NEPS
National Educational Panel Study

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Samples, Weights and Nonresponse

NEPS Starting Cohort 6 — Adults
Adult Education and Lifelong Learning

Wave 14

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Samples, Weights, and Nonresponse: the Adult Cohort of the National Educational Panel Study (Wave 14)

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Technical Report referring to DOI:10.5157/NEPS:SC6:14.0.0

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1. Prequel

This report documents the sample sizes and the weighting procedures of Wave 14 of the NEPS Starting Cohort 6 (SC6, Adult Education and Lifelong Learning).[1] The data are released via corresponding Scientific Use Files (SUF): DOI:10.5157/NEPS:SC6:14.0.0 (Blossfeld & Roßbach, 2019).[2]

This paper supplements NEPS Survey Paper No. 7 by Hammon et al. (2016) which gives more detailed information on the applied sampling procedure, the derivation of design weights, and their successive adjustments. Details on the computation of panel weights for previous waves can be found in Hammon et al. (2016) for Waves 2 to 6, in Hammon (2018) for Waves 7 to 9, in Hammon (2019) for Wave 10, and in Landrock (2020, 2021, 2022) for Waves 11, 12 and 13.

In total, the SC6 sample comprises three subsamples: respondents from the ALWA sample (ALWA), the enhancement & refreshment sample of Wave 2 (NEPS 1), and the refreshment sample of Wave 4 (NEPS 3). Table 1 summarizes the study numbers, the survey modes, the periods of the studies, as well as the numbers of participants in each wave.

Table 1: Survey overview for Starting Cohort 6.

Wave	Study number	Survey mode	Period	Number of participants
2	B72	CATI/CAPI	2009/10	11,649
3	B67	CAPI/CATI	2010/11	9,323
4	B68	CATI/CAPI	2011/12	14,112
5	B69	CAPI/CATI	2012/13	11,696
6	B70	CATI/CAPI	2013/14	10,639
7	B97	CAPI/CATI	2014/15	9,770
8	B115	CATI/CAPI	2015/16	9,236
9	B116	CAPI/CATI	2016/17	8,662
10	B117	CATI/CAPI	2017/18	8,125
11	B144	CATI/CAPI	2018/19	7,693
12	B145	CATI/CAPI	2019/20	7,052
13	B146	CATI	2020/21	6,675
14	B157	CATI/CAPI	2021/22	5,624

CATI: Computer-assisted telephone interview, CAPI: Computer-assisted personal interview.

The remainder of this supplement is structured as follows: Section 2. details the panel progress of the Starting Cohort 6, and the composition of the gross and net samples of the different waves is described. In Section 3. the derivation of the panel weights of Wave 14 is described.

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[1]The wave corresponds to study B157.

[2]For general information on the NEPS, see Blossfeld et al., 2011. More detailed information is available in the documentation section on the homepage.

This includes nonresponse adjustments and the post-stratification of weights, respectively. Finally, Section 4. concludes with a summary of the provided sampling weights and design information given in the corresponding weighting data set.

2. Panel progress

The following Table 2 completes the study summary of Starting Cohort 6 (Table 1) by detailing the composition of the distinct samples together with the numbers of nonrespondents and final dropouts. Final dropouts are separated into final dropouts due to refusal during the survey period and final dropouts between two consecutive waves.

Starting with wave 14, target persons older than 75 years were excluded from the active panel population. In wave 14, these are target persons born in 1944 and 1945. Target persons with questionnaires in foreign languages were also excluded.

Table 2: Case numbers, respondents, nonrespondents and final drop-outs.

