Quality Report for the European Social Survey, Round 9

OVERALL FIELDWORK AND DATA QUALITY REPORT

ESS ERIC Core Scientific Team[1]

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The document builds on the quality assessment work and recommendations by Geert Loosveldt and Celine Wuyts

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INTRODUCTION

From its foundation in 2001, the European Social Survey 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 in view of both the ESS quality commitment to data users and continuous quality improvement.

The purpose of this report is to inform interested substantive data users, survey methodological researchers, survey sponsors and practitioners on the quality of the European Social Survey Round 9 data and data collection process. The report integrates and elaborates on the 29 country-specific quality reports that were produced in 2020. The focus is on the strengths and relative weaknesses in the different stages of the (national) survey lifecycle for the participating countries (Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Montenegro, the Netherlands, Norway, Poland, Portugal, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom), 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 specification, guidelines and templates for participating countries etc.). For some elements in the survey lifecycle, the ESS9 Specifications (European Social Survey, 2018) provide 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 with respect to 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.

Standardisation similarly refers to how the information provided in this report is repeated from one wave to another, furthering the content's understandability and comparability across waves. Therefore, this report uses the previous version from ESS Round 8 (2018; Wuyts & Loosveldt, 2019) as a blueprint in many regards.

The report's 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 life-cycle which are sparsely documented additionally draw on information from the ESS Sampling Expert Panel, Translation Team, SQP Team, Fieldwork Team, and country contacts.

The final report was compiled and edited by Georg Kessler, GESIS Mannheim. Respective Core Scientific Team (CST) members provided the chapters' content:

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1 TIMING OF ACTIVITIES

Relative to the timetable proposed in the ESS9 Specification[1], the preparatory activities related to sampling, translation and pretesting were completed on schedule in 5 countries (Belgium, Finland, the Netherlands, Sweden, and the United Kingdom). The sampling design was signed off only after the end of June 2018 in 17 countries, cApStAn verification was completed only after the end of August 2018 in 12 countries, SQP Coding was started after the end of August 2018 in 18 countries, and pretesting was completed after the end of August 2018 in 19 countries. In Bulgaria, Croatia, Czechia, Hungary, Iceland, Latvia, Lithuania, Montenegro, Slovakia and Spain, all of the preparatory activities were completed late relative to the project timetable.

Fieldwork in Bulgaria was completed by the end of December 2018. In 16 countries, fieldwork was extended beyond this date, and in Croatia, Hungary, Iceland, Latvia, Lithuania, Montenegro, Slovakia, Spain, fieldwork only started in 2019.

For 18 countries (Austria, Belgium, Bulgaria, Cyprus, Czechia, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, the Netherlands, Norway, Poland, Slovenia, Switzerland, and the United Kingdom) complete deposits were made by the end of May 2019. These countries were included in the first data release (October 2019). For Croatia, Latvia, Lithuania, Montenegro, Portugal, Slovakia, Spain and Sweden, complete deposits were made between July 2019 and the first week of March 2020. These countries were added in the second data release (June 2020). Denmark and Iceland completed the Round 9 data deposit between March and April 2020. As a result, these countries were included in the third data release (December 2020).

Taking the dates of the release of the Round 9 Source Questionnaire or of the confirmed participation to ESS9 as the start of the national survey lifecycle[2] 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 56 weeks (Spain) and 140 (Denmark). In the median country, the cycle took 79 weeks (Table 1.1). This suggests that a National Coordinator has to be available for about one year and a half in order to prepare, implement and monitor the different steps in the national lifecycle.

[1] In view of comparable data collection periods (taking at least one month between September and December) and a timely data release, the ESS9 Specification suggests that sampling preparations are to be preferably completed by the end of June 2018, and translation and pretesting by the end of August 2018.

[2] The Round 9 Source Questionnaire was released to the NCs at the end of March 2018. This can be considered as the survey start date for most of the Round 9 countries. However, a few countries joined the Round 9 after this release. In these cases, the date of their confirmed participation is considered as the start date.

Table 1.1 National lifecycle duration, Round 9

Country	Date of finalisation of main data file	Date of planned fieldwork end	Duration (weeks)
Austria	31 March 2018	29 April 2019	56.3
Belgium	31 March 2018	18 June 2019	63.4
Bulgaria	01 July 2018	09 October 2019	66.4
Croatia	01 March 2019	07 April 2020	57.6
Cyprus	31 March 2018	14 October 2019	80.3
Czechia	31 March 2018	01 August 2019	69.7
Denmark	31 March 2018	04 December 2020	139.9
Estonia	31 March 2018	07 October 2019	79.3
Finland	31 March 2018	15 October 2019	80.4
France	31 March 2018	25 September 2019	77.6
Germany	31 March 2018	25 July 2019	68.7
Hungary	31 March 2018	21 October 2019	81.3
Iceland	31 March 2018	13 October 2020	132.4
Ireland	31 March 2018	15 October 2019	80.4
Italy	31 March 2018	26 June 2019	64.6
Latvia	31 March 2018	12 May 2020	110.4
Lithuania	31 March 2018	28 May 2020	112.7
Montenegro	01 September 2018	29 May 2020	90.9
Netherlands	31 March 2018	03 June 2019	61.3
Norway	31 March 2018	09 October 2019	79.6
Poland	31 March 2018	24 June 2019	64.3
Portugal	31 March 2018	26 April 2020	108.1
Serbia	31 March 2018	04 October 2019	78.9
Slovakia	01 July 2018	20 April 2020	94.1
Slovenia	31 March 2018	18 September 2019	76.6
Spain	01 December 2018	07 April 2020	70.4
Sweden	31 March 2018	05 May 2020	109.4
Switzerland	31 March 2018	03 October 2019	78.7
United Kingdom	31 March 2018	08 October 2019	79.4

Note:
Based on ESS9 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 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 objective was to sign off the sample designs of all countries by the end of July 2018, well in advance of fieldwork starting in September 2018. However,there are always some countries where the design is signed off later. At Round 9, only 12 of the 29 countries that eventually participated in Round 9 had signed off their designs by this date. By the end of November 2018, 24 designs had been signed off. The last five were signed off between March and September 2019. Three of these—Lithuania, Croatia and Iceland—were signed off more than a year after the 31 July 2018 target, all in September 2019. The sign-off date for each country is shown in Table 2.1.

Table 2.1 Date of sample sign-off, Round 9

Country	Sign-off date	Timely sign-off
Austria	13 September 2018	
Belgium	11 June 2018	Yes
Bulgaria	07 November 2018	
Croatia	05 September 2019	
Cyprus	05 July 2018	Yes
Czechia	16 October 2018	
Denmark	04 September 2018	
Estonia	07 September 2018	
Finland	27 June 2018	Yes
France	14 September 2018	
Germany	26 August 2018	
Hungary	27 November 2018	
Iceland	17 September 2019	
Ireland	02 October 2018	
Italy	24 July 2018	Yes
Latvia	19 September 2018	
Lithuania	02 September 2019	
Montenegro	14 March 2019	
Netherlands	03 July 2018	Yes
Norway	11 June 2018	Yes
Poland	30 May 2018	Yes
Portugal	23 July 2018	Yes
Serbia	07 September 2018	
Slovakia	11 October 2018	
Slovenia	12 June 2018	Yes
Spain	31 July 2019	
Sweden	19 July 2018	Yes
Switzerland	28 June 2018	Yes
United Kingdom	11 June 2018	Yes

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 disadvantage is that it is not usually possible to select equal-probability samples of persons, leading to the need to carry out a larger 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 the countries participating in ESS9 (15 out of 29) used a sampling frame of persons, such as a population register, while most of the remainder (13 out of 29) used a sampling frame of addresses. Just one country, Slovakia, used an area sampling approach. The sampling frames used are summarised in Table 2.2.

Table 2.2 Sampling frames, Round 9

Country	Frame units	Frame
Austria	Address	data.door (postal delivery file)
Belgium	Person	Belgian national population register
Bulgaria	Address	2011 population census list of dwellings
Croatia	Address	National list of addresses of buildings with private households
Cyprus	Address	Electricity Authority of Cyprus (EAC) list of domestic household customers
Czechia	Address	Czech Statistical Office register of houses and apartments
Denmark	Person	Dansk centrale personregister (CPR)
Estonia	Person	Eesti rahvastikuregister
Finland	Person	Kansallinen väestörekisteri (national population register)
France	Address	INSEE master list of dwellings
Germany	Person	Official register of residents
Hungary	Person	Magyar Népesség Nyilvántartás (National Population Registry from the BM NYHÁT)
Iceland	Person	Icelandic Population Register
Ireland	Address	GeoDirectory
Italy	Person	Liste Anagrafiche comunali (LAC)
Latvia	Address	List of occupied private dwellings in Latvia: Population Register - State Address Register - Central Statistical Bureau
Lithuania	Address	Lietuvos Respublikos adresų registras
Montenegro	Address	Geoportal and eRegistry (combined)
Netherlands	Person	Dutch population register
Norway	Person	Norwegian National Population Register
Poland	Person	Powszechny Elektroniczny System Ewidencji Ludności (PESEL)
Portugal	Address	List of addresses of domestic clients of Energias de Portugal (EDP)
Serbia	Address	2011 Serbian Population Census list of dwellings
Slovakia	Address	List of dwellings constructed by field enumeration
Slovenia	Person	Central Register of Population (CRP)
Spain	Person	Padrón Continuo (Continuous Population Register)
Sweden	Person	Svenska skattemyndighetens register över befolkningen (population register)
Switzerland	Person	Stichprobenrahmen für Personen- und Haushaltserhebungen (population register)
United Kingdom	Address	Postcode address file (small users)

Note:
Based on the ESS9 country-specific Sample Design Summaries, Round 9.

2.2.1 Coverage of the target population

The target population of ESS9 was:

> All persons aged 15 and over (no upper age limit)who 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 facilities.

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 undercoverage, 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 undercoverage mainly depends on how long ago the census was last conducted. At Round 9, Bulgaria, Serbia and France all used address lists of this kind, but in the case of France, the list was constructed in 2017, just a year before the ESS fieldwork. However, Bulgaria and Serbia both relied on lists of dwellings enumerated for the 2011 Census, so these lists have the potential for substantial undercoverage.

In addition to undercoverage 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), the smaller Balearic and Canary Islands in Spain (1.3% of the Spanish 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 (0.6% of the population of the United Kingdom), small islands in Croatia (1.9% of Croatian population), the island of Grimsey (0.02% of Icelandic population), and islands in Portugal (4.8% of Portuguese population).Undercoverage in each country is summarised in Table 2.3.

Table 2.3 Sample undercoverage, Round 9

Country	Exclusions (undercoverage)
Austria	Persons residing at addresses not included in the Austrian Postal Service address list (data.door)
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 1.9% of the Croatian population.
Cyprus	Persons residing at addresses not connected to the mains electricity grid
Czechia	Persons residing at addresses not included in Czech Statistical Office's register of residential dwellings, e.g. homeless persons, persons living in non-standard dwellings
Denmark	Persons not in the population register
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. Also, all islands (incl. Corsica, constituting 0.5% of the target population).
Germany	Persons not registered with any municipality
Hungary	Persons not in the population register
Iceland	Persons not in the population register. Also, one remote island (Grímsey), with 15+ population of 50 people, is excluded
Ireland	Persons residing at addresses not included in the GeoDirectory
Italy	Persons not in the public register of individuals (Liste Anagrafiche comunali – LAC)
Latvia	Persons residing at an address not declared by anyone as their residence
Lithuania	Persons residing under addresses not included in the address register of the Republic of Lithuania (version October 1, 2016)
Montenegro	Persons not residing in a recognised dwelling
Netherlands	Persons residing at addresses not included in the Postaal Afgiftenpuntenbestand provided by Cendris, a subsidiary of the Dutch Postal Service
Norway	Persons not in the population register
Poland	Persons not included in the National Register of Citizens. The estimated number of non-registered immigrants varies from 50,000 to 500,000, depending on the method of estimation.
Portugal	All islands, including Madeira. Persons living in municipalities with less than 20 dwellings
Serbia	Persons residing at dwellings not included in the 2011 Census. Excluded dwellings include a large number in the municipalities of Preševo and Bujanovac – encompassing around 0.5% of the population - where the census was boycotted by most of the Albanian ethnic community
Slovakia	Persons not residing in a recognised dwelling
Slovenia	Persons not included in the Central Register of Population
Spain	Persons not in the Continuous Population Register (Padrón Continuo), as updated in 2015. Also, the smaller Balearic and Canary Islands (constituting 1.3% of the target population).
Sweden	Persons not in the population register obtained from the Swedish tax authority. This includes illegal immigrants. A report from 2010 estimates that there are between 10 000 and 35 000 illegal immigrants in Sweden.
Switzerland	Persons not in the population register of any cantons or municipalities, nor in the federal register of immigrants or the register of international civil servants
United Kingdom	Persons not residing at an address in the Post Office's small user file (PAF), e.g. homeless persons. Also, the Isle of Man, the Channel Islands and areas north of the Caledonian Canal.

Note:

Based on the ESS9 country-specific Sample Design Summaries, Round 9.

Unlike undercoverage, overcoverage should not introduce any error to survey estimates, provided that all cases of overcoverage (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, Montenegro and Serbia. Similarly, vacant, demolished and non-residential addresses are outcomes that should only apply to address frames but have been used quite extensively in Belgium, Spain, Hungary and Italy.

Table 2.4 Sample overcoverage (%), Round 9

Frames	Country	Total Ineligible	Died	Abroad	Demol-ished	Vacant	Non-residential	Other
Person	Belgium	4.8	0.3	2.0	0.7	0.8	0.5	0.7
	Denmark	1.5	0.3	0.9	0.1	0.0	-	0.2
	Estonia	2.1	1.7	0.2	-	-	-	0.2
	Finland	0.4	0.1	0.3	0.0	-	-	-
	Germany	1.6	0.5	0.4	0.2	-	0.5	-
	Hungary	5.0	0.7	2.7	1.3	0.1	0.1	0.1
	Iceland	4.4	0.2	2.1	1.1	0.1	0.1	0.7
	Italy	5.2	0.9	1.3	1.5	0.9	0.3	0.3
	Netherlands	2.7	0.4	0.9	0.1	0.6	0.4	0.4
	Norway	1.6	0.4	-	-	-	-	1.2
	Poland	8.0	0.6	6.7	0.3	0.3	0.3	-
	Slovenia	2.1	0.1	1.1	0.1	0.6	0.1	0.1
	Spain	5.6	1.3	1.7	1.1	1.0	0.4	0.2
	Sweden	3.3	0.3	1.7	-	-	-	1.4
	Switzerland	1.3	0.4	0.8	-	-	0.2	-
Address	Austria	0.9	-	-	0.1	0.5	0.2	0.1
	Bulgaria	5.1	0.5	1.5	0.5	2.2	0.1	0.4
	Croatia	13.2	-	1.0	7.7	3.3	0.9	0.2
	Cyprus	11.1	-	0.2	2.8	5.5	2.3	0.4
	Czechia	0.1	-	0.0	-	-	0.1	-
	France	7.5	-	0.0	2.7	4.3	0.5	-
	Ireland	5.2	0.1	-	0.4	3.9	0.6	0.3
	Latvia	7.4	0.3	0.5	1.6	3.9	0.7	0.5
	Lithuania	26.0	-	-	2.0	9.2	7.9	7.0
	Montenegro	6.3	0.7	3.0	1.9	0.4	-	0.3
	Portugal	27.2	0.2	0.4	11.0	11.3	2.6	1.7
	Serbia	2.5	1.2	0.5	0.5	0.2	0.1	-
	Slovakia	3.3	-	0.1	1.6	1.0	0.6	-
	United Kingdom	8.3	-	-	0.4	5.7	1.1	1.2

Note:
Based on ESS9 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).

Overall ineligibility rates were highest in Portugal (27.2%) and Lithuania (26.0%) and lowest in Finland (0.4%) and Czechia (0.1%).

2.3 Frame unit selection

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 ‘frame 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 20 countries had a single-domain design. Of these, 12 were multi-stage clustered designs, and 8 were single-stage unclustered designs (7 of persons and 1 of addresses). These design features are summarised in Table 2.5. The frame units are shown in Table 2.2.

Table 2.5 Sample design features, Round 9

Country	Domains	Clusters (primary sampling units)
Austria	2	Census districts (Zählsprengel) (outside-Vienna domain)
Belgium	1	Municipalities
Bulgaria	1	Census enumeration areas
Croatia	1	Polling areas
Cyprus	1	-
Czechia	1	Basic settlement units
Denmark	1	-
Estonia	1	-
Finland	1	-
France	2	Interviewer action areas (Zone Action Enquêteur) (smaller municipalities domain)
Germany	1	Municipalities
Hungary	2	Settlements (smaller settlements domain)
Iceland	2	2-digit postcode areas (rural domain)
Ireland	1	Address clusters
Italy	2	Municipalities (smaller municipalities domain)
Latvia	1	Address clusters
Lithuania	2	Polling stations (rural domain)
Montenegro	1	Polling stations
Netherlands	1	-
Norway	1	-
Poland	2	Settlements (gminas) (rural domain)
Portugal	2	Postcode areas (small postcode areas domain)
Serbia	1	Census enumeration areas
Slovakia	2	Streets (large municipalities domain); Muncipalities (small municipalities domain)
Slovenia	1	Clusters of enumeration areas
Spain	1	Census blocks (sección)
Sweden	1	-
Switzerland	1	-
United Kingdom	1	Postcode sectors

Note:
Based on the ESS9 country-specific Sample Design Summaries, Round 9.

2.3.2 In-Field selection

For countries where the frame 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 are the Kish grid method, the Rizzo method and the (last, next to or nearest) birthday method. Birthday methods were used for within-household selection in seven countries, and the Kish grid method was used in four countries (Table 2.6). A further three countries used the standardised ESS Fieldwork Management System (FMS), 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, Round 9

Country	Selection method				Number of eligible persons in dwelling (row %)				
	Kish	SRS (FMS)	Last Birth-day	Next Birth-day	1	2	3	4	5+
Austria			x		33.4	48.1	11.6	5.2	1.6
Bulgaria			x		21.5	41.8	20.7	10.5	5.6
Croatia		x			27.3	43.7	17.4	7.0	4.6
Cyprus			x		23.9	44.5	16.2	10.3	5.1
Czechia				x	23.0	49.6	17.6	8.1	1.8
France	x				39.0	48.1	8.5	3.7	0.8
Ireland			x		29.5	50.0	15.7	8.9	4.2
Latvia	x				40.0	43.7	12.6	2.3	1.3
Lithuania	x				35.5	49.8	10.1	3.1	1.6
Montenegro			x		16.8	24.2	18.8	22.1	18.1
Portugal			x		22.6	49.2	16.8	9.0	2.5
Serbia		x			29.9	39.0	15.1	10.3	5.7
Slovakia		x			33.9	45.3	12.3	6.6	1.9
United Kingdom	x				39.1	47.1	9.0	3.6	1.2

Note:
Selection method is based on ESS9 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 1. 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, $n_{eff} = n/deff$.

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 22 of the 29 countries went into the field with a design predicted to meet the minimum requirement for effective sample size. Of these 22, only 13 achieved at least 95% of the minimum target, while nine did not. The countries that fell short of the target included three of the smaller countries for whom the minimum effective sample size was 800: Cyprus (633), Latvia (728) and Montenegro (644). The others were Bulgaria (1,172), Croatia (1,286), Norway (1,406), Poland (1,312) and Serbia (1,352). Of the seven countries with below-minimum predicted n_{eff}, two achieved better than predicted, but five achieved less. The net result was that 21 of the 29 countries achieved the specified minimum n_{eff} to within a tolerance of 10% (i.e. at least 1,350, or 720 for smaller countries). Only two countries achieved less than 80% of the specified minimum effective sample size: Portugal (56%) and Slovakia (45%).

Table 2.7 Predicted and estimated effective sample sizes, Round 9

Country	Target minimum n_{eff}	Pre-fieldwork predicted n_{eff}	Post-fieldwork estimated n_{eff}
Austria	1500	1509	1488
Belgium	1500	1500	1524
Bulgaria	1500	1500	1172
Croatia	1500	1500	1286
Cyprus	800	835	633
Czechia	1500	1484	1452
Denmark	1500	1621	1575
Estonia	800	1994	1904
Finland	1500	1999	1755
France	1500	1412	1464
Germany	1500	1732	1921
Hungary	1500	1438	1538
Iceland	800	1000	828
Ireland	1500	1513	1534
Italy	1500	1557	1521
Latvia	800	801	724
Lithuania	1500	1300	1196
Montenegro	800	803	644
Netherlands	1500	1800	1666
Norway	1500	1761	1406
Poland	1500	1500	1312
Portugal	1500	1100	843
Serbia	1500	1500	1352
Slovakia	1500	974	679
Slovenia	800	1064	1160
Spain	1500	1502	1426
Sweden	1500	1800	1539
Switzerland	1500	1500	1542
United Kingdom	1500	1466	1373

Note:
Based on the ESS9 country-specific Sampling Design Summaries and the ESS9 Sample Design Data File.

