

Siegers, Rainer; Steinhauer, Hans Walter; Schütt, Johannes

**Research Report**

## SOEP-Core v37 - Documentation of sample sizes and panel attrition in the German Socio-Economic Panel (SOEP) (1984 until 2020)

SOEP Survey Papers, No. 1106

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**SOEP** Survey Papers

Series C - Data Documentations (Datendokumentationen)

## SOEP-Core v37 – Documentation of Sample Sizes and Panel Attrition in the German Socio-Economic Panel (SOEP) (1984 until 2020)

Rainer Siegers, Hans Walter Steinhauer, Johannes Schütt

Running since 1984, the German Socio-Economic Panel (SOEP) is a wide-ranging representative longitudinal study of private households, located at the German Institute for Economic Research, DIW Berlin.

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DIW Berlin

German Socio-Economic Panel (SOEP)

Mohrenstr. 58

10117 Berlin

Germany

[soeppapers@diw.de](mailto:soeppapers@diw.de)

## Data Documentation:

### Documentation of Sample Sizes and Panel Attrition in the German Socio-Economic Panel (SOEP) (1984 until 2020)

Rainer Siegers

Hans Walter  
Steinhauer

Johannes Schütt

May 10, 2022

DIW Berlin – Deutsches Institut für Wirtschaftsforschung e.V.  
Sozio-oekonomisches Panel (SOEP)  
Mohrenstraße 58  
10117 Berlin

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# Introduction

This data documentation is meant to provide SOEP users with a general overview of the longitudinal development of the survey over the past 37 years and the derivation of weights that compensate for disproportional sampling probabilities, selective non-response in the first wave of each sample, as well as panel attrition.

In the first section we provide a short description of each of the SOEP samples, including structured information about the underlying target population, sampling methodology and initial fieldwork results.

In the second section, we report the number of household and person interviews by cross-section. We do so for the entire SOEP sample as a whole, as well as for subsamples A through K individually, the boost samples of specific family types L1-L3, the IAB-SOEP Migration Samples M1 and M2, the Refugee Samples M3/4 and M5, and Samples N and O. Because of their short-running time series, the latest Samples (P, Q, M6, M7, and M8) are not outlined separately, but will be added over the next years. For a general overview on the integration of enlargement and refreshment samples into the SOEP see Kroh et al. (2015b).

The SOEP study surveys not only the original sample from the first wave, but also households and persons that entered the survey at later points in time. They enter, for example, when SOEP households split (i.e., individuals move out and form their own households), when people move into SOEP households, and when an original sample member gives birth to a “new sample member”. For a detailed review of the SOEP inclusion rules for new sample units and their treatment within the weighting framework see Spiess et al. (2008) and Schonlau et al. (2011).

Furthermore, the present paper gives information on the longitudinal development of the SOEP and reports descriptive figures of the participatory behavior of the original sample members, the entrance patterns of new sample members and the development of the share of original households compared to new households resulting from household splits.

Households may leave the survey for several reasons. SOEP’s weighting strategy distinguishes between survey-related reasons and reasons unrelated to the survey (for a detailed description of the SOEP weighting strategy, see Rendtel (1995); Schonlau et al. (2013) and for a general overview, Kara et al. (2018)). We ignore panel attrition of the latter form due to respondents moving abroad or dying, since these cases technically represent an exit from the underlying population. The third section of this paper provides initial evidence on the risk of survey-related panel attrition in different groups of the original sample units (e.g., in different subsamples, age, educational, and income groups).

The fourth section reports in more detail on the occurrence of unsuccessful follow-ups to household addresses by cross-section and subsample, and subsample-specific regression models of the probability of unsuccessful follow-ups in 2020 based on the characteristics of households measured in 2019. The fifth section does the same for the second form of survey-related attrition: refusals. Documentation of panel attrition of previous panel waves can be obtained from the respective annual documentation (see, for instance, Siegers et al. (2021) for wave BJ).

Based on the regression models of unsuccessful-follow ups and refusals, we derive predicted observation probabilities. The inverse of the product of these predicted probabilities gives the longitudinal weighting variables for the year 2020:  $BKHBLEIB$  and  $BKPBLEIB$ . Based on the inverse probability of observing households and persons in 2019, the staying probability in 2020, and additional post-stratification to meet benchmarks of known margins of the underlying population in 2020, we derive the cross-sectional weights  $BKHHRF$  and  $BKPHRF$ .

Section 6 illustrates the margins used during the post-stratification process across different waves and samples. Especially samples L1-L3 and M1-M8, that cover specific sub-populations, required a modified selection and coding of the employed margins.

The final section of this paper documents some summary statistics of the development of the longitudinal and the cross-sectional weights by subsample and wave.

# 1 Sampling of SOEP Subsamples A to M8

## 1.1 Sample A (1984)

Sample A “Residents in the Federal Republic of Germany” is one of the two initial samples of the SOEP and covers private households with a household head, who does not belong to one of the main foreigner groups of “guest workers” (i.e. Turkish, Greek, Yugoslavian, Spanish or Italian households).

### Key Facts

<b>Sampling Design</b>	Multistage stratified sampling procedure based on the ADM-Design <sup>1</sup>		
<i>first stage</i>	Stratification: federal states (NUTS 1) governmental regions (NUTS 2) municipality size		
	Clustering: 585 primary sampling units (PSUs)		
<i>second stage</i>	Random walk in each PSU		
	Selected unit: household		
<b>Sample Size</b> <sup>2</sup>	households	persons (thereof children)	
	NET	4,524	11,366 (2,290)
	GROSS	7,430	
<b>Field Period</b>	February to October 1984		
<b>Initial Survey Mode</b>	Paper-and-Pencil Interviewing (PAPI), possibility for self-completion		
<b>Number of Interviewers</b>	592		
<b>Initial Response Rate</b> <sup>3</sup>	60.9%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	5,491	1,402	3,358 / 11,041
<b>Further Readings</b>	<a href="#">Infratest Sozialforschung (2011). <i>SOEP 1984 – Methodenbericht zum Befragungsjahr 1984 (Welle 1) des Sozio-oekonomischen Panels</i>. SOEP Survey Papers 1, DIW/SOEP, Berlin 2011.</a>		

<sup>1</sup>ADM is the “Arbeitskreis Deutscher Markt- und Sozialforschungsinstitute e.V.” (Working Group of the German Market and Social Research Institutes). For more information, see <https://www.adm-ev.de/leistungen/arbeitsgemeinschaft-adm-stichproben/>

<sup>2</sup>The net sample includes households and persons with complete or partial interview. The gross sample comprises also the non-participating households, excluding those that were classified as “quality neutral non-response” (e.g. invalid addresses, deaths, moving abroad).

<sup>3</sup>AAPOR Response Rate Definition RR2, see AAPOR (2016).

## 1.2 Sample B (1984)

Sample B “Foreigners in the Federal Republic of Germany” is one of the two initial Samples of the SOEP and covers private households with a Turkish, Greek, Yugoslavian, Spanish or Italian household head. Compared to Sample A the population of Sample B is oversampled.

### Key Facts

<b>Sampling Design</b>	Multistage stratified sampling procedure using the registers of foreigners in each county (Ausländerregister der Landkreise)		
<i>first stage</i>	Stratification: federal states (NUTS 1) governmental regions (NUTS 2) number of foreigners of the respective nationality Clustering: 241 PSUs (random selection of PSUs independent for each nationality)		
<i>second stage</i>	Random selection of addresses in each PSU Selected unit: person		
<b>Sample Size</b>	households	persons (thereof children)	
	NET	1,393	4,807 (1,638)
	GROSS	2,045	
<b>Field Period</b>	April to October 1984		
<b>Initial Survey Mode</b>	Paper-and-Pencil Interviewing (PAPI)		
<b>Number of Interviewers</b>	253		
<b>Initial Response Rate</b>	68.1%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	820	574	89 / 4,347
<b>Further Readings</b>	<a href="#">Infratest Sozialforschung (2011). <i>SOEP 1984 – Methodenbericht zum Befragungsjahr 1984 (Welle 1) des Sozio-oekonomischen Panels</i>. SOEP Survey Papers 1, DIW/SOEP, Berlin 2011.</a>		

### 1.3 Sample C (1990)

Sample C “German Residents in the German Democratic Republic (GDR)” covers persons in private households in which the household head was a citizen of the GDR.

#### Key Facts

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<b>Sampling Design</b>	Multistage stratified sampling procedure based on GDR-Master-Sample designed by Infratest in cooperation with the Department for Social Research of the Radio of GDR <sup>4</sup>		
<i>first stage</i>	Stratification: counties (NUTS 3) municipality size Clustering: 330 PSUs		
<i>second stage</i>	Random walk in each PSU with start addresses drawn from the central residents' data base Selected unit: household		
<b>Sample Size</b>		households	persons (thereof children)
	NET	2,179	6,044 (1,591)
	GROSS	3,404	
<b>Field Period</b>	May to July 1990		
<b>Initial Survey Mode</b>	Paper-and-Pencil Interviewing (PAPI), possibility for self-completion		
<b>Number of Interviewers</b>	215		
<b>Initial Response Rate</b>	64.0%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	3,103	1,734	367 / 19,102
<b>Further Readings</b>	<a href="#">Infratest Sozialforschung (2011). <i>SOEP 1990/91 – Methodenbericht Ost-deutschland zu den Befragungsjahren 1990-1991 (Welle 1/2 – Ost) des Sozio-ökonomischen Panels</i>. SOEP Survey Papers 14, DIW/SOEP, Berlin 2011.</a>		

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<sup>4</sup>In German: Abteilung Soziologische Forschung des Rundfunks der DDR.

## 1.4 Sample D (1994/95)

Sample D “Immigrants” covers private households in which at least one household member had moved from abroad to West Germany after 1984. This sample includes two subsamples that were drawn independently in 1994 (D1) and in 1995 (D2).

The fieldwork organization sampled a small number of households of Sample D ( $N=98$ ) drawing on a respondent-driven sampling procedure. In these 98 cases, inclusion probabilities cannot be derived directly and we thus do not assign weights to these households.

### Key Facts

<b>Sampling Design</b>	Households with at least one person who moved to Germany since 1984 were identified in representative face-to-face and telephone surveys of the German population driven by Infratest and following the ADM-Design.			
Sample D1 (1994)	All eligible households which agreed to be re-contacted by the SOEP-Survey were selected for the gross sample. The gross sample was supplemented with 98 additional cases, which were obtained by a respondent-driven procedure.			
Sample D2 (1995)	Here a distinction was made between ethnic German immigrants from Eastern Europe as well as the GDR and <i>Other Immigrants</i> . While in case of Other Immigrants again all eligible households, that agreed to be re-contacted by the SOEP-Survey, were selected for the gross sample, among ethnic German immigrants approx. 70% were selected in order to compensate for overrepresentation of the latter subpopulations in Sample D1.			
<b>Sample Size</b>	households		persons (thereof children)	
	D1	D2	D1	D2
NET	236	295 <sup>5</sup>	719 (248)	905 (283)
GROSS	307	385		
<b>Field Period</b>	January to March 1994 (D1) and January to April 1995 (D2)			
<b>Initial Survey Mode</b>	Paper-and-Pencil Interviewing (PAPI), possibility for self-completion			
<b>Number of Interviewers</b>	83 (1994)	206 (1995)		
<b>Initial Response Rate</b>	76.9% (D1)	76.6% (D2)		
<b>Initial Weighting Factor</b>	Average	SD	min / max	
(in 1995)	3,906	1,717	1,699 / 9,855	

<sup>5</sup>213 cases in Sample D do not meet the requirements of the SOEP sampling design. These cases are interviewed, but do not receive valid weights.

## Further Readings

Infratest Sozialforschung (2011). *SOEP 1994 – Methodenbericht Zuwanderer-Befragung (Teilstichprobe D1) zum Befragungsjahr 1994 (Welle 11) des Sozio-oekonomischen Panels*. SOEP Survey Papers 26, DIW/SOEP, Berlin 2011.

Infratest Sozialforschung (2011). *SOEP 1995 – Methodenbericht Zuwanderer-Befragung II (Zweitbefragung D1, Erstbefragung D2) zum Befragungsjahr 1995 (Welle 12) des Sozio-oekonomischen Panels*. SOEP Survey Papers 28, DIW/SOEP, Berlin 2011.

Rendtel, U., M. Pannenberg and S. Daschke (1997). *Die Gewichtung der Zuwanderer-Stichprobe des Sozio-oekonomischen Panels (SOEP)*. In: Vierteljahrshefte zur Wirtschaftsforschung, Duncker & Humblot, Berlin, Vol. 66. Iss. 2, pp. 271-286.



## 1.5 Sample E (1998)

Sample E “Refreshment I” is the first sample that was designed to be representative for all private households in both East and West Germany. It is the first of several regular refreshment samples drawn to increase the overall size of the SOEP, compensate for panel-attrition and cover population changes, e.g. due to migration.

It is also the first sample in which the Computer-Assisted Personal Interviewing (CAPI) was implemented. Interviews in Samples A-D at this time were completely conducted using Paper-and-Pencil Interviewing (PAPI). To study mode effects, households of sample E were randomly allocated to CAPI and PAPI mode.

With the data distribution of 2012, parts of sample E have been extracted into the SOEP Innovation Sample.

### Key Facts

<b>Sampling Design</b>	Multistage stratified sampling procedure based on the ADM-Design		
<i>first stage</i>	Stratification: federal states (NUTS 1)		
	governmental regions (NUTS 2)		
	municipality size		
	Clustering: 125 PSUs		
<i>second stage</i>	Random walk in each PSU		
	Selected unit: household		
<b>Sample Size</b>		households	persons (thereof children)
	NET	1,056	2,376 (466)
	GROSS	1,969	
<b>Field Period</b>	April to September 1998		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI) and Paper-and-Pencil Interviewing (PAPI)		
<b>Number of Interviewers</b>	130		
<b>Initial Response Rate</b>	53.6%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	35,568	18,204	14,809 / 204,381

### Further Readings

Infratest Sozialforschung (2011). *SOEP 1998 – Methodenbericht Erstbefragung der Stichprobe E zum Befragungsjahr 1998 (Welle 15) des Sozio-oekonomischen Panels*. SOEP Survey Papers 33, DIW/SOEP, Berlin 2011.

Projektgruppe Das Sozio-oekonomische Panel (DIW) (1998). *Funktion und Design einer Ergänzungsstichprobe für das Sozio-oekonomische Panel (SOEP)*. DIW Discussion Papers 163, Berlin 1998.

Schräpler, J.-P., J. Schupp and G. G. Wagner (2006). *Changing From PAPI to CAPI – A longitudinal Study of Mode Effects Based on an Experimental Design*. DIW Discussion Papers 593, Berlin 2006.

## 1.6 Sample F (2000)

Sample F “Refreshment II” covers private households in Germany and substantially increases the sample size of the SOEP. Experience with the previous samples has shown that migrant households display lower response probabilities. This is why households with at least one adult not having the German nationality were oversampled in Sample F.

### Key Facts

<b>Sampling Design</b>	Multistage stratified sampling procedure based on the ADM-Design		
<i>first stage</i>	Stratification: federal states (NUTS 1) governmental regions (NUTS 2) counties (NUTS 3) municipality size		
	Clustering: 985 PSUs		
<i>second stage</i>	Random walk in each PSU		
	Oversampling of “non-German” households		
	Selected unit: household		
<b>Sample Size</b>		households	persons (thereof children)
	NET	6,043	13,871 (2,991)
	GROSS	11,862	
<b>Field Period</b>	March to October 2000		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI) and Paper-and-Pencil Interviewing (PAPI), possibility for self-completion		
<b>Number of Interviewers</b>	671		
<b>Initial Response Rate</b>	50.9%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	6,364	2,215	2,373 / 18,859
<b>Further Readings</b>	<a href="#">Infratest Sozialforschung (2011). <i>SOEP 2000 – Methodenbericht erste Welle der SOEP-Stichprobe F zum Befragungsjahr 2000 (Welle 17) des Sozio-ökonomischen Panels</i>. SOEP Survey Papers 37, DIW/SOEP, Berlin 2011.</a>		

## 1.7 Sample G (2002)

The 2002 Sample G “High Income” covers private households in Germany with a monthly income of at least DM<sup>6</sup>7,500 (EUR 3,835), which - due to the lack of an adequate sampling frame - were identified using a telephone screening procedure. From Wave 2 in 2003 onwards, only households with a net monthly income of at least EUR 4,500 were interviewed further.

### Key Facts

<b>Sampling Design</b>	Households with a monthly income of $\geq$ DM 7,500 were identified in representative face-to-face and telephone surveys of the German population driven by Infratest and following the ADM-Design.		
<i>first stage</i>	From all 5,663 eligible households 3,672 were drawn, stratified by income and region (east/west) with oversampling of higher incomes and regions in East-Germany. Of these 2,495 households agreed to be re-contacted by the SOEP-Survey and became the gross sample.		
<b>Sample Size</b>			persons (thereof children)
	NET	1,224	3,364 (693)
	GROSS	2,493	
<b>Field Period</b>	March to July 2002		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI) and Paper-and-Pencil Interviewing (PAPI), possibility for self-completion		
<b>Number of Interviewers</b>	276		
<b>Initial Response Rate</b>	49.1%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	2,084	953	983 / 9,757
<b>Further Readings</b>	<p>Infratest Sozialforschung (2011). <i>SOEP 2002 – Methodenbericht Sondererhebung Hocheinkommensstichprobe zum Befragungsjahr 2002 (Welle 19) des Sozio-oekonomischen Panels</i>. SOEP Survey Papers 44, DIW/SOEP, Berlin 2011.</p> <p>Infratest Sozialforschung (2011). <i>SOEP 2003 – Methodenbericht zweite Welle der Sondererhebung Hocheinkommensstichprobe zum Befragungsjahr 2003 (Welle 20) des Sozio-oekonomischen Panels</i>. SOEP Survey Papers 47, DIW/SOEP, Berlin 2011.</p>		

<sup>7</sup>Deutschmark (DM)

## 1.8 Sample H (2006)

Sample H “Refreshment III” covers private households in Germany. For the first time in a SOEP subsample, all households were interviewed in the computer-assisted personal interview mode (CAPI).

### Key Facts

<b>Sampling Design</b>	Multistage stratified sampling procedure based on the ADM-Design		
<i>first stage</i>	Stratification: federal states (NUTS 1)		
	governmental regions (NUTS 2)		
	municipality size		
Clustering: 250 PSUs			
<i>second stage</i>	Random walk in each PSU		
	Selected unit: household		
<b>Sample Size</b>	households	persons	
		(thereof children)	
	NET	1,506	3,239 (623)
	GROSS	3,747	
<b>Field Period</b>	March to July 2006		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	243		
<b>Initial Response Rate</b>	40.2%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	26,443	13,453	9,024 / 128,852
<b>Further Readings</b>			

[TNS Infratest Sozialforschung \(2011\). \*SOEP 2006 – Methodenbericht Erstbefragung der Ergänzungsstichprobe H zum Befragungsjahr 2006 \(Welle 23\) des Sozio-oekonomischen Panels\*. SOEP Survey Papers 57, DIW/SOEP, Berlin 2011.](#)

## 1.9 Sample I (2009)

Sample I “Innovation Sample” covers private households in Germany. A disproportional sampling design was implemented in order to increase the number of migrant households in the SOEP. In order to do so, an analysis of family names –“onomastic procedure” – was applied. In 2012, Sample I was completely transferred to SOEP-IS, which is why it is excluded in terms of weighting. The cases are nevertheless integrated in SOEP waves Z and BA (2009 and 2010), however, without valid weighting factors.

### Key Facts

<b>Sampling Design</b>	Multistage stratified sampling procedure based on the ADM-Design		
<i>first stage</i>	Stratification: federal states (NUTS 1) governmental regions (NUTS 2) municipality size		
	Clustering: 250 PSUs		
<i>second stage</i>	Random walk for address listing in each PSU		
	Oversampling of migrant households such that the share of migrants for each PSU is doubled		
Selected unit: household			
<b>Sample Size</b>		households	persons (thereof children)
	NET	1,495	3,052 (620)
	GROSS	4,743	
<b>Field Period</b>	September 2009 to January 2010		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	233		
<b>Initial Response Rate</b>	31.5%		
<b>Further Readings</b>			

TNS Infratest Sozialforschung (2012). *SOEP 2009 – Methodenbericht Innovationssample zum Befragungsjahr 2009 (Welle 26) des Sozio-oekonomischen Panels (Erstbefragung Stichprobe I)*. SOEP Survey Papers 73, DIW/SOEP, Berlin 2012.

Schröder, M., D. Saßenroth, J. Körtner, M. Kroh, and J. Schupp (2013). *Experimental Evidence of the Effect of Monetary Incentives on Cross-Sectional and Longitudinal Response: Experiences from the Socio-Economic Panel (SOEP)*. SOEPpapers 603, DIW/SOEP, Berlin 2013.

Pförr, K., M. Blohm, A. G. Blom, B. Erdel, B. Felderer, M. Fräßdorf, K. Hajek, S. Helmschrott, C. Kleinert, A. Koch, U. Krieger, M. Kroh, S. Martin, D. Saßenroth, C. Schmiedeberg, E.-M. Trüdinger, and B. Rammstedt (2015). “Are Incentive Effects on Response Rates and Nonresponse Bias in Large-scale, Face-to-face Surveys Generalizable to Germany? Evidence from Ten Experiments”. In: *Public Opinion Quarterly* 79.3, 740–768.

## 1.10 Sample J (2011)

Sample J “Refreshment IV” covers private households in Germany. Again, a disproportional sampling design was implemented in order to increase the number of migrant households in the SOEP.

### Key Facts

<b>Sampling Design</b>	Multistage stratified sampling procedure based on the ADM-Design		
<i>first stage</i>	Stratification: federal states (NUTS 1) governmental regions (NUTS 2) municipality size		
	Clustering: 307 PSUs		
<i>second stage</i>	Random walk for address listing in each PSU		
	Oversampling of migrant households <sup>8</sup> such that the share of migrants for each PSU is doubled		
	Selected unit: household		
<b>Sample Size</b>		households	persons (thereof children)
	NET	3,136	6,308 (1,147)
	GROSS	9,492	
<b>Field Period</b>	March to October 2011		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	338		
<b>Initial Response Rate</b>	33.0%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	12,593	6,181	1,937 / 49,493

### Further Readings

TNS Infratest Sozialforschung (2012). *SOEP 2011 – Methodenbericht zum Befragungsjahr 2011 (Welle 28) des Sozio-oekonomischen Panels*. SOEP Survey Papers 108, DIW/SOEP, Berlin 2012.

Kroh, M., K. Käppner and S. Kühne (2014). *Sampling, Nonresponse, and Weighting in the 2011 and 2012 Refreshment Samples J and K of the Socio-Economic Panel*. SOEP Survey Papers 260, DIW/SOEP, Berlin 2014.

<sup>8</sup>Identification of potentially migrant households using onomastic procedure.

## 1.11 Sample K (2012)

Sample K “Refreshment V” covers private households in Germany.

### Key Facts

<b>Sampling Design</b>	Multistage stratified sampling procedure based on the ADM-Design		
<i>first stage</i>	Stratification: federal states (NUTS 1) governmental regions (NUTS 2) municipality size Clustering: 126 PSUs		
<i>second stage</i>	Random walk for address listing in each PSU Selected unit: household		
<b>Sample Size</b>	households	persons (thereof children)	
	NET	1,526	3,036 (563)
	GROSS	4,397	
<b>Field Period</b>	March to October 2012		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	304		
<b>Initial Response Rate</b>	34.7%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	26,053	10,328	3,872 / 83,120
<b>Further Readings</b>	<p>TNS Infratest Sozialforschung (2013). <i>SOEP 2012 - Methodenbericht zum Befragungsjahr 2012 (Welle 29) des Sozio-oekonomischen Panels</i>. SOEP Survey Papers 144, DIW/SOEP, Berlin 2013.</p> <p>Kroh, M., K. Käppner and S. Kühne (2014). <i>Sampling, Nonresponse, and Weighting in the 2011 and 2012 Refreshment Samples J and K of the Socio-Economic Panel</i>. SOEP Survey Papers 260, DIW/SOEP, Berlin 2014.</p>		

## 1.12 Sample L1 (FiD) (2010)

Sample L1 “Cohort Sample”<sup>9</sup>, covers private households in Germany, in which at least one household member is a child that was born between January 2007 and March 2010. Again, migrants identified by an “onomastic procedure” are oversampled.

### Key Facts

<b>Sampling Design</b>	Multistage stratified sampling procedure based on information from local registration offices (Einwohnermeldeämter)		
<i>first stage</i>	Stratification: federal states (NUTS 1) governmental regions (NUTS 2) municipality size		
	Clustering: 159 PSUs		
<i>second stage</i>	Random selection of children in the respective cohort in each PSU provided by the local registration offices, stratified by municipality size		
	Oversampling of migrant households <sup>10</sup> such that the share of migrants for each PSU is doubled		
	Selected unit: child in the respective cohort		
<b>Sample Size</b>	households	persons (thereof children)	
	NET	2,074	7,670 (3,900)
	GROSS	5,286	
<b>Field Period</b>	June to October 2010		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	204		
<b>Initial Response Rate</b>	39.2%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	935	573	83 / 3,504
<b>Further Readings</b>	<p>TNS Infratest Sozialforschung (2010). <i>"Familien in Deutschland" (FiD) 2010 Methodenbericht: Anlage und Ergebnisse der FiD-Stichproben.</i> München 2011.</p> <p>Schröder, M., R. Siegers, K. Spieß (2013). <i>"Familien in Deutschland" - FiD.</i> Schmollers Jahrbuch: Vol. 133, No. 4, pp. 595-606.</p>		

<sup>9</sup>Sample L1 (as well as L2 and L3) was part of the SOEP-related study “Familien in Deutschland” (FiD), which was later integrated into the SOEP in 2014. As part of an evaluation project of the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (BMFSFJ) and the Federal Ministry of Finance (BMF) the study focused on public benefits in Germany for married people and families. Therefore, the survey instruments of waves BA to BD differ in some parts from those of the other samples.

<sup>10</sup>Identification of potentially migrant addresses using onomastic procedure and information on the citizenship.



### 1.13 Sample L2 (FiD) (2010)

Sample L2 “Family Types I” covers private households in Germany that meet at least one of the following criteria regarding their household composition: single parents, low income families and large families with three or more children. Similar to Sample G we face the problem that the eligible sub-population is relatively small and an adequate sampling frame is lacking. So again, a preceding telephone screening procedure identifies eligible households.

#### Key Facts

<b>Sampling Design</b>	Persons in potentially eligible households were identified in representative face-to-face and telephone surveys of the German population following the ADM-Design. Telephone screening (CATI-Screening) was then conducted in order to verify the eligibility and willingness of the households to participate. Selected unit: person		
<b>Sample Size</b>		households	persons (thereof children)
	NET	2,500 <sup>11</sup>	8,838 (4,611)
	GROSS	3,281	
<b>Field Period</b>	March to June 2010		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	343		
<b>Initial Response Rate</b>	76.2%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	1,596	1,035	213 / 7,701
<b>Further Readings</b>	<p>TNS Infratest Sozialforschung (2010). <i>"Familien in Deutschland" (FiD) 2010 Methodenbericht: Anlage und Ergebnisse der FiD-Stichproben.</i> München 2011.</p> <p>Schröder, M., R. Siegers, K. Spieß (2013). <i>"Familien in Deutschland" - FiD.</i> Schmollers Jahrbuch: Vol. 133, No. 4, pp. 595-606.</p>		

<sup>11</sup>During the fieldwork in wave 1,237 households were identified not to be part of the target population and thus do not receive valid weights.

## 1.14 Sample L3 (FiD) (2011)

Sample L3 “Family Types II” covers private households in Germany that meet at least one of the following criteria regarding their household composition: single parents or large families with three or more children. It is conducted analogously to Sample L2 in order to increase the number of cases in these sub-populations.

