Switzerland	28, 29, 30	French, German, Italian

Note:

Based on ESS10 Data Documentation Report.

3.3 TRANSLATION TEAM COMPOSITION

Table 3.2 portrays the translation team compositions. The ESS translation scheme requires that the translation team for each language version is composed of at least three persons. That requirement was met by most of Round 10 translation teams. In the case of Hungarian in Slovakia, the national translation team consisted of only one person. Despite shared language harmonisation with the Hungarian translation from Hungary, this is considered insufficient with regard to ESS requirements. For the language version Russian in Lithuania, the national translation team consisted of two persons. This is considered sufficient given the intensive shared language harmonisation process in Round 10

with the questionnaire expert from Russia, Prof. Anna Andreenkova. For all other language versions in Round 10, the translation team size varied between three and ten persons.

Another requirement is that at least two independent parallel translations are considered in the review meetings. In three case(s), only one translation was produced in the country itself (Polish in Iceland, Russian in Lithuania, and Hungarian in Slovakia), but in these cases the second parallel translation came from another country using the same 'shared' language, and this had been agreed with the ESS Translation Team / CST beforehand.

In addition, the ESS translation scheme expresses two recommendations: (a) at least one of the two translators should be a professional translator, trained translator or both, and (b) questionnaire translation experience should be covered in the translation teams. Most ESS Round 10 translation teams met these recommendations (see Table 3.2). For the language version Hungarian in Slovakia, no team member had questionnaire translation competence. With regard to the requirement that at least one of the translators should be a professional translator, trained translator or both, not all teams met this requirement.

Table 3.2 Translation team compositions, ESS 10

Language version number	Country	Language version	Team size (trained and/or professional translators)	Quest. Translation experience (yes-no)	Number of parallel translations	Requirements met (yes-no)	Comments
1	Belgium	Dutch	5 (2)	yes	2	yes	Dutch shared language process
2	Belgium	French	4 (1)	yes	3	yes	intensive French shared language process
3	Bulgaria	Bulgarian	5 (3)	yes	2	yes	
4	Croatia	Croatian	6 (1)	yes	2	yes	
5	Czechia	Czech	4 (0)	yes	2	yes	recommended to add professional and/or trained translator(s)
6	Estonia	Estonian	4 (2)	yes	2	yes	
7	Estonia	Russian	5 ()	yes	2	yes	Information about translators unavailable
8	Finland	Finnish	10 (2)	yes	2	yes	
9	Finland	Swedish	8 (4)	yes	2	yes	
10	France	French	5 (1)	yes	3	yes	intensive French shared language process
11	Greece	Greek	6 (0)	yes	2	yes	recommended to add professional and/or trained translator(s)
12	Hungary	Hungarian	5 (1)	yes	2	yes	
13	Iceland	Icelandic	5 (1)	yes	2	yes	
14	Iceland	Polish	4 (1)	yes	1	yes	second translation from Poland
15	Italy	Italian	4 (2)	yes	2	yes	

(continued ...)

^a By 'qualified' we mean trained and/ or professional translator.

Table 3.3 Translation team compositions, ESS 10

Language version number	Country	Language version	Team size (trained and/or professional translators)	Quest. Translation experience (yes-no)	Number of parallel translations	Requirements met (yes-no)	Comments
16	Lithuania	Lithuanian	3 (0)	yes	2	yes	recommended to add professional and/or trained translator(s)
17	Lithuania	Russian	2 (0)	yes	1	yes	intensive shared language process for Russian in ESS10
18	Montenegro	Montenegrin	3 (2)	yes	2	yes	
19	Montenegro	Albanian	3 (2)	yes	3	yes	
20	Netherlands	Dutch	4 (2)	yes	2	yes	
21	North Macedonia	Macedonian	10 (2)	yes	2	yes	
22	North Macedonia	Albanian	5 (2)	yes	2	yes	
23	Norway	Norwegian	4 (2)	yes	2	yes	
24	Portugal	Portuguese	4 (1)	yes	2	yes	
25	Slovakia	Slovak	4 (1)	yes	2	yes	
26	Slovakia	Hungarian	1 (0)	no	1	no	serious quality concerns on the translation Slovakia-Hungarian
27	Slovenia	Slovene	5 (1)	yes	3	yes	
28	Switzerland	French	4 (2)	yes	2	yes	intensive French shared language process
29	Switzerland	German	4 (2)	yes	2	yes	intensive German shared language process
30	Switzerland	Italian	4 (2)	yes	2	yes	

Note:

Based on internal records of the ESS Translation Team.

^a By 'qualified' we mean trained and/ or professional translator.

3.4 TRANSLATION REVIEW MEETING

The ESS translation scheme requires the translations of all new and modified items from the source questionnaire to be discussed in the Review meeting, not only those where both parallel translations differ. For teams that have participated in earlier ESS rounds, thus, only these new and modified items need to be discussed, that is, about 40-60 items per round. A rule of thumb says that about four to five items can be discussed per hour when the discussion is thorough, which leads to an ideal Review duration of at least eight hours. Review sessions shorter than eight hours can be accepted if there is an international shared language harmonisation meeting in addition to the national Review discussion. For new ESS teams (such as Montenegro in Round 10), the translation of the entire questionnaire needs to be discussed; thus, the Review discussion needs to be much longer, at least two days.

A minimum Review duration of four hours would still be accepted, but a meeting of three hours is considered too short for discussing all relevant issues. A 'pass' was given to language versions where the review was not entirely up to the ESS' methodological requirements but still accepted.

As shown in Table 3.4, only in Croatia and Czechia the meetings lasted three hours. Still, it has to be acknowledged that both teams are very experienced in ESS questionnaire translations. Montenegro reported zero hours for both national languages. As there had already been serious problems with translation processes with this team in Round 9, the ESS Translation Team has again, in Round 10, concerns about the quality of the translations developed by the national team from Montenegro. In all other language versions in Round 10, the duration of the Review meeting is considered sufficiently long.

In addition, the ESS translation scheme requires that at least three people participate in the Review meeting. Ideally, these should cover both a background as trained and professional translators or at least linguists on the one hand, and social scientists or survey experts on the other. Most of the teams met this requirement—in some cases in combination with a shared language process involving trained and professional translators in other national teams (Russian in Estonia, French in France, Greek in Greece), but in some cases, no translation competence was involved in the Review meeting (Estonia and Iceland).

Table 3.4 Review meetings, ESS 10

Country	Language version	Review meeting participants	Social scientist & translator present	Duration (hours)	Requirements met	Comments
Belgium	Dutch	5	yes	8	yes	
	French	4	yes	15	yes	Intensive FR shared language process
Bulgaria	Bulgarian	5	yes	12	yes	
Croatia	Croatian	6	yes	3	yes	Review meeting too short
Czechia	Czech	4	yes	3	yes	Review meeting too short
Estonia	Estonian	3	no	7	yes	No translators present
	Russian	1	no	16	yes	Intensive RU shared language process
Finland	Finnish	6	yes	12	yes	
	Swedish	4	yes	16	yes	
France	French	2	no	4	yes	Intensive FR shared language process
Greece	Greek	3	no	100	yes	Duration probably a typo / No translators present
Hungary	Hungarian	4	yes	14	yes	
Iceland	Icelandic	4	no	12	yes	No translators present
	Polish	2	no	20	yes	Shared language process + difficult language setting
Italy	Italian	4	yes	8	yes	

(continued ...)

Country	Language version	Review meeting participants	Social scientist & translator present	Duration (hours)	Requirements met	Comments
Lithuania	Lithuanian	3	yes	7	yes	
	Russian	2	yes	5	yes	Intensive RU shared language process
Montenegro	Montenegrin	3	yes	0	no	No Review meeting
	Albanian	4	yes	0	no	No Review meeting
Netherlands	Dutch	4	yes	10	yes	
North Macedonia	Macedonian	8	no	18	yes	Full questionnaire discussed / Translators not available
	Albanian	5	yes	36	yes	Full questionnaire discussed
Norway	Norwegian	4	yes	6	yes	
Portugal	Portuguese	4	yes	6	yes	
Slovakia	Slovak	4	yes	7	yes	No precise duration reported
	Hungarian	3	yes	1	no	Review meeting too short
Slovenia	Slovene	4	yes	4	yes	
Switzerland	French	4	yes	8	yes	Intensive FR shared language process
	German	4	yes	8	yes	
	Italian	4	yes	7	yes	

Note:

Based on internal records of the ESS Translation Team.

3.5 EXTERNAL VERIFICATION, SQP, AND PRETEST

During the translation process, the translation quality is assessed in three steps: (a) during translation verification by the external firm cApStAn, (b) during SQP Coding, and (c) during the national Pretest. It is vital that these three steps are carried out in this order and that each step is finalised and signed off before the next one starts (see Table 3.5). All resulting findings and corrections have to be correctly incorporated into the translations before the next step.

In the Round 10, verification was carried out on all language versions except the Russian and German versions. The Russian National Coordinator supported an intensive shared language harmonisation process based on the Russian master translation developed by herself and her team in Russia. In the case of German, the ESS Translation Expert being of German mother tongue, was closely involved in this shared language harmonisation process. Verification was signed off before SQP Coding started in all cases except France and Portugal.

SQP Coding was carried out only in the first national language of all countries. It was carried out in both national languages (Dutch and French) in Belgium. In two cases, the SQP Coding was not signed off before the Pre-test started, violating the ESS requirements. However, this is a major improvement from Round 9, where 15 countries started the pretest before finalising the SQP Coding. The national Pre-tests should test the national questionnaires in their pre-final version to assess, among others, whether the translations are correctly understood or create problems with a small sample of the target population. If SQP Coding was not completed, the pre-tested questionnaires were not pre-final yet, because possibly the SQP Coding step would trigger changes in the questionnaires that would then be fielded without having been pre-tested.

Table 3.5 External Verification, UPF checks, and Pre-test, ESS10

Country	Language version	Verification Start	Verification End	Verification before SQP?	SQP Start	SQP End	SQP before Pretest?	Pre-test Start	Pre-test End
Belgium	Dutch (Belgium)	16-07-2020	15-10-2020	yes	16-10-2020	26-11-2020	yes	15-09-2021	16-09-2021
	French (Belgium)	09-10-2020	01-03-2021	yes	02-03-2021	07-05-2021	yes	15-09-2021	16-09-2021
Bulgaria	Bulgarian	27-07-2020	15-10-2020	yes	15-10-2020	15-01-2021	yes	19-05-2021	06-06-2021
Croatia	Croatian	09-11-2020	15-12-2020	yes	16-12-2020	22-02-2021	yes	20-03-2021	28-03-2021
Czechia	Czech	15-07-2020	22-09-2020	yes	22-09-2020	14-05-2021	yes	07-07-2021	29-09-2021
Estonia	Estonian	24-05-2020	26-06-2020	yes	26-06-2020	17-07-2020	no	25-05-2020	07-06-2021
	Russian		15-07-2020					25-05-2020	07-06-2021
Finland	Finnish	03-02-2021	26-03-2021	yes	27-03-2021	27-05-2021	yes	18-08-2021	31-08-2021
Finland	Swedish	11-05-2021	31-05-2021					18-08-2021	31-08-2021
France	French (France)	09-10-2020	01-03-2021	no	04-02-2021	07-05-2021	yes	22-06-2021	30-06-2021
Greece	Greek (Greece)	19-01-2021	14-05-2021	yes	17-05-2021	28-06-2021	yes	15-10-2021	25-10-2021
Hungary	Hungarian	29-10-2020	19-02-2021	yes	20-02-2021	03-05-2021	yes	06-05-2021	11-05-2021
Iceland	Icelandic	01-10-2020	18-12-2020	yes	18-12-2020	11-01-2021	yes	30-06-2021	25-07-2021
	Polish	02-10-2020	18-12-2020					30-06-2021	25-07-2021
Ireland	English							15-11-2021	16-02-2022
Italy	Italian	17-11-2020	23-07-2021	yes	23-07-2021	17-08-2021	yes	21-09-2021	27-09-2021
Lithuania	Lithuanian	07-07-2020	25-06-2020	yes	28-06-2020	02-09-2020	yes	30-09-2020	14-10-2020
	Russian		15-07-2020					30-09-2020	14-10-2020
Montenegro	Montenegrin	19-02-2021	11-05-2021	yes	11-05-2021	31-08-2021	yes	25-10-2021	30-10-2021
Montenegro	Albanian	14-05-2021	03-08-2021					25-10-2021	30-10-2021
Netherlands	Dutch (Netherlands)	29-07-2020	15-10-2020	yes	16-10-2020	30-10-2020	yes	25-08-2021	15-09-2021
North Macedonia	Macedonian	30-04-2021	22-07-2021	yes	22-07-2021	18-08-2021	yes	23-09-2021	05-10-2021
North Macedonia	Albanian	07-05-2021	18-08-2021					23-09-2021	05-10-2021
Norway	Norwegian	23-07-2020	11-08-2020	yes	11-08-2020	28-08-2020	yes	23-09-2020	29-10-2020
Portugal	Portuguese	26-05-2021	19-06-2021	no	10-06-2021	05-07-2021	yes	20-07-2021	02-08-2021
Slovakia	Slovak	14-10-2020	16-11-2020	yes	16-11-2020	07-12-2020	yes	06-05-2021	13-05-2021
	Hungarian	28-10-2020	06-03-2021					06-05-2021	13-05-2021
Slovenia	Slovene	16-06-2020	15-07-2020	yes	15-07-2020	27-08-2020	no	26-08-2020	04-09-2020
Switzerland	French	09-10-2020	22-12-2020					30-03-2021	01-04-2021
Switzerland	German (Switzerland)		20-09-2020	yes	21-09-2020	26-10-2020	yes	30-03-2021	01-04-2021
Switzerland	Italian	13-11-2020	15-02-2021					30-03-2021	01-04-2021
United Kingdom	English							26-05-2021	23-06-2021

Note:

Based on internal records of the ESS Translation Team.

4 SURVEY INSTRUMENT IMPLEMENTATION AND PRE-TESTING

The next step in the survey lifecycle is to program the translated questionnaire(s) and test the survey instrument(s). The mode by which the questionnaire is to be administered is essential in designing and implementing the instrument(s). The ESS main questionnaire is to be administered to all respondents using face-to-face interviews.

National teams must ensure that the survey instruments implement the finalised questionnaires (including routings) correctly and completely, and a national pretest has to take place.

4.1 MAIN QUESTIONNAIRE ADMINISTRATION MODE

The ESS main questionnaire was administered through face-to-face interviewing in Round 10⁵. However, as illustrated in the Introduction the larger flexibility was granted to countries to reduce the impact of the COVID-19 pandemic on the data collection. Particularly, interviewers were encouraged to facilitate the requests of the target respondents when these regarded administering the interviews in an outdoor setting.

4.2 VIDEO INTERVIEWING

In response to the COVID-19 pandemic, the ESS Specification was updated to allow video interviewing to be offered as a complementary approach to the usual in-person interviewing. It was expected that even in cases where face-to-face fieldwork was possible, some respondent might be unable or unwilling to take part in an in-person interview due to concerns relating to the COVID-19 pandemic. In cases where an in-person interview was refused, interviewers could offer a video interview as an alternative. In the latter stages of Round 10 fieldwork, video interviews could be offered as an equal alternative to in-person interviewing, which aimed to help countries in completing fieldwork in this challenging round.

Countries were given the option whether or not to offer video interviewing to complement in-person interviewing. Those that offered video interviewing needed to follow a set of guidelines prepared by the ESS Core Scientific Team and to complete a questionnaire outlining their planned approach (for approval by ESS Headquarters).

Table 4.1 below shows whether each country offered video interviewing in Round 10 and, in cases where they did, the percentage of their total interviews that were carried out by video.

⁵With the exclusion of the nine countries where the survey was implemented with self-completion mode due the COVID-19 pandemic, as illustrated previously, these countries are not covered in this report.

Table 4.1 Video interviews, ESS10

Country	Video interviewing offered?	Interviews carried out by video (%)
Belgium	Yes	1.2
Bulgaria	No	
Croatia	Yes	6.0
Czechia	No	
Estonia	Yes	15.6
Finland	Yes	15.2
France	Yes	2.3
Greece	Yes	0.8
Hungary	No	
Iceland	Yes	37.0
Ireland	Yes	0.3
Italy	Yes	17.3
Lithuania	No	
Montenegro	No	
Netherlands	Yes	16.9
North Macedonia	Yes	0.3
Norway	Yes	34.8
Portugal	Yes	0.4
Slovakia	Yes	0.0
Slovenia	Yes	0.0
Switzerland	Yes	3.3
United Kingdom	Yes	4.8

Note:

Based on ESS10 data from Contact Forms, edition 3.0.

4.3 NATIONAL PRE-TESTING

The ESS Round 10 Specification required a national pre-test of the survey instrument of at least 30 face-to-face interviews to be collected. Compared to the previous ESS rounds, the primary focus of the Round 10 pretest was on the feasibility of implementing face-to-face interviews in the COVID-19 pandemic context. Testing the translation was part of the task but not the primary purpose.

Countries implementing video interviews were also required to run additional test interviews in this mode to minimise the risks of technical issues during their administration.

This pretest phase took place in all participating countries, except for Ireland. The number of pretest interviews met or exceeded the minimum number of 30 in all countries except for Belgium (16 face-to-face interviews) and Iceland (29 face-to-face interviews). In the median country, 30 pretest face-to-face interviews were conducted, and in 7 countries, there were 40 or more face-to-face pretest interviews (Table 4.2).

Table 4.2 Pre-testing, ESS10

Country	Pre-test Start	Pre-test End	Pre-test duration (days)	Total No. of interviews
Belgium	15-09-2021	16-09-2021	1	16
Bulgaria	19-05-2021	06-06-2021	18	40
Croatia	20-03-2021	28-03-2021	8	64
Czechia	07-07-2021	29-09-2021	84	30
Estonia	25-05-2020	07-06-2021	378	80
Finland	18-08-2021	31-08-2021	13	260
France	22-06-2021	30-06-2021	8	58
Greece	15-10-2021	25-10-2021	10	40
Hungary	06-05-2021	11-05-2021	5	32
Iceland	30-06-2021	25-07-2021	25	42
Ireland				
Italy	21-09-2021	27-09-2021	6	41
Lithuania	30-09-2020	14-10-2020	14	60
Montenegro	25-10-2021	30-10-2021	5	40
Netherlands	25-08-2021	15-09-2021	21	48
North Macedonia	23-09-2021	05-10-2021	12	43
Norway	23-09-2020	29-10-2020	36	68
Portugal	20-07-2021	02-08-2021	13	30
Slovakia	06-05-2021	13-05-2021	7	50
Slovenia	26-08-2020	04-09-2020	9	40
Switzerland	30-03-2021	01-04-2021	2	30
United Kingdom	26-05-2021	23-06-2021	28	31

Note:

Based on ESS10 Data Documentation Report.

Ireland did not deliver a correctly executed Pre-test.

The pretest was completed before the start of fieldwork in all countries (except Ireland). Pretests were completed between 1 day (Estonia and Finland) and more than 200 days (Lithuania and Norway, where the pretest was run right before a new COVID-19 pandemic wave) before the start of the fieldwork.

Pretesting durations range between less than half a week (Belgium and Switzerland) and almost one year (Estonia, where different phases of pretesting were implemented by the NC). In the median country, pretesting took 12 days.

5 INTERVIEWER CAPACITY, WORKLOAD, EXPERIENCE, AND TRAINING

5.1 INTERVIEWER CAPACITY AND WORKLOAD

A sufficient number of interviewers should be engaged to launch and maintain a powerful fieldwork and to limit the negative effect of interviewers' individual systematic differences in administering the questionnaire on the effective net sample size. Therefore, the ESS Specification limits the interviewer workload (the total number of sample units assigned to each interviewer) to 48 sample units.

Table 5.1 presents an overview of the number of (active) interviewers for each participating country in Round 10. To assess the adequacy of the interviewer capacity, the raw number of interviewers active in the fieldwork has only limited informational value. The gross sample size, representing the total workload to be distributed among the available interviewers, after all, varies across countries (see section Sampling), and larger gross sample sizes require larger numbers of interviewers.

Table 5.1 Number of interviewers, ESS10

Country	Number of active interviewers ^a	Gross sample size	Standardised number of active interviewers ^b	Average workload 1st phase of fieldwork (sd) ^a	SD
Belgium	75	3531	1.0	47.1	32.8
Bulgaria	121	3848	1.5	31.8	13.1
Croatia	173	3940	2.1	22.8	13.5
Czechia	219	3402	3.1	15.5	6.3
Estonia	53	3290	0.8	62.3	32.2
Finland	138	3900	1.7	28.3	128.6
France	121	6687	0.9	43.7	94.5
Greece	134	5864	1.1	43.6	21.8
Hungary	93	4700	0.9	51.3	30.3
Iceland	46	2758	0.8	60.0	105.4
Ireland	64	4728	0.6	73.9	45.6
Italy	208	5461	1.8	26.3	9.6
Lithuania	149	5830	1.2	39.1	13.6
Montenegro	46	2250	1.0	48.9	38.3
Netherlands	94	4187	1.1	44.5	25.7
North Macedonia	73	2580	1.4	36.4	19.6
Norway	47	3880	0.6	82.6	229.9
Portugal	68	5254	0.6	77.3	47.7
Slovakia	112	3258	1.7	29.1	14.4
Slovenia	61	2400	1.2	39.3	17.1
Switzerland	60	3102	0.9	51.7	34.7
United Kingdom	224	5885	1.8	25.4	14.7

Note:

Based on ESS10 data from Contact Forms, edition 3.0.

^a The number of active interviewers includes all interviewers for which at least one personal visit was recorded.

^b The standardised number of active interviewers is derived as the ratio of the number of active interviewers and the number of sets of 48 cases in the gross sample size.

^c In Iceland, Norway, Finland and Estonia contact attempts by phone were allowed to set up an appointment. In France and Switzerland the telephone was used to set up appointment at a later stage during the fieldwork. The numbers mentioned here include these attempts.

Still, when it comes to making valid comparisons, Iceland, Norway, Finland and Estonia cannot be meaningfully compared to other countries. Due to the geographic characteristics (remote and low population density areas) and/or and COVID-related health safety measures in Iceland, Norway, Finland and Estonia, first contact attempts could also be made by phone, albeit strictly to set up an appointment (interviews are always in person). Some of the cases were contacted by a central calling agency, while others were contacted directly by interviewers. Therefore we refrain from providing descriptive statistics and substantial discussion of the workload in these countries. Furthermore, France and Switzerland used telephone contact attempts towards the end of fieldwork to set up appointments. This also—at least in part—makes meaningful comparisons difficult. Still, we include them in the comparative analysis.

The number of active interviewers per 48 cases in the gross sample size ranges between 0.6 (Ireland

and Portugal) and 3.1 (Czechia). There were 1.1 interviewers per 48 cases in the gross sample size in the median country⁶. This gives a first indication of the differences in actual fieldwork capabilities with respect to the adherence to the 48 sample unit specification. In 6 countries (France, Hungary, Ireland, Montenegro, Portugal, and Switzerland), the academic (i.e., planned) workload exceeded 48 cases, so that the number of interviewers was insufficient to avoid workloads larger than 48 cases even if all cases could have been evenly distributed.⁷ The number of interviewers was relatively low in many other participating countries, forewarning the risk of a capacity bottleneck in fieldwork and/or inflated interviewer effects reducing the effective net sample size.

Finally, in only two countries (Croatia and Czechia), the number of active interviewers for 48 cases in the gross sample was higher than two. For these countries, the expectation was that the interviewer capacity would be sufficient. This can also be observed when one looks at the average workload during the first phase of fieldwork.

However, both the degree of the geographical dispersion of cases and the (necessary) intensity of re-issuing activities are critical factors to consider. Therefore, the adequacy of the interviewer capacity is more validly assessed based on the distribution of the actual interviewer workloads observed after the re-issue phase.

Table 5.2 presents some descriptive statistics of observed interviewer workloads, including the re-issue phase (if there was one). The average interviewer workload ranges between 15.5 (Czechia) and 80.1 (Portugal)⁸. In the median country, the average interviewer workload contained 41.9 cases. The observed interviewer workloads do not only vary markedly between interviewers of different countries. In most countries, cases are far from evenly distributed, and interviewer workloads correspondingly vary strongly between interviewers. In seven countries (Belgium, France, Greece, Hungary, Montenegro, the Netherlands, and Switzerland)⁹ both workloads as small as five or fewer cases and workloads exceeding 100 cases are observed. The standard deviation exceeds 50% of the average interviewer workload in 12 countries¹⁰.

⁶Excluding Estonia, Finland, Norway and Iceland

⁷Based on the signed off Sampling Design Summaries and the Fieldwork Questionnaire

⁸Excluding Estonia, Finland, Norway and Iceland.