The accuracy of the predictions of the impact of sample clustering on design effects, and hence on effective sample size, is summarised in Table 2.8, which therefore lists only the countries/domains with clustered designs. The two relevant parameters are $\bar{b}$ the mean number of interviews per cluster and $\bar{\rho}$ the mean intra-cluster correlation. 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 Germany, France domain 2, Croatia, Hungary domain 2, Lithuania domain 2, Latvia, Portugal domain 1, Serbia and Slovenia).

On the other hand, the predicted valueof $\bar{\rho}$ was overly optimistic in three countries that had not taken

part in Round 9 and therefore did not have a prior estimate based on recent ESS data. In Bulgaria, $\bar{\rho}$ turned out to be 2.14 times the predicted value, in Slovakia 1.53 times higher and in Montenegro 1.49 times higher. In Slovakia, $\bar{b}$ was over-estimated due to undue optimism about the likely response rate achieved: the realised value was only 52% of the predicted value. There was also an overestimation in Latvia (75%), but all other realised values were in the range of 82% to 108% of the predicted value.

Table 2.8 Predicted and estimated parameters of clustering, Round 9

Country	Pre-fieldwork predicted $\bar{b}$	Post-fieldwork realised $\bar{b}$	Pre-fieldwork predicted $\bar{\rho}$	Post-fieldwork estimated $\bar{\rho}$
Austria (domain 2)	5.62	5.669	0.08	0.092
Belgium	4.89	4.96	0.04	0.039
Bulgaria	3.927	3.964	0.1	0.214
Croatia	2.91	2.03	0.15	0.091
Czechia	4.2	4.196	0.1	0.121
France (domain 2)	9.47	7.76	0.04	0.025
Germany	13.33	13.25	0.04	0.019
Hungary (domain 2)	6.09	6.552	0.12	0.036
Iceland (domain 2)	20.3	17.6	0.02	0.021
Ireland	3.485	3.53	0.08	0.061
Italy (domain 2)	14.25	14.595	0.06	0.068
Latvia	2.425	1.818	0.15	0.048
Lithuania (domain 2)	4.676	3.949	0.2	0.108
Montenegro	5.066	4.167	0.1	0.149
Poland (domain 2)	3	2.63	0.1	0.124
Portugal (domain 1)	5.53	5.413	0.06	0.037
Serbia	2.95	2.83	0.06	0.04
Slovakia	5.18	2.71	0.1	0.153
Slovenia	4.23	4.393	0.06	0.04
Spain	3.8	3.595	0.062	0.059
United Kingdom	6.14	5.651	0.05	0.047

Note:
Based on the ESS9 country-specific Sampling Design Summaries and the ESS9 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: $deff_p = 1 + CV(w)^2$.[3] In most cases, the predictions are very close to the realised values. There are five instances of $CV(w)^2$ being under-estimated by 10% or more, namely Lithuania, where the realised $deff_p$ is 8% greater than predicted, three countries where the realised $deff_p$ is 4% greater than predicted (Bulgaria, France (domain 1) and Ireland) and Serbia, where it is 3%. There are also two instances of modest over-estimation: Austria domain 2 (realised $deff_p$ is 94% of predicted) and Slovakia (84%).

[3] $CV(w)^2$ is the squared coefficient of variation of the design weights. The coefficient of variation is the ratio of the standard deviation to the mean. The design effect due to variation in selection probabilities is predicted as $1 + CV(w)^2$.

Table 2.9 Predicted and estimated variation in design weights, Round 9

Country	Domain	Pre-fieldwork predicted $CV(w)^2$	Post-fieldwork predicted $CV(w)^2$
Austria	domain 1	0.000	0.230
	domain 2	0.334	0.250
Belgium		0.000	0.000
Bulgaria		0.100	0.147
Croatia		0.348	0.312
Cyprus		0.240	0.234
Czechia		0.226	0.190
Denmark		0.000	0.000
Estonia		0.000	0.000
Finland		0.000	0.000
France	domain 1	0.200	0.244
	domain 2	0.200	0.191
Germany		0.000	0.000
Hungary	domain 1	0.000	0.000
	domain 2	0.000	0.000
Iceland	domain 1	0.000	0.000
	domain 2	0.000	0.000
Ireland		0.206	0.251
Italy	domain 1	0.000	0.000
	domain 2	0.000	0.005
Latvia		0.260	0.219
Lithuania	domain 1	0.116	0.203
	domain 2	0.495	0.621
Montenegro		0.292	0.265
Netherlands		0.000	0.004
Norway		0.000	0.000
Poland	domain 1	0.000	0.002
	domain 2	0.000	0.005
Portugal	domain 1	0.220	0.201
	domain 2	0.220	0.203
Serbia		0.268	0.309
Slovakia		0.500	0.265
Slovenia		0.000	0.000
Spain		0.000	0.014
Sweden		0.000	0.000
Switzerland		0.000	0.000
United Kingdom		0.300	0.319

Note:
Based on the ESS9 country-specific Sampling Design Summaries and the ESS9 Sample Design Data File.

3 TRANSLATION

3.1 SPECIFICATIONS

Each country translates the source questionnaire into those languages spoken by 5% or more of the Population as first language. ESS follows the TRAPD translation approach, consisting of the steps: Translation, Review, Adjudication, Pretesting 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 harmonization (e.g. for 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 system SQP[4] detects formal inconsistencies between the source and translated questionnaire.

3.2 LANGUAGE VERSIONS

Table 3.1 lists all languages the questionnaire was translated into in each country. Overall, 27 countries—in which languages other than English were fielded—participated in ESS9, with overall 38 language versions other than English. Ireland and the United Kingdom also participated in ESS9 and used an English questionnaire. Ten countries carried out fieldwork in more than one language: Belgium, Estonia, Finland, Iceland, Latvia, Lithuania, Montenegro, Slovakia, Spain, and Switzerland.

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

- Dutch (Belgium, Netherlands)
- French (Belgium, France, Switzerland)
- German (Austria, Germany, Switzerland)
- Hungarian (Hungary, Slovakia)
- Italian (Italy, Switzerland)
- Polish (Iceland, Polish)
- Russian (Estonia, Latvia, Lithuania)
- Swedish (Finland, Sweden)

Shared language harmonisation steps were carried out for all shared languages except for Swedish. For the Albanian language, the team from Montenegro collaborated with the team from Albania. As the Albanian data was not part of an official data release, the country is not listed in the ESS9 translation overview.

[4] The service is openly available for researchers under http://sqp.upf.edu.

Table 3.1 Languages versions per country, Round 9

Country	Language
Austria	German
Belgium	Dutch, French
Bulgaria	Bulgarian
Croatia	Croatian
Cyprus	Greek
Czechia	Czech
Denmark	Danish
Estonia	Estonia, Russian
Finland	Finnish, Swedish
France	French
Germany	German
Hungary	Hungarian
Iceland	Icelandic, Polish
Italy	Italian
Latvia	Latvian, Russian
Lithuania	Lithuanian, Russian
Montenegro	Albanian, Montenegrin
Netherlands	Dutch
Norway	Norwegian
Poland	Polish
Portugal	Portuguese
Serbia	Serbian
Slovenia	Slovene
Slovakia	Hungarian, Slovak
Spain	Spanish, Catalan
Sweden	Swedish
Switzerland	French, German, Italian

Note:
Based on ESS9 Data documentation report.

3.3 Translation team composition

The ESS translation scheme requires that the translation team for each language version is composed of at least three persons. That requirement was met in all ESS9 translation teams, where team sizes ranged between three and nine individuals. Two countries stand out: in Latvia and Montenegro the translation teams for the secondary languages (Russian and Albanian, respectively) consisted only of two persons. This irregularity was accepted because the second parallel translations came from

different national ESS9 teams via a 'shared language harmonisation step' with complete translation teams.

Another requirement is that at least two independent parallel translations are considered in the Review meetings. This requirement was met in most ESS9 language versions. Three national teams prepared only one translation for a secondary language: Russian in Latvia, Hungarian in Slovakia, and Albanian in Montenegro. In the case of these secondary languages, a different national ESS9 team provided the second parallel translation via a 'shared language harmonisation step.' In the case of Montenegrin in Montenegro and it was the first national language in Montenegro.The situation was different: Montenegrin was a completely new language to the ESS in Round 9. If only one translation is used, very little or no alternative translation options and understandings of the source text are available. The likelihood that this leads to lower translation quality is higher than if two parallel translations are used as reference. This is even more problematic in the case of the core modules, as these translations will have to be repeated with as few changes as possible in all following rounds. Therefore, Montengrin is the only language version in Round 9 that did not meet the ESS translation requirements with regard to the implementation of the team approach.

In addition, the ESS translation scheme expresses two recommendations: (a) professional or at least trained translators should be part of the translation teams, and (b) questionnaire translation experience should be covered in the translation teams. Most Round 9 translation teams met these recommendations (see Table 3.2).

Table 3.2 Translation team compositions, Round 9

Country	Language	Team size (qualified[a] translators)	Quest. translation experience	Number of parallel translations	Requirements met	Notes
Austria	German	3 (0)	yes	2	yes	
Belgium	Dutch	5 (2)	no	2	yes	new team
	French	3 (2)	yes	2	yes	
Bulgaria	Bulgarian	5 (1)	yes	2	yes	
Croatia	Croatian	4 (0)	yes	2	yes	
Cyprus	Greek	9 (0)	yes	2	yes	
Czechia	Czech	4 (0)	yes	2	yes	
Denmark	Danish	4 (2)	yes	2	yes	
Estonia	Estonian	6 (2)	yes	2	yes	
	Russian	4 (2)	yes	2	yes	Russian shared language process
Finland	Finnish	4 (2)	yes	2	yes	
	Swedish	4 (1)	yes	2	yes	
France	French	4 (1)	yes	4	yes	
Germany	German	8 (2)	yes	2	yes	
Hungary	Hungarian	4 (1)	yes	2	yes	
Iceland	Icelandic	5 (1)	yes	2	yes	
	Polish	3 (1)	yes	2	yes	
Italy	Italian	3 (1)	yes	2	yes	
Latvia	Latvian	5 (1)	yes	2	yes	
	Russian	2 (0)	yes	1	yes	Russian shared language process

(continued …)

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

Country	Language	Team size (qualified[a] translators)	Quest. translation experience	Number of parallel translations	Requirements met	Notes
Lithuania	Lithuanian	3 (0)	yes	2	yes	
	Russian	3 (0)	yes	2	yes	Russian shared language process
Montenegro	Albanian	2 (1)	no	1	yes	new team
	Montenegrin	3 (1)	no	1	no	only 1 initial translation
Netherlands	Dutch	6 (0)	yes	2	yes	
Norway	Bokmål	4 (1)	yes	2	yes	
Poland	Polish	9 (3)	yes	2	yes	
Portugal	Portuguese	5 (2)	yes	2	yes	
Serbia	Serbian	5 (0)	yes	2	yes	
Slovenia	Slovene	5 (1)	yes	3	yes	
Slovakia	Hungarian	3 (2)	yes	1	yes	
	Slovak	4 (1)	yes	2	yes	
Spain	Spanish	5 (0)	yes	2	yes	
	Catalan	4 (0)	yes	2	yes	
Sweden	Swedish	4 (2)	yes	2	yes	
Switzerland	French	4 (2)	yes	2	yes	
	German	4 (2)	yes	2	yes	
	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 are 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 4-5 items can be discussed per hour when the discussion is thorough, which leads to an ideal Review duration of at least 8 hours. In two cases, review sessions shorter than 8 hours can be accepted under two conditions: (a) if there is an international shared language harmonization meeting in addition to the national Review discussion, and (b) if the team is very experienced and has translated several ESS questionnaires before. For new ESS teams (such as Montenegro in ESS9), the translation of the entire questionnaire needs to be discussed, thus, the Review discussion needs to be much longer, at least 2 days.

A minimum Review duration of 4 hours would still be accepted, but a meeting of 3 hours is considered too short for discussing all relevant issues. A 'pass' was given to language versions where the review is not entirely up to the ESS' methodological requirements but still accepted.

As shown in Table 3.3, Montenegro, with both languages, is the only country where the requirements have not been met. Four hours are insufficient to thoroughly discuss the entire questionnaire, especially since the team has had no prior experience with ESS questionnaire translations and both Montenegro-Albanian and Montenegro-Montenegrin are completely new language versions of the ESS in Round 9.

In addition, the ESS translation scheme requires that at least three persons participate in the Review meeting. Ideally, these should cover both a background as trained and/or professional translators or at least linguists on the one hand, and social scientists, or survey experts on the other. All teams met this requirement. In the case of Finland, the team is highly experienced and had very long discussions (16 hours), which outweighs the fact that two persons only carried out the Review.

Table 3.3 Review meetings, Round 9

Country	Language	Review meeting participants	Social scientist & translator present	Duration (hours)	Requirements met?
Austria	German	3	yes	4	yes
Belgium	Dutch	3	no	1	pass
	French	3	yes	6	yes
Bulgaria	Bulgarian	4	no	3	pass
Croatia	Croatian	4	yes	3	pass
Cyprus	Greek	9	yes	8	yes
Czechia	Czech	4	no	3	pass
Denmark	Danish	4	yes	3	pass
Estonia	Estonian	4	no	5	yes
	Russian	4	no	5	yes
Finland	Finnish	2	yes	16	Yes
	Swedish	2	yes	16	Yes
France	French	4	yes	4	yes
Germany	German	6	yes	5	yes
Hungary	Hungarian	3	yes	5	yes
Iceland	Icelandic	3	no	16	yes
	Polish	3	yes	20	yes
Italy	Italian	3	yes	10	yes
Latvia	Latvian	5	yes	10	yes
	Russian	2	yes	16	yes
Lithuania	Lithuanian	3	yes	10	yes
	Russian	3	yes	7	yes
Montenegro	Albanian	3	no	4	No
	Montenegrin	3	yes	4	No
Netherlands	Dutch	3	no	3	yes
Norway	Norwegian	4	yes	5	yes
Poland	Polish	3	yes	6	yes
Portugal	Portuguese	3	no	8	yes
Serbia	Serbian	6	yes	7	yes

(continued …)

Country	Language	Review meeting participants	Social scientist & translator present	Duration (hours)	Requirements met?
Slovenia	Slovene	5	yes	5.0	yes
Slovakia	Hungarian	4	yes	4.0	yes
	Slovak	4	yes	4.0	yes
Spain	Spanish	5	no	6.0	yes
	Catalan	4	no	5.0	yes
Sweden	Swedish	4	yes	6.0	yes
Switzerland	French	4	yes	8.0	yes
	German	4	yes	5.5	yes
	Italian	4	yes	7.5	yes

Note:
Based on internal records of the ESS Translation Team.

3.5 External verification, SQP Coding, 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 3.4). All resulting findings and corrections have to be correctly incorporated in the translations before the next step.

In ESS9, verification was carried out on all language versions, except the Russian versions. The Russian National Coordinator carried out an intensive shared language harmonization process around Russia's Russian master translation. In all cases, verification was signed off before SQP started, except for Spain: given a long-term reliable collaboration, it was agreed between the National Coordinator and the ESS Translation and SPQ Teams that SQP and verification may partly be carried out in parallel in order to meet the fieldwork schedules.

SQP Coding was carried out only in the first national language in all countries. It was carried out in both national languages (Dutch and French) in Belgium. In 15 cases, the SQP Coding step was not signed off before the Pretest started, violating the ESS requirements. The national Pretests should test the national questionnaires in their pre-final version to assess whether the translations are correctly understood or create problems with a small sample of the target population. If SQP Coding was not completed, the pretested questionnaires were not pre-final yet, because possibly the SQP step would trigger changes in the questionnaires that would then be fielded without having been pretested.

Only in 10 countries the SQP Coding step was correctly signed off before the Pretests started. In Bulgaria and Portugal, the national team did not finalise the SQP Coding.

Table 3.4 External Verification, SQP Coding, and Pretest, Round 9

Country	Language	Verification start	Verification end	Verification before SQP	SQP start	SQP end	SQP before Pretest start	Pretest start	Pretest end
Austria	German	15/06/2018	17/07/2018	yes	17/07/2018	28/08/2018	no	17/08/2018	26/08/2018
Belgium	Dutch	01/06/2018	23/07/2018	yes	23/07/2018	09/08/2018	yes	13/08/2018	23/08/2018
	French	02/07/2018	02/08/2018	yes	02/08/2018	23/08/2018	no	13/08/2018	23/08/2018
Bulgaria	Bulgarian	13/08/2018	05/09/2018	yes	05/09/2018	-	-	21/09/2018	07/10/2018
Croatia	Croatian	22/06/2018	22/07/2019	yes	22/07/2019	22/08/2019	yes	24/09/2019	29/08/2019
Cyprus	Greek	20/06/2018	13/07/2018	yes	13/08/2018	14/09/2018	no	03/09/2018	15/09/2018
Czechia	Czech	23/08/2018	01/10/2018	yes	02/10/2018	07/11/2018	no	01/11/2018	12/11/2018
Denmark	Danish	08/08/2018	03/09/2018	yes	03/09/2018	11/09/2018	no	20/07/2018	05/08/2018
Estonia	Estonian	22/05/2018	19/06/2018	yes	19/06/2018	28/08/2018	no	10/06/2018	20/06/2018
	Russian	-	-	-	-	-	-	-	-
Finland	Finnish	25/05/2018	29/06/2018	yes	29/06/2018	31/07/2018	yes	15/08/2018	22/08/2018
	Swedish	11/06/2018	29/06/2018	-	-	-	-	-	-
France	French	-	24/08/2018	yes	24/08/2018	02/10/2018	no	12/09/2018	18/09/2018
Germany	German	15/06/2018	17/07/2018	yes	17/07/2018	29/08/2018	no	02/07/2018	17/07/2018
Hungary	Hungarian	16/07/2018	21/11/2018	yes	21/11/2018	25/01/2019	no	13/12/2018	22/12/2018
Iceland	Icelandic	07/07/2019	07/08/2019	yes	07/08/2019	02/10/2019	no	01/10/2019	05/10/2019
	Polish	04/07/2019	10/11/2019	-	-	-	-	-	-
Italy	Italian	21/05/2018	23/07/2018	yes	23/07/2018	13/11/2018	no	30/10/2018	31/10/2018
Latvia	Latvian	28/05/2019	05/08/2019	yes	05/08/2019	02/09/2019	yes	27/09/2019	03/10/2019
	Russian	-	-	-	-	-	-	-	-

(continued …)

Country	Language	Verification start	Verification end	Verification before SQP	SQP start	SQP end	SQP before Pretest start	Pretest start	Pretest end
Lithuania	Lithuanian	20/06/2019	18/07/2019	yes	18/07/2019	07/08/2019	yes	21/08/2019	01/09/2019
	Russian	-	-	-	-	-	-	-	-
Montenegro	Albanian	22/02/2019	11/04/2019	-	-	-	-	-	-
	Montenegrin	18/12/2018	21/01/2019	yes	21/01/2019	29/04/2019	yes	14/05/2019	17/05/2019
Netherlands	Dutch	01/06/2018	09/07/2018	yes	09/07/2018	26/07/2018	yes	14/08/2018	21/08/2018
Norway	Norwegian	05/05/2018	01/06/2018	yes	01/06/2018	03/08/2018	no	23/07/2018	05/09/2018
Poland	Polish	06/06/2018	28/06/2018	yes	28/07/2018	29/08/2018	yes	03/09/2018	09/09/2018
Portugal	Portuguese	23/08/2018	25/10/2018	yes	25/10/2018	-	-	20/11/2018	25/11/2018
Serbia	Serbian	19/07/2018	09/08/2018	yes	09/08/2018	03/09/2018	no	09/08/2018	20/08/2018
Slovenia	Slovene	21/06/2018	21/08/2018	yes	21/08/2018	18/09/2018	no	05/09/2018	11/09/2018
Slovakia	Hungarian	07/11/2018	05/02/2019	-	-	-	-	-	-
	Slovak	01/10/2018	07/11/2018	yes	07/11/2018	12/12/2018	yes	11/05/2019	19/05/2019
Spain	Spanish	04/07/2019	12/09/2019	no	02/09/2019	20/10/2019	no	17/10/2019	23/10/2019
	Catalan	04/07/2019	12/09/2019	-	-	-	-	-	-
Sweden	Swedish	01/06/2018	20/08/2018	yes	20/08/2018	30/08/2018	no	20/06/2018	01/08/2018
Switzerland	French	02/07/2018	04/09/2018	-	-	-	-	-	-
	German	15/06/2018	17/07/2018	yes	17/07/2018	09/08/2018	no	23/07/2018	25/07/2018
	Italian	29/06/2018	04/09/2018	-	-	-	-	-	-

Note:
Based on internal records of the ESS Translation Team.

4 SURVEY INSTRUMENT IMPLEMENTATION AND PRETESTING

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

As required, the ESS main questionnaire was administered by face-to-face interviewing in all participating countries in ESS9. Different from the previous rounds, with ESS9, all participating countries must administer the questionnaire by computer-assisted personal interviewing (CAPI). All countries met this requirement in Round 9.