### Key Facts

<b>Sampling Design</b>	Persons in potentially eligible households were identified in representative face-to-face and telephone surveys of the German population following the ADM-Design. Telephone screening (CATI-Screening) was then conducted to verify the eligibility and willingness of the households to participate. Selected unit: person		
<b>Sample Size</b>		households	persons (thereof children)
	NET	924 <sup>12</sup>	3,579 (2,092)
	GROSS	1,144	
<b>Field Period</b>	March to June 2011		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	250		
<b>Initial Response Rate</b>	80.8%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	2,359	1,582	468 / 12,154
<b>Further Readings</b>	<p>TNS Infratest Sozialforschung (2011). <i>“Familien in Deutschland” (FiD) 2011 Methodenbericht: Anlage und Ergebnisse der FiD-Stichproben.</i> München 2011.</p> <p>Schröder, M., R. Siegers, K. Spieß (2013). <i>“Familien in Deutschland” - FiD.</i> Schmollers Jahrbuch: Vol. 133, No. 4, pp. 595-606.</p>		

<sup>12</sup>During the fieldwork of the first wave, 9 households were identified not to be part of the target population and thus do not receive valid weights.

## 1.15 Sample M1 (2013)

The 2013 “IAB-SOEP Migration Sample” (M1) was jointly planned and conducted by the *Institute for Employment Research* (IAB) in Nuremberg and the SOEP at DIW Berlin. Register data of the *Federal Employment Agency* (BA), the so-called *Integrated Employment Biographies* (IEB), were used as a sampling frame. The target population consists of individuals in the register as of 31.12.2011 who a) immigrated to Germany since 1995 as well as b) second-generation migrants born after 1976 in Germany.

### Key Facts

<b>Sampling Design</b>	Multistage stratified sampling design based on the IEB database		
<i>first stage</i>	Stratification: federal states (NUTS 1) county type (urban/rural)		
	Clustering: 250 PSUs proportional to number of migrants <sup>13</sup> in each stratum		
<i>second stage</i>	Simulated random walk algorithm in each PSU		
	Disproportional address sampling according to country of origin and migration generation		
	Selected unit: person		
<b>Sample Size</b>	households	persons (thereof children)	
	NET	2,723	7,445 (2,481)
	GROSS	11,051	
<b>Field Period</b>	May to November 2013		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	232		
<b>Initial Response Rate</b>	35.0% <sup>14</sup>		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	1,561	1,534	62 / 9,035
<b>Further Readings</b>			

TNS Infratest Sozialforschung (2014). *Methodenbericht zum IAB-SOEP-Migrationssample 2013*. SOEP Survey Papers 217, DIW/SOEP, Berlin 2014.

Kroh, M., S. Kühne, J. Goebel and F. Preu (2015). *The 2013 IAB-SOEP Migration Sample (M1): Sampling Design and Weighting Adjustment*. SOEP Survey Papers 271, DIW/SOEP, Berlin 2015.

Eisnecker, P. S., K. Erhardt, M. Kroh, and P. Trübswetter (2017). *The Request for Record Linkage in the IAB-SOEP Migration Sample*. SOEP Survey Papers 291, DIW/SOEP, Berlin 2017.

Eisnecker, P. S. and M. Kroh (2017). “The Informed Consent to Record Linkage in Panel Studies: Optimal Starting Wave, Consent Refusals, and Subsequent Panel Attrition”. In: *Public Opinion Quarterly* 81.1, 131-143

<sup>13</sup>Identification of target persons using information on nationality, BA measures and onomastic procedure.

<sup>14</sup>Including the 1,145 households that were screened out and not taken into further consideration.

## 1.16 Sample M2 (2015)

The 2015 “IAB-SOEP Migration Sample” (M2) aimed for the collection of information on households with recent migrants, that is, individuals who immigrated to Germany between 2009 and 2013. Similar to the M1 sample, register data of the *Federal Employment Agency* (BA) was used as a sampling frame.

### Key Facts

<b>Sampling Design</b>	Multistage stratified sampling design based on the IEB database		
<i>first stage</i>	Stratification: federal states (NUTS 1) county type (urban/rural) proportion of migrants in each PSU		
	Clustering: 125 PSUs proportional to the number of target population members <sup>15</sup> in each stratum		
<i>second stage</i>	Disproportional address sampling in each PSU according to country of origin		
	Selected unit: person		
<b>Sample Size</b>	households	persons (thereof children)	
	NET	1,096	2,638 (927)
	GROSS	6,008	
<b>Field Period</b>	May to December 2015		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	143		
<b>Initial Response Rate</b>	32.6% <sup>16</sup>		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	926	826	54 / 4,579
<b>Further Readings</b>	<a href="#">Kühne, S. and M. Kroh (2017). <i>The 2015 IAB-SOEP Migration Study M2: Sampling Design, Nonresponse, and Weighting Adjustment</i>. SOEP Survey Papers 473, DIW/SOEP, Berlin 2017.</a>		

<sup>15</sup>Identified by the year they entered the IEB and former and current citizenship.

<sup>16</sup>Including the 863 households that were screened out and not taken into further consideration.

## 1.17 Sample M3/4 (2016)

The 2016 “IAB-BAMF-SOEP Refugee Survey” (Samples M3 and M4) is a joint project of the *Institute for Employment Research* (IAB), the *Research Centre of the Federal Office for Migration and Refugees* (BAMF-FZ) as well as the SOEP. The target population of the samples consists of households with individuals who arrived in Germany between January 2013 and January 2016 and applied for asylum or were hosted as part of specific programs of the federal states (irrespective of their asylum procedure and their current legal status).

The first part of the sample (M3) was financed with funds from the research budget of the *Federal Employment Agency* (BA) allocated to the IAB. Sample M4 was funded by the *Federal Ministry of Education and Research* (BMBF) and has a focus on refugee families.

### Key Facts

<b>Sampling Design</b>	Multistage stratified sampling design based on the German Central Register of Foreigners (AZR)		
<i>first stage</i>	Stratification: federal states (NUTS 1) county type (urban/rural) Clustering: 99 PSUs (M3) / 95 PSUs (M4)		
<i>second stage</i>	Disproportional address sampling in each PSU according to country of origin, current legal status, age and gender Selected unit: person		
<b>Sample Size</b>	households	persons (thereof children)	
	NET	3,273	9,856 (5,391)
	GROSS	6,761	
<b>Field Period</b>	June to December 2016		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	162		
<b>Initial Response Rate</b>	48.4%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	143	178	6 / 4,165
<b>Further Readings</b>	<p><a href="#">Kroh, M., H. Brücker, S. Kühne, E. Liebau, J. Schupp, M. Siegert, and P. Trübswetter (2016). <i>Das Studiendesign der IAB-BAMF-SOEP-Befragung von Geflüchteten</i>. SOEP Survey Papers 365, DIW/SOEP, Berlin 2016.</a></p> <p><a href="#">Kroh, M., S. Kühne, J. Jacobsen, M. Siegert, and R. Siegers (2017). <i>Sampling, Nonresponse, and Integrated Weighting of the 2016 IAB-BAMF-SOEP Survey of Refugees (M3/M4) – revised version</i>. SOEP Survey Papers 477, DIW/SOEP, Berlin 2017.</a></p>		

## 1.18 Sample M5 (2017)

Sample M5 is both an enlargement and a refreshment of the former sub-samples M3 and M4 which are known as the IAB-BAMF-SOEP Survey of Refugees. Whereas the target population of M3 and M4 are all people that immigrated to Germany between January 2013 and January 2016 and appeared in the *Central Register of Foreigners* (AZR) up to April 2016, M5 adds two new aspects: First, people that immigrated to Germany between January 2013 and January 2016 and made a claim for asylum after April 2016 until January 2017 (refreshment) and, second, people who immigrated to Germany between February 2016 and December 2016 and making a claim for asylum until January 2017 (enlargement). The sampling is similar to sampling of M3 and M4 and we propose, for substantial analyses, to use all three sub-samples jointly. By using all sub-samples together they are representative for people that immigrated to Germany and applied for asylum or people who were hosted as part of specific programs of the federal states (irrespective of their asylum procedure and their current legal status).

### Key Facts

<b>Sampling Design</b>	Multistage stratified sampling design based on the German Central Register of Foreigners (AZR)		
<i>first stage</i>	Stratification: federal states (NUTS 1) county type (urban/rural) Clustering: 99 PSUs		
<i>second stage</i>	Disproportional address sampling in each PSU according to country of origin, current legal status, gender, and target population (refreshment vs. enlargement) Selected unit: person		
<b>Sample Size</b>		households	persons (thereof children)
	NET	1,519	4,161 (1,909)
	GROSS	2,871	
<b>Field Period</b>	June to October 2017		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	33		
<b>Initial Response Rate</b>	52.9%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	145	179	5/2,367
<b>Further Readings</b>	Jacobsen, J., M. Kroh, S. Kühne, J. A. Scheible, R. Siegers, and M. Siegert (2019). <i>Supplementary of the IAB-BAMF-SOEP Survey of Refugees in Germany (M5) 2017</i> . SOEP Survey Papers 605, DIW/SOEP, Berlin 2019.		

## 1.19 Sample N (2017)

Participants of Sample N were initially drawn in the context of the international *Project in Assessment of Adult Skills and Competencies* (PIAAC) in 2012 that was initiated by the OECD<sup>17</sup>. The survey of the German subsample was carried out by the *Leibniz-Institute for the Social Sciences* (GESIS) and the target population of PIAAC 2012 Germany consisted of adults from age 16 through 65 that lived in Germany (on the reference date of 1 December 2011). The fieldwork in 2012 resulted in a net sample of 5,319 persons. Participants were then transferred into the PIAAC-L panel study<sup>18</sup>, which followed the concept of "Anchor Persons", meaning that only original PIAAC sample members were followed in subsequent waves. The waves of PIAAC-L surveyed not only the PIAAC anchor persons, but other household members as well and already introduced items similar to those of the SOEP. The respective waves were conducted in the years 2014 (3,758 anchor interviews), 2015 (3,263) and 2016 (2,967), of which 2,811 anchor persons have agreed to be transferred into the SOEP. Finally, Sample N is based on respondents that took part in the last wave of PIAAC-L in 2016 and gave consent to be transferred into the SOEP.

### Key Facts

<b>Sampling Design</b> <sup>19</sup>	Two-staged stratified and clustered sampling procedure based on information from local registration offices (Einwohnermeldeämter)		
<i>first stage</i>	Stratification: federal states administrative regions districts county type (rural/urban)		
<i>second stage</i>	Clustering: 277 PSUs systematic random sampling in each PSU Selected unit: person <sup>20</sup>		
<b>Sample Size</b> <sup>21</sup>	households	persons (thereof children)	
	NET	2,378 <sup>22</sup>	4,807 (1,037)
	GROSS	3,447	
<b>Field Period</b>	March to August 2017		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	287		
<b>Initial Response Rate</b>	69.0%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	14.016	11.060	1.839 / 132.503

<sup>17</sup> A detailed description of the international PIAAC survey can be found in OECD (2016).

<sup>18</sup> For more detailed information on the respective waves please see the corresponding Technical Reports listed under *Further Readings*.

<sup>19</sup> The sampling design outlined here refers to the initial sample of PIAAC Germany in 2012.

<sup>20</sup> The households of the initially for PIAAC 2012 drawn persons provided the basis for PIAAC-L and Sample N, by also interviewing other household members, after giving their consent to participate.

<sup>21</sup> The numbers in this paragraph refer to the actual Sample N of the SOEP. For information concerning the respective PIAAC and PIAAC-L samples see the literature listed below.

<sup>22</sup> 64 of these households will be realised the first time in wave 2 of Sample N.

## Further Readings

Zabal, A., S. Martin, N. Massing, D. Ackermann, S. Helmschrott, I. Barkow, and B. Rammstedt (2014). *PIAAC Germany 2012. Technical report*. Münster: Waxmann.

OECD, 2nd Edition (2016). *Technical Report of the Survey of Adult Skills (PIAAC)*. Not yet published.

Zabal, A., S. Martin, and B. Rammstedt (2016). *PIAAC-L data collection 2014: technical report; follow-up to PIAAC Germany 2012*. GESIS Papers, 2016|17. Köln: GESIS - Leibniz-Institut für Sozialwissenschaften.

Zabal, A., S. Martin, and B. Rammstedt (2017). *PIAAC-L data collection 2015: technical report*. GESIS Papers 2017|29, Köln: GESIS - Leibniz-Institut für Sozialwissenschaften.

Martin, S., A. Zabal, and B. Rammstedt (2018). *PIAAC-L data collection 2016: technical report*. GESIS Papers 2018|05, Köln: GESIS - Leibniz-Institut für Sozialwissenschaften.



## 1.20 Sample O (2018)

Sample O is a refreshment sample that is aimed at evaluating the urban development and planning program 'Soziale Stadt'. The target population of Sample O consists of all households located in one of the 'Soziale Stadt' areas. The corresponding households have been sampled using spatially referenced data. Besides a novel sampling approach, the refreshment sample itself provides an additional data infrastructure for urban and regional planning and research.

### Key Facts

<b>Sampling Design</b>	Shape files restricting residential areas in which households were sampled as well as information about number and coordinates of buildings within these areas have been provided by <i>the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR)</i> .		
<i>first stage</i>	Stratification: 20 Regions (by Federal states and population size) Clustering: PSUs		
<i>second stage</i>	Within the PSUs buildings were randomly selected.		
<i>third stage</i>	Within each of the selected buildings households were selected using the Kish selection grid. Selected unit: household		
<b>Sample Size</b>		households	persons (thereof children)
	NET	935	1,730 (479)
	GROSS	6,119	
<b>Field Period</b>	March to August 2018		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	122		
<b>Initial Response Rate</b>	15.3%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	2,587	2,123	94 / 11,141
<b>Further Readings</b>	Steinhauer, H. W., M. Kroh, and J. Goebel (2020). <i>SOEP-Core – 2018: Sampling, Nonresponse, and Weighting in Sample O</i> . SOEP Survey Papers 827: SOEP Survey Papers Series C –Data Documentation, DIW/SOEP, Berlin 2020.		

## 1.21 Sample P (2019)

Sample P “Top Shareholder Sample”, covers households in Germany in which at least one household member belongs to the top percentile in terms of the estimated value of his or her cumulative company shareholdings.

### Key Facts

<b>Sampling Design</b>	Multistage stratified sampling design based on the global company database ORBIS, which was provided by the business information publisher Bureau van Dijk (BvD).		
<i>first stage</i>	Stratification: 24 Regions (by Federal states and population density) Clustering: 250 PSUs		
<i>second stage</i>	Disproportional address sampling in each PSU according to age, sex and estimated value of shareholdings Selected unit: person		
<b>Sample Size</b>	households	persons (thereof children)	
	NET	1,960	3,589 (1,149)
	GROSS	22,728	
<b>Field Period</b>	January 2019 to February 2020		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	259		
<b>Initial Response Rate</b>	8.6%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	322	291	18 / 2,548
<b>Further Readings</b>	<p>Schröder, C., C. Bartels, K. Göbler, M. M. Grabka, J. König, R. Siegers and S. Zinn (2020). <i>Improving the Coverage of the Top-Wealth Population in the Socio-Economic Panel (SOEP)</i>. SOEP Papers on Multidisciplinary Panel Data Research 1114, DIW/SOEP, Berlin 2020.</p>		

## 1.22 Sample Q (2019)

The 2019 boost sample Q supplemented the SOEP core sample by queer households, including gender and sexual minorities such as lesbian, gay, bisexual, and trans\* respondents. To recruit these households, a random telephone screening of adults living in Germany was conducted. Sample Q was funded by the *Federal Ministry of Education and Research (BMBF)*.

### Key Facts

<b>Sampling Design</b>	Persons eligible to the target population were identified through nationwide omnibus surveys conducted by Kantar Public. A dual-frame method was used which makes it possible to also include respondents who only have a cell phone but not a landline. Subsequently, a telephone screening (CATI screening) was conducted to verify the eligibility and willingness of the target respondents (and their households) to participate. Selected unit: person		
<b>Sample Size</b>	households	persons (thereof children)	
	NET	477	636 (70)
	GROSS	813	
<b>Field Period</b>	September 2018 to August 2019 (telephone screening) April to November 2019 (interviews in households)		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	221		
<b>Initial Response Rate</b>	58.7%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	3,157	2,192	582 / 12,734
<b>Further Readings</b>	De Vries, L., M. Fischer, M. Kroh, S. Kühne and D. Richter. (2021). <i>Design, Nonresponse, and Weighting in the 2019 Sample Q (Queer) of the Socio-Economic Panel</i> . SOEP Survey Papers 940: SOEP Survey Papers Series C – Data Documentation, DIW/SOEP, Berlin 2021.		

## 1.23 Sample M6 (2020)

The 2020 boost sample M6 supplemented the samples of the IAB-BAMF-SOEP Survey of Refugees by 1,141 households. To recruit these households, a random sample was drawn from the Central Register of foreigners. The sample M6 consists of two main groups, namely persons who entered Germany between January 2013 up to the end of December 2016, filed an asylum application and whose last change of asylum status took place in 2013 to the end of 2016 (refreshment). The second group consists of persons who entered Germany between January 2013 and end of June 2019, filed an asylum application and whose last change of asylum status took place in 2017 to the end of June 2019 (enlargement).

### Key Facts

<b>Sampling Design</b>	Multistage stratified sampling design based on the German Central Register of Foreigners (AZR)		
<i>first stage</i>	Stratification: refreshment and enlargement		
	Clustering: 159 unique PSUs (100 per stratum)		
<i>second stage</i>	Sampling anchor persons within each PSU / stratum		
	Selected unit: person		
<b>Sample Size</b>	households	persons (thereof children)	
	NET	1,141	3,177 (1,210)
	GROSS	3,000	
<b>Field Period</b>	August 2020 - February 2021		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	53		
<b>Initial Response Rate</b>	44.3%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	504	870	5 / 12,506
<b>Further Readings</b>	<a href="#">Steinhauer, H. W., R. Siegers, M. Siegert., J. Jacobsen and S. Zinn (2022). Sampling, Nonresponse, and Weighting of the 2020 Refreshment Sample (M6) of the IAB-BAMF-SOEP Refugee Panel. SOEP Survey Papers 1104: SOEP Survey Papers Series C – Data Documentation, DIW/SOEP, Berlin 2022.</a>		

## 1.24 Sample M7 (2020)

The 2020 “IAB-SOEP Migration Sample” (M7) aimed for the collection of information on households with recent migrants from Poland, Romania, and Bulgaria between January 1<sup>st</sup>, 2016 and December 31<sup>st</sup>, 2018. Similar to the M1 and M2 sample, register data of the *Federal Employment Agency* (BA) was used as a sampling frame.

### Key Facts

<b>Sampling Design</b>	Multistage stratified sampling design based on the IEB database		
<i>first stage</i>	Stratification: federal states (NUTS 1) county type (urban/rural) Clustering: 125 PSUs proportional to the number of target population members in each stratum		
<i>second stage</i>	Address sampling in each PSU according to country of origin Selected unit: person		
<b>Sample Size</b>	households	persons (thereof children)	
	NET	783	1,993 (484)
	GROSS	19,751	
<b>Field Period</b>	July 2020 - February 2021		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	109		
<b>Initial Response Rate</b>	11.1%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	197	259	2 / 1,589
<b>Further Readings</b>			

Steinhauer, H. W., P. Trübswetter and S. Zinn (2022). *SOEP-Core – 2020: Sampling, Nonresponse and Weighting in the IAB-SOEP Migration Studies M7 and M8*. SOEP Survey Papers 1105: SOEP Survey Papers Series C – Data Documentation, DIW/SOEP, Berlin 2022.

## 1.25 Sample M8 (2020)

The target population of sample M8 consists of third-country nationals from outside the EU living in private households who were granted a permission to work in Germany as professionals in the time from January 1<sup>st</sup>, 2019 until January 30<sup>th</sup>, 2020. To sample from this population, we make use of the IEB data, which is official data provided by the IAB.

### Key Facts

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<b>Sampling Design</b>	Multistage stratified sampling design based on the IEB database		
<i>first stage</i>	Stratification: federal states (NUTS 1) county type (urban/rural) Clustering: 125 PSUs proportional to the number of target population members in each stratum		
<i>second stage</i>	Address sampling in each PSU Selected unit: person		
<b>Sample Size</b>		households	persons (thereof children)
	NET	1,096	1,979 (335)
	GROSS	12,992	
<b>Field Period</b>	July 2020 - February 2021		
<b>Initial Survey Mode</b>	Computer-Assisted Personal Interviewing (CAPI)		
<b>Number of Interviewers</b>	109		
<b>Initial Response Rate</b>	15.5%		
<b>Initial Weighting Factor</b>	Average	SD	min / max
	66	86	4 / 539
<b>Further Readings</b>			

Steinhauer, H. W., P. Trübswetter and S. Zinn (2022). *SOEP-Core – 2020: Sampling, Nonresponse and Weighting in the IAB-SOEP Migration Studies M7 and M8*. SOEP Survey Papers 1105: SOEP Survey Papers Series C – Data Documentation, DIW/SOEP, Berlin 2022.

## 2 Developments in Sample Size

With respect to developments in sample size, the following figures focus on (2.1) comparing the number of successful interviews by cross-section, (2.2) providing a longitudinal study of panel attrition among the original sample members, (2.3) showing the entrance of new sample members by birth / moving into SOEP households and their participation behavior, (2.4) reporting share of original households in relation to new households from splits and (2.5) assessing the risk of survey-related attrition of original sample respondents by social characteristics.

Note that the sample sizes of the English public use version of SOEP and the German DIW version differ by approximately 5 percent. This percentage of the original SOEP data was excluded in compliance with German data protection laws, which was accomplished technically by randomly selecting 5 percent of the first wave households and dropping these and the persons living in them from the English public-use version. Hence, the difference in sample sizes is not always exactly 5 percent. The sample sizes documented below refer to the original database.

### 2.1 Development of the Number of Successful Interviews by Cross-Section

The following figures display the number of successful interviewed cases at the household and individual level.

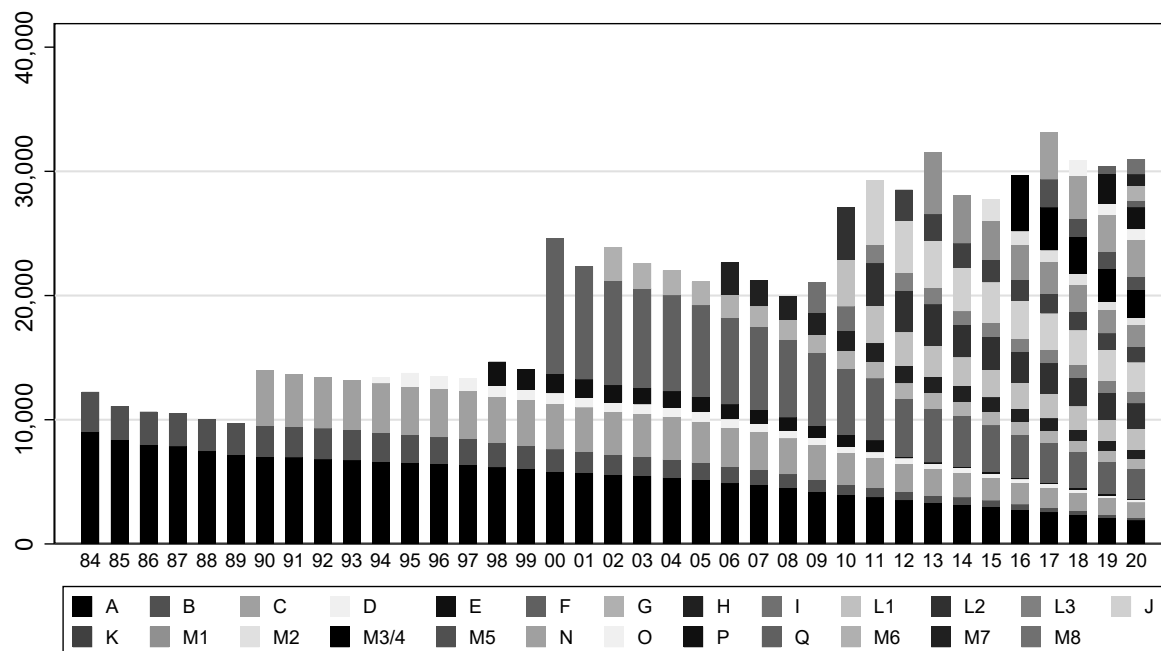


Figure 1: The Number of Successful Interviews with Persons by Subsamples A through M8, Waves 1 to 37.