⁹In France, the interviewer ID associated with 929 is associated with a call unit. Switzerland also used 25 CATI interviewers for recruitment

¹⁰Excluding Estonia, Finland, Norway and Iceland

Table 5.2 Interviewer workload, ESS10

Country	N	Min	Max	Mean ^a	SD
Belgium	75	1	170	47.5	33.3
Bulgaria	121	8	48	31.9	13.2
Croatia	180	2	51	23.5	14.3
Czechia	219	6	30	15.5	6.3
Estonia	53	1	245	76.6	41.0
Finland	139	1	1525	37.5	127.8
France	121	5	929	63.5	111.9
Greece	142	1	112	42.7	22.1
Hungary	94	3	152	52.1	30.2
Iceland	51	1	730	84.6	135.8
Ireland	64	8	208	73.9	45.6
Italy	220	9	59	28.7	10.0
Lithuania	149	2	61	39.1	13.6
Montenegro	46	1	164	48.9	38.3
Netherlands	94	2	170	57.7	37.8
North Macedonia	74	2	75	35.7	19.1
Norway	72	1	2144	153.8	358.1
Portugal	68	6	239	80.1	51.4
Slovakia	113	1	51	29.1	14.3
Slovenia	61	8	93	41.0	18.6
Switzerland	75	1	212	61.2	57.5
United Kingdom	229	1	87	27.2	14.6

Note:

Based on ESS10 data from Contact Forms, edition 3.0.

^a In Iceland, Norway, Finland and Estonia contact attempts by phone were allowed to set up an appointment. In France and Switzerland the telephone was used to set up appointment at a later stage during the fieldwork. The numbers mentioned here include these attempts.

5.2 INTERVIEWER EXPERIENCE

Interviewers are expected to have been appropriately trained and have relevant experience (Table 5.3). As evident from the relative frequency distribution of interviewers' experience (prior ESS experience or no prior ESS experience) presented in Table 5.3, there is substantial variation. The number of interviewers with ESS experience ranges up from 0% (North Macedonia)¹¹, and in eleven countries, more than 40% of the interviewers had prior ESS experience.

¹¹North Macedonia participated for the first time in Round 10

Table 5.3 Interviewer experience, ESS10

Country	in %	
	Prior ESS experience	No prior ESS experience
Belgium	65.3	34.7
Bulgaria	16.5	83.5
Croatia	54.7	45.3
Czechia	91.3	8.7
Estonia	60.4	39.6
Finland	68.0	32.0
France	39.7	60.3
Greece	3.6	96.4
Hungary	72.7	27.3
Iceland	10.9	89.1
Ireland	81.3	18.7
Italy	7.8	92.2
Lithuania	37.3	62.7
Montenegro	26.1	73.9
Netherlands	40.4	59.6
North Macedonia	0.0	100.0
Norway	36.6	63.4
Portugal	40.3	59.7
Slovakia	20.4	79.6
Slovenia	65.5	34.5
Switzerland	58.6	41.4
United Kingdom	25.8	74.2

Note:

Based on ESS10 Data Documentation Report.

5.3 INTERVIEWER BRIEFING

The ESS Specification requires that interviewers attend an ESS-specific briefing before starting their work. This briefing should equip the interviewers with the knowledge about the ESS, its purpose, topics, quality standards and relevance, necessary to represent the ESS in the field successfully. The briefing should also ensure that all interviewers are well prepared to apply the ESS contact procedure, complete the ESS Contact Form, and administer the ESS Questionnaire according to the ESS rules for standardised interviewing. Any gaps between the ESS instructions and usual practice and any disparity among the interviewers in their application of the ESS task rules should be addressed. Due to the COVID-19 pandemic and subsequent shut-down measures the ESS Specification was altered to also allow briefings virtually.

In-person ESS-specific briefings were organised in four participating countries (Table 5.4). Eight countries opted for a mix of both in-person or virtual briefing sessions. The remaining ten countries conducted only virtual meetings. In 18 countries almost all interviewers attended such a briefing session. In Greece, Montenegro, and North Macedonia, most interviewers attended such a briefing.

Table 5.4 Interviewer briefings, ESS10

Country	Briefing length	Briefing type	Number of interviewers that attended the briefing
Belgium	4 - 8 hrs	in-person	(almost) all
Bulgaria	4 - 8 hrs	in-person	(almost) all
Croatia	< 4 hrs	mix	(almost) all
Czechia	< 4 hrs	mix	(almost) all
Estonia	> 8 hrs	virtual	(almost) all
Finland	4 - 8 hrs	virtual	(almost) all
France	4 - 8 hrs	virtual	(almost) all
Greece	> 8 hrs	mix	most
Hungary	< 4 hrs	virtual	(almost) all
Iceland	4 - 8 hrs	mix	(almost) all
Ireland	4 - 8 hrs	virtual	(almost) all
Italy	4 - 8 hrs	mix	(almost) all
Lithuania	4 - 8 hrs	virtual	(almost) all
Montenegro	4 - 8 hrs	in-person	most
Netherlands	4 - 8 hrs	mix	(almost) all
North Macedonia	4 - 8 hrs	in-person	most
Norway	4 - 8 hrs	mix	(almost) all
Portugal	< 4 hrs	virtual	(almost) all
Slovakia	4 - 8 hrs	virtual	(almost) all
Slovenia	> 8 hrs	virtual	(almost) all
Switzerland	4 - 8 hrs	mix	(almost) all
United Kingdom		virtual	

Note:

Based on ESS10 Data Documentation Report.

Most countries organised half-day or full-day briefing sessions, as recommended. Only in Croatia, Czechia, Hungary, and Portugal, briefing sessions were shorter than 4 hours. Estonia, Greece, and Slovenia had briefings with a duration of 8 hours or more. For the United Kingdom, this information was not available.

6 FIELDWORK

Important sources of fieldwork quality indicators (e.g. response rates or the intensity of the fieldwork process) derive from the contact form data file. It contains detailed (attempt- and case-level) paradata on the contact and recruitment process. NCs deposit these after the fieldwork period has ended. Alongside the Data Documentation Report, these are the primary source for indicators developed in this chapter.

6.1 TIMING AND INTENSITY OF FIELDWORK

Countries are offered the flexibility to complete their fieldwork within a given time frame. Figure 6.1 graphically displays the information presented in Table 6.1 about countries commencing and ending fieldwork ordered by the fieldwork starting date. Slovenia kicked-off the fieldwork period on the 18 September 2020. However, the NC Team had to pause its fieldwork activities in the wake of the COVID-19 pandemic's shut-down measures. The next batch followed with Switzerland and Croatia. The remaining countries followed in close succession. Slovenia was also the first country to end its fieldwork period on 26 August 2021, while Ireland was the last country to finish its fieldwork period on 16 December 2022.

The median country in Round 10 remained 27.1 weeks in the field. Outliers on the extremes are Czechia with 12.3 weeks and Ireland with 55.4 weeks.

Table 6.1 Fieldwork duration, ESS10

Country	Start	End	Duration (weeks)
Belgium	27 October 2021	03 September 2022	44.4
Bulgaria	28 June 2021	30 September 2021	13.4
Croatia	05 May 2021	16 November 2021	27.9
Czechia	05 July 2021	29 September 2021	12.3
Estonia	07 June 2021	31 December 2021	29.6
Finland	31 August 2021	31 January 2022	21.9
France	23 August 2021	31 December 2021	18.6
Greece	09 November 2021	23 May 2022	27.9
Hungary	10 June 2021	16 October 2021	18.3
Iceland	28 July 2021	11 February 2022	28.3
Ireland	23 November 2021	16 December 2022	55.4
Italy	25 October 2021	26 April 2022	26.1
Lithuania	01 July 2021	15 December 2021	23.9
Montenegro	03 November 2021	30 March 2022	21.0
Netherlands	01 October 2021	03 April 2022	26.3
North Macedonia	23 October 2021	08 March 2022	19.4
Norway	10 June 2021	04 May 2022	46.9
Portugal	23 August 2021	09 March 2022	28.3
Slovakia	25 May 2021	31 October 2021	22.7
Slovenia	18 September 2020	26 August 2021	48.9
Switzerland	04 May 2021	02 May 2022	51.9
United Kingdom	15 August 2021	02 September 2022	54.7

Note:

Based on ESS10 Data Documentation Report.

Slovenia had to pause the fieldwork due to COVID-19 pandemic's shut-down measures in November 2020 and restart in June 2021. Considering that, the real fieldwork duration in Slovenia was 18.6 weeks.

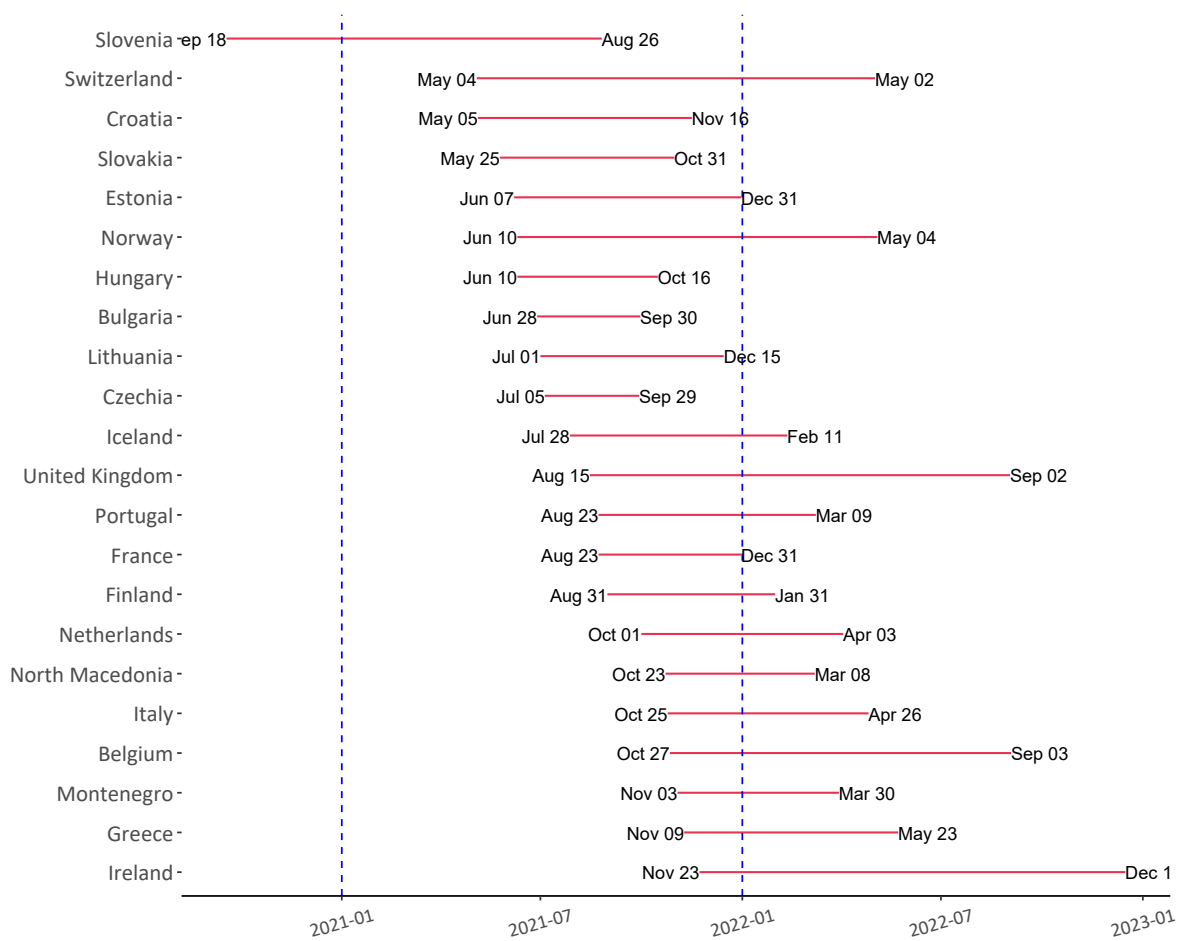


Figure 6.1 Fieldwork periods, ESS10.
The vertical line marks the new year.

6.2 CONTACT AND RECRUITMENT STRATEGIES

With the aim of low non-contact rates and high response rates, the ESS Specification imposes a fairly strict contact and recruitment strategy to which all countries have to submit. The standard contact procedure stipulates the following for fieldworkers:

- the first contact must be face-to-face ¹².
- at least four personal visits are required
 - on different times of the day
 - at different days of the week
 - at least one attempt has to happen in the evening
 - at least one attempt has to happen during the weekend

¹²Countries with sample frames of named individuals including telephone numbers, such as Iceland, Norway, Sweden, and Finland, can be exceptions to the general principle of face-to-face recruitment.

- all contact attempts have to spread over at least two weeks.

Only once these conditions are exhausted can a sample unit be abandoned as ‘non-productive’.

6.2.1 Number and timing of personal visits to ‘non-productive’ contacts

Compliance with the prescribed number and timing of personal visits is assessed by considering personal visits made to sample units that are categorised as final ‘Non-contact’ (code 20) or ‘Broken appointment’ (code 31) (see Section 6.5, p. 53). These cases remain potentially productive and should not have been prematurely abandoned.

Table 6.2 presents descriptive statistics of the number of personal visits made to these cases in Round 10. The average number of personal visits ranges between 1.6 (Ireland) and 6.8 (the Netherlands). In the median country, 3.7 personal visits were made on average.

Table 6.2 Compliance with contact specification: Number of personal visits, ESS10

Country	N ^a	Min	Max	Mean	SD
Belgium	190	1	9	5.0	1.5
Bulgaria	264	0	8	4.2	0.9
Croatia	44	4	10	4.6	1.4
Estonia	220	0	10	3.0	2.0
Finland	447	0	8	2.0	1.6
France	283	1	13	4.1	1.6
Greece	95	0	6	3.1	1.8
Hungary	75	0	5	2.0	1.5
Iceland	230	0	8	2.0	2.0
Ireland	1549	0	7	1.6	1.3
Italy	475	0	10	2.9	2.0
Lithuania	869	0	7	3.7	0.9
Montenegro	29	1	4	3.5	1.2
Netherlands	110	1	16	6.8	2.5
North Macedonia	103	1	6	3.7	1.4
Norway	51	0	6	2.5	1.5
Portugal	461	2	13	5.5	1.8
Slovakia	330	1	9	4.4	0.9
Slovenia	135	0	10	3.3	2.0
Switzerland	397	0	26	4.7	3.4
United Kingdom	805	0	20	5.0	3.1

Note:

Based on ESS10 data from Contact Forms, edition 3.0.

^a N refers to all cases categorised as final ‘Non-contact’ (code 20) or ‘Broken appointment’ (code 31).

Table 6.3 shows the extent to which the specifications on the timing of personal visits were met (see also Figure 6.2). In thirteen countries (Bulgaria, Estonia, Finland, Greece, Hungary, Iceland, Ireland, Italy, Lithuania, Norway, Slovenia, Switzerland, and the United Kingdom), (nearly) all cases were visited at least once, while in four countries (Bulgaria, Croatia, Portugal, and Slovakia), (nearly) all of the cases were personally visited at least four times before they were abandoned as non-productive.

Table 6.3 Compliance with contact specification: Timing and spread of personal visits, ESS10

Country	N ^a	Proportion of non-contacts (%) with Specification fulfilled				
		At least one	At least four	At least one in the evening ^b	At least one at the weekend ^c	Spread over 14 days
Belgium	190	100.0	87.9	80.5	74.7	83.2
Bulgaria	264	99.6	97.0	48.1	80.7	67.4
Croatia	44	100.0	100.0	95.5	100.0	93.2
Estonia	220	96.8	31.8	46.8	35.0	68.6
Finland	447	86.8	18.1	3.6	15.2	48.3
France	283	100.0	68.6	75.6	67.8	88.0
Greece	95	80.0	66.3	37.9	46.3	14.7
Hungary	75	92.0	24.0	22.7	48.0	21.3
Iceland	230	71.7	32.6	37.8	53.5	26.1
Ireland	1549	82.1	9.3	32.7	16.4	28.3
Italy	475	96.6	30.5	18.3	41.9	67.2
Lithuania	869	99.3	79.6	62.9	88.6	80.0
Montenegro	29	100.0	82.8	27.6	72.4	6.9
Netherlands	110	100.0	86.4	36.4	64.5	93.6
North Macedonia	103	100.0	69.9	65.0	80.6	72.8
Norway	51	96.1	29.4	58.8	54.9	54.9
Portugal	461	100.0	98.9	99.1	100.0	95.2
Slovakia	330	100.0	97.3	38.2	78.8	76.1
Slovenia	135	97.8	41.5	29.6	48.9	63.0
Switzerland	397	99.2	61.0	65.0	60.5	68.8
United Kingdom	805	95.3	63.2	52.5	68.6	66.8

Note:

Based on ESS10 data from Contact Forms, edition 3.0.

^a N refers to all cases categorised as final 'Non-contact' (code 20) or 'Broken appointment' (code 31).

^b Visits after 17:00 are categorised as 'evening'.

^c Visits on Saturday or Sunday are categorised as 'weekend'.

Four countries (Finland, Greece, Iceland, and Ireland) had more than 10% of cases with no contact attempt. In eight countries (Ireland, Finland, Hungary, Norway, Italy, Estonia, Iceland, and Slovenia), fieldwork was stopped with more than half of the remaining cases still requiring a fourth visit.

Evening visits occurred at least once for (nearly) all unproductive cases in two countries (Croatia and Portugal). In two countries (Croatia and Portugal), (nearly) all of the cases were visited at least once during the weekend. Close to all of the cases were visited at least twice over a period of 14 days in one country (Portugal).

Only one country (Portugal) managed to cover the specified minimum of four visits, two weeks, weekend, and evening visits for at least 95% of the unproductive cases.

The median country covered the minimum of one visitation attempt by 99.2%, but only 46.8% of the weekend visit specification. The remaining specifications are met by approximately 60% to 70% in the median country.

However, it should be noted here that not contacting more than 10% of the cases, conducting evening visits for (nearly) all unproductive cases or visiting during the weekend as well as not covering the

specified minimum of four visits, two weeks, weekend, and evening visits for at least 95% of the unproductive cases was caused mostly by the COVID-19 pandemic and shut-down measures. Moreover, in many situations National Coordinators were required to prioritise contacting the whole sample over conducting four contact attempts.

The country with a record closest to a perfect adherence to all five specifications is Portugal. Croatia follows closely. Conversely, all remaining countries fall far behind to adhere to all specifications simultaneously (see also Figure 6.2).

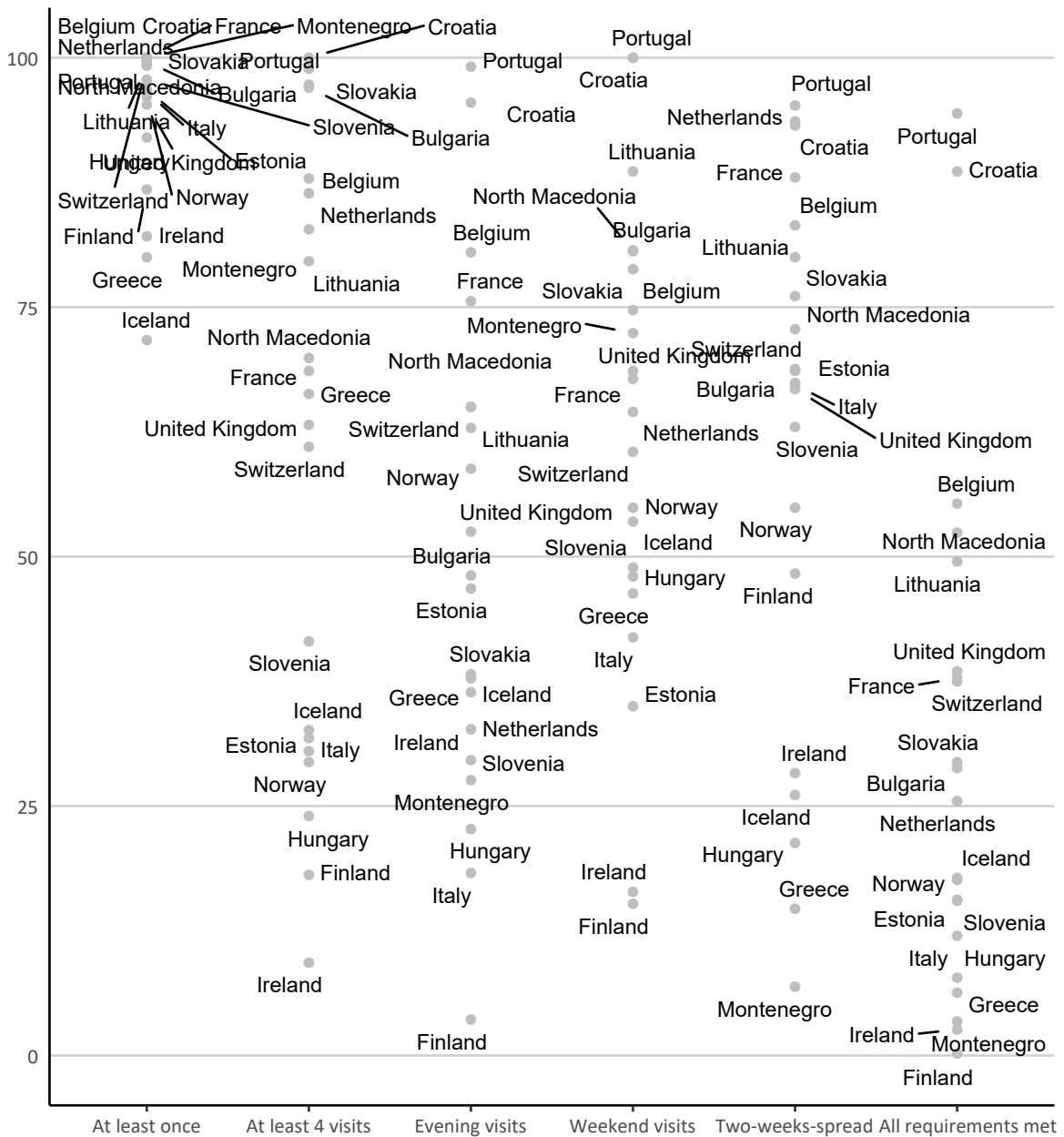


Figure 6.2 Compliance with specifications of contact strategy concerning final non-contacts (respective level in %), ESS10
 Based on ESS10 data from Contact Forms, edition 3.0.

6.2.2 Timing of personal visits

The extent to which the specifications on the timing of personal visits are met is closely related to the typical timing pattern of such visits. Figure 6.3 shows the distribution of (unsolicited)¹³ personal visits by times of the day and days of the week. Darker shades indicate that more attempts were made at the respective day and time. The weekdays can be divided into four categories for fieldwork procedures: Monday through Friday, Saturday, and Sunday. Table 6.4 presents the corresponding relative frequency distributions over these week categories. Additionally, a breakdown of the weekday category (Monday through Friday) by the time of day (morning before 12 pm, afternoon between 12 pm and 5 pm, and evening between 5 pm and 9 pm) is shown. To summarise, nearly all visits were made between 6:00 and 22:00, with the bulk (96.2%) happening between 10:00 and 19:00.

¹³Visits following an appointment (for which the target household/respondent would have determined the timing likely are excluded.