4.2 National Pretesting

A national pretest involving personal interviews took place in all participating countries. The number of pretest interviews met or exceeded the minimum number of 30 in all countries except for Belgium. In the median country, 33 pretest interviews were conducted, and in 7 countries, there were 50 or more pretest interviews (Table 4.1).

The pretest was properly completed before the start of fieldwork in all countries. Pretests were completed between 1 day (Iceland) and 103 days (Estonia) before the start of the fieldwork.

Pretesting took from two days (Switzerland) to five weeks (Sweden). In the median country, pretesting took 1.5 weeks.

Table 4.1 National pretest, Round 9

Country	Number of pretest interviews	Start	End	Duration (days)
Austria	30	17 August 2018	26 August 2018	9
Belgium	14	13 August 2018	23 August 2018	10
Bulgaria	1023[a]	21 September 2018	07 October 2018	16
Croatia	30	24 August 2019	29 August 2019	5
Cyprus	50	03 September 2018	15 September 2018	12
Czechia	30	01 November 2018	12 November 2018	11
Denmark	24	20 July 2018	05 August 2018	16
Estonia	25	10 June 2018	20 June 2018	10
Finland	30	15 August 2018	22 August 2018	7
France	51	12 September 2018	18 September 2018	6
Germany	53	02 July 2018	17 July 2018	15
Hungary	30	13 December 2018	22 December 2018	9
Iceland	38	01 October 2019	05 October 2019	4
Ireland	30	08 October 2018	15 October 2018	7
Italy	31	30 October 2018	31 October 2018	1
Latvia	30	27 September 2019	03 October 2019	6
Lithuania	60	21 August 2019	01 September 2019	11
Montenegro	39	14 May 2019	17 May 2019	3
Netherlands	57	14 August 2018	21 August 2018	7
Norway	39	23 July 2018	05 September 2018	44
Poland	30	03 September 2018	09 September 2018	6
Portugal	49	20 November 2018	25 November 2018	5
Serbia	40	09 August 2018	20 August 2018	11
Slovakia	30	11 May 2019	19 May 2019	8
Slovenia	30	05 September 2018	11 September 2018	6
Spain	35	17 October 2019	23 October 2019	6
Sweden	50	20 June 2018	01 August 2018	42
Switzerland	50	23 July 2018	25 July 2018	2
United Kingdom	33	18 June 2018	09 July 2018	21

Note:
Based on ESS9 Data documentation report.
[a] Bulgarian pretest was used as a "rehearsal" for the ESS fieldwork, as it was reported that interviewers were not accustomed to conduct social surveys. To do so the fieldwork agency used another survey (The International Social Survey Programme-ISSP) adding rotating modules to test the ESS items.

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 9. 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, and larger gross sample sizes require larger numbers of interviewers.

Table 5.1 Number of interviewers, Round 9

Country	Number of active interviewers[a]	Gross sample size	Standardised number of active interviewers[b]	Average workload 1st phase of fieldwork (sd)
Austria	119	4956	1.2	41.7 (10.2)
Belgium	125	3204	1.9	25.6 (11.7)
Bulgaria	140	3330	2.0	23.6 (11.7)
Croatia	176	4470	1.9	25.4 (14.4)
Cyprus	33	1599	1.0	48.4 (28.2)
Czechia	296	3564	4.0	12.0 (2.4)
Denmark	90	3212	1.3	35.7 (8.1)
Estonia	65	3100	1.0	47.2 (15.3)
Finland	148	3400	2.1	22.9 (7.7)
France	195	4400	2.1	22.5 (11.1)
Germany	211	8695	1.2	41.2 (20.2)
Hungary	123	4363	1.4	35.5 (21.9)
Iceland	51	2197	1.1	-
Ireland	107	3768	1.4	35.2 (11.3)
Italy	188	5497	1.6	29.2 (7.6)
Latvia	63	2525	1.2	40.1 (25.2)
Lithuania	92	4190	1.1	45.5 (11.7)
Montenegro	53	2016	1.3	38.0 (22.7)
Netherlands	98	3463	1.4	32.8 (18.7)
Norway	108	3300	1.6	-
Poland	151	2700	2.7	18.6 (11.7)
Portugal[c]	84	3617	1.1	48.2 (49.1)
Serbia	140	3605	1.9	25.9 (13.3)
Slovakia	88	2800	1.5	31.8 (15.3)
Slovenia	55	2100	1.3	38.2 (16.0)
Spain	176	3248	2.6	18.4 (12.2)
Sweden	74	4082	0.9	-
Switzerland	57	3015	0.9	52.9 (24.9)
United Kingdom	306	5850	2.5	20.5 (9.8)

Note:
Based on ESS9 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] During the 1st phase of fieldwork only 75 interviewers were active.

Still, when it comes to making valid comparisons, Iceland, Norway, and Sweden cannot be meaningfully compared to other countries. Due to the geographic characteristics (remote and low population density

areas) in Iceland, Norway and Sweden, 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.

The standardised number of active interviewers per 48 cases in the gross sample size ranges between 0.9 (Switzerland) and 4.0 (Czechia). There were 1.4 interviewers per 48 cases in the gross sample size in the median country. This gives a first indication of the differences in actual fieldwork capabilities with respect to the adherence to the 48 sample unit specification. In 3 countries (Cyprus, Portugal and Switzerland), the academic 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. 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.

On the other hand, more than two interviewers were active per 48 cases in the gross sample size in 7 countries (Bulgaria, Czechia, Finland, France, Poland, Spain and the United Kingdom). 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 1st 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 12.0 (Czechia) and 59.9 (Portugal). In the median country, the average interviewer workload contained 35.2 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 9 countries (Cyprus, Denmark, Estonia, Germany, Hungary, Latvia, the Netherlands[5] , Portugal and Switzerland[6])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 16 countries.

[5] The interviewer with 274 contact attempts is one of the interviewers that conducted motivating telephone contact attempts during the refusal conversion to set up appointments. Other interviewers went to these appointments and conducted the actual interviews.

[6] Switzerland also used 25 CATI interviewers for recruitment.

Table 5.2 Interviewer workload, Round 9

Country	N[a]	Min	Max	Mean	SD
Austria	119	12	68	41.7	10.2
Belgium	125	8	126	33.9	21.7
Bulgaria	140	6	54	23.6	11.7
Croatia	176	5	45	25.4	14.4
Cyprus	33	3	146	55	36.7
Czechia	296	6	20	12	2.4
Denmark	90	2	110	37.7	11
Estonia	65	5	112	56	21.7
Finland	148	9	60	29.2	10.7
France	195	1	75	24.3	13.5
Germany	211	3	163	44.3	23.3
Hungary	123	1	125	35.5	21.9
Iceland	51	-	-	-	-
Ireland	107	6	48	35.2	11.3
Italy	188	6	61	31.3	8.8
Latvia	63	5	119	41.2	24.8
Lithuania	92	1	55	45.5	11.7
Montenegro	53	7	82	38.1	22.9
Netherlands	98	2	274	42.4	37
Norway	108	-	-	-	-
Poland	151	1	63	21.2	13.3
Portugal	84	1	194	59.9	49.7
Serbia	140	1	55	25.8	13.3
Slovakia	88	2	77	32.5	15.2
Slovenia	55	7	134	41.4	23.1
Spain	176	7	88	19.4	14.2
Sweden	74	-	-	-	-
Switzerland	57	1	155	59.7	37.2
United Kingdom	306	1	56	24.9	12.7

Note:

Based on ESS9 data from Contact forms, edition 3.0.

[a] N refers to the number of active interviewers.

5.2 Interviewer Experience

Interviewers are expected to have been appropriately trained and have relevant experience. As evident from the relative frequency distribution of interviewers' experience (prior ESS experience, other face-to-face interviewing experience, no face-to-face interviewing experience) presented in Table 5.3, large numbers of interviewers in most of the participating countries have at least some prior experience in face-to-face interviewing. In 19 countries, over 90% of all interviewers had at least some prior experience in face-to-face interviewing. In five countries, more than 25% had no prior experience in

face-to-face interviewing. In Iceland, more than 90% of the interviewers had no prior experience in face-to-face interviewing.

Table 5.3 Interviewer experience, Round 9

Country	Prior ESS experience (%)	Other face-to-face interviewing experience (%)	No face-to-face interviewing experience
Austria	67.2	32.8	0.0
Belgium	68.5	31.5	0.0
Bulgaria	0.0	100.0	0.0
Croatia	0.0	94.9	5.1
Cyprus	33.3	66.7	0.0
Czechia	84.8	15.2	0.0
Denmark	48.3	40.2	11.5
Estonia	74.2	25.8	0.0
Finland	69.3	30.7	0.0
France	67.2	30.8	2.0
Germany	45.8	41.7	12.5
Hungary	73.2	26.8	0.0
Iceland	9.1	0.0	90.9
Ireland	16.8	83.2	0.0
Italy	60.9	39.1	0.0
Latvia	1.6	87.3	11.1
Lithuania	31.1	68.9	0.0
Montenegro	0.0	100.0	0.0
Netherlands	18.9	45.1	36.0
Norway	0.0	53.8	46.2
Poland	39.7	60.3	0.0
Portugal	12.7	56.3	31.0
Serbia	0.0	100.0	0.0
Slovakia	49.4	44.4	6.2
Slovenia	60.0	27.2	12.8
Spain	58.5	41.5	0.0
Sweden	48.4	0.0	51.6
Switzerland	45.1	42.7	12.2
United Kingdom	35.3	58.3	6.4

Note:

Based on ESS9 Data documentation report.

In five countries (Bulgaria, Croatia, Montenegro, Norway and Servia), none of the interviewer workforces had prior experience in the European Social Survey. The number of interviewers with ESS experience ranges up to about 1.6% (Latvia), and in 10 countries, more than 1 in 2 interviewers had

prior ESS experience.

5.3 Interviewer Briefing

The ESS Specification requires that interviewers attend an ESS-specific interviewer 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.

An in-person ESS-specific briefing was organised in all participating countries (Table 5.4). In all countries except Czechia, all interviewers attended such a briefing session.

Table 5.4 Interviewer briefings, Round 9

Country	ESS-specific personal briefing	Interviewers briefed (%)	Duration (hours)
Austria	Yes	100.0	4
Belgium	Yes	100.0	4
Bulgaria	Yes	100.0	> 8
Croatia	Yes	100.0	<= 4
Cyprus	Yes	100.0	4
Czechia	Yes	26.4	<= 4
Denmark	Yes	100.0	4
Estonia	Yes	100.0	4
Finland	Yes	100.0	> 8
France	Yes	100.0	4
Germany	Yes	100.0	4
Hungary	Yes	100.0	4
Iceland	Yes	100.0	4
Ireland	Yes	100.0	4
Italy	Yes	100.0	4
Latvia	Yes	100.0	<= 4
Lithuania	Yes	100.0	4
Montenegro	Yes	100.0	<= 4
Netherlands	Yes	100.0	4
Norway	Yes	100.0	4
Poland	Yes	100.0	4
Portugal	Yes	100.0	> 8
Serbia	Yes	100.0	4
Slovakia	Yes	100.0	4
Slovenia	Yes	100.0	4
Spain	Yes	100.0	4
Sweden	Yes	100.0	> 8
Switzerland	Yes	100.0	> 8
United Kingdom	Yes	100.0	4

Note:
Based on ESS9 Data documentation report.

Most countries organised half-day or full-day briefing sessions, as recommended. Only in Croatia, Czechia, Latvia and Montenegro, briefing sessions were shorter than 4 hours. Bulgaria, Finland, Portugal, Sweden and Switzerland had briefings with a duration of 8 hours or more.

5.3.1 Briefing Materials and Activities

We may assume that some briefing presentation slides are used in all participating countries, and interviewers in all countries reportedly received ESS-specific written instructions (see ESS Data Archive, 2018).

The ESS Briefing Presentation Slides and ESS Interviewer Manual were used in many countries. These materials were usually (to a varying degree) adapted or used as a source of inspiration to update the materials already in use (Table 5.5).

Table 5.5 Interviewer briefing presentation slides and written instructions, Round 9

Country	ESS Briefing presentation slides used	ESS Interviewer manual used
Austria	yes	yes
Belgium	yes	yes
Bulgaria	yes	yes
Croatia	yes	yes
Cyprus	yes	yes
Czechia	yes	yes
Denmark	yes	yes
Estonia	yes	no
Finland	yes	yes
France	yes	no
Germany	yes	yes
Hungary	yes	yes
Iceland	yes	yes
Ireland	yes	yes
Italy	yes	yes
Latvia	no	yes
Lithuania	yes	yes
Montenegro	no	no
Netherlands	yes	no
Norway	yes	no
Poland	yes	no
Portugal	yes	yes
Serbia	yes	yes
Slovakia	yes	yes
Slovenia	yes	yes
Spain	no	yes
Sweden	yes	yes
Switzerland	yes	no
United Kingdom	yes	yes

Note:
Based on ESS9 Deposited documentation.

6 FIELDWORK

The ESS seeks to assure high standards of fieldwork quality for its complex cross-cultural design. The Fieldwork Team—consisting of County Contacts and member of the ESS Core Scientific Team[7]—has an important role in the process of quality control and assurance. It documents, assesses and signs off on The National Coordinating Teams' plans to conduct their fieldwork for each round through various documents and forms. Additionally, assessment often is cross-validated by separate Fieldwork Team members to guarantee the four-eyes principle.

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. The National Coordinators 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 Fieldwork quality assurance and control

The ESS Specification require the National Coordinators to deliver their fieldwork plans in a documented fashion to the Fieldwork Team ahead of their actual field period to have them checked and even re-checked. This step ensures procedural quality.

National Coordinators have to answer the Fieldwork Questionnaire, which delineates in over 50 questions a comprehensive plan of fieldwork implementation strategies covering topics from timing, sampling strategy, fieldwork workforce, fieldworker training, and contact strategies, remuneration, budget, etc. The fieldwork projections manifest the National Coordinating Team's projections of completed interviews per week.

Necessarily, both have to be signed off before the actual fieldwork starts. The earlier this process is terminated, the more time the local teams have to handle uncertainties or implement last changes, which might have arisen from the Fieldwork Team's feedback. A 'timely' sign-off is assumed for a period of at least one week ahead of fieldwork start; a 'precarious' one is assumed for periods of less than one week; 'late' countries are those with a sign-off date after the actual fieldwork start.

As shown in Table 6.1, of the 29 countries, three (Denmark, Iceland, and Portugal) started fieldwork before the Fieldwork Questionnaire received a final sign-off from HQ. Portugal is also among the five countries with a late sign-off for the Fieldwork Projections (Belgium, Bulgaria, Estonia, Italy, and Portugal). Countries with a precarious time window between Fieldwork Questionnaire sign-off and commencing fieldwork (Cyprus, Czechia, Estonia, France, Germany, Hungary, Italy, Latvia, Lithuania, Sweden, and Switzerland) are very likely also precariously signed-off for their Fieldwork Projections.

[7] The ESS ERIC Director assigns each country a 'Country Contact' to support National Coordinators. They monitor the progress of each step of the survey life cycle and provide assistance where necessary. Country Contacts have a global view of each country's achievements and challenges and can identify areas where comparability across rounds and between countries might be failing. They also facilitate round-to-round improvements in each country.

Table 6.1 Timeliness of sign-offs, Round 9

Country	Fieldwork start	Fieldwork Questionnaire sign-off	Fieldwork Questionnaire timeliness	Fieldwork Projection sign-off	Fieldwork Projection timeliness
Austria	18/09/2018	30/08/2018	timely	07/09/2018	timely
Belgium	20/09/2018	23/08/2018	timely	26/09/2018	late
Bulgaria	16/11/2018	09/11/2018	timely	30/11/2018	late
Croatia	20/09/2019	12/09/2019	timely	12/09/2019	timely
Cyprus	17/09/2018	11/09/2018	precarious	17/09/2018	precarious
Czechia	17/11/2018	12/11/2018	precarious	12/11/2018	precarious
Denmark	13/09/2018	31/12/2018	late	03/09/2018	timely
Estonia	01/10/2018	28/09/2018	precarious	02/10/2018	late
Finland	03/09/2018	03/08/2018	timely	16/08/2018	timely
France	19/10/2018	18/10/2018	precarious	18/10/2018	precarious
Germany	29/08/2018	28/08/2018	precarious	28/08/2018	precarious
Hungary	31/01/2019	28/01/2019	precarious	23/01/2019	timely
Iceland	05/10/2019	08/01/2020	late	03/10/2019	precarious
Ireland	05/11/2018	23/10/2018	timely	23/10/2018	timely
Italy	17/12/2018	17/12/2018	precarious	18/12/2018	late
Latvia	10/10/2019	04/10/2019	precarious	04/10/2019	precarious
Lithuania	21/09/2019	19/09/2019	precarious	17/09/2019	precarious
Montenegro	22/05/2019	09/05/2019	timely	09/05/2019	timely
Netherlands	28/08/2018	10/08/2018	timely	14/08/2018	timely
Norway	04/10/2018	03/08/2018	timely	28/08/2018	timely
Poland	26/10/2018	14/09/2018	timely	08/10/2018	timely
Portugal	26/11/2018	29/11/2018	late	27/11/2018	late
Serbia	01/10/2018	07/09/2018	timely	18/09/2018	timely
Slovakia	14/06/2019	29/05/2019	timely	29/05/2019	timely
Slovenia	24/09/2018	23/07/2018	timely	27/08/2018	timely
Spain	08/11/2019	22/10/2019	timely	21/10/2019	timely
Sweden	30/08/2018	30/08/2018	precarious	30/08/2018	precarious
Switzerland	01/09/2018	31/08/2018	precarious	27/08/2018	precarious
United Kingdom	31/08/2018	23/08/2018	timely	23/08/2018	timely

Note:

Based on ESS9 Data documentation report.

6.2 Timing and intensity of fieldwork

Countries are offered the flexibly to complete their fieldwork within a given time frame. Figure 6.1 graphically displays the information presented in Table 6.2 about countries commencing and ending fieldwork ordered by starting date. A large batch of countries (n = 22) enters the fieldwork period in quick succession, kicking-off with the Netherlands on the 28th of August 2018, followed in close timely proximity by Germany, Sweden, the United Kingdom, Switzerland, and Finland. Fifteen countries succeed closely until January. By then, Hungary is the last one to enter fieldwork before Montenegro closes a four-month-gap in May 2019, with Slovakia following a month later. Another three-month-gap separates it from Coratia, Lithuania, Iceland, Latvia, and finally Spain, entering last in mid-November 2019.

The median country in ESS9 remained 21 weeks in the field. Outliers on the extremes are Bulgaria with 4.1 weeks and Portugal with 56.3 weeks.

Table 6.2 Fieldwork duration, Round 9

Country	Start	End	Duration (weeks)
Austria	18 September 2018	12 January 2019	16.6
Belgium	20 September 2018	28 January 2019	18.6
Bulgaria	16 November 2018	15 December 2018	4.1
Croatia	20 September 2019	27 January 2020	18.4
Cyprus	17 September 2018	26 May 2019	35.9
Czechia	17 November 2018	06 February 2019	11.6
Denmark	13 September 2018	08 January 2019	16.7
Estonia	01 October 2018	02 March 2019	21.7
Finland	03 September 2018	18 February 2019	24.0
France	19 October 2018	01 April 2019	23.4
Germany	29 August 2018	04 March 2019	26.7
Hungary	31 January 2019	22 May 2019	15.9
Iceland	05 October 2019	31 January 2020	16.9
Ireland	05 November 2018	05 April 2019	21.6
Italy	17 December 2018	10 March 2019	11.9
Latvia	10 October 2019	21 January 2020	14.7
Lithuania	21 September 2019	15 December 2019	12.1
Montenegro	22 May 2019	30 October 2019	23.0
Netherlands	28 August 2018	22 January 2019	21.0
Norway	04 October 2018	16 May 2019	32.0
Poland	26 October 2018	20 March 2019	20.7
Portugal	26 November 2018	25 December 2019	56.3
Serbia	01 October 2018	01 March 2019	21.6
Slovakia	14 June 2019	07 December 2019	25.1
Slovenia	24 September 2018	01 February 2019	18.6
Spain	08 November 2019	27 January 2020	11.4
Sweden	30 August 2018	23 May 2019	38.0
Switzerland	01 September 2018	11 February 2019	23.3
United Kingdom	31 August 2018	22 February 2019	25.0

Note:

Based on ESS9 Data documentation report.

