OeNBEuroSurvey
The euro in Central, Eastern and Southeastern Europe

Methodology

compiled by[*]

last update March 2024

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Methodological framework at a glance

Geographical scope	Central, Eastern and Southeastern Europe	see section 1
Current coverage	BG, HR, CZ, HU, PL, RO, AL, BA, MK, RS	
Target population	All persons aged 18 and over residing in the territory of the respective country	see table 2
Survey company	"Das Österreichische Gallup-Institut" and subcontractors	see table 3
Sample	Multi-stage stratified random sample of individuals; random route sampling; 1,000 target interviews per country and wave	see section 1
Reference period	2007–2014: semiannual survey in spring and fall; 2015–present: annual survey in fall	see section 3 and table 7
Questionnaire	Harmonized questionnaire for all countries covering frequency and determinants of foreign currency usage, trust, beliefs and expectations; special survey modules addressing current topics for individual waves	see questionnaire
Translation	English questionnaire is translated into national languages by certified translators	see questionnaire
Fieldwork	Fieldwork is conducted simultaneously in all countries.	see section 3
Fieldwork period	4 weeks on average, mainly in October and, until 2014, also in April	see table 7 for fieldwork dates
Survey mode	Computer-assisted personal interviewing (CAPI) with a small share of paper-assisted personal interviewing (PAPI)	see section 2 and table 4
Interviewer	Between 40 to 100 interviewers per country, of whom 60% to 90% regularly conduct OeNB Euro Survey interviews	see section 3.2
Incentives	No incentives for survey participation are offered	see section 1
Survey languages	The OeNB Euro Survey is conducted in all the official languages of the surveyed countries	see questionnaire
Documents used for interviews	Questionnaire and showcards	see questionnaire
Response rate	AAPOR RR1 was between 40% and 73% in 2023	see table 12
Weighting	Weights are calibrated to fit at least the marginal distributions of gender, (broad) age groups and region (mostly on NUTS2 level) in each country and wave	see section 4.2
Editing and consistency checks	Post-interview consistency checks including cross-checks with previous waves, filter checks, logical checks and, in some cases, callbacks	see section 4.4
Data availability	Data are available to external researchers	see data sharing

1 How were respondents selected?

This section defines the population that the survey is intended to represent and highlights changes over time in the definition of the target population.

1.1 Target population

The OeNB Euro Survey covers those Central, Eastern and Southeastern European (CESEE) countries that have not yet (or only recently) adopted the euro. Currently, the survey covers six EU member states (Bulgaria, Croatia, Czechia, Hungary, Poland and Romania) and four candidates (Albania, Bosnia and Herzegovina, North Macedonia and Serbia). Until 2008, the survey also covered Slovakia. This was discontinued when the euro was introduced as legal tender in 2009.

The target population of the OeNB Euro Survey is defined as all persons aged 18 and over residing in the territory of the countries covered by the survey at the time of data collection. For Bulgaria, Croatia, Romania, Albania, North Macedonia and Serbia, the target population only includes citizens of the respective country aged 18 and over residing in the country. Before 2017, in some countries the target population had also covered residents who were younger than 18 (see table 2). For Poland and Bulgaria, until 2011, the target population had only included adults up to the age of 69. The most important change in terms of the target population was recorded for Poland: For budgetary reasons and given the size of the country, the target population had only covered the ten largest cities until the spring wave of 2012.[1]

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[1]For the fall wave of 2012, the variable *h_ polsample* indicates the sampling units that would have been included in the previous target population which had only covered the residents aged 15-69 of the ten largest cities.

Table 2: Target population

Country	Survey waves	Citizens	Residents	Age
Bulgaria	2007–spring 2012	✓		15–69
	fall 2012–2016	✓		≥ 15
	2017–present	✓		≥ 18
Croatia	2007–fall 2013	✓		≥ 14
	spring 2014–2015		✓	≥ 15
	2016–present	✓		≥ 18
Czechia	2007–2015		✓	≥ 14
	2016–present		✓	≥ 18
Hungary	2007–present		✓	≥ 18
Poland	2007–spring 2012		10 largest cities	15–69
	fall 2012–2015		✓	≥ 15
	2016–present		✓	≥ 18
Romania	2007–2015	✓		≥ 14
	2016–present	✓		≥ 18
Slovakia	2007–fall 2008		✓	≥ 14
Albania	2007–2015	✓		≥ 15
	2016–present*	✓		≥ 18
Bosnia and Herzegovina	2007–2015		✓	≥ 15
	2016–present		✓	≥ 18
North Macedonia	2007–2015	✓		≥ 15
	2016–present	✓		≥ 18
Serbia	2007–spring 2012	✓		≥ 14
	fall 2012–2015	✓		≥ 15
	2016–present	✓		≥ 18

Note: * See section 4.4.
Source: OeNB Euro Survey.

1.2 Sampling

Content will be added. Please check again in June 2024.

2 How were the data collected?

In 2007, 2012, 2016 and 2021, "Das Österreichische Gallup-Institut" was awarded the contract in a Europe-wide invitation to tender for conducting the OeNB Euro Survey. Gallup sub-contracts opinion poll institutes in each of the countries where the survey is conducted (see table 3). In Bulgaria, Croatia, Albania and North Macedonia, the institutes conducting the survey changed over the years.

Table 3: Survey institutes

Country	Current institute	Former institute	Survey waves
BG	TNS BBSS	IPSOS	until 2016
HR	Hendal	Target	until fall 2013
CZ	Mareco		
HU	PSYMA		
PL	Mareco		
RO	TNS CSOP		
SK	n.a.	Mareco	until fall 2008
AL	BE Research	IPSOS	until 2015
BA	IPSOS		
MK	BRIMA	IPSOS	until 2019
RS	TNS TMG		

Source: OeNB Euro Survey.

The OeNB Euro Survey is conducted as a face-to-face survey in all countries. In most countries and waves, surveys have been conducted as computer-assisted personal interviews (CAPIs). Especially in earlier waves, some surveys were pen-and-paper-assisted personal interviews (PAPIs). Table 4 shows the share of PAPIs since 2016. Until 2016, the exact share of PAPIs is not known, but table 5 shows whether or not there have been any PAPIs in the individual countries and waves.

For budgetary reasons, the survey can be conducted as part of an omnibus survey. This means that the institutes may choose to include questionnaires by other clients in addition to the OeNB Euro Survey questionnaire in a given survey wave. This has been the case in some countries, especially for waves with shorter OeNB Euro Survey questionnaires (see table 6). For omnibus surveys, the questions from the OeNB Euro Survey questionnaire are included in the first or second section of the entire questionnaire. When combining the survey questions from the OeNB Euro Survey questionnaire with other questionnaires in the omnibus, the wording and order of OeNB Euro Survey questions must not be changed. Furthermore, questions from other questionnaires must not be inserted in the OeNB Euro Survey questionnaire. Finally, other questionnaires included in the omnibus survey must not cover questions on household finance.

