

SINUS study for the Friedrich-Ebert-Stiftung

# Social-ecological transformation

Methodology report

Heidelberg, September 2023

**FRIEDRICH  
EBERT  
STIFTUNG**

**sinus:**

Teil der INTEGRAL-SINUS-OPINION Gruppe

# Methodological design of the study

## Online survey with quota sample

- The study design is based on quantitative, **population-representative surveys with** a sample size of at least 1,200 individuals per country. The study was conducted in the following 19 countries: Denmark, Germany, France, Greece, Italy, Canada, Croatia, Poland, Portugal, Romania, Serbia, Slovakia, Spain, Sweden, the Czech Republic, Turkey, Hungary, the United Kingdom and the USA. In all countries included in the study, the survey was designed as an **online study** (CAWI = Computer Assisted Web Interviewing). The advantage of online surveys is that they are efficient and cost-effective and guarantee greater anonymity than face-to-face interviews (CAPI = computer-assisted personal interviews).
- Access to the internet is a prerequisite for online surveys. It should be noted that not everyone has access to the internet. This applies primarily to the older population (70+). The **resident population aged between 18 and 69** therefore forms the basic population for the surveys in the countries analysed. In order to fulfil the requirement of representativeness for the age group of 18 to 69-year-olds, **quota samples** were drawn in all countries. Quota samples are based on a deliberate selection of target persons. The composition of the sample is determined by defining quota characteristics.
- The aim of the survey was to achieve the closest possible approximation to the representative marginal distributions of the **quota characteristics of gender, age, education and region** in all countries. Despite the definition of these quotas, there may be structural deviations from the population. For this reason, the data was adjusted for deviations from the population after the surveys were completed. This was implemented using factorial weighting.
- SINUS developed the **standardised questionnaire** in close cooperation with the Friedrich-Ebert-Stiftung. The **duration of the survey was set at 20 minutes**. In preparation for the field phase, the master questionnaire was programmed for Germany, **translated** into the respective national languages and adapted to the country specifics (e.g. adaptation of the education categories). Before the start of the surveys, the programming was tested for all countries.

# Methodological design of the study

## Analysis of the survey results

- In addition to differentiation according to sociodemographic characteristics, the data was analysed according to the **milieu affiliation of the respondents**. By evaluating the findings according to the **Sinus meta-milieus**, the sociodemographic analysis is supplemented by way of living and value components.
  - The milieu perspective does not replace the study of sociodemographic characteristics, but complements and refines them by taking into account fundamental values that determine way of living and life goals, as well as everyday attitudes towards family, work, leisure and consumption, for example.
- Established test procedures of empirical social research were used to **examine the statistical significance** of survey results. The differences in the response behaviour of the analyzed population groups were tested using a chi-square test (e.g. age group of 18 to 29-year-olds compared to the average). This is based on a confidence interval of 95% or 99%, which is standard for social science purposes.
  - The examined characteristics are interpreted as **overrepresented or underrepresented** in the sample if the probability of this is at least 95%. Characteristics are considered to be **strongly overrepresented or strongly underrepresented** if a probability of 99% is applied.
  - The result of the significance test always depends on the size of the group. The larger the group (e.g. group of people with high educational qualifications), the more likely it is that even weak over- and underrepresentations will be shown to be significant. For this reason, it can happen in individual cases that identical numerical values are presented as having different over- or under-representation.

Reading example

# Attitudes towards climate change

If you now think about the topic environment and climate. To what extent do you agree with the following statements?

Response category: "Fully agree / somewhat agree"

	Total	Education			Net equivalent income (HH/month)		
		Low	Medium	High	Low <60% (<1.247 €)	Medium 60-140% (1.247-2.910 €)	High >140% (>2.910 €)
The destruction of nature endangers people and their livelihoods.	92	92	90	95	93	92	93
<b>I am afraid of the consequences of climate change.</b>	<b>65</b>	<b>56</b>	62	72	62	66	67
There are more important problems in our country than climate change.	50	55	52	44	54	49	45

65% of people surveyed in Germany fully or somewhat agree with the statement that they are afraid of the consequences of climate change. While 72% of those with a high level of formal education (somewhat) agree with this statement, "only" 56% of those with a low level of formal education agree. In other words, among the respondents who (tend to) agree with the statement, the formally highly educated are strongly overrepresented, while the group of formally low educated is strongly underrepresented. The significance test examines the question of how likely it is that the percentage differences between certain subgroups (e.g. the group of people with a low level of education compared to all respondents) are statistically relevant (i.e. do not merely represent random fluctuations). Accordingly, the subgroups analysed (e.g. group of low-educated persons) are interpreted as overrepresented or underrepresented if there is a probability of at least 95% that the results are not due to chance. Subgroups are interpreted as strongly overrepresented or strongly underrepresented if there is a probability of at least 99%.