Wave	Sub-sample	Panel cohort	[a]Not used	Used sample	Participants	Participation proportion	Temporary drop-outs	Final drop-outs (within wave)	[b]Final drop-outs (after wave)
2	**Gesamt**	8,997	0	27,009	11,649	0.431	1,927	13,433	1,381
	ALWA	8,997	0	8,997	6,572	0.730	1,927	498	1,097
	NEPS 1	-	0	18,012	5,077	0.282	0	12,935	284
3	**Gesamt**	12,195	0	12,195	9,323	0.764	2,566	306	511
	ALWA	7,402	0	7,402	5,639	0.763	1,582	181	511
	NEPS 1	4,793	0	4,793	3,684	0.769	984	125	0
4	**Gesamt**	11,390	0	28,501	14,112	0.495	1,806	12,583	414
	ALWA	6,714	0	6,714	5,380	0.801	1,023	311	204
	NEPS 1	4,676	0	4,676	3,524	0.754	783	369	210
	NEPS 3	-	0	17,111	5,208	0.304	0	11,903	0
5	**Gesamt**	15,504	255	15,249	11,696	0.767	2,113	1,440	0
	ALWA	6,199	3	6,196	4,880	0.788	757	559	0
	NEPS 1	4,097	8	4,089	3,100	0.758	548	441	0
	NEPS 3	5,208	244	4,964	3,716	0.749	808	440	0
6	**Gesamt**	13,809	251	13,558	10,639	0.785	2,354	565	528
	ALWA	5,637	114	5,523	4,555	0.825	814	154	161
	NEPS 1	3,648	119	3,529	2,847	0.807	520	162	114
	NEPS 3	4,524	18	4,506	3,237	0.718	1,020	249	253
7	**Gesamt**	12,465	22	12,443	9,770	0.785	1,771	902	344
	ALWA	5,208	2	5,206	4,189	0.805	737	280	109
	NEPS 1	3,253	10	3,243	2,604	0.803	385	254	82
	NEPS 3	4,004	10	3,994	2,977	0.745	649	368	153

Table 2: Case numbers, respondents, nonrespondents and final drop-outs, continued.

Wave	Sub-sample	Panel cohort	[a]Not used	Used sample	Participants	Participation proportion	Temporary drop-outs	Final drop-outs (within wave)	[b]Final drop-outs (after wave)
8	**Gesamt**	11,197	10	11,187	9,236	0.826	1,458	493	616
	ALWA	4,817	2	4,815	4,099	0.851	554	162	616
	NEPS 1	2,907	4	2,903	2,450	0.844	322	131	0
	NEPS 3	3,473	4	3,469	2,687	0.775	582	200	0
9	**Gesamt**	10,078	23	10,055	8,662	0.861	1,003	390	392
	ALWA	4,427	23	4,404	3,835	0.871	431	138	131
	NEPS 1	2,641	0	2,641	2,289	0.867	240	112	117
	NEPS 3	3,010	0	3,010	2,538	0.843	332	140	144
10	**Gesamt**	9,273	0	9,273	8,125	0.876	921	227	319
	ALWA	4,135	0	4,135	3,669	0.887	395	71	126
	NEPS 1	2,412	0	2,412	2,133	0.884	203	76	90
	NEPS 3	2,726	0	2,726	2,323	0.852	323	80	103
11	**Gesamt**	8,727	0	8,727	7,693	0.882	766	268	324
	ALWA	3,938	0	3,938	3,525	0.895	313	100	124
	NEPS 1	2,246	0	2,246	1,991	0.886	175	80	76
	NEPS 3	2,543	0	2,543	2,177	0.856	278	88	124
12	**Gesamt**	8,135	0	8,135	7,052	0.867	905	178	316
	ALWA	3,714	0	3,714	3,256	0.877	391	67	123
	NEPS 1	2,090	0	2,090	1,836	0.878	208	46	85
	NEPS 3	2,331	0	2,331	1,960	0.841	306	65	108

Table 2: Case numbers, respondents, nonrespondents and final drop-outs, continued.

Wave	Sub-sample	Panel cohort	[a]Not used	Used sample	Participants	Participation proportion	Temporary drop-outs	Final drop-outs (within wave)	[b]Final drop-outs (after wave)
13	**Gesamt**	7,641	0	7,641	6,675	0.874	840	126	[c]615
	ALWA	3,524	0	3,524	3,113	0.883	362	49	173
	NEPS 1	1,959	0	1,959	1,714	0.875	205	40	239
	NEPS 3	2,158	0	2,158	1,848	0.856	273	37	203
14	**Gesamt**	6,900	0	6,900	5,624	0.815	979	297	[d]238
	ALWA	3,302	0	3,302	2,734	0.828	450	118	59
	NEPS 1	1,680	0	1,680	1,342	0.799	253	85	106
	NEPS 3	1,918	0	1,918	1,548	0.807	276	94	73