Table 4: Share of interviews conducted as PAPIs since 2016

Country	2016	2017	2018	Survey waves 2019	2020	2021	2022	2023
				%				
BG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CZ	55.9	55.3	50.6	52.6	48.9	25.4	6.1	9.3
HU	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
PL	70.6	69.0	66.2	56.2	61.9	38.0	26.7	21.9
RO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AL	0.0	0.0	0.0	0.0	*	*	0.0	**
BA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: * See section 4.4. ** Due to census fieldwork, no survey wave was conducted in Albania in fall 2023.
Source: OeNB Euro Survey.

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Table 5: PAPI usage from 2007 to 2015

Country	2007 fall	2008 spring	2008 fall	2009 spring	2009 fall	2010 spring	2010 fall	2011 spring	2011 fall	2012 spring	2012 fall	2013 spring	2013 fall	2014 spring	2014 fall	2015 fall
BG	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
HR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
CZ	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HU	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
RO	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
SK	✓	✓	✓	survey discontinued												
AL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
MK	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
RS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Source: OeNB Euro Survey.

Table 6: OeNB Euro Survey waves conducted as part of omnibus survey

BG	information not available	2007–spring 2012
	part of omnibus survey	fall 2012–2015
	stand-alone wave	2016–present
HR	part of omnibus survey	2007–spring 2012
	stand-alone wave	fall 2012–present
CZ	part of omnibus survey	2007–2017
	stand-alone wave	2018–present
HU	information not available	2007–spring 2012
	part of omnibus survey	fall 2012–fall 2014, 2016, 2017
	stand-alone wave	2015, 2018–present
PL	information not available	2007–spring 2012
	part of omnibus survey	fall 2012, spring 2013, 2016–2023
	stand-alone wave	fall 2013–2015
RO	information not available	2007–spring 2012
	part of omnibus survey	fall 2012–fall 2014
	stand-alone wave	2015–present
SK	part of omnibus survey	2007–fall 2008
	survey discontinued	2009–present
AL	information not available	2007–spring 2012
	stand-alone wave	fall 2012–present
BA	information not available	2007–spring 2012
	part of omnibus survey	fall 2012–fall 2017
	stand-alone wave	2018–present
MK	information not available	2007–spring 2012
	stand-alone wave	fall 2012–present
RS	information not available	2007–spring 2012
	part of omnibus survey	fall 2012–fall 2020
	stand-alone wave	fall 2021–present

Source: OeNB Euro Survey.

3 Who collected the data, when and where?

For the OeNB Euro Survey, only face-to-face interviews are conducted. Until 2014, field-work was carried out in spring and fall of each year, and from 2015 onward only in fall of each year. This harmonization of fieldwork periods reflects the questionnaire's focus on euroization (see `https://www.oenb.at/en/Monetary-Policy/Surveys/OeNB-Euro-Survey/questionnaire.html` and how the latter is affected by, inter alia, the exchange rate of the euro, events in the euro area and seasonal patterns observed, e.g., in tourism. In addition to fieldwork timing and length, differences in fieldwork effort and, e.g., interviewers' experience may also affect the comparability of results (Jabkowski and Kołczyńska, 2020).

This section first presents information on fieldwork timing and duration and then discusses interviewer characteristics and proxies for fieldwork effort. It concludes with a description of fieldwork monitoring.

3.1 Fieldwork timing and duration

Table 7 lists the beginning and end date of each fieldwork period for each country. Across all countries and survey waves, fieldwork lasted for around 2 weeks on average. For some countries and waves, fieldwork periods were considerably shorter, coming to less than a week. Over the years, fieldwork periods tended to get longer. This was partially due to increased questionnaire length but may also reflect the general phenomenon of decreasing willingness to participate in surveys and the fact that recruitment of qualified interviewers is becoming increasingly difficult.

Readers familiar with the CESEE region and/or individual countries will notice that some fieldwork periods took place during times of great change. Croatia, for example, extended deposit insurance during the fall wave of 2008. During the spring wave of 2014, some countries were affected by severe flooding. In North Macedonia, the fall wave of 2017 coincided with elections; in Bosnia and Herzegovina, this was the case for the fall wave of 2018. On the one hand, these country-specific events will likely affect survey results. On the other hand, researchers may use coincidences like these as natural experiments — such as Prean and Stix (2011) who, following the events in Croatia in 2008, analyzed effects on depositors.