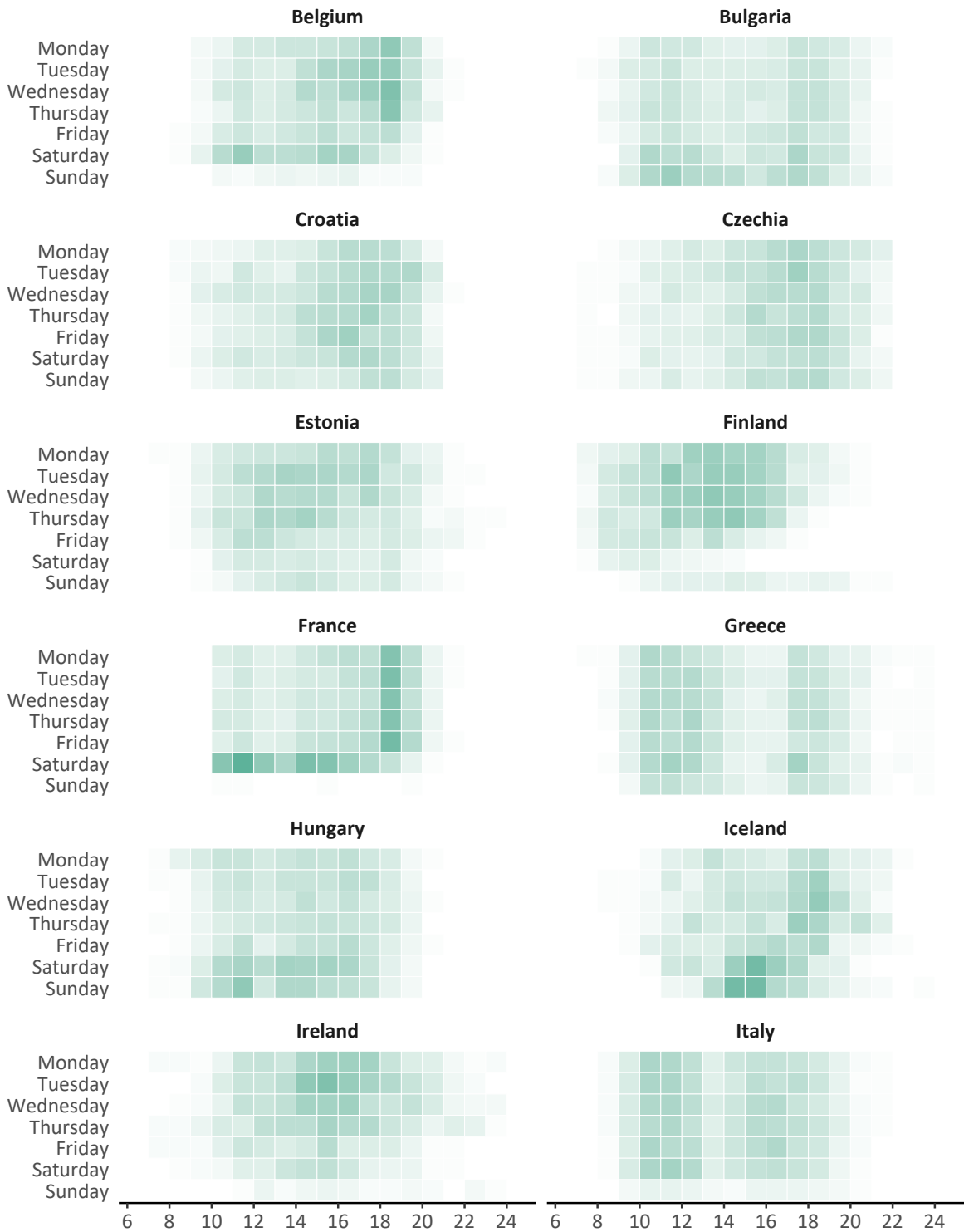




Figure 6.3 Timing of (unsolicited) personal visits, ESS10, Based on ESS10 data from Contact Forms, edition 3.0. Note: Visits following an appointment (for which the timing likely would have been determined by the target respondent) and visits with day of the week or hour missing or with a recorded hour between 0:00 and 6:00 are excluded.

Table 6.4 Timing of (unsolicited) personal visits (%), ESS10

Country	N ^a	Workday morning	Workday afternoon	Workday evening	Workday overall	Saturday	Sunday
Belgium	6941	14.5	44.2	41.0	78.9	17.6	3.5
Bulgaria	7588	27.2	37.3	34.4	64.3	16.4	19.2
Croatia	5116	14.5	46.3	38.9	73.8	14.8	11.4
Czechia	3394	13.4	43.3	40.7	73.5	12.6	13.9
Estonia	5495	20.2	52.1	26.1	80.7	9.6	9.7
Finland	4283	35.1	57.1	7.8	89.3	4.0	6.7
France	12645	13.7	38.1	47.7	74.5	25.0	0.5
Greece	9334	31.3	36.4	30.4	72.1	15.7	12.2
Hungary	6361	26.5	52.1	21.3	64.5	18.4	17.0
Iceland	2402	9.4	43.4	43.5	68.5	15.9	15.6
Ireland	7329	14.6	53.0	27.8	86.7	9.8	3.6
Italy	16087	32.5	45.0	21.9	79.7	15.3	4.9
Lithuania	9299	19.5	45.2	33.9	66.2	19.2	14.6
Montenegro	2434	17.8	52.7	26.0	70.9	13.6	15.5
Netherlands	10938	19.0	62.8	17.5	83.5	14.3	2.2
North Macedonia	4730	11.5	57.3	30.7	64.1	20.6	15.3
Norway	4521	6.3	46.9	44.5	79.5	12.9	7.6
Portugal	11200	21.6	41.5	35.9	63.3	24.3	12.4
Slovakia	6630	18.8	48.5	32.4	67.8	18.4	13.9
Slovenia	4621	29.5	39.1	31.3	81.3	15.6	3.1
Switzerland	9030	19.7	42.1	37.9	80.4	18.7	0.9
United Kingdom	19316	13.3	57.8	28.8	74.9	14.5	10.7

Note:

Based on ESS10 data from Contact Forms, edition 3.0.

Weekday (Monday through Friday) visits are categorised as 'morning' (before 12:00), 'afternoon' (between 12:00 and 17:00), 'evening' (between 17:00 and 21:00) or 'night'

^a N refers to the total number of unsolicited personal visits.

On average, the majority of visits by fieldwork agencies happen on workdays (74.5%). On workdays, households are least likely to be visited in the mornings. Only 9.7% of visits occur on Sundays.

Weekdays

The majority of workday visits occurred in Finland (89.3%); the fewest in Portugal (63.3%). In the median country, workday visits happened in 74.15% of the time.

Saturdays

The majority of Saturday visits occurred in France (25%); the fewest in Finland (4%). In the median country, Saturday visits happened in 15.65% of the time.

Sundays

The majority of Sunday visits occurred in Bulgaria (19.2%); the fewest in France (0.5%). In the median country, Sunday visits happened in 11.05% of the time.

Common patterns

Figure 6.4 depicts common occurrences of over- and underrepresented patterns.¹⁴ The most common pattern of observed visits consists of a relative over-representation of weekday mornings and afternoons. Conversely, households are less often frequented on weekends. Visiting schedules very often are subject to when knocking at a stranger’s door is seen appropriate in a Country.

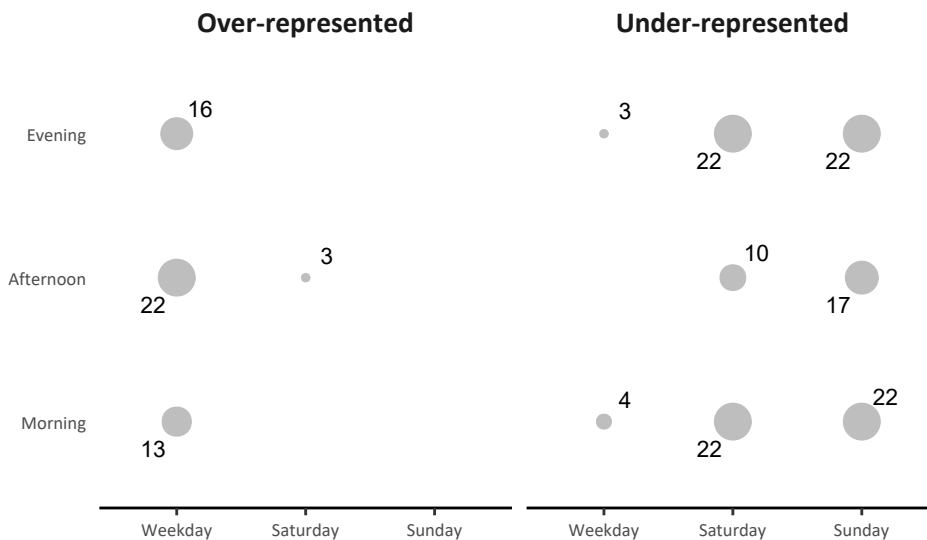


Figure 6.4 Statistical representation of contact patterns (numbers indicate number of countries with respective pattern) in Round 10
Based on ESS10 data from Contact Forms, edition 3.0.

¹⁴Weekday (Monday through Friday) visits are categorised as ‘morning’ (before 12:00), ‘afternoon’ (between 12:00 and 17:00), ‘evening’ (between 17:00 and 21:00) or ‘night’. Saturday and Sunday visits are considered overall. The observed frequency distribution is compared to the frequency distribution which we would expect if visits were uniformly spread over the week. Timing categories are identified as under- or overrepresented on the basis of a chi-squared test at significance level 0.05 and one degree of freedom.

6.3 RESPONSE ENHANCEMENT: INCENTIVES TO TARGET RESPONDENTS

Target respondents can be offered incentives, unconditionally and/or conditionally on cooperation. In all but two countries (Bulgaria and Hungary), incentives were offered. The particularities vary markedly. Table 6.5 presents an overview of the respondent incentives that were used. Six countries offered an unconditional, fourteen a conditional incentive of some sort; five countries offered a combination (see Table 6.5). A more detailed description of particular incentives for each country can be found in the National Technical Summaries in the in the ESS Country Documentation Report (ESS Data Archive, 2023) ¹⁵.

Table 6.5 Respondent incentives, ESS10

Country	Conditional		Unconditional		No incentives
	Monetary	Nonmone-tary	Monetary	Nonmone-tary	
Belgium		x			
Bulgaria					x
Croatia		x			
Czechia	x				
Estonia		x			
Finland		x		x	
France	x				
Greece	x				
Hungary					x
Iceland	x				
Ireland	x				
Italy		x			
Lithuania		x			
Montenegro				x	
Netherlands		x		x	
North Macedonia		x			
Norway		x		x	
Portugal		x			
Slovakia		x			
Slovenia		x			
Switzerland		x	x		
United Kingdom		x		x	

Note:

Based on ESS10 Data Documentation Report.

Other response-enhancing measures such as dedicated websites, follow-up letters, and free-of-charge

¹⁵Section 7.4 Use of respondent incentives

(helpdesk) telephone numbers etc. are also centrally recommended. Table 6.6 features the measures taken. A more detailed description of particular incentives for each country can be found in the National Technical Summaries in the ESS Country Documentation Report (ESS Data Archive, 2023) ¹⁶.

Table 6.6 *Response-enhancing measures, ESS10*

Country	Measure	Notes
Belgium		
Bulgaria		
Croatia	Call-center	
Czechia	Call-center; Web-pages	
Estonia	Call-center; Web-pages	additional information available
Finland	Web-pages	additional information available
France	Call-center; Web-pages	
Greece	Call-center; Web-pages	
Hungary		
Iceland	Call-center	
Ireland	Web-pages	
Italy	Call-center	
Lithuania		additional information available
Montenegro		
Netherlands	Call-center; Web-pages	additional information available
North Macedonia		
Norway		additional information available
Portugal		
Slovakia	Call-center; Web-pages	additional information available
Slovenia		
Switzerland	Call-center; Web-pages	additional information available
United Kingdom	Web-pages	

Note:

Based on ESS10 Data Documentation Report.

¹⁶Section 7.6 *Use of additional response enhancing measures*

6.4 OUTCOME RATES AND DETAILED RESPONSE BREAKDOWN

The rates of response, non-contact, refusal, and other-nonresponse achieved in Round 10 are presented in Table 6.7.¹⁷ A detailed breakdown of these rates by final outcome is presented in Table 6.8 and Table 6.9. The figures are discussed in the following subsections.

6.5 OUTCOME RATES

The ESS has traditionally targeted a response rate of 70% when feasible, or at least higher than the previous round if 70% is unrealistic (European Social Survey, 2018). However, no country has been able to reach this (for many countries quite ambitious) target. Looking at Table 6.7, the Round 10 response rates range between 20.9% (the United Kingdom) and 72.9% (Czechia). The median country achieved a response rate of 42.4%. A response rate of at least 50% was achieved in five countries, but it exceeds 60% only in three countries (Bulgaria, Czechia, and North Macedonia).

¹⁷Detailed final outcome or 'disposition' codes for all sample units are derived from the sequences of contact attempt outcome codes recorded by the interviewers and the case-level interview and contact form indicators in the integrated Contact Form data set. The response rate is defined as the number of complete and valid interviews relative to the number of issued eligible sample units.

$$RR = \frac{n_{complete}}{n_{gross} - n_{ineligible}}$$

with n_{gross} the total number of issued sample units, $n_{ineligible}$ the total number of ineligible sample units, identified by the final outcome codes 43 'Deceased', 51 'Moved out of country', 61 'Derelict or demolished house', 62 'House not yet built, not ready for occupation', 63 'House not occupied', 64 'Address not residential: business', 65 'Address not residential: institution', and 67 'Other ineligible', and $n_{complete}$ the number of complete and valid interviews, identified by the final outcome code 10 'Complete and valid interview'. The non-contact and refusal rates are similarly defined as the relative number of non-contacts and refusals, respectively.

$$NCON = \frac{n_{non-contact}}{n_{gross} - n_{ineligible}}$$

$$REF = \frac{n_{refusal}}{n_{gross} - n_{ineligible}}$$

with $n_{non-contact}$ the number of non-contacts, identified by the final outcome code 20 'Non-contact', and $n_{refusal}$ the total number of refusals, identified by the final outcome code 30 'Refusal because of opt-out list', 32 'Respondent refusal', 33 'Proxy refusal', 34 'Household refusal, before selection'.

These outcome rates are in line with the AAPOR (2016) definitions $RR1$, $CON1$ and $REF1$. Although rarely formally assessed, residual nonresponse can be considerable, which cannot be attributed to either non-contact or refusal. It is, therefore, useful to consider both its magnitude and its diverse composition. We, therefore, define the 'other-nonresponse rate' in line with the other outcome rates as the relative number of other non-respondents.

$$OTH = \frac{n_{other}}{n_{gross} - n_{ineligible}}$$

with n_{other} the number of sample units not elsewhere categorised: those that could not be contacted (52 'Moved to unknown destination', 53 'Moved, still in country', and 54 'Address not traceable'), those that were contacted but were unable to participate (41 'Not available, away', 42 'Mentally/physically unable/ill/sick, short term', 46 'Mentally/physically unable/ill/sick, long term', 44 'Language barrier') or otherwise did not participate (31 'Broken appointment' and 45 'Contact but no interview, other'), those for which an interview was administered that either was not complete or was invalidated (11 'Partial interview' and 12 'Invalid interview'), and those for which no final outcome code could be derived (0 'No contact form' and 99 'Undefined').

Table 6.7 Outcome rates, ESS10

Country	Rate (%)				Gross sample size	Eligible sample size
	Response	Non-contact	Refusal	Other non-response		
Belgium	39.2	4.4	38.9	17.5	3531	3422
Bulgaria	72.5	6.8	17.8	3.0	3848	3751
Croatia	43.1	0.7	37.9	18.3	3940	3697
Czechia	72.9	0.0	27.1	0.0	3402	3400
Estonia	47.2	4.5	34.6	13.7	3300	3270
Finland	41.1	11.1	30.7	17.2	3900	3841
France	39.6	4.7	35.9	19.8	5286	4992
Greece	49.6	1.6	41.4	7.4	5875	5827
Hungary	39.7	1.5	44.4	14.4	4775	4578
Iceland	33.5	7.5	36.5	22.5	2758	2688
Ireland	36.3	30.0	25.6	8.1	5000	4875
Italy	49.8	7.6	23.6	19.0	5461	5297
Lithuania	35.6	18.3	37.4	8.7	5830	4659
Montenegro	57.9	1.3	23.6	17.3	2250	2202
Netherlands	35.7	2.4	48.1	13.8	4187	4114
North Macedonia	60.3	3.8	28.1	7.8	2604	2370
Norway	37.5	1.1	37.2	24.2	3880	3764
Portugal	41.7	9.6	34.5	14.2	5254	4404
Slovakia	44.3	9.6	42.5	3.6	3258	3198
Slovenia	54.5	2.9	25.5	17.0	2400	2288
Switzerland	49.5	7.6	25.9	17.0	3102	3074
United Kingdom	20.9	12.2	47.7	19.2	5885	5504

Note:

Based on ESS10 data from Contact Forms, edition 3.0.

6.6 CAUSES OF NONRESPONSE

Nonresponse is mainly caused by people (target respondents or other household members on behalf of target respondents) refusing to participate. In all countries except Ireland, the relative number of refusals exceeds both the relative number of non-contacts and the relative number of other nonrespondents. The refusal rate ranges between 17.8% (Bulgaria) and 48.1% (the Netherlands), with ten countries falling within the inter-quartile range (26.2% – 38.6%). The median country had a refusal rate of 35.2%.

6.6.1 Refusal

‘Respondent refusal’ is the main type of final refusal (median = 20.9%). ‘Refusal because of opt-out list’ happens rarely as final outcome. Opt-out lists are a cause of nonresponse only in Czechia and Estonia.

6.6.2 Non-contact

The ESS Specification requires that contact is established with at least 97% of all sample units. In all countries except Ireland, non-contact is the smallest nonresponse component. It ranges between 0% (Czechia) and 30% (Ireland) of the eligible sample. The median country achieved a non-contact rate of 4.6%. Countries in the lowest quartile (Croatia, Czechia, Greece, Hungary, Montenegro, and Norway) achieved a non-contact rate of less than 1.8%; those in the highest quartile (Finland, Ireland, Lithuania, Portugal, Slovakia, and the United Kingdom) one higher than 9.1%.

Table 6.8 Detailed response breakdown (part 1), ESS10

Country	Non-contact (%)		Refusal (%)			N ^a
	20	30	32	33	34	
Belgium	4.3	0.0	34.5	2.9	0.3	3422
Bulgaria	6.7	0.0	12.7	1.4	3.2	3751
Croatia	0.7	0.0	11.8	0.0	23.8	3697
Czechia	0.0	27.1	0.0	0.0	0.0	3400
Estonia	4.5	4.5	28.7	1.2	0.0	3270
Finland	10.9	0.0	28.6	1.3	0.4	3841
France	4.5	0.0	31.8	1.6	0.5	4992
Greece	1.6	0.0	16.3	7.1	17.6	5827
Hungary	1.5	0.0	37.7	3.9	0.9	4578
Iceland	7.3	0.0	33.9	1.2	0.4	2688
Ireland	29.3	0.0	17.0	1.7	6.2	4875
Italy	7.4	0.0	16.5	5.2	1.2	5297
Lithuania	14.6	0.0	8.4	1.8	19.6	4659
Montenegro	1.3	0.0	22.8	0.0	0.3	2202
Netherlands	2.4	0.0	40.4	6.4	0.5	4114
North Macedonia	3.5	0.0	9.1	8.7	7.7	2370
Norway	1.0	0.0	34.4	1.6	0.1	3764
Portugal	8.0	0.0	4.8	2.2	21.9	4404
Slovakia	9.5	0.0	18.9	3.4	19.4	3198
Slovenia	2.8	0.0	19.9	4.2	0.1	2288
Switzerland	7.5	0.0	22.0	2.5	1.2	3074
United Kingdom	11.4	0.0	26.5	4.3	13.7	5504

Note:

Based on ESS10 data from Contact Forms, edition 3.0.

20 'Non-contact'; 30 'Refusal because of opt-out list'; 32 'Respondent refusal'; 33 'Proxy refusal'; 34 'Household refusal, before selection'

^a N refers to the total eligible sample size.

Table 6.9 Detailed response breakdown (part 2), ESS10

Country	Not able and other nonresponse (%)											Undefined (%)		N ^a
	11	12	31	41	42	44	45	46	52	53	54	88	0	
Belgium	0.0	0.1	1.1	1.4	0.2	3.3	1.6	4.0	3.2	1.6	0.5	0.1	0.0	3422
Bulgaria	0.5	0.2	0.2	0.3	0.0	0.1	0.3	0.4	0.4	0.4	0.1	0.1	0.0	3751
Croatia	0.0	0.1	0.4	0.0	0.0	0.0	1.1	2.3	0.1	6.7	6.5	0.0	0.0	3697
Czechia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3400
Estonia	0.0	0.2	2.2	2.7	0.6	0.5	3.7	0.9	0.1	0.5	0.0	2.1	0.0	3270
Finland	0.1	0.0	0.5	2.0	0.1	2.1	7.8	3.9	0.1	0.2	0.1	0.0	0.0	3841
France	0.0	0.0	0.9	4.4	0.3	1.4	1.1	3.1	1.5	4.8	1.2	0.1	0.0	4992
Greece	0.3	0.0	0.0	0.9	0.1	0.4	0.1	0.8	0.2	0.1	0.1	1.1	3.0	5827
Hungary	0.7	4.3	0.1	0.6	0.0	0.6	0.6	1.0	3.9	0.2	0.3	0.3	1.2	4578
Iceland	0.1	0.1	1.1	1.8	0.3	3.6	8.3	1.6	4.0	1.0	0.1	0.0	0.0	2688
Ireland	0.0	0.0	1.7	2.2	0.3	1.0	1.6	0.9	0.1	0.1	0.1	0.0	0.0	4875
Italy	0.0	4.8	1.3	3.6	0.3	0.4	2.7	1.8	1.6	0.8	1.1	0.1	0.0	5297
Lithuania	0.4	0.1	0.3	0.2	0.1	0.3	0.9	0.8	0.1	0.1	3.8	0.0	0.0	4659
Montenegro	0.2	2.8	0.0	0.1	0.0	0.0	0.4	0.2	0.0	0.0	4.6	8.6	0.0	2202
Netherlands	0.1	0.2	0.2	1.5	0.4	3.5	2.0	3.4	1.4	0.8	0.0	0.0	0.0	4114
North Macedonia	0.0	3.6	0.5	0.3	0.1	0.0	0.7	0.5	0.2	0.1	0.7	0.3	0.1	2370
Norway	0.3	0.0	0.3	0.7	0.2	5.1	9.7	4.6	0.7	1.8	0.2	0.0	0.0	3764
Portugal	0.2	0.0	0.8	0.1	0.0	0.6	0.3	0.7	0.1	0.0	9.2	0.0	0.0	4404
Slovakia	0.0	0.0	0.7	0.9	0.0	0.0	0.4	0.5	0.1	0.4	0.4	0.1	0.0	3198
Slovenia	0.2	0.0	2.8	2.4	0.8	0.8	0.9	2.7	3.9	1.3	0.4	0.1	0.0	2288
Switzerland	0.2	0.3	5.3	0.7	0.2	3.1	0.0	2.3	4.2	0.3	0.0	0.3	0.0	3074
United Kingdom	0.0	0.2	2.3	2.7	0.5	0.7	5.5	2.5	0.1	0.0	0.2	0.4	3.0	5504

Note:

Based on ESS10 data from Contact Forms, edition 3.0.

11 'Partial interview'; 12 'Invalid interview'; 31 'Broken appointment'; 41 'Not available, away'; 42 'Mentally/physically unable/ill/sick, short term'; 44 'Language barrier'; 45 'Contact but no interview, other'; 46 'Mentally/physically unable/ill/sick, long term'; 52 'Moved to unknown destination'; 53 'Moved, still in country'; 54 'Address not traceable'; 88 'Undefined'; 0 'No contact form'

^a N refers to the total eligible sample size.

6.6.3 Other nonresponse

Residual nonresponse, which cannot be attributed to either non-contact or refusal is subsumed under 'Other nonresponse'. Table 6.9 breaks down the outcome codes of this comprehensive nonresponse category. Values range between 0% (Czechia) and 24.2% (Norway). It has a diverse composition. The 'Other nonresponse' categories used in Round 10 are 'Partial interview'; 'Invalid interview'; 'Broken appointment'; 'Not available, away'; 'Mentally/physically unable/ill/sick, short term'; 'Language barrier'; 'Contact but no interview, other'; 'Mentally/physically unable/ill/sick, long term'; 'Moved to unknown destination'; 'Moved, still in country'; 'Address not traceable'; 'Undefined'; and 'No contact form'. Due to often rather small values, the following description will evaluate outstanding results.

Overall, eight countries (Croatia, Finland, Iceland, Montenegro, Norway, Portugal, Switzerland, and United Kingdom) faced rates above 5%. The affected categories are 'Broken appointment'; 'Language barrier'; 'Contact but no interview, other'; 'Moved, still in country'; 'Address not traceable'; and 'Undefined'.

The top five categories contributing on average the most to this round's other-nonresponse rates are 'Contact but no interview, other' (45, mean = 2.26); 'Mentally/physically unable/ill/sick, long term' (46, mean = 1.76); 'Not available, away' (41, mean = 1.34); 'Address not traceable' (54, mean = 1.34); and 'Language barrier' (44, mean = 1.26).

In seven countries (Belgium, Finland, France, Iceland, Netherlands, Norway, and Switzerland), 'Language barrier' is the assumed reason for nonresponse for more than one percent of the sample, ranging between 1.4% (France) and 5.1% (Norway). Although generally modest in numbers, language barriers have been identified as a particularly concerning source of nonresponse bias in the European Social Survey (Beullens, Loosveldt, Vandenplas, & Stoop, 2017). Since traditional approaches to response enhancement such as stricter and more tailored contact procedures are of little use when people are not sufficiently fluent in (any of) the available questionnaire language(s), language barriers are also a particularly challenging source of nonresponse to mitigate. One or more additional interview languages would have to be supported. In Round 10, a localised Polish questionnaire was produced in Iceland in an effort to reduce nonresponse related to language barriers, but the efforts resulted in ambiguous success as the nonresponse rate for this category remains at 3.6%.

Nonresponse due to not being able to track a respondent down ('Moved to unknown destination' [52]; 'Moved, still in country' [53]; and 'Address not traceable' [54]) contributes more than one percent to the outcome in the respective sample in fourteen countries (Belgium, Croatia, France, Hungary, Iceland, Italy, Lithuania, Montenegro, Netherlands, North Macedonia, Norway, Portugal, Slovenia, and Switzerland), ranging between 1.04% (North Macedonia) and 13.27% (Croatia). At the same time, in Bulgaria, Czechia, Estonia, Finland, Greece, Ireland, Slovakia, and United Kingdom nearly all cases could be located.