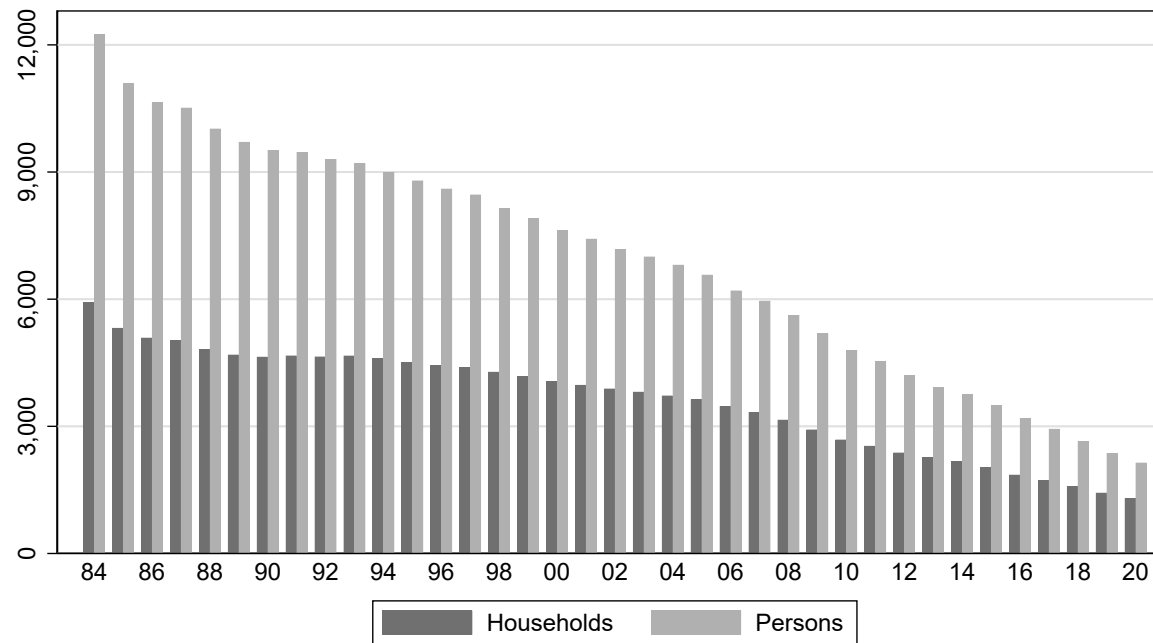


Figure 2: Comparison of Successful Interviews with Persons and Households (Subsamples A and B), Waves 1 to 37

Year	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Persons	12,245	11,090	10,646	10,516	10,023	9,710	9,519	9,467	9,305	9,206	9,001	8,798	8,606	8,467	8,145	7,909	7,623	7,424
Households	5,921	5,322	5,090	5,026	4,814	4,690	4,640	4,669	4,645	4,667	4,600	4,508	4,445	4,389	4,285	4,183	4,060	3,977

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Persons	7,175	7,004	6,811	6,575	6,203	5,961	5,626	5,197	4,793	4,541	4,204	3,926	3,761	3,497	3,187	2,940	2,653	2,370	2,143
Households	3,889	3,814	3,724	3,635	3,476	3,337	3,154	2,923	2,686	2,539	2,379	2,270	2,176	2,028	1,857	1,729	1,581	1,433	1,305



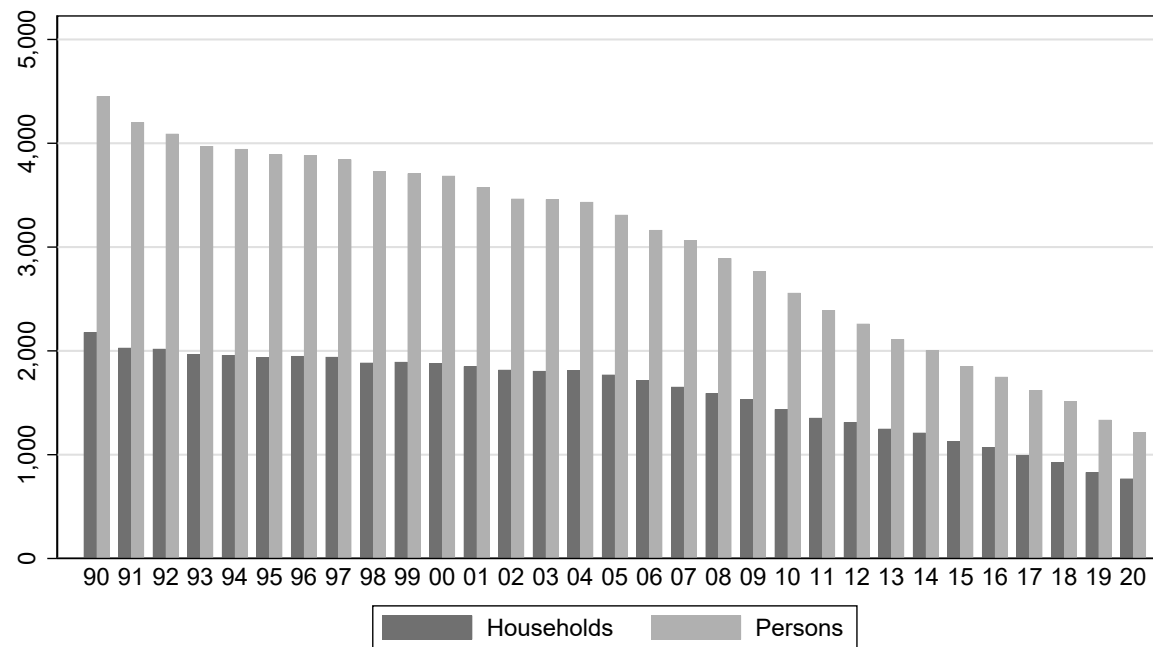


Figure 3: Comparison of Successful Interviews with Persons and Households (Subsample C), Waves 1 to 31

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Persons	4,453	4,202	4,092	3,973	3,945	3,892	3,882	3,844	3,730	3,709	3,687	3,576	3,466	3,459	3,435
Households	2,179	2,030	2,020	1,970	1,959	1,938	1,951	1,942	1,886	1,894	1,879	1,850	1,818	1,807	1,813

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Persons	3,311	3,165	3,067	2,892	2,769	2,559	2,392	2,262	2,111	2,006	1,853	1,750	1,622	1,516	1,336	1,217
Households	1,771	1,717	1,654	1,592	1,535	1,437	1,355	1,312	1,250	1,212	1,131	1,073	997	929	830	770

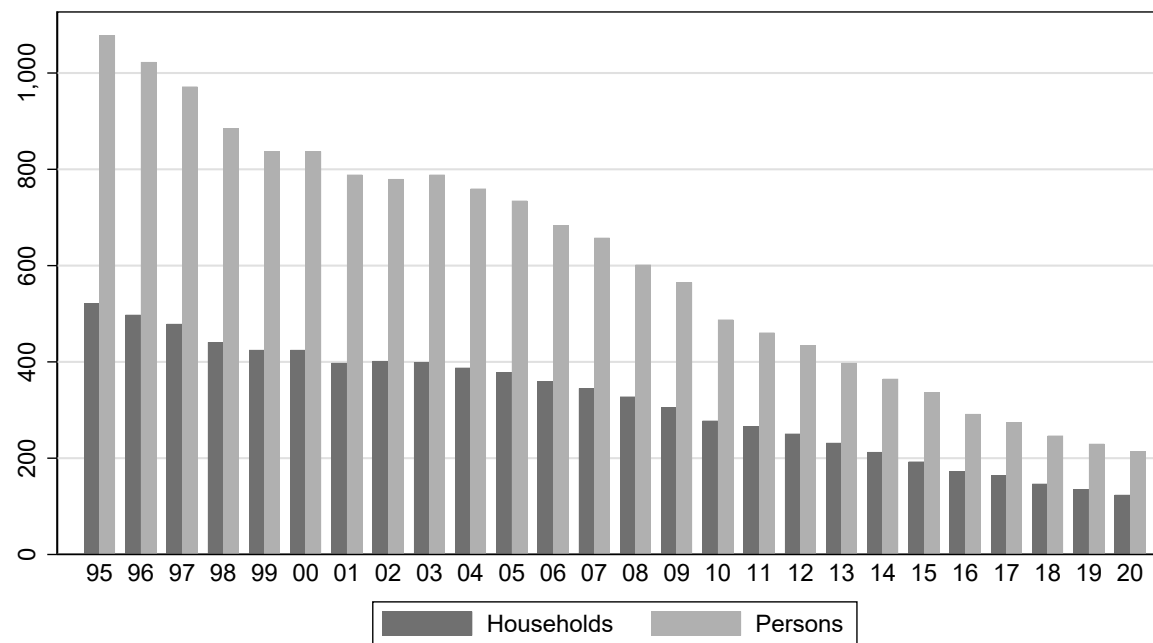


Figure 4: Comparison of Successful Interviews with Persons and Households (Subsample D), Waves 1 to 26

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Persons	1,078	1,023	972	885	838	837	789	780	789	760	735	684	658
Households	522	498	479	441	425	425	398	402	399	388	379	360	345

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Persons	602	565	488	461	435	398	365	337	292	275	247	230	214
Households	328	306	278	266	251	232	213	193	173	165	147	136	124

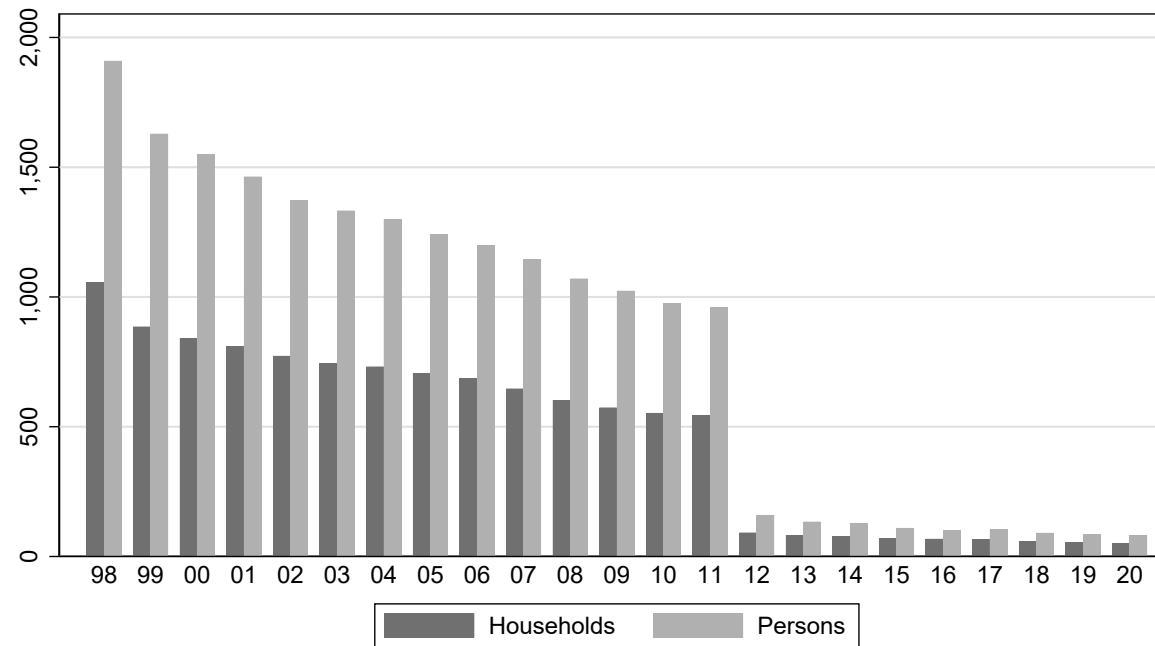


Figure 5: Comparison of Successful Interviews with Persons and Households (Subsample E), Waves 1 to 23<sup>23</sup>

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Persons	1,910	1,629	1,549	1,464	1,373	1,333	1,300	1,241	1,199	1,145	1,071
Households	1,056	886	842	811	773	744	732	706	686	647	602

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Persons	1,024	975	961	160	134	128	110	102	104	91	85	81
Households	574	553	545	92	82	78	70	68	67	59	55	52

<sup>23</sup>In 2012, subsample E has been split into two parts, one being surveyed continuously by SOEP-Core and the larger part being surveyed by SOEP-IS from 2012 onwards.

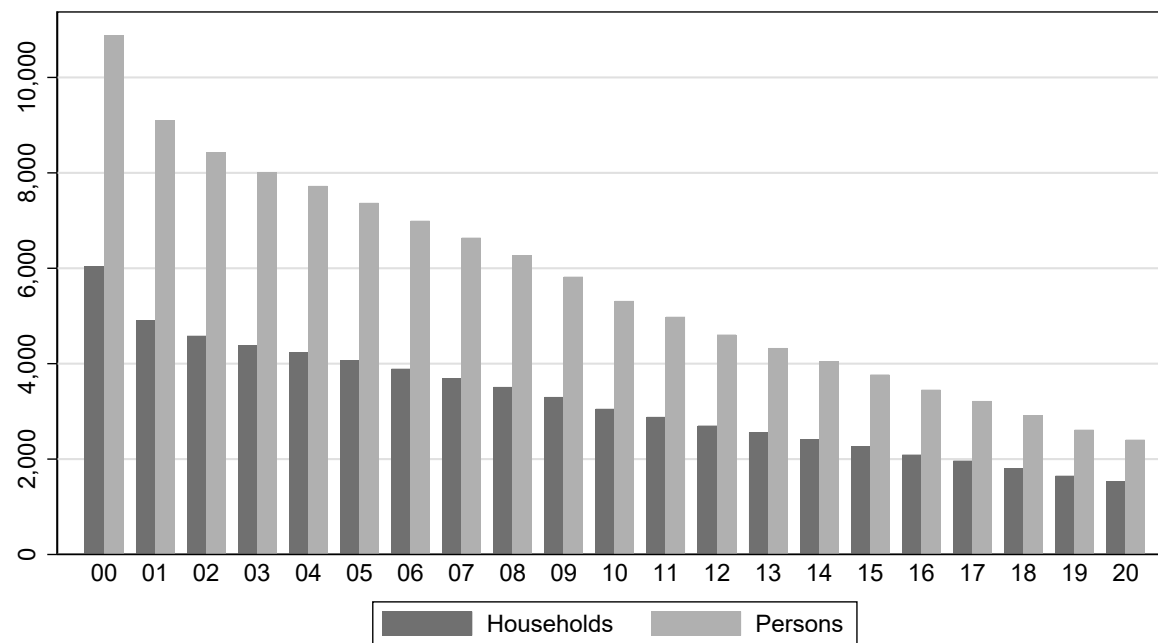


Figure 6: Comparison of Successful Interviews with Persons and Households (Subsample F), Waves 1 to 21

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Persons	10,880	9,098	8,427	8,010	7,727	7,372	6,997	6,642	6,276	5,824
Households	6,043	4,911	4,586	4,386	4,235	4,070	3,895	3,694	3,513	3,303

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Persons	5,316	4,984	4,610	4,329	4,049	3,773	3,455	3,219	2,923	2,616	2,407
Households	3,055	2,885	2,702	2,567	2,414	2,273	2,094	1,968	1,811	1,652	1,534

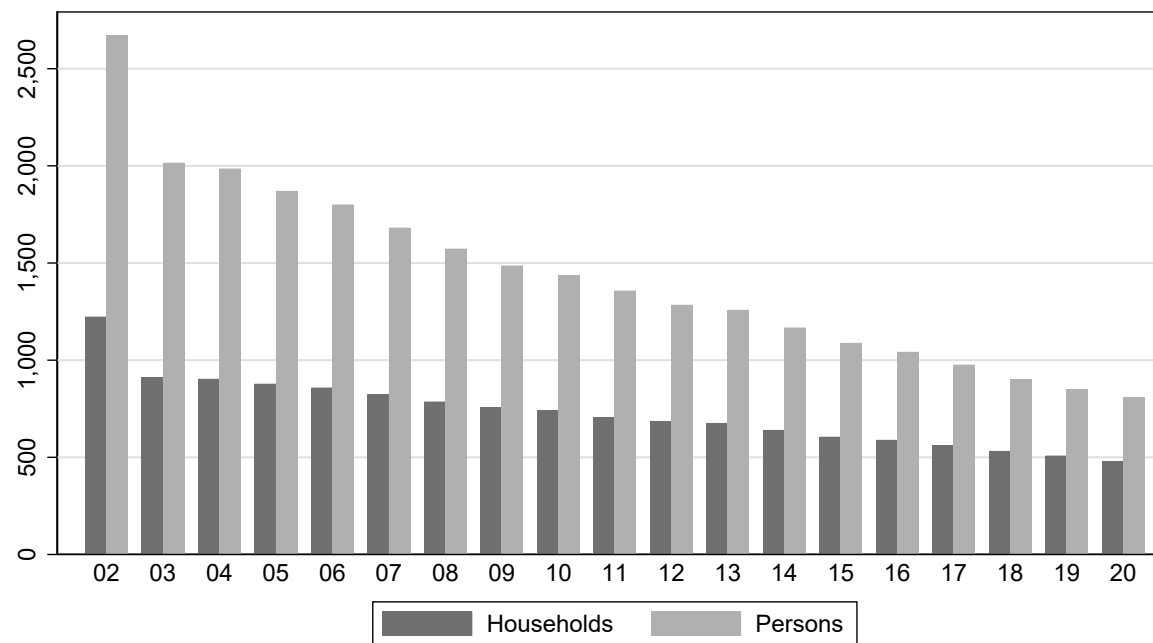


Figure 7: Comparison of Successful Interviews with Persons and Households (Subsample G), Waves 1 to 19<sup>24</sup>

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Persons	2,671	2,016	1,986	1,871	1,801	1,682	1,574	1,487	1,438	1,358	1,285	1,259	1,168	1,089	1,043	977	903	851	810
Households	1,224	911	904	879	859	824	787	757	743	706	687	677	641	606	590	561	533	509	480

<sup>24</sup>In the second wave the target population was changed: a higher income threshold resulted in a smaller number of observations in 2003.

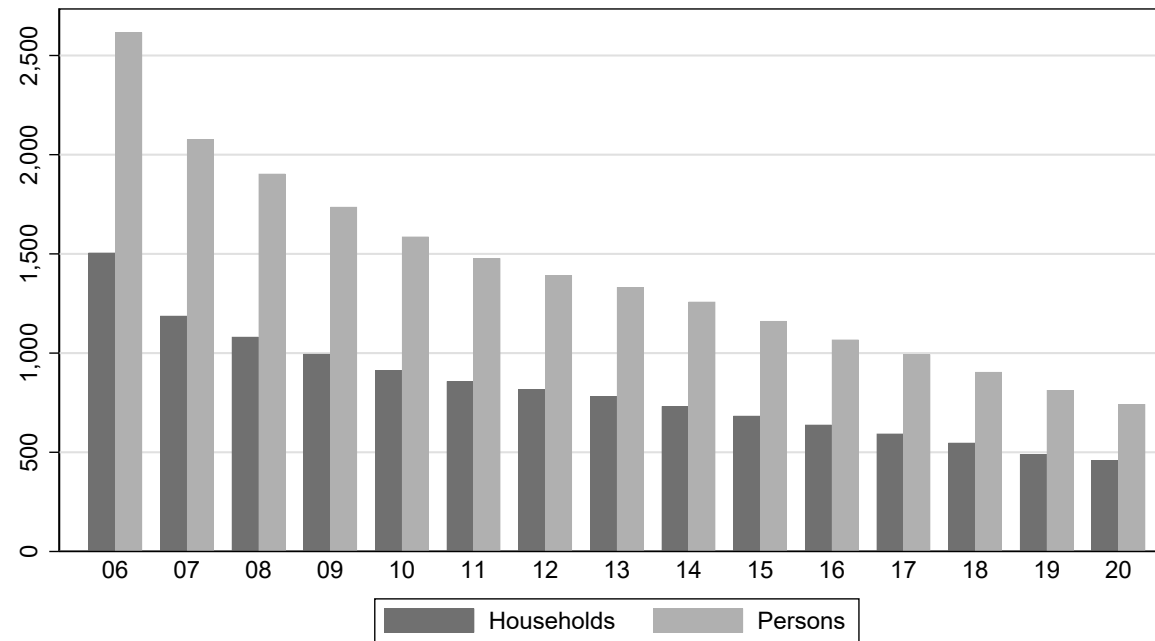


Figure 8: Comparison of Successful Interviews with Persons and Households (Subsample H), Waves 1 to 15

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Persons	2,616	2,077	1,904	1,737	1,587	1,478	1,392	1,333	1,259	1,162	1,068	993	905	814	743
Households	1,506	1,188	1,082	996	913	858	818	783	732	684	639	594	548	491	461

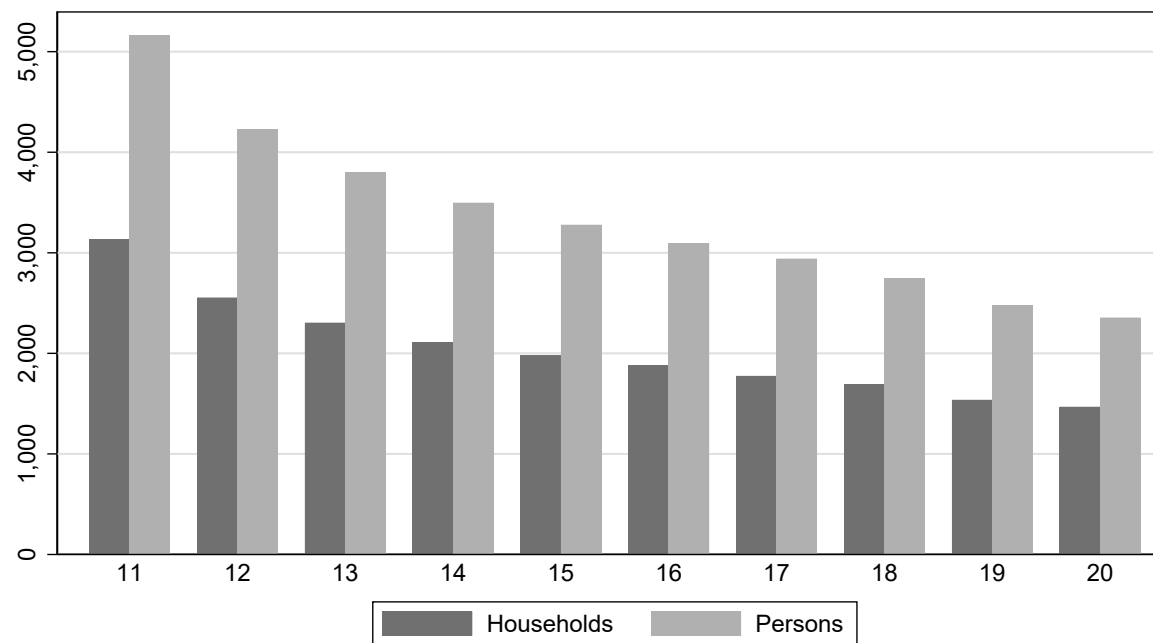


Figure 9: Comparison of Successful Interviews with Persons and Households (Subsample J), Waves 1 to 10

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Persons	5,161	4,229	3,801	3,498	3,279	3,096	2,942	2,746	2,476	2,356
Households	3,136	2,555	2,305	2,110	1,983	1,883	1,776	1,692	1,538	1,469

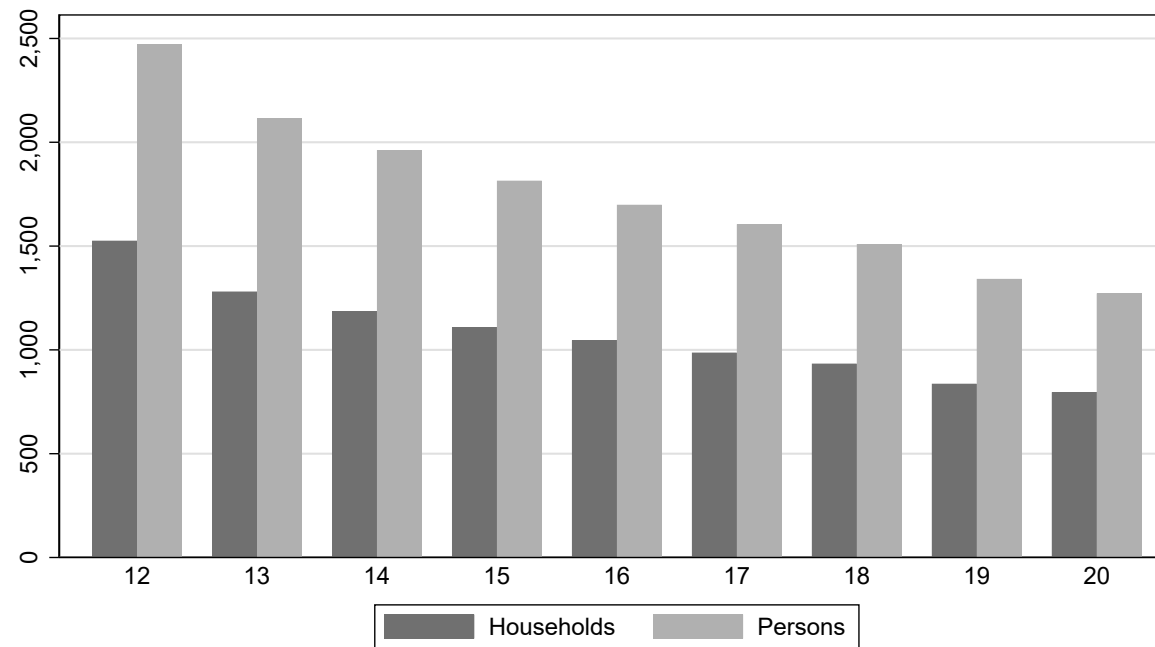


Figure 10: Comparison of Successful Interviews with Persons and Households (Subsample K), Waves 1 to 9

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020
Persons	2,473	2,115	1,962	1,815	1,699	1,605	1,510	1,342	1,272
Households	1,526	1,281	1,187	1,108	1,046	987	934	837	796



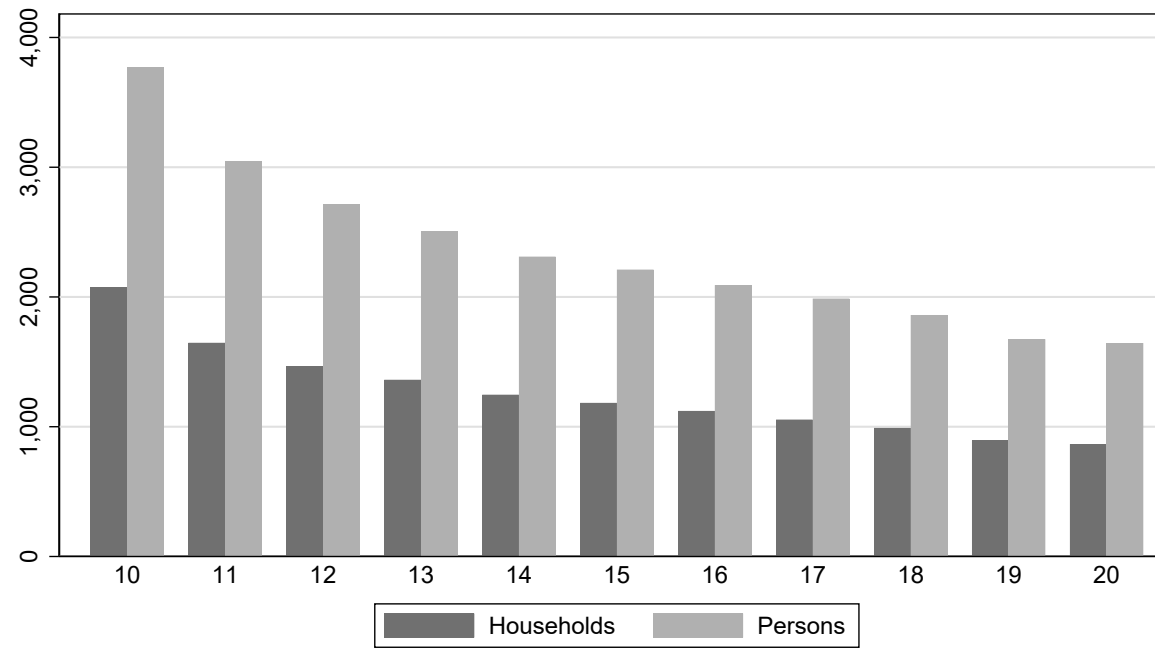


Figure 11: Comparison of Successful Interviews with Persons and Households (Subsample L1), Waves 1 to 11

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Persons	3,770	3,048	2,713	2,506	2,311	2,211	2,091	1,988	1,861	1,675	1,645
Households	2,074	1,647	1,467	1,362	1,247	1,184	1,122	1,055	991	894	866

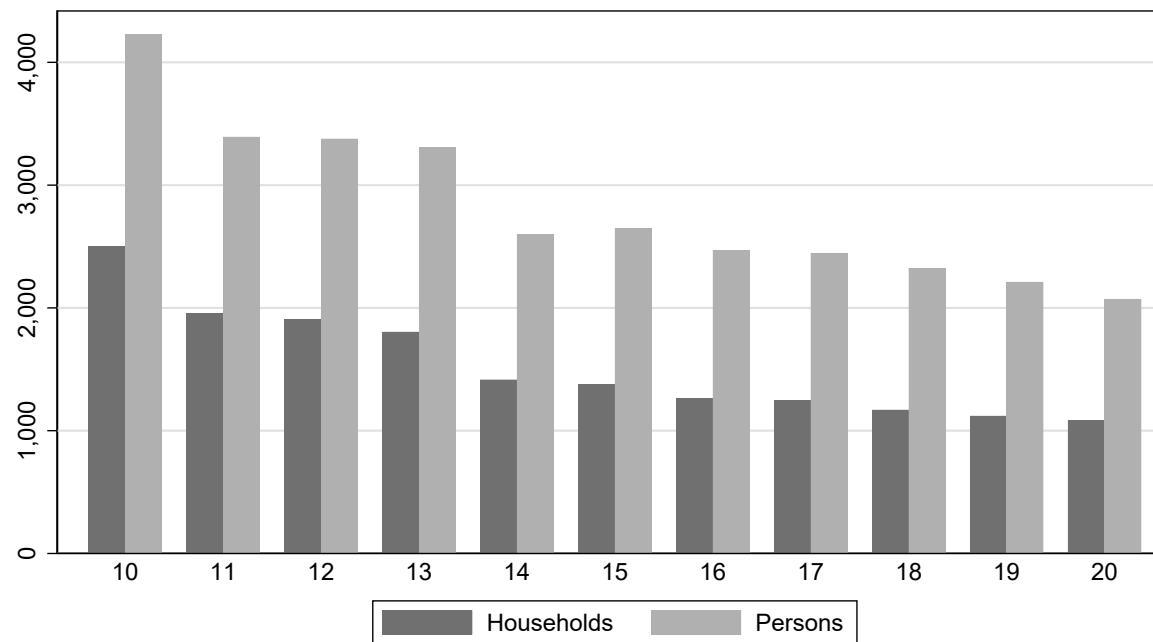


Figure 12: Comparison of Successful Interviews with Persons and Households (Subsample L2), Waves 1 to 11 <sup>25,26</sup>

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Persons	4,227	3,393	3,378	3,307	2,600	2,647	2,469	2,447	2,324	2,212	2,073
Households	2,500	1,958	1,907	1,805	1,416	1,379	1,265	1,247	1,170	1,121	1,087

<sup>25</sup>237 households were identified not to be part of the target population and were not followed in the second wave.

<sup>26</sup>In 2014 the default interview mode changed to Computer-Assisted Web Interviewing (CAWI).