Table 7: Fieldwork timing and duration

Survey wave	BG	HR	CZ	HU	PL	RO	SK	AL	BA	MK	RS
fall 2007	15.10.–30.10.	5.5.–21.5.	10.10.–23.10.	9.11.–21.11.	27.10.–31.10.	18.10.–31.10.	10.10.–23.10.	29.10.–12.11.	14.10.–21.10.	6.10.–10.10.	18.10.–27.10.
spring 2008	15.4.–30.4.	5.5.–25.5.	15.5.–27.5.	9.5.–21.5.	2.6.–10.6.	23.5.–30.5.	6.5.–20.5.	20.5.–2.6.	16.5.–26.5.	19.5.–29.5.	19.5.–25.5.
fall 2008	15.10.–30.10.	4.10.–24.10.	15.10.–27.10.	4.10.–20.10.	8.10.–13.10.	27.10.–4.11.	15.10.–26.10.	3.11.–10.11.	2.11.–16.11.	6.11.–12.11.	9.10.–13.10.
spring 2009	15.5.–30.5.	8.5.–25.5.	15.5.–25.5.	8.5.–20.5.	27.5.–3.6.	30.4.–9.5.		15.5.–21.5.	18.5.–26.5.	11.5.–17.5.	5.5.–22.5.
fall 2009	15.10.–26.10.	5.10.–25.10.	10.10.–25.10.	9.10.–19.10.	28.10.–3.11.	17.10.–25.10.		30.10.–20.11.	12.11.–21.11.	10.11.–17.11.	16.10.–22.10.
spring 2010	1.5.–26.5.	7.5.–29.5.	8.5.–23.5.	5.5.–12.5.	28.4.–5.5.	21.5.–30.5.		20.5.–28.5.	14.5.–25.5.	28.4.–10.5.	14.5.–19.5.
fall 2010	14.10.–29.10.	3.10.–26.10.	14.10.–24.10.	14.10.–20.10.	2.11.–10.11.	23.10.–31.10.		30.10.–10.11.	17.11.–28.11.	30.11.–18.12.	11.10.–17.10.
spring 2011	12.5.–28.5.	27.4.–25.5.	4.5.–29.5.	12.5.–19.5.	28.4.–6.5.	18.5.–31.5.		7.5.–24.5.	10.5.–19.5.	10.5.–26.5.	12.5.–21.5.
fall 2011	2.11.–9.11.	2.10.–22.10.	8.10.–24.10.	10.11.–15.11.	27.10.–3.11.	26.10.–5.11.		1.11.–19.11.	19.11.–10.12.	21.10.–2.11.	12.10.–21.10.
spring 2012	25.5.–31.5.	17.4.–13.5.	4.5.–18.5.	17.5.–22.5.	18.4.–24.4.	25.5.–5.6.		5.5.–22.5.	11.5.–21.5.	19.5.–5.6.	23.5.–29.5.
fall 2012	4.10.–18.10.	10.10.–17.11.	10.10.–29.10.	3.11.–13.11.	15.10.–25.10.	24.10.–4.11.		1.11.–12.11.	11.11.–21.11.	2.11.–15.12.	12.10.–23.10.
spring 2013	15.5.–25.5.	26.4.–19.5.	6.5.–20.5.	15.5.–21.5.	1.4.–6.5.	23.4.–8.5.		16.5.–23.5.	14.5.–21.5.	20.5.–31.5.	18.4.–30.4.
fall 2013	25.10.–3.11.	9.5.–26.6.	10.10.–28.10.	16.11.–28.11.	26.10.–3.11.	22.10.–2.11.		9.11.–19.11.	12.11.–20.11.	12.11.–26.11.	22.10.–3.11.
spring 2014	23.5.–1.6.	9.5.–26.6.*	7.5.–21.5.	7.5.–15.5.	17.4.–23.4.	24.4.–6.5.		8.5.–17.5.	27.5.–11.6.	17.5.–29.5.	25.4.–6.5.
fall 2014	14.10.–28.10.	23.10.–22.11.	31.10.–12.11.	9.11.–30.11.	24.10.–3.11.	22.10.–30.10.		16.11.–30.11.	22.11.–1.12.	10.11.–28.11.	28.10.–12.11.
fall 2015	27.10.–11.11.	15.10.–23.11.	16.10.–2.11.	14.11.–23.11.	18.10.–28.10.	25.10.–24.11.		6.11.–30.11.	4.11.–25.11.	9.11.–30.11.	21.10.–27.10.
fall 2016	21.10.–3.11.	21.10.–30.11.	19.10.–31.10.	22.10.–3.11.	2.11.–15.11.	1.11.–5.12.		16.11.–25.11.	27.10.–1.12.	4.11.–24.11.	21.10.–2.11.
fall 2017	6.10.–16.10.	10.10.–10.11.	2.10.–20.10.	14.10.–26.10.	20.10.–4.11.	7.10.–3.11.		5.10.–8.11.	12.10.–25.10.	4.10.–25.10.	26.10.–6.11.
fall 2018**	13.10.–30.10.	9.10.–5.11.	16.9.–23.10.	20.10.–2.11.	12.10.–30.10.	5.10.–9.11.		8.10.–21.10.	07.10.–23.10.	12.10.–28.10.	20.10.–4.11.
fall 2019	3.10.–31.10.	2.10.–23.10.	1.10.–19.10.	19.10.–31.10.	2.10.–27.10.	4.10.–7.11.		14.10.–4.11.	9.10.–22.10.	6.10.–3.11.	21.10.–3.11.
fall 2020	29.9.–29.10.	29.9.–21.10.	25.9.–20.10.	5.10.–23.10.	1.10.–18.10.	21.9.–31.10.		*	28.9.–25.10.	29.9.–8.10.	9.10.–4.11.
fall 2021	29.9.–25.10.	4.10.–7.11.	13.9.–23.10.	14.10.–28.10.	6.10.–20.10.	3.10.–5.11.		*	28.9.–8.11.	2.10.–29.10.	5.10.–27.10.
fall 2022	28.9.–3.11.	29.9.–1.11.	1.10.–18.10.	14.10.–30.10.	7.10.–22.10.	28.9.–25.10.		1.10.–27.10.	29.9.–7.11.	5.10.–10.11.	1.10.–29.10.
fall 2023	04.10.–16.11.	29.9.–02.11.	01.10.–15.10.	17.10.–12.11.	09.10.–31.10.	8.10.–2.11.		***	04.10.–14.11.	05.10.–9.12.	03.10.–07.11

Note: * See section 4.4. ** For BG and BA, some interviews had to be done in February 2019. *** Due to census fieldwork, no survey wave was conducted in Albania in fall 2023.

Source: OeNB Euro Survey.

3.2 Interviewer characteristics

Interviewers play a key role in face-to-face data collection. They have an effect on sampling, respondent recruitment and measurement (West and Blom, 2017). Over the years, the OeNB Euro Survey has taken steps to take into account growing research on interviewer effects and behavior in order to improve data quality. From fall 2012 onward, interviewer identifiers and information on the gender of interviewers have been collected. Since 2016, the age, education and labor market status of interviewers have been recorded. From 2017 onward, interviewer paradata include information on whether interviewers have experience in conducting OeNB Euro Survey interviews. Following international practice, the paradata on interviewer characteristics are not available for external use (see also Data Sharing: `https://www.oenb.at/en/Monetary-Policy/Surveys/OeNB-Euro-Survey/data-sharing.html`

To provide users with some insights on interviewers, tables 8 to 11 show descriptive statistics at the interviewer level. These tables illustrate that the number of interviewers varies significantly between countries and also across surveys waves within countries. For Albania, Bulgaria, Croatia and North Macedonia, the change in institutes explains the strong variation from one year to the next (see also table 3). At present, the OeNB Euro Survey does not implement a restriction on interviewer workload; however, such a restriction may be implemented in future waves.

Table 8: Number of interviewers per country and survey wave

| | Survey waves | | | | | | | | | | | |
Country	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BG	61	58	63	74	81	95	99	94	95	101	91	98
HR	73	112	59	63	64	56	65	71	73	76	78	84
CZ	63	52	49	56	54	55	51	50	49	49	52	50
HU	96	98	104	99	92	103	100	114	100	96	101	98
PL	79	78	95	97	99	92	94	94	95	90	90	92
RO	117	111	111	66	76	53	85	73	77	94	77	74
AL	38	42	43	36	21*	20*	20*	20*	*	*	18*	**
BA	72	76	64	71	72	76	70	68	67	60	61	43
MK	55	73	69	87	85	91	80	69	54	57	54	60
RS	47	54	57	54	71	75	78	75	76	69	77	70

Note: * See section 4.4. ** Due to census fieldwork, no survey wave was conducted in Albania in fall 2023. The years 2012–2014 relate to the respective fall wave.
Source: OeNB Euro Survey.

Survey research has documented several dimensions of gender-of-interviewer effects (see West and Blom (2017) for an overview). In the OeNB Euro Survey, the majority of interviewers are women (see table 9). In 2023, the highest share of female interviewers was recorded in Bulgaria and Croatia, the lowest share in Bosnia and Herzegovina. Table 10 shows the average age of interviewers by country and wave. Large differences between countries are in line with countries' demographics. As a case in point, interviewers in Albania are on average much younger than interviewers in EU member states.

The percentage of interviewers with experience in conducting OeNB Euro Survey interviews is above 50% in all countries and years except Romania in 2018, North Macedonia in 2019 and Bosnia and Herzegovina in 2018.

Olbrich, Beckmann and Sakshaug (2024) investigate the role of observable characteristics (interviewer age, gender and experience) on the variance inflation caused by interviewers in the OeNB Euro Survey for the fall waves from 2012 to 2021. They find that overall, the effect of observable interviewer characteristics is small and cannot explain interviewer effects. Looking at questions for which interviewer effects were shown to be particularly large, such as questions on financial literacy (Crossley et al., 2021), Olbrich, Beckmann and Sakshaug (2024) find that results pertaining to the gender of interviewers are mixed. They confirm a positive correlation between interviewers' age and financial literacy. Interviewer experience, on the other hand, does not correlate with financial literacy.

