World Values Survey Wave 7 in Germany: Sample Design.

The fieldwork was carried out by the research institute Kantar Public Germany (https://www.tns-infratest.com/sofo/) on behalf of GESIS – Leibniz-Institute for the Social Sciences (www.gesis.org). The target population was individuals who were 18 years or older at the day of selection and who were residents of the country within private households. There was no upper age limit and no exclusion regarding nationality, citizenship or language (however, respondents had to conduct the interview in German). The target sample size was 1,500 individuals.

A 2-stage sample design has been applied.

1st stage: random sample of municipalities

A 2-stage design has been planned. At the first stage municipalities are sampled stratified by NUTS 3 and by BIK classification "GKBIK10" (that incorporates municipality size in terms of population and area type) with a selection probability proportional to their population aged 18 or older. For the calculation of the allocation (rounding, drafting of the target) a stochastic rounding algorithm (Cox) has been used. The actual selection of the municipalities has been performed by using a sampling program of the survey institute. Certain large municipalities have been selected multiple times, thus the number of unique primary sample units (PSUs) in the sample is smaller than the factual number of sampling points at the first sampling stage, which is 162. More in detail, Cologne and Frankfurt on the Main have 2 sample points, Hamburg and Munich have 3 sample points and Berlin has 7 sample points. All other municipalities have one sample point[1].

2nd stage: random sample of individuals

The population of the survey is persons in private households, who are registered in Germany with their first address and who have been born before the 1st of October 1999 (at least 18 years old at the beginning of the fieldwork period). For the face-to-face survey the survey institute has asked the municipalities to randomly select 85 addresses for each sample point. In larger municipalities with more than 100.000 inhabitants, the survey institute planned with 92 addresses for each sample point[2]. However, since the institute also followed a twofold address approach for municipalities between 100,000 and 500,000 inhabitants and a triple approach for communities with a population of 500,000 or more, this value needs to be multiplied by 2 and 3 respectively. Thus, for cities with one sample point such as Mannheim, 92*2=184 addresses have been collected. For large municipalities such as Berlin, 92*3=276 addresses have been collected for each sample point.

From these address lists N=48 persons have been selected for the interviews for each sample point within each municipality. This list (N=48) is also the gross number of addresses to be provided for each interviewer in the first stage of the survey. The selection of the 48 individuals addresses from the delivered addresses list is done by a stratified random

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[1] Note, that for big municipalities with more than 100.000 inhabitants, a random selection of spatial clusters of addresses for each sample point has been chosen after the address lists have been collected from the municipalities.

[2] After the collection of the data, the address list has been tested for formal consistency and household duplicates.

sample. The stratification is done by age groups and gender, with an allocation proportional to the joint distribution of the two variables on the NUTS 1 level to which the municipality belongs. The resulting gross sample represents the population by age and gender for each NUTS 1 level unit (federal states). The correct regional distribution is achieved by the sampling design at stage 1. When information about age is not provided by a municipality only gender is used for the stratification.

Furthermore, a reserve sample of approximately N=24 persons per sample point has been selected for the case that the achieved net sample size lags behind the expectation when conducting the survey.

More in detail, individual sampling is based on the age group (18-19, 20-29, ..., 70 +), crossed with gender on the basis of a census updates.

Following this sample design we drew one large sample of individuals. Then, this sample was randomly split into two separate EVS and WVS (World Values Survey) samples for each sample point, thereby ensuring the correct regional distribution. Therefore, both samples are representative for Germany on their own and also in combination.

In Germany EVS and WVS were conducted simultaneously, each with an individual target sample size of n=1500 face-to-face interviews.

Municipalities are sampled stratified by NUTS 3 and by BIK classification "GKBIK10" that incorporates municipality size and area type, and with a selection probability proportional to their population aged 18 or older. This procedure applies to urban and rural populations equally.

The number of selected addresses for each sampling point N= 48 persons. An additional number of approximately N=24 addresses had been collected for each sample point as a reserve sample.

There was no procedure of selection of the respondent in the household since no household sample was used. Instead, respondent's addresses had been randomly drawn from the registers of the municipalities.

All interviews were conducted face-to-face by professional interviewers at the respondent's house/apartment. However, if the respondent only agreed to take part in the survey when he/she was interviewed outside their home, alternative places (like cafés) were considered.

All interviews are conducted face-to-face by professional interviewers (CAPI). The interviewers use touch-screen laptops and a printed list of answer categories for the respondents.

Interviewers were instructed to make at least 4 personal contact attempts for each target person and to space out their contact attempts over the week days and various day times. Besides, individual appointments allowed for times that fit the respondents' needs as good as possible.

All respondents were contacted again to ensure they had taken part in the survey and to check and compare the time frames documented by the interviewer. Respondents received a further questionnaire to validate their demographics, interview duration and possibly further items from the questionnaire.

Furthermore, interview data were checked against register information for the respondents.

In addition, GESIS monitored the field during data collection and investigated performance and field work effort per interviewer and sample point (e.g., number of contact attempts/interviewers per interviewer/sample point per week).

Weighting was applied to data when necessary (e.g. adjustment weights).

However, the sampling design had led to a self-weighting sample, where the selection probability for each respondent assumed to be the same on average across all municipalities (primary sampling units). It can thus be derived by dividing the gross number of addresses included in the sample by the number of inhabitants over 18 years in Germany (population size):

$$PROB_i = \frac{5,831}{68,850,007} = 0,0000846913491409660$$

Thus, no design weight had to be calculated.

The major problem that was taken into account during the planning of fieldwork in Germany was the low response rates.

No special permissions were required. However, the municipalities have the right to deny the sampling of addresses from their registers. This rarely happens; therefore, it was not considered a problem for the field work.