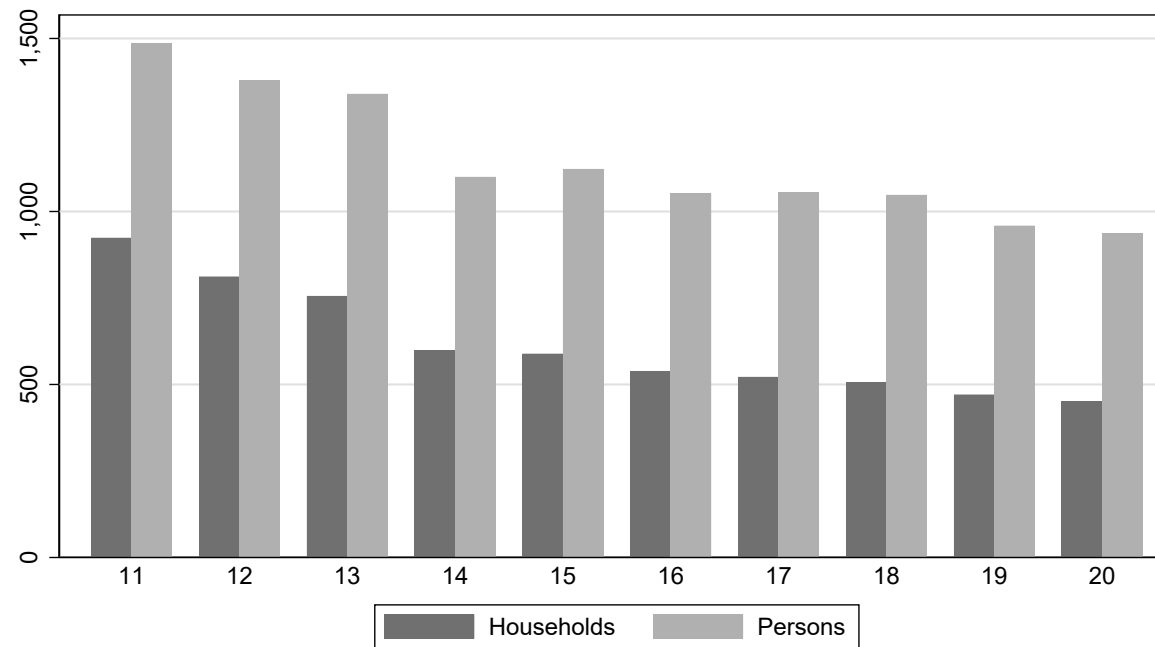


Figure 13: Comparison of Successful Interviews with Persons and Households (Subsample L3), Waves 1 to 10<sup>27</sup>

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Persons	1,487	1,379	1,340	1,100	1,123	1,052	1,056	1,048	959	937
Households	924	812	756	599	589	539	522	506	471	451

<sup>27</sup>In 2014 the default interview mode changed to Computer-Assisted Web Interviewing (CAWI).

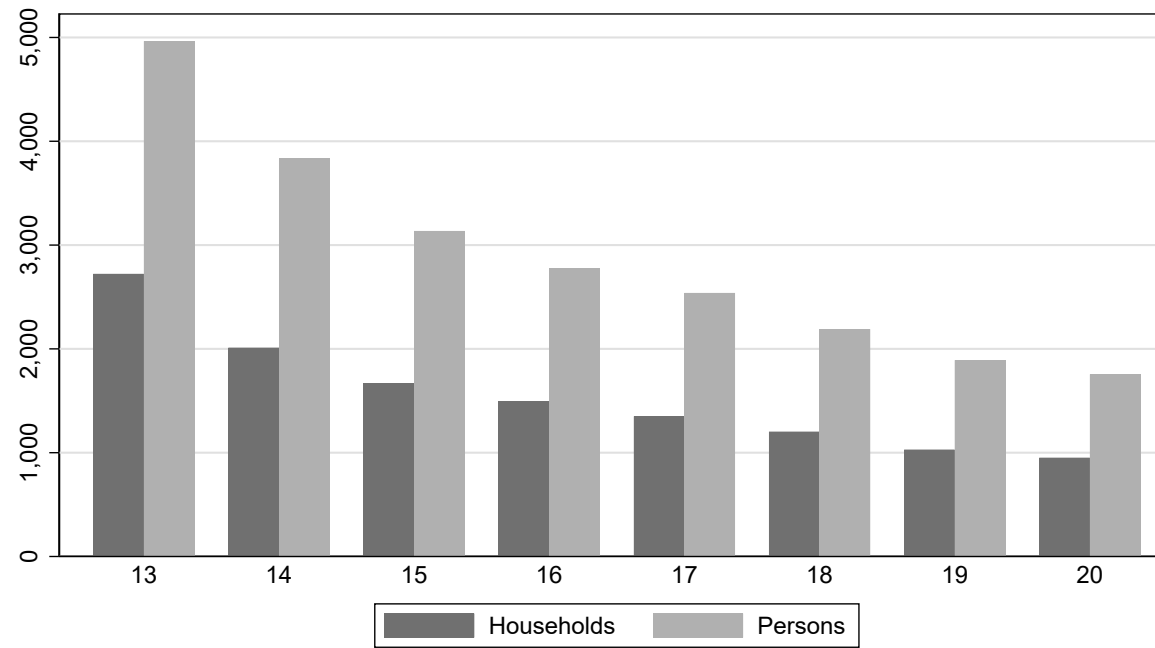


Figure 14: Comparison of Successful Interviews with Persons and Households (Subsample M1), Waves 1 to 8

Year	2013	2014	2015	2016	2017	2018	2019	2020
Persons	4,964	3,835	3,136	2,778	2,539	2,190	1,891	1,755
Households	2,723	2,012	1,667	1,493	1,350	1,203	1,030	952

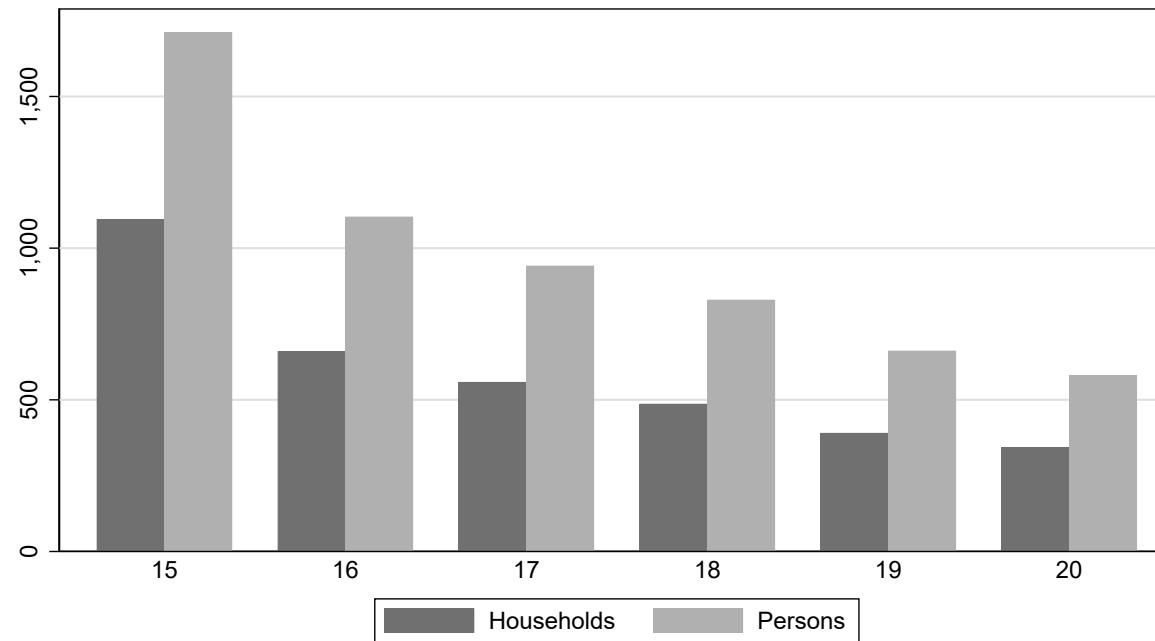


Figure 15: Comparison of Successful Interviews with Persons and Households (Subsample M2), Waves 1 to 6

Year	2015	2016	2017	2018	2019	2020
Persons	1,711	1,104	942	830	662	582
Households	1,096	660	559	487	391	344

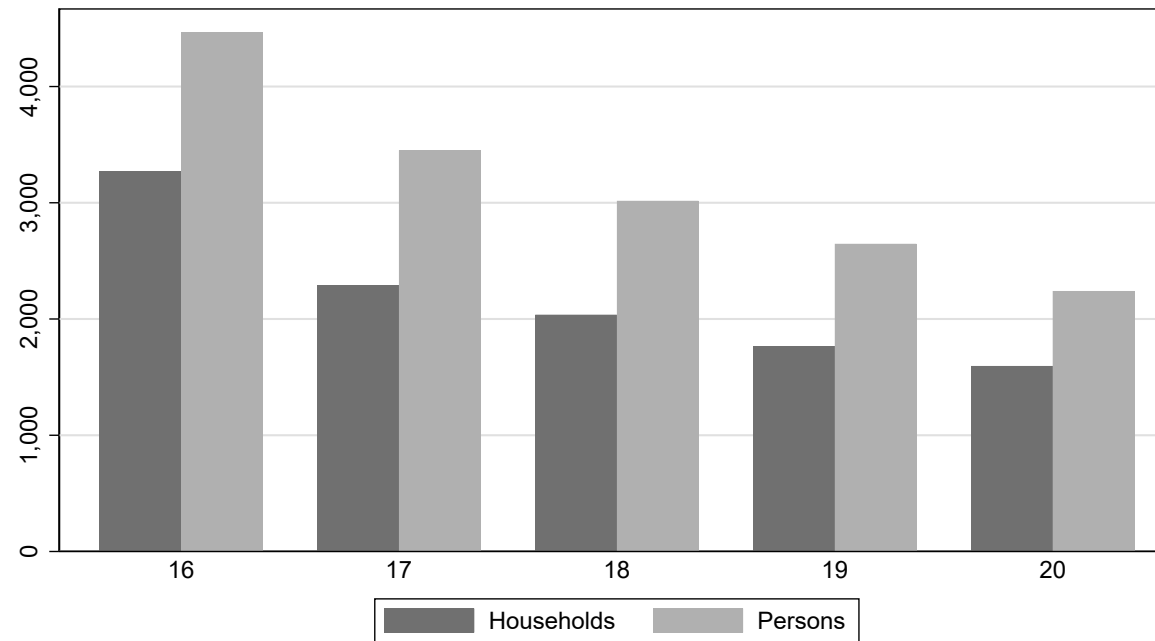


Figure 16: Comparison of Successful Interviews with Persons and Households (Subsamples M3/M4), Waves 1 to 5

Year	2016	2017	2018	2019	2020
Persons	4,465	3,451	3,017	2,647	2,241
Households	3,273	2,291	2,037	1,764	1,596

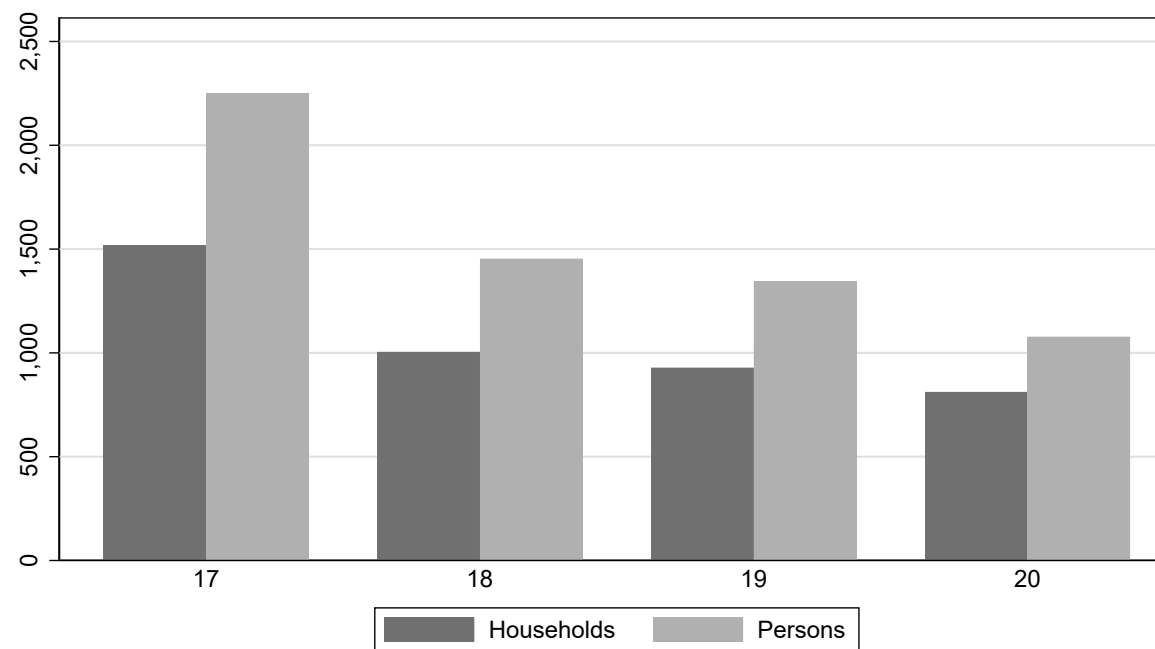


Figure 17: Comparison of Successful Interviews with Persons and Households (Subsample M5), Waves 1 to 4

Year	2017	2018	2019	2020
Persons	2,252	1,454	1,346	1,078
Households	1,519	1,005	929	812

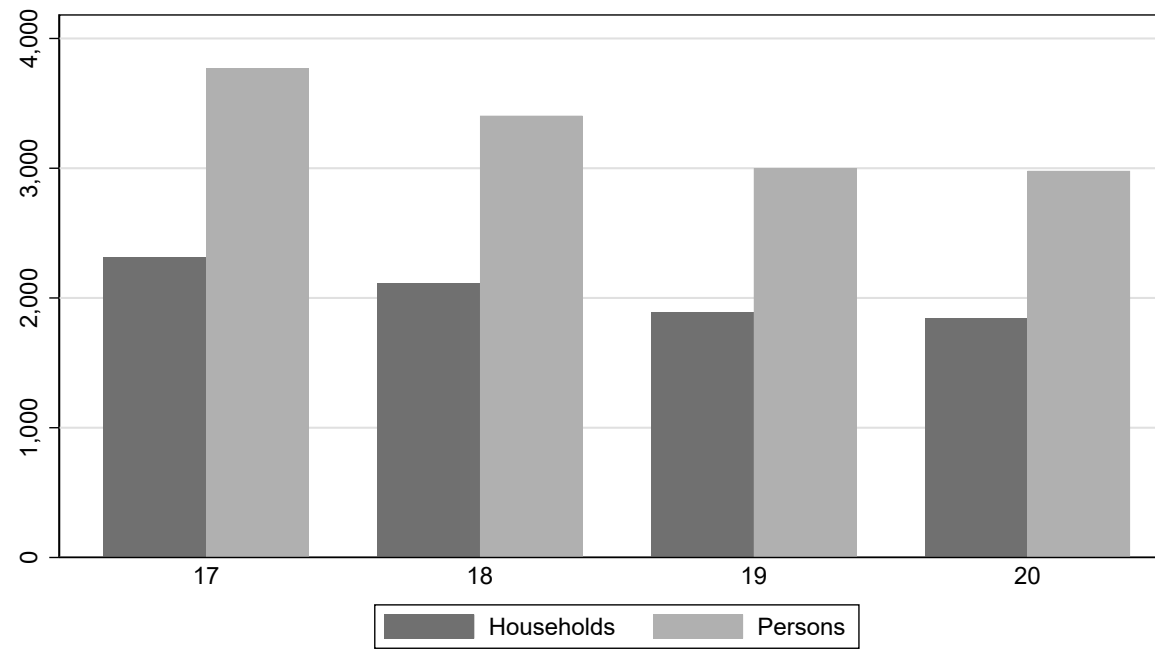


Figure 18: Comparison of Successful Interviews with Persons and Households (Subsample N), Waves 1 to 4

Year	2017	2018	2019	2020
Persons	3,770	3,405	3,000	2,980
Households	2,314	2,114	1,889	1,844



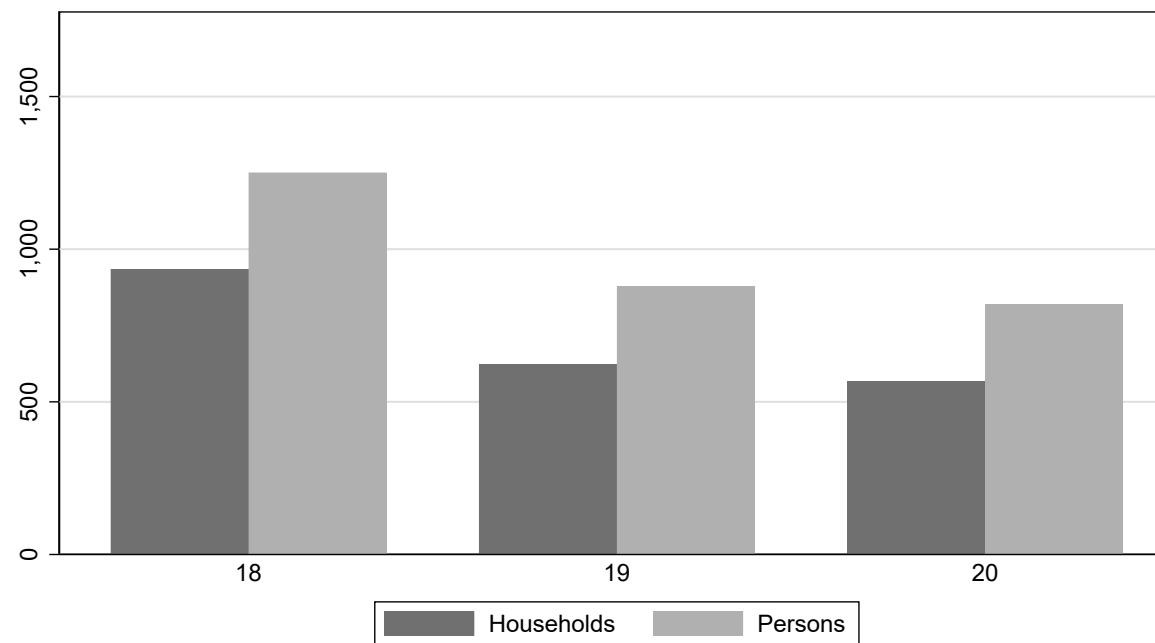


Figure 19: Comparison of Successful Interviews with Persons and Households (Subsample O), Waves 1 to 3

Year	2018	2019	2020
Persons	1,251	879	820
Households	935	623	568

## 2.2 Continuance and Exit: The First Wave Gross Samples and their Participation Behavior

The following figures display the participation behavior of the first-wave respondents in the subsequent years distinguishing between continued participation (“With interview”), exits due to survey-unrelated attrition (“Moved abroad”, “Deceased”, “Under the age of 16”), and exits due to survey-related attrition (“Temporary drop-out”, “Drop-out”).

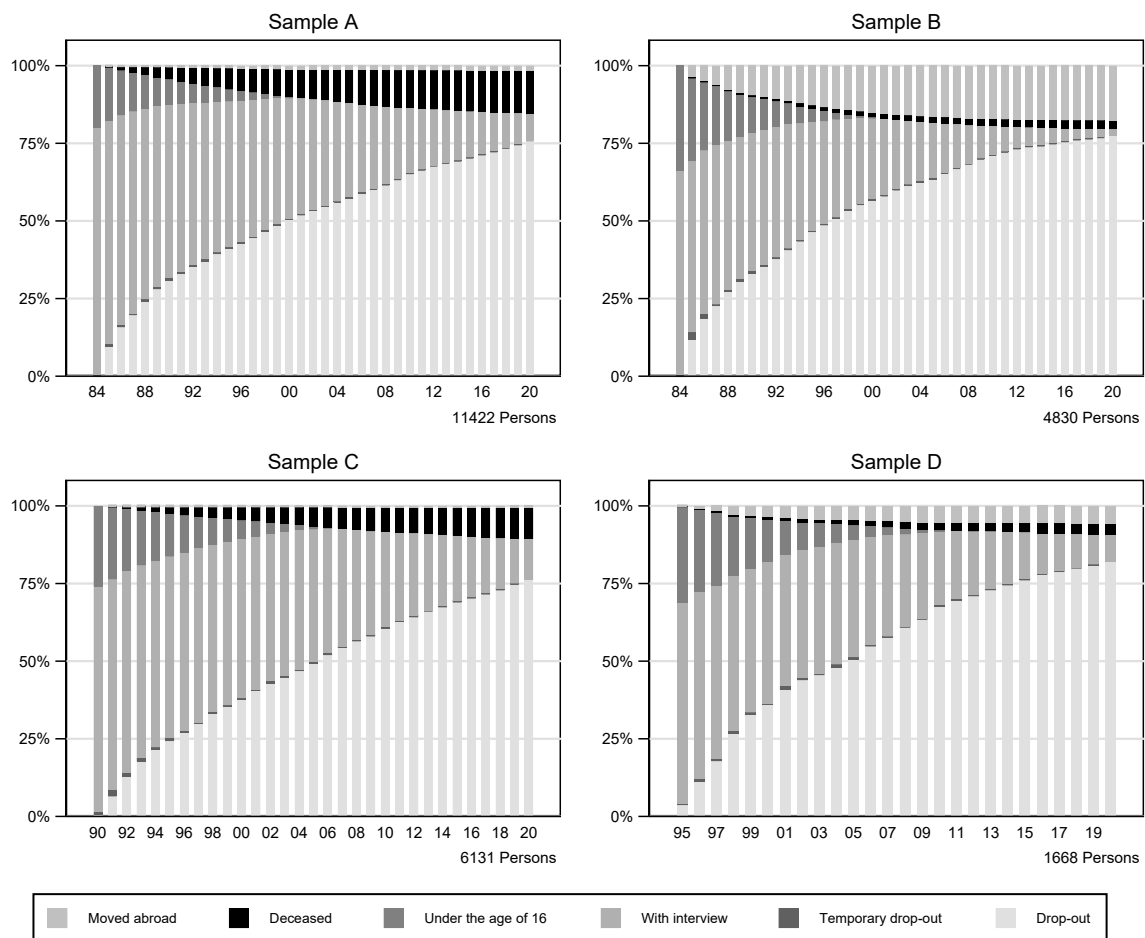


Figure 20: First-Wave Persons and their Participation Behavior. Development up to 2020

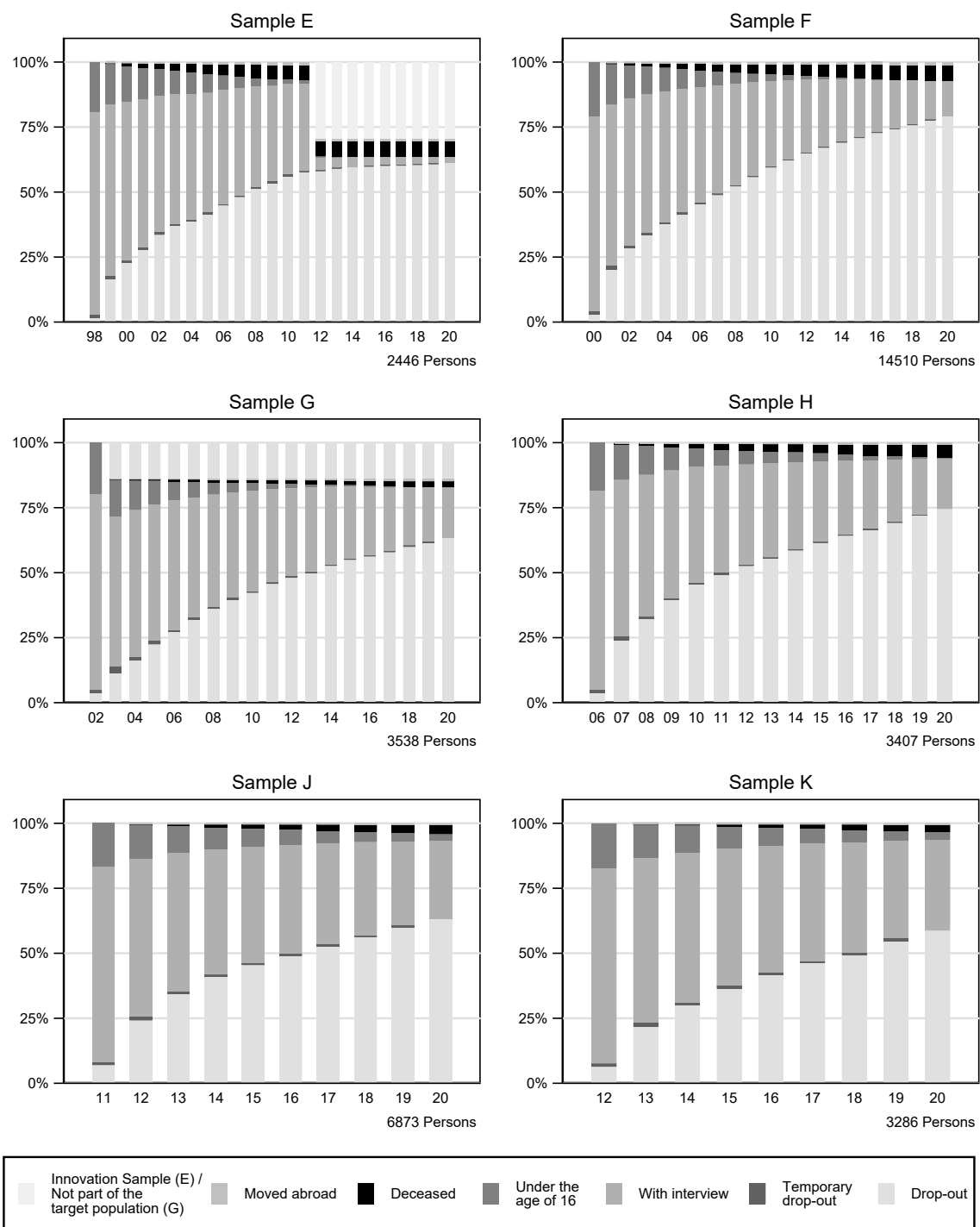


Figure 20: First-Wave Persons and their Participation Behavior. Development up to 2020

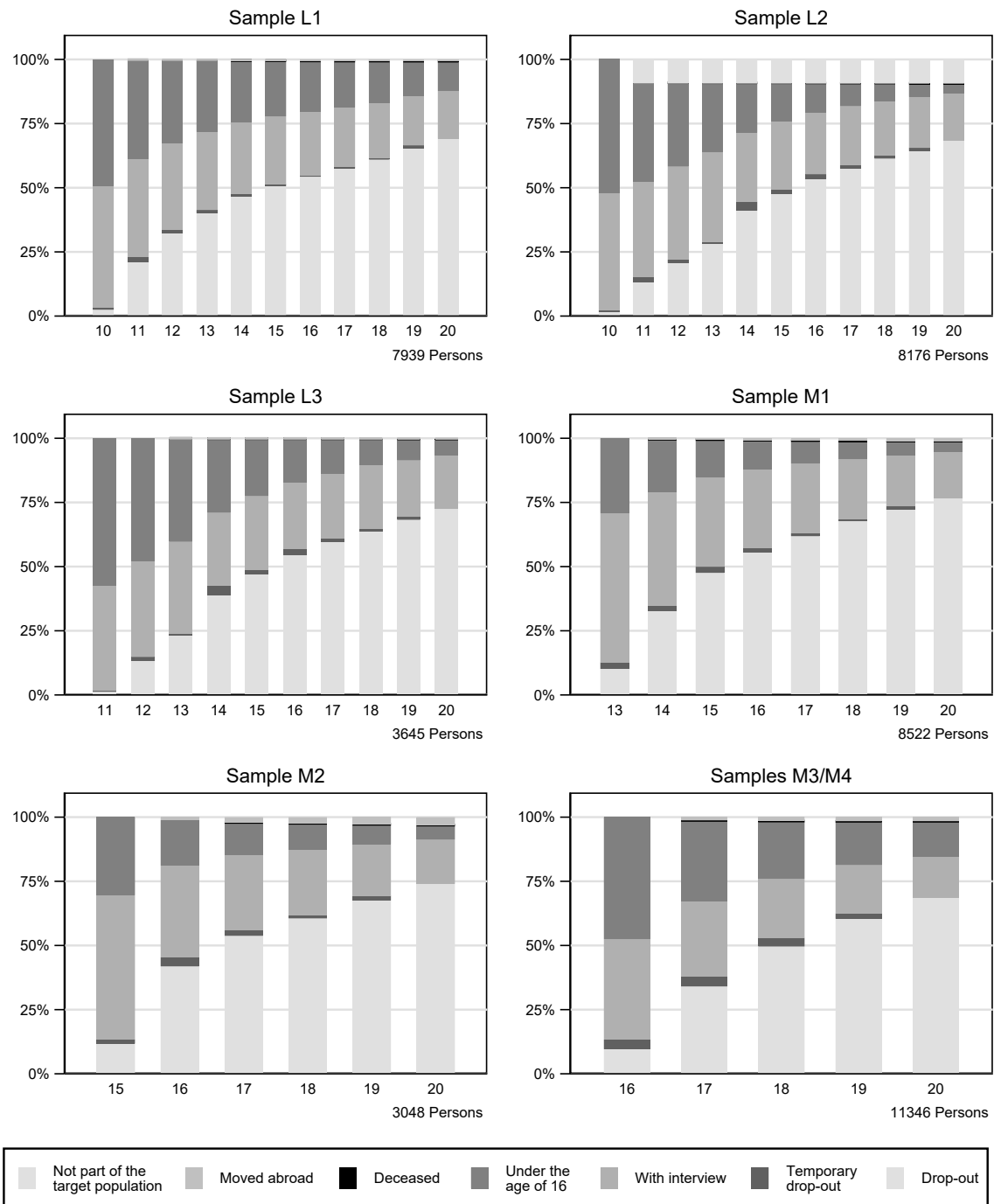


Figure 20: First-Wave Persons and their Participation Behavior. Development up to 2020