Table 9: Share of male interviewers per country and survey wave

						Survey waves						
Country	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
							%					
BG	16.39	8.62	6.35	37.84	12.35	13.33	9.62	14.56	11.00	10.89	10.99	8.99
HR	24.66	19.64	15.25	19.05	9.38	17.86	20.00	22.54	13.70	10.53	8.97	11.9
CZ	30.16	28.85	30.61	33.93	25.93	25.45	29.41	28.00	32.65	30.61	28.85	22.7
HU	22.92	19.39	18.27	22.22	26.09	20.39	20.00	17.54	17.00	19.79	17.82	15.8
PL	25.32	28.21	26.32	21.65	24.24	14.13	19.15	18.09	14.74	14.44	20.00	16.0
RO	34.19	33.33	33.33	33.33	21.05	26.42	24.71	13.7	24.68	19.15	19.48	15.2
AL	23.68	30.95	23.26	16.67	42.86*	25.00*	25.00*	25.00*	*	*	33.33*	**
BA	26.39	23.68	26.56	36.62	29.17	35.53	35.71	38.24	35.82	33.33	26.23	36.4
MK	14.55	24.66	28.99	18.39	17.65	9.89	21.25	20.29	16.67	17.54	18.52	20.9
RS	36.17	31.48	35.09	29.63	22.54	18.67	19.23	16.00	17.11	20.29	14.29	19.1

Note: * See section 4.4. ** Due to census fieldwork, no survey wave was conducted in Albania in fall 2023. The years 2012–2014 relate to the respective fall wave.
Source: OeNB Euro Survey.

The briefing of interviewers is done separately in each country by the respective survey institute. The OeNB provides interviewer guidelines that apply to all countries and have to be shared with interviewers as part of their briefing and training. In all countries except Bosnia and Herzegovina, the interview schedule specifies a minimum of three contact attempts per household. In Bosnia and Herzegovina, the minimum number of contact attempts is two. The interview schedule also specifies that for each country and survey wave, a given share of interviews has to be conducted in the evenings (after 8 p.m.) or mornings (before 9 a.m.) or at the weekends. This share is prescribed by the survey institutes and varies considerably between countries:

- 5% in Romania and Hungary
- 10% in Bosnia and Herzegovina
- 20% in Albania and Serbia
- 30% in Croatia and Czechia
- 40% in North Macedonia
- 50% in Bulgaria
- 60% in Poland

Table 10: Average age of interviewers per country and survey wave

| | Survey waves | | | | | | | |
Country	2016	2017	2018	2019	2020	2021	2022	2023
BG	50.17	51.91	52.8	52.62	54.15	54.89	55.21	56.5
HR	40.05	45.05	40.8	44.18	45.49	44.38	44.38	45.0
CZ	49.09	48.38	49.49	50.96	52.59	52.76	51.92	52.3
HU	47.58	46.83	48.2	49.22	49.67	51.76	51.42	54.3
PL	40.55	43.55	42.64	45.23	46.14	47.26	46.78	49.2
RO	38.5	42.3	41.32	43.7	40.09	39.76	41.82	43.1
AL	26.95*	28.75*	30.00*	30.80*	*	*	33.72*	**
BA	34.17	32.3	33.17	35.82	37.57	37.77	37.43	42.8
MK	35.95	39.42	39.44	38.64	44.61	46.02	46.07	47.8
RS	40.93	41.25	41.05	43.05	43.33	44.99	46.03	45.7

Note: * See section 4.4. ** Due to census fieldwork, no survey wave was conducted in Albania in fall 2023.
Source: OeNB Euro Survey.

Table 11: Share of experienced interviewers per country and survey wave

| | Survey waves | | | | | | |
Country	2017	2018	2019	2020 %	2021	2022	2023
BG	**	65.38	79.61	82	86.14	92.31	80.4
HR	67.86	53.85	50.7	76.71	72.37	79.49	84.3
CZ	89.09	84.31	92	83.67	87.76	82.69	75.4
HU	58.25	57	56.14	77	78.13	76.24	86.5
PL	63.04	90.43	88.3	92.63	81.11	75.56	88.1
RO	58.49	32.94	58.9	59.74	59.57	87.01	87.2
AL	83.33*	93.55*	100*	*	*	94.44*	****
BA	51.32	47.14	61.76	67.16	53.33	60.66	74.0
MK	48.35	58.75	40.58	11.11***	70.18	83.33	68.2
RS	70.67	84.62	93.33	88.16	82.61	76.62	74.0

Note: * See section 4.4. ** New institute in 2017. *** New institute in 2020; interviewers who conducted the pilot survey in spring 2020 are defined as "experienced." See table 3. **** Due to census fieldwork, no survey wave was conducted in Albania in fall 2023.
Source: OeNB Euro Survey.

So far, the interview schedule has not been evaluated with regards to data quality. In 2023, information on contact attempts and timing was collected for the first time. Results will be shared in due course.

3.3 Fieldwork monitoring

Monitoring fieldwork in cross-national surveys needs to address the challenge of monitoring in diverse national contexts and maintaining comparability. While the European Social Survey has moved toward a centralized monitoring approach, other surveys, such as the World Values Survey, maintain a decentralized approach to monitoring (Briceno-Rosas, Butt and Kappelhof, 2020). The OeNB Euro Survey, too, pursues a decentralized approach that is implemented by the survey institutes. Related measures include logical consistency checks of completed interviews at regular intervals during fieldwork. Furthermore, interviews are verified through telephone callbacks to confirm the physical presence of the interviewer and demographic data of the respondent. The share of interviews that are verified through personal re-visits by supervisors or telephone callbacks is determined by the survey institutes and is as follows:

- 15% in Czechia
- 20% in Albania, Bulgaria, Poland, Serbia and Hungary
- 25% in Croatia and North Macedonia
- 30% in Bosnia and Herzegovina and Romania

The OeNB uses the geolocation of primary sampling units (PSUs) and data on interview date and time to monitor fieldwork. However, these checks are only conducted ex post and are therefore not suitable for troubleshooting during fieldwork. From 2023 onward, time stamps have been implemented for each question, serving as an additional centralized monitoring element. The OeNB Euro Survey aims to continuously improve data collection by adjusting the definition of minimum standards with each tender and, in particular, by providing the survey institutes with detailed feedback on any observed data quality deficiencies. Further measures to ensure data quality are being implemented on a regular basis. These quality assurance improvements are naturally subject to a cost-benefit evaluation both in terms of financial and personnel costs and are conducted against the overall aim and scope of the OeNB Euro Survey.

4 How were the data edited, coded and weighted?

This section provides information on the "representativeness" of OeNB Euro Survey samples. It first provides information on response rates. It then describes how post-stratification weights are calibrated and discusses which types of weights are not provided for the OeNB Euro Survey. The section moreover outlines the factors that are taken into account to adjust for differences between the sample and the target population. Finally, it provides information on data checks and editing, illustrating how data quality issues are identified and addressed.

4.1 Response rates

Historically, response rates have been seen as an indicator of survey quality. The higher the response rate, the higher the data quality, i.e., the more accurate the survey estimates. However, with respondents increasingly refusing to participate, response rates have declined globally. Furthermore, research has increasingly emphasized total survey error as a more appropriate concept to assess survey quality.