Basis: 1,200 cases, total sample; figures in %

- strongly overrepresented
- strongly underrepresented
- overrepresented
- underrepresented

# Methodological design of the study

## At a glance



### Method

Standardised online survey (CAWI)

Quota sample (gender, age, education and region)

The surveys were conducted in the national language.



### Data collection

Interview duration: 20 to 28 minutes, depending on the country

The data was collected by Sociotrend GmbH.



### Target group

Resident population aged from 18 to 69 years



### Sample size

Around 1,200 people



### Survey period

20.04. - 28.07.2023

### Survey content

- Awareness of environmental, nature and climate protection issues
- Climate and environmentally conscious behaviour: Attitudes, barriers, and motivators
- Attitudes towards change in way of living and economies: Necessity of change, attribution of responsibility and policies
- Interest in information and level of knowledge: climate change, ecological contexts and political measures

# Methodological design of the study

## Survey period and duration per country

Country	Survey period	Ø Survey duration
Germany	20.04. - 23.05.2023	20.0 minutes
Denmark	19.05. - 08.06.2023	25.1 minutes
France	12.05. - 08.06.2023	23.0 minutes
Greece	22.05. - 20.06.2023	25.0 minutes
Italy	15.05. - 05.06.2023	23.2 minutes
Canada	09.06. - 30.06.2023	24.7 minutes
Croatia	12.06. - 07.07.2023	23.0 minutes
Poland	09.06. - 03.07.2023	24.7 minutes
Portugal	23.06. - 05.07.2023	27.7 minutes
Romania	30.05. - 02.07.2023	25.6 minutes

Country	Survey period	Ø Survey duration
Serbia	27.06. - 28.07.2023	26.4 minutes
Slovakia	27.06. - 25.07.2023	25.8 minutes
Spain	09.06. - 05.07.2023	23.3 minutes
Sweden	27.06. - 07.07.2023	23.7 minutes
Czech Republic	09.06. - 04.07.2023	25.8 minutes
Turkey	30.05. - 04.07.2023	22.4 minutes
Hungary	27.06. - 07.07.2023	26.1 minutes
United Kingdom	09.05. - 05.06.2023	19.6 minutes
USA	27.06. - 11.07.2023	22.8 minutes