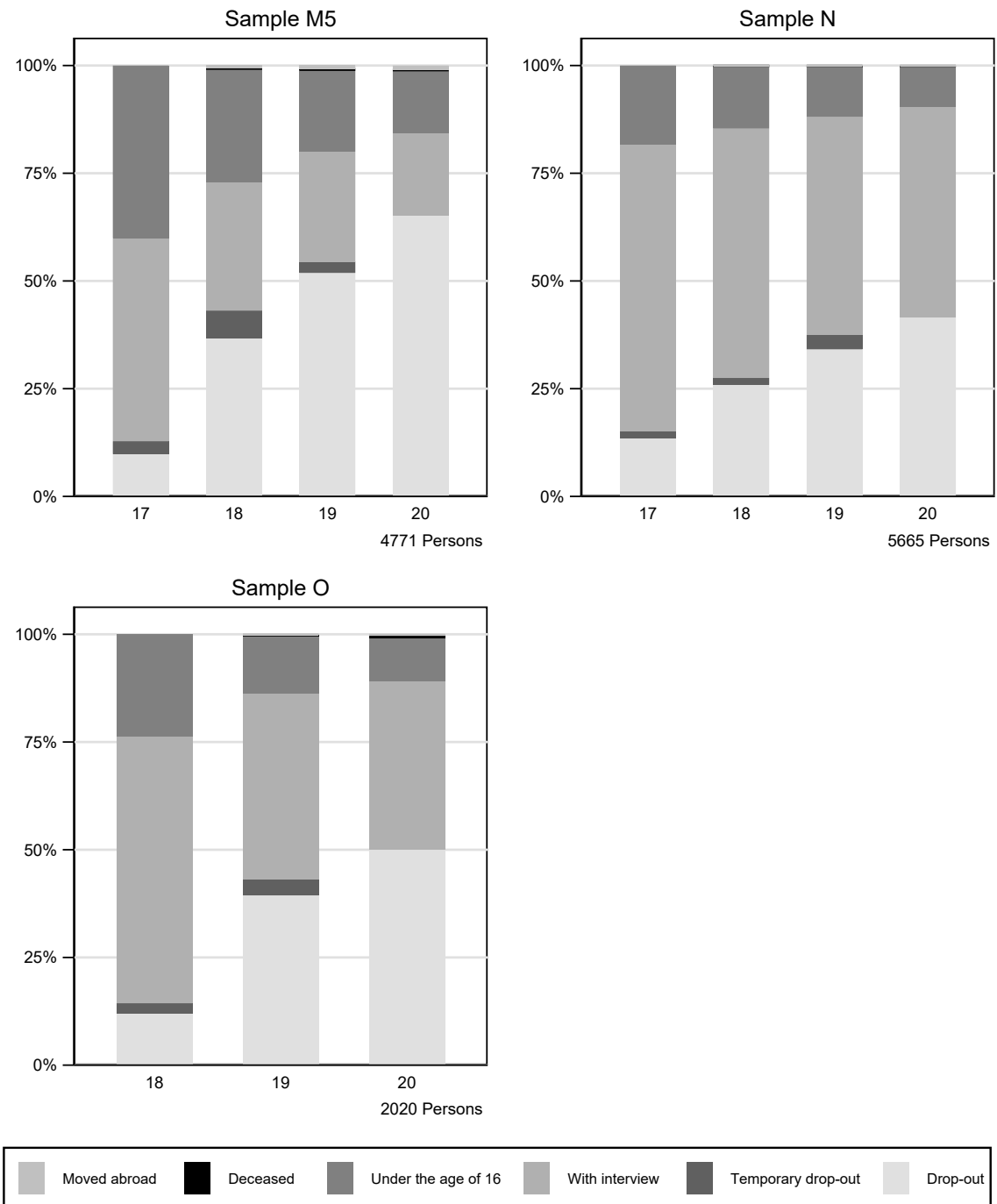


Figure 20: First-Wave Persons and their Participation Behavior. Development up to 2020

## 2.3 New Entrants through birth or move into SOEP Households and their Participation Behavior

The following figures display the participation behavior of the non-original sample members and their entrance to the ongoing survey, distinguishing between continuation of participation, exits due to survey unrelated attrition, and exits due to survey-related attrition.

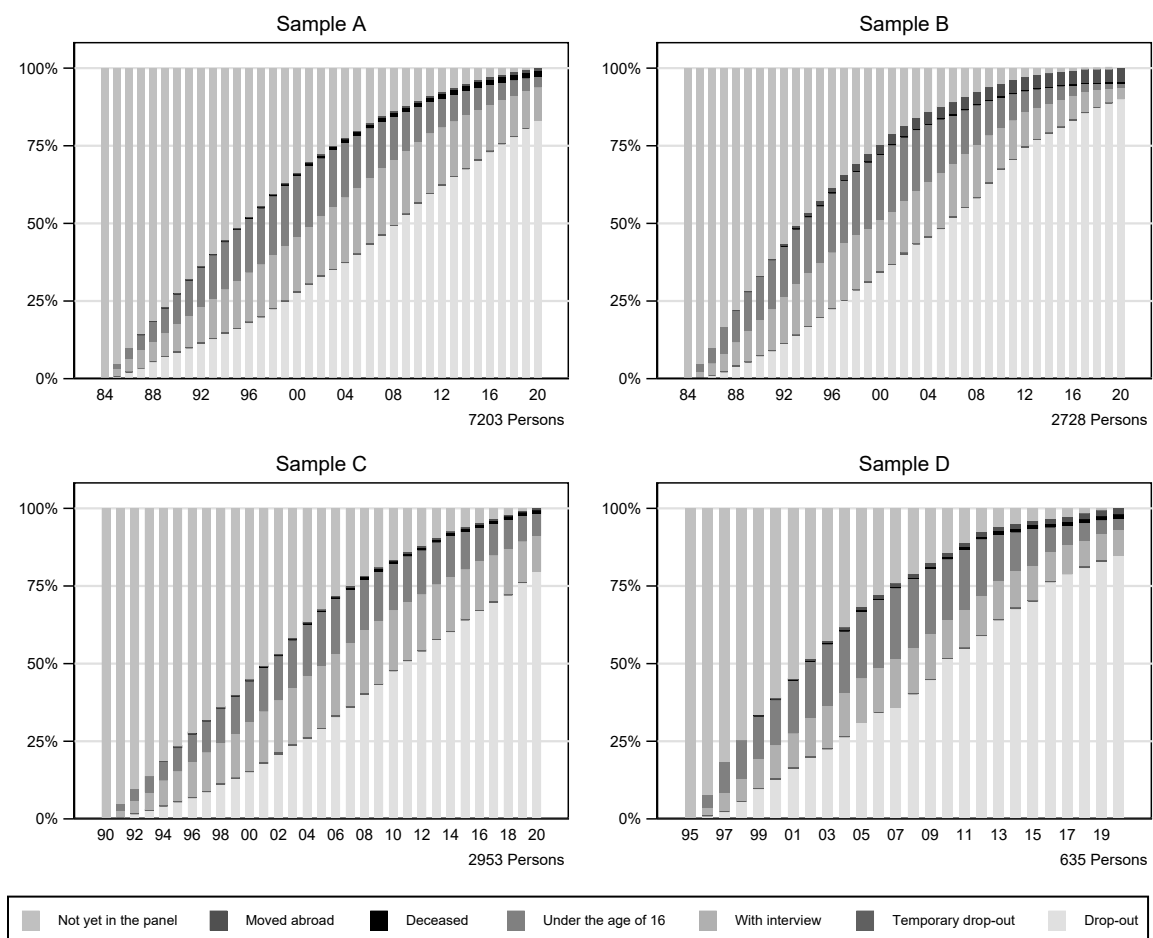


Figure 21: Entrants and their Participation Behavior. Development up to 2020

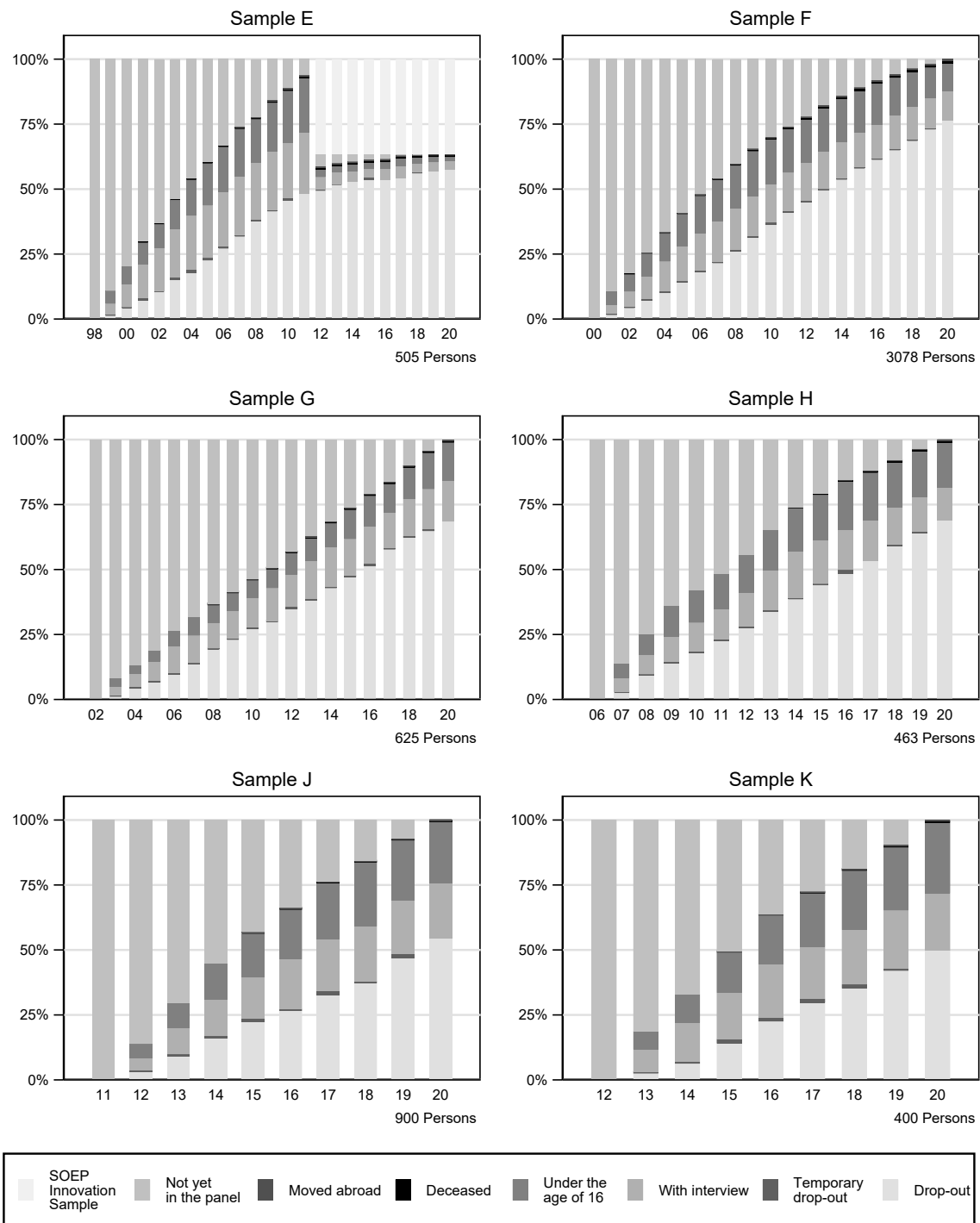


Figure 21: Entrants and their Participation Behavior. Development up to 2020

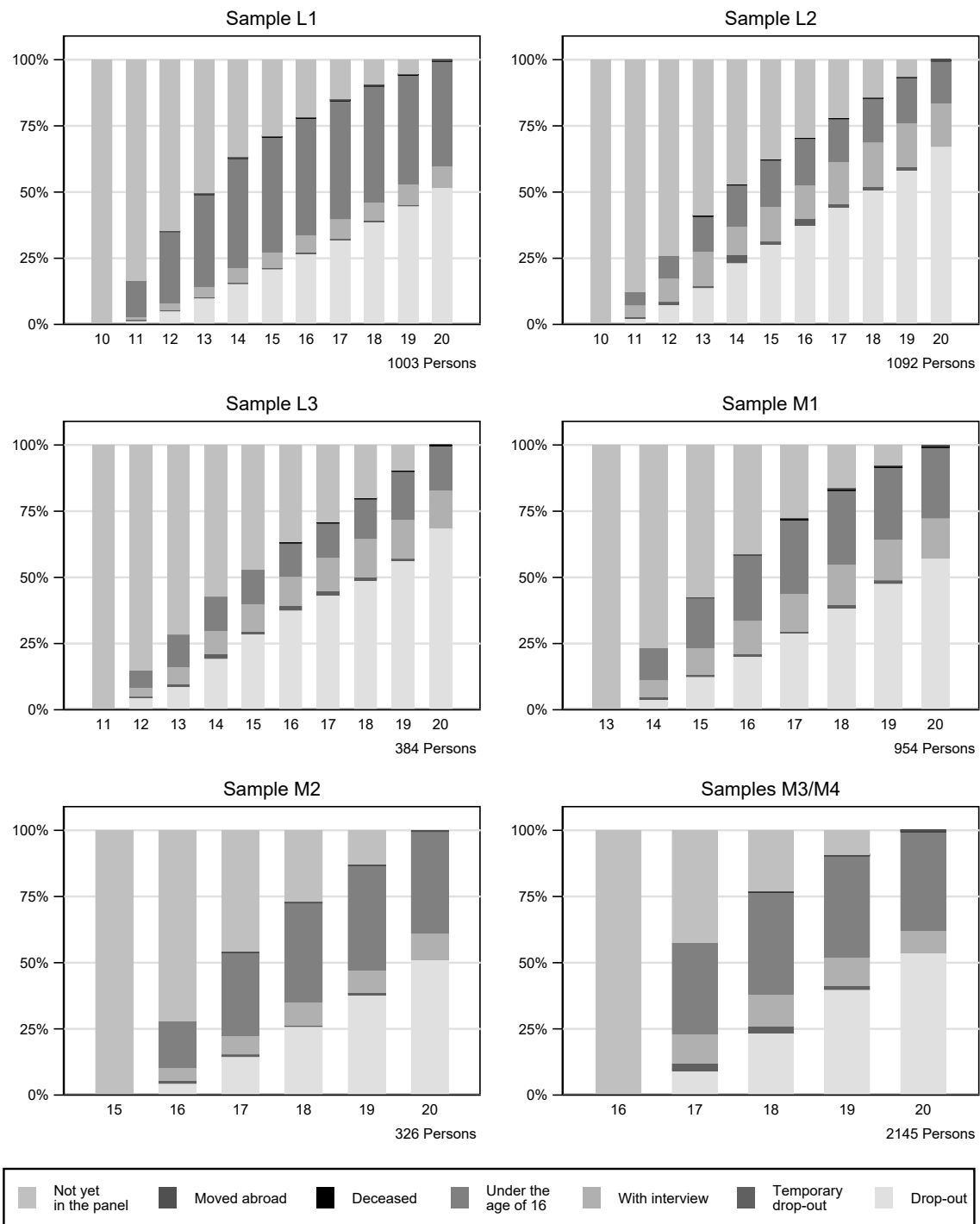


Figure 21: Entrants and their Participation Behavior. Development up to 2020



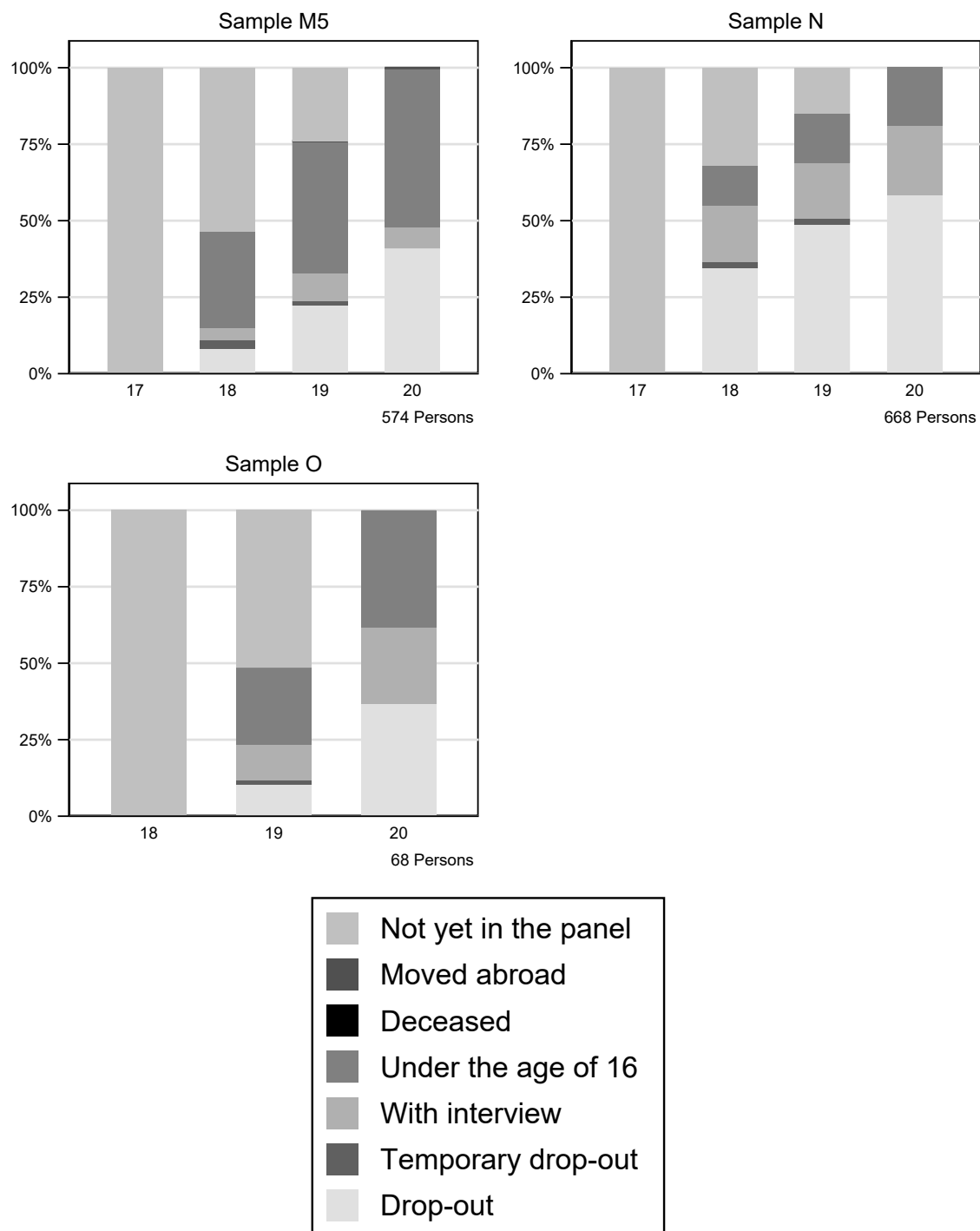


Figure 21: Entrants and their Participation Behavior. Development up to 2020

## 2.4 Original Households and Split-Offs

In case a household splits in multiple households (for instance, because a household member moves into another apartment), all resulting split-off households will be interviewed. The household which is not moving keeps the initial household number. These households are referred to as an “original household”<sup>28</sup>. The following figures display the development of the share of original households for each sample.

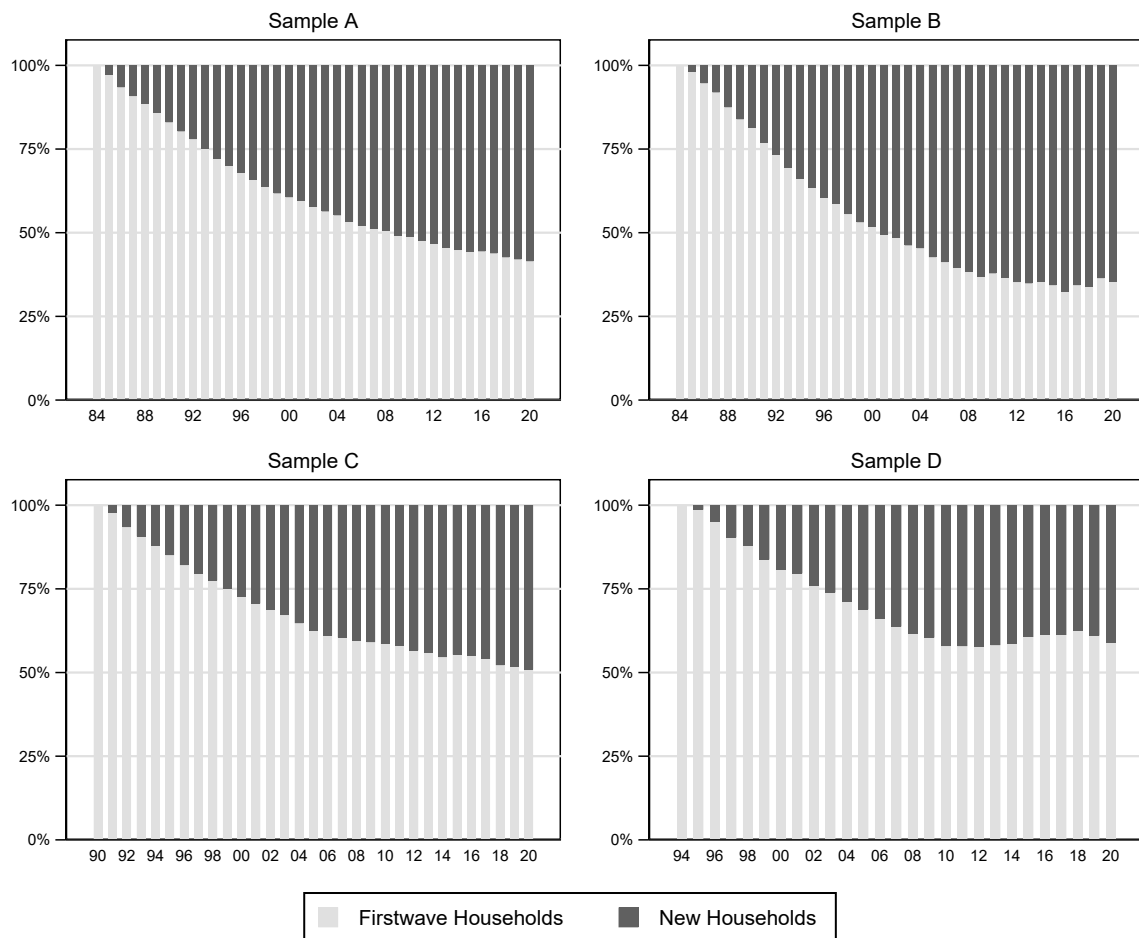


Figure 22: Proportion of First-Wave and New Households. Development up to 2020

<sup>28</sup>For detailed studies on the relevance of non-original sample members in the SOEP, see Schonlau et al. (2011) and Spiess et al. (2008).