Note. [a] Includes respondents who did not actively withdraw their participation but who were not used in the subsequent wave (e.g. due to unavailability). These cases were finally excluded from the panel. [b] Includes respondents who have withdrawn their participation between two waves as well as individuals who have been declared as final drop-outs because of not having participated for a period of two years. [c] After wave 13, target persons older than 75 years (i.e., born in 1944 and 1945) and target persons with questionnaires in foreign languages were excluded from the active panel population. [d] After wave 14, target persons born in 1946 were excluded from the active panel population.

3. Cross-sectional and Longitudinal Weights for Wave 14

For all units of the Wave 14 gross sample, participation probabilities have been estimated in order to adjust the sampling weights with respect to nonreponse. For this purpose, logistic regression models have been estimated separately for the two subsamples NEPS1/ ALWA and NEPS3. The resulting participation probabilities were inversed and used as adjustment factors for adjusted wave-specific cross-sectional and longitudinal weights. Missing values in the co-variates were below 5% for each variable and handled by imputation.

3.1 Modeling Participation in Wave 14

In Wave 14, participation of the ALWA and NEPS1 subsample depends on *subsample*, *birth cohort*, *migration background*, *marital status*, *household size*, *educational attainment*, *federal state* and *contact attempts*. Individuals of the youngest birth cohort are less likely to participate than units from the oldest age group. Unmarried persons are more likely to drop out than married, divorced or widowed individuals. The propensity of participating increases with increasing level of education as in previous waves. Units from the ALWA study have a higher likelihood to participate than units from NEPS1 subsample. Furthermore, migration background has a very negative impact on the probability of participating in the survey. In addition, units who live in a household with three persons and more have a lower probability of participating than those who live in a one-person-household. The number of contact attempts has a positive impact on the participation propensity.

The model of the NEPS3 subsample shows selectivity with regards to *migration background*, *marital status*, *household size*, *educational attainment*, *residential area* and *contact attempts*. The effects are similar to those reported for the ALWA and NEPS1 subsample. The parameter estimates of both models can be found in Table 3 and 4.

Table 3: Model estimating the individual participation propensity in Wave 14 (ALWA/ NEPS 1).

Variable	Odds Ratio	Standard Error	p-Value
Subsample (Reference: ALWA)			
NEPS 1	0.70	0.06	0.00
Birth year (Reference: 1944-1955)			
1956-1969	1.26	0.07	0.00
1970-1979	1.12	0.09	0.17
1980-1986	0.67	0.10	0.00
Gender (Reference: male)			
female	0.95	0.04	0.24
Country of birth (Reference: born in Germany)			
born abroad	0.51	0.08	0.00
Marital status (Reference: unmarried)			
married	1.50	0.06	0.00
divorced	1.26	0.09	0.01
widowed	1.86	0.15	0.00
Household size (Reference: one person)			
two persons	0.98	0.06	0.69
three persons or more	0.53	0.07	0.00
[a] *Educational level (Reference: 1/2ab)*			
3ac/4ab	2.25	0.12	0.00
3b	1.57	0.11	0.00
5a/6	3.38	0.11	0.00
5b	2.25	0.11	0.00
Federal State (Reference: Nordrhein-Westfalen)			
Schleswig-Holstein	0.98	0.13	0.86
Hamburg	1.02	0.15	0.90
Niedersachsen	0.97	0.08	0.74
Bremen	1.88	0.25	0.01
Hessen	1.11	0.08	0.22
Rheinland-Pfalz	1.02	0.10	0.84
Baden-Württemberg	1.01	0.07	0.87
Bayern	1.01	0.07	0.86
Saarland	0.72	0.19	0.08
Berlin	1.29	0.11	0.03
Brandenburg	1.26	0.12	0.05
Mecklenburg-Vorpommern	0.94	0.17	0.71
Sachsen	1.07	0.10	0.49
Sachsen-Anhalt	0.90	0.13	0.40
Thüringen	1.10	0.13	0.47
[b] *BIK categories (Reference: less than 2,000 inhabitants)*			
2,000 up to 5,000	1.13	0.20	0.53
5,000 up to 20,000	1.06	0.17	0.72
20,000 up to 50,000	0.96	0.17	0.78
50,000 up to 100,000 (styp 2/3/4)	1.12	0.17	0.52
50,000 up to 100,000 (styp 1)	1.33	0.21	0.16
100,000 up to 500,000 (styp 2/3/4)	1.00	0.16	0.99
100,000 up to 500,000 (styp 1)	1.21	0.16	0.24
more than 500,000 (styp 2/3/4)	1.12	0.17	0.49
more than 500,000 (styp 1)	1.14	0.16	0.42
Attempts to contact target	1.01	0.00	0.00
Number of cases	**12116**		