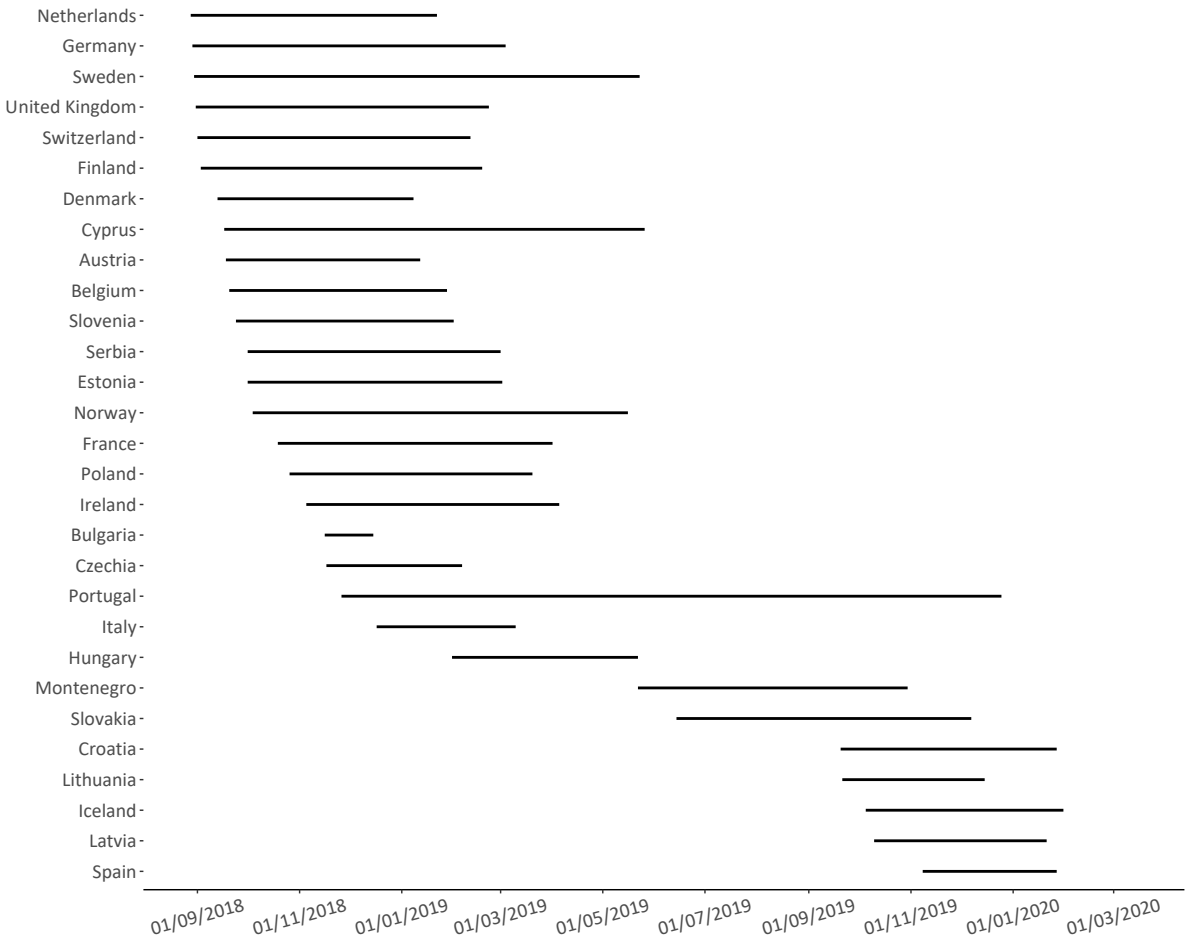


Figure 6.1 Fieldwork periods, Round 9

6.3 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.[8]
- 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
- 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'.

6.3.1 Recruitment mode

According to the specifications in ESS9, fieldwork agencies are required to make first contact through their interviewers in person.[9] Table 6.3 shows the relative frequency distributions of the mode (personal visit, telephone, or other) of the first contact.

Only 4 countries (Austria, Bulgaria, Latvia, and Lithuania) completely adhered to the specifiation. In additionally 15 countries (Belgium, Croatia, Cyprus, Czechia, France, Hungary, Ireland, Italy, Montenegro, Poland, Portugal, Serbia, Slovakia, Slovenia, and the United Kingdom), contact was made through a personal visit for nearly all contacted cases. Only in countries where telephone is an acceptable mode of first contact (Finland, Iceland, Norway, and Sweden), fewer than 1 in 4 cases were first contacted by an interviewer in person.

[8] Iceland, Finland, Norway, and Sweden with sample frames of named individuals including telephone numbers are an exception to the general principle of face-to-face recruitment.

[9] The category 'other' comprises information such as call centre refusals as well as contact attempts made by interviewers in any other mode (e.g. mail, social media). An exception to this rule are—as previously mentioned—Finland, Iceland, Norway, and Sweden

Table 6.3 Recruitment mode (%), Round 9

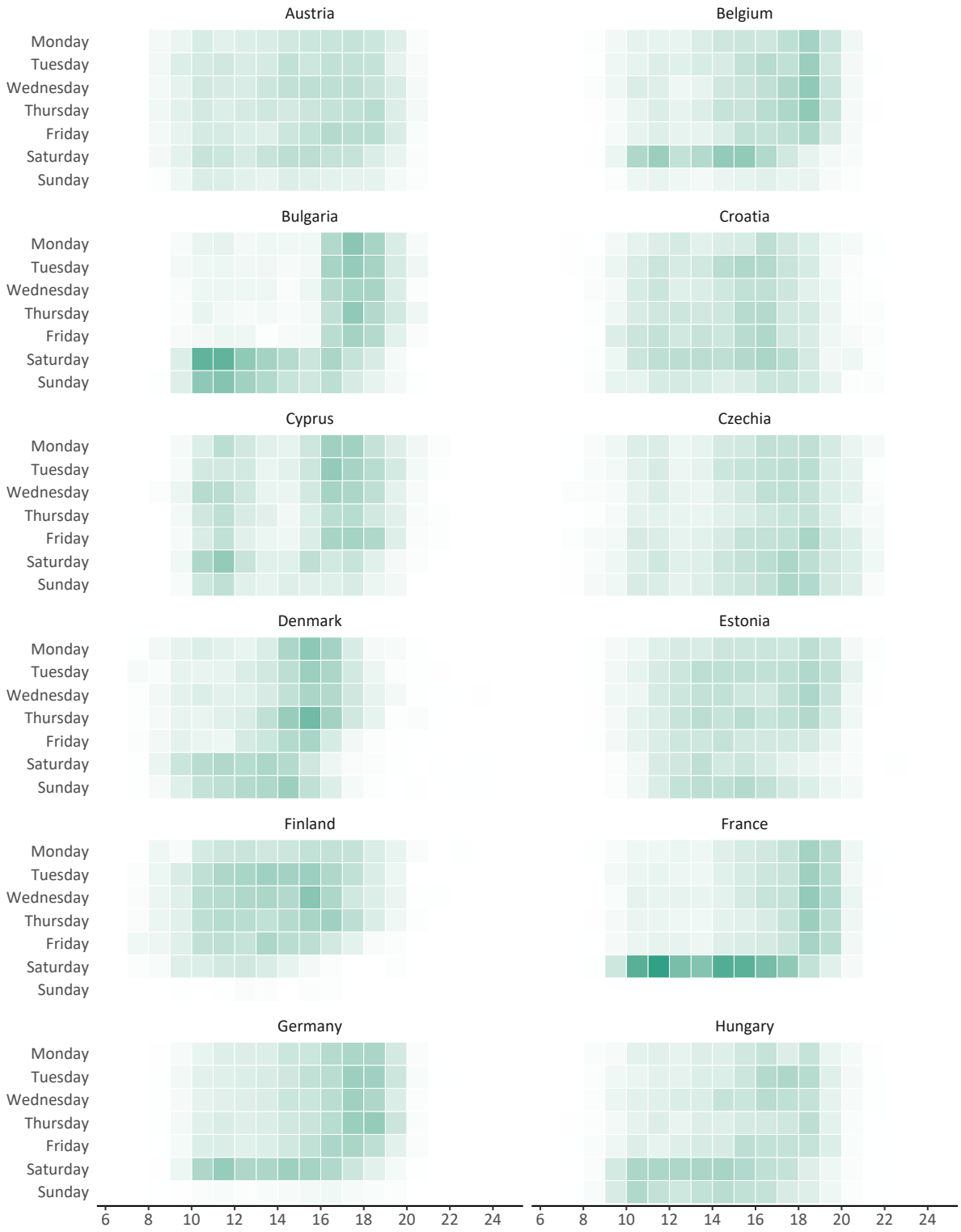
Country	N[a]	Personal visit	Telephone	Other[b]
Austria	4778	100.0	0.0	0.0
Belgium	2941	98.0	1.9	0.0
Bulgaria	2603	100.0	0.0	0.0
Croatia	3636	98.9	0.2	0.9
Cyprus	1246	97.8	1.8	0.4
Czechia	3519	98.9	0.0	1.1
Denmark	3035	87.3	10.2	2.4
Estonia	2917	72.9	26.1	1.0
Finland	3013	23.1	76.5	0.4
France	3611	96.4	3.6	0.0
Germany	8221	92.1	7.2	0.7
Hungary	3770	99.9	0.1	0.0
Iceland	1680	25.1	65.0	9.9
Ireland	3233	97.8	1.8	0.4
Italy	4641	97.9	2.0	0.1
Latvia	1800	100.0	0.0	0.0
Lithuania	2871	100.0	0.0	0.0
Montenegro	1643	95.5	4.3	0.2
Netherlands	3283	82.3	11.1	6.5
Norway	3125	16.8	49.9	33.3
Poland	2413	98.9	1.1	0.0
Portugal	2353	98.6	0.8	0.6
Serbia	3062	98.5	0.4	1.1
Slovakia	2492	99.4	0.4	0.2
Slovenia	2001	95.8	2.6	1.6
Spain	2944	92.6	2.4	5.0
Sweden	3517	10.9	87.3	1.8
Switzerland	2730	84.3	12.9	2.8
United Kingdom	4834	98.7	1.0	0.3

Note:
Based on ESS9 data from Contact forms, edition 3.0.
[a] N refers to all cases for which any contact was made.
[b] 'Other' covers information such as call centre refusals, as well as contact attempts made by interviewers in any other mode (e.g. mail, social media).

6.3.2 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 6.2 shows the distribution of (unsolicited)[10] 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 (90%) happening between 10:00 and 19:00.

[10] Visits following an appointment (for which the target household/respondent would have determined the timing) are excluded.


Austria
Belgium
Bulgaria
Croatia
Cyprus
Czechia
Denmark
Estonia
Finland
France
Germany
Hungary
Monday
Tuesday
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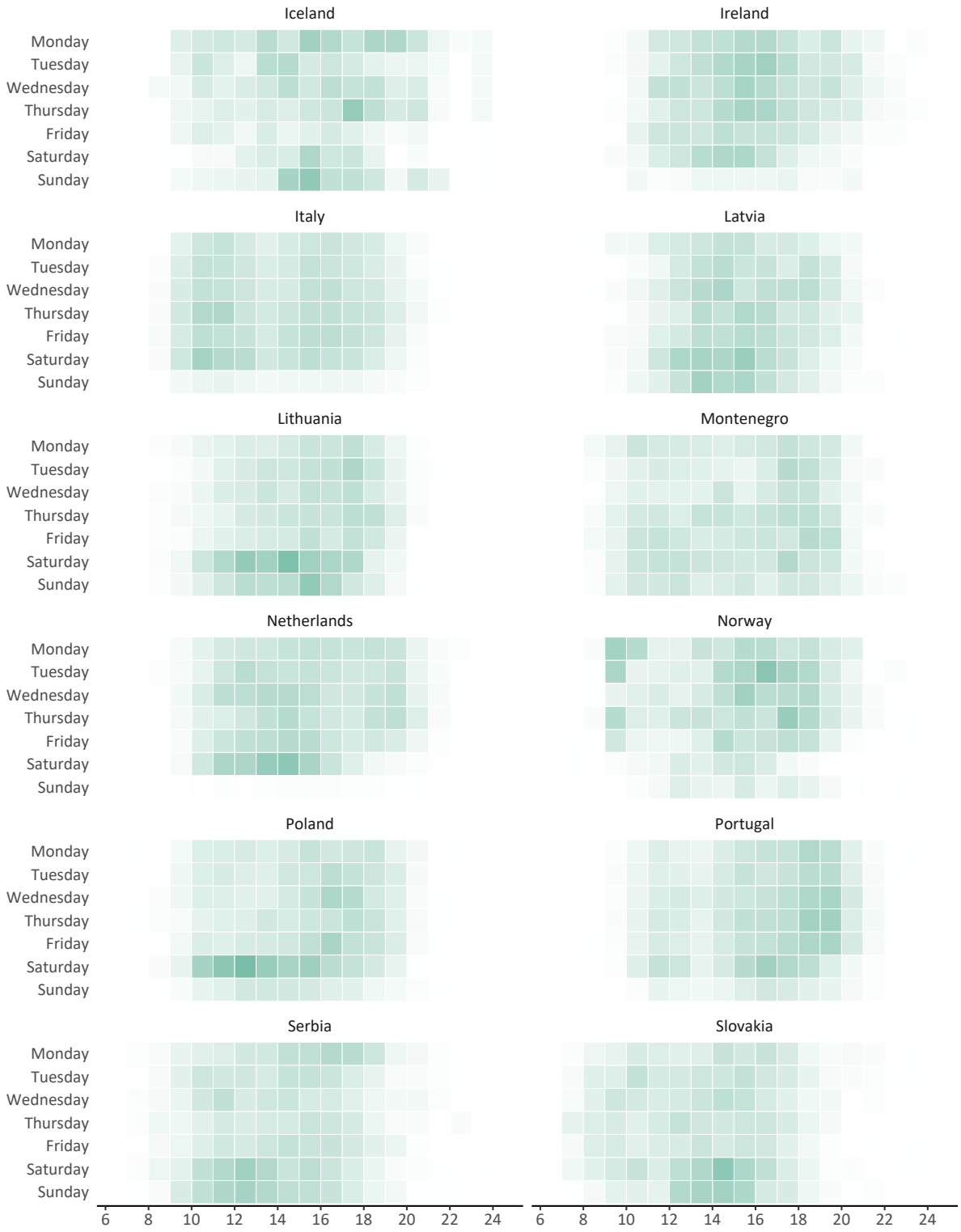
Iceland
Ireland
Italy
Latvia
Lithuania
Montenegro
Netherlands
Norway
Poland
Portugal
Serbia
Slovakia
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
6
8
10
12
14
16
18
20
22
24

Figure 6.2 Timing of (unsolicited) personal visits, Round 9
Based on ESS9 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 (%), Round 9

Country	N[a]	Weekday morning	Weekday afternoon	Weekday evening	Weekday overall	Saturday	Sunday
Austria	9037	17.1	35.4	23.4	75.8	15.7	8.5
Belgium	8291	10.5	31.1	32.3	74.0	20.2	5.8
Bulgaria	4165	6.6	17.4	32.6	56.6	24.2	19.2
Croatia	4986	15.7	38.4	15.5	69.9	18.1	12.0
Cyprus	4201	17.3	30.7	26.9	75.5	14.9	9.7
Czechia	5467	12.1	27.1	27.2	67.5	16.7	15.7
Denmark	6733	13.5	47.6	8.9	70.0	14.9	15.0
Estonia	9543	10.3	38.3	26.5	75.4	10.7	13.9
Finland	3978	25.3	51.7	14.0	92.3	7.1	0.6
France	15607	7.5	21.5	33.7	62.8	37.2	0.0
Germany	24506	10.6	34.8	31.8	77.3	20.4	2.3
Hungary	6028	10.8	30.4	21.9	63.4	20.3	16.3
Iceland	1614	13.8	33.4	25.2	75.2	9.5	15.4
Ireland	7311	8.5	46.7	24.9	82.7	13.2	4.0
Italy	17732	23.6	35.5	18.4	77.7	17.6	4.7
Latvia	5540	6.2	41.3	20.7	68.4	17.1	14.5
Lithuania	5917	8.1	33.9	20.0	62.1	21.8	16.2
Montenegro	3039	16.0	28.0	25.1	70.1	16.4	13.5
Netherlands	9586	12.8	42.1	25.0	81.2	17.9	0.9
Norway	1807	18.4	39.4	28.3	86.9	6.9	6.1
Poland	5718	11.9	33.3	21.5	66.9	23.8	9.4
Portugal	14107	8.9	29.7	36.7	76.6	16.0	7.4
Serbia	6092	17.1	34.8	13.0	65.5	17.2	17.3
Slovakia	5174	23.0	34.0	9.0	66.8	18.3	15.0
Slovenia	4610	25.4	34.5	19.4	79.3	16.1	4.6
Spain	9468	13.4	33.5	30.6	78.4	16.4	5.2
Sweden	2994	20.8	34.7	24.6	80.9	8.2	10.9
Switzerland	8036	17.9	31.3	30.6	79.9	19.4	0.8
United Kingdom	25933	9.4	40.6	23.5	73.5	16.7	9.8

Note:
Based on ESS9 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 during weekdays (74%). On weekdays, households are least likely visited in the mornings. Of all contacts, an average of only 9% occur on Sundays.

Weekdays

The majority of weekday visits occur in Finland (92.3%); the fewest in Bulgaria (56.6%). In the median country, weekday visits happen in 75.2% of the time.

Saturdays

The majority of Saturday visits occur in France (37.2%); the fewest in Norway (6.9%). In the median country, Saturday visits happen in 16.7% of the time.

Sundays

The majority of Sunday visits occur in Bulgaria (19.2%); the fewest in France (0%). In the median country, Sunday visits happen in 9.7% of the time.

Common patterns

Figure 6.3 depicts common occurrences of over- and underrepresented patterns.[11] The most common pattern of observed visits consists of a relative overrepresentation of weekday afternoons. Conversely, households are less often frequented during weekends. An exception are Saturday afternoons overrepresented in Belgium, Bulgaria, Croatia, France, Germany, Hungary, Latvia, Lithuania, the Netherlands, Poland, Slovakia, and the United Kingdom, and Sunday afternoon visits in one country (Lithuania). In Bulgaria, Estonia, France, Germany, Ireland, Latvia, Lithuania, Portugal, and the United Kingdom weekday mornings, and in Croatia, Denmark, Finland, Serbia, Slovakia, and Slovenia weekday evenings are relatively underrepresented.

[11] 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'. 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.

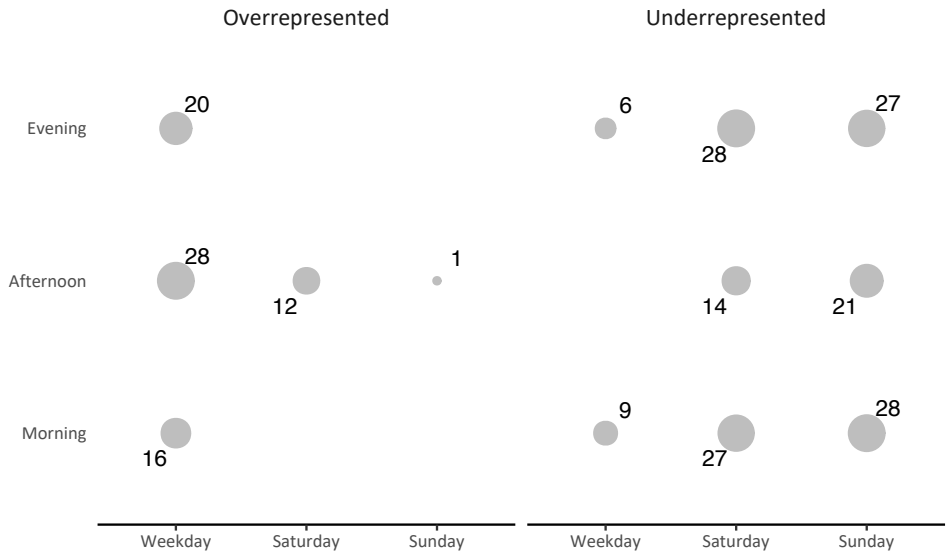

Figure 6.3 Statistical representation of contact patterns (numbers indicate number of countries with respictive pattern), Round 9
Based on ESS9 data from Contact forms, edition 3.0.

6.3.3 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 6.4, p. 60). These cases remain potentially productive and should not have been prematurely abandoned.

Table 6.5 presents descriptive statistics of the number of personal visits made to these cases in ESS9. The average number of personal visits ranges between 0.9 (Sweden) and 8.3 (the Netherlands). In the median country, 4.2 personal visits were made on average.

Table 6.6 shows the extent to which the specifications on the timing of personal visits were met (see also Figure 6.4). In ten countries (Denmark, Estonia, Finland, Iceland, Montenegro, Norway, Serbia, Sweden, Switzerland, and the United Kingdom), (nearly) all cases were visited at least once, while in 8 countries (Austria, Belgium, France, Germany, Italy, Lithuania, the Netherlands, and Portugal), (nearly) all of the cases were personally visited at least four times before they were abandoned as non-productive.

Four countries (Iceland, Sweden, Finland, and Norway) abandoned more than 10% of the unproductive cases with no further contact attempt. They are also among those nine countries (Bulgaria, Iceland, Sweden, Czechia, Finland, Norway, Croatia, Ireland, and Serbia) who stopped fieldwork with more than half of the remaining cases still requiring a fourth visit—Bulgaria and Sweden leading with more than 90%, followed by Czechia with more than 70% missing a fourth visit.

Evening visits occurred at least once for (nearly) all unproductive cases in four countries (Austria, Belgium, Lithuania, and Portugal). In the same countries, (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 four countries (Belgium, France, Germany, and Netherlands).