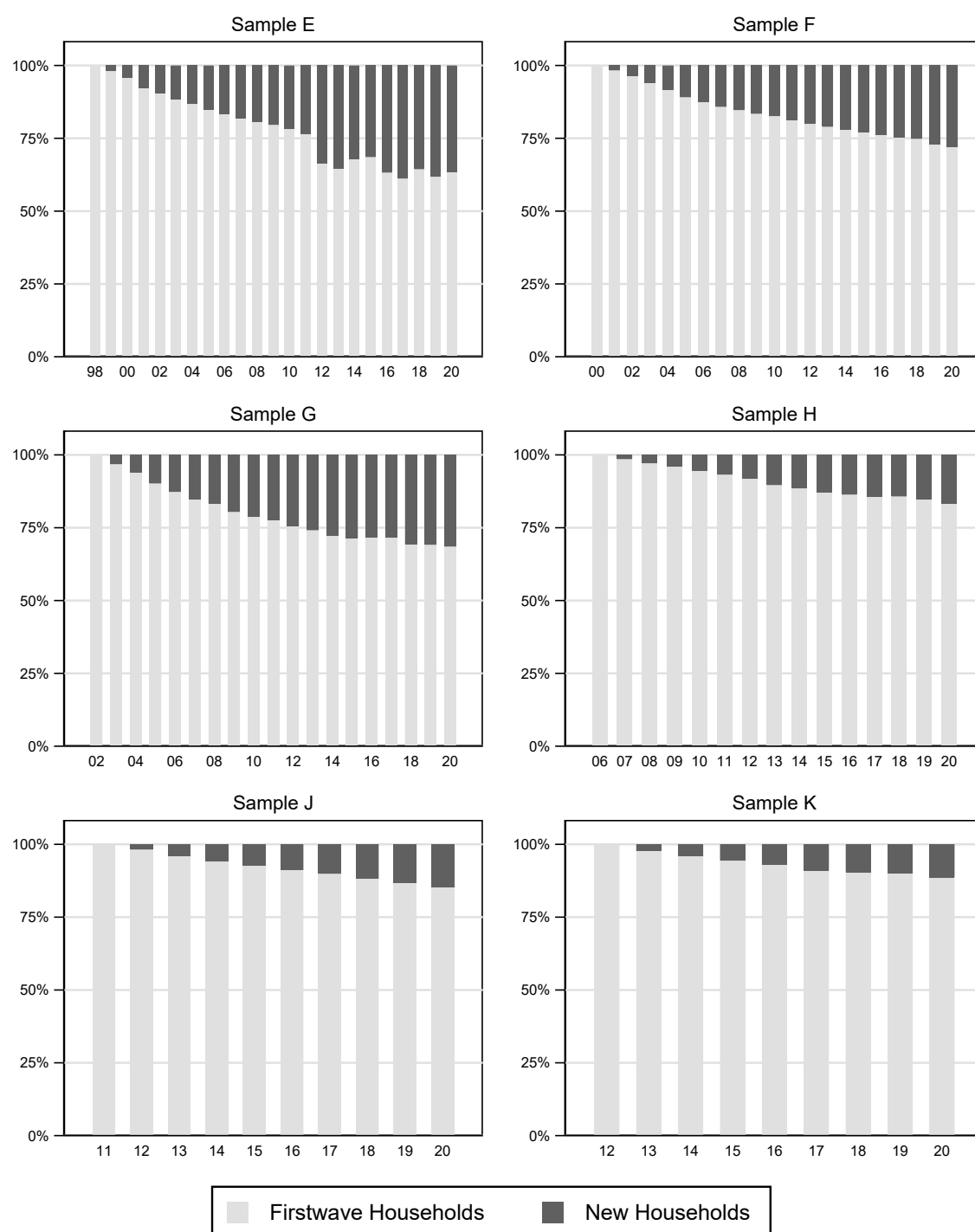


Figure 22: Proportion of First-Wave and New Households. Development up to 2020

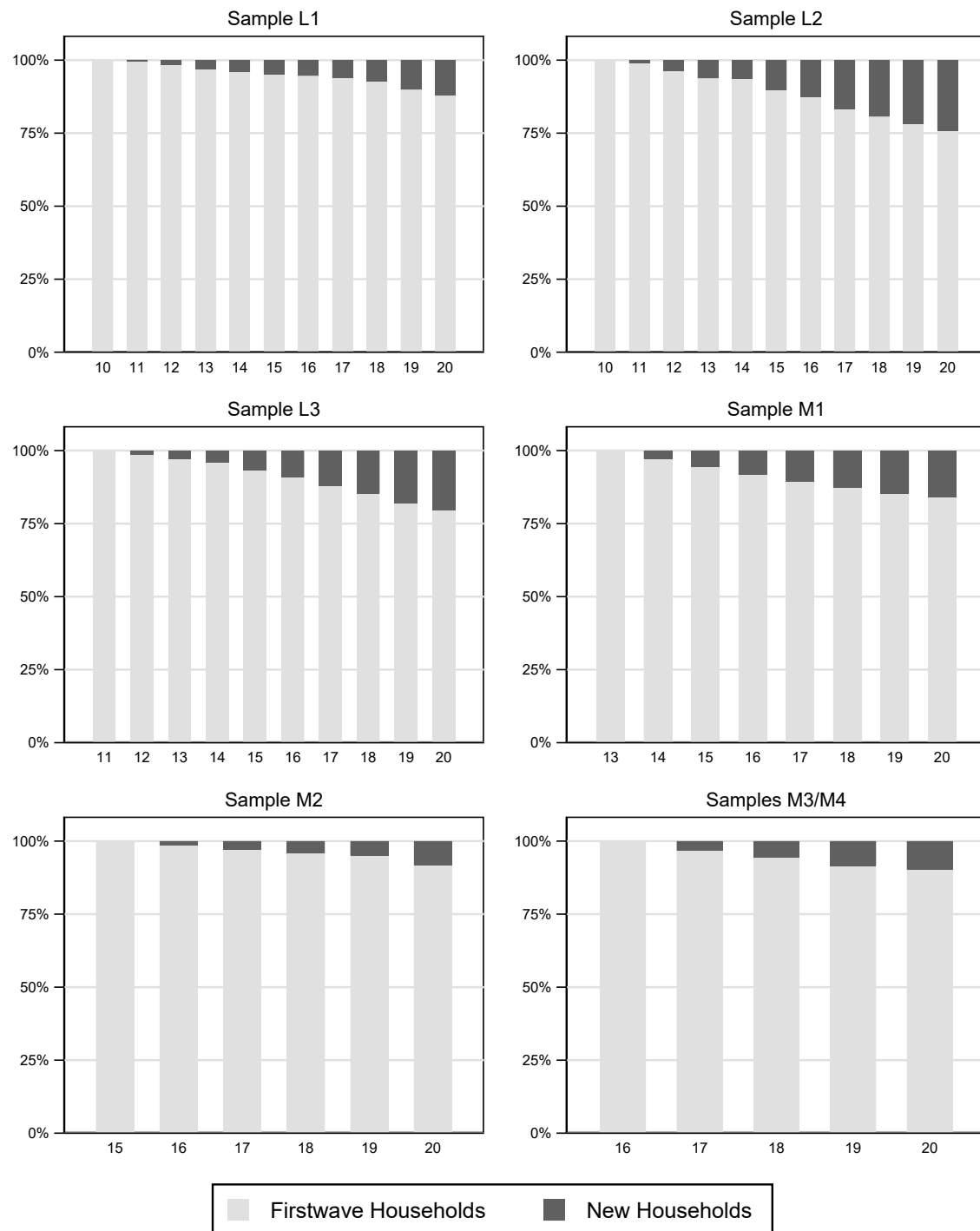


Figure 22: Proportion of First-Wave and New Households. Development up to 2020

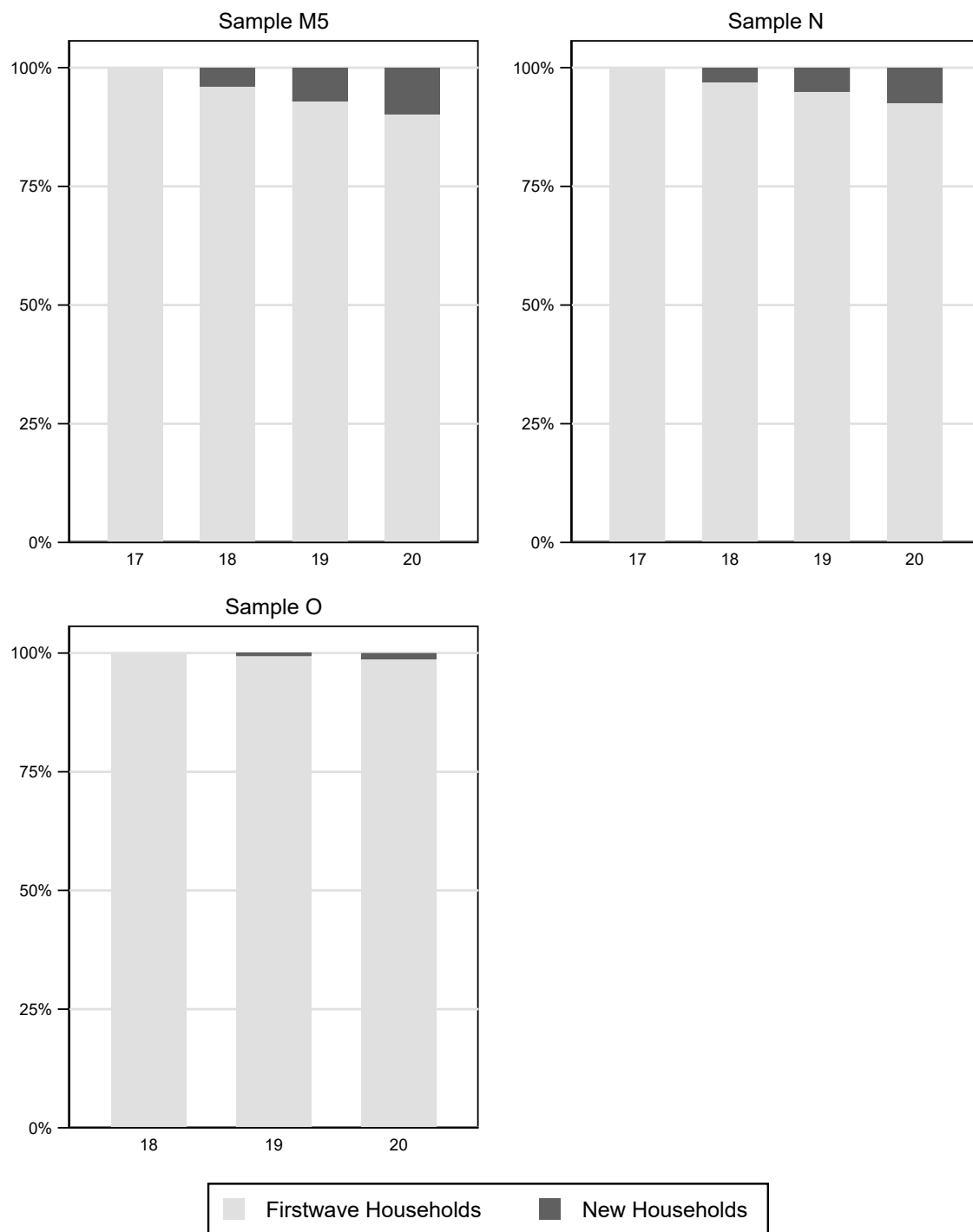


Figure 22: Proportion of First-Wave and New Households. Development up to 2020

## 2.5 The Risk of Survey-Related Panel Attrition

The following figures display Kaplan-Meier estimates of the survey related attrition risk (unsuccessful follow-up and refusal) of the net sample of first-wave respondents thereby ignoring survey unrelated exits (moves abroad and deaths). These figures stratify the drop-out risk in different groups of the sample defined by respondents' sample membership (Figures 23 through 27) and some basic socio-demographic characteristics measured in the year of sampling, such as age, occupation, income, and education (Figures 29, 30, 31, and 32 respectively). These unweighted figures show in general only moderate differences in the risk of survey related attrition between groups of the sample. Among the older samples A through C (Figure 23), for instance, first-wave respondents from sample B have a somewhat lower probability of remaining in the survey than respondents from samples A or C.

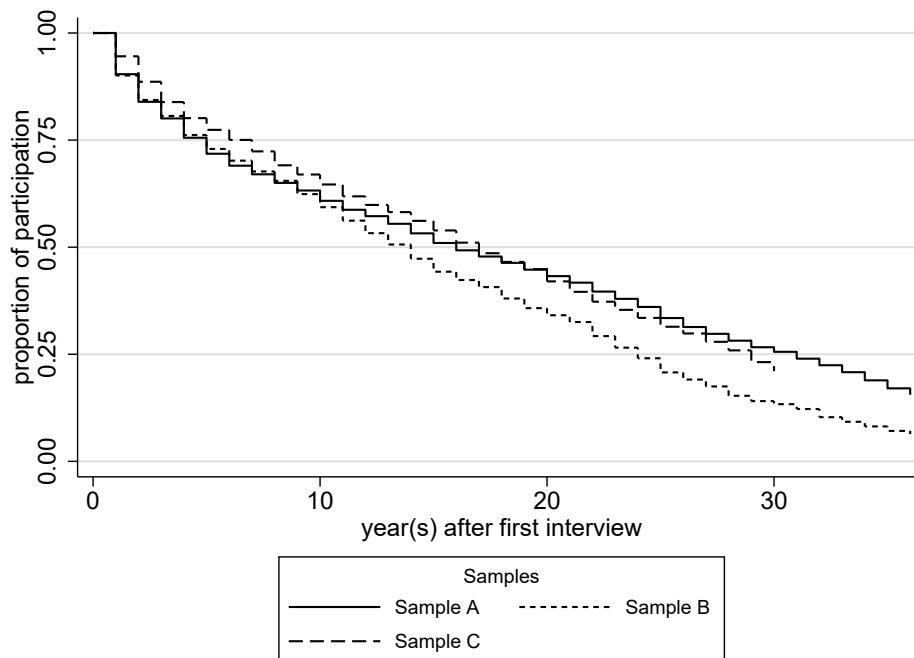


Figure 23: Successful Re-Interviewing of First-Wave Respondents by Subsamples A, B, C. Kaplan-Meier Estimates of Survey-Related Attrition Ignoring Deaths and Moves Abroad

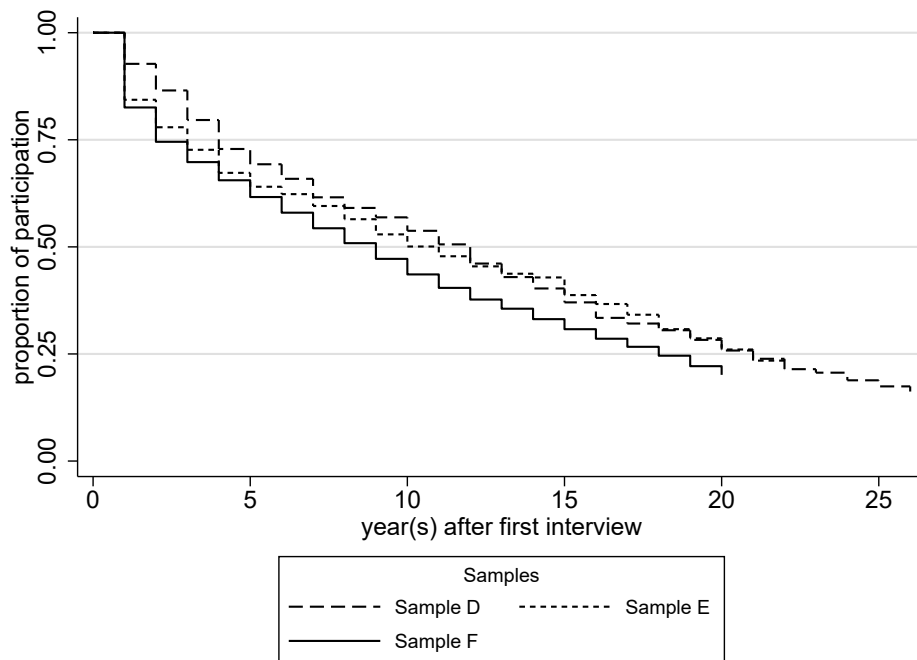


Figure 24: Successful Re-Interviewing of First-Wave Respondents by Subsamples D, E, F. Kaplan-Meier Estimates of Survey-Related Attrition Ignoring Deaths and Moves Abroad

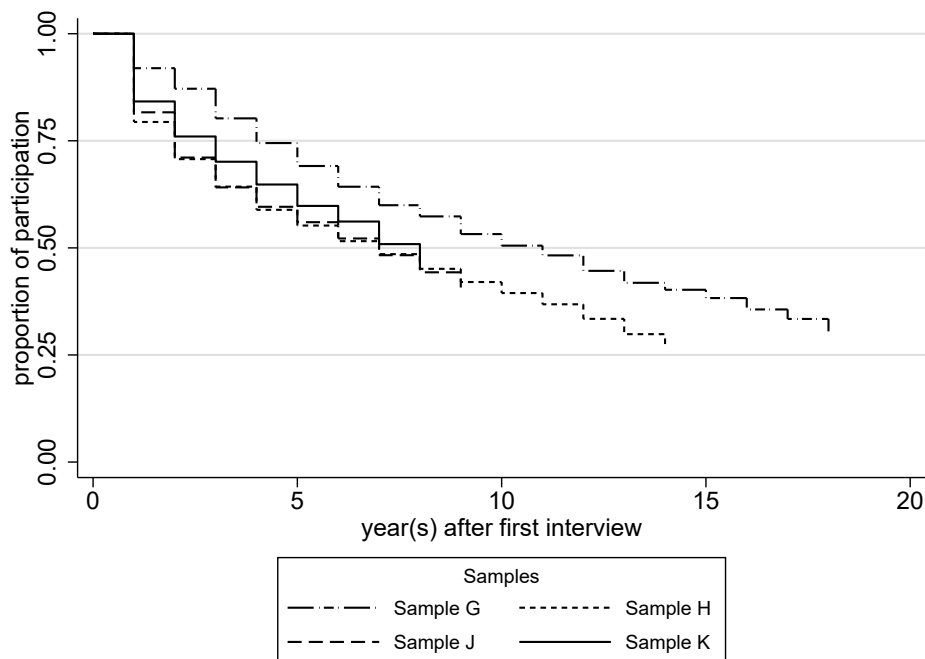


Figure 25: Successful Re-Interviewing of First-Wave Respondents by Subsamples G, H, J and K. Kaplan-Meier Estimates of Survey-Related Attrition Ignoring Deaths and Moves Abroad

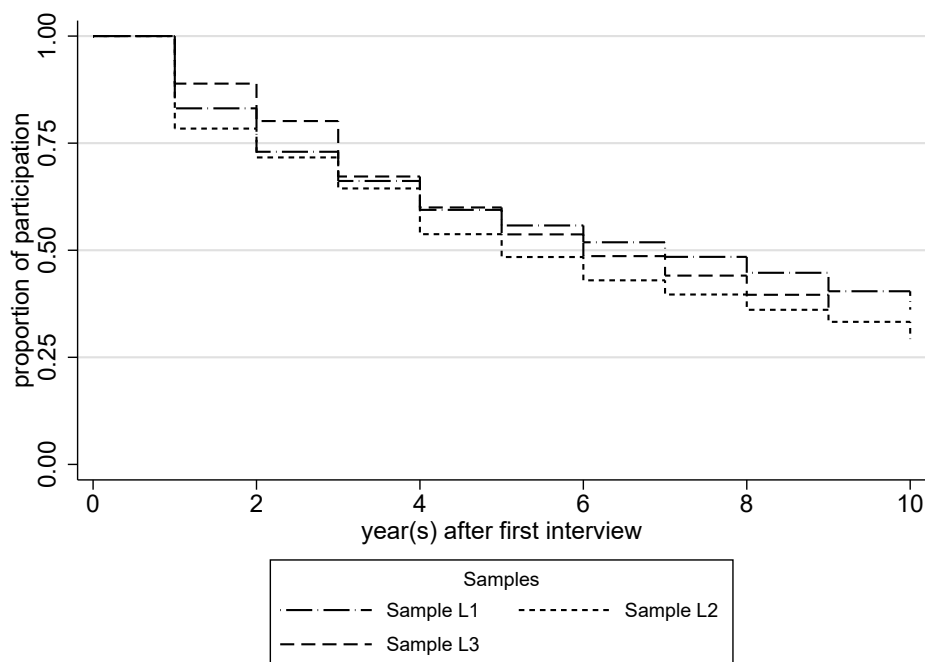


Figure 26: Successful Re-Interviewing of First-Wave Respondents by Subsamples L1, L2 and L3. Kaplan-Meier Estimates of Survey-Related Attrition Ignoring Deaths and Moves Abroad

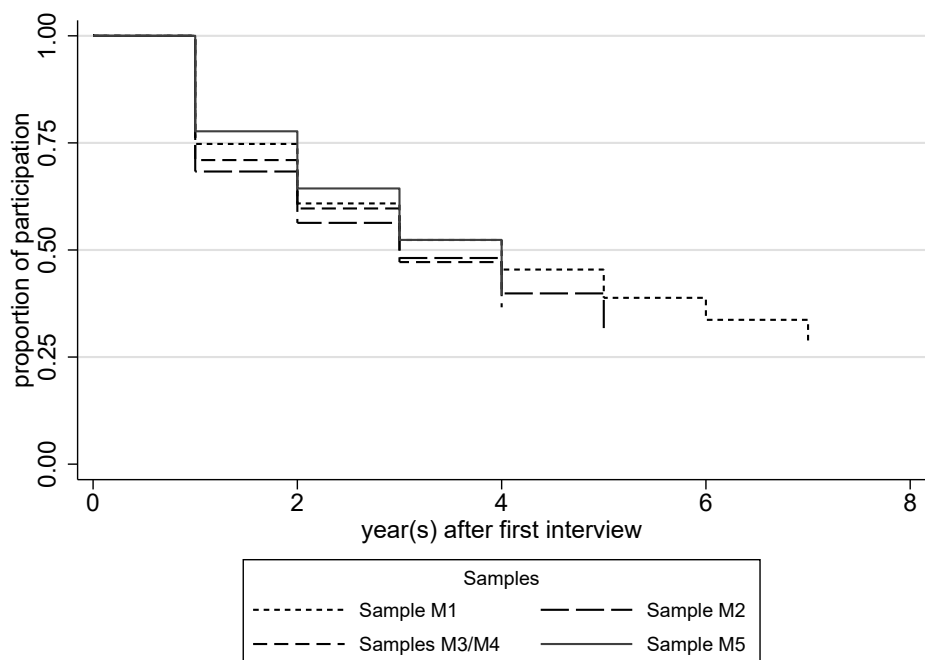


Figure 27: Successful Re-Interviewing of First-Wave Respondents by Subsamples M1, M2, M3/M4 and M5. Kaplan-Meier Estimates of Survey-Related Attrition Ignoring Deaths and Moves Abroad



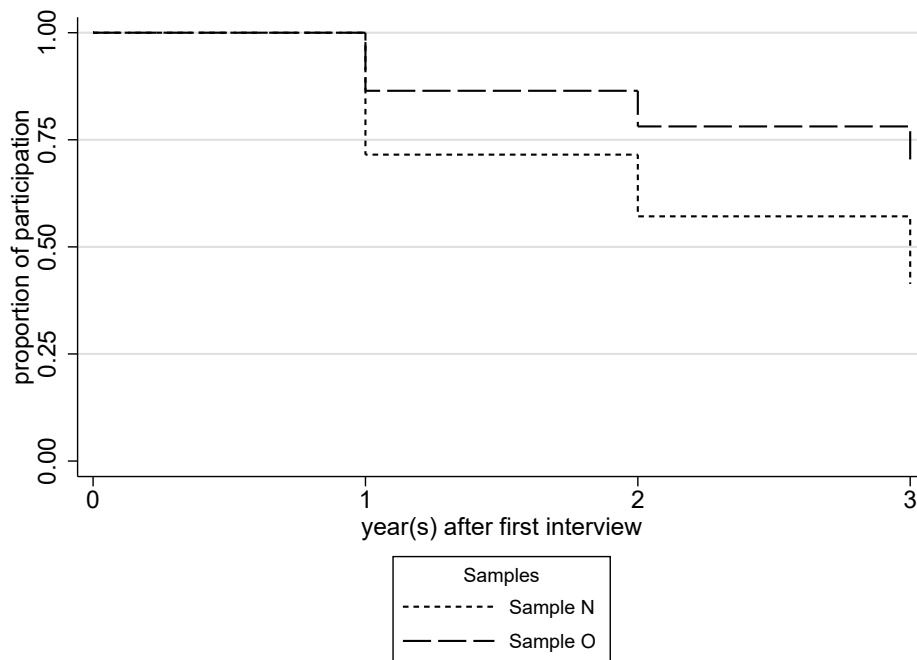


Figure 28: Successful Re-Interviewing of First-Wave Respondents by Subsamples N and O. Kaplan-Meier Estimates of Survey-Related Attrition Ignoring Deaths and Moves Abroad

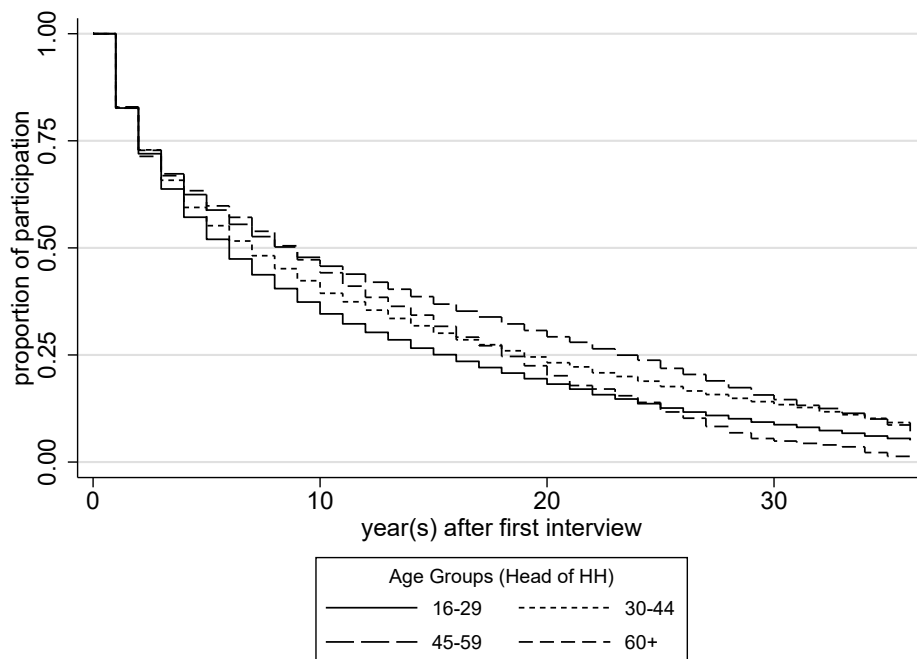


Figure 29: Successful Re-Interviewing of All First-Wave Respondents by Age Categories. Kaplan-Meier Estimates of Survey-Related Attrition Ignoring Deaths and Moves Abroad

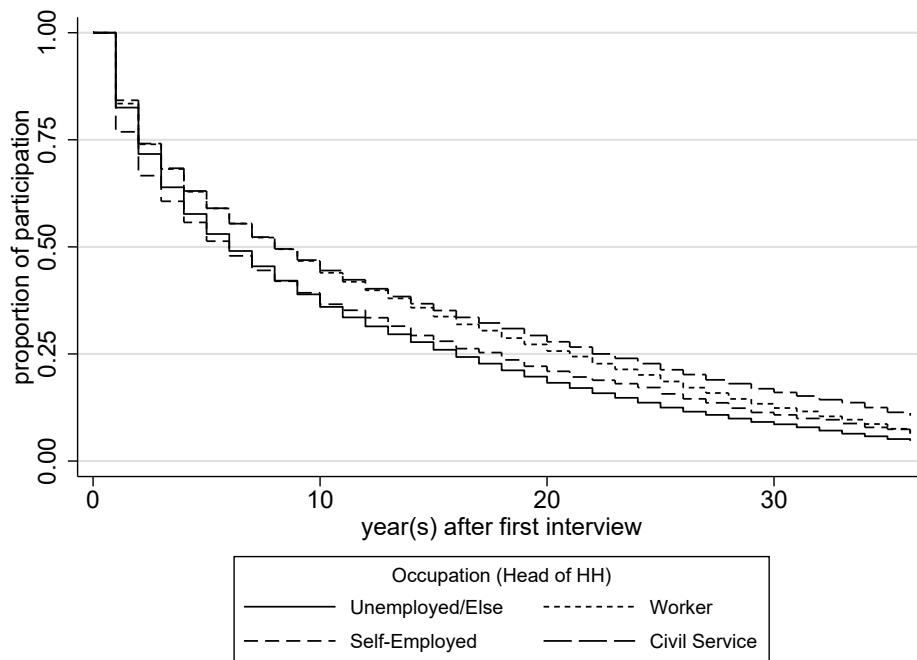


Figure 30: Successful Re-Interviewing of All First-Wave Respondents by Occupation. Kaplan-Meier Estimates of Survey-Related Attrition Ignoring Deaths and Moves Abroad

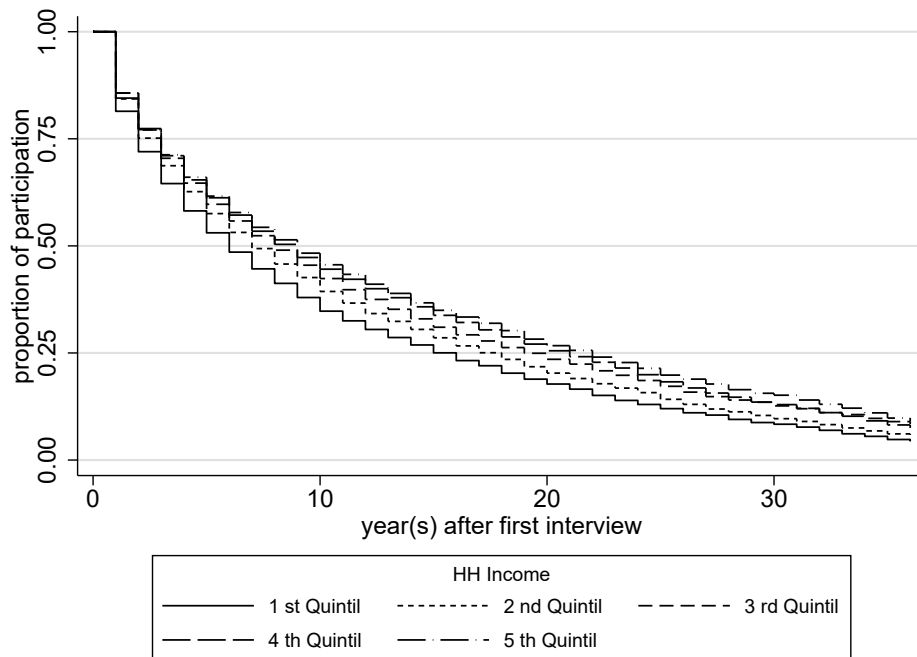


Figure 31: Successful Re-Interviewing of All First-Wave Respondents by Income Quintiles. Kaplan-Meier Estimates of Survey-Related Attrition Ignoring Deaths and Moves Abroad

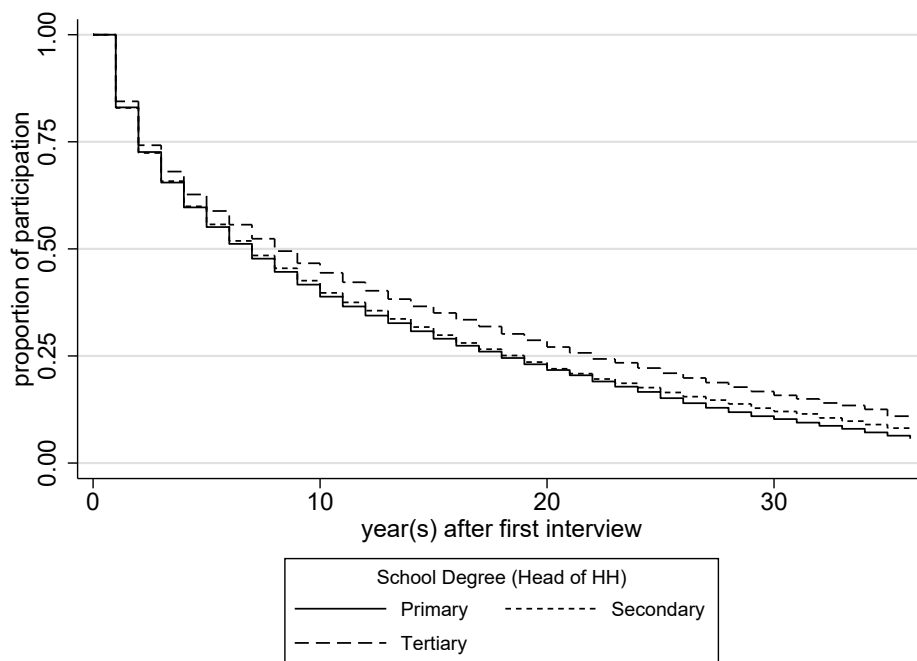


Figure 32: Successful Re-Interviewing of All First-Wave Respondents by Education. Kaplan-Meier Estimates of Survey-Related Attrition Ignoring Deaths and Moves Abroad

### 3 Panel Attrition Due to Unsuccessful Follow-Ups

In each panel wave, the first step in successful re-interviewing is the identification of the place of residence of households who took part in the preceding wave. The fieldwork organization of the SOEP, Kantar Public (formerly, TNS Infratest), identifies whether (a) a household still lives at the old address, (b) an entire household has moved, (c) all household members have left the sampling area or have died, or (d) all household members have returned to an existing panel household.