Note. [a] Classification of residential areas on the two dimensions community size and regional structure: https://www.destatis.de/EN/Themes/Countries-Regions/Regional-Statistics/_node.html, https://www.bik-gmbh.de/download/BIK-Regions_english.pdf. [b] International Standard Classification of Education (ISCED 1997): http://uis.unesco.org/sites/default/files/documents/international-standard-classification-of-education-1997-en_0.pdf.

Table 4: Model estimating the individual participation propensity in Wave 14 (NEPS 3).

Variable	Odds Ratio	Standard Error	p-Value
Birth year (Reference: 1944-1955)			
1956-1969	1.17	0.08	0.06
1970-1979	0.93	0.11	0.52
1980-1986	0.91	0.13	0.48
Gender (Reference: male)			
female	0.95	0.06	0.45
Country of birth (Reference: born in Germany)			
born abroad	0.52	0.12	0.00
Marital status (Reference: unmarried)			
married	1.64	0.10	0.00
divorced	1.17	0.14	0.25
widowed	2.06	0.21	0.00
Household size (Reference: one person)			
two persons	0.81	0.10	0.03
three persons or more	0.49	0.11	0.00
[b] *Educational level (Reference: 1/2ab)*			
3ac/4ab	1.63	0.17	0.00
3b	1.26	0.15	0.13
5a/6	2.53	0.16	0.00
5b	1.90	0.16	0.00
Federal State (Reference: Nordrhein-Westfalen)			
Schleswig-Holstein	1.03	0.20	0.89
Hamburg	0.89	0.26	0.65
Niedersachsen	0.99	0.12	0.97
Bremen	1.37	0.41	0.44
Hessen	0.99	0.14	0.93
Rheinland-Pfalz	0.71	0.18	0.06
Baden-Württemberg	0.79	0.12	0.05
Bayern	0.93	0.11	0.50
Saarland	0.90	0.28	0.70
Berlin	1.10	0.19	0.63
Brandenburg	1.00	0.18	0.98
Mecklenburg-Vorpommern	0.75	0.26	0.26
Sachsen	1.07	0.17	0.69
Sachsen-Anhalt	1.09	0.19	0.64
Thüringen	1.29	0.19	0.18
[a] *BIK categories (Reference: less than 2,000 inhabitants)*			
2,000 up to 5,000	1.88	0.34	0.07
5,000 up to 20,000	2.11	0.29	0.01
20,000 up to 50,000	1.57	0.29	0.12
50,000 up to 100,000 (styp 2/3/4)	1.57	0.29	0.12
50,000 up to 100,000 (styp 1)	1.56	0.36	0.21
100,000 up to 500,000 (styp 2/3/4)	1.73	0.28	0.05
100,000 up to 500,000 (styp 1)	1.72	0.29	0.06
more than 500,000 (styp 2/3/4)	2.01	0.29	0.02
more than 500,000 (styp 1)	1.49	0.29	0.16
Attempts to contact target	1.02	0.00	0.00
Number of cases	**5029**		

Note. [a] Classification of residential areas on the two dimensions community size and regional structure: https://www.destatis.de/EN/Themes/Countries-Regions/Regional-Statistics/_node.html, https://www.bik-gmbh.de/download/BIK-Regions_english.pdf. [b] International Standard Classification of Education (ISCED 1997): http://uis.unesco.org/sites/default/files/documents/international-standard-classification-of-education-1997-en_0.pdf.