6.7 NONRESPONSE BIAS

Even if nonresponse is random and the (unobserved) response distribution for the substantive items in the ESS questionnaire for nonrespondents would have been similar to the (observed) response distribution for respondents, nonresponse is an issue for data quality in terms of loss of precision in survey estimates. Nonresponse introducing systematic differences between nonrespondents and

respondents resulting in biased survey estimates is concerning. Given that survey data for nonrespondents are naturally missing, auxiliary data available for nonrespondents and respondents can be leveraged to make assumptions about the similarity of these two groups of respondents, thereby, assessing the impact of the bias introduced.

The first source of auxiliary data in the European Social Survey is the Neighbourhood Characteristics Form, which is part of the standard ESS Contact Form since Round 1.

The form has to be completed by the interviewer visiting the address for all eligible sample units with three obvious exceptions: the target respondents are listed on an opt-out list, the target respondents have moved to an unknown destination, or their addresses are untraceable.

On the one side, the collected auxiliary information is accessible case-level data on all eligible sample units—(most) nonrespondents and respondents—across participating countries. On the other side, the auxiliary information is limited to directly and reliably observable characteristics by interviewers in the field.

An additional source of auxiliary data for countries with register-based samples is the population register from which the sample is drawn. Since Round 6, the age and gender of each person in the gross sample are to be appended to the Contact Form data set for ESS countries with register-based samples (Belgium, Estonia, Finland, Hungary, Iceland, Italy, Netherlands, Norway, Slovenia, and Switzerland). Thus, highly reliable auxiliary data is directly available for all sample units for these countries. The key disadvantage is that this auxiliary information is limited to characteristics typically recorded in the register.

A statistic that summarizes the differences between respondents and nonrespondents in all available auxiliary variables, is the standardized average bias.^{footnote}For each auxiliary variable x , the absolute standardised contrast and the absolute standardised bias are computed as follows:

$$contrast(x) = \left| \frac{\bar{x}_R - \bar{x}_{NR}}{s} \right|$$

with \bar{x} the respondent mean, \bar{x}_{NR} the nonrespondent mean and s the full-sample standard error.

The bias is, by definition, equal to the product of the contrast between respondents and nonrespondents, and the nonresponse rate ($1 - RR$):

$$bias(x) = contrast(x) \times (1 - RR) = \left| \frac{\bar{x}_R - \bar{x}}{s} \right|$$

with \bar{x}_R the respondent mean, \bar{x} the full-sample mean, and s the full-sample standard error.]

The risk of nonresponse bias is assessed based on both auxiliary data sources in the following subsections.

6.7.1 Differences of respondents and nonrespondents on the basis of the Neighbourhood Characteristics Form

The first assessment draws on the auxiliary data collected by the interviewers via the Neighbourhood Characteristics Form. In Round 10, this auxiliary data is available for all countries except Norway. The analytic sample consists of all eligible cases (excluding the three nonrespondents categories

mentioned above) for which the complete Neighbourhood Characteristics Form was filled out. The following measures were derived¹⁸:

- whether the dwelling is a detached house or an apartment/ a multi-unit building
- whether there is an entry phone system, a locked gate or door, both or neither before reaching the target respondent's individual door
- the overall physical condition of the building (rated on a five-point scale from 'Very good' to 'Very bad')
- the amount of litter and rubbish in the immediate vicinity (rated on a four-point scale from 'Very large amount' to 'None or almost none')
- the amount of vandalism and graffiti in the immediate vicinity (rated on a four-point scale from 'Very large amount' to 'None or almost none').

For each of these auxiliary variables, the respondent mean, the nonrespondent mean and the mean for the full analytic eligible gross sample for all countries are presented in Tables 6.10, 6.11, and 6.12, respectively.

¹⁸Note that the variables also contained additional categories, for example, the type of dwelling being a trailer. Therefore, these are generally very small in numbers and can be safely excluded. Consequently, the total eligible sample size would also vary slightly across variables. For simplicity's sake, we report only the full eligible sample size of the selected categories.

Table 6.10 Respondent, nonrespondent and full-sample proportion for Neighbourhood Characteristics Form auxiliary variables, ESS10

Country	Detached house (%)			Apartment (%)			N ^a
	Nonresp.	Resp.	All	Nonresp.	Resp.	All	
Belgium	41.9	33.3	75.2	16.3	8.5	24.8	3422
Bulgaria	12.3	36.4	48.7	13.6	37.7	51.3	3751
Croatia	37.5	36.4	73.9	15.1	11.0	26.1	3697
Czechia		55.1	55.1		44.9	44.9	3400
Estonia	18.7	19.2	37.9	33.8	28.3	62.1	3270
Finland	32.9	28.4	61.4	23.7	15.0	38.6	3841
France	35.3	29.8	65.2	23.1	11.7	34.8	4992
Greece	25.0	26.6	51.6	23.7	24.6	48.4	5827
Hungary	47.5	34.5	82.0	11.6	6.4	18.0	4578
Iceland	27.4	25.5	52.9	29.5	17.6	47.1	2688
Ireland	55.6	37.0	92.6	5.7	1.7	7.4	4875
Italy	24.1	24.7	48.8	25.8	25.4	51.2	5297
Lithuania	24.4	17.5	41.9	38.1	20.0	58.1	4659
Montenegro	27.8	51.4	79.2	10.5	10.2	20.8	2202
Netherlands	45.1	28.7	73.8	18.1	8.1	26.2	4114
North Macedonia	24.8	52.5	77.3	12.8	9.9	22.7	2370
Norway							3764
Portugal	20.7	26.7	47.4	33.5	19.0	52.6	4404
Slovakia	31.4	32.6	64.0	23.9	12.1	36.0	3198
Slovenia	27.5	43.9	71.4	15.9	12.7	28.6	2288
Switzerland	17.0	23.2	40.2	31.9	28.0	59.8	3074
United Kingdom	60.1	19.4	79.6	17.0	3.4	20.4	5504

Note:

Czechia: The Contact Form data for Czechia does not contain any information on non-contacts. The data suggests that interviewers could make contact with all eligible cases.

Based on ESS10 data from Contact Forms, edition 3.0.

^a N refers to all eligible cases not categorised as final 'Refusal because of opt-out list' (code 30), 'Moved to unknown destination' (code 52) or 'Address not traceable' (code 54) and for which the Neighbourhood Characteristics Form was completed.

Table 6.11 Respondent, nonrespondent and full-sample proportion for Neighbourhood Characteristics Form auxiliary variables, ESS10

Country	Entry phone (%)			Locked entrance (%)			Both (%)			None (%)			N ^a
	Nonresp.	Resp.	All	Nonresp.	Resp.	All	Nonresp.	Resp.	All	Nonresp.	Resp.	All	
Belgium	11.4	6.1	17.4	4.5	3.6	8.1	9.9	5.5	15.3	32.7	26.5	59.1	3422
Bulgaria	0.5	3.6	4.1	13.0	35.6	48.6	8.2	18.1	26.3	4.3	16.7	21.0	3751
Croatia	10.0	7.4	17.4	13.1	12.0	25.1	7.2	5.8	13.0	22.4	22.2	44.5	3697
Czechia		70.0	70.0		14.8	14.8		14.5	14.5		0.6	0.6	3400
Estonia	9.5	11.5	21.0	17.9	14.3	32.2	17.8	13.8	31.6	6.3	8.8	15.1	3270
Finland	2.3	1.9	4.2	13.1	7.8	20.9	6.0	4.1	10.1	35.2	29.6	64.8	3841
France	16.1	10.1	26.2	4.6	2.2	6.8	7.8	3.7	11.5	30.0	25.5	55.4	4992
Greece	17.2	19.4	36.7	13.8	13.2	27.0	9.3	8.4	17.7	8.5	10.1	18.6	5827
Hungary	3.6	2.0	5.7	37.5	25.9	63.4	11.9	6.9	18.8	6.3	5.8	12.1	4578
Iceland	4.0	3.0	7.0	10.7	7.2	17.9	18.2	13.1	31.3	23.8	20.1	43.9	2688
Ireland	5.5	2.7	8.1	5.0	1.3	6.4	3.7	0.8	4.5	47.3	33.7	81.0	4875
Italy	8.1	10.5	18.6	7.6	7.4	15.0	31.6	30.3	61.9	2.6	1.9	4.5	5297
Lithuania	22.6	9.1	31.6	12.9	6.7	19.6	4.5	3.0	7.5	22.4	18.9	41.3	4659
Montenegro	6.6	7.1	13.7	14.3	27.7	42.0	5.3	4.9	10.2	13.4	20.7	34.1	2202
Netherlands	11.7	5.3	16.9	0.9	0.4	1.3	3.7	1.6	5.3	46.9	29.6	76.5	4114
North Macedonia	2.6	1.5	4.1	14.8	21.8	36.5	5.1	2.3	7.4	15.3	36.6	51.9	2370
Norway													3764
Portugal	20.8	13.3	34.1	8.5	12.0	20.5	19.5	11.8	31.3	5.4	8.7	14.1	4404
Slovakia	5.7	5.8	11.5	21.6	20.3	41.9	24.3	11.1	35.4	3.6	7.5	11.1	3198
Slovenia	4.6	5.8	10.4	12.1	17.9	30.0	12.2	10.3	22.5	14.9	22.2	37.1	2288
Switzerland	4.5	4.1	8.6	12.8	16.6	29.4	21.5	17.6	39.0	10.2	12.7	22.9	3074
United Kingdom	5.8	0.9	6.6	3.0	0.7	3.7	8.1	1.5	9.7	60.5	19.5	80.0	5504

Note:

Czechia: The Contact Form data for Czechia does not contain any information on non-contacts. The data suggests that interviewers could make contact with all eligible cases.

Based on ESS10 data from Contact Forms, edition 3.0.

^a N refers to all eligible cases not categorised as final 'Refusal because of opt-out list' (code 30), 'Moved to unknown destination' (code 52) or 'Address not traceable' (code 54) and for which the Neighbourhood Characteristics Form was completed.

Table 6.12 Respondent and nonrespondent full-sample averages for Neighbourhood Characteristics Form auxiliary variables and average standardized contrast over all auxiliary variables, ESS10

Country	Physical condition			Litter and rubbish			Vandalism and graffiti			N ^a
	Nonresp.	Resp.	All	Nonresp.	Resp.	All	Nonresp.	Resp.	All	
Belgium	2.0	1.9	1.9	3.8	3.8	3.8	3.9	3.9	3.9	3422
Bulgaria	2.4	2.1	2.2	3.4	3.5	3.5	3.7	3.7	3.7	3751
Croatia	1.9	1.9	1.9	3.8	3.8	3.8	3.9	3.8	3.9	3697
Czechia		1.9	1.9		3.6	3.6		3.6	3.6	3400
Estonia	2.3	2.1	2.2	3.8	3.8	3.8	3.9	3.9	3.9	3270
Finland	2.1	2.0	2.0	3.9	3.9	3.9	4.0	4.0	4.0	3841
France	1.9	1.8	1.9	3.8	3.9	3.8	3.9	3.9	3.9	4992
Greece	2.1	2.0	2.0	3.8	3.8	3.8	3.9	3.9	3.9	5827
Hungary	2.2	2.2	2.2	3.8	3.7	3.7	3.9	3.9	3.9	4578
Iceland	2.1	1.8	2.0	3.7	3.8	3.8	3.8	3.9	3.8	2688
Ireland	1.7	1.6	1.7	3.8	3.8	3.8	3.9	3.9	3.9	4875
Italy	2.3	2.2	2.3	3.8	3.8	3.8	3.8	3.8	3.8	5297
Lithuania	2.2	2.2	2.2	3.8	3.7	3.7	3.9	3.9	3.9	4659
Montenegro	2.3	2.1	2.2	3.5	3.6	3.6	3.7	3.8	3.7	2202
Netherlands	2.0	1.9	2.0	3.8	3.8	3.8	3.9	3.9	3.9	4114
North Macedonia	2.2	2.2	2.2	3.6	3.6	3.6	3.8	3.9	3.8	2370
Norway										3764
Portugal	2.1	2.2	2.2	3.9	3.9	3.9	3.9	3.9	3.9	4404
Slovakia	1.9	1.9	1.9	3.8	3.8	3.8	3.9	3.9	3.9	3198
Slovenia	2.1	2.0	2.0	3.8	3.9	3.9	3.9	3.9	3.9	2288
Switzerland	2.2	2.1	2.1	3.8	3.8	3.8	3.9	3.9	3.9	3074
United Kingdom	2.2	1.9	2.1	3.7	3.8	3.7	3.9	3.9	3.9	5504

Note:

Czechia: The Contact Form data for Czechia does not contain any information on non-contacts. The data suggests that interviewers could make contact with all eligible cases.

Based on ESS10 data from Contact Forms, edition 3.0.

^a N refers to all eligible cases not categorised as final 'Refusal because of opt-out list' (code 30), 'Moved to unknown destination' (code 52) or 'Address not traceable' (code 54) and for which the Neighbourhood Characteristics Form was completed.

To show each variable's contribution to the average bias, Table 6.13 exhibits the respective absolute standardized bias. As these values constitute t-statistics, a value above or equal to 1.96 can be considered statistically significant. While neither the type of housing nor the type of access control demonstrate any significant effects, those of the perceived neighbourhood conditions do. In all countries at least one such significant value can be found.

At this point, a *word of caution* is necessary to contextualize the findings for the used auxiliary variables: (1) Interviewers evaluate subjectively the level of the building's physical condition, the amount of litter, or vandalism in the immediate vicinity. Although concrete instructions are provided in the ESS Round 10 Interviewer Manual, including guidelines on what to consider as "litter" and the extent of the "immediate vicinity" (approximately fifteen meters on each side of the building), this subjective assessment might still affect the measurements' validity. (2) This analysis did not take the multi-level structure of the data into consideration where observations are nested within interviewers. A multi-level data structure usually leads to underestimated standard errors if not modelled correctly. As a result, statistical significance might be overstated. This problem is exacerbated the more the mea-

surement is affected by an interviewer's subjective judgement. There will be less variance among interviewers on the question of whether a dwelling is a detached house or whether it features an entry-phone than on whether the dwelling's immediate vicinity is littered. Furthermore, the statistical power of the samples is so large that even small differences will appear highly significant.¹⁹ Therefore, we advocate to only assess the aggregated averages over these variables and even then interpret significant values with caution.

¹⁹A power analysis finds that a difference test of means with a sample size of $N = 3500$, a two-sided significance level of 0.05 and a power of 0.8 would already identify effect sizes (Cohen's d) above 0.047 as significant. To exemplify this, with an average standard deviation of 20 years in age as in this sample, a mean difference of only one year would equal that effect size.

Table 6.13 Respondent and nonrespondent full-sample averages for Neighbourhood Characteristics Form auxiliary variables and average standardized contrast over all auxiliary variables, ESS10

Country	Bias for ...							Physi- cal cond.	Litter	Vandal- ism	Avg. Bias ^a	N ^b
	Det. house	Appart- ment	Entry- phone	Lock	Both	None						
Belgium	1.0	0.7	0.6	0.3	0.5	0.9	4.6	3.0	1.2	1.4	3422	
Bulgaria	0.4	0.4	0.1	0.4	0.3	0.2	4.5	3.5	1.7	1.3	3751	
Croatia	0.9	0.6	0.5	0.5	0.4	0.7	2.4	2.7	3.6	1.4	3697	
Czechia											3400	
Estonia	0.6	0.9	0.4	0.6	0.6	0.3	5.7	3.0	2.4	1.6	3270	
Finland	0.8	0.8	0.2	0.6	0.4	0.9	6.0	2.8	3.2	1.7	3841	
France	0.9	0.8	0.6	0.4	0.5	0.8	4.6	3.8	4.3	1.9	4992	
Greece	0.7	0.7	0.6	0.5	0.4	0.4	3.5	4.0	2.1	1.4	5827	
Hungary	1.1	0.6	0.3	1.0	0.6	0.4	1.7	2.5	1.9	1.1	4578	
Iceland	0.8	0.9	0.3	0.5	0.7	0.7	10.2	2.9	4.7	2.4	2688	
Ireland	1.2	0.5	0.4	0.5	0.5	1.1	7.5	0.7	0.1	1.4	4875	
Italy	0.7	0.7	0.4	0.4	0.8	0.2	3.9	1.0	1.7	1.1	5297	
Lithuania	0.8	1.1	0.9	0.6	0.3	0.7	2.4	6.9	1.0	1.6	4659	
Montenegro	0.7	0.5	0.4	0.5	0.3	0.5	4.3	2.1	4.2	1.5	2202	
Netherlands	1.1	0.8	0.6	0.2	0.3	1.1	6.1	6.1	3.2	2.2	4114	
North Macedonia	0.6	0.5	0.3	0.5	0.4	0.5	0.4	0.8	5.3	1.0	2370	
Norway											3764	
Portugal	0.6	1.0	0.7	0.4	0.7	0.3	6.5	3.7	0.1	1.5	4404	
Slovakia	0.8	0.8	0.3	0.7	0.9	0.2	1.9	4.4	2.9	1.4	3198	
Slovenia	0.7	0.6	0.3	0.5	0.5	0.5	3.4	3.5	1.6	1.3	2288	
Switzerland	0.5	0.8	0.3	0.5	0.7	0.4	3.6	2.3	1.7	1.2	3074	
United Kingdom	1.6	1.0	0.7	0.4	0.7	1.6	17.7	10.1	8.4	4.7	5504	

Note:

Statistically significant values are highlighted. However, their true value will be smaller due to the multi-level structure of the underlying data, which is not considered in this representation.

^a The values represent the average over all single absolute standardized bias.

^b N refers to all eligible cases not categorised as final 'Refusal because of opt-out list' (code 30), 'Moved to unknown destination' (code 52) or 'Address not traceable' (code 54) and for which the Neighbourhood Characteristics Form was completed.

For ease of comparison across countries, Figure 6.5 shows the country-level average bias over the five Neighbourhood Characteristics Form auxiliary variables, against the achieved response rates. We observe cross-national variation in the average bias as well as in the achieved response rates. Overall, the risk of bias according to the discussed set of auxiliary data is lower in high-response rate countries ($r = -0.657, p = 0.002$).

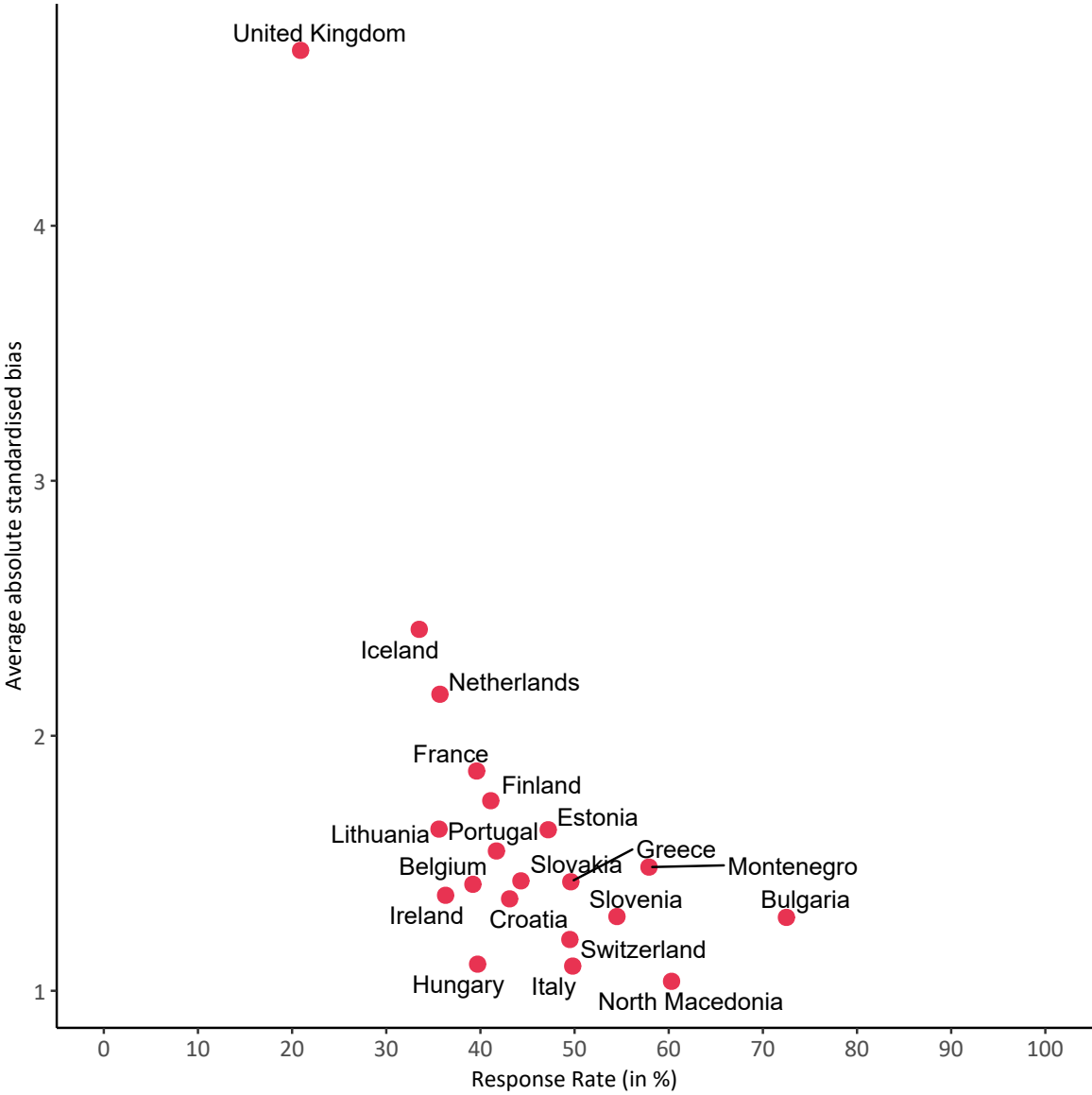


Figure 6.5 Average absolute standardised bias for Neighbourhood Characteristics Form auxiliary variables versus response rate, ESS 10
Based on ESS10 data from Contact Forms, edition 3.0.

Table 6.14 Respondent, nonrespondent and full-sample mean/proportion for register-based auxiliary variables, ESS10

Country	Age				Female (%)				Avg. Bias	N ^a
	Nonresp.	Resp.	All	Bias	Nonresp.	Resp.	All	Bias		
Belgium	47.9	48.2	48.0	0.5	52.1	49.9	51.3	3.2	1.9	3422
Croatia	50.8	49.4	50.2	2.6	48.2	54.7	51.0	9.1	5.8	3697
Estonia	47.3	51.4	49.3	6	52.8	55.1	53.9	2.5	4.3	3270
Finland	47.7	52.3	49.6	8.3	51.5	51.0	51.3	0.7	4.5	3841
France	50.0	49.5	49.8	1	53.4	51.9	52.8	2.4	1.7	4992
Hungary	52.2	50.3	50.4	0.4	46.5	62.2	52.7	25.7	13.1	4578
Iceland	43.5	49.3	45.4	10.5	47.5	51.8	49.0	6	8.2	2688
Italy	53.1	50.7	51.9	4.5	47.6	52.7	50.1	7.4	5.9	5297
Netherlands	48.9	48.0	48.6	2	52.0	49.0	50.9	5	3.5	4114
Slovenia	49.3	48.9	49.1	0.4	45.0	52.8	49.3	6.8	3.6	2288
Switzerland	49.3	49.3	49.3	0.1	51.1	48.5	49.8	2.9	1.5	3074

Note:

Based on ESS10 data from Contact Forms, edition 3.0.

^a N refers to all eligible cases not categorised as final 'Refusal because of opt-out list' (code 30), 'Moved to unknown destination' (code 52) or 'Address not traceable' (code 54) and for which the Neighbourhood Characteristics Form was completed.