#### 3.1 The Frequency of Successful Follow-Ups

Table 3.1 displays the number of households of the previous waves that need to be re-contacted and the relative frequency of successful follow-ups in subsamples A through M8 and waves 1985 through 2020. The re-contact rates refer to all households of the previous wave that still exist in the sampling area plus split-off households. A contact is regarded as successful if the interviewer documented a completed interview or refusal in the address protocol. Moreover, if former household members returned to an existing panel household, this is classified as a successful follow-up.

Table 3.1: The Frequency of Households to be Re-Contacted and the Percentage of Successful Follow-Ups, Subsamples A to M8 by Year.

Year	Sample A		Sample B		Sample C		Sample D		Sample E		Sample F		Sample G		Sample H		Sample I		Sample J		Sample K		Sample L1		Sample L2	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1984	4,528		1,393																							
1985	4,681	98.5	1,370	96.8																						
1986	4,486	99.0	1,325	97.4																						
1987	4,232	99.1	1,220	98.7																						
1988	4,140	99.2	1,191	99.1																						
1989	3,984	99.1	1,157	99.0																						
1990	3,902	99.2	1,124	98.8	2,179																					
1991	3,860	99.5	1,151	99.3	2,246	98.5																				
1992	3,845	99.7	1,153	99.2	2,302	99.5																				
1993	3,867	99.3	1,172	98.6	2,227	99.1																				
1994	3,849	99.3	1,150	99.0	2,134	99.4	236																			
1995	3,784	99.5	1,108	99.0	2,110	99.6	540	100.0																		
1996	3,747	99.7	1,069	99.3	2,103	99.5	544	99.6																		
1997	3,688	99.6	1,038	99.1	2,087	99.5	541	99.3																		
1998	3,667	99.4	1,019	99.4	2,079	99.4	528	99.1	1,056																	
1999	3,631	99.6	975	99.4	2,037	99.7	498	99.4	1,089	99.5																
2000	3,549	99.6	934	99.5	2,025	99.7	467	99.8	967	99.2	6,043															
2001	3,463	99.6	904	99.4	2,034	99.7	454	99.1	921	99.1	6,162	99.0														
2002	3,406	99.7	877	99.1	2,005	99.6	450	99.8	873	99.4	5,447	99.5	1,224													
2003	3,330	99.6	840	99.6	1,982	99.6	434	99.5	834	99.3	4,965	99.7	1,056	99.1												
2004	3,260	99.8	803	99.6	1,962	99.6	436	99.8	797	99.7	4,736	99.6	1,010	99.7												
2005	3,220	99.8	779	99.4	1,959	99.7	429	99.3	783	99.9	4,577	99.7	1,001	99.7												
2006	3,138	99.7	770	99.6	1,941	99.4	425	98.8	775	99.1	4,401	99.3	995	99.5	1,506											
2007	3,000	99.7	725	99.4	1,834	99.9	387	99.5	727	99.7	4,157	99.5	933	99.2	1,530	99.5										
2008	2,856	99.8	676	99.3	1,767	99.5	372	99.5	680	99.7	3,962	99.4	904	99.7	1,326	99.6										
2009	2,730	99.7	620	99.4	1,695	99.9	351	99.7	636	100.0	3,760	99.6	870	99.5	1,145	99.7	1,495									
2010	2,570	99.8	548	99.5	1,627	100.0	334	99.7	605	99.8	3,538	99.6	826	99.9	1,059	99.5	1,738	98.3					2,074		2,500	
2011	2,421	99.8	495	99.2	1,541	99.8	303	99.3	589	100.0	3,319	99.7	797	99.6	992	99.6			3,136				2,083	98.8	2,271	98.1
2012	2,289	99.8	440	99.8	1,466	99.9	286	100.0	116	99.1	3,076	99.9	774	99.7	928	99.9			3,204	99.2	1,526		1,867	99.6	2,255	98.5
2013	2,180	99.6	393	99.2	1,417	99.7	269	99.3	98	100.0	2,881	99.7	733	99.6	877	99.5			2,871	99.5	1,564	99.0	1,753	99.3	2,177	98.8
2014	2,078	99.4	361	99.4	1,351	99.6	249	100.0	90	100.0	2,741	99.7	725	99.3	828	99.4			2,519	99.1	1,448	99.4	1,512	99.4	2,027	98.2
2015	1,998	99.4	331	99.4	1,300	99.5	229	100.0	83	100.0	2,597	99.2	699	99.3	790	99.7			2,309	99.4	1,308	99.3	1,404	99.4	1,880	98.4
2016	1,861	99.6	296	99.7	1,217	99.7	208	99.5	83	96.4	2,412	99.4	669	98.7	720	99.6			2,119	99.5	1,209	99.3	1,287	99.5	1,736	98.6
2017	1,748	99.3	271	98.9	1,125	99.6	184	99.5	75	100.0	2,214	99.3	622	99.5	677	99.4			2,015	99.3	1,105	99.5	1,209	99.3	1,587	98.6
2018	1,641	99.4	236	100.0	1,060	99.2	174	99.4	69	100.0	2,070	99.4	608	99.0	641	99.7			1,916	99.3	1,067	99.0	1,151	98.9	1,494	98.1
2019	1,497	99.6	200	99.5	988	99.8	155	100.0	64	100.0	1,947	99.6	574	99.8	593	99.3			1,797	99.2	987	99.4	1,086	99.4	1,451	97.7
2020	1,370	99.9	172	99.4	905	99.7	148	100.0	59	100.0	1,766	99.7	542	99.8	526	99.8			1,668	99.5	908	99.2	1,027	99.8	1,384	97.0

Table 3.1 – *Continued from previous page*

Year	Sample L3		Sample M1		Sample M2		Sample M3/4		Sample M5		Sample N		Sample O		Sample P		Sample Q		Sample M6		Sample M7		Sample M8	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
<b>2011</b>	924																							
<b>2012</b>	943	98.7																						
<b>2013</b>	920	99.1	2,723																					
<b>2014</b>	836	98.6	2,828	98.8																				
<b>2015</b>	789	97.8	2,456	98.0	1,096																			
<b>2016</b>	732	98.2	2,116	97.7	1,096	97.1	3,289																	
<b>2017</b>	686	97.8	1,794	97.9	931	98.1	3,351	93.6	1,519		2,314													
<b>2018</b>	650	98.2	1,605	98.4	688	98.7	3,110	94.0	1,585	93.2	2,482	99.1	935											
<b>2019</b>	621	97.3	1,415	98.2	580	96.7	2,618	93.2	1,491	88.3	2,335	99.3	943	98.1	1,960		477							
<b>2020</b>	579	96.7	1,229	98.7	475	98.5	2,139	94.6	1,178	92.4	2,147	99.6	786	99.2	1,978	99.4	480	99.6	1,141		783		1,096	

Note: In the case of the initial wave of a sample, table entries are the number of participating households. See also Section 2.

<sup>29</sup>This number contains 112 cases that had to be deleted in 2016, due to incorrectly conducted interviews, and that were subsequently surveyed in 2017. Furthermore 112 cases had to be deleted in 2017 due to incorrectly conducted interviews.

### **3.2 Predicting the Probability of Successful vs. Unsuccessful Follow-Ups in the Year 2020**

Based on household and interview level characteristics measured in 2019, we aim to predict the probability of re-contacting a household relative to unsuccessful follow-up in 2020. Among a very large number of regressors that we tested in preliminary analyses, we identified a small set of variables that exert a robust effect on the probability of successful follow-ups ( $p < 0.05$ ). Table 3.2 describes the regressors and Table 3.3 reports the subsample-specific estimates of logit models for the probability of re-contacting a household relative to unsuccessful follow-up.

Note that the estimates of regression models of the previous waves from 1985 to 2019 are not reported in the present data documentation due to space restrictions. These can be obtained from previous attrition documentations (e.g. Siegers et al. (2021)).

Table 3.2: Definition of the Regressors of the Logit Model of Refusal

Variable	Label	Value
<b>Interview Characteristics</b>		
New Address	Household moved	0/1
New Household (Gross)	New Household in SOEP (interview not necessarily conducted)	0/1
New Household (Net)	New Household in SOEP (interview conducted)	0/1
Phone Unknown	Telephone number undisclosed	0/1
Temporary Drop-Out	Temporary drop-out of household in previous year	0/1
<b>Demographic Characteristics</b>		
Single Household	One-person household	0/1
<b>Work, Education, and Finances</b>		
High Unemployment Rate	Household is located in area with a high unemployment rate	0/1
<b>Health, Personality, and Activities</b>		
Often Using Social Media	Head of household uses social media frequently	0/1
Worried About Asylum Procedure	Head of household worries about the outcome of the asylum procedure	0/1
<b>Building, Area, and Region</b>		
Broadband Availability Low	Household is located in area with low broadband availability	0/1
General Education Schools High	Household is located in area with high share of general education school students	0/1
General Education Schools Low	Household is located in area with low share of general education school students	0/1
Migration Net Total High	Household is located in area with a high net total of migration	0/1



Table 3.3: Estimates of Cloglog Models of the Probability of Re-Contacting a Household (Relative to Unsuccessful Follow-Up) in 2020

<i>Explanatory Variable</i>	<b>Sample L2</b>	<b>Sample L3</b>	<b>Sample M1</b>	<b>Sample M34</b>	<b>Sample M5</b>
(Intercept)	2.36***	2.23***	1.67***	2.33***	1.66***
<b>Interview Characteristics</b>					
New Address	-0.91***	-1.08***		-1.50***	-1.26***
New Household (Gross)	-0.80***	-1.59***	-1.46***	-1.25***	-0.84***
New Household (Net)		-0.87**			
Phone Unknown	-0.65***			-0.78***	-0.67***
Temporary Drop-Out				-0.42**	
<b>Demographic Characteristics</b>					
Single Household	-0.57***			-0.52***	-0.52***
<b>Work, Education, and Finances</b>					
High Unemployment Rate		-0.81**			
<b>Health, Personality, and Activities</b>					
Often Using Social Media					0.40**
Worried About Asylum Procedure				0.48**	
<b>Building, Area, and Region</b>					
Broadband Availability Low					-0.44**
General Education Schools High	-0.52***				
General Education Schools Low				-0.52***	
Migration Net Total High					0.48**
<i>Number of Observations</i>	1,384	579	1,229	2,138	1,180
<i>Log Likelihood</i>	-107.26	-46.87	-58.35	-260.76	-204.78

Note: \*p <0.05; \*\*p <0.01; \*\*\*p <0.001.

## 4 Panel Attrition Due to Refusals

In each panel wave, the second step in successful re-interviewing after having identified the location of households from the preceding wave is to obtain each household's confirmation of willingness to participate in the survey. We define successful re-interviewing relative only to survey-related panel attrition, such as refusals, and ignore survey-unrelated attrition, such as the death of a participant or her decision to move abroad, to generate the longitudinal weights.

### 4.1 The Frequency of Participation

Table 4.1 display the participation rates due to refusal by subsample and wave. The corresponding drop-out rates can be then obtained following an analogous procedure. Note that in order to obtain this probability no distinction was made between the various types of refusals that can occur in a survey, such as unconditional refusals, refusals due to lack of time, or health problems, etc.

Table 4.1: The Frequency of Re-Contacted Households and the Percentage of Participation, Subsamples A to M8 by Year.

Year	Sample A		Sample B		Sample C		Sample D		Sample E		Sample F		Sample G		Sample H		Sample I		Sample J		Sample K		Sample L1		Sample L2	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1984	4,528		1,393																							
1985	4,611	89.8	1,326	89.1																						
1986	4,442	89.2	1,290	87.4																						
1987	4,194	93.2	1,204	92.7																						
1988	4,105	91.2	1,180	90.8																						
1989	3,949	92.4	1,146	91.0																						
1990	3,871	93.3	1,111	92.5	2,179																					
1991	3,842	94.0	1,143	92.4	2,213	91.7																				
1992	3,833	93.5	1,144	92.7	2,290	88.2																				
1993	3,838	93.9	1,156	92.0	2,208	89.2																				
1994	3,821	93.6	1,139	89.8	2,122	92.3	236																			
1995	3,766	93.6	1,097	89.5	2,101	92.2	540	96.7																		
1996	3,734	93.3	1,061	90.5	2,092	93.3	542	91.9																		
1997	3,674	94.1	1,029	90.5	2,076	93.5	537	89.2																		
1998	3,645	92.9	1,013	88.6	2,066	91.3	523	84.3	1,056																	
1999	3,616	92.0	969	88.5	2,030	93.3	495	85.9	1,084	81.7																
2000	3,535	91.7	929	88.3	2,018	93.1	466	91.2	959	87.8	6,043															
2001	3,448	91.9	899	90.0	2,028	91.2	450	88.4	913	88.8	6,100	80.5														
2002	3,396	92.0	869	88.1	1,996	91.1	449	89.5	868	89.1	5,420	84.6	1,224													
2003	3,318	92.6	837	88.6	1,974	91.5	432	92.4	828	89.9	4,951	88.6	1,047	87.0												
2004	3,253	92.5	800	89.3	1,955	92.7	435	89.2	795	92.1	4,719	89.7	1,007	89.8												
2005	3,214	91.4	774	90.2	1,954	90.6	426	89.0	782	90.3	4,564	89.2	998	88.1												
2006	3,130	90.1	767	85.4	1,930	89.0	420	85.7	768	89.3	4,370	89.1	990	86.8	1,506											
2007	2,992	91.0	721	85.2	1,832	90.3	385	89.6	725	89.2	4,138	89.3	926	89.0	1,523	78.0										
2008	2,850	90.7	671	84.9	1,759	90.5	370	88.6	678	88.8	3,939	89.2	901	87.3	1,321	81.9										
2009	2,723	89.0	616	81.2	1,693	90.7	350	87.4	636	90.3	3,746	88.2	866	87.4	1,142	87.2	1,495									
2010	2,565	87.5	545	80.9	1,627	88.3	333	83.5	604	91.6	3,523	86.7	825	90.1	1,054	86.6	1,709	68.8					2,074		2,500	
2011	2,417	88.9	491	79.6	1,538	88.1	301	88.4	589	92.5	3,308	87.2	794	88.9	988	86.8			3,136				2,057	80.1	2,228	87.9
2012	2,285	89.0	439	78.8	1,465	89.6	286	87.8	115	80.0	3,073	87.9	772	89.0	927	88.2			3,179	80.4	1,526		1,859	78.9	2,222	85.8
2013	2,172	89.7	390	82.3	1,413	88.5	267	86.9	98	83.7	2,873	89.3	730	92.7	873	89.7			2,857	80.7	1,549	82.7	1,741	78.2	2,151	83.9
2014	2,065	90.8	359	84.1	1,346	90.0	249	85.5	90	86.7	2,732	88.4	720	89.0	823	88.9			2,497	84.5	1,439	82.5	1,503	83.0	1,990	71.2
2015	1,986	88.6	329	81.5	1,294	87.4	229	84.3	83	84.3	2,577	88.2	694	87.3	788	86.8			2,296	86.4	1,299	85.3	1,396	84.8	1,850	74.5
2016	1,853	87.9	295	77.3	1,213	88.5	207	83.6	80	85.0	2,398	87.3	660	89.4	717	89.1			2,108	89.3	1,201	87.1	1,280	87.7	1,712	73.9
2017	1,736	88.0	268	75.0	1,120	89.0	183	90.2	75	89.3	2,199	89.5	619	90.6	673	88.3			2,001	88.8	1,099	89.8	1,200	87.9	1,564	79.7
2018	1,631	86.1	236	75.0	1,051	88.4	173	85.0	69	85.5	2,058	88.0	602	88.5	639	85.8			1,902	89.0	1,056	88.4	1,138	87.1	1,465	79.9
2019	1,491	86.0	199	75.9	986	84.2	155	87.7	64	85.9	1,940	85.2	573	88.8	589	83.4			1,783	86.3	981	85.3	1,079	82.9	1,418	79.1
2020	1,369	85.4	171	79.5	902	85.4	148	83.8	59	88.1	1,761	87.1	541	88.7	525	87.8			1,660	88.5	901	88.3	1,025	84.5	1,343	80.9

Table 4.1 – *Continued from previous page*

Year	Sample L3		Sample M1		Sample M2		Sample M3/4		Sample M5		Sample N		Sample O		Sample P		Sample Q		Sample M6		Sample M7		Sample M8	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
<b>2011</b>	924																							
<b>2012</b>	931	87.2																						
<b>2013</b>	912	82.9	2,723																					
<b>2014</b>	824	72.7	2,793	72.0																				
<b>2015</b>	772	76.3	2,407	69.3	1,096																			
<b>2016</b>	719	75.0	2,067	72.2	1,064	62.0	3,289																	
<b>2017</b>	671	77.8	1,757	76.8	913	61.2	3,138	73.0	1,519		2,314													
<b>2018</b>	638	79.3	1,579	76.2	679	71.7	2,922	69.7	1,477	68.0	2,460	85.9	935											
<b>2019</b>	604	78.0	1,389	74.2	561	69.7	2,440	72.3	1,316	70.6	2,318	81.5	925	67.4	1,960		477							
<b>2020</b>	560	80.5	1,213	78.5	468	73.5	2,023	78.9	1,088	74.6	2,139	86.2	780	72.8	1,967	62.5	478	88.5	1,141		783		1,096	

Note: In the case of the initial wave of a sample, table entries are the number of participating households. See also Section 2.

<sup>30</sup>This number contains 112 cases that had to be deleted in 2016 due to incorrectly conducted interviews, and that were subsequently surveyed in 2017. Furthermore, 112 cases had to be deleted in 2017 due to incorrectly conducted interviews.

## 4.2 Predicting the Probability of Re-Interviewing vs. Refusal in the Year 2020

Based on the household and interview characteristics measured in the year 2019, and some regional information measured in 2020, we aim at predicting the probability of agreement vs. refusal to participate in the survey for households that were re-contacted in 2020. The individual attributes refer in many cases to the head of the household in the previous wave, but for split-off households the attributes are based on the information from the person who moved out of the panel household (in the case of several persons, the first person mentioned in the address protocol). In many other cases, personal information is aggregated at the level of households, for instance, rare events, such as the presence of individuals with an acute medical condition.

As in the case of predicting successful follow-ups, we only use model specifications where all included regressors are to be considered statistically significant (that is different from zero). The definition of the regressors is given in Table 4.2. Table 4.3 reports the subsample-specific estimates of logit models for the probability of participating relative to refusing to participate. Note again that the estimates of regression models of the previous waves 1985 through 2019 are not reported in the present documentation due to space restrictions. These can as well be found in previous attrition reports (e.g. Siegers et al. (2021)).

Table 4.2: Definition of the Regressors of the Logit Model of Refusal

Variable	Label	Value
<b>Interview Characteristics</b>		
(High) Item Nonresponse HH on Finance	(High) Item Nonresponse household regarding financial matters	0/1
Drop-Out Related HH	Ultimate drop-out of related household	0/1
Email Known	Email address disclosed	0/1
New Household (Gross)	New Household in SOEP (interview not necessarily conducted)	0/1
New SOEP Member	Head of household has had less than 4 interviews	0/1
Not Original Sample Member	Head of household is not an original sample member	0/1
Part. Unit Nonresponse	Household member(s) did not participate last wave	0/1
Phone Unknown	Telephone number undisclosed	0/1
Temp. Drop-Out Related HH	Temporary drop-out of related household	0/1
Temporary Drop-Out	Temporary drop-out of household in previous year	0/1
<b>Demographic Characteristics</b>		
Between 25 and 34	Head of household is between 25 and 34 years old	0/1
Between 55 and 64	Head of household is between 55 and 64 years old	0/1
Between 65 and 74	Head of household is between 65 and 74 years old	0/1
Both Parents Not German Native Speakers	Both parents in the household are German native speakers	0/1
Child Under 12	At least one child under the age of 12 in household	0/1
Family Household	Family household	0/1
Foreigner In HH	At least one person who was born outside of Germany in household	0/1
Not Born In Germany	Head of household was not born in Germany	0/1
Single Household	One-person household	0/1
<b>Work, Education, and Finances</b>		
High Disposable Income	High disposable income	0/1
Low Education	Head of household has low education (CASMIN 1a - 1c)	0/1
New Work Since Last Year	Head of household has a new job since last year	0/1
No Valuable Assets	Household did not hold any valuable assets in the previous year	0/1
Read English well	Head of household can read English well	0/1
Same Employer 3rd Q.	Head of household with current employer since third quarter	0/1
Worried About Own Economic Situation	Head of household often worries about own financial/economic situation	0/1
<b>Health, Personality, and Activities</b>		
Conscientious	Head of household is conscientious	0/1
Depressive Disorder	Head of household suffers from depressive disorder	0/1

Table 4.2 – *Continued from previous page*

Variable	Label	Value
Extrovert	Head of household is an extrovert	0/1
Joint Disorder	Head of household suffers from joint disorder (e.g., arthrosis, rheumatism)	0/1
Low Life Satisfaction	Head of household is dissatisfied with his/her life	0/1
Neurotic	Head of household is a neurotic	0/1
No Cultural Events	Head of household does not go to cultural events	0/1
No Worries Long-Term Peace	Head of household is not worried about long-term peace	0/1
Not Satisfied w/ Own Health	Head of household is not satisfied with own health	0/1
Not Worried About Immigration	Head of household is not worried about immigration into Germany	0/1
Not Worried About Own Health	Head of household is not worried about own health	0/1
Open-Minded	Head of household is open-minded	0/1
Political Party Preference	Head of household has a general party preference	0/1
Receives Visits From Foreigners	Household receives visits from foreigners	0/1
Unhappy	Head of household rarely felt happy in the past four weeks	0/1
Voluntary Work	Head of household regularly engages in voluntary work	0/1
<b>Building, Area, and Region</b>		
A Lot Of Recreational Area	Household is located in area with a lot of recreational area per inhabitant	0/1
City Under 20,000 Residents	Household is located in city with fewer than 20,000 residents	0/1
Doctors Per Resident Low	Household is located in area with low number of doctors per resident	0/1
Elementary Schools High	Household is located in area with high share of elementary school students	0/1
Emigration Rate Low	Household is located in area with low emigration rate	0/1
Employment Rate Low	Household located in area with low employment rate	0/1
Fertility Rate High	Household is located in area with high fertility rate	0/1
High Exclusion Rate	Household is located in area with high share of students receiving special education	0/1
High Fathers Parental Allowance	High share of fathers receiving parental allowance	0/1
High Share Of Women Aged 65+	Household is located in area with high share of women 65 years and older	0/1
Intercity Railway Not Reachable	Household is located in area with poor reachability of intercity railway stations	0/1
Intercity Railway Reachable	Household is located in area with good reachability of intercity railway stations	0/1
Little Recreational Area	Household is located in area with little recreational area per inhabitant	0/1
Low Dependency Ratio	Household is located in area with a low dependency ratio	0/1
Low Median Income	Household is located in area with low median income	0/1
Low Share Of Residents Aged 65-75	Household is located in area with low share of residents aged 65-75	0/1
Manufacturing Sector Low	Low share of persons employed in the manufacturing sector	0/1
Migration Background High	Household is located in area with low share of households with no migration background	0/1
Migration Net Total Low	Household is located in area with a low net total of migration	0/1

Table 4.2 – *Continued from previous page*

Variable	Label	Value
Naturalizations per Inhabitant High	Household is located in area with high number of naturalizations per inhabitant	0/1
New Apartment Buildings Low	Household is located in area with low number of new apartment buildings	0/1
Poor Medical Supply	Household is located in area with poor medical supply	0/1
Predominantly Single-Family Houses	Household is located in area with predominantly single-family houses	0/1
Reachability Highways Low	Household is located in area with poor highway reachability	0/1
Residents Under 3 Years High	Household is located in area with low high of residents younger than 3 years	0/1
Share Of Women Low	Household is located in area with low share of women	0/1
Small Town Or Rural Community	Household is located in small town or rural community	0/1
Thuringia	Household is located in Thuringia	0/1



Table 4.3: Estimates of Cloglog Models for the Probability of Re-Interviewing a Household (Relative to Refusal) in 2020

<i>Explanatory Variable</i>	Sample A	Sample B	Sample C	Sample D	Sample F	Sample G	Sample H	Sample J	Sample K
(Intercept)	0.63***	0.54**	1.05***	0.96***	0.78***	0.89***	0.78***	0.90***	0.89***
<b>Interview Characteristics</b>									
(High) Item Nonresponse HH on Finance					-0.47***				
Drop-Out Related HH	-0.57***		-0.76***						
New Household (Gross)	-1.33***		-0.94**		-0.76***		-1.09**	-0.72***	
Not Original Sample Member								-0.28**	-0.55***
Phone Unknown								-0.58***	
Temp. Drop-Out Related HH			-0.80**						
Temporary Drop-Out	-2.11***		-1.48***		-1.98***	-1.49***	-1.79***	-1.02***	-0.89***
<b>Demographic Characteristics</b>									
Between 65 and 74					0.26**				
Family Household			-0.41**						
<b>Work, Education, and Finances</b>									
High Disposable Income	0.22**								
Low Education				-0.77*					
Worried About Own Economic Situation		-0.67*							
<b>Health, Personality, and Activities</b>									
Depressive Disorder					0.31**				
Extrovert		0.71**							
Joint Disorder		0.60*							
Low Life Satisfaction	-0.43**								
Neurotic						-0.41***			
Not Worried About Immigration					0.28***				
Not Worried About Own Health								0.32***	0.31**
Voluntary Work	0.23**								
<b>Building, Area, and Region</b>									
City Under 20,000 Residents			-0.38**						
Employment Rate Low							0.51**		
High Share Of Women Aged 65+	0.37**								
Intercity Railway Reachable			-0.28**						
Little Recreational Area						0.48***			
Migration Background High				-0.89*					
Reachability Highways Low		-0.63**							
Thuringia			0.42**						
<i>Number of Observations</i>	1,369	171	902	92	1,761	541	525	1,660	901
<i>Log Likelihood</i>	-482.11	-72.60	-312.13	-37.17	-571.19	-167.32	-166.72	-512.79	-281.44

Note: \*p <0.05; \*\*p <0.01; \*\*\*p <0.001.