3.2 Modeling Participation in Consecutive Waves

In addition to the cross-sectional weights, also weights for participation in consecutive waves, i.e. longitudinal weights, are provided. The longitudinal weights of continuous participation up to Wave 14 are derived using the longitudinal weights of Wave 13, and the participating propensities in Wave 14 that are predicted by the logistic regression models. The cross-sectional weights were calibrated to match sample distributions with those of the Microcensus 2021. A comparison of the (unweighted) Wave 14 sample distributions and the benchmark distributions from the Microcensus can be found in Tables 8 to 12 in the Appendix.

In wave 14, we modified the calibration procedure. Basically, we built age groups and education categories in order to achieve an appropriate number of cases in the cells.

The distribution of *country of birth* and especially that of *educational level* differ considerably between sample and Microcensus. In addition, the younger age groups are less represented in the sample than in the target population.

4. Summary of Design Variables and Weights

The NEPS provides various kinds of weights for the Adult cohort together with design information. Table 6 lists the design information and summarizes all types of weights and their accordant label provided by SUF release version DOI:10.5157/NEPS:SC6:14.0.0. To ease statistical analysis, all survey weights apart from the pure design weight (Wave 1) are provided in a trimmed and standardized form, where standardization was performed to have weights with mean one that sum up to the number of participants in the corresponding wave. (Würbach et al., 2016, Chapter 6). Along with sampling weights, variables highlighting the sampling design are published. They are summarized in Table 5. Table 6 lists the types of weights provided for the SC6 SUF release version 14-0-0.

Table 5: Design variables provided.

Type of design information	Label
Primary Sampling Unit (Sampling point number)	`psu`
Identifier of stratum (Implicit stratification)	`stratum`
Initial sample (ALWA, NEPS)	`sample`
Initial sample detailed (ALWA, NEPS enhancement, NEPS refreshment)	`subsample`
Federal state	`tx80101`
BIK 10 classification	`tx80102`
BIK 7 classification	`tx80103`

Summary statistics for all kind of weights provided are given in Table 7.

Table 6: Types of weights provided in the weighting data set for SC6 SUF version 14.0.0.

Variable	Applies to	Content
Cross-sectional weights adjusted for wave-specific nonresponse, calibrated and standardized		
w_t2_cal	11,649	Cross-sectional weight for targets participating in Wave 2
w_t3_cal	9,320	Cross-sectional weight for targets participating in Wave 3
w_t4_cal	14,104	Cross-sectional weight for targets participating in Wave 4
w_t5_cal	11,696	Cross-sectional weight for targets participating in Wave 5
w_t6_cal	10,639	Cross-sectional weight for targets participating in Wave 6
w_t7_cal	9,770	Cross-sectional weight for targets participating in Wave 7
w_t8_cal	9,236	Cross-sectional weight for targets participating in Wave 8
w_t9_cal	8,662	Cross-sectional weight for targets participating in Wave 9
w_t10_cal	8,125	Cross-sectional weight for targets participating in Wave 10
w_t11_cal	7,693	Cross-sectional weight for targets participating in Wave 11
w_t12_cal	7,052	Cross-sectional weight for targets participating in Wave 12
w_t13_cal	6,675	Cross-sectional weight for targets participating in Wave 13
w_t14_cal	5,624	Cross-sectional weight for targets participating in Wave 14
Longitudinal weights for ALWA and NEPS 1, standardized		
w_t2to3_std	9,040	Longitudinal weight for targets participating in Wave 2 to 3
w_t2to4_std	7,905	Longitudinal weight for targets participating in Wave 2 to 4
w_t2to5_std	6,823	Longitudinal weight for targets participating in Wave 2 to 5
w_t2to6_std	6,169	Longitudinal weight for targets participating in Wave 2 to 6
w_t2to7_std	5,462	Longitudinal weight for targets participating in Wave 2 to 7
w_t2to8_std	5,019	Longitudinal weight for targets participating in Wave 2 to 8
w_t2to9_std	4,624	Longitudinal weight for targets participating in Wave 2 to 9
w_t2to10_std	4,264	Longitudinal weight for targets participating in Wave 2 to 10
w_t2to11_std	3,997	Longitudinal weight for targets participating in Wave 2 to 11
w_t2to12_std	3,718	Longitudinal weight for targets participating in Wave 2 to 12
w_t2to13_std	3,456	Longitudinal weight for targets participating in Wave 2 to 13
w_t2to14_std	2,910	Longitudinal weight for targets participating in Wave 2 to 14
Longitudinal weights for NEPS 3, standardized		
w_t4to5_std	11,198	Longitudinal weight for targets participating in Wave 4 to 5
w_t4to6_std	9,717	Longitudinal weight for targets participating in Wave 4 to 6
w_t4to7_std	8,506	Longitudinal weight for targets participating in Wave 4 to 7
w_t4to8_std	7,636	Longitudinal weight for targets participating in Wave 4 to 8
w_t4to9_std	6,982	Longitudinal weight for targets participating in Wave 4 to 9
w_t4to10_std	6,393	Longitudinal weight for targets participating in Wave 4 to 10
w_t4to11_std	5,948	Longitudinal weight for targets participating in Wave 4 to 11
w_t4to12_std	5,478	Longitudinal weight for targets participating in Wave 4 to 12
w_t4to13_std	5,072	Longitudinal weight for targets participating in Wave 4 to 13
w_t4to14_std	4,273	Longitudinal weight for targets participating in Wave 4 to 14