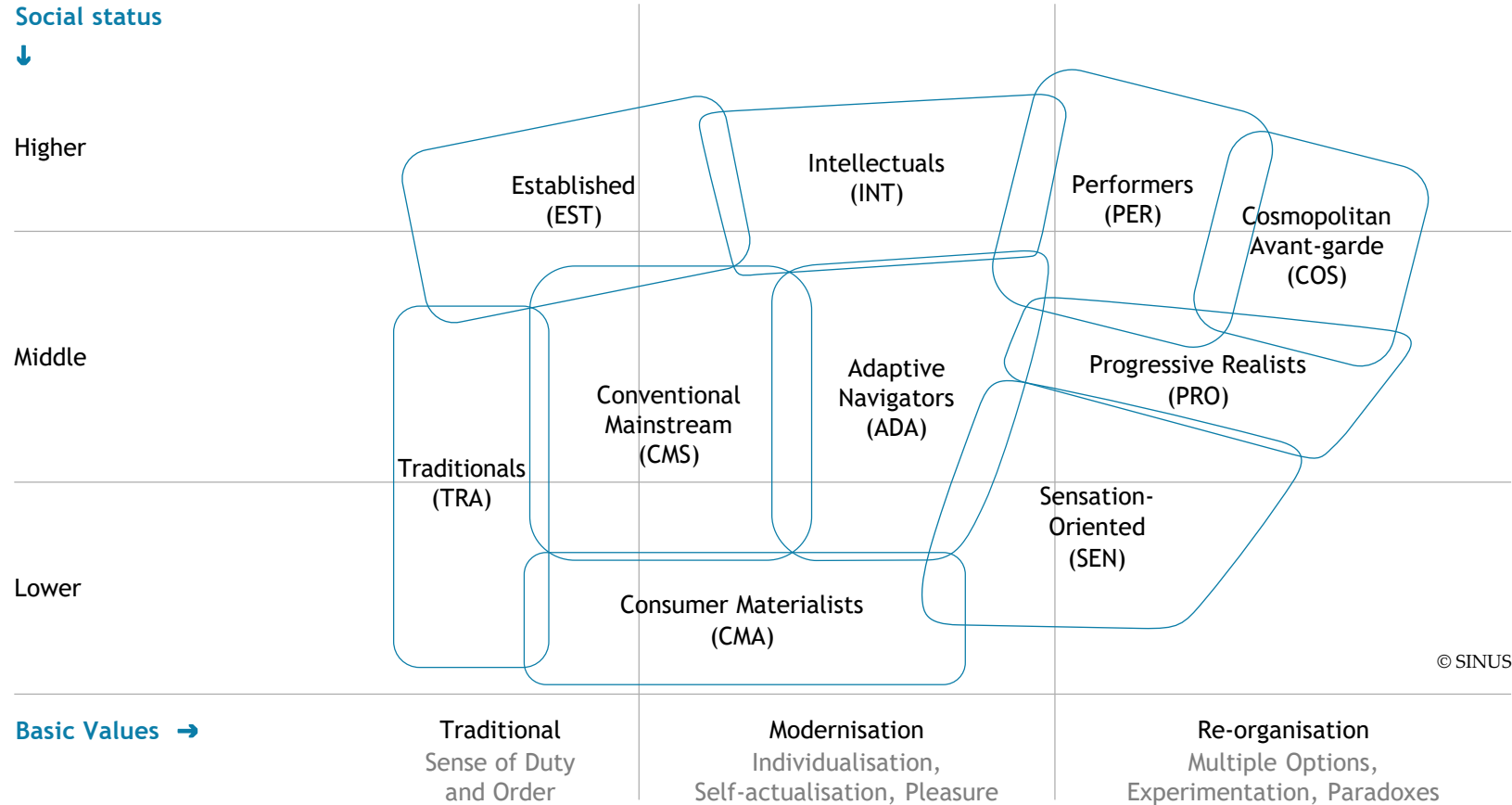
# Methodological design of the study

## Multi-country segmentation with the Sinus meta-milieus target group model

- The SINUS Institute has been researching changing values and people's way of living for more than 40 years. This has resulted in the **Sinus-Milieus**, one of the best-known and most influential instruments for target group segmentation. The Sinus-Milieus group people who are similar in their outlook on life and way of living. Fundamental values that determine way of living and life goals are taken into account, as are everyday attitudes towards family, work, leisure, and consumption, for example. The Sinus-Milieus therefore perceive people holistically, in the frame of reference of everything that has meaning for their lives.
- The SINUS Institute's **international target group research** shows that there are "groups of like-minded people" even across national borders - the Sinus meta-milieus. The **Sinus meta-milieus** are internationally comparable target groups with similar value orientations, way of living, and consumer preferences. They are developed as uniformly as possible and as differently as necessary: The basic focus is on looking at internationally comparable orientations and values. However, **country-specific development and modelling** is essential, taking into account local characteristics and country-specific response behaviour. As a result, the Sinus meta-milieus are internationally comparable but can be described country-specifically in terms of the depth of the descriptions, way of living, media behaviour, etc.
- There is a standardised international **milieu indicator** for the multi-country segmentation. This indicator contains 29 statements that represent the typical values of the individual living environment. The statements that have proved most successful are those that capture the basic convictions of the respondents or diagnose motives that are effective in everyday life. The criterion for the selection of such statements is their differentiating power, i.e. their suitability to optimally separate the different living environments. Based on the answers to these indicator questions, the respondents are assigned to the living environments using a probability model with a multivariate classification procedure. The Sinus meta-milieus are modelled independently for each country in order to take into account local characteristics and country-specific response behaviour.