Table 6.5 Compliance with contact specifications: Number of personal visits, Round 9

Country	N[a]	Min	Max	Mean	SD
Austria	136	4	8	4.3	0.6
Belgium	100	4	13	6.9	1.7
Bulgaria	474	1	4	1.7	0.6
Croatia	186	1	7	2.0	1.4
Cyprus	121	1	10	6.3	2.6
Czechia	42	2	4	2.7	0.8
Denmark	109	0	12	4.7	2.3
Estonia	102	0	18	4.7	3.0
Finland	261	0	8	2.2	1.6
France	514	2	18	6.6	1.9
Germany	161	1	24	6.1	2.7
Hungary	121	1	10	4.1	1.1
Iceland	284	0	6	1.1	1.2
Ireland	310	1	9	3.0	1.8
Italy	534	1	13	4.7	1.4
Latvia	561	1	5	3.5	1.0
Lithuania	243	1	6	4.2	0.6
Montenegro	153	0	4	3.9	0.6
Netherlands	71	1	16	8.3	2.0
Norway	27	0	19	3.6	4.7
Poland	63	2	8	4.3	0.9
Portugal	338	2	28	8.2	3.9
Serbia	226	0	11	2.8	1.9
Slovakia	207	1	6	4.0	0.9
Slovenia	85	1	17	4.4	2.8
Spain	132	1	16	5.0	2.9
Sweden	266	0	8	0.9	1.4
Switzerland	340	0	14	4.2	2.5
United Kingdom	526	0	20	6.4	4.1

Note:
Based on ESS9 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).

Only two countries (Belgium and France) managed to cover the specified minimum of four visits, two weeks, weekend, and evening visits for at least 95% of the unproductive cases. Converseley, Iceland and Sweden exhibit the lowest adherence to all specifications simultaneously. The median country covered the minimum of one contact attempt by 100%, but only 52% of the two-week spread specification. The remaining specifications (a minimum of four, weekend, and evening visits) are all met by approximately 72% in the median country.

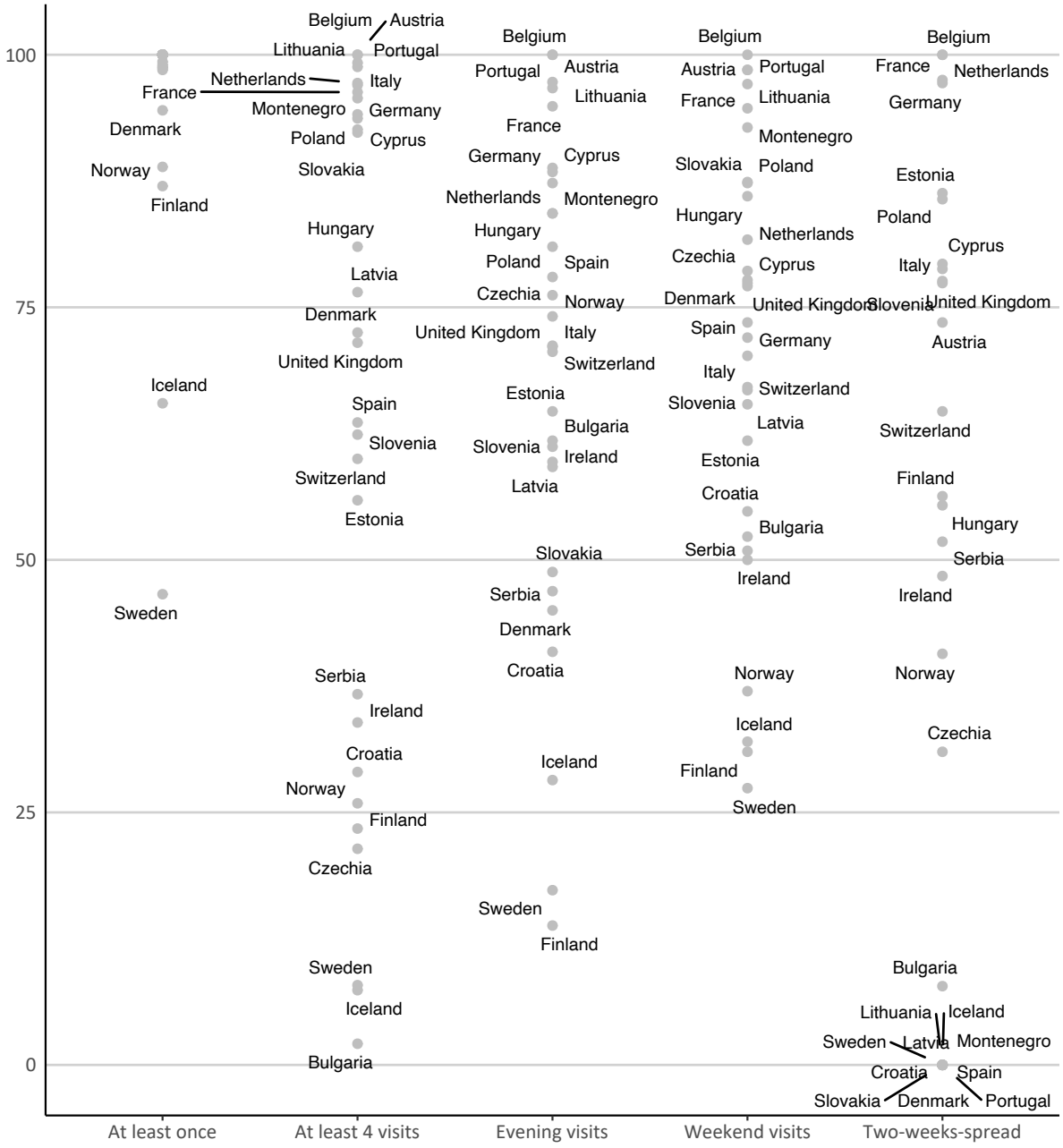

Figure 6.4 Adherence to specifications of contact strategy concerning final non-contacts (respective level in %), Round 9
Based on ESS9 data from Contact forms, edition 3.0.

Table 6.6 Compliance with contact specifications: Timing and spread of personal visits, Round 9

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
Austria	136	100.0	100.0	100.0	98.5	73.5
Belgium	100	100.0	100.0	100.0	100.0	100.0
Bulgaria	474	100.0	2.1	61.8	52.3	7.8
Croatia	186	100.0	29.0	40.9	54.8	0.0
Cyprus	121	100.0	92.6	88.4	77.7	79.3
Czechia	42	100.0	21.4	76.2	78.6	31.0
Denmark	109	94.5	72.5	45.0	77.1	0.0
Estonia	102	99.0	55.9	64.7	61.8	86.3
Finland	261	87.0	23.4	13.8	31.0	56.3
France	514	100.0	96.3	94.9	94.7	100.0
Germany	161	100.0	95.7	88.8	72.0	97.5
Hungary	121	100.0	81.0	84.3	86.0	55.4
Iceland	284	65.5	7.4	28.2	32.0	0.0
Ireland	310	100.0	33.9	59.7	50.0	48.4
Italy	534	100.0	97.0	71.2	70.2	78.8
Latvia	561	100.0	76.5	59.2	65.4	0.0
Lithuania	243	100.0	99.2	96.7	97.1	0.0
Montenegro	153	99.3	94.1	84.3	92.8	0.0
Netherlands	71	100.0	97.2	87.3	81.7	97.2
Norway	27	88.9	25.9	74.1	37.0	40.7
Poland	63	100.0	93.7	81.0	87.3	85.7
Portugal	338	100.0	98.8	97.3	98.5	0.0
Serbia	226	98.7	36.7	46.9	50.9	51.8
Slovakia	207	100.0	92.3	48.8	87.4	0.0
Slovenia	85	100.0	62.4	61.2	67.1	77.6
Spain	132	100.0	63.6	78.0	73.5	0.0
Sweden	266	46.6	7.9	17.3	27.4	0.0
Switzerland	340	98.8	60.0	70.6	66.8	64.7
United Kingdom	526	98.5	71.5	71.1	77.4	77.4

Note:

Based on ESS9 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'.

6.3.4 Response enhancement: incentives to target respondents

Target respondents can be offered incentives, unconditionally and/or conditionally on cooperation. In all but 8 countries (Belgium, Bulgaria, Cyprus, Denmark, Hungary, Montenegro, Slovakia, and Spain), some incentives were (standardly) offered, but the particularities vary markedly. Table 6.7 shows an overview of the respondent incentives that were used. Eight countries offered an unconditional, eighteen a conditional incentives of some sort; five offered both (Finland, the Netherlands, Sweden, Switzerland, and the United Kingdom). A more detailed description of particular incentives for each country can be found in the National Technical Summaries in the ESS Survey Documentation Report

(ESS Data Archive, 2018; see Section 43.7 Respondent incentives). Other response-enhancing measures such as dedicated websites, follow-up letters, and free-of-charge (helpdesk) telephone numbers etc. are also frequently used but less consistently documented.

Table 6.7 Respondent incentives, Round 9

Country	Unconditional	Conditional
Austria		x
Belgium		
Bulgaria		
Croatia		x
Cyprus		
Czechia		x
Denmark		
Estonia		x
Finland	x	x
France		x
Germany		x
Hungary		
Iceland		x
Ireland	x	
Italy		x
Latvia		x
Lithuania		x
Montenegro		
Netherlands	x	x
Norway		x
Poland	x	
Portugal	x	
Serbia		x
Slovakia		
Slovenia		x
Spain		
Sweden	x	x
Switzerland	x	x
United Kingdom	x	x

Note:
Based on ESS9 Data documentation report.

6.4 Outcome rates and detailed response breakdown

The rates of response, non-contact, refusal, and other-nonresponse achieved in ESS9 are presented in Table 6.8.[12] A detailed breakdown of these rates by final outcome is presented in Table 6.9 and Table 6.10. The figures are discussed in the following subsections.

6.4.1 Response rates

The ESS has traditionally targeted a response rate of 70% (European Social Survey, 2018). However, no country has been able to reach this (for many countries quite ambitious) target. Looking at Table 6.8, the ESS9 response rates range between 27.6% (Germany) and 69.4% (Bulgaria). The median country achieved a response rate of 51.8%. A response rate of at least 50% was achieved in 16 countries, but it exceeds 60% only in 7 (Bulgaria, Czechia, Estonia, Ireland, Montenegro, Poland, and Slovenia).

[12] Detailed 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 6.8 Outcome rates, Round 9

Country	Rate (%)				Gross sample size	Eligible sample size
	Response	Non-contact	Refusal	Other non-response		
Austria	50.8	2.7	44.8	1.7	4956	4915
Belgium	57.6	2.7	28.4	11.3	3204	3066
Bulgaria	69.4	14.8	10.4	5.5	3330	3169
Croatia	43.2	4.3	43.0	9.6	4470	4186
Cyprus	53.3	7.4	20.4	18.9	1599	1464
Czechia	67.4	1.2	31.2	0.3	3564	3560
Denmark	49.5	2.9	36.9	10.7	3212	3166
Estonia	62.7	2.3	27.8	7.2	3100	3035
Finland	51.8	7.1	24.4	16.7	3400	3387
France	48.1	10.7	24.9	16.3	4400	4178
Germany	27.6	1.8	51.9	18.7	8695	8556
Hungary	39.8	2.8	42.0	15.4	4363	4169
Iceland	40.5	12.1	30.8	16.6	2197	2125
Ireland	62.0	8.4	23.2	6.5	3768	3577
Italy	51.9	9.3	28.3	10.5	5497	5286
Latvia	38.9	22.0	29.6	9.5	2525	2358
Lithuania	59.2	7.3	30.6	2.9	4190	3099
Montenegro	62.3	7.2	20.6	9.9	2016	1926
Netherlands	49.6	1.8	38.4	10.1	3463	3372
Norway	43.3	0.8	43.0	12.8	3300	3246
Poland	60.4	2.3	24.2	13.1	2700	2485
Portugal	34.9	8.5	30.3	26.3	3617	3021
Serbia	57.9	5.6	25.3	11.2	3605	3530
Slovakia	39.6	6.8	49.3	4.3	2800	2738
Slovenia	64.1	2.4	23.0	10.5	2100	2056
Spain	53.8	3.9	20.6	21.6	3248	3100
Sweden	39.0	6.7	41.0	13.3	4082	3946
Switzerland	51.8	6.5	27.8	13.9	3015	2976
United Kingdom	41.0	7.9	38.8	12.3	5850	5371

Note:
Based on ESS9 data from Contact forms, edition 3.0.

6.5 Detailed nonresponse analysis

Nonresponse is mainly caused by people refusing to participate. Most commonly, the target respondents themselves, but also other household members on behalf of them might decline participation. In all countries except Bulgaria and Spain, 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 10.4% (Bulgaria) and 51.9% (Germany), with 15 countries falling within the inter-quartile range (24.4% – 38.8%). The median country had a refusal rate of 29.6%.

Refusal

'Respondent refusal' is the main type of final refusal. The median country has 19.7% refusals. In some of the countries, where (household) addresses rather than individual persons are issued, 'Household refusal, before selection' dominates (Austria, Bulgaria, Croatia, Cyprus, Czechia, Ireland, Latvia, Lithuania, Serbia, Slovakia, and United Kingdom). Proxy refusals (someone refusing on the respondent's behalf) happen in all participating countries, but are usually relatively rare as final outcome. Only 2 countries (France and Portugal) have more than 10% proxy refusals. Opt-out lists are a cause of nonresponse only in Estonia, Montenegro, and Sweden.

Non-contact

The ESS Specification requires that contact is established with at least 97% of all sample units (ESS Survey Specifications, 2018). With the exception of Austria, Bulgaria, Czechia, Ireland, Latvia, Lithuania, and Slovakia, non-contact is the smallest nonresponse component, but it ranges between 0.8% (Norway) and 22% (Latvia) of the eligible sample. The median country achieved a non-contact rate of 6.5%. Countries in the lowest quartile (Austria, Belgium, Czechia, Estonia, Germany, the Netherlands, Norway, Poland, and Slovenia) achieved a non-contact rate of less than 2.7%; those in the highest quartile (Bulgaria, France, Iceland, Ireland, Italy, Latvia, Portugal, and the United Kingdom) one higher than 7.9%.

Other nonresponse

Residual nonresponse, which cannot be attributed to either non-contact or refusal, ranges between 0.3% (Czechia) and 26.3% (Portugal), and has a diverse composition.

The most common other-nonresponse categories are 'Not available, away' (41), 'Language barrier' (44), 'Contact but no interview, other' (45), 'Mentally/physically unable/ill/sick, long term' (46), 'Moved to unknown destination' (52), and 'Address not traceable' (54). Croatia, Cyprus, Finland, France, Germany, Portugal, and Spain faced nonresponse rates above 5% in at least one of these.

'Not available, away' (41) is the largest other-nonresponse category in 4 countries (Czechia, Estonia, Ireland, and Latvia).

In 3 countries (Austria, Cyprus, and Sweden), 'Language barrier' (44) is the largest of the other-nonresponse categories. 'Language barrier' is responsible for some nonresponse in all countries except for Croatia, Czechia, Montenegro, and Poland, and reaches its maximum of 9.9% final other nonrespondents in Cyprus. 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

Table 6.9 Detailed response breakdown (part 1), Round 9

	Non-contact (%)	Refusal (%)				
Country	20	30	32	33	34	N[a]
Austria	2.7	0.0	27.0	2.5	14.9	4915
Belgium	2.6	0.0	24.6	1.6	0.9	3066
Bulgaria	14.1	0.0	4.4	1.0	4.5	3169
Croatia	4.0	0.0	0.6	0.0	39.6	4186
Cyprus	6.8	0.0	12.4	1.8	4.4	1464
Czechia	1.2	0.0	5.9	1.9	23.3	3560
Denmark	2.9	0.0	33.2	3.0	0.2	3166
Estonia	2.2	4.9	21.3	1.0	0.0	3035
Finland	7.0	0.0	23.1	1.2	0.1	3387
France	10.2	0.0	4.4	19.2	0.0	4178
Germany	1.8	0.0	47.8	3.3	0.1	8556
Hungary	2.6	0.0	36.3	3.4	0.4	4169
Iceland	11.7	0.0	29.0	0.8	0.0	2125
Ireland	8.0	0.0	15.0	2.7	4.3	3577
Italy	8.9	0.0	22.0	3.9	1.3	5286
Latvia	20.5	0.0	15.0	4.3	8.3	2358
Lithuania	5.4	0.0	0.9	0.3	21.5	3099
Montenegro	6.9	16.3	2.5	0.2	0.7	1926
Netherlands	1.8	0.0	32.6	4.4	0.5	3372
Norway	0.8	0.0	39.8	2.2	0.3	3246
Poland	2.1	0.0	19.0	3.0	0.3	2485
Portugal	7.1	0.0	6.7	16.4	2.2	3021
Serbia	5.5	0.0	10.9	4.4	9.5	3530
Slovakia	6.7	0.0	8.9	0.6	38.6	2738
Slovenia	2.4	0.0	19.7	2.8	0.1	2056
Spain	3.8	0.0	14.6	4.5	0.6	3100
Sweden	6.4	1.9	35.1	2.4	0.3	3946
Switzerland	6.4	0.0	21.8	3.8	1.9	2976
United Kingdom	7.2	0.0	20.3	3.6	11.7	5371

Note:
Based on ESS9 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.

source of nonresponse to mitigate. One or more additional interview languages would have to be supported. In ESS9, a localised Polish questionnaire was produced in Iceland in an effort to reduce nonresponse related to language barriers, but the efforts were not unambiguously successful as the nonresponse rate for this category remained at 2.7%.

The category 'Contact but no interview, other' (45) contains unidentified contact practices. It is the largest of the other-nonresponse categories in 7 countries (Finland, Hungary, Iceland, Norway, Slovakia, Sweden, and United Kingdom).

The category 'Mentally/physically unable/ill/sick, long term' (46) is the largest of the other-nonresponse

categories in 4 countries (Belgium, Denmark, France, and Netherlands).

In 5 countries (Bulgaria, Germany, Italy, Slovenia, and Spain), ‘Moved to unknown destination’ (52) is the largest of the other-nonresponse categories. It is responsible for up to about 9.1% final other nonrespondents (Spain). At the same time, there are no such cases at all in Austria, Belgium, Croatia, Czechia, Finland, Lithuania, and United Kingdom. This issue is not confined to a sample frame drawing from addresses rather than individuals. Relatively large numbers of people who have moved generally pose a challenge to surveys. Traditional approaches to response enhancement are of little use if target respondents’ new addresses are unknown.

The category ‘Address not traceable’ (54) is the largest of the other-nonresponse categories in 3 countries (Croatia, Portugal, and Slovakia). This was a particular issue for Portugal, where 10.7% of nonresponse was due to untraceable addresses.

Table 6.10 Detailed response breakdown (part 2), Round 9

	Not able and other nonresponse (%)											Undefined (%)		
Country	11	12	31	41	42	44	45	46	52	53	54	88	0	N[a]
Austria	0.0	0.0	0.0	0.1	0.0	1.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	4915
Belgium	0.0	1.2	0.5	1.6	0.2	3.1	0.0	3.7	0.0	0.0	0.5	0.0	0.0	3066
Bulgaria	0.0	0.1	0.2	0.7	0.1	0.1	0.4	0.4	2.7	0.4	0.2	0.0	0.0	3169
Croatia	0.0	0.1	0.2	0.0	0.0	0.0	0.6	0.5	0.0	0.7	6.8	0.0	0.0	4186
Cyprus	0.0	0.0	0.8	1.1	0.3	9.9	0.3	1.8	0.1	0.0	2.7	0.4	0.0	1464
Czechia	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	3560
Denmark	0.2	0.1	0.5	1.1	0.1	2.8	1.0	3.8	0.5	0.3	0.1	0.2	0.0	3166
Estonia	0.1	0.2	1.1	2.0	0.2	0.4	0.6	0.8	0.1	0.6	0.0	1.0	0.0	3035
Finland	0.0	0.0	0.6	2.4	0.1	1.1	10.6	1.6	0.0	0.0	0.0	0.3	0.0	3387
France	0.0	0.0	1.5	1.2	1.1	1.6	1.8	5.2	0.2	0.0	2.5	0.0	0.2	4178
Germany	0.1	0.2	0.1	5.0	0.1	2.4	0.0	3.5	7.0	0.1	0.0	0.0	0.0	8556
Hungary	0.0	2.5	0.1	0.8	0.1	0.8	4.9	1.0	2.8	0.9	0.6	0.0	0.1	4169
Iceland	0.0	0.0	1.2	1.9	0.1	2.7	3.3	3.1	2.1	0.4	1.1	0.1	0.0	2125
Ireland	0.0	0.0	0.2	2.9	0.2	0.8	0.8	0.8	0.1	0.1	0.1	0.0	0.0	3577
Italy	0.0	0.0	0.8	1.1	0.2	0.3	1.9	1.0	2.9	0.6	1.3	0.0	0.0	5286
Latvia	0.2	0.0	1.7	2.3	0.4	0.3	1.3	0.8	0.6	0.4	0.8	0.1	0.0	2358
Lithuania	0.1	1.2	0.4	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	3099
Montenegro	0.2	3.9	0.7	0.1	0.0	0.0	0.3	0.1	0.8	1.2	1.8	0.0	0.0	1926
Netherlands	0.1	0.0	0.3	0.4	0.1	2.4	0.8	3.1	2.6	0.0	0.1	0.0	0.0	3372
Norway	0.0	0.0	0.0	0.5	0.1	2.9	3.8	2.7	0.8	1.0	0.0	0.8	0.0	3246
Poland	0.0	0.2	0.2	1.8	0.0	0.0	0.7	1.8	3.4	3.8	0.1	0.0	0.0	2485
Portugal	0.4	0.5	2.2	2.4	0.3	0.7	2.0	2.0	0.2	0.4	10.7	0.1	0.0	3021
Serbia	0.1	2.1	0.8	1.0	0.2	0.2	2.0	1.2	0.4	0.9	0.4	0.1	1.7	3530
Slovakia	0.0	0.0	0.7	0.5	0.0	0.2	1.0	0.5	0.1	0.2	1.0	0.0	0.0	2738
Slovenia	0.0	0.0	1.7	1.5	0.2	0.5	1.5	1.5	2.2	1.1	0.0	0.0	0.0	2056
Spain	0.0	0.0	0.3	6.6	0.1	0.9	0.2	2.2	9.1	0.2	1.1	0.0	0.0	3100
Sweden	0.0	0.1	0.1	1.4	0.1	3.2	3.2	2.6	1.0	0.2	0.0	0.0	1.0	3946
Switzerland	0.0	0.1	4.9	1.0	0.1	3.0	0.0	2.7	1.7	0.2	0.0	0.0	0.0	2976
United Kingdom	0.0	0.0	1.8	2.7	0.3	0.9	3.2	1.6	0.0	0.0	0.1	0.1	0.6	5371

Note:
Based on ESS9 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 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: target respondents on an opt-out list, target respondents who have moved to an unknown destination, and untraceable addresses.