6.7.2 Differences of respondents and nonrespondents on the basis of register data

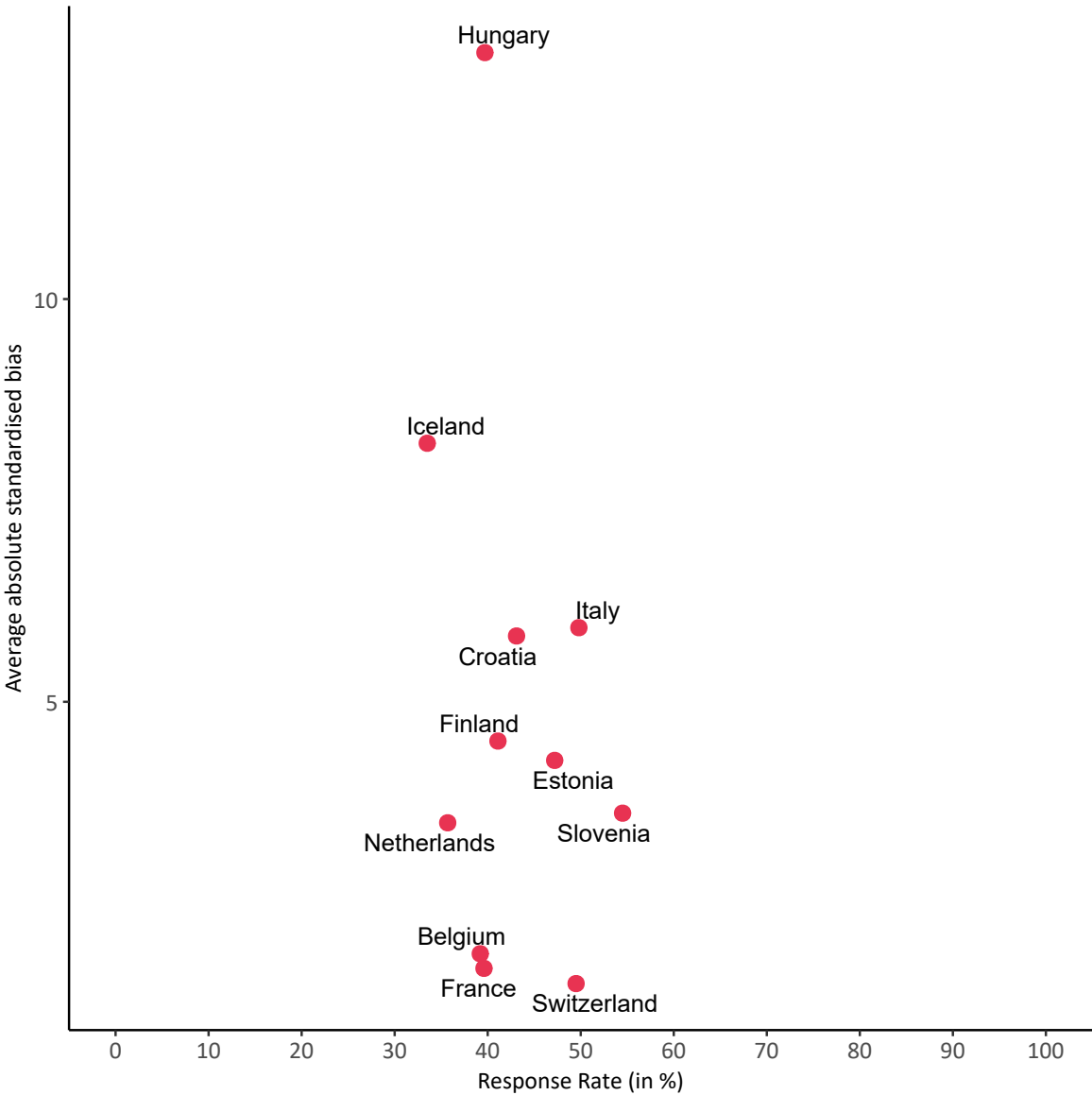


Figure 6.6 Average absolute standardised bias for Neighbourhood Characteristics Form auxiliary variables versus response rate, ESS 10
 Based on ESS10 data from Contact Forms, edition 3.0.

The second assessment of nonresponse bias draws on the auxiliary data provided by the national teams from the population register. In Round 10, this auxiliary data is (partially) available for 11 countries (Belgium, Croatia, Estonia, Finland, France, Hungary, Iceland, Italy, the Netherlands, Slovenia, and Switzerland). Again, the analytic sample consists of all eligible cases (excluding target respondents on an opt-out list) for which age and gender are properly available.

Table 6.14 comprises the respondent mean, the nonrespondent mean, the mean for the entire analytic eligible gross sample for both auxiliary variables. Additionally, the variable-specific standardized absolute bias estimates and an aggregated average are presented.

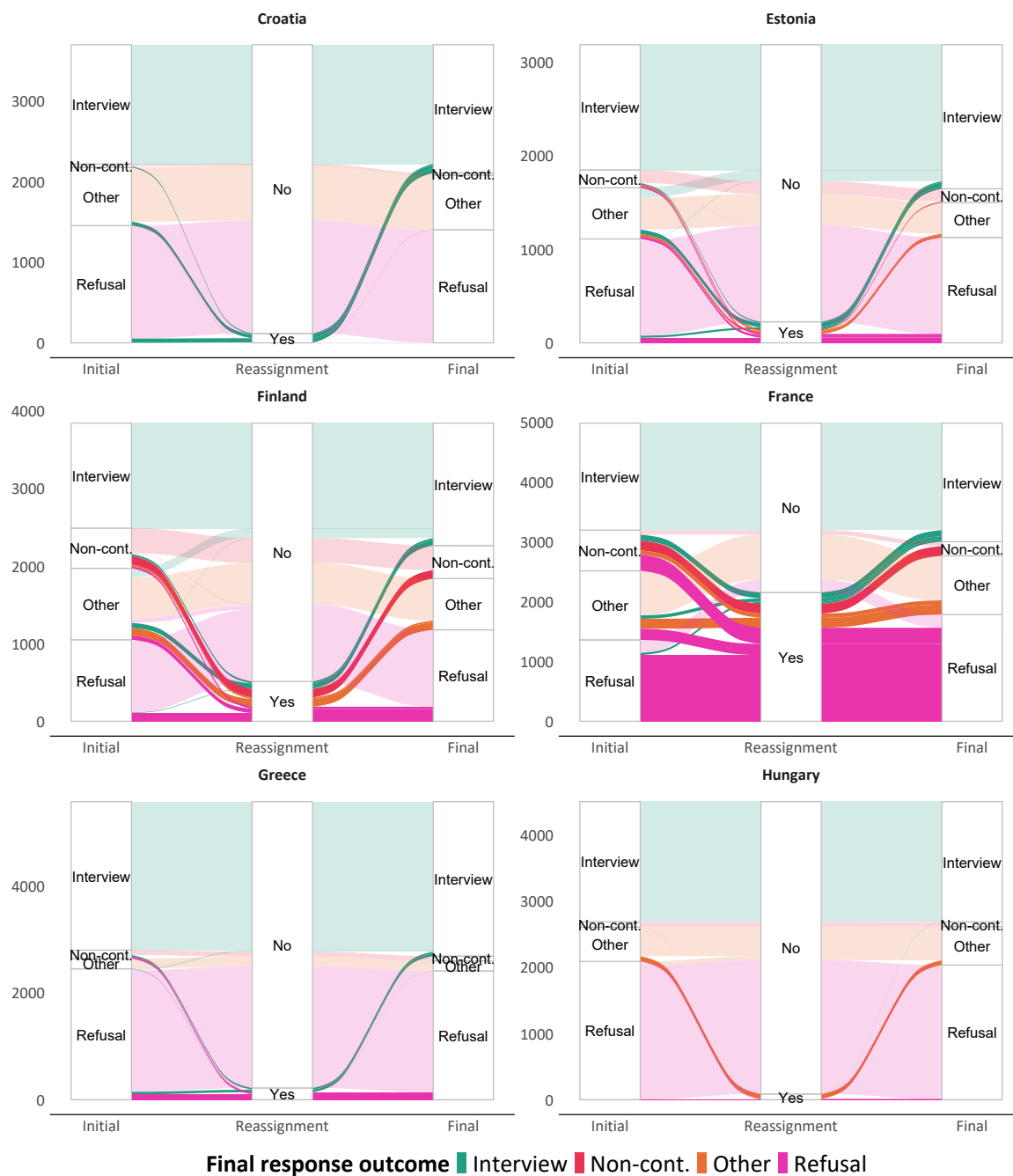
For ease of comparison across countries, Figure 6.6 shows the country-level average absolute standardized bias over the two Neighbourhood Characteristics Form auxiliary variables, against the achieved response rates. While the countries exhibit considerable variance in bias, the response rates lie much closer together. Nevertheless, the negative correlation sign—although too small to be significant—indicates in line with the previous finding that countries with higher response rates tend to be less affected by bias in the observed variables ($r = -0.261$, $p = 0.438$).

6.8 RE-ASSIGNMENT

Initial nonrespondent sample units are regularly reassigned to, and re-approached by, other (often more experienced) interviewers in order to reduce nonresponse. This section describes how this particular nonrespondent conversion strategy was employed across countries and its impact on nonresponse²⁰.

Figures 6.7 to 6.9 visualize the volume of reassignments and the resulting shifts in outcome codes. Only countries with at least 50 re-issued cases were considered in the figures because otherwise the added value of an illustration would only be marginal. The first horizontal bar represents the composition of the eligible sample by initial outcome code. The third horizontal bar represents the composition by final outcome code. The horizontal bar in-between differentiates reassigned sample units from non-reassigned sample units. The flow colour highlights the final outcome code and the shade highlights whether reassignment took place. For instance, the (dark) green lines from initial **Refusal**, **Non-contact** and **Other nonresponse** to final **Interview** (through reassignment) indicates the volume of these initial nonrespondents that are successfully converted in the reassignment phase of the fieldwork.

²⁰Initial nonrespondent sample units can also be reapproached in a different way (for example in terms of respondent incentives, or persuasive communication) by the same interviewer. The integrated Contact Form data set allows identifying both contact attempts made by different interviewers, and, at least in theory, contact attempts that were made in the context of ‘refusal conversion’ activities (which may include but do not necessarily involve the reassignment to a different interviewer). The quality of the ‘refusal conversion’ indicator, however, is not convincing. ‘Conversion efforts’ are therefore considered in a narrow sense, taking into account only additional contact attempts by new interviewers. Initial attempts are distinguished from reassignment attempts on the basis of the first attempt by a new interviewer. Note that small numbers of reassignments may be due to interviewers dropping out of the interviewer workforce rather than a deliberate conversion strategy. In some countries, telephone calls are made by interviewers without strict assignment of particular sets of sample units. A first attempt by a new interviewer is, therefore, only considered as a cut-off point between initial and reassignment attempts once at least one personal visit has been recorded (i.e. not in case of ‘reassignment’ to the first face-to-face interviewer).



Final response outcome Interview Non-cont. Other Refusal

Figure 6.7 Re-assignments, ESS 10

Note: Based on ESS10 data from Contact Forms, edition 3.0.

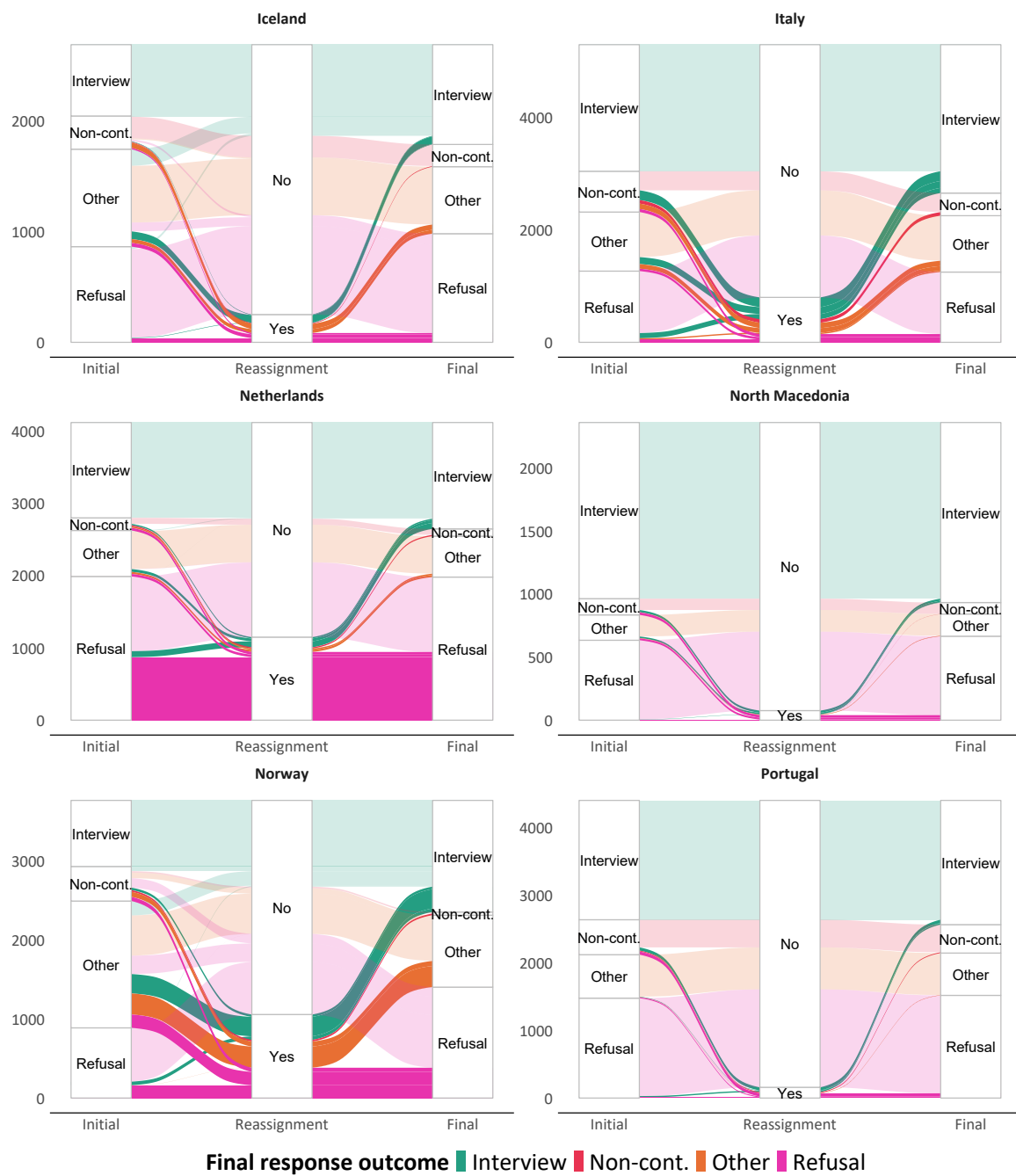


Figure 6.8 Re-assignments, ESS 10
 Note: Based on ESS10 data from Contact Forms, edition 3.0.

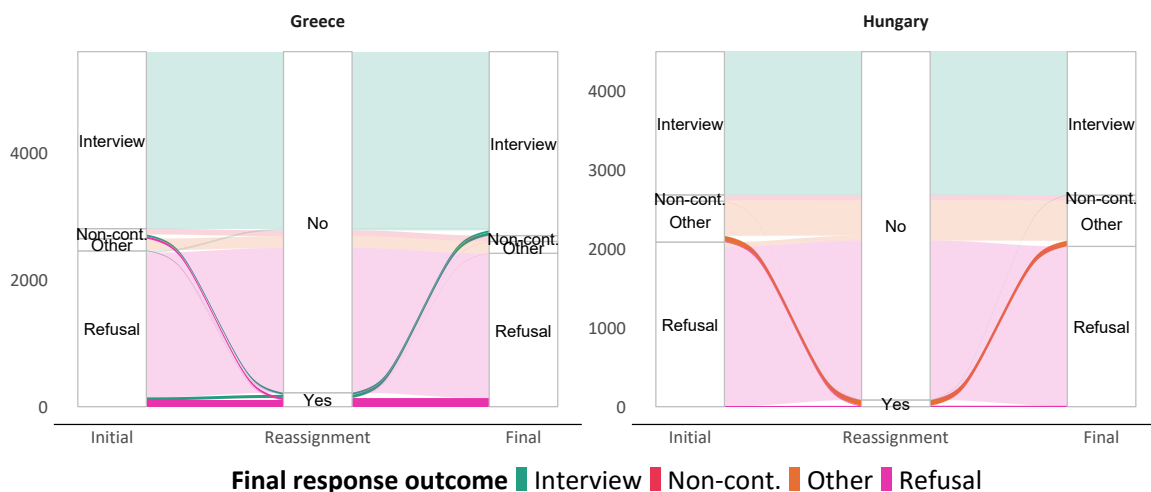


Figure 6.9 Re-assignments, ESS 10

Note: Based on ESS10 data from Contact Forms, edition 3.0.

Table 6.15 Initial outcome rates, ESS10

Country	Rate (%)				Gross sample size	Initial eligible sample size
	Initial Response	Initial non-contact	Initial refusal	Initial other non-response		
Belgium	38.8	4.6	38.6	18.0	3531	3423
Bulgaria	72.3	7.0	18.0	2.7	3848	3751
Croatia	40.0	1.1	39.3	19.6	3940	3695
Czechia	72.9	0.0	27.1	0.0	3402	3400
Estonia	41.0	5.9	34.1	19.0	3300	3261
Finland	35.1	13.6	27.3	24.0	3900	3848
France	35.4	14.1	27.3	23.2	5286	5045
Greece	47.7	2.7	42.1	7.5	5875	5827
Hungary	39.6	1.7	45.6	13.1	4775	4579
Iceland	23.9	11.4	32.0	32.7	2758	2696
Ireland	36.3	30.0	25.6	8.1	5000	4875
Italy	42.3	13.9	23.8	20.0	5461	5319
Lithuania	35.6	18.4	37.2	8.8	5830	4661
Montenegro	49.7	1.9	30.2	18.2	2250	2188
Netherlands	32.0	4.3	48.3	15.4	4187	4118
North Macedonia	58.9	5.5	26.7	8.9	2604	2372
Norway	22.0	11.9	23.4	42.7	3880	3795
Portugal	39.8	12.3	33.4	14.5	5254	4435
Slovakia	43.7	10.5	42.2	3.6	3258	3200
Slovenia	52.7	4.5	24.3	18.5	2400	2292
Switzerland	41.9	11.0	27.0	20.1	3102	3079
United Kingdom	18.7	15.9	42.1	23.3	5885	5714

Note:

Based on ESS10 data from Contact Forms, edition 3.0.

Table 6.15 presents the outcome rates achieved in the initial fieldwork phase, i.e. before any specific conversion efforts, in Round 10.²¹ The median country achieved an initial response rate of 39.9%, an initial non-contact rate of 8.8% and an initial refusal rate of 31.1%. A response rate of at least 50% was achieved in 4 countries (Bulgaria, Czechia, North Macedonia, and Slovenia) and a non-contact rate of at most 3% was achieved in 5 countries (Croatia, Czechia, Greece, Hungary, and Montenegro).

6.8.1 Volume of Re-assignments

Re-assignments were recorded in all countries. There is also a fair number of countries where re-assignments were relatively uncommon with less 1 in 10 cases of the initial eligible sample affected (see Table 6.16). In the remainder of this paragraph, we focus on the 6 countries where a reassignment was recorded for at least 1 in 10 cases in the initial eligible sample (Finland, France, Italy, the Netherlands, Norway, and Switzerland). Among these countries, between about 0.2% (Bulgaria and Lithuania) and 44% (France) cases in the initial eligible sample were re-assigned. The re-assignment efforts are even more pronounced when considered relative to the initial nonrespondent sample (i.e. excluding initial respondents).

²¹Detailed, initial outcome codes are derived for all sample units from the sequences of outcome codes for the initial attempts and the case-level interview and contact form indicators. Detailed reassignment outcome codes are similarly derived from the sequences of outcome codes for the reassignment attempts for all reassigned sample units. The response rate, the non-contact rate, the refusal rate and other-nonresponse rate are defined as above (see Subsection refsec:response-breakdown)

Table 6.16 Volume of re-assignments, ESS10

Country	In initial eligible sample		In initial non-respondent sample	
	N ^a	Re-assigned (%)	N ^b	Re-assigned (%)
Bulgaria	3751	0.2	1039	0.8
Croatia	3695	3.1	2217	5.2
Czechia	3400		923	
Estonia	3261	7.1	1923	12.0
Finland	3848	13.4	2496	20.7
France	5045	44.0	3260	68.0
Greece	5827	3.8	3045	7.3
Hungary	4579	2.4	2765	3.9
Iceland	2696	9.4	2052	12.4
Italy	5319	15.5	3069	26.8
Lithuania	4661	0.2	3003	0.3
Montenegro	2188	0.5	1101	1.1
Netherlands	4118	28.0	2801	41.1
North Macedonia	2372	3.3	975	8.0
Norway	3795	28.5	2960	36.6
Portugal	4435	4.3	2669	7.1
Slovakia	3200	0.9	1801	1.7
Slovenia	2292	4.1	1085	8.7
Switzerland	3079	33.2	1789	57.2

Note:

Based on ESS10 data from Contact Forms, edition 3.0.

Cases initially identified as ineligible (and initial respondents) are excluded, although reassignment-phase attempts have occasionally been recorded.

^a N refers to the initial eligible sample size.

^b N refers to the initial nonrespondent sample size.

7 INTERVIEW PROCESS

7.1 INTERVIEW SETTING

As detailed in the ESS interviewer manual, interviewers have to make sure that interviews take place in an appropriate setting, a quiet environment with as few distractions as possible, and preferably without anyone else present. The presence of another household member, a neighbour or friend can be distracting and can influence the answers given by the respondent, possibly encouraging more socially acceptable responses. Interviewers have to indicate in the Interviewer Questionnaire they complete at the end of each interview whether anyone who interfered with the interview was present²².

According to the reports of the interviewers, in most countries there was rarely someone present who interfered with the interview (Table 7.1). In the median country, third party interference occurred in 6.3% of interviews. This percentage varies only slightly across participating countries. Only in Montenegro and North Macedonia, there was some significant interference for at least 14% of the interviews.

Interviewers also have to make sure that respondents have all showcards and use the relevant ones to answer questions that require their use. Whether the respondent used all, only some or none of the showcards is also to be signaled via the Interviewer Questionnaire²³.

In about half of the countries, more than 80% of the respondents were reported to have used all of the showcards (see table 7.2). In the other half of the countries, only some of the showcards were used by a higher proportion of the respondents representing between 16% to 34% of the total participants. Across almost all countries, there is a low the percentage of respondents refusing or being unable to use the showcards at all. In the median country, 2.6% of the respondents didn't use the showcards at all. Only in the Croatia, Montenegro, North Macedonia, Portugal and Hungary, the percentages of respondents refusing or being unable to use the showcards are above 10% of the total participants.

²²Whether a third party is merely present or actually interferes with the interview may be differently evaluated by interviewers. At any rate, interviewers should not be discouraged from candidly reporting interferences.

²³This item was added to the Interviewer questionnaire in ESS8.

Table 7.1 Third party interference, ESS10

Country	N ^a	Anyone present who interfered with the interview (%)
Belgium	1341	7.0
Bulgaria	2718	8.2
Croatia	1592	4.7
Czechia	2476	5.8
Estonia	1542	4.1
Finland	1577	3.4
France	1977	7.8
Greece	2799	6.8
Hungary	1849	5.1
Iceland	903	4.7
Ireland	1770	9.8
Italy	2640	6.3
Lithuania	1659	8.1
Montenegro	1278	20.3
Netherlands	1470	4.5
North Macedonia	1429	16.5
Norway	1411	6.4
Portugal	1838	6.9
Slovakia	1418	5.8
Slovenia	1252	6.3
Switzerland	1523	6.2
United Kingdom	1149	4.9

Note:

Based on ESS10 data from Interviewer's questionnaire, edition 3.0.

^a N refers to the number of respondents for which the Interviewer Questionnaire item was completed.

Table 7.2 Showcard use, ESS10

Country	N ^a	Used all of the applicable showcards (%)	Used only some of the applicable showcards (%)	Re-fused/was unable to use the showcards at all (%)
Belgium	1341	96.9	1.9	1.0
Bulgaria	2718	67.8	26.6	5.4
Croatia	1592	65.6	21.2	13.1
Czechia	2476	65.0	35.0	0.0
Estonia	1542	81.2	15.2	3.2
Finland	1577	96.6	2.3	0.9
France	1977	93.2	5.3	1.4
Greece	2799	88.2	9.9	1.8
Hungary	1849	50.1	37.5	11.2
Iceland	903	92.7	3.7	0.7
Ireland	1770	69.1	22.9	7.9
Italy	2640	77.8	16.0	4.1
Lithuania	1659	70.4	21.4	8.2
Montenegro	1278	48.8	20.1	30.5
Netherlands	1470	94.3	3.8	1.7
North Macedonia	1429	60.9	22.0	16.8
Norway	1411	97.7	1.6	0.3
Portugal	1838	64.1	23.9	11.8
Slovakia	1418	87.0	10.6	1.2
Slovenia	1252	92.3	4.2	2.6
Switzerland	1523	92.6	6.8	0.5
United Kingdom	1149	95.0	3.4	1.5

Note:

Based on ESS10 data from Interviewer's questionnaire, edition 3.0.

^a N refers to the number of respondents for which the Interviewer Questionnaire item was completed.

7.2 INTERVIEW LANGUAGE

Interview language may constitute a barrier to the proper understanding of survey questions for particular groups of respondents, and thus be a source of measurement error as well as a source of nonresponse error. The ESS Standards set the coverage of all languages spoken by at least 5% of the population. Nonetheless, it may therefore be useful to consider whether any language spoken by less than 5% of the population. It is also relevant to consider whether the 'dominant' language of the individual respondents matches the interview language. Being interviewed in a language other than the one spoken at home could impact the quality of the interview.

Table 7.3 shows the languages in which interviews were conducted in each participating country in Round 10. Whether the interview language differs to the first language spoken at home by the respondents is presented in Table 7.4.