The OeNB Euro Survey has a target response rate of 50%. Table 12 reports AAPOR RR1 response rates. For most countries, we observe that response rates have declined over time. For those countries exhibiting surprising changes in response rates, please also see the information provided on changes in institutes (see section 2) and changes in sampling (see section 1).

Table 12: Response rates (AAPOR RR1)

Survey wave	BG	HR	CZ	HU	PL	RO	SK	AL	BA	MK	RS
fall 2007			0.6	0.538	0.611		0.639				0.779
spring 2008	0.199	0.29	0.598	0.507	0.539	0.881	0.616	0.839	0.869	0.844	0.785
fall 2008	0.192	0.274	0.609	0.486	0.548	0.878	0.617	0.766	0.762	0.641	0.622
spring 2009	0.176	0.29	0.618	0.492	0.555	0.885		0.78	0.71	0.67	0.595
fall 2009	0.164	0.318	0.629	0.484	0.544	0.889		0.785	0.641	0.653	0.613
spring 2010	0.18	0.322	0.609	0.5	0.539	0.889		0.721	0.608	0.619	0.736
fall 2010	0.173	0.293	0.597	0.475	0.552	0.886		0.798	0.651	0.579	0.738
spring 2011	0.207	0.389	0.599	0.462	0.544	0.869		0.737	0.609	0.617	0.736
fall 2011	0.177	0.313	0.598	0.464	0.475	0.836		0.773	0.639	0.636	0.746
spring 2012	0.165	0.311	0.588	0.468	0.564	0.828		0.733	0.63	0.625	0.727
fall 2012	0.332	0.308	0.523	0.422	0.572	0.807		0.670	0.626	0.594	0.752
spring 2013	0.389	0.258	0.549	0.441	0.59	0.816		0.653	0.637	0.626	0.745
fall 2013	0.340	0.280	0.563	0.408	0.498	0.806		0.671	0.219	0.576	0.729
spring 2014	0.338	0.28	0.593	0.4	0.505	0.807		0.661	0.214	0.565	0.73
fall 2014	0.364	0.299	0.600	0.392	0.417	0.770		0.699	0.724	0.606	0.732
fall 2015	0.361	0.342	0.588	0.418	0.418	0.800		0.667	0.745	0.571	0.778
fall 2016	0.300	0.348	0.572	0.429	0.396	0.683		0.803*		0.525	
fall 2017	0.401	0.351	0.555	0.419	0.359	0.607		0.534*	0.783	0.505	0.685
fall 2018	0.450	0.344	0.559	0.400	0.318	0.747		0.668*	0.754	0.422	0.686
fall 2019	0.397	0.349	0.529	0.383	0.295	0.785		0.660*	0.717	0.455	0.640
fall 2020	0.429	0.326	0.455	0.343	0.271			*	0.592	0.740	
fall 2021	0.447	0.316	0.468	0.312	0.270	0.601		*	0.625	0.757	0.597
fall 2022	0.475	0.324	0.466	0.314	0.296	0.577		0.624*	0.657	0.746	0.591
fall 2023	0.54	0.47	0.58	0.41	0.40	0.67		*	0.67	0.73	0.62

Note: For missing country-years, the gross sample size is not available. The survey was discontinued in Slovakia in 2009. * For details on Albania, see section 4.4. For the definition of AAPOR RR1 response rates, see AAPOR (2016).
Source: OeNB Euro Survey.

4.2 Weighting

OeNB Euro Survey data come with two weights called *weight* and *weight_hh*. Both of these weights are post-stratification (calibrated) weights, which are explained in more detail in the corresponding subsection. For the 2023 survey wave, data on unit nonresponse were collected which may allow to construct nonresponse weights in the future. Other weights are not provided at the moment, but this subsection also outlines how users can construct design and country weights themselves.

4.2.1 Post-stratification and calibration weights

For each survey wave, the local survey institutes provide post-stratification weights for each respondent (*weight*) and household of the respondent (*weight_hh*). These weights correct for sampling error beyond nonresponse and fit the sample's distribution of certain characteristics to the distribution of these characteristics in the target population. While individual post-stratification weights have been available since 2007 for all countries except Bulgaria, household weights have only consistently been provided since fall 2017. From spring 2007 to spring 2012, Bulgaria used quota sampling and all observations therefore have a weight of 1.

Table 13 and table 14 present an overview of which characteristics were used in which wave to compute post-stratification weights. As can be seen, different characteristics were used across countries and waves. The minimum requirement for individual weights is to fit the marginal distributions of the target population's gender, (broad) age groups and region (mostly on NUTS2 level); the current minimum for household weights is the marginal distribution of household size and region. Age groups, household size and regional characteristics are not harmonized across countries but rather depend on whether data on target population totals are available. Population totals are usually obtained from the latest available census data or latest available intercensal estimates by the time of the interview. The exact population totals used for each country and in each wave are available upon request.

Moreover, the method used to construct post-stratification weights differs across countries. Some use cross-classification between age, gender and region. Others use iterative raking and only fit marginal distributions. Yet other countries use iterative raking but still cross-classify gender and age. For most household weights, only the marginal distributions are fit. Thus, there is a mix of classical post-stratification and calibration weights.[2] Eventually, all post-stratification weights are standardized to the sample size and have a mean of 1. Weights are not truncated around the common threshold of 4.

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[2]For the sake of simplicity, we will only use the term post-stratification weight in the following.

Table 13: Overview of characteristics used for post-stratification weights

	BG	HR	CZ	HU	PL	RO	SK	AL	BA	MK	RS
Gender (G)	since fall 2012	since 2007	since 2007	since 2007	since 2007	since 2007	2007–fall 2008	since 2007*	since 2007	since 2007	since 2019
Age (A)	since fall 2012	since 2007	since 2007	since 2007	since 2007	since 2007	2007–fall 2008	since 2007*	since 2007	since 2007	since 2007
G x A	since 2017	2007–spring 2013		2023	since 2011	fall 2009–spring 2012, since 2020	2007–fall 2008	fall 2012–2015, since 2017*		since 2007	since fall 2012 since 2019
Region (R)	since fall 2012	since 2007	since 2007	since fall 2012	fall 2013	since 2007	2007–fall 2008	since fall 2012*	since fall 2012	since 2007	since 2019
G x A x R					2017, since 2019						
Education		2007–fall 2013		2007–2022				2007–2015	since 2019	2007–2017	2007–2018, since 2020
Type settlement	fall 2012–2017	since spring 2014	since 2007	2007–spring 2013, 2022		2007–2019	2007–fall 2008	2007–2015	2007–2017, since 2020	2007–spring 2012	fall 2012–spring 2014
Ethnic group										since fall 2013	

Note: * See section 4.4. *Source*: OeNB Euro Survey.

Table 14: Overview of characteristics used for household post-stratification weights

	BG	HR	CZ	HU	PL	RO	AL	BA	MK	RS
Household size (H)	since 2017	since 2017	since 2017	since 2017	since 2017	since 2017	since 2017*	since 2017	since 2017	since 2017
Region (R)	since 2017	since 2017	since 2017	since 2017	since 2019	since 2017	since 2017*	since 2017	since 2017	since 2019
H x R			since 2017		since 2019			since 2018	2017, 2019	2019
Type settlement (T)	2017				2017–2021	2017–2019		2017		
H x T					2017–2018					
Age	2017			2017–2019		2017–2019		2017	2017–2018	
Gender	2017			2017–2019		2017–2019		2017	2017–2018	

Note: * See section 4.4. *Source*: OeNB Euro Survey.