# Methodological design of the study

Multi-country segmentation with the Sinus meta-milieus target group model





# Methodological design of the study

## Quality assurance

- SINUS has been cooperating with Sociotrend GmbH on international projects for many years. Sociotrend also acted as a subcontractor for this project and took over the **field management** for all countries. The advantage here is that all field services come from a single source. Sociotrend co-operated with Dynata - one of the world's largest panel providers, which was able to cover all the countries to be included in the study.
- The country versions of the master questionnaire were programmed and hosted by Sociotrend GmbH. All of the survey data was collated on Sociotrend's German servers so that the creation of each individual data set could be tracked in real time. Centralised hosting ensured **maximum transparency**, as no data could be altered or even falsified.
- In addition, the following strict **quality assurance measures** have been implemented:
  - Installation of reading control questions to exclude unreliable respondents during the survey (traptool)
  - Logging of interview times to recognise speeding or insufficient reading of individual sections
  - Analysis of conspicuous (uniform) response patterns in longer statement batteries
  - Consistency check of the response behaviour
- With the help of these indicators, unreliable study participants could be reliably recognised and removed from the sample.

# Methodological design of the study

## Concrete procedure for quality assurance

- **Ongoing adjustment (qualityfail):** In order to check whether the questionnaire was read carefully, two control items were integrated into the survey (e.g. "Please *select* the answer category *I tend to oppose* in this line to show that you are not a robot."). Respondents who answered both control items incorrectly were directly excluded. In addition, respondents who always gave the same value or only gave a different value once for the milieu indicator were also screened out directly.
- Depending on the country, between 9.9% and 23.2% of respondents were excluded as a result.
- **Subsequent adjustment:** All surveys were reviewed using a combination of 5 quality criteria.
  - Survey duration shorter than half of the median duration (group-specific by age group to take into account the generally faster processing time of younger respondents)
  - Conspicuous click patterns in item batteries (very often the same value given)
  - Incorrect answer to a control item
  - Implausibilities in response behaviour (combination of age, education and occupation)
  - Conspicuously short processing time for the environment indicator
- Respondents who were conspicuous in at least two of these criteria or who performed particularly poorly in certain criteria were excluded from the sample (e.g. extreme "speeder": less than a third of the median processing time). Depending on the country, between 10.4% and 33.3% of respondents were again removed from the sample as a result of the subsequent adjustment.

# Methodological design of the study

## Overview field control (1/2)

Country	Total participation*	Incompletes/ screened out**	Data protection not accepted	Proportion of qualityfail	Complete	Subsequent adjustment	Final number of respondents
Germany	3.896	1.861	85	283	1.667	467)	1.200
Denmark	3.152	1.389	63	211	1.489	287)	1.202
France	3.638	1.453	172	393	1.620	419)	1.201
Greece	3.970	2.249	74	248	1.399	199)	1.200
Italy	3.103	1.247	89	256	1.511	310)	1.201
Canada	4.603	2.692	110	319	1.482	281)	1.201
Croatia	2.801	1.095	46	220	1.440	236)	1.204
Poland	3.000	1.220	20	296	1.464	264)	1.200
Portugal	4.645	3.000	50	238	1.357	157)	1.200
Romania	4.096	2.144	87	432	1.433	233)	1.200

\* Number of potential respondents contacted

\*\* Survey cancelled or screened out due to wrong target group (younger than 18 years or older than 69 years) or screened out due to full quotas

# Methodological design of the study

## Field control overview (2/2)

Country	Total participation*	Incompletes/ screened out**	Data protection not accepted	Proportion of qualityfail	Complete	Subsequent adjustment	Final number of respondents
Serbia	3.128	1.599	40	9,9% (148)	1.341	10,4% (140)	1.201
Slovakia	2.838	1.158	35	14,0% (231)	1.414	15,1% (214)	1.200
Spain	4.077	2.156	66	16,2% (300)	1.555	22,8% (355)	1.200
Sweden	3.186	1.241	50	12,0% (227)	1.668	27,9% (466)	1.202
Czech Republic	2.926	1.252	40	12,2% (199)	1.435	16,2% (233)	1.202
Turkey	5.762	3.266	352	16,0% (344)	1.800	33,3% (599)	1.201
Hungary	2.761	1.014	67	15,9% (267)	1.413	15,1% (213)	1.200
United Kingdom	3.600	1.681	74	17,5% (323)	1.522	21,0% (319)	1.203
USA	6.120	3.948	224	23,0% (448)	1.500	19,7% (295)	1.205

\* Number of potential respondents contacted

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Imprint

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