In 17 countries, less than 10% of the interviews present a mismatch between the first home language and the interview language. The small numbers of the various language groups may also fluctuate heavily due to sampling variation. Only in Montenegro and Switzerland do we observe a high mismatch between the first home language and the interview language (51.4% and 68% respectively). Although the percentage for Switzerland is reduced to 13.1% if we regard the language group Swiss German/Alemannic/Alsatian as equal to the German interview language. In Montenegro, the largest language mismatch comes from respondent who speak Serbian as the main language at home (37.3%). Further considerations and investigation would be necessary to assess whether the observed large mismatch affects the quality of the interviewing process in Montenegro.

It should also be noted that also in Germany, Italy, Norway, Ireland, and the Netherlands, dialects and regional languages are mentioned to be spoken as first language at home by low percentage of the respondents, generating mismatch with the interview language. In addition, even if multiple language versions are available, many respondents are interviewed in the country's 'dominant' interview language although it differs from their first home language (e.g. Catalan-speaking respondents in other Spanish regions than Catalunya). This may be due to the complexities of organising contact and recruitment efforts of interviewers speaking different languages, but it may also be the case that many of these respondents do speak the 'dominant' interview language sufficiently fluently to complete an interview. Nonetheless, it should be reflected whether the results indicate the deliberate choice of the respondent or a possible issue in the supply of the most suitable questionnaire language for the respondents.

Table 7.3 Interview language, ESS10

Country	Language	Number of interviews
Belgium	Dutch	889
Belgium	French	452
Bulgaria	Bulgarian	2718
Croatia	Croatian	1592
Czechia	Czech	2476
Estonia	Estonian	1162
Estonia	Russian	380
Finland	Finnish	1497
Finland	Swedish	80
France	French	1977
Greece	Modern Greek	2799
Hungary	Hungarian	1776
Iceland	Icelandic	858
Iceland	Polish	15
Ireland	English	1770
Italy	English	1
Italy	German	28
Italy	Italian	2556
Lithuania	Lithuanian	1627
Lithuania	Russian	29
Montenegro	Albanian	20
Montenegro	Montenegrin	1157
Netherlands	Dutch	1458
Netherlands	English	1
North Macedonia	Albanian	242
North Macedonia	Macedonian	1181
Norway	Norwegian	1397
Portugal	Portuguese	1838
Slovakia	Hungarian	40
Slovakia	Slovak	1366
Slovenia	Slovenian	1252
Switzerland	French	383
Switzerland	German	1071
Switzerland	Italian	69
United Kingdom	English	1149

Note:

Based on ESS10 data from Interviewer's questionnaire, edition 3.0.

Interviews in English and German languages in Italy as well as interview in English in the Netherlands are deviations flagged in the ESS Data portal.

Table 7.4 Interview language different from first home language, ESS10

Country	N	Interview not in first home language (%)	Main first home languages of respondents not interviewed in first home language
Belgium	1340	12.2	
Bulgaria	2707	6.7	Turkish (5%), Romany (1.5%)
Croatia	1592	2.4	Romany (0.7%)
Czechia	2473	0.7	
Estonia	1541	3.4	Russian (2.1%), Estonian (0.8%)
Finland	1567	3.0	English (0.6%), Russian (0.6%), Estonian (0.5%), Swedish (0.5%)
France	1974	9.5	Arabic (2%), English (1.3%), Portuguese (0.8%), Castilian (0.6%), Creoles and pidgins (0.5%), Swiss German/Alemannic/Alsatian (0.5%)
Greece	2795	1.6	Albanian (0.8%)
Hungary	1844	4.3	Hungarian (3.9%)
Iceland	899	7.6	Icelandic (3.3%), English (1.8%), Polish (0.7%)
Ireland	1770	7.2	
Italy	2605	8.5	Italian (1.8%), Local language Italy (1.4%), Arabic (0.8%), German (0.8%), Romanian (0.6%), Sicilian (0.6%)
Lithuania	1644	3.8	Russian (2.7%), Polish (0.9%)
Montenegro	1217	51.4	Serbian (37.3%), Bosnian (4.6%), Montenegrin (3.6%), Albanian (3.5%)
Netherlands	1458	6.4	Western Frisian (2.1%), English (1.1%), Dutch (0.8%)
North Macedonia	1425	6.6	Albanian (2.3%), Romany (1.4%), Turkish (1.3%), Bosnian (0.7%)
Norway	1409	6.5	English (1.1%), Norwegian (0.9%), Swedish (0.8%)
Portugal	1838	1.3	
Slovakia	1408	7.6	Hungarian (5.3%), Romany (1.2%), Slovak (0.6%)
Slovenia	1248	4.0	Bosnian (1.8%), Serbian (1%)
Switzerland	1468	68.0	Swiss German/Alemannic/Alsatian (54.9%), Italian (2.2%), Portuguese (2.2%), Albanian (1.8%), English (1.2%), Serbian (1%), Castilian (0.9%), Turkish (0.6%)
United Kingdom	1106	3.5	

Note:

Based on ESS10 data from Interviewer's questionnaire, edition 3.0.

N refers to the number of respondents for which the interview language and first home language was recorded.

7.3 INTERVIEW DURATION

Table 7.5 presents some descriptive statistics of the interview duration for all participating countries in Round 10.

The average interview duration ranges between 42.5 (Croatia) and 67.8 minutes (Switzerland). In the median country, an interview took on average 48.8 minutes. The anticipated interview duration for British English is between 55 and 60 minutes (European Social Survey, 2017).

Language is one of the factors that may affect interview duration. However, previous research has suggested that cross-national differences cannot simply be reduced to language differences (Loosveldt & Beullens, 2013 for ESS5). Table 7.6 shows descriptive statistics of the interview duration by language.

The results show large differences in interview duration across countries with a shared language. For example, the average interview duration ranges between 29.4 (Italy) and 67.1 minutes (Switzerland) for interviews in German, ranges between 47.7 (Italy) and 68.8 minutes (Switzerland) for interviews in Italian, and ranges between 58.9 (France) and 69.9 minutes (Switzerland) for interviews in French.

These results are consistent with the outcome of previous ESS rounds. The figures support the earlier findings on the importance of cross-national differences over and above cross-language differences, and suggest that cross-national differences in interview practice continue to exist.

Table 7.5 Interview duration, ESS10

Country	N ^a	Q1	Q3	Mean	SD
Belgium	1339	50.0	68	60.5	17.4
Bulgaria	2687	36.0	57	48.8	26.4
Croatia	1592	33.0	49	42.6	16.7
Czechia	2476	38.0	52	45.5	11.0
Estonia	1514	45.0	67	58.7	30.6
Finland	1565	51.0	69	62.4	18.2
France	1930	47.0	66	58.9	25.9
Greece	2791	38.0	55	47.7	20.6
Hungary	1766	34.0	60	47.8	19.5
Iceland	866	49.0	70	61.6	20.4
Ireland	1756	27.0	47	39.0	23.6
Italy	2576	33.0	57	47.5	28.7
Lithuania	1591	43.0	67	60.2	35.1
Montenegro	1167	25.0	58	47.1	43.4
Netherlands	1451	55.0	75	66.7	20.8
North Macedonia	1416	35.0	58	48.5	20.8
Norway	1392	52.0	71	63.5	16.5
Portugal	1837	39.0	51	46.2	11.4
Slovakia	1387	41.0	58	55.2	37.1
Slovenia	1228	38.0	55	48.3	19.0
Switzerland	1486	52.0	77	67.9	26.3
United Kingdom	1114	46.0	65	57.4	17.2

Note:

Based on ESS10 integrated file, edition 3.0.

^a N refers to all cases for which the interview duration was recorded.

Table 7.6 Interview duration by interview language, ESS10

Interview Language	Country	N ^a	Q1	Q3	Mean	SD
Albanian	Montenegro	20	31.8	56.4	56.4	40.2
Albanian	North Macedonia	242	37.0	48.1	48.1	18.1
Bulgarian	Bulgaria	2687	36.0	48.8	48.8	26.4
Croatian	Croatia	1592	33.0	42.6	42.6	16.7
Czech	Czechia	2476	38.0	45.5	45.5	11.0
Dutch	Belgium	887	49.0	58.6	58.6	16.8
Dutch	Netherlands	1450	55.0	66.7	66.7	20.8
English	Ireland	1756	27.0	39.0	39.0	23.6
English	United Kingdom	1114	46.0	57.4	57.4	17.2
Estonian	Estonia	1142	45.0	57.8	57.8	29.0
Finnish	Finland	1485	51.0	62.7	62.7	18.4
French	Belgium	452	52.0	64.2	64.2	18.1
French	France	1930	47.0	58.9	58.9	25.9
French	Switzerland	376	55.0	69.9	69.9	27.9
German	Italy	28	20.0	29.4	29.4	12.7
German	Switzerland	1042	51.0	67.1	67.1	26.3
Hungarian	Hungary	1766	34.0	47.8	47.8	19.5
Hungarian	Slovakia	40	45.8	53.8	53.8	19.8
Icelandic	Iceland	852	49.0	61.2	61.2	19.1
Italian	Italy	2547	33.0	47.7	47.7	28.8
Italian	Switzerland	68	59.8	68.8	68.8	13.3
Lithuanian	Lithuania	1563	43.0	59.8	59.8	34.7
Macedonian	North Macedonia	1174	35.0	48.6	48.6	21.4
Modern Greek	Greece	2791	38.0	47.7	47.7	20.6
Montenegrin	Montenegro	1147	24.5	47.0	47.0	43.5
Norwegian	Norway	1392	52.0	63.5	63.5	16.5
Polish	Iceland	14	56.8	82.4	82.4	56.8
Portuguese	Portugal	1837	39.0	46.2	46.2	11.4
Russian	Estonia	372	45.0	61.7	61.7	34.8
Russian	Lithuania	28	56.0	82.2	82.2	48.8
Slovak	Slovakia	1347	41.0	55.2	55.2	37.5
Slovenian	Slovenia	1228	38.0	48.3	48.3	19.0
Swedish	Finland	80	49.0	58.6	58.6	13.1

Note:

Based on ESS10 integrated file, edition 3.0.

Languages with 10 or less interviews have been excluded

^a N refers to all cases for which the interview duration was recorded.

7.4 INTERVIEWER EFFECTS

While interviewers can motivate respondents and support them in performing their role adequately, they can also influence responses and thereby introduce error. In order to limit interviewer-induced error in the measurement of attitudes, beliefs and behaviour patterns, all ESS interviewers are expected to apply the same basic task rules when administering the questionnaire. One way to assess the extent to which interviewers affect responses is by looking at the intra-interviewer correlations.

Intra-interviewer correlations capture the proportion of item variability which is due to the interviewers' individual systematic differences. High intra-interviewer correlations indicate that responses from respondents interviewed by the same interviewer are more similar than otherwise would be expected, and are suggestive of differences between interviewers in the way they interact with respondents during the interview. The intra-interviewer correlations can be affected by the non-random allocation of respondent. This is controlled to some extent by estimating the impact of geographical region and urbanization to the intra-interviewer correlations.

Figure 7.1 visualizes the distribution of intra-interviewer correlations for participating countries in Round 10²⁴. Table 7.7 presents some descriptive statistics. Interviewer effects appear negligible in several of the countries, but probably should receive priority attention in some other countries. The average intra-interviewer correlation ranges between 0.014 (Norway) and 0.309 (Montenegro), with ten countries in the 0.027-0.138 range. For the median country we observe an average intra-interviewer correlation of 0.092. The distribution of the intra-interviewer correlation varies largely across countries. While in seven countries (Czechia, Finland, France, Netherlands, Norway, Slovenia and Iceland), a few of the intra-interviewer correlations exceed 0.10, more than half the intra-interviewer correlations exceed this threshold in nine countries (Bulgaria, Greece, Hungary, Italy, Lithuania, Montenegro, Slovakia, and North Macedonia).

Table 7.8 presents some descriptive statistics by questionnaire module. For the median country we observe an average intra-interviewer correlation of 0.076 for the core modules A, B and C, 0.13 for the rotating module D on understanding democracy, 0.092 for the module G on digital social contacts, communication and citizenship behaviour, 0.088 for the core socio-demographic module F, and 0.1 for the core module H on Human values.

²⁴Intra-interviewer correlations were estimated from linear models with an interviewer-level random effect for all numeric items and ordinal items measured on at least a 4-point scale in the Round 10 main questionnaire (N = 195). To control for similarities between respondents arising from area effects rather than interviewer effects, the geographical region and self-reported degree of urbanization of respondents' domicile are included in the models. It should nonetheless be noted that, given the lack of random assignment, interviewer and area effects cannot be fully disentangled, and some (presumably small) portion of the 'intra-interviewer' correlations may be attributable to area effects. Estimates for items administered by fewer than 30 interviewers or from fewer than five respondents for each interviewer are suppressed.

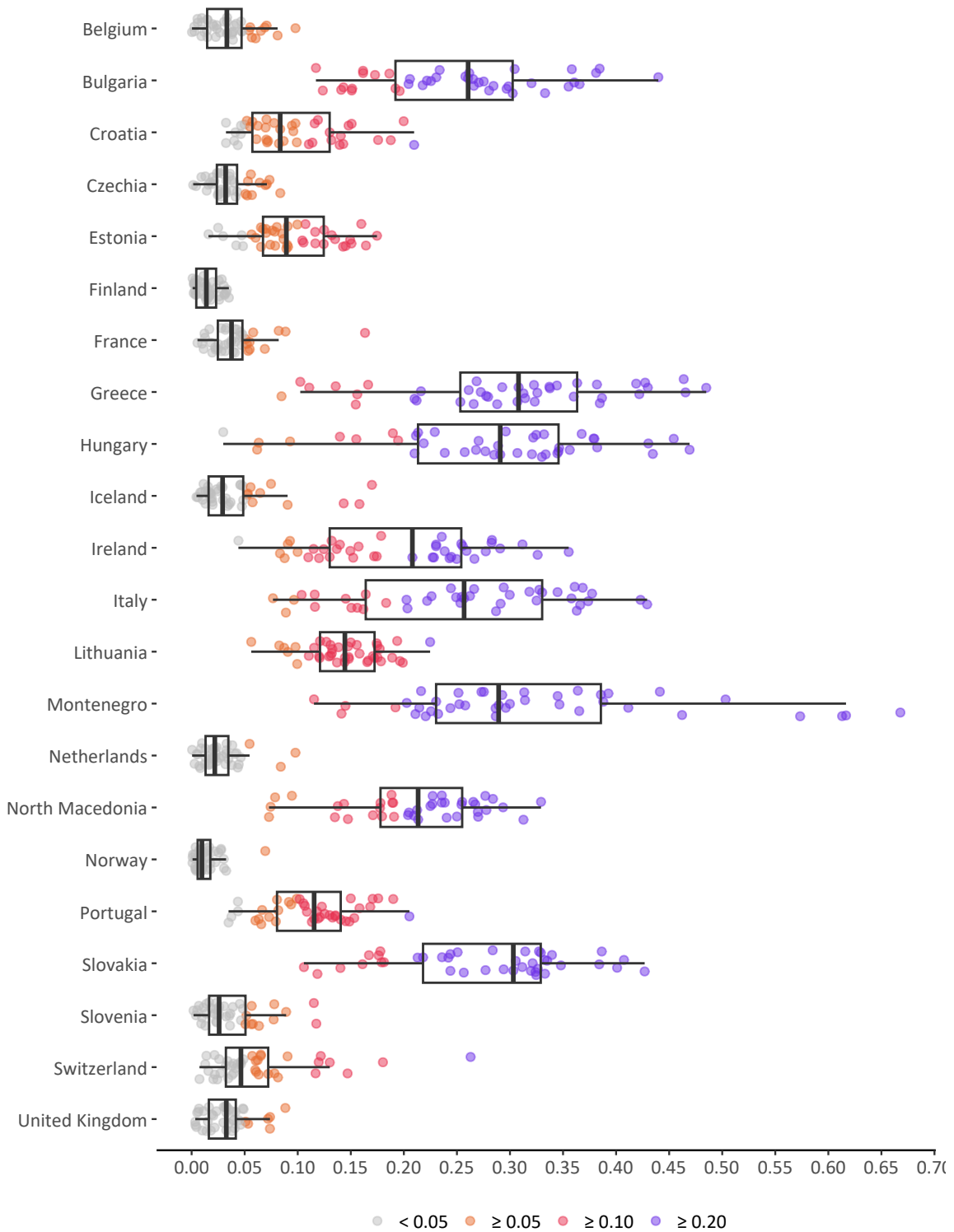


Figure 7.1 Interviewer effects, ESS10

Note: Based on ESS10 integrated file, edition 3.0.

N = 50 items for which the intra-interviewer correlation could be estimated for all participating countries.

Table 7.7 Interviewer effects, ESS10

Country	Min	Max	Mean	SD	> .05 (%)	> .10 (%)
Belgium	0.000	0.098	0.033	0.023	22.0	0.0
Bulgaria	0.117	0.440	0.253	0.081	100.0	100.0
Croatia	0.032	0.210	0.095	0.047	80.5	36.6
Czechia	0.002	0.084	0.035	0.019	24.4	0.0
Estonia	0.016	0.175	0.094	0.040	85.4	39.0
Finland	0.001	0.035	0.015	0.011	0.0	0.0
France	0.005	0.163	0.040	0.027	24.4	2.4
Greece	0.085	0.485	0.298	0.103	100.0	97.6
Hungary	0.030	0.469	0.279	0.106	97.6	90.2
Iceland	0.005	0.170	0.041	0.039	24.4	7.3
Ireland	0.044	0.355	0.195	0.078	97.6	85.4
Italy	0.077	0.429	0.255	0.099	100.0	92.7
Lithuania	0.056	0.225	0.144	0.036	100.0	85.4
Montenegro	0.115	0.668	0.321	0.131	100.0	100.0
Netherlands	0.000	0.098	0.027	0.020	7.3	0.0
North Macedonia	0.073	0.329	0.210	0.064	100.0	90.2
Norway	0.001	0.069	0.014	0.013	2.4	0.0
Portugal	0.035	0.205	0.112	0.042	90.2	63.4
Slovakia	0.106	0.427	0.277	0.082	100.0	100.0
Slovenia	0.002	0.117	0.037	0.028	26.8	4.9
Switzerland	0.007	0.263	0.063	0.051	46.3	17.1
United Kingdom	0.003	0.088	0.032	0.021	14.6	0.0

Note:

Based on ESS10 integrated file, edition 3.0.

N = 33 items in modules A to F for which the intra-interviewer correlation could be estimated for all participating countries.

Table 7.9 presents the top 25 items according to the median intra-interviewer correlation estimate across countries. Figure 7.2 visualizes the intra-interviewer correlations for these 25 items for each participating country in Round 10. The rotating module D accounts for 18 items in the top 25. It suggests that new and rotating modules should receive additional attention.

Table 7.8 Interviewer effects by module, ESS10

Country	Modules A, B, C		Module D		Module F		Module G		Module H	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Belgium	0.025	0.018	0.046	0.025	0.037	0.015	0.028	0.026	0.030	0.023
Bulgaria	0.260	0.058	0.327	0.061	0.130	0.018	0.212	0.058	0.182	0.038
Croatia	0.071	0.033	0.128	0.049	0.042	0.002	0.081	0.020	0.102	0.053
Czechia	0.030	0.012	0.054	0.020	0.019	0.007	0.017	0.014	0.030	0.006
Estonia	0.077	0.031	0.110	0.030	0.088	0.003	0.126	0.043	0.069	0.046
Finland	0.014	0.011	0.010	0.009	0.021	0.014	0.020	0.008	0.019	0.012
France	0.028	0.018	0.037	0.019	0.036	0.026	0.041	0.017	0.063	0.043
Greece	0.278	0.101	0.383	0.061	0.094	0.013	0.231	0.098	0.293	0.038
Hungary	0.280	0.077	0.358	0.066	0.120	0.128	0.170	0.115	0.271	0.081
Iceland	0.052	0.053	0.034	0.041	0.019	0.014	0.046	0.011	0.034	0.026
Ireland	0.139	0.069	0.262	0.055	0.138	0.020	0.155	0.069	0.213	0.047
Italy	0.202	0.053	0.365	0.033	0.096	0.028	0.189	0.103	0.242	0.058
Lithuania	0.133	0.037	0.172	0.027	0.111	0.028	0.119	0.019	0.144	0.032
Montenegro	0.272	0.048	0.422	0.148	0.179	0.053	0.264	0.070	0.307	0.145
Netherlands	0.022	0.014	0.019	0.011	0.024	0.012	0.037	0.009	0.038	0.035
North Macedonia	0.214	0.047	0.229	0.035	0.133	0.082	0.160	0.090	0.232	0.076
Norway	0.011	0.009	0.011	0.009	0.039	0.043	0.015	0.009	0.016	0.008
Portugal	0.082	0.038	0.135	0.026	0.083	0.033	0.098	0.024	0.139	0.051
Slovakia	0.269	0.058	0.352	0.044	0.220	0.162	0.204	0.078	0.237	0.060
Slovenia	0.021	0.020	0.033	0.022	0.027	0.033	0.040	0.024	0.066	0.032
Switzerland	0.061	0.044	0.043	0.023	0.098	0.116	0.040	0.015	0.105	0.072
United Kingdom	0.033	0.026	0.028	0.013	0.044	0.042	0.030	0.014	0.038	0.024

Note:

Based on ESS10 integrated file, edition 3.0.

N = 17 items for the core modules A, B and C, N = 14 items for the rotating module D on understanding Democracy, N = 8 items for the rotating module G on digital social contacts, communications and citizenship behaviour, N = 2 items for the sociodemographic module F, and N = 9 items for the core module H on Human values for which the intra-interviewer correlation could be estimated for all participating countries.

Table 7.9 Interviewer effects (top 25 items), ESS10

item	module	label
cttres	D	The courts treat everyone the same
gvctzpv	D	The government protects all citizens against poverty
wkhtotp	F	Hours normally worked a week in main job overtime included, partner
wkhtot	F	Total hours normally worked per week in main job overtime included
nwspol	A	News about politics and current affairs, watching, reading or listening, in minutes
gptpelcc	D	In country governing parties are punished in elections when they have done a bad job
wpestop	D	The will of the people cannot be stopped
votedir	D	Citizens have the final say on political issues by voting directly in referendums
fairelc	D	National elections are free and fair
grdfinc	D	The government takes measures to reduce differences in income levels
gptpelc	D	Governing parties are punished in elections when they have done a bad job
rghmgpr	D	The rights of minority groups are protected
iprspt	H	Important to get respect from others
viepolc	D	In country the views of ordinary people prevail over the views of the political elite
wpestopc	D	In country the will of the people cannot be stopped
dfprtal	D	Different political parties offer clear alternatives to one another
viepol	D	The views of ordinary people prevail over the views of the political elite
ipstrgv	H	Important that government is strong and ensures safety
medcrgvc	D	In country the media are free to criticise the government
medcrgv	D	The media are free to criticise the government
gveldc19	K	How satisfied with government's response to COVID-19: elderly people in care homes
impsafe	H	Important to live in secure and safe surroundings
keydec	D	Key decisions are made by national governments rather than the European Union
grdfincc	D	In country the government takes measures to reduce differences in income levels
fairelcc	D	In country national elections are free and fair

Note:

Based on ESS10 integrated file, edition 3.0.

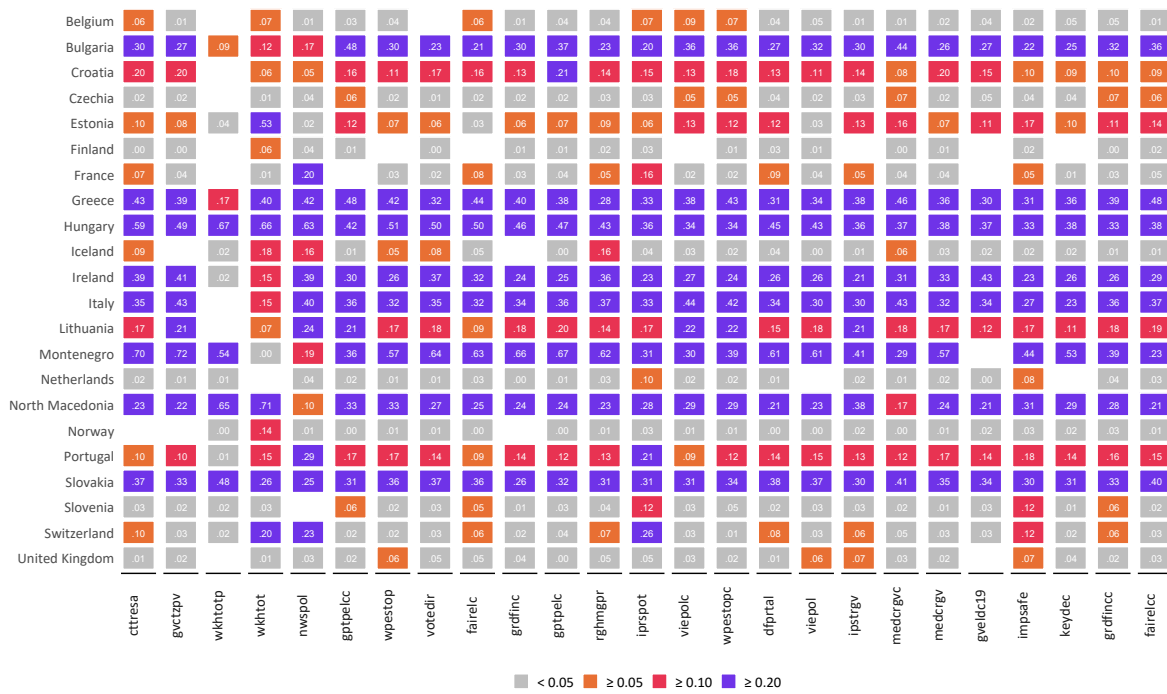


Figure 7.2 Interviewer effects (top 25 items), ESS10
 Note: Based on ESS10 integrated file, edition 3.0.