On the one side, the critical advantage of this source is that auxiliary, case-level data on all eligible sample units—(most) nonrespondents and respondents—should be readily available 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. 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.

An in-depth calculation of bias-estimates and effects on response rates is omitted. However, a statistic that summarizes the differences between respondents and nonrespondents in all available auxiliary variables, the standardized average contrast[13], is calculated (see Tables 6.13 and \ref{tab:auxiliary_4).

6.6.1 Differences of respondents and nonrespondents based on the Neighbourhood Characteristics Form

The first assessment draws on the auxiliary data collected by the interviewers via the Neighbourhood Characteristics Form. In ESS9, this auxiliary data is available for 28 countries. There is no such information available for Norway. The analytic sample consists of all eligible cases (excluding the three nonrespondents mentioned above categories) for which the complete Neighbourhood Characteristics Form was filled out. The following measures were derived[14]:

- whether the dwelling is a detached house
- whether the dwelling is an apartment or otherwise in a multi-unit building
- whether there is an entry phone system before reaching the target respondent's individual door
- whether there is a locked gate or door 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 li†er and rubbish in the immediate vicinity (rated on a four-point scale from 'Very large amount' to 'None or almost none')

[13] For each auxiliary variable x, the absolute standardised contrast and the absolute standardised bias are computed as follows:

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

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

[14] Note 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.

- 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 are presented in Table 6.11, Table 6.12, and Table 6.13. Especially the proportion of apartment dwellings and the proportion of entry phone systems tend to diverge considerably between respondents and nonrespondents in several countries. Conversely, the differences are negligible for observing litter and rubbish, vandalism, and graffiti in the immediate vicinity.

Table 6.11 Respondent, nonrespondent and full-sample proportion for Neighbourhood Characteristics Form auxiliary variables, Round 9

	Detached house (%)			Apartment (%)			
Country	Nonresp.	Resp.	All	Nonresp.	Resp.	All	N[a]
Austria	50.5	43.0	46.7	49.5	57.0	53.3	4915
Belgium	70.9	82.1	77.4	29.1	17.9	22.6	3066
Bulgaria	30.4	59.6	50.8	69.6	40.4	49.2	3169
Croatia	78.0	63.6	71.3	22.0	36.4	28.7	4186
Cyprus	59.3	81.5	71.5	40.7	18.5	28.5	1464
Czechia	84.3	75.3	78.2	15.7	24.7	21.8	3560
Denmark	57.7	74.4	66.0	42.3	25.6	34.0	3166
Estonia	27.8	34.0	31.8	72.2	66.0	68.2	2884
Finland	53.9	63.9	59.2	46.1	36.1	40.8	3387
France	52.6	63.7	58.0	47.4	36.3	42.0	4177
Germany	44.7	56.0	48.0	55.3	44.0	52.0	8556
Hungary	73.8	77.6	75.3	26.2	22.4	24.7	4169
Iceland	46.6	55.1	50.1	53.4	44.9	49.9	2125
Ireland	83.3	92.4	89.0	16.7	7.6	11.0	3577
Italy	44.6	49.9	47.4	55.4	50.1	52.6	5286
Latvia	20.3	33.7	25.4	79.7	66.3	74.6	2358
Lithuania	49.3	51.0	50.3	50.7	49.0	49.7	3099
Montenegro	62.8	77.4	74.0	37.2	22.6	26.0	1598
Netherlands	70.4	81.4	76.0	29.6	18.6	24.0	3372
Norway							3246
Poland	37.5	44.5	41.6	62.5	55.5	58.4	2485
Portugal	42.5	51.3	45.9	57.5	48.7	54.1	3021
Serbia	60.9	68.1	65.1	39.1	31.9	34.9	3530
Slovakia	55.2	64.1	58.8	44.8	35.9	41.2	2738
Slovenia	64.3	71.2	68.7	35.7	28.8	31.3	2056
Spain	27.9	38.0	33.4	72.1	62.0	66.6	3100
Sweden	38.2	62.2	57.7	61.8	37.8	42.3	3870
Switzerland	31.0	40.5	36.0	69.0	59.5	64.0	2976
United Kingdom	78.9	84.0	81.1	21.1	16.0	18.9	5371

Note:
Based on ESS9 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, nonrespondent and full-sample proportion for Neighbourhood Characteristics Form auxiliary variables, Round 9

	Entry phone (%)			Locked entrance (%)			Both (%)			None (%)			
Country	Nonresp.	Resp.	All	Nonresp.	Resp.	All	Nonresp.	Resp.	All	Nonresp.	Resp.	All	N[a]
Austria	32.4	38.6	35.5	18.4	16.8	17.6	26.1	21.0	23.5	23.2	23.6	23.4	4915
Belgium	22.6	14.8	18.1	10.3	10.2	10.3	15.8	12.6	13.9	51.2	62.4	57.7	3066
Bulgaria	7.9	5.3	6.1	50.7	50.5	50.5	30.9	20.9	24.0	10.5	23.3	19.4	3169
Croatia	9.3	11.9	10.5	26.6	16.7	22.0	16.8	19.0	17.8	47.3	52.5	49.7	4186
Cyprus	11.7	10.1	10.8	23.9	23.8	23.9	33.9	19.5	26.0	30.5	46.6	39.3	1464
Czechia	44.7	45.4	45.2	52.5	31.9	38.7	2.4	20.0	14.3	0.4	2.6	1.9	3560
Denmark	16.4	10.7	13.6	5.3	3.8	4.6	11.3	7.7	9.5	67.0	77.7	72.3	3166
Estonia	24.2	26.0	25.4	25.6	31.2	29.4	33.2	20.3	24.6	17.0	22.4	20.6	2884
Finland	5.5	7.1	6.3	21.4	16.8	19.0	7.2	6.8	7.0	65.9	69.4	67.8	3387
France	26.6	23.6	25.2	9.7	8.1	8.9	18.5	11.8	15.2	45.2	56.5	50.7	4177
Germany	17.1	16.5	16.9	20.0	20.9	20.2	39.7	31.6	37.3	23.3	31.1	25.6	8556
Hungary	13.1	8.6	11.3	58.1	57.5	57.8	20.6	23.8	21.9	8.3	10.1	9.0	4169
Iceland	28.0	18.4	24.1	5.5	8.9	6.9	26.9	22.9	25.3	39.6	49.8	43.8	2125
Ireland	6.8	3.9	5.0	9.8	7.3	8.2	8.2	3.7	5.4	75.2	85.1	81.3	3577
Italy	35.6	36.5	36.1	10.3	11.2	10.8	50.8	47.4	49.0	3.3	4.9	4.2	5286
Latvia	21.5	11.1	17.5	30.6	22.3	27.4	11.3	5.0	8.9	36.5	61.5	46.3	2358
Lithuania	23.1	16.7	19.3	28.1	20.5	23.6	8.5	7.1	7.7	40.3	55.7	49.4	3099
Montenegro	20.6	13.3	15.1	28.9	41.5	38.4	4.8	5.2	5.1	45.7	40.0	41.4	1598
Netherlands	21.3	12.6	16.9	1.7	1.6	1.7	3.1	2.3	2.7	73.9	83.5	78.8	3372
Norway													3246
Poland	44.5	33.4	37.6	27.8	37.0	33.6	13.6	10.4	11.6	14.0	19.2	17.2	2485
Portugal	10.9	11.1	11.0	23.2	27.6	24.9	52.5	51.5	52.1	13.4	9.8	12.0	3021
Serbia	11.2	13.8	12.8	38.9	28.7	32.7	20.6	10.6	14.5	29.4	46.9	40.0	3530
Slovakia	13.4	20.9	16.4	35.5	29.5	33.1	42.1	27.6	36.2	9.1	22.0	14.3	2738
Slovenia	10.4	8.6	9.2	30.3	34.4	33.0	21.7	16.2	18.1	37.6	40.7	39.6	2056
Spain	62.6	58.9	60.6	4.9	6.3	5.6	18.3	14.5	16.2	14.2	20.3	17.5	3100
Sweden	2.8	4.9	4.5	32.2	25.6	26.8	25.7	11.3	13.9	39.3	58.2	54.8	3870
Switzerland	8.1	7.1	7.6	30.6	34.9	32.9	41.3	33.1	37.0	20.0	24.9	22.5	2976
United Kingdom	5.7	4.4	5.2	1.7	1.3	1.5	9.8	5.7	8.0	82.8	88.6	85.3	5371

Note:
Based on ESS9 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 6.13 Respondent and nonrespondent full-sample averages for Neighbourhood Characteristics Form auxiliary variables and average standardized contrast over all auxiliary variables, Round 9

	Physical condition			Litter and rubbish			Vandalism and graffiti				
Country	Nonresp.	Resp.	All	Nonresp.	Resp.	All	Nonresp.	Resp.	All	Avg. Contrast	N[a]
Austria	1.8	1.8	1.8	3.8	3.8	3.8	3.9	3.9	3.9	0.1	4915
Belgium	2.1	1.9	2.0	3.8	3.8	3.8	3.9	3.9	3.9	0.3	3066
Bulgaria	2.3	2.3	2.3	3.1	3.1	3.1	3.3	3.4	3.4	0.4	3169
Croatia	2.1	1.9	2.0	3.8	3.8	3.8	3.9	3.9	3.9	0.3	4186
Cyprus	2.2	2.1	2.1	3.7	3.8	3.7	3.9	3.9	3.9	0.4	1464
Czechia	1.7	2.0	1.9	4.0	3.9	3.9	3.9	3.9	3.9	0.6	3560
Denmark	2.2	1.9	2.0	3.8	3.9	3.8	3.9	4.0	3.9	0.4	3166
Estonia	2.1	2.0	2.1	3.7	3.8	3.8	3.9	3.9	3.9	0.2	2884
Finland	2.1	1.9	2.0	3.9	3.9	3.9	4.0	4.0	4.0	0.2	3387
France	1.8	1.7	1.8	3.8	3.9	3.9	3.9	3.9	3.9	0.3	4177
Germany	2.1	2.0	2.1	3.8	3.8	3.8	3.9	3.9	3.9	0.2	8556
Hungary	2.3	2.3	2.3	3.7	3.7	3.7	3.8	3.8	3.8	0.1	4169
Iceland	2.0	1.8	1.9	3.9	3.8	3.9	3.9	3.9	3.9	0.3	2125
Ireland	1.7	1.6	1.6	3.9	3.8	3.8	4.0	3.9	3.9	0.4	3577
Italy	2.3	2.2	2.3	3.7	3.7	3.7	3.8	3.8	3.8	0.1	5286
Latvia	2.4	2.4	2.4	3.7	3.7	3.7	3.8	3.9	3.8	0.5	2358
Lithuania	2.1	2.3	2.2	3.7	3.7	3.7	3.9	3.9	3.9	0.2	3099
Montenegro	2.4	2.3	2.3	3.5	3.6	3.6	3.7	3.7	3.7	0.3	1598
Netherlands	1.9	1.7	1.8	3.7	3.8	3.8	3.8	3.9	3.9	0.3	3372
Norway											3246
Poland	2.0	2.1	2.1	3.7	3.7	3.7	3.7	3.7	3.7	0.2	2485
Portugal	2.2	2.1	2.2	3.8	3.8	3.8	3.9	3.9	3.9	0.1	3021
Serbia	2.4	2.5	2.5	3.6	3.6	3.6	3.7	3.8	3.7	0.3	3530
Slovakia	1.8	1.8	1.8	3.9	3.8	3.8	3.9	3.9	3.9	0.4	2738
Slovenia	2.1	2.0	2.0	3.8	3.8	3.8	3.9	3.9	3.9	0.2	2056
Spain	2.4	2.2	2.3	3.7	3.8	3.7	3.7	3.8	3.8	0.3	3100
Sweden	1.8	1.6	1.7	3.8	3.9	3.9	3.9	3.9	3.9	0.5	3870
Switzerland	2.2	2.1	2.1	3.8	3.8	3.8	3.9	3.9	3.9	0.2	2976
United Kingdom	2.2	2.1	2.1	3.7	3.8	3.7	3.9	3.9	3.9	0.3	5371

Note:
Based on ESS9 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.

Respondents and nonrespondents appear to differ most strongly on the interviewer-observed characteristics in Czechia, Sweden, and Latvia (0.63, 0.53, and 0.48, respectively). In the median country, the contrast is 0.27. Respondents and nonrespondents are most similar to each other in Italy, Austria, and Hungary (0.12, 0.14, and 0.14, respectively).

6.6.2 Differences of respondents and nonrespondents based on the available register data

Table 6.14 Respondent, nonrespondent and full-sample mean/proportion for register-based auxiliary variables, Round 9

	Age			Female (%)				
Country	Nonresp.	Resp.	All	Nonresp.	Resp.	All	Avg. Contrast	N[a]
Belgium	49.0	47.8	48.3	48.3	49.1	48.8	0.04	3066
Czechia	41.8	48.5	48.0	51.9	43.7	44.3	0.28	3560
Denmark				48.9	53.7	51.3		3166
Estonia				47.8	44.0	45.2		2884
Finland	47.1	50.8	49.0	49.3	48.3	48.8	0.10	3387
Germany	49.7	49.2	49.6	49.5	51.2	50.0	0.03	8556
Hungary				50.1	42.7	47.2		4169
Iceland	42.2	49.6	45.2	52.8	48.7	51.1	0.24	2125
Italy	53.4	51.2	52.3	49.5	45.5	47.4	0.10	5286
Netherlands	47.7	48.1	47.9	50.0	49.0	49.5	0.02	3372
Norway	46.5	46.1	46.3	48.8	51.8	50.1	0.04	3246
Poland	47.2	47.3	47.3	47.6	47.3	47.4	0.01	2485
Slovenia	50.0	49.3	49.6	52.6	46.3	48.5	0.08	2056
Spain	50.4	48.1	49.1	49.2	50.8	50.1	0.08	3100
Sweden	46.5	52.2	48.8	48.6	50.7	49.4	0.16	3870
Switzerland	49.0	47.4	48.1	49.0	50.1	49.6	0.05	2976

Note:
Based on ESS9 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.

The second assessment of similarity draws on the auxiliary data provided by the national teams from the population register. In ESS9, this auxiliary data is (partially) available for 16 countries (Belgium, Czechia, Denmark, Estonia, Finland, Germany, Hungary, Iceland, Italy, the Netherlands, Norway, Poland, Slovenia, Spain, Sweden, 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, and the mean for the entire analytic eligible gross sample for both auxiliary variables. Overall, the response groups exhibit a higher contrast in age than the gender composition. Czechia, Iceland, and Sweden exhibit the highest contrasts (0.28, 0.24, and 0.16, respectively). Respondents and nonrespondents are most similar to each other in Poland, the Netherlands, and Germany (0.01, 0.02, and 0.03, respectively).

7 INTERVIEW PROCESS

7.1 Interview setting

As detailed in the ESS interviewer manual (European Social Survey, 2018), interviewers have to see to it 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 was present who interfered with the interview[15].

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 7.4% of interviews. This percentage varies only slightly across participating countries. Only in Spain, Portugal and Bulgaria, there was some 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 Questionnaire[16].

In about half of the countries, more than 80% of the respondents were reported to have used all of the showcards (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 20% to 45% of the total participants. Across almost allcountries, the percentage of respondents refusing or unable to use the showcards at all is very low. In the median country, 2.8% of the respondents didn't use the showcards at all. Only in the Montenegro, Serbia, Hungary and Croatia, the percentages of respondents refusing or unable to use the showcards are above 10% of the total participants.

[15] Whether 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.

[16] This item was added to the Interviewer questionnaire in Round 8.

Table 7.1 Third party interference, Round 9

Country	N[a]	Anyone present who interfered with the interview (%)
Austria	2499	4.5
Belgium	1767	9.0
Bulgaria	2198	14.3
Croatia	1810	4.8
Cyprus	781	11.0
Denmark	1572	5.2
Estonia	1904	6.7
Finland	1755	3.5
France	2010	6.7
Germany	2358	8.1
Hungary	1661	7.0
Iceland	861	8.7
Ireland	2216	10.7
Italy	2745	7.4
Latvia	918	10.5
Lithuania	1835	4.3
Montenegro	1200	11.3
Netherlands	1673	6.3
Norway	1406	8.0
Poland	1500	10.3
Portugal	1055	15.7
Serbia	2043	11.9
Slovakia	1083	5.3
Slovenia	1318	6.8
Spain	1668	18.3
Sweden	1539	2.5
Switzerland	1542	7.5
United Kingdom	2204	6.7

Note:
Based on ESS9 data from Interviewer's questionnaire, edition 3.
[a] N refers to the number of respondents for which the Interviewer Questionnaire item was completed.

Table 7.2 Showcard use, Round 9

Country	N[a]	Used all of the applicable showcards (%)	Used only some of the applicable showcards (%)	Refused/was unable to use the showcards at all (%)
Austria	2499	78.2	20.3	1.3
Belgium	1767	97.1	2.4	0.5
Bulgaria	2198	90.1	6.5	3.1
Croatia	1810	54.6	31.3	13.5
Cyprus	781	62.5	29.6	7.9
Denmark	1572	92.0	5.7	2.2
Estonia	1904	81.5	13.8	4.7
Finland	1755	93.2	4.4	2.1
France	2010	95.7	3.7	0.5
Germany	2358	94.7	4.3	1.0
Hungary	1661	42.5	45.2	12.1
Iceland	861	92.9	6.2	0.9
Ireland	2216	68.3	26.2	5.3
Italy	2745	87.7	10.8	1.5
Latvia	918	64.5	22.2	13.2
Lithuania	1835	61.9	30.6	7.2
Montenegro	1200	51.3	29.9	18.6
Netherlands	1673	94.8	4.5	0.6
Norway	1406	92.1	5.3	1.1
Poland	1500	64.3	28.5	5.9
Portugal	1055	79.5	15.9	4.4
Serbia	2043	58.4	27.0	14.3
Slovakia	1083	54.0	37.4	8.4
Slovenia	1318	90.2	6.4	2.8
Spain	1668	67.0	24.6	8.2
Sweden	1539	96.0	2.4	0.8
Switzerland	1542	95.1	4.2	0.5
United Kingdom	2204	91.5	7.1	1.2

Note:
Based on ESS9 data from Interviewer's questionnaire, edition 3.
[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 Interview language, Round 9

Country	Language	Number of interviews
Austria	German	2499
Belgium	Dutch	1037
	French	730
Bulgaria	Bulgarian	2198
Croatia	Croatian	1810
Cyprus	Greek	781
Denmark	Danish	1572
Estonia	Estonian	1465
	Russian	439
Finland	Finnish	1668
	Swedish	87
France	French	2010
Germany	German	2358
Hungary	Hungarian	1661
Iceland	English	2
	Icelandic	850
	Polish	8
	Sign languages	1
Ireland	English	2216
Italy	Italian	2745
Latvia	Latvian	715
	Russian	203
Lithuania	Lithuanian	1776
	Russian	59
Montenegro	Albanian	12
	Montenegrin	1188
Netherlands	Dutch	1673
Norway	Norwegian	1406
Poland	Polish	1500

(continued …)

Country	Language	Number of interviews
Poland	Polish	1500
Portugal	Portuguese	1055
Serbia	Bosnian	8
	Serbian	2035
Slovakia	Hungarian	9
	Slovak	1074
Slovenia	Slovenian	1318
Spain	Catalan	103
	Spanish, Castilian	1565
Sweden	Swedish	1539
Switzerland	French	402
	German	1075
	Italian	65
United Kingdom	English	2204

Note:
Based on ESS9 data from Interviewer's questionnaire, edition 3.