4.2.2 Population size weights

When pooling OeNB Euro Survey data over several countries, it can be useful to correct for very similar sample sizes, but very different population sizes of the countries included. If population size weights are not used, larger countries are underrepresented compared to smaller countries. Therefore, population size weights are constructed by dividing the population size (adult population or population aged over 14 (15) in a country) by the sample size in each country.

4.2.3 Design weights

Design weights are supposed to account for different probabilities to be sampled that arise due to sampling design. Thus, they are meant to correct for sample selection bias. In most countries and survey waves, multi-stage stratified sampling was used. Still, for earlier waves, the information on stratification is limited and will affect the construction of consistent design weights (see the section on sampling).

Nevertheless, design weights that take at least the final sampling stage into account can be constructed. The final sampling stage is the household itself. Since only one person in a household is interviewed, the selection probability depends on how many persons of the target population are living in the household. It is suggested to compute the design weights as the inverse of the (pre-multiplied) selection probabilities and to standardize them to the sample size for each country-wave.

When constructing the design weights, the number of (eligible) target persons in the household must be calculated. This is easiest for the waves conducted from 2020 onward, but also possible for previous waves if researchers are willing to tolerate small inaccuracies. For all waves since 2020, the number of target persons is obtained by subtracting from the household size (n4) the number of children in a household (2020: n7a, from 2021 onward: n7d*).

For the waves from 2017 to 2019, the number of children (n7a) also includes persons who are already 18 years old. Thus, the 18-year-olds are part of the target population for these waves, which might introduce a slight bias if the number of children is subtracted. Between the fall waves of 2012 and 2016, the target population in most countries also included persons younger than 18 years old and subtracting the number of children again eliminates some persons of the target population. Alternatively, the number of children younger than 15 years old can be subtracted, which, however, might result in some household members counting toward the number of target persons, even though they are actually not part of the target population. The specific age limits of the target population for each country and wave can be obtained from table 2.

Before 2012, households with five or more members were coded into one category, which further distorts potential design weights for those living in large households. Moreover, in Poland, an upper age limit was set, and data on the age of adult household members are not available. Given that Bulgaria used quota sampling before the fall wave of 2012, design weights cannot be constructed at all for these waves.

4.2.4 Nonresponse weights

As part of the 2023 survey wave, data on unit nonresponse were collected for the very first time. Once the data have been evaluated, further information will be added.

4.2.5 Combining weights

Depending on statistical software and preferred handling of survey data, design, post-stratification and population size weights are multiplied with each other to obtain a single weight. Alternatively, they are pasted individually in a survey data environment (e.g., *svyset* in Stata). Including population size weights at any stage is not necessary but also not harmful if countries are analyzed separately.

4.3 Item nonresponse

CONTENT WILL BE ADDED. PLEASE CHECK AGAIN IN JUNE 2024.

4.4 Data consistency checks and editing

Several consistency analyses, logical checks and coding checks are carried out to correct any errors that may have occurred during fieldwork or during the compilation of electronically recorded interviews, of individual country datasets or of the aggregate dataset of all countries covered by the survey. The OeNB receives one dataset that contains the data for all countries included in the survey. Before receipt of the dataset, the institutes of the different countries and Gallup Vienna carry out checks on coding and labelling but are strictly advised not to change any actual data records. Instead, they are tasked with compiling a report of potential errors that should be edited. In addition, OeNB staff will carry out the following checks:

Sociodemographic data are cross-checked against previous waves and/or external data sources. Year-to-year comparisons can reveal changes in the sample due to randomization but can also point to problems in terms of coverage. The analysis of sociodemographic data also includes checks of logical inconsistencies, e.g., age and marital status, age and retirement, or household size and number of children. In addition, checks for outliers are conducted for those variables for which respondents are asked to report values, e.g., for income in particular. Finally, as described in section 4.2, post-stratification weights are calculated using as a minimum the characteristics gender, age and region. Data checks also include weight checks, specifically summary statistics, outlier detection and box plots of the weight variables. Data are also checked for correlations between weights and survey variables, and an analysis of variation of means across the deciles of the post-stratification weights is carried out.

Data checks of the main part of the interview consist of "hard" and "soft" checks. Hard checks cover filter variables and other responses where certain answers can be ruled out. Filter checks are carried out for the questionnaire's complete set of filters in each wave. For example, a respondent who does not have a loan cannot state the currency of a loan. Some hard checks are programmed into the CAPI version of the questionnaire (see section 3). However, hard checks are used sparingly as they may affect comparability across countries considering the mix of CAPI- and PAPI-recorded observations. Further hard checks cover, e.g., cross-checks for age. Either respondents ' age or the year of loan origination can be ruled out as incorrect if an individual states that they took out a mortgage in a year when, according to the information provided on their current age, they were a minor.

Interview data collected in several waves is checked using year-to-year comparisons of variables. Severe changes over time are investigated in more depth bearing in mind that changes may be driven by exogenous events and not necessarily indicative of data errors. Interview variables recording amounts, percentages, or other numbers are investigated for outliers, e.g., to detect data entry errors in terms of superfluous 0 or wrong decimal places.

Interviews are further checked for logical inconsistencies. These may, e.g., occur when a respondent reports having a bank loan but no bank account. Logical inconsistencies may also arise when respondents report, e.g., strong trust in the stability of the national currency but at the same time expect a severe depreciation.

Finally, data checks rely on paradata recording the start date, time and duration of interviews as well as interviewer characteristics. Both interview and sociodemographic data are examined for clustered irregularities at short interview duration, or for certain interviewers or primary sampling units. Once all potential errors have been identified, the survey institutes review all cases of irregularities, suggesting solutions, where possible. If the proposed solutions call for data edits after the first delivery of the data to the OeNB, they have to be approved by OeNB staff.

Revised data are checked by OeNB staff for additional unauthorized edits by comparing the full versions of data files.

Table 15: Variables with flagged (recommended) data edits

Variable	Survey wave	Reason for flagging
q79a–f	2017	callback: kitchen/windows/last major renovation was done before person who has lived longest in the residence moved in or before house was built
n24	2019	callback: contradiction between q20=2,3,4,5,6 and n=24 if person has loan
q19ac	2019	callback: responses in Poland inconsistent with previous waves, share of "about 50%" or "below 50%" of savings increased by 30 percentage points
n26	2019	callback: answer inconsistent with income
q23g	2020	callback: either all items not mentioned, or all items not mentioned except q23g_5 and q23g_4
q19ac	2019	callback: translation error in MK
q19n	2020	no callback: recoding based on flagging recommended

Note: For further flag variables, see also tables 3 and 4 in section "Questionnaire", see `https://www.oenb.at/en/Monetary-Policy/Surveys/OeNB-Euro-Survey/questionnaire.html`.
Source: OeNB Euro Survey.