7.4.1 Changes in intra-interviewer correlations across Rounds

Changes in the intra-interviewer correlations relative to the previous rounds can be indicative of positive or negative impact of specific measures aimed to assure the quality of the interviewing process. Therefore, in addition to the current magnitude and distribution of interviewer effects in the European Social Survey, any apparent improvement (or possibly, deterioration) of interviewer effects should be critically assessed.

Table 7.10 presents, for each participating country that also participated in Round 9, the mean difference in the intra-interviewer correlations estimated for Round 10 relative to those estimated for Round 9 across items repeated between the two rounds. Among the 16 countries for which a comparison with Round 9 is possible, a significant decrease in intra-interviewer correlations is observed for Bulgaria, Czechia, and Hungary. The improvement appears particularly striking in Czechia. Significant increase in intra-interviewer correlations can be observed for Montenegro and Portugal.

A wider perspective in the development of the interviewer effects can be achieved by looking at the changes since the first ESS Round. Figure 7.3 visualizes the intra-interviewer correlations for repeated items from the Main Questionnaire²⁵ since Round 1.

In most countries, interviewer effects are relatively stable across rounds, some countries show a positive development of decreasing intra-interviewer correlations (Bulgaria, Czechia, France, Hungary, Slovenia). Some show an upwards trends of increasing intra-interviewer correlations (Estonia, Greece, Italy, Montenegro, Portugal) which calls for further attention.

²⁵The relevant variables are AESFDRK, EDUYRS, ESTSZ, FREEHMS, GINCDIF, HAPPY, HEALTH, HHMMB, IMBGECO, IMDFETN, IMPCNTR, IMSMETN, IMUECLT, IMWBCNT, POLINTR, PPLFAIR, PPLHLP, PPLTRST, PRAY, RLGATND, RLGDGR, SCLACT, SCLMEET, STFDEM, STFECO, STFEDU, STFHLTH, TRSTEP, TRSTLGL, TRSTPLC, TRSTPLT, TRSTPRL, TRSTUN and YRBRN.

Table 7.10 Change in interviewer effects relative to the ESS9, ESS10

Country	ESS9		ESS10		Change		
	Mean	SD	Mean	SD	Mean	SD	p.value
Belgium	0.027	0.020	0.020	0.015	-0.008	0.020	0.152
Bulgaria	0.283	0.118	0.208	0.080	-0.075	0.058	0.003
Croatia	0.062	0.031	0.071	0.035	0.009	0.046	0.258
Czechia	0.128	0.056	0.030	0.014	-0.108	0.040	< 0.001
Estonia	0.045	0.025	0.058	0.030	0.012	0.029	0.059
Finland	0.014	0.014	0.011	0.009	-0.006	0.019	0.36
France	0.026	0.018	0.024	0.013	-0.004	0.015	0.58
Greece			0.259	0.117			
Hungary	0.324	0.124	0.243	0.110	-0.075	0.057	0.006
Iceland			0.029	0.022			
Ireland	0.062	0.030	0.118	0.059	0.055	0.044	< 0.001
Italy	0.165	0.074	0.194	0.080	0.029	0.033	0.131
Lithuania	0.117	0.061	0.121	0.043	0.002	0.046	0.76
Montenegro	0.140	0.060	0.246	0.079	0.107	0.059	< 0.001
Netherlands	0.021	0.013	0.019	0.013	-0.003	0.014	0.504
North Macedonia			0.177	0.054			
Norway	0.016	0.028	0.013	0.016	-0.007	0.019	0.554
Portugal	0.032	0.020	0.063	0.040	0.031	0.036	< 0.001
Slovakia	0.249	0.096	0.253	0.101	0.004	0.065	0.872
Slovenia	0.023	0.019	0.016	0.012	-0.006	0.019	0.088
Switzerland	0.039	0.028	0.047	0.046	0.005	0.032	0.43
United Kingdom	0.040	0.028	0.031	0.021	-0.012	0.032	0.198

Note:

Based on ESS10 integrated file, edition 3.0.

N = 33 items in modules A to F, repeated in both rounds, for which the intra-interviewer correlation could be estimated for all participating countries.

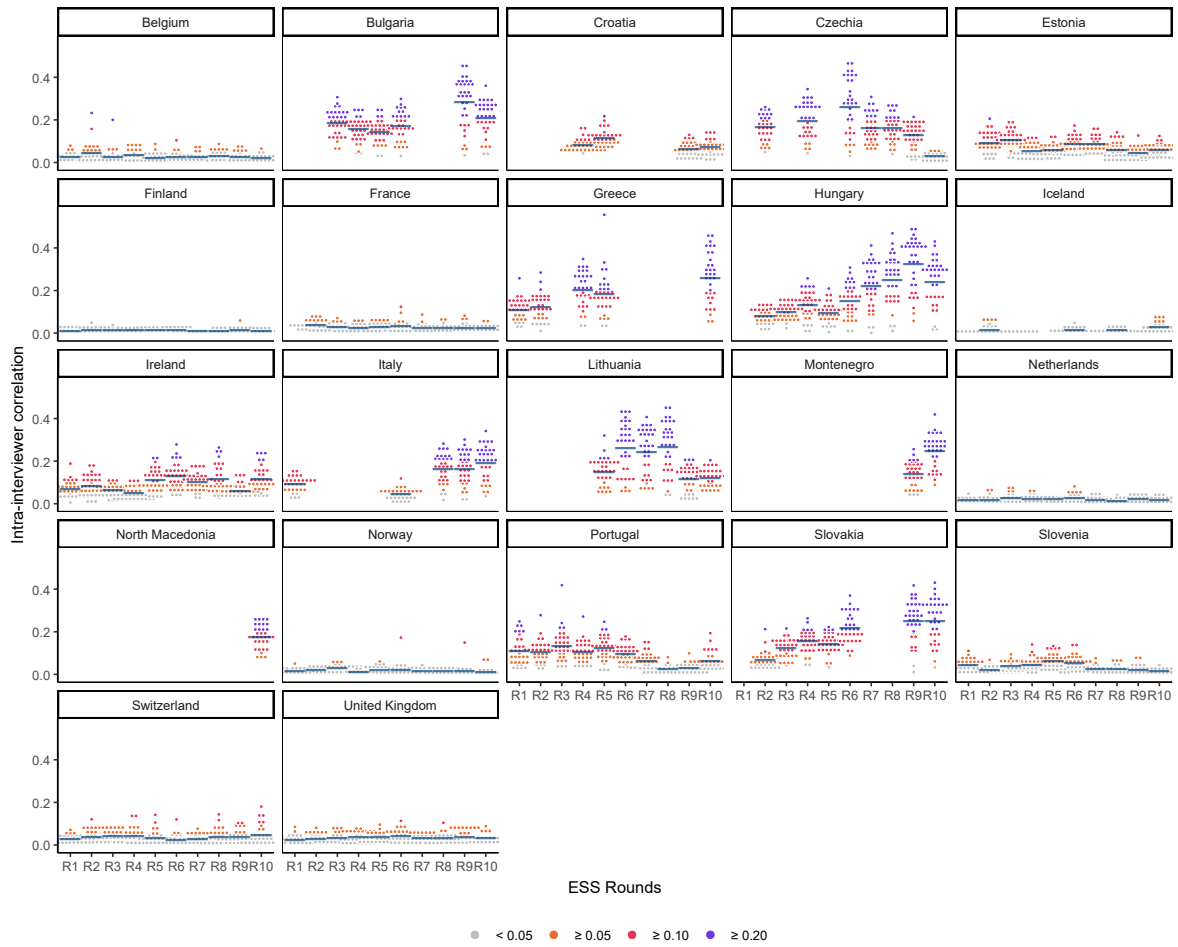


Figure 7.3 Interviewer effects across ESS Rounds
 Note: Based on ESS10 integrated file, edition 3.0.

Table 7.11 Share of video interviews, ESS10

Country	Share of Video Interviews (%)
Belgium	1.19
Bulgaria	0.00
Switzerland	3.29
Czechia	0.00
Estonia	15.56
Finland	15.22
France	2.33
United Kingdom	4.80
Greece	0.82
Croatia	5.97
Hungary	0.00
Ireland	0.34
Iceland	37.00
Italy	17.31
Lithuania	0.00
Montenegro	0.00
North Macedonia	0.28
Netherlands	16.88
Norway	34.80
Portugal	0.44
Slovenia	0.00
Slovakia	0.00

Note:

Based on ESS10 integrated file, edition 3.0.

7.5 VIDEO INTERVIEWS

Due to the limitation and fears introduced by the COVID-19 pandemic, Round 10 allowed participating countries to offer respondents the alternative of interviewing via a online video interview as a possible alternative to an in-person face-to-face interview. The video interviews were designed to be as similar as possible to an in-person interview and meet all the interviewing standards applied to an in-person interview, including showcards, which were adjusted to be implemented in a digital setting. Table 7.11 shows the share of video interviews for all countries. Two countries show substantial shares of video interviews (Iceland and Norway). A few more countries display decent shares (Estonia, Finland, Italy, and Netherlands).



Figure 7.4 Age distribution for Face-to-Face and Video Interviews, ESS10
 Note: Based on ESS10 integrated file, edition 3.0.

7.5.1 Socio-economic characteristics of Video Interview Respondents

Table 7.12 gives an overview of specific socio-economic characteristics of the respondents. It depicts the relative differences between respondents that took part in video interviews compared to respondents that had the interview conducted face-to-face.

Video interviews were administered to a younger sample in all countries. Several countries show a more than a ten-year decrease in the mean age (Estonia, Finland, Croatia, Iceland, North Macedonia, and Portugal). However, all countries show a substantially younger sample, with a minor decrease

Table 7.12 Socio-economic differences, ESS10

Country	Mean Age (Years)			Women (%)			Household Size (Person)			Married Share (%)			Share in Work (%)			Citizens (%)		
	F2F	LV	Diff.	F2F	LV	Diff.	F2F	LV	Diff.	F2F	LV	Diff.	F2F	LV	Diff.	F2F	LV	Diff.
Belgium	49	44	-5	50	56	6	2.8	3.6	0.7	44.6	50.0	5.4	9	12	4	92	88	-4
Bulgaria	53			47			2.4			46.0			4			98		
Switzerland	50	44	-6	51	40	-11	2.9	2.8	-0.1	50.4	60.0	9.6	10	22	12	80	88	8
Czechia	48			44			2.2			38.2			5			97		
Estonia	54	40	-14	45	55	10	2.4	3.0	0.6	40.5	41.2	0.8	6	12	6	87	95	9
Finland	55	41	-14	50	55	4	2.2	2.6	0.4	48.1	41.7	-6.4	7	8	1	99	99	0
France	50	41	-8	49	54	5	2.9	2.5	-0.4	51.1	45.7	-5.4	3	4	1	94	91	-3
United Kingdom				45	69	24	2.1	2.2	0.2	45.0	67.3	22.3	11	9	-2	94	96	2
Greece	50	43	-7	48	65	17	2.1	2.1	0.0	51.0	47.8	-3.1	1			97	95	-2
Croatia	51	39	-12	46	67	22	5.4	5.2	-0.1	58.3	43.2	-15.2	2	9	7	100	100	0
Hungary	50			38			2.5			51.9			2			97		
Ireland	53	52	-1	48	67	19	2.8	3.3	0.6	51.6	66.7	15.0	4			89	83	-5
Iceland	55	42	-13	49	53	4	2.6	3.3	0.6	49.1	49.2	0.1	11	30	19	96	98	3
Italy	52	48	-4	47	51	3	4.3	4.3	0.0	48.2	53.6	5.4	2	2	0	95	95	1
Lithuania	51			38			2.2			43.1			6			99		
Montenegro	47			51			3.2			54.2			8			98		
North Macedonia	51	35	-17	46	100	54	3.7	4.2	0.5	63.0	75.0	12.0	2	50	48	98	100	2
Netherlands	50	41	-9	52	53	1	2.7	3.1	0.4	52.7	49.6	-3.1	16	31	15	97	98	1
Norway	50	42	-9	52	52	-1	2.5	2.9	0.4	48.3	42.2	-6.1	15	18	4	94	95	0
Portugal	54	42	-13	42	38	-4	2.6	2.4	-0.2	47.5	37.5	-10.0	8	25	17	94	100	6
Slovenia	49			47			3.1			48.7			17			95		
Slovakia	53			46			2.4			54.7			7			97		

Note:

Based on ESS10 integrated file, edition 3.0.

Face-to-Face Interviews (F2F), Video Interviews (LV) and absolute Difference (Diff.) for the mean age of the respondents in years, the percentage of women, the household size in persons, the share of married respondents and the share of respondents that are citizens of their respective country.

Table 7.13 Differences in key characteristics, ESS10

Country	Interference (%)			Showcard use (%)			Duration (min)			Nonresponse (%)			Understanding (1-5)			Experience (1-10)		
	F2F	LV	Diff.	F2F	LV	Diff.	F2F	LV	Diff.	F2F	LV	Diff.	F2F	LV	Diff.	F2F	LV	Diff.
Belgium	7	0	-7	97	94	-3	60	69	9				4.5	4.9	0.4	8.4	8.4	0.0
Bulgaria	8			68			49			1.56			4.5			7.7		
Switzerland	6	0	-6	93	84	-9	67	85	18	1.57	1.25	-0.32	4.7	4.3	-0.4	8.3	7.8	-0.5
Czechia	6			65			46			2.32			4.4			7.4		
Estonia	4	4	0	78	96	18	58	64	6	1.01	0.92	-0.09	4.6	4.7	0.1	8.0	8.2	0.2
Finland	3	4	0	96	98	2	63	60	-3	0.84	0.49	-0.35	4.8	4.9	0.1	8.5	8.0	-0.5
France	8	9	1	94	74	-20	59	70	12	1.67	2.10	0.43	4.7	4.8	0.1	7.9	7.7	-0.2
United Kingdom	5	0	-5	95	95	-1	57	60	2				4.6	4.6	0.0	8.5	8.4	-0.1
Greece	7	0	-7	88	83	-6	48	53	6	1.21	2.54	1.33	4.5	4.9	0.4	8.1	8.3	0.3
Croatia	5	0	-5	63	99	35	42	50	8	2.03	2.29	0.26	4.7	4.8	0.1	8.7	8.9	0.2
Hungary	5			50			48			2.12			4.5			7.3		
Ireland	10	0	-10	69	100	31	39	37	-2				4.4	4.3	-0.1	8.4	8.5	0.1
Iceland	5	3	-2	91	96	6	63	60	-2	1.76	1.52	-0.24	4.8	4.9	0.1	8.5	8.4	-0.2
Italy	7	4	-3	78	77	-1	46	55	9	2.26	2.54	0.28	4.5	4.5	0.0	7.8	8.0	0.2
Lithuania	8			70			60			2.90			4.4			7.8		
Montenegro	20			49			46			4.03			4.0			8.2		
North Macedonia	17	0	-17	61	100	39	48	77	29	2.10	0.98	-1.12	4.4	5.0	0.6	8.4	7.2	-1.1
Netherlands	5	2	-3	96	86	-10	67	66	-1	0.95	0.90	-0.05	4.6	4.6	0.0	8.4	8.4	0.0
Norway	8	3	-4	98	98	1	64	64	0	0.70	0.67	-0.03	4.7	4.8	0.0	8.5	8.3	-0.2
Portugal	7	12	6	64	75	11	46	60	14	2.21	0.65	-1.56	4.8	5.0	0.2	8.0	7.5	-0.5
Slovenia	6			92			48			1.26			4.6			8.7		
Slovakia	6			87			55			2.36			4.4			7.8		

Note:

Based on ESS10 integrated file, edition 3.0.

Face-to-Face Interviews (F2F), Video Interviews (LV) and absolute Difference (Diff.) for the share of interviews that got interfered, how often showcards were used, the duration of the interview in minutes, the share of non-response, the degree of understanding from 'Never - Often' (1 - 5) and the overall experience from 'Very Negative Experience - Very Positive Experience' (1 - 10).

in Italy and an almost five-year younger sample. In terms of gender, video interviews show no clear trend. While some countries have slightly more men (Estonia, Italy, and Portugal), most countries feature more women in video interviews (Finland, France, Greece, Croatia, Iceland, Netherlands, and Norway), with one significant outlier that has over proportionally more women (North Macedonia). Respondents of video interviews are generally less likely to be married. Significant increases in married respondents can be observed in two countries (Norway and Portugal). Regarding the workforce, video respondents are more likely to be currently in paid work than face-to-face respondents. No significant differences in citizenship can be detected between the different modes of interviewing.

7.5.2 Impact of Video Interviews on Data Quality

The introduction of video interviews as a variation of the standards of an in-person interview mode deems a more detailed inspection of the differences in data quality. It should be noted that video interviews are still not routinely used among survey organizations (West et al., 2022), proving more relevant to the inspection of how this mode impacts data quality. Figure 7.13 shows the key characteristics of implementing video interviews relative to implementing in-person interviews.

For most countries, the interference is lower in video interviews. Two countries show slight increases

(Finland and France) while one shows drastically increased levels of interference of the interview (Portugal). The usage of showcards shows similarly positive results, with most countries having more respondents using them. Some countries show slight decreases (Switzerland, France, Italy, and the Netherlands).

The duration of interviews has slightly decreased for a few countries (Finland, Iceland, Netherlands, and Portugal). However, the general observation for most countries is that video interviews require more time.

Further, the nonresponse in most countries decreased for video interviews. Some show increased levels of nonresponse (France, Greece, Croatia, and Italy), while most could either slightly decrease nonresponse (Estonia, Iceland, Netherlands, and Norway), some could make more drastic improvements (Switzerland, Finland, North Macedonia, and Portugal).

Even the understanding is improved in video interviews for all countries but one (Switzerland). The general experience suffers in half of the countries (Switzerland, Finland, France, Iceland, North Macedonia, Norway, and Portugal). However, it is elevated in the other half (Estonia, Greece, Croatia, Italy, and the Netherlands).

In most countries, a substantial number of respondents had problems starting the call and internet problems. More common issues with the showcards were only reported in a few countries (Italy, Portugal, and Switzerland). Respondents from almost all countries complained about audio issues. Rarely respondents reported Display problems. Half or more of the respondents in some countries had no issues (Croatia, Estonia, Finland, Portugal, and Switzerland).

Interviewer behavior can also affect data quality in video interviews. The effect of the interviewer could be different between in-person and video interviews. Significant systematic interviewer effects could compromise the comparability of data across modes. We calculate the Intra-Class Correlation per item to estimate the interviewer effects and run Principal Component Analysis on latent variables. Both estimates need a minimum sample size of interviewers with a sufficient amount of video and face-to-face interviews to produce robust results. The analysis is conducted for all participating countries if enough interviewers meet the minimum requirements.

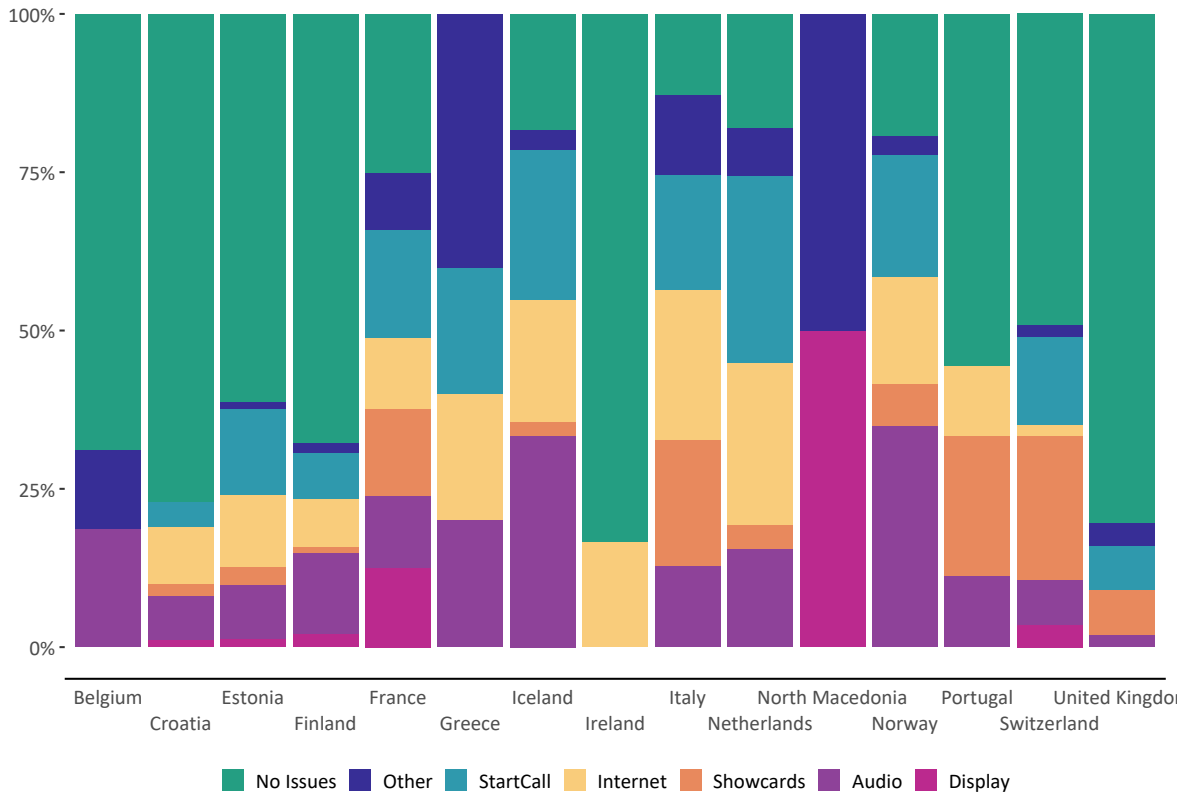


Figure 7.5 Technical Issues per Country, ESS10
 Note: Based on ESS10 integrated file, edition 3.0.

7.5.3 Interviewer Effects on Video Interviews

Intra-Class Correlation and Principal Component Analysis need a decent sample size of interviewers with a sufficient amount of video interviews as well as face-to-face interviews to produce meaningful results.

The threshold for for an intra-interviewer correlation is to either have a minimum of five video or face-to-face interviews. In total five countries surpass this threshold (Estonia, Finland, Iceland, Netherlands, and Norway). For the principal component analysis the threshold is to have a minimum of ten interviews completed in either mode, which is achieved by Estonia, Finland, Iceland, Italy, the Netherlands and Norway.

Table 7.14 Depending on the amount of interviews the interviewers have done, for which analysis are they eligible, ESS10

Country	N		Eligible for
	Face-to-Face	Video	
Belgium	1325	16	none
Bulgaria	2712	0	none
Switzerland	1471	50	none
Czechia	2476	0	none
Estonia	1302	240	ICC and PCA
Finland	1337	240	ICC and PCA
France	1931	46	none
United Kingdom	1090	55	none
Greece	2774	23	none
Croatia	1497	95	none
Hungary	1840	0	none
Ireland	1764	6	none
Iceland	567	333	ICC and PCA
Italy	2183	457	ICC and PCA
Lithuania	1659	0	none
Montenegro	1278	0	none
North Macedonia	1424	4	none
Netherlands	1221	248	ICC and PCA
Norway	920	491	ICC and PCA
Portugal	1830	8	none
Slovenia	1247	0	none
Slovakia	1415	0	none

Note:

Based on ESS10 integrated file, edition 3.0.