Table 7.3 shows the languages in which interview where conducted in each participating country in Round 9. Whether the interview language differs to the first language spoken at home by the respondents is presented in Table 7.4. In 21 countries, less than 10% of the interviews present a mismatch between the first home language and the interview language. Up to 14% of the interviews in Belgium, Bulgaria, Italy, and Spain were conducted in a language different to the first home language of the respondent. Across almost all countries, the group of respondents who are not interviewed in their first home language is a diverse group, with few prominent, large language groups. The small numbers of the various language groups may also fluctuate heavily due to sampling variation. Only in Montenegro and Switzerland we observe a high mismatch between the first home language and the interview language (61.2% and 62.8% respectively) with a language language, although for for Switzerland the language group Swiss German/Alemannic/Alsatian could be regarded as equal to the German interview language. It should also be noted that also in Italy, Germany, the Netherlands, Norway and Ireland, 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 Spain). 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 7.4 Interview language different from first home language, Round 9

Country	N	Interview not in first home language (%)	Main first home languages of respondents not interviewed in first home language
Austria	2499	6.3	Turkish (1.6%), Bosnian (0.6%), Serbian (0.6%) and English (0.5%)
Belgium	1767	11.2	Arabic (2.4%), English (1.2%), French (1.2%), Romanian (0.6%), Turkish (0.6%) and Polish (0.5%)
Bulgaria	2198	12.9	Turkish (8.2%) and Romany (4.5%)
Croatia	1810	2.3	Serbian (0.8%)
Cyprus	781	4.0	Russian (1%), English (0.9%), Romanian (0.6%) and Bulgarian (0.5%)
Denmark	1572	6.0	English (1%)
Estonia	1904	4.6	Russian (3.4%) and Estonian (0.5%)
Finland	1755	4.1	English (0.8%), Russian (0.7%), Estonian (0.6%) and Finnish (0.5%)
France	2010	4.1	Arabic (0.9%) and Portuguese (0.5%)
Germany	2358	7.7	Russian (1.4%), Arabic (0.7%), Low German Saxon (0.6%), Polish (0.6%), Turkish (0.6%) and English (0.5%)
Hungary	1661	0.3	
Iceland	861	3.1	English (1.5%), Polish (1.5%) and Irish (0.8%)
Ireland	2216	5.9	Polish (1.5%) and Irish (0.8%)
Italy	2745	13.0	Local language Italy (3.9%), Romanian (1.3%), German (1.2%), Sicilian (1.1%), Albanian (0.7%), Arabic (0.7%)
Latvia	918	7.0	Russian (4.2%), Baltic other (1.7%), Latvian (0.7%),
Lithuania	1835	5.7	Polish (3.1%) and Russian (2.3%)
Montenegro	1200	61.2	Serbian (45%), Slavic other (7.4%), Albanian (3.2%), Bosnian (2%)
Netherlands	1673	7.1	Western Frisian (1.7%), Arabic (1.1%), English (1.1%) and Turkish (0.5%)
Norway	1406	8.3	English (1.3%), Arabic (0.7%), Norwegian Bokmål (0.7%), Norwegian Nynorsk (0.6%), Swedish (0.6%)
Poland	1500	0.3	
Portugal	1055	1.8	
Serbia	2043	6.2	Hungarian (2.9%) and Romany (0.8%)
Slovakia	1083	9.4	Hungarian (7.8%)
Slovenia	1318	5.1	Bosnian (2.1%), Serbian (0.7%) and Albanian (0.5%)
Spain	1668	13.7	Gallegan (3.7%), Catalan (3.6%), Arabic (1.1%), Basque (1.1%), Spanish Castilian (1.1%), Romanian (0.7%)
Sweden	1539	8.3	Arabic (1.6%), English (1%), Persian (0.7%) and Finnish (0.6%)
Switzerland	1542	68.2	Swiss German/Alemannic/Alsatian (54.5%), Portuguese (2.6%), Italian (1.8%), Albanian (1.6%), English (1.3%), Serbian (1.2%), Spanish Castilian (1%), Turkish (0.8%) and French (0.6%)
United Kingdom	2204	7.8	Polish (1.1%), Urdu (0.6%) and French (0.5%)

Note:
Based on ESS9 data from Interviewer's questionnaire, edition 3.
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 ESS9. The average interview duration ranges between 43.8 (Croatia) and 78.7 minutes (Germany). In the median country, an interview took on average 60.4 minutes. Note that interviews in the United Kingdom took on average 60 minutes, which is within the range of the anticipated interview duration for British English of 55 to 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 Round 5 of the European Social Survey). Table 7.6 shows descriptive statistics of the interview duration by language. The figures clearly show large differences in interview duration across countries with a shared language. For example, the average interview duration ranges between 61.3 (Switzerland) and 78.7 minutes (Germany) for interviews in German, ranges between 52.5 (Italy) and 66.7 minutes (Switzerland) for interviews in Italian, and ranges between 45.9 (Ireland) and 60.5 minutes (United Kingdom) for interviews in English. 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, Round 9

Country	N[a]	Q1	Q3	Mean	SD
Austria	2499	49.0	78.0	66.0	24.2
Belgium	1760	51.0	69.0	61.2	16.0
Croatia	1810	33.0	52.0	43.8	15.8
Cyprus	725	42.0	65.0	56.5	20.9
Denmark	1566	50.0	70.0	62.7	24.8
Estonia	1883	46.0	68.0	59.5	26.1
Finland	1661	48.0	66.0	59.2	18.0
France	2010	49.0	70.0	61.0	17.2
Germany	2347	63.0	89.0	78.7	23.2
Hungary	576	35.0	60.0	48.4	17.4
Iceland	860	49.0	69.0	61.8	19.5
Ireland	2203	35.0	53.0	45.9	20.7
Italy	2714	39.0	63.0	52.5	22.4
Latvia	897	43.0	61.0	54.0	20.0
Lithuania	1834	53.0	65.8	60.4	10.7
Montenegro	1195	37.0	62.0	55.5	37.7
Netherlands	1482	55.0	75.0	66.8	19.6
Norway	1393	48.0	68.0	60.9	19.9
Poland	1498	48.0	71.0	60.9	18.1
Portugal	1021	54.0	78.0	70.2	29.0
Serbia	1848	37.0	59.0	51.6	33.5
Slovakia	1065	40.0	55.0	49.7	17.9
Slovenia	1244	39.0	55.0	48.6	19.8
Spain	1481	37.0	55.0	47.3	17.8
Sweden	1484	57.0	83.0	74.4	32.4
Switzerland	1493	49.0	71.0	61.5	17.8
United Kingdom	2087	47.0	68.0	60.5	28.1

Note:
Based on ESS9 data from Contact forms, edition 3.0.
[a] N refers to all cases for which the interview duration was recorded.

Table 7.6 Interview duration by interview language, Round 9

Interview Language	Country	N[a]	Q1	Q3	Mean	SD
Albanian	Montenegro	12	53.0	66.5	66.5	25.7
Catalan	Spain	100	42.0	50.0	50.0	12.8
Croatian	Croatia	1810	33.0	43.8	43.8	15.8
Danish	Denmark	1566	50.0	62.7	62.7	24.8
Dutch	Belgium	1034	50.0	59.3	59.3	14.3
	Netherlands	1482	55.0	66.8	66.8	19.6
English	Ireland	2203	35.0	45.9	45.9	20.7
	United Kingdom	2087	47.0	60.5	60.5	28.1
Estonian	Estonia	1453	46.0	59.5	59.5	23.9
Finnish	Finland	1579	48.0	59.3	59.3	18.2
French	Belgium	726	52.0	63.9	63.9	17.8
	France	2010	49.0	61.0	61.0	17.2
	Switzerland	388	49.0	61.2	61.2	18.0
German	Austria	2499	49.0	66.0	66.0	24.2
	Germany	2347	63.0	78.7	78.7	23.2
	Switzerland	1042	49.0	61.3	61.3	17.8
Greek	Cyprus	725	42.0	56.5	56.5	20.9
Hungarian	Hungary	576	35.0	48.4	48.4	17.4
Icelandic	Iceland	850	49.0	61.6	61.6	19.3
Italian	Italy	2714	39.0	52.5	52.5	22.4
	Switzerland	63	55.5	66.7	66.7	15.7
Latvian	Latvia	695	43.0	53.5	53.5	19.8
Lithuanian	Lithuania	1775	53.0	60.4	60.4	10.7
Montenegrin	Montenegro	1183	37.0	55.4	55.4	37.8
Norwegian	Norway	1393	48.0	60.9	60.9	19.9
Polish	Poland	1498	48.0	60.9	60.9	18.1
Portuguese	Portugal	1021	54.0	70.2	70.2	29.0
Russian	Estonia	430	43.0	59.7	59.7	32.5
	Latvia	202	46.0	56.0	56.0	20.7
	Lithuania	59	49.0	58.2	58.2	11.8
Serbian	Serbia	1841	37.0	51.5	51.5	33.5
Slovak	Slovakia	1056	40.0	49.7	49.7	17.9
Slovenian	Slovenia	1244	39.0	48.6	48.6	19.8
Spanish, Castilian	Spain	1381	37.0	47.1	47.1	18.1
Swedish	Finland	82	46.2	58.3	58.3	14.2
	Sweden	1484	57.0	74.4	74.4	32.4

Note:
Based on ESS9 data from Contact forms, 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 assesses 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 extend 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 ESS9[17]. The intra-interviewer correlation could be estimated for 37 items among all participating countries. 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 0.019 (Finland) and 0.351 (Hungary), with 13 countries in the 0.051-0.158 range. For the median country we observe an average intra-interviewer correlation of 0.087. The distribution of the intra-interviewer correlation varies largely across countries. While in 6 countries (Belgium, Finland, France, Iceland, the Netherlands, the United Kingdom), (almost) none of the intra-interviewer correlations exceed 0.10, more than half the intra-interviewer correlations exceed this threshold in 10 countries (Austria, Bulgaria, the Czech Republic, Hungary, Italy, Lithuania, Montenegro, Poland, Serbia and Slovakia).

Table 7.8 presents some descriptive statistics by questionnaire module. For the median country we observe an average intra-interviewer correlation of 0.055 for the core modules A, B and C, 0.093 for the rotating module D on Timing of Life, 0.103 for the new module G on Justice and Fairness in Europe, 0.072 for the core socio-demographic module F, and 0.108 for the core module H on Human values.

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 ESS9. Supporting the previous concerns about the core module H on Human values, 6 items in the top 25 are from the H module (the module as a whole contains a total of 21 items). The rotating modules contribute to about two thirds of the item in the top 25. The list contains 11 items rotating module G on Justice and Fairness in Europe and 5 from module D on Timing of Life. This results could be related to the specific characteristic of these two modules, however, it still suggests that new and rotating modules should receive additional attention.

[17] Intra-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 ESS9 main questionnaire (N = 151). 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 assinment, 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 5 respondents for each interviewer are suppressed.

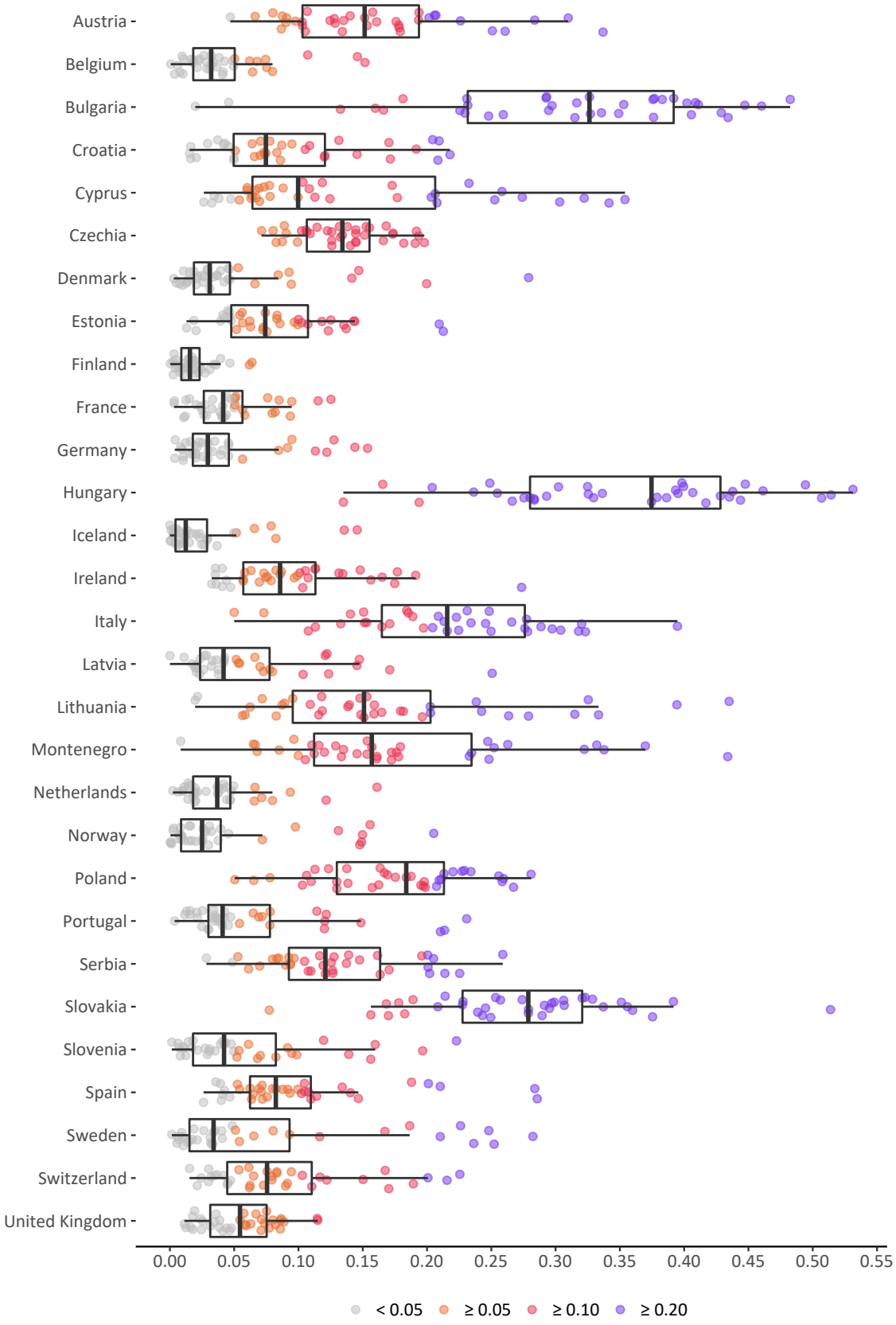

Figure 7.1 Interviewer effects, Round 9

Note: Based on ESS9 integrated file, edition 3.1.

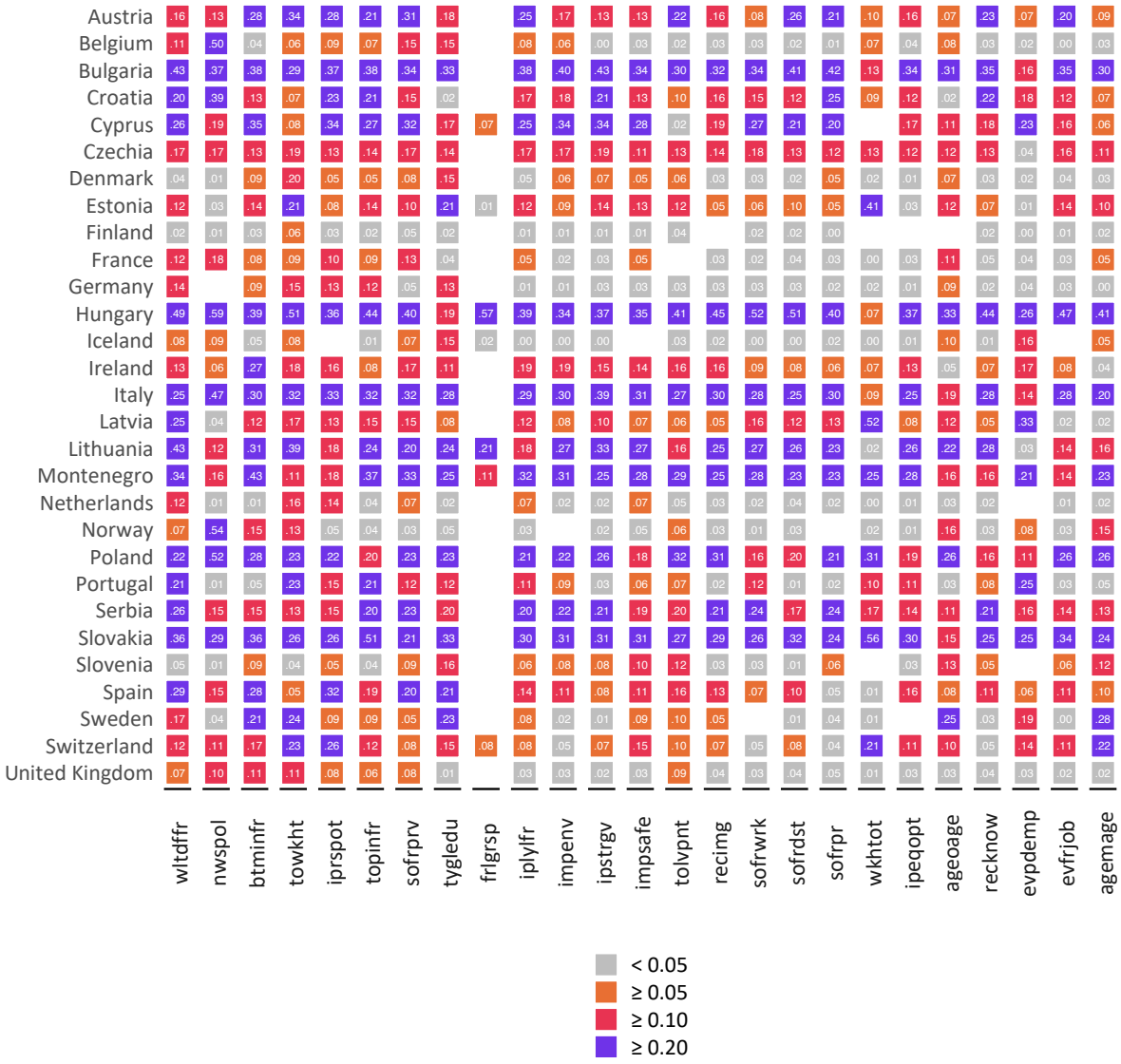

Figure 7.2 Interviewer effects (top 25 items), Round 9
Note: Based on ESS9 integrated file, edition 3.1.

Table 7.7 Interviewer effects, Round 9

Country	Min	Max	Mean	SD	> .05 (%)	> .10 (%)
Austria	0.047	0.337	0.158	0.158	97.3	78.4
Belgium	0.001	0.152	0.042	0.042	27.0	8.1
Bulgaria	0.020	0.482	0.308	0.308	94.6	94.6
Croatia	0.015	0.218	0.093	0.093	70.3	35.1
Cyprus	0.026	0.354	0.136	0.136	86.5	48.6
Czechia	0.071	0.198	0.135	0.135	100.0	81.1
Denmark	0.003	0.279	0.051	0.051	24.3	10.8
Estonia	0.013	0.213	0.084	0.084	73.0	32.4
Finland	0.000	0.064	0.019	0.019	5.4	0.0
France	0.003	0.125	0.047	0.047	35.1	5.4
Germany	0.004	0.154	0.044	0.044	24.3	13.5
Hungary	0.135	0.531	0.351	0.351	100.0	100.0
Iceland	0.000	0.146	0.026	0.026	16.2	5.4
Ireland	0.033	0.274	0.096	0.096	78.4	40.5
Italy	0.050	0.395	0.216	0.216	100.0	94.6
Latvia	0.000	0.251	0.061	0.061	43.2	21.6
Lithuania	0.020	0.435	0.169	0.169	94.6	73.0
Montenegro	0.008	0.434	0.177	0.177	97.3	81.1
Netherlands	0.002	0.161	0.039	0.039	18.9	5.4
Norway	0.000	0.205	0.044	0.044	21.6	16.2
Poland	0.050	0.281	0.176	0.176	100.0	91.9
Portugal	0.004	0.231	0.064	0.064	37.8	21.6
Serbia	0.028	0.259	0.129	0.129	94.6	64.9
Slovakia	0.077	0.514	0.272	0.272	100.0	97.3
Slovenia	0.001	0.223	0.060	0.060	40.5	16.2
Spain	0.026	0.286	0.100	0.100	81.1	37.8
Sweden	0.002	0.282	0.075	0.075	37.8	24.3
Switzerland	0.015	0.226	0.087	0.087	67.6	29.7
United Kingdom	0.011	0.115	0.054	0.054	51.4	5.4

Note:
Based on ESS9 integrated file, edition 3.1.
N = 37 items items in modules A to F for which the intra-interviewer correlation could be estimated for all participating countries.