Table 7: Summary statistics for all weights provided.

Label of weight	Min.	Lower Quart.	Median	Mean	Upper Quart.	Max.
w_t2_cal	0.118	0.493	0.785	1	1.209	3.798
w_t3_cal	0.065	0.420	0.728	1	1.246	4.119
w_t4_cal	0.000	0.394	0.832	1	1.253	4.110
w_t5_cal	0.000	0.330	0.552	1	1.207	4.836
w_t6_cal	0.000	0.273	0.499	1	1.126	22.979
w_t7_cal	0.000	0.225	0.465	1	1.129	20.603
w_t8_cal	0.022	0.190	0.423	1	1.079	20.298
w_t9_cal	0.019	0.163	0.401	1	1.059	19.488
w_t10_cal	0.011	0.159	0.407	1	1.118	16.709
w_t11_cal	0.008	0.136	0.376	1	1.092	20.727
w_t12_cal	0.005	0.115	0.348	1	1.087	18.655
w_t13_cal	0.003	0.095	0.310	1	1.057	20.359
w_t14_cal	0.001	0.054	0.217	1	0.978	17.876
w_t2to3_std	0.135	0.471	0.762	1	1.211	3.952
w_t2to4_std	0.130	0.435	0.725	1	1.203	4.202
w_t2to5_std	0.104	0.389	0.674	1	1.206	4.461
w_t2to6_std	0.082	0.337	0.611	1	1.210	4.719
w_t2to7_std	0.061	0.278	0.543	1	1.203	4.974
w_t2to8_std	0.034	0.230	0.483	1	1.175	5.157
w_t2to9_std	0.020	0.178	0.417	1	1.159	5.326
w_t2to10_std	0.016	0.136	0.358	1	1.111	5.466
w_t2to11_std	0.008	0.098	0.293	1	0.999	5.595
w_t2to12_std	0.003	0.066	0.231	1	0.966	5.693
w_t2to13_std	0.001	0.045	0.187	1	0.933	5.758
w_t2to14_std	0.001	0.030	0.134	1	0.868	5.826
w_t4to5_std	0.147	0.520	0.684	1	1.136	4.115
w_t4to6_std	0.115	0.445	0.631	1	1.124	4.490
w_t4to7_std	0.086	0.374	0.576	1	1.112	4.805
w_t4to8_std	0.048	0.316	0.518	1	1.098	5.055
w_t4to9_std	0.029	0.249	0.465	1	1.087	5.211
w_t4to10_std	0.023	0.190	0.402	1	1.069	5.377
w_t4to11_std	0.011	0.136	0.336	1	1.024	5.528
w_t4to12_std	0.005	0.092	0.274	1	0.995	5.642
w_t4to13_std	0.002	0.062	0.216	1	0.938	5.725
w_t4to14_std	0.001	0.039	0.163	1	0.916	5.798

For further information on weighting please contact `statistik@lifbi.de`.