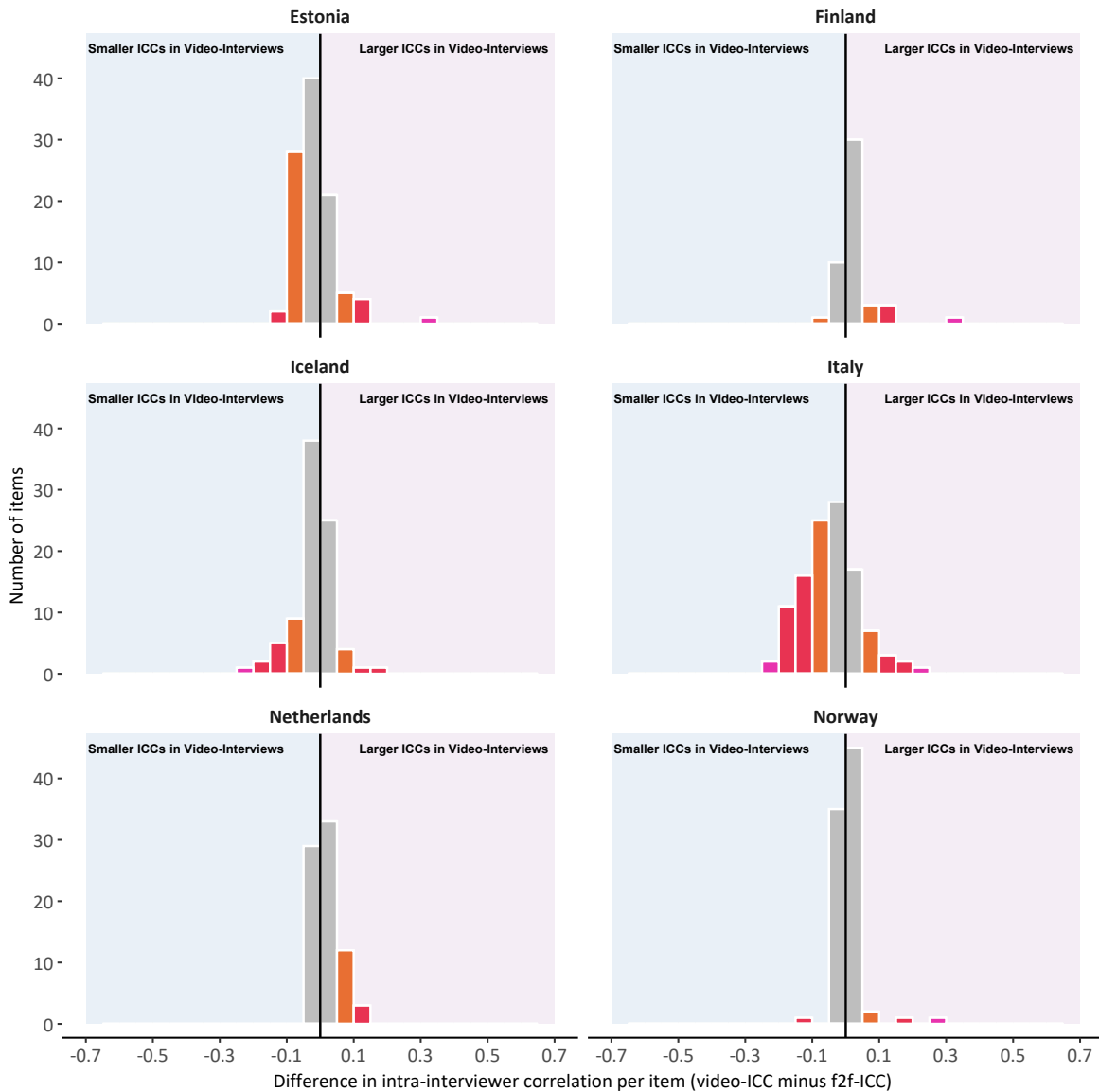


Figure 7.6 Interviewer effects difference between video and F2F interviews, ESS10
 Note: Based on ESS10 integrated file, edition 3.0.

The intra-interviewer correlations (ICCs) is the standard indicator of the European Social Survey to measure the interviewer effect on responses during the interview (see section Interviewer Effects). By comparing the ICC estimates from face-to-face interviews and the video interviews, it is possible to investigate variations of the effect between interviewer across these modes. The intra-interviewer correlations are estimated from multilevel models with respondents clustered within interviewers separately for face-to-face interviews and for video interviews. Due to the small sample size of video interviews and the low number of interviewer conducting video interview across participating countries, only estimates for items administered in video interviews by fewer than five interviewers were suppressed (compared to the recommended 30 interviewers). It should be noted that this reduced

number of clusters might affect the accuracy of the estimates and these results should be read with the necessary caution.

Figure 7.6 shows the distribution of the differences between video and face-to-face interviews regarding the intra-interviewer correlations estimates in Round 10. The ICCs in Estonia and Iceland tend to be smaller in video interviews, while in Finland, the Netherlands, and Norway, the skew towards higher ICCs in video interviews.

In this section, we investigate the impact of interviewers on latent variables from item batteries in the questionnaire. We look at the answer patterns to a set of items within an interview and compare it to the overall dimension built by the answer pattern of the other respondents. The extent to which the differences of the answers of respondents is related to allocation within an interviewer can ascertain the effect interviewers have on answers and can help identify issues regarding interviewer behaviour.

For this purpose, we run a categorical principal component analysis (CatPCA) over a few selected batteries of items. The categorical principal component analysis is conducted on a set of categorical variables. It allows analyzing the relationship between multiple variables while reducing the dimensionality of the data to facilitate interpretation. The items selected for the analysis correspond to the battery of items on human values, items on immigration attitudes, items on personal LGBTQ opinions, items on the satisfaction of life and circumstances, and items on institutional trust²⁶.

To estimate the effect of interviewers on respondents' answers, we calculate (a) the mean of component scores of the first component across interviews conducted by the same interviewer and (b) the standard deviations of those scores. We limit the analysis to interviewers with at least ten completed interviews, as the literature suggested (Blasius, 2018). Further, this is only applied to countries with more than three interviewers with at least ten video interviews each.

By comparing the mean component scores across interviewers it is possible to observe the extent to which the answer pattern differs between interviewers. In contrast, the standard deviation of the mean score indicates the extent to which answers vary within each interviewer. Lastly, the mean scores and their standard deviations are compared for video and face-to-face interviews. Figure 7.7 displays mean scores on the y-axis and the standard deviations on the x-axis per interviewer for the variables batteries of human values, attitudes towards immigration, LGBTQ attitudes, satisfaction with life, and trust attitudes. For each mode of interviewing, the ellipse superimposes the normal-probability contours over the scatterplot. The ellipses overlap for each interviewing mode and describe how similar they are. The overlap is the percentage of the video ellipses overlapping with the face-to-face ellipses relative to their total area.

²⁶From the ESS Questionnaire: attitudes on immigration from section B (imsmetrn, imdfetrn, impcntr), attitudes on LGTBQ also from section B (freehms, hmsfmlsh, hmsacld), the importance of miscellaneous aspects from section H (ipcrtiv, imprich, ipeqopt, ipshabt,impsafe, impdiff, ipfrule, ipudrst, ipmodst, ipgdtim, impfree, iphlpll, ipsuces, ipstrgv, ipadvnt, ipbhprp, iprspt, iplylfr, impenv, imptrad, impfun), satisfaction with the respondents life and circumstances from section B (stflife, stfeco, stfgov, stfdem) and institutional trust from section B (trstprl, trstlgl, trstplc, trstplt, trstprt, trstep, and trstun).

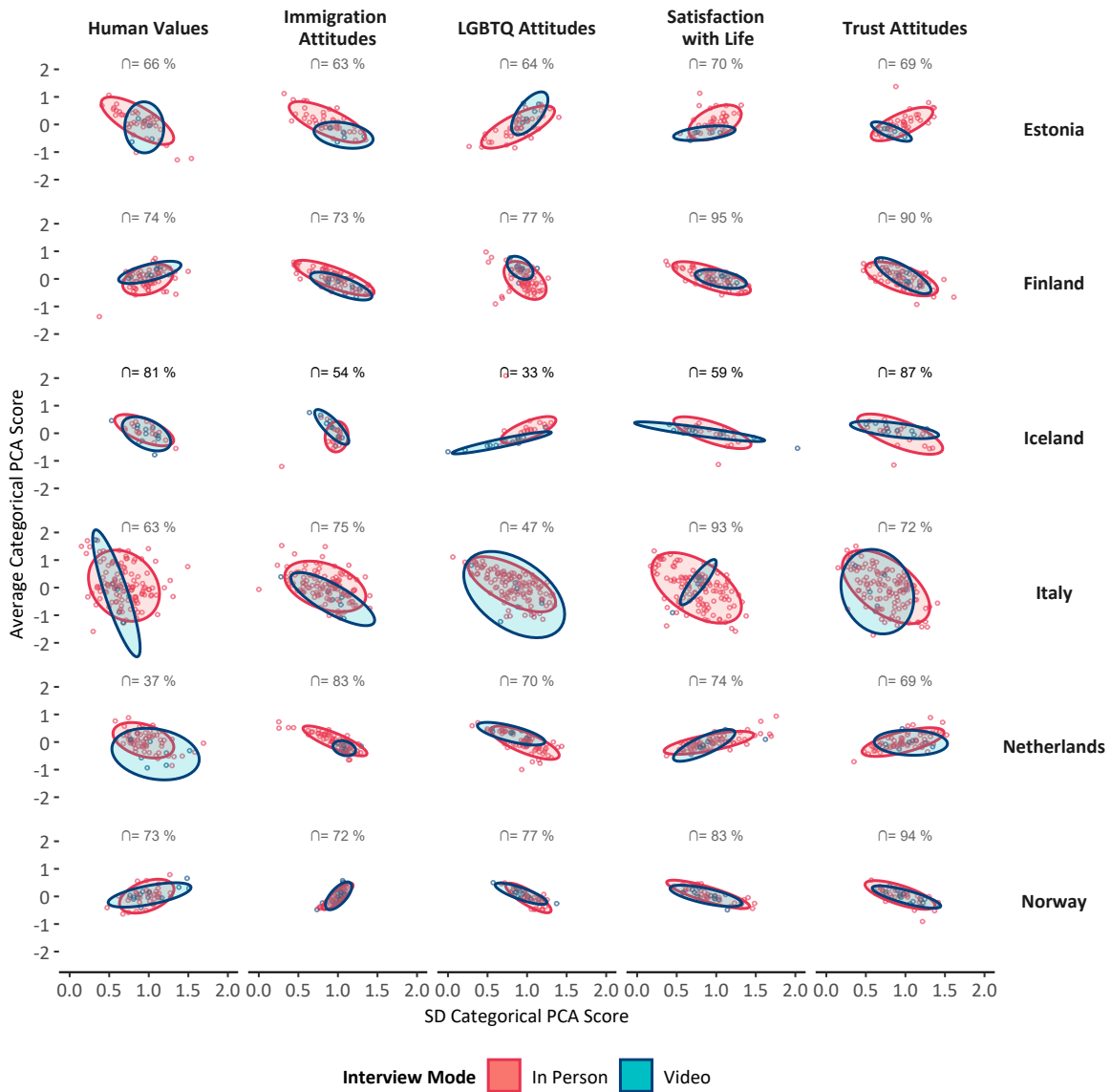


Figure 7.7 Principle Component Analysis in ESS10 for different components
 Note: Based on ESS10 integrated file, edition 3.0.
 Based on ESS10 data from Interviewer's questionnaire, edition 3.0.

8 DATA DEPOSIT

Once the data is collected, the survey data and paradata has to be finalised and, along with the relevant documentation, deposited to the ESS Archive, in principle by the end of February 22 (two months after the end of the targeted fieldwork period, which spanned from 1 September 2020 to 31 December 2021). Before deposit, the national teams are also expected to check and edit the data concerning uniqueness and consistency of identification numbers across files, data consistency towards the dictionaries on variable names, labels, values, and categories, and avoid possible disclosure risks with regards to the respondents. To assist in the latter task, the ESS Data Archive has made available an anonymisation guide, aiming to provide guidance to the National Teams on how to assess and minimise disclosure risk in the publicly available ESS data while avoiding unnecessary data loss. A complete deposit must contain the main data file, the raw data file, the interviewer questionnaire data file, the contact form data file, the sample design data file, the National Technical Summary, which documents key information on the data collection, and other documents such as questionnaire(s), show cards, population statistics, interviewer briefings, and information letters to respondents.

As shown in Figure 8.1 and summarised in Table 8.1, complete deposits were made between the end of November 2021 (Slovenia) and the end of January 2023 (UK and Ireland). Timely depositing has been a recurring challenge for many countries over the years in the ESS, and in Round 10 this was further complicated by COVID-19 pandemic, rendering fieldwork difficult to conduct for long spells in most countries. The last country to make the cut for the 10-country Round 10 first data release (face-to-face) in late June 22 was Finland (the other nine were Bulgaria, Croatia, Czechia, Estonia, France, Hungary, Lithuania, Slovakia and Slovenia), who deposited in mid-April 22, five months after Slovenia. A further nine countries (Iceland, Montenegro, Portugal, Norway, Switzerland, Netherlands, North Macedonia, Italy and Greece), depositing within a time frame from late May 22 to late June 22 were included in the Round 10 second release on 8 December 22. Finally, a third face-to-face data release in May 2023 capped off a challenging round, with Belgium, United Kingdom and Ireland taking the total of face-to-face countries having their Round 10 data published to 22.



processing step 1

1_1_idno_var.ipynb
1_2_wildcodes.ipynb
1_3_nonresponse.ipynb
1_5_duplicates.ipynb
1_4_empty_categories.ipynb
1_6_CF_filtercheck.ipynb
1_6_filtercheck.ipynb
1_7_CF_consistency.ipynb
1_7_consistency.ipynb
1_8_classifications.ipynb
1_9_report.ipynb

control of NTS and appendixes

1st processing report

processing step 2

2_0_edit_missings.ipynb
2_1_diffcheck.ipynb
2_2_create_draft.ipynb
2_3_frequency.ipynb

fieldwork documents

country documentation to Colectica

Figure 8.1 Data deposit process, ESS10

Table 8.1 Complete deposit, ESS10

Country	Date of complete deposit	Weeks between end of fieldwork and complete deposit
Austria	24 February 2022	11.4
Belgium	17 November 2022	10.7
Bulgaria	19 January 2022	15.9
Croatia	01 February 2022	9.6
Cyprus	05 January 2023	19.9
Czechia	25 March 2022	25.3
Estonia	21 February 2022	7.4
Finland	14 April 2022	10.4
France	16 March 2022	10.7
Germany	24 May 2022	20.0
Greece	28 June 2022	5.1
Hungary	24 January 2022	14.3
Iceland	29 May 2022	15.3
Ireland	26 January 2023	5.9
Israel	24 January 2023	27.3
Italy	07 June 2022	6.0
Latvia	11 January 2023	49.3
Lithuania	11 January 2022	3.9
Montenegro	30 May 2022	8.7
Netherlands	01 June 2022	8.4
North Macedonia	02 June 2022	12.4
Norway	31 May 2022	3.9
Poland	11 July 2022	6.7
Portugal	30 May 2022	12.1
Serbia	09 August 2022	10.9
Slovakia	06 March 2022	19.4
Slovenia	23 November 2021	12.7
Spain	07 September 2022	14.1
Sweden	09 May 2022	16.0
Switzerland	31 May 2022	4.1
United Kingdom	20 January 2023	20.0

When the fieldwork starts late and/or is extended beyond four months, it may be difficult or even impossible to make a complete deposit by the specified deposit deadline. However, there are also marked differences between countries in the time between fieldwork completion and deposit. It took between four weeks (Lithuania) and 25 weeks (Czechia) before a complete deposit was made. The median country (Belgium) took slightly more than ten weeks.

For eleven countries, data deliverables were deposited on the same day or over just a few days (Table 8.2). The main data file was part of, or just a few days later than the first deposit for all countries. The sample design data file was a different story this round. For nine countries, this file was deposited a week or more later than the other data deposits, with four countries (Slovenia, Greece, UK and Ireland) delaying this deposit by a month or more. The last deposits often consisted of either the sample data file, contact form data file or the NTS.

Table 8.2 Time between end of fieldwork and deposit (in weeks) of main data and documentation deliverables, ESS10

Country	Main data file	Contact forms data file	Sample design data file	National Technical Summary	Complete deposit
Austria	11.4	11.4	11.4	11.4	11.4
Belgium	10.7	10.7	10.7	10.7	10.7
Bulgaria	15.9	15.9	15.9	15.9	15.9
Croatia	7.9	7.9	9.6	9.6	9.6
Cyprus	19.9	19.9	4.6	4.6	19.9
Czechia	18.1	18.1	21.1	25.3	25.3
Estonia	7.4	7.4	7.4	7.4	7.4
Finland	8.6	8.4	10.4	8.4	10.4
France	10.6	10.7	10.7	10.7	10.7
Germany	20.0	20.0	20.0		20.0
Greece	1.0	5.0	5.1	5.1	5.1
Hungary	14.0	14.3	14.3	13.3	14.3
Iceland	15.3	15.3	15.3	19.6	15.3
Ireland	0.7	0.7	5.9	0.7	5.9
Israel	27.3	27.3	22.4	22.4	27.3
Italy	6.0	6.0	6.0	6.0	6.0
Latvia	31.3	49.3	31.3	33.0	49.3
Lithuania	3.9	3.9	3.9	3.9	3.9
Montenegro	8.7	8.7	8.7	8.7	8.7
Netherlands	8.3	8.3	8.3	8.4	8.4
North Macedonia	12.4	12.4	12.3	12.4	12.4
Norway	3.9	3.9	3.9	3.7	3.9
Poland	5.1	5.1	5.1	6.7	6.7
Portugal	9.7	9.7	12.1	9.7	12.1
Serbia	1.7	1.7	10.9	1.7	10.9
Slovakia	15.0	15.0	15.0	19.4	19.4
Slovenia	6.7	10.7	12.0	12.7	12.7
Spain	1.4	4.3	4.3	14.1	14.1
Sweden	16.0	16.0	16.0	16.0	16.0
Switzerland	4.1	4.1	4.1	4.1	4.1
United Kingdom	15.9	20.0	20.0	15.9	20.0

Note:

Based on information from the ESS Archive.

Once all data files and documentation have been deposited, the ESS Archive processes the data in close collaboration with the national teams. The principles for data processing are to produce harmonised and standardised data files that are as user-friendly as possible and reflect the original quality of the data. This is an important principle: the processing shall not fix the quality of the data but rather reflect the original quality and document irregularities.

As of Round 10, the ESS Data Archive is cloud-processing the main, interviewer and contact form data in Python/Jupyter Notebook. Metadata is imputed to Colectica, a data documentation/metadata management system, from national technical summaries and appendices on education, political parties, marital status, and ancestry. All fieldwork documents, source questionnaires, and survey documentation documents are stored in Azure, and links are imputed to Colectica. A main difference from previous ESS rounds is that processing in the new system is more standardized and less prone to differential treatment depending on the actual researcher carrying out the country processing.

Processing is done in two main steps (see Figure 8.1), the first followed by a comprehensive data processing report containing output with issues and systematic errors from the data processing programs²⁷. Each issue should be controlled thoroughly by the national teams.

The main action points of the processing are to check the consistency of identification numbers between files and consistency between deposited files and the dictionaries when it comes to names, labels, formats, values, and categories of all variables. Values not listed in the dictionary are reported as wild codes. Cases with high item-nonresponse are flagged for countries to check and decide whether to keep them in the data. Empty categories are highlighted to investigate whether they indicate an error in the questionnaire or data. Duplicate cases in one or more modules are reported, and countries are asked to investigate duplicated interviews conducted by the same interviewer especially. In the filter check, we control that the flow logic defined in the source questionnaire was implemented correctly in the national CAPI instruments and the resulting data files. A high portion of cases with filter errors or systematic filter errors are reported for national teams to check or confirm. Inconsistencies related to the age distribution of respondents, household grid, interview times, contact attempts, etc., and extremely short or long interviews are all reported for further investigation. Finally, changes over time in education, religion, ancestry, occupation, country of birth and language, as well as the bridging of country-specific variables into harmonised variables, are checked, and the national teams are asked to control if changes reflect fundamental changes or are due to for instance different coding procedures between rounds or sample related issues.

When data processing is completed, the final step for the national teams is to validate the drafts of the country's data files. In addition to the validation of the main and interviewer data files, we ask the country NCs to confirm that they have looked at the changes in distribution from Round 9 to Round 10. For each category of each variable, we flag if the change between rounds is larger than two standard deviations. While it is expected that the distribution of variables changes over time, we see this procedure as a way of discovering potential problems in the data collection process, for instance scales that has been turned etc.

²⁷For most countries, iterations of step 1 are required before proceeding to step 2 of processing. This includes the production of several processing reports from step 1, based on modified versions of the originally deposited data sets.

9 CONCLUSION

The European Social Survey strives for robust quality standards and cross-national comparability and has been successful in many respects. The current ESS Specification addresses diverse aspects of the survey design and implementation in view of cross-national comparability (input harmonisation). While the aspiration for high-quality standards remains consistent, achieving uniformity across all aspects of the survey may encounter challenges.

Despite the efforts to standardise the survey design and implementation across countries, notable discrepancies persist across various stages of the national survey lifecycle, encompassing timing, emphasis, and practical implementation.

Of particular concern is the observed variance in adherence to the prescribed translation procedures, with some countries exhibiting limited commitment, notably regarding the duration allocated for translation team review. A well-translated questionnaire is indispensable for establishing a robust baseline for cross-country comparison of measured concepts, with established procedures serving as a crucial safeguard. At the same time, a national team's experience can increase efficiency and effectiveness, and some lenience towards a lack of rule adherence can be appropriate.

Some national teams face tight budget constraints, resulting in inadequate capacity to meet the specified high-quality standards of the European Social Survey. A critical challenge arises as several countries' planned net sample sizes fall short of achieving the targeted statistical precision, primarily due to budget constraints.

The prolonged national survey lifecycle suggests that a National Coordinator must be available for at least one and a half years to prepare, implement, and monitor across different stages. In Round 10, the average duration from questionnaire release to data deposit was about 29 months, significantly longer than the average of 19 months for Round 9. This increase can be attributed mainly to the adversities encountered during the varying waves of the COVID-19 pandemic in 2020-2021. Still, there are significant deviations between countries. National teams face fluctuating work demands in different survey data collection knowledge areas and thus need flexibility and versatility. Little is known about the time commitments of the National Coordinators and their teams. It may be advisable for the Core Scientific Team to map these time commitments and consider time as a constraint on the project alongside scope and cost.

The asynchronous fieldwork periods are particularly striking, with varying start dates and fieldwork durations. Countries do not only vary in terms of the difficulty of reaching sample units that are hard to contact and/or reluctant to participate but also in the capacity available and the amount of effort devoted to reaching these sample units and closely monitoring and managing this process.

Significant cross-national differences in interview duration, surpassing cross-language differences, suggest that cross-national differences in interview practice continue to exist. In addition, interviewer effects remain large in some countries, suggesting that interviewing practice is also not adequately standardised across interviewers within countries. Interviewers' adherence to the principles of standardised interviewing depends on many factors. In addition to prior training and experience of the interviewer workforce and interviewer monitoring processes, the content and organisation of the interviewer briefing may be highly relevant.

The absence of an experimental design and reliable information on the fieldwork organisation limits

the causal evaluation of interviewer effects. To the extent that interviewer error is random, only the precision of survey estimates is adversely affected. However, although unquantifiable, the unstandardised interviewing practice also increases the risk of survey estimates that are, overall, shifted in one direction or the other (pure interviewer bias). This country-specific systematic interviewer effect poses a non-negligible threat to cross-national comparability.

Nonresponse, particularly regarding the systematic divergence between nonrespondents and respondents and the resulting nonresponse bias reducing cross-national comparability of survey estimates, remains a cause of concern. Contrasting the two response groups via auxiliary paradata revealed specific differences, which could also be related to differences in substantive answers. However, the analysis in this report does not include a detailed model of capturing the extent of potential bias. Additional fieldwork efforts to convert initial nonrespondents may help to reduce the divergence between the respondent group and the group of nonrespondents. Some of the risks of nonresponse bias, which depends on the response rate and the contrast between respondents and nonrespondents, can be alleviated. All in all, maintaining high response rate targets appears to remain conducive to nonresponse error mitigation.

Data processing remains a field with many blind spots. On the one hand, the data processing by national teams and survey agencies before depositing it to the Archive is insufficiently documented. On the other hand, the data processing by the ESS Archive is thoroughly documented, but not in a way that might facilitate a straightforward evaluation of its impact on the data. The potential effect of processing error on data quality has not received much attention thus far, neither in the ESS nor in survey methodological research. Further studies directed towards developing quality standards at that stage of the survey lifecycle would be a much-needed contribution to the field of survey methodology.

Substantive data users should also remain attentive to remaining data quality issues. Cross-national comparative research should account for disparities across various stages of the national survey lifecycle and potential variations in data quality among countries. This entails incorporating analyses that address differences, such as controlling for interviewer variance, to ensure a robust interpretation of results.

The European Social Survey prioritises methodological rigour and aims for cross-national and intertemporal comparability, but this requires an ongoing effort and commitment. This report contributes to these objectives by assessing the data collection process and quality across all participating countries in Round 10. In pursuing quality assessment and enhancement, employing a case study approach may offer additional insights by delving into specific aspects of the survey lifecycle requiring improvement (e.g., sampling, briefing, fieldwork, and interviewer monitoring) within select countries. The findings presented in this report can be used to select these countries and areas for improvement.

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