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 7.8 Interviewer effects by module, Round 9

	Modules A, B, C		Module D		Module F		Module G		Module H	
Country	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Austria	0.134	0.035	0.138	0.082	0.102	0.007	0.209	0.065	0.188	0.059
Belgium	0.026	0.021	0.041	0.039	0.062	0.018	0.055	0.043	0.048	0.042
Bulgaria	0.321	0.121	0.230	0.104	0.203	0.031	0.384	0.048	0.368	0.071
Croatia	0.063	0.031	0.051	0.023	0.085	0.029	0.156	0.053	0.154	0.065
Cyprus	0.085	0.049	0.082	0.038	0.044	0.014	0.221	0.088	0.299	0.045
Czechia	0.128	0.035	0.136	0.043	0.095	0.006	0.142	0.022	0.162	0.034
Denmark	0.019	0.012	0.073	0.063	0.149	0.184	0.041	0.029	0.052	0.013
Estonia	0.052	0.022	0.094	0.066	0.055	0.011	0.102	0.030	0.125	0.018
Finland	0.011	0.009	0.029	0.019	0.006	0.008	0.023	0.012	0.010	0.003
France	0.028	0.022	0.049	0.023	0.055	0.038	0.066	0.036	0.034	0.015
Germany	0.019	0.010	0.066	0.051	0.051	0.008	0.056	0.046	0.018	0.007
Hungary	0.350	0.108	0.321	0.107	0.210	0.063	0.414	0.061	0.345	0.069
Iceland	0.025	0.039	0.036	0.043	0.015	0.011	0.027	0.028	0.000	0.000
Ireland	0.063	0.029	0.093	0.050	0.094	0.010	0.124	0.065	0.142	0.053
Italy	0.183	0.055	0.198	0.068	0.101	0.072	0.270	0.040	0.306	0.082
Latvia	0.032	0.016	0.048	0.048	0.035	0.004	0.103	0.069	0.099	0.024
Lithuania	0.116	0.053	0.148	0.098	0.064	0.063	0.255	0.089	0.220	0.099
Montenegro	0.149	0.051	0.149	0.079	0.088	0.033	0.241	0.117	0.222	0.115
Netherlands	0.022	0.013	0.055	0.044	0.042	0.006	0.042	0.034	0.032	0.029
Norway	0.008	0.008	0.082	0.068	0.082	0.095	0.041	0.042	0.016	0.013
Poland	0.154	0.044	0.178	0.070	0.090	0.018	0.202	0.049	0.217	0.035
Portugal	0.035	0.020	0.073	0.068	0.082	0.056	0.087	0.072	0.050	0.057
Serbia	0.089	0.029	0.128	0.040	0.072	0.062	0.175	0.049	0.168	0.068
Slovakia	0.272	0.088	0.244	0.070	0.224	0.077	0.311	0.086	0.278	0.044
Slovenia	0.025	0.022	0.107	0.074	0.029	0.015	0.053	0.031	0.058	0.027
Spain	0.072	0.036	0.078	0.050	0.085	0.004	0.155	0.080	0.108	0.030
Sweden	0.014	0.010	0.157	0.099	0.041	0.014	0.069	0.068	0.036	0.038
Switzerland	0.040	0.020	0.136	0.070	0.068	0.050	0.090	0.036	0.085	0.023
United Kingdom	0.055	0.026	0.057	0.029	0.056	0.044	0.057	0.032	0.028	0.008

Note:
Based on ESS9 integrated file, edition 3.1.
N = 11 items for the core modules A, B and C, N = 11 items for the rotating module D on Timing of life, N = 10 items for the rotating module G on Justice and Fairness, N = 2 items for the sociodemoraphic module F, and N = 3 items for the core module H on Human values for which the intra-interviewer correlation could be estimated for all participating countries.

Table 7.10 presents, for each participating country that also participated in the previous ESS8, the mean difference in the intra-interviewer correlations estimated for ESS9 relative to those estimated for ESS9 across items repeated between the two rounds. Among the 21 countries for which a comparison with ESS8 is possible, a significant decrease in intra-interviewer correlations is observed for Germany, Ireland,

Table 7.9 Interviewer effects (top 25 items), Round 9

item	module	label
wltdffr	G	Differences in wealth in country, how fair
nwspol	A	News about politics and current affairs, watching, reading or listening, in minutes
btminfr	G	Bottom 10% full-time employees in country, earning less than [amount], how fair
towkht	D	Be working 20 hours or more per week, age too old. SPLIT BALLOT
iprspot	H	Important to get respect from others
topinfr	G	Top 10% full-time employees in country, earning more than [amount], how fair
sofrprv	G	Society fair when people from families with high social status enjoy privileges
tygledu	D	Leave full-time education, age too young. SPLIT BALLOT
frlgrsp	G	Fair level of [weekly/monthly/annual] gross pay for you
iplylfr	H	Important to be loyal to friends and devote to people close
impenv	H	Important to care for nature and environment
ipstrgv	H	Important that government is strong and ensures safety
impsafe	H	Important to live in secure and safe surroundings
tolvpnt	D	Still be living with parents, age too old. SPLIT BALLOT
recimg	G	Influence decision to recruit in country: person has immigrant background
sofrwrk	G	Society fair when hard-working people earn more than others
sofrdst	G	Society fair when income and wealth is equally distributed
sofrpr	G	Society fair when takes care of poor and in need, regardless of what give back
wkhtot	F	Total hours normally worked per week in main job overtime included
ipeqopt	H	Important that people are treated equally and have equal opportunities
ageoage	D	Age reach old age. SPLIT BALLOT
recknow	G	Influence decision to recruit in country: person knows someone in organisation
evpdemp	D	Paid employment or apprenticeship at least 3 months 20 hours weekly
evfrjob	G	Everyone in country fair chance get job they seek
agemage	D	Age reach middle age. SPLIT BALLOT

Note:
Based on ESS9 integrated file, edition 3.1.

Lithuania, and Portugal. The improvement appears particularly striking in Lithuania. No significant increase in intra-interviewer correlations can be observed.

A wider perspective in the developmend 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 Questionnaire[18] since ESS1. In most countries, interviewer effects are relatively stable across rounds, some countries show a positive development of decreasing intra-interviewer correlations (Estonia, Germany, Slovenia, Portugal). Only a few show a upwards trends of increasing intra-interviewer correlations (Hungary and Slovakia) which calls for further attention.

[18] The 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 previous Round 8, Round 9

	Round 8		Round 9		Change		
Country	Mean	SD	Mean	SD	Mean	SD	p.value
Austria	0.138	0.056	0.120	0.050	-0.019	0.027	0.146
Belgium	0.032	0.021	0.027	0.020	-0.005	0.017	0.326
Bulgaria			0.283	0.118			
Croatia			0.062	0.031			
Cyprus			0.072	0.043			
Czechia	0.162	0.063	0.128	0.056	-0.032	0.031	0.021
Denmark			0.028	0.051			
Estonia	0.058	0.037	0.045	0.025	-0.010	0.022	0.124
Finland	0.012	0.008	0.014	0.014	0.005	0.017	0.394
France	0.024	0.017	0.026	0.018	0.003	0.020	0.656
Germany	0.034	0.022	0.017	0.012	-0.018	0.024	< 0.001
Hungary	0.249	0.115	0.317	0.124	0.067	0.069	0.026
Iceland	0.016	0.010	0.016	0.010	0.001	0.016	0.863
Ireland	0.114	0.064	0.062	0.030	-0.052	0.052	< 0.001
Italy	0.164	0.068	0.165	0.074	0.001	0.031	0.963
Latvia			0.035	0.023			
Lithuania	0.265	0.120	0.117	0.061	-0.148	0.073	< 0.001
Montenegro			0.140	0.060			
Netherlands	0.014	0.009	0.021	0.013	0.009	0.012	0.008
Norway	0.018	0.012	0.016	0.028	0.002	0.035	0.880
Poland	0.068	0.038	0.135	0.064	0.067	0.045	< 0.001
Portugal	0.024	0.016	0.032	0.020	0.008	0.019	0.069
Serbia			0.078	0.035			
Slovakia			0.249	0.096			
Slovenia	0.026	0.018	0.023	0.019	-0.003	0.018	0.536
Spain	0.052	0.025	0.064	0.040	0.011	0.031	0.173
Sweden	0.019	0.012	0.017	0.012	0.000	0.018	0.654
Switzerland	0.039	0.032	0.039	0.028	0.000	0.021	0.999
United Kingdom	0.031	0.021	0.040	0.028	0.009	0.023	0.174

Note:
Based on ESS9 integrated file, edition 3.1.
N = 34 items in modules A to F, repeated in both rounds, for which the intra-interviewer correlation could be estimated for all participating countries.

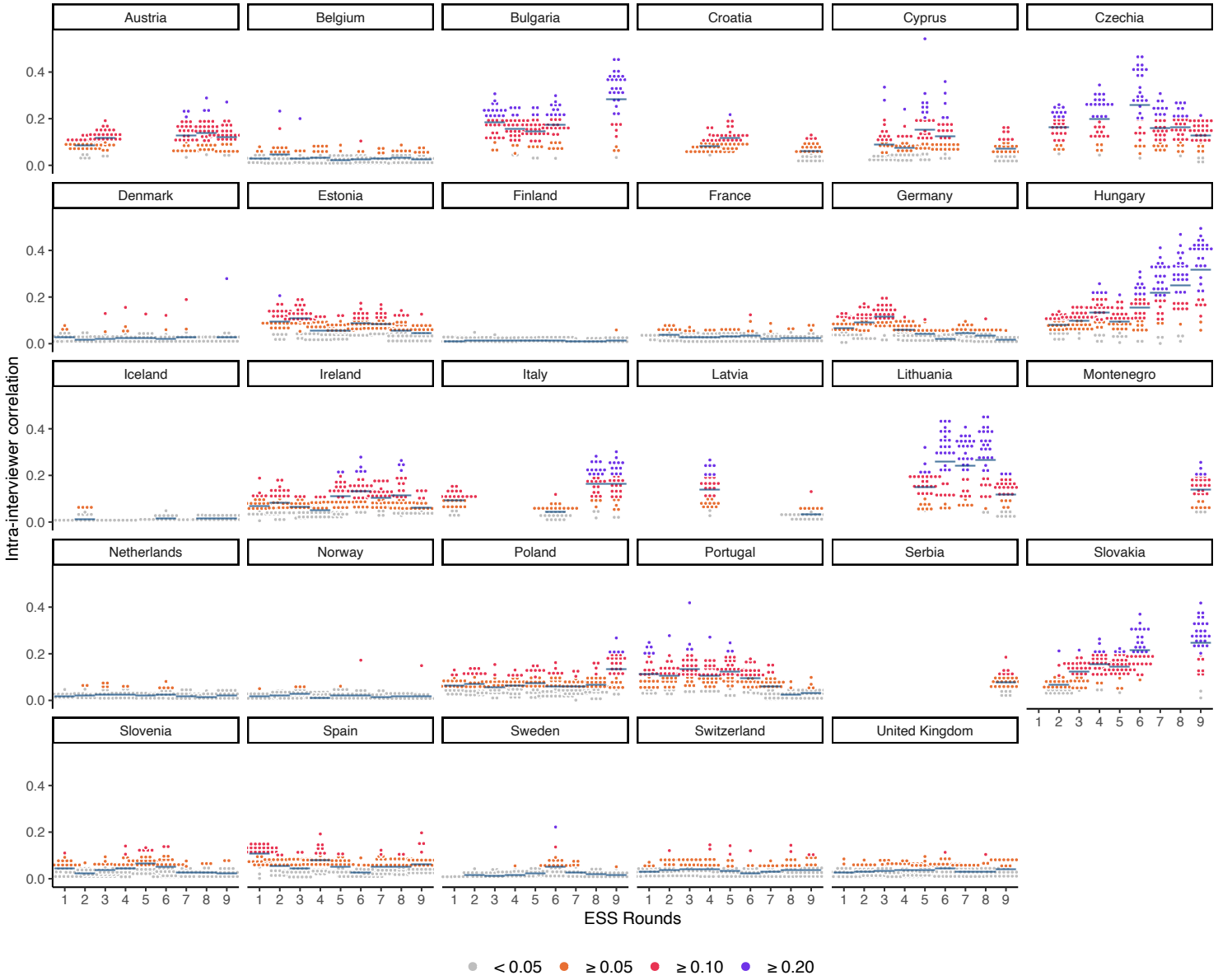

Figure 7.3 Interviewer effects across ESS Rounds
Note: Based on ESS9 integrated file, edition 3.1.

8 DATA DEPOSIT AND PROCESSING

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 (two months after the end of the targeted fieldwork period). 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 of the respondents. 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 population statistics, interviewer briefings and information letters to respondents.

Summarised in Table 8.1, complete deposits were made between the end of February 2019 (Austria and the Netherlands) and mid April 2020 (Iceland). Timely depositing is a challenge for many countries. By the end of February 2019, a complete deposit was made only for Austria and the Netherlands. For 12 countries, a complete deposit was made between March and May 2019, and for additional six countries, a complete deposit was made in June/July 2019. No deposits were completed in autumn 2019. Nine countries, Croatia, Denmark, Iceland, Latvia, Lithuania, Montenegro, Portugal, Slovakia and Spain, made a complete deposit between January and April 2020.

Table 8.1 Complete deposit, Round 9

Country	Date of complete deposit	Weeks between end of fieldwork and complete deposit
Austria	22 February 2019	8.0
Belgium	01 March 2019	9.0
Bulgaria	02 April 2019	13.1
Croatia	28 February 2020	12.0
Cyprus	17 June 2019	25.4
Czechia	27 March 2019	5.6
Denmark	11 March 2020	61.1
Estonia	29 April 2019	12.6
Finland	10 June 2019	18.6
France	23 May 2019	16.0
Germany	26 April 2019	16.1
Hungary	24 June 2019	11.9
Iceland	20 April 2020	11.4
Ireland	21 May 2019	7.6
Italy	15 March 2019	1.0
Latvia	10 February 2020	8.6
Lithuania	17 January 2020	5.3
Montenegro	03 February 2020	18.0
Netherlands	22 February 2019	7.6
Norway	11 June 2019	25.4
Poland	05 April 2019	11.4
Portugal	06 February 2020	40.3
Serbia	06 June 2019	24.7
Slovakia	21 January 2020	11.1
Slovenia	11 April 2019	11.6
Spain	04 March 2020	7.0
Sweden	05 July 2019	26.6
Switzerland	02 May 2019	13.0
United Kingdom	10 May 2019	12.7

Note:
Based on information from the ESS Archive.

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 1 week (Italy) and 61 weeks (Denmark) before a complete deposit was made. The median country took 12 weeks.

For 21 countries, data deliverables were deposited on the same day or over just a few days (Table 8.2). Iceland, Latvia and Montenegro had deposited over 2-3 months, while Denmark deposited their deliverables over 12 months. The main data file was part of, or just a few days later than the first deposit for all countries but one, which had a 'delay' of 12 days. The sample design data file was also part of or just a few days later than the first deposit for all countries except Latvia (2 months later) and Denmark, which deposited the sample design data file seven months after the deposit of the main data file. Among the 4 countries for which multiple deposits were made within 2-3 months and longer, the last deposit often consisted of either the Contact Form data file (Iceland, Montenegro and Denmark; 23 days, 2,5 months and one year respectively, after the deposit of the main data file) or the NTS (Iceland and Denmark; 2,5 months and 9 months respectively after deposit of the main data file).

Table 8.2 Time between end of fieldwork and deposit (in weeks) of main data and documentation deliverables, Round 9

Country	Main data file	Contact forms data file	Sample design data file	National Technical Summary	Complete deposit
Austria	5.3	5.3	5.3	5.9	5.9
Belgium	4.6	4.6	4.6	4.6	4.6
Bulgaria	15.3	15.3	15.3	15.3	15.4
Croatia	4.0	4.0	4.6	4.1	4.6
Cyprus	2.7	2.7	3.1	2.7	3.1
Czechia	7.0	7.0	7.0	7.0	7.0
Denmark	7.4	61.1	38.1	53.0	61.1
Estonia	8.3	8.3	8.3	8.3	8.3
Finland	14.6	14.6	15.3	16.0	16.0
France	7.4	7.4	7.4	7.4	7.4
Germany	7.6	7.6	7.6	7.6	7.6
Hungary	4.7	3.0	3.0	4.7	4.7
Iceland	0.7	4.0	0.7	11.4	11.4
Ireland	6.6	6.6	6.6	6.6	6.6
Italy	0.7	0.7	0.7	0.7	0.7
Latvia	1.4	1.4	10.1	2.9	2.9
Lithuania	4.3	4.3	4.3	4.3	4.7
Montenegro	11.3	22.1	11.9	13.7	13.7
Netherlands	4.4	4.4	4.4	4.4	4.4
Norway	3.7	3.7	3.7	3.7	3.7
Poland	1.9	1.9	1.9	1.9	2.3
Portugal	4.7	5.7	5.9	4.7	6.1
Serbia	13.9	13.9	13.9	13.9	13.9
Slovakia	3.9	5.7	5.7	5.9	6.4
Slovenia	6.9	6.9	6.9	6.9	9.9
Spain	5.3	5.3	5.3	5.3	5.3
Sweden	6.0	6.1	6.1	6.1	6.1
Switzerland	11.3	11.4	11.1	11.4	11.4
United Kingdom	11.0	11.0	11.0	11.0	11.0

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.

Processing is done in two main steps, each followed by a Data Processing Report containing output with issues and systematic errors from the data processing programmes. 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. Duplicated 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.

When data processing is completed, the final step for the national teams is to validate the drafts of the country's data files.

CONCLUSION AND RECOMMENDATIONS

The ESS aims for high-quality standards and cross-national comparability and has been successful in many respects. The current ESS Specification addresses various aspects of the survey design and implementation in view of cross-national comparability (input harmonisation). While high-quality standards are aimed for, and these standards are generally not out of range, they are not necessarily met across the board.

Despite the efforts to standardise the survey design and implementation across countries, considerable variation with regard to different aspects of the national survey life cycle, in terms of timing, emphasis and practical implementation, persists.

A major concern is the limited effort in some countries to adhere to the specifications set forth for the translation procedure, in particular the time needed to review the translation in a team. A well translated questionnaire is indispensible for establishing a baseline of comparison of measured concepts across countries. The established procedures are a strong safeguard to ensure it. At the same time, a national team's experience can increase the efficiency and effectiveness, and some lenience towards a lack of rule-adherence can be appropriate.

Some national teams face tight budget constraints and, therefore, may have insufficient capacity available to meet the specifications and the related high-quality standards of the ESS. One important issue is that for a number of countries, the planned net sample size (and accordingly, as is usual, the realised net 'effective' sample size) is smaller than necessary to achieve the targeted level of statistical precision because of budget constraints.

The prolonged national survey lifecycle suggests that a National Coordinator has to be available for at least one year and half in order to prepare, implement and monitor the different stages in the lifecycle. For ESS9, the median deposit period lasted only 6.4 weeks, which is much faster than in ESS8 (approximately three months). Still, there are large deviations between countries. This stage in the survey lifecycle may be relatively underestimated and underresourced. National teams face fluctuating work demands in different knowledge areas of survey data collection 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 evidently also in the capacity available and the amount of effort devoted to reaching these sample units and to closely monitoring and managing this process.

Large 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 the lack of reliable information on the fieldwork organ-

isation limit 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, on the whole, shifted in one direction or the other (pure interviewer bias). This kind of country-specific systematic interviewer effect poses a non-negligible threat to cross-national comparability.

Nonresponse, particularly in terms of the systematic divergence between nonrespondents and respondents, and the resulting nonresponse bias reducing cross-national comparability of survey estimates, remains a cause of concern. In part, contrasting the two response groups via auxiliary paradata revealed certain differences which also could be relating to differences in substantive answers. However, the analysis in this report does not include a detailed model of capturing the potential bias' extent. 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 risk of nonresponse bias, which depends on both the response rate and the contrast between respondents and nonrespondents, can thereby be alleviated. All in all, maintaining high response rate targets appear 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 deposit to the Archive is insufficiently documented—as is the case for several stages in the survey lifecycle. 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 impact of processing error on data quality has not received much attention thus far, neither in the ESS nor in survey methodological research more generally. Further studies directed towards the development of quality standards at that stage of the survey life-cycle 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 consider the differences in various aspects of the national survey life cycle and possible differences in data quality between countries, both in analysis (considering the possibility to control for interviewer variance, for example) and interpretation of results.

The ESS prioritises methodological rigour and cross-national and inter-temporal comparability, but this requires an ongoing effort and commitment. This report, outlining an assessment of the data collection process and data quality across all participating countries in Round 9, contributes to this effort. In the context of quality assessment and improvement, there may be additional benefits in applying a case study approach to gain an in-depth and multifaceted understanding of a particular aspect of the survey lifecycle that is in need of improvement (e.g. sampling, briefing, fieldwork and interviewer monitoring) in a particular set of countries. The results presented in this report can be used to select these countries and improvement areas.

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