Acknowledgements

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A Comparison of the distributions of the Wave 14 sample data and the target distributions (Microcensus 2021)

Table 8: Comparison of the distribution of the Wave 14 sample data and the target distribution (Microcensus 2021) according to Federal State.

	Distribution net sample	Distribution population	
Federal State	**%**	**%**	**Total**
Schleswig-Holstein	2.97	3.53	1,558,000
Hamburg	1.85	2.11	931,000
Niedersachsen	10.30	9.60	4,233,000
Bremen	0.85	0.76	337,000
Nordrhein-Westfalen	22.32	21.33	9,403,000
Hessen	7.82	7.53	3,321,000
Rheinland-Pfalz	4.55	5.01	2,210,000
Baden-Württemberg	12.06	13.17	5,808,000
Bayern	15.18	15.79	6,962,000
Saarland	1.19	1.22	540,000
Berlin	4.37	4.21	1,856,000
Brandenburg	3.66	3.27	1,443,000
Mecklenburg-Vorpommern	1.56	2.08	916,000
Sachsen	5.25	4.92	2,169,000
Sachsen-Anhalt	2.93	2.76	1,217,000
Thüringen	3.13	2.69	1,188,000
Total	**99.99**	**99.98**	**44,092,000**

Table 9: Comparison of the distribution of the Wave 14 sample data and the target distribution (Microcensus 2021) according to gender and educational attainment.

	Distribution net sample	Distribution population	
Gender and education	**%**	**%**	**Total**
male			
ISCED 0-2	1.10	7.37	3,249,000
ISCED 3-4	18.42	24.94	10,998,000
ISCED 5-6	30.81	17.13	7,555,000
female			
ISCED 0-2	2.36	9.28	4,091,000
ISCED 3-4	21.03	28.17	12,421,000
ISCED 5-6	26.26	13.10	5,778,000
Total	**99.98**	**99.99**	**44,092,000**

Note. International Standard Classification of Education (ISCED 1997): http://uis.unesco.org/sites/default/files/documents/international-standard-classification-of-education-1997-en_0.pdf.

Table 10: Comparison of the distribution of the Wave 14 sample data and the target distribution (Microcensus 2021) according to country of birth.

	Distribution net sample	Distribution population	
Country of birth	**%**	**%**	**Total**
born in Germany	94.15	79.78	35,175,000
born abroad	5.85	20.22	8,917,000
Total	**100.00**	**100.00**	**44,092,000**

Table 11: Comparison of the distribution of the Wave 14 sample data and the target distribution (Microcensus 2021) according to year of birth.

	Distribution net sample	Distribution population	
Year of birth	**%**	**%**	**Total**
1946-1955	22.00	19.74	8,704,000
1956-1969	52.47	40.35	17,792,000
1970-1979	16.18	23.11	10,190,000
1980-1986	9.35	16.80	7,406,000
Total	**100.00**	**100.00**	**44,092,000**

Table 12: Comparison of the distribution of the Wave 14 sample data and the target distribution (Microcensus 2021) according to BIK categories of municipality size.

	Distribution net sample	Distribution population	
BIK categories	**%**	**%**	**Total**
less than 2,000 inhabitants	5.81	5.70	2,512,000
2,000 up to 5,000 inhabitants	6.61	8.83	3,893,000
5,000 up to 20,000 inhabitants	27.45	27.62	12,177,000
20,000 up to 50,000 inhabitants	19.91	18.98	8,369,000
50,000 up to 100,000 inhabitants	8.59	8.91	3,928,000
100,000 up to 500,000 inhabitants	17.14	14.04	6,191,000
more than 500,000 inhabitants	14.47	15.93	7,022,000
Total	**99.98**	**100.01**	**44,092,000**