There are three types of more substantial data edits that may be implemented after the fieldwork has been completed, if necessary:

1. data edits due to translation errors
2. data edits due to filter errors or incorrect answer categories
3. data edits due to inconsistent answers

For both translation and filter errors as well as incorrect answer categories, data are edited based on follow-up queries (callbacks). Some translation errors and filter errors are only discovered in a later wave. In these cases, callbacks are not an option; instead, the data that have been collected using the wrong wording are deleted from the dataset, i.e., data are set to missing. Tables 3 and 4 in section "Questionnaire" (`https://www.oenb.at/en/Monetary-Policy/Surveys/OeNB-Euro-Survey/questionnaire.html`) provide an overview of these cases. The data edits can be tracked using the flag variables listed in the tables. In addition, a limited number of follow-up queries are conducted by phone to clarify inconsistent answers. These callbacks usually occur no later than three to four months after completion of fieldwork. Table 15 provides an overview of all follow-up queries. Follow-up queries are used sparingly because the time lag between fieldwork and follow-up queries may affect outcomes.

4.4.1   Croatia fall wave of2013

Severe data issues were detected following consistency checks by OeNB staff after the Croatia fall wave of 2013. After these data issues had been pointed out, the local survey institute revealed that its interviewer team had transitioned from full-time employees to part-time contractual workers who were mainly very young and inexperienced interviewers. The data collected by this inexperienced team of interviewers, which probably had not received any training, diverged to such an extent in almost all year-to-year comparison analyses that the survey wave had to be repeated. Simultaneously, collaboration with the survey institute "Target" was discontinued and new collaboration arrangements were set up with "Hendal". In spring 2014, Hendal repeated the survey originally conducted in fall 2013. In addition, the fall 2013 questionnaire which had been fielded in 2013 included questions that some other countries fielded in spring 2014 only. Following survey repetition, the dataset from the OeNB Euro Survey for the fall 2013 wave now includes the data collected by Hendal in spring 2014. Variables that were collected in both fall 2013 and spring 2014 in other countries are therefore missing one observation in Croatia. For all other variables, researchers need to be aware that the timing of the fieldwork conducted in Croatia for fall 2013 actually occurred in spring 2014 (see also table 7).

4.4.2   Albania 2016 to 2022

From 2016 to 2019 and in 2022, the data collected for Albania only cover Central and South Albania. The data for North Albania (NUTS 2 region AL01 and NUTS 3 region AL021) were taken out from the data disseminated to users. For 2020 and 2021, no data were disseminated to users. Descriptive results, too, [3] only cover Central and South Albania for the period from 2016 to 2019 and for 2022. For the waves conducted from 2016 to 2019 and in 2022, the data disseminated to users contain post-stratification weights that are calibrated to fit the marginal distribution of gender, age and regions in Central and South Albania. Below, we explain the reason for excluding certain data.

The analysis of interviewer effects conducted by Olbrich, Beckmann and Sakshaug (2024) points to severe data quality issues in Albania. Olbrich, Beckmann and Sakshaug (2024) estimate multilevel models to investigate interviewer variance. They use, inter alia, the following data quality indicators:

1. near duplicate analysis (Kuriakose and Robbins, 2016)
2. daily interviews per interviewer (Bushery et al., 1999)
3. satisficing, in particular regarding

    (a) item nonresponse (Schäfer et al., 2005)
    (b) straightlining (Loosveldt and Beullens, 2017)

Finally, Olbrich, Beckmann and Sakshaug (2024) apply a multivariate tree-based outlier detection method to identify country-years with exceptional patterns that may indicate poor data quality.

Considering their results, the OeNB decided to take out the survey data for Albania for the waves conducted in 2020 and 2021 from the data altogether. During these years, the COVID-19 pandemic had severely impacted fieldwork; moreover, the analyses by Olbrich, Beckmann

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[3]See https://www.oenb.at/en/Monetary-Policy/Surveys/OeNB-Euro-Survey/Main-Results.html.

and Sakshaug (2024) indicate that large parts of the data collected in Albania were fabricated or manipulated by interviewer supervisors.

Data for North Albania were taken out for the waves conducted from 2016 to 2019 and in 2022. For these waves, data analysis pointed to insufficient data quality in specific regions. This was confirmed by the institute conducting the surveys. In Albania, data quality control procedures from 2016 to 2022 were mainly conducted by supervisors. In total, there were five supervisors who were responsible for specific regions for all waves occurring from 2016 to 2022. In North Albania, these supervisor control procedures failed for two reasons: i) some supervisors conducted interviews themselves; ii) some supervisors were related to interviewers who conducted interviews in the region they supervised. Although some of the data collected in North Albania are genuine, results also indicate that some data are likely to be fabricated or manipulated.

The following figures and tables compare the results for data quality indicators using the original dataset for Albania (including North Albania) and the dataset excluding North Albania. As the paper by Olbrich, Beckmann and Sakshaug (2024) shows, the main data quality issue originated at the level of interviewer supervisors and not at the level of interviewers themselves. Therefore, we do not present results on interviewer variance including and excluding North Albania but rather focus on the data quality indicators 1–3 listed above.

Near duplicates. Kuriakose and Robbins (2016) argue that interviews with a similarity of more than 85% to another interview should be very rare. Figure 1 shows the distribution of near duplicates when data for North Albania are included and excluded.

When using the full sample for Albania, the share of observations with a similarity of 85% or higher is 14.9% in 2016, 8.9% in 2017, 19.5% in 2018, 11.5% in 2019 and 8.5% in 2022. When removing the data for North Albania, the share of observations with a similarity of 85% or higher is 5.9% in 2016, 5.9% in 2017, 3.8% in 2018, 2.7% in 2019 and 0% in 2022.

In addition to analyzing near duplicates based on responses, paradata on the start date, time and duration of interviews can be checked for duplicates. Paradata should be recorded automatically and are very unlikely to yield a high share of duplicates. Table 16 shows the number of observations for which interview start time and duration overlap with at least one other interview. It also shows the number of observations for which start times overlap when looking at the data by supervisor and by interviewer. Again, the comparison of the datasets including and excluding North Albania shows that duplicates drop significantly when the data for North Albania is removed.

Interviewer workload. Bushery et al. (1999) use the interviewers' daily number of successful interviews as an indicator for flagging suspicious data. The maximum number of interviews is limited by interview duration, the share of refusals and the geographical distance between potential respondents. Table 17 compares the workload of interviewers as measured by the daily number of successful interviews for the datasets including and excluding North Albania. It shows that in 2017 and 2018, the maximum number of interviews drops when excluding North Albania. As data manipulation likely took place at the level of supervisors rather than at the level of interviewers, the minor changes identified for the remaining waves do not suffice to indicate adequate data quality.

Figure 1: Near duplicates comparison including and excluding North Albania
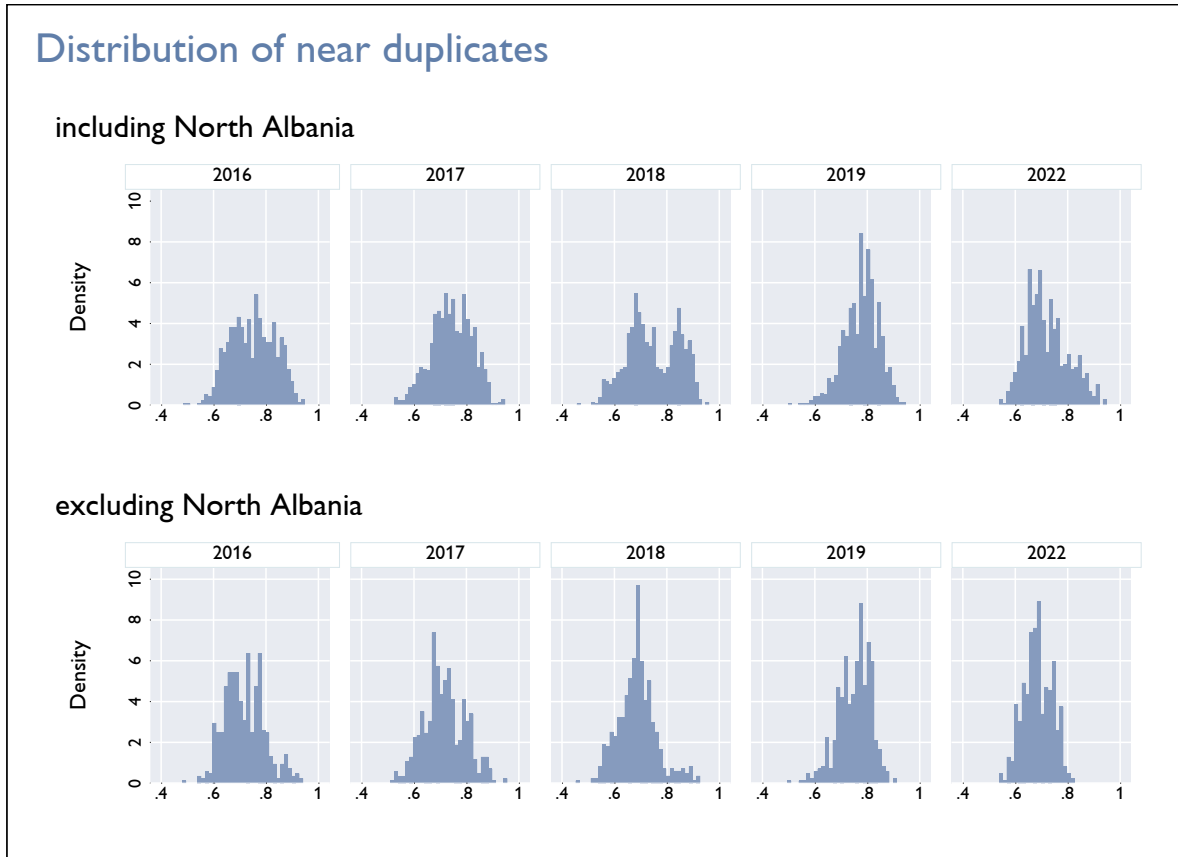
Satisficing. Figure 2 presents results for the satisficing indicator straightlining. This indicator focuses on questions with item batteries where responses are measured on a scale, e.g., from 1 to 6 or 1 to 5. The indicator measures to what extent responses vary across adjacent items. Straightlining can be used to assess both respondent satisficing and interviewer effects (Loosveldt and Beullens, 2017; Olbrich et al., 2023). A low variance of responses across same-scaled items indicates lower data quality. We use an item battery on trust in institutions as well as an item battery where respondents are asked to agree or disagree with several statements on the economic situation of their country. Figure 2 shows the percentage of responses where respondents selected exactly the same answer for all of the seven statements on their country's economic situation and for their level of trust in six different institutions, respectively. Moreover, the figure clearly demonstrates that the share of straightlining responses – especially regarding the item battery on trust in institutions – drops significantly when data on North Albania is excluded.

Table 16: Duplicate times in Albania including and excluding North Albania

		Start time	Start time & duration	Start time & supervisor	Start time & interviewer
		Number of interviews			
2016	incl. North Albania	349	36	139	2
	excl. North Albania	77	4	77	2
2017	incl. North Albania	288	18	78	6
	excl. North Albania	63	4	60	0
2018	incl. North Albania	236	18	40	0
	excl. North Albania	32	2	32	0
2019	incl. North Albania	313	86	163	0
	excl. North Albania	48	4	51	0
2022	incl. North Albania	289	155	158	0
	excl. North Albania	30	10	30	0

Note: This table shows the number of observations where at least one other observation is a duplicate in terms of start time, start time and duration, start time and supervisor or start time and interviewer.
Source: OeNB Euro Survey.

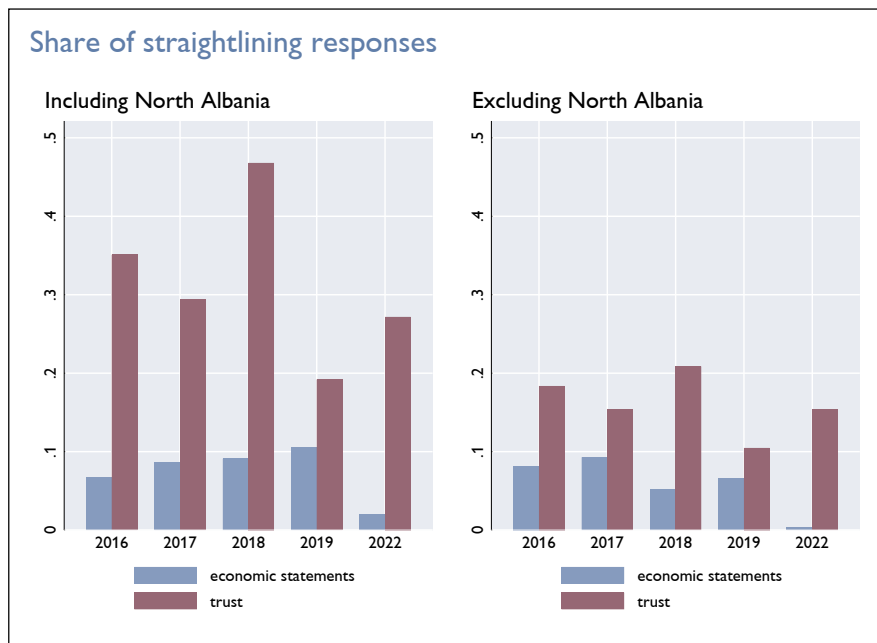**Figure 2:** Straightlining including and excluding North Albania

Table 17: Daily number of interviews by interviewer including and excluding North Albania

		Mean	Maximum
2016	incl. North Albania	9.2	17
	excl. North Albania	9.2	17
2017	incl. North Albania	9.1	24
	excl. North Albania	7.9	14
2018	incl. North Albania	7.9	14
	excl. North Albania	6.1	12
2019	incl. North Albania	8.5	14
	excl. North Albania	7.6	14
2022	incl. North Albania	5.7	15
	excl. North Albania	4.9	15

Source: OeNB Euro Survey.

4.4.3 Albania 2023

In fall 2023, no data collection could take place in Albania, as planned OeNB Euro Survey fieldwork would have overlapped with announced census fieldwork. According to "Das Österreichische Gallup-Institut" and the Albanian survey institute, local legislation prohibited survey fieldwork to take place in parallel with census data collection processes.

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