Table 4.3 – Continued from previous page

<i>Explanatory Variable</i>	<b>Sample L1</b>	<b>Sample L2</b>	<b>Sample L3</b>	<b>Sample M1</b>	<b>Sample M2</b>	<b>Sample M34</b>	<b>Sample M5</b>	<b>Sample N</b>	<b>Sample O</b>	<b>Sample P</b>	<b>Sample Q</b>
(Intercept)	−0.34.	0.73***	0.32*	0.57***	−0.36	0.14	0.58***	0.63***	−0.69***	0.47***	1.00***
<b>Interview Characteristics</b>											
(High) Item Nonresponse HH on Finance										−0.27***	
Email Known		0.23**	0.41**	0.27**				0.43***		0.31***	
New Household (Gross)		−0.76***									
New SOEP Member			−1.10***								
Not Original Sample Member				−0.31***	−0.48**	−0.22***		−0.76***			
Part. Unit Nonresponse		−0.33***								−0.44***	
Phone Unknown	−0.63***	−0.72***	−0.65***	−0.86***		−1.20***	−1.13***	−0.32**	−0.56***	−0.49***	
Temp. Drop-Out Related HH				−0.80***							
Temporary Drop-Out		−1.02***	−0.79***	−0.78***			−0.59***				
<b>Demographic Characteristics</b>											
Between 25 and 34										−0.60**	
Between 55 and 64								0.20**			
Both Parents Not German Native Speakers								−0.41***		−0.54***	
Child Under 12	−0.32*										
Family Household						0.30***					
Foreigner In HH	−0.34**										
Not Born In Germany	1.20***				0.87***				1.57***		
Single Household	−0.78***										
<b>Work, Education, and Finances</b>											
New Work Since Last Year	0.33**										
No Valuable Assets										−0.48**	
Read English well						0.21***					
Same Employer 3rd Q.						0.38***					
<b>Health, Personality, and Activities</b>											
Conscientious										−0.18**	
Neurotic			0.36**								
No Cultural Events						0.30***					
No Worries Long-Term Peace			0.66**								
Not Satisfied w/ Own Health											−0.62***
Not Worried About Immigration										0.22***	
Open-Minded									−0.31**		
Political Party Preference								0.20***	0.31**		
Receives Visits From Foreigners									−0.31**		
Unhappy									0.35**		
Voluntary Work								0.20**	0.35**		
<b>Building, Area, and Region</b>											

Note: \*p &lt;0.05; \*\*p &lt;0.01; \*\*\*p &lt;0.001.

Table 4.3 – *Continued from previous page*

<i>Explanatory Variable</i>	<i>Sample L1</i>	<i>Sample L2</i>	<i>Sample L3</i>	<i>Sample M1</i>	<i>Sample M2</i>	<i>Sample M34</i>	<i>Sample M5</i>	<i>Sample N</i>	<i>Sample O</i>	<i>Sample P</i>	<i>Sample Q</i>
A Lot Of Recreational Area											−0.46**
Doctors Per Resident Low	0.59***										
Elementary Schools High				0.45***							
Emigration Rate Low										0.21**	
Fertility Rate High			−0.43**								
High Exclusion Rate				0.26**							
High Fathers Parental Allowance					0.61***						
Intercity Railway Not Reachable						0.22**					
Low Dependency Ratio							−0.32***				
Low Median Income	0.42***										
Low Share Of Residents Aged 65-75								0.26***			
Manufacturing Sector Low						0.23**					
Migration Net Total Low											−0.54***
Naturalizations per Inhabitant High						−0.26***					
New Apartment Buildings Low									−0.50***		
Poor Medical Supply			0.50***								
Predominantly Single-Family Houses	0.31**										
Residents Under 3 Years High											0.52**
Share Of Women Low							0.26**				
Small Town Or Rural Community	−0.42***										
<i>Number of Observations</i>	1,025	1,343	560	1,213	468	2,022	1,090	2,139	780	1,967	478
<i>Log Likelihood</i>	−357.38	−536.83	−206.81	−546.12	−235.13	−874.24	−541.73	−748.40	−343.85	−1,191.59	−143.60

Note: \*p &lt;0.05; \*\*p &lt;0.01; \*\*\*p &lt;0.001.

## 5 Margins used in the Post-Stratification Process

In a final step, the cross-sectional weights are adjusted by a post-stratification process. The following tables provide an overview of the variables and their categories used in the post-stratification at the household level (Table 5.1) and whether they are used in a given wave and subsample (Table 5.2). Tables 5.3 and 5.4 show the same on the person level. We obtain these marginal distributions of the underlying cross-sectional population by the Microcensus provided by the Federal Statistical Office of Germany. Only in the case of marginal distributions of the IAB-BAMF-SOEP Refugee Survey, we draw on additional margins derived from the Central Register of Foreigners (AZR).

Table 5.1: Marginal Distributions - Household Level

Variables	Marginal Distributions
Federal State ( <i>Fed. State</i> ) <sup>31</sup>	Berlin, Brandenburg Hamburg, Schleswig-Holstein Bremen, Lower Saxony North Rhine-Westphalia Hesse Saarland, Rhineland-Palatinate Baden-Wuerttemberg Bavaria Mecklenburg-Western Pomerania Saxony-Anhalt Thuringia Saxony
Size of Municipality ( <i>Mun. Size</i> )	Less than 20,000 inhabitants 20,000-100,000 inhabitants 100,000-500,000 inhabitants More than 500,000 inhabitants
Household Size ( <i>H. Type</i> )	1   2   3   4   5 or more members

<sup>31</sup>Different categorisation:

*Sample L1, L2, and L3*: 14 units, Bremen/Hamburg and Saarland/Rhineland-Palatinate are combined

*Sample J*: 16 units for each Federal State

*Sample M1 and M2*: the last 4 units are combined in one, overall 9 categories

*Sample M7 and M8*: 4 units, North, South, East, and West Germany

Table 5.1 – *Continued from previous page*

Variables	Marginal Distributions
Houseowner ( <i>Owner</i> )	Owner   Tenant
Household Typology ( <i>H. Type</i> ) <sup>32</sup>	Single household 2 adults without children 2 adults, 1 or 2 children Single parent, less than 3 children Single parent, 3 or more children Families with more than 3 children Remaining households
Migration Second Generation ( <i>Migr.</i> )	No 2 <sup>nd</sup> generation migrant in household At least one 2 <sup>nd</sup> gen. migrant in household born after 1995 At least one 2 <sup>nd</sup> gen. migrant in household born 1975-1994 At least one 2 <sup>nd</sup> gen. migr. born 1975-1994 and one after 1995
Nationality ( <i>Nat.</i> ) <sup>33</sup>	EU Country   Former Yugoslavia   Turkey   CIS countries Rest of the world   Only German nationality
Year of Immigration ( <i>Imm. Year</i> )	1900-1979   1980-1984   1985-1989   1990-1994 1995-1999   2000-2004   2005-2009   2010-2013 <sup>34</sup>   Other
Target Population AB ( <i>AB</i> )	Household size and country of origin ( <i>altogether 47 combinations</i> )
Target Population E, F ( <i>E, F</i> )	West Germany, all household members German West Germany, at least one household member without Ger. nat. East Germany
Target Population G ( <i>G</i> )	West Germany, household income <DM 7,500 East Germany, household income <DM 7,500 West Germany, household income DM 7,500-10,000 East Germany, household income DM 7,500-10,000 West Germany, household income >DM 10,000 East Germany, household income >DM 10,000

<sup>32</sup>For sample M7, the categories are summarized as follows: Single household, 2 adults without children, 2 adults with less than 3 children

<sup>33</sup>Sample M8: Poland, Bulgaria, and Romania

<sup>34</sup>The additional category “2010-2013” is used from 2015 on

Table 5.1 – *Continued from previous page*

Variables	Marginal Distributions
Children Typology (Child)	Household with children aged 0-6 years Household with children aged 7-11 years Household with children aged 12-17 years Household with children aged 0-6 and children aged 7-11 Household with children aged 0-6 and children aged 12-17 Household with children aged 7-11 and children aged 12-17 Household with children aged 0-6, 7-11 and 12-17
Target Population L1 (L1)	<i>Four different variables:</i> Household with child born in 2007 (yes/no) Household with child born in 2008 (yes/no) Household with child born in 2009 (yes/no) Household with child born in the 1st quarter of 2010 (yes/no)
Target Population L2 (L2)	Family with low income (LI) Single parent household (SP) Household with at least 3 children (3+) (LI) and (SP) household (LI) and (3+) household (SP) and (3+) household (LI), (SP) and (3+) household Not eligible for sample L2
Target Population L1/L2 (L1/L2)	Low income household, eligible for sample L1 Single parent household, eligible for sample L1 Household with at least 3 children, eligible for sample L1 At least 2 characteristics of sample L2 and eligible for L1 Not eligible for sample L2, but for sample L1 Eligible for sample L2, but not for sample L1 Not eligible for sample L1 and L2
Target Population L3 (L3)	Single parent household Household with at least 3 children Single parent household with at least 3 children Not eligible for sample L3
Target Population L1/L3 (L1/L3)	Single parent household, eligible for sample L1 Household with at least 3 children, eligible for sample L1 Single parent household with at least 3 children, eligible for L1 Eligible for sample L3, but not for sample L1

Table 5.1 – *Continued from previous page*

Variables	Marginal Distributions
Target Population H, J, K (H, J, K)	West Germany (without Berlin), all household members German West Germany, at least one household member without Ger. Nat. East Germany (incl. Berlin)
Household Size and Number of Employed Household Members <sup>35</sup> (Empl.)	Single household, not employed Single household, employed 2 members, not employed 2 members, 1 employed 2 members, 2 employed 3 members, not employed 3 members, 1 employed 3 members, 2 employed 3 members, 3 employed 4 or more members, not employed 4 or more members, 1 employed 4 or more members, 2 employed 4 or more members, 3 employed 4 or more members, 4 or more employed
Unemployment Benefits (ALG)	Household in West Germany receiving ALG II <sup>36</sup> Household in West Germany without ALG II Household in East Germany receiving ALG II Household in East Germany without ALG II
Greater Regions (Reg.)	North Germany   East Germany South Germany   West Germany

<sup>35</sup> Sample J: sorted by East and West Germany

<sup>36</sup> Arbeitslosengeld II

Table 5.1 – *Continued from previous page*

Variables	Marginal Distributions
Target Population M1 (M1) <sup>37</sup>	1st Generation, 1995-2004, Turkey
	1st Generation, 1995-2004, Spain/Greece/Italy
	1st Generation, 1995-2004, Poland
	1st Generation, 1995-2004, CIS countries
	1st Generation, 1995-2004, Arabic Countries
	1st Generation, 1995-2004, Late repatriate
	1st Generation, 1995-2004, Rest of the world
	1st Generation, after 2005, Turkey, Spain, Greece
	1st Generation, after 2005, Poland
	1st Generation, after 2005, CIS countries
	1st Generation, after 2005, Rest of the world
	2nd Generation, Not Turkey
	2nd Generation, Turkey
Target Population M2 (M2) <sup>35</sup>	2009-2011, Germany
	2009-2011, Poland
	2009-2011, Romania, Bulgaria
	2009-2011, Italy, Portugal, Spain, Greece
	2009-2011, Rest of Western Europe
	2009-2011, Rest of Eastern Europe
	2009-2011, Islamic States
	2009-2011, Rest of the World
	2012-2013, Germany
	2012-2013, Poland
	2012-2013, Romania/Bulgaria
	2012-2013, Italy/Portugal/Spain/Greece
	2012-2013, Rest of Western Europe
	2012-2013, Rest of Eastern Europe
	2012-2013, Islamic States
	2012-2013, Rest of the world
Target Population M3/4 (M3/4)	(At least one) M3/4-eligible Person
	Moved into existing household
	Household founded by M3/4-eligible person(s)
	M3/4-eligible Person(s) living in refugee shelter
	HH not M3/4-eligible

<sup>37</sup>Personal characteristics are aggregated on the household level according to the following order: 1. earliest year of immigration; 2. oldest household member; 3. female household member; 4. random household member



Table 5.1 – *Continued from previous page*

Variables	Marginal Distributions
Target Population M5 (M5)	(At least one) M5-eligible Person Moved into existing household Household founded by M5-eligible person(s) M5-eligible Person(s) living in refugee shelter HH not M5-eligible
Target Population N (N)	Part of target population of Sample N Not part of target population of Sample N <sup>38</sup>
Refugee in Household (Ref.)	Person in HH came to GER as a refugee between 2013 and 2016 No person in HH that came to GER as a refugee between 2013 and 2016 <sup>39</sup>
Target Population O (O)	Part of "Soziale Stadt"-area Western Germany Part of "Soziale Stadt"-area Eastern Germany HH not part of target population of Sample O
Target Population P (P)	bottom wealth tercile, female, young bottom wealth tercile, female, old bottom wealth tercile, male, young bottom wealth tercile, male, old middle wealth tercile, female, young middle wealth tercile, female, old middle wealth tercile, male, young middle wealth tercile, male, old top wealth tercile, female, young top wealth tercile, female, old top wealth tercile, male, young top wealth tercile, male, old
Target Population Q (Q)	no lesbian/gay/bisexual person in HH at least one lesbian/gay/bisexual person in HH lesbian/gay/bisexual couple in HH

<sup>38</sup>The Sample N target population consists of households in which at least one household member, on the reference date of 1 December 2011, met the following requirements: adult from 16 through 65 years of age and living in Germany.

<sup>39</sup>The term "refugee" refers to the target populations of Samples M3/4 in 2016 and Samples M3/4 and M5 from 2017 on.

Table 5.1 – *Continued from previous page*

Variables	Marginal Distributions
Target Population P/Q ( <i>P/Q</i> )	neither P nor Q P, not Q Q, not P P and Q
Target Population M6 ( <i>M6</i> )	Person in private HH came to GER as a refugee until 2016 Person in private HH came to GER as a refugee from 2017 onwards HH not part of target population of Sample M6

Table 5.2: Margins - Household Level

Year (Samples)	Fed. State	Mun. Size	H. Size	Owner	H. Type	Migr.	Nat.	Imm. Year	AB	E, F	G	Child	L1	L2	L1/L2	L3	L1/L3	H, J, K	Empl.	ALG
1984 (A-B)	+ A B	+ A B	+ A B	+ A B					A B											
1985 (A-B)	+	+	+	+																
1986 (A-B)	+	+	+	+																
1987 (A-B)	+	+	+	+																
1988 (A-B)	+	+	+	+																
1989 (A-B)	+	+	+	+																
1990 (A-C)	+	+	+	+																
1991 (A-C)	+	+	+	+																
1992 (A-C)	+	+	+	+																
1993 (A-C)	+	+	+	+																
1994 (A-D)	+	+	+	+																
1995 (A-D)	+	+	+	+																
1996 (A-D)	+	+	+	+																
1997 (A-D)	+	+	+	+																
1998 (A-E)	+ * E	+ * E	+ * E	+ * E						* E										
1999 (A-E)	+	+	+	+																
2000 (A-F)	+ * F	+ * F	+ * F	+ * F						* F										
2001 (A-F)	+	+	+	+																
2002 (A-G)	+ *	+ *	+ *	+ *							* G									
2003 (A-G)	+	+	+	+																
2004 (A-G)	+	+	+	+																
2005 (A-G)	+	+	+	+																
2006 (A-H)	+ * H	+ * H	+ * H	+ * H														* H		
2007 (A-H)	+	+	+	+																
2008 (A-H)	+	+	+	+																
2009 (A-I)	+	+	+	+																
2010 (A-L2)	+ * L1 L2	+ * L1 L2	+ *	+ *	+ *	+ *						L1 L2	* L1	* L2	L1 L2					
2011 (A-L3)	+ * L3 J	+ * L3 J	+ * J	+ * J	+ * J	+ * J						L3				* L3	* L3	* J	J	J
2012 (A-K)	+ * K	+ * K	+ * K	+ * K	+ * K	+ * K												* K	K	K

Table 5.2 – Continued from previous page

Year (Samples)	Fed. State	Mun. Size	H. Size	Owner	H. Type	Migr.	Nat.	Imm. Year	Reg.	M1	M2	M3/4	M5	N	Ref.	O	P	Q	P/Q	M6	M7	M8
2013 (A-M1)	+ * M1	+ * M1	+ * M1	+ *	+ *	+ *	+	+	M1	+ M1												
2014 (A-M1)	+	+	+	+	+	+	+	+														
2015 (A-M2)	+ * M2	+ * M2	+ * M2	+ *	+ *	+ *	+ *	+ *	M2		+ M2											
2016 (A-M3/4)	+ *	+ *	+ *	+ *	+ *	+ *	+ *	+ *				*			+							
2017 (A-N)	+ * N	+ * N	+ * N	+ *	+ * N	+ * N	+ * N	+ * N					*	*	+							
2018 (A-O)	+ * O	+ * O	+ * O	+ *	+ * O	+ * O	+ * O	+ * O							+ *	* O						
2019 (A-Q)	+ *	+ *	+ *	+ *	+ *	+ *	+ *	+ *							+ *		*	*	P Q			
2020 (A-M8)	+ * M7 M8	+ * M7 M8	+ * M7 M8	+ *	+ * M7	+ *	+ * M7	+ *							+ *					*	M7	M8

Note: (+) margins for standard weights; (\*) margins for standard weights without the new samples; (*sample letter*) margins for standalone weights of a new sample

Table 5.3: Marginal Distributions - Person Level

Variables	Distributions
Age and Gender <sup>40</sup>	0-4 male   0-4 female   5-9 male   5-9 female 10-14 male   10-14 female   15-19 male   15-19 female 20-24 male   20-24 female   25-29 male   25-29 female 30-34 male   30-34 female   35-39 male   35-39 female 40-44 male   40-44 female   45-49 male   45-49 female 50-54 male   50-54 female   55-59 male   55-59 female 60-64 male   60-64 female   65-69 male   65-69 female 70+ male   70+ female
Household Typology ( <i>H. Type</i> )	1 adult and 0 children   2 adults and 0 children 3 adults and 0 children   4 or more adults and 0 children 1 adult and 1 or more children   2 adults and 1 child 2 adults and 2 children   2 adults and 3 or more children 3 adults and 1 or more children 4 or more adults and 1 or more children
German Nationality ( <i>German</i> )	German nationality   Other nationality
Migration Second Generation ( <i>Migrant 2<sup>nd</sup> Gen.</i> )	Indirect migration, born after 1995 Indirect migration, German nat., born 1975/1994 Indirect migration, other nat., born 1975/1994 Indirect migration, other nat. born before 1964 until 1974 Direct or no migration, or indirect migration, but German nationality and born before 1975
Foreign Nationality ( <i>Nation.</i> ) <sup>41</sup>	EU Country   Former Yugoslavia   CIS countries   Turkey Rest of the world   Only German nationality
Year of Immigration ( <i>Imm. Year</i> )	1900-1979   1980-1984   1985-1989   1990-1994 1995-1999   2000-2004   2005-2009   2010-2013 <sup>42</sup>   Other

<sup>40</sup>Different categorisation:*Sample M7*: 18 units, first 6 are combined into 0-14 male and 0-14 female; last 10 are combined into 50-max male and 50-max female*Sample M8*: 8 units, 0-34 female, 35-max female, 0-29 male, 30-34 male, 35-39 male, 40-44 male, 45-49 male, and 50-max male<sup>41</sup>*Sample M7*: Poland, Bulgaria, and Romania<sup>42</sup>An adjusted category “2010-2013” is used from 2015 on.

Table 5.3 – Continued from previous page

Variables	Distributions
Target Population G (G)	West Germany, household income <DM 7,500 East Germany, household income <DM 7,500 West Germany, household income DM 7,500-10,000 East Germany, household income DM 7,500-10,000 West Germany, household income >DM 10,000 East Germany, household income >DM 10,000
Age <sup>43</sup>	0-4   5-9   10-14   15-19   20-24   25-29   30-34 35-39   40-44   45-49   50-54   55-59   60-64   65+
Gender	Male   Female
Target Population L1 (L1)	<i>Four different variables:</i> Household with child born in 2007 (yes/no) Household with child born in 2008 (yes/no) Household with child born in 2009 (yes/no) Household with child born in the 1st quarter of 2010 (yes/no)
Target Population L2 (L2)	Family with low income (LI) Single parent household (SP) Household with at least 3 children (3+) (LI) and (SP) household (LI) and (3+) household (SP) and (3+) household (LI), (SP) and (3+) household
Target Population L3 (L3)	Single parent household (SP) Household with at least 3 children (3+) (SP) and (3+) household
Type of Migration Background (Migrant)	Immigration before 1995 Immigration between 1995 and 2004 Immigration since 2005 Migration background (indirect) No migration background Not eligible for sample M1

<sup>43</sup>Different categorisation:

Sample L1: 0, 1, 2, 3, 4-7, 8-12, 13-18, 19-26, 27-31, 32-36, 37-41, 42-46, 47+

Sample L2: 0-3, 4-7, 8-12, 13-18, 19-26, 27-31, 32-36, 37-41, 42-46, 47-51, 52-56, 57+

Sample L3: 0-3, 4-6, 7-11, 12-17, 18-25, 26-30, 31-35, 36-40, 41-45, 46-50, 51-55, 56+

Sample M1: For respondents younger than 19 years old: only one category (0-19).

Table 5.3 – Continued from previous page

Variables	Distributions
Target Population M1 (M1)	1st generation, earlier than 1995, Turkey, m/f <sup>44</sup>
	1st generation, earlier than 1995, Spain/Greece/Italy, m/f
	1st generation, earlier than 1995, Late repatriate, m/f
	1st generation, earlier than 1995, Rest of the world, m/f
	1st generation, 1995-2004, Turkey, m/f
	1st generation, 1995-2004, Spain/Greece/Italy, m/f
	1st generation, 1995-2004, Poland, m/f
	1st generation, 1995-2004, CIS countries, m/f
	1st generation, 1995-2004, Arabic countries, m/f
	1st generation, 1995-2004, Late repatriate, m/f
	1st generation, 1995-2004, Rest of the world, m/f
	1st generation, after 2005, Spain/Greece/Italy, m/f
	1st generation, after 2005, Poland, m/f
	1st generation, after 2005, CIS countries, m/f
	1st generation, after 2005, Rest of the world, m/f
	2nd generation, Not Turkey, m/f
	2nd generation, Turkey, m/f
	German, m/f
	Not eligible for sample M1
Target Population M2 (M2)	Did not immigrate between 2009-2013, m/f
	2009-2011, Germany, m/f
	2009-2011, Poland, m/f
	2009-2011, Romania/Bulgaria, m/f
	2009-2011, Italy/Portugal/Spain/Greece, m/f
	2009-2011, Rest of Western Europe, m/f
	2009-2011, Rest of Eastern Europe, m/f
	2009-2011, Islamic States, m/f
	2009-2011, Rest of the world, m/f
	2012-2013, Germany, m/f
	2012-2013, Poland, m/f
	2012-2013, Romania/Bulgaria, m/f
	2012-2013, Italy/Portugal/Spain/Greece, m/f
	2012-2013, Rest of Western Europe, m/f
Part of Target Population of Sample M3/4 (Ref. M3/4)	2012-2013, Rest of Eastern Europe, m/f
	2012-2013, Islamic States, m/f
	2012-2013, Rest of the world, m/f
	Came to Germany as a refugee between January 2013 and January 2016
	Not part of target population of "Refugee Samples" <sup>45</sup>

<sup>44</sup>Each category distinguishes between male (m) or female (f) gender of the respondent.

<sup>45</sup>The variables marked here with "Refugee Samples" refer to the target populations of Samples M3/4 in 2016 and Samples M3/4 and M5 in 2017 respectively.

Table 5.3 – Continued from previous page

Variables	Distributions
Federal State - Refugee Samples ( <i>Ref. Fed. State</i> )	Berlin, Brandenburg Hamburg, Schleswig-Holstein Bremen, Lower Saxony North Rhine-Westphalia Hesse Saarland, Rhineland-Palatinate Baden-Wuerttemberg Bavaria Mecklenburg-Western Pomerania Saxony-Anhalt Thuringia, Saxony Not part of target population of "Refugee Samples"
Registered Date of Arrival - Refugee Samples ( <i>Ref. Reg.</i> )	Arrival including January 2013 to January 2016 Arrival including February 2016 to December 2016 Not part of target population of "Refugee Samples"
Date of Arrival in Germany <sup>46</sup> - Refugee Samples - By Year and Quarter ( <i>Ref. Arrival</i> ) <sup>47</sup>	2013 Q1   2013 Q2   2013 Q3   2013 Q4 2014 Q1   2014 Q2   2014 Q3   2014 Q4 2015 Q1   2015 Q2   2015 Q3   2015 Q4 2016 Q1   2016 Q2   2016 Q3   2016 Q4 2017 Q1   2017 Q2   2017 Q3   2017 Q4 2018 Q1   2018 Q2   2018 Q3   2018 Q4 2019 Q1 Not part of target population of "Refugee Samples"
Country of Origin - Refugee Samples ( <i>Ref. Origin</i> ) <sup>48</sup>	Syria Afghanistan Iraq Albania, Serbia, Kosovo Eritrea, Somalia Russia, Pakistan Nigeria, Guinea, Gambia Other Not part of target population of "Refugee Samples"
Age - Refugee Samples ( <i>Ref. Age</i> )	0-4   5-9   10-14   15-17   18-20   21-24   25-29   30-34 35-39   40-44   45-49   50-54   55-59   60+ Not part of target population of "Refugee Samples"

<sup>46</sup>The date of arrival in this variable is based on self-reported information. This information may differ from the officially *registered* date of arrival recorded in the corresponding variable above.

<sup>47</sup>The additional categories "2017 Q1" - "2019 Q1" are used from 2020 on

<sup>48</sup>The additional category "Nigeria, Guinea, Gambia" is used from 2020 on.



Table 5.3 – Continued from previous page

Variables	Distributions
Age and Gender - Refugee Samples ( <i>Ref. Age &amp; Gender</i> )	0-4 male   0-4 female   5-9 male   5-9 female 10-14 male   10-14 female   15-17 male   15-17 female 18-24 male   18-24 female   25-29 male   25-29 female 30-34 male   30-34 female   35-39 male   35-39 female 40+ male   40+ female Not part of target population of "Refugee Samples"
Target Population P ( <i>P</i> )	bottom wealth tercile, female, young bottom wealth tercile, female, old bottom wealth tercile, male, young bottom wealth tercile, male, old middle wealth tercile, female, young middle wealth tercile, female, old middle wealth tercile, male, young middle wealth tercile, male, old top wealth tercile, female, young top wealth tercile, female, old top wealth tercile, male, young top wealth tercile, male, old
Federal States Rural/Urban - Sample P ( <i>P State Urban</i> )	Schleswig-Holstein, rural Schleswig-Holstein, urban Hamburg Lower Saxony, rural Lower Saxony, urban Bremen North Rhine-Westphalia, rural North Rhine-Westphalia, urban Hesse, rural Hesse, urban Rhineland-Palatinate, rural Rhineland-Palatinate, urban Baden-Württemberg, rural Baden-Württemberg, urban Bavaria, rural Bavaria, urban Saarland Berlin Brandenburg Mecklenburg-West Pomerania Saxony, rural Saxony, urban Saxony-Anhalt Thuringia

Table 5.3 – *Continued from previous page*

Variables	Distributions
Age Group - Sample P ( <i>P Age</i> )	min - 1954
	1955 - 1964
	1965 - 1969
	1970 - 1974
	1975 - max
Target Population M678 ( <i>M678</i> )	Person in private HH came to GER until 2016
	Person in private HH came to GER from 2017 onwards
	Person in shared accommodation came to GER until 2016
	Person in shared accommodation came to GER from 2017 onwards
	Part of target population of Sample M7
	Part of target population of Sample M8
	HH not part of target population of Sample M6/7/8

Table 5.4: Margins - Person Level

Year (Samples)	Age & Gender	H. Type	Ger.	Mig. 2 <sup>nd</sup> Gen.	Nat.	Imm. Year	G	Age	Gender	L1	L2	L3	Mig.	M1	M2
1984 (A-B)	+	+	+												
1985 (A-B)	+	+	+												
1986 (A-B)	+	+	+												
1987 (A-B)	+	+	+												
1988 (A-B)	+	+	+												
1989 (A-B)	+	+	+												
1990 (A-B)	+	+	+												
1991 (A-B)	+	+	+												
1992 (A-B)	+	+	+												
1993 (A-B)	+	+	+												
1994 (A-B)	+	+	+												
1995 (A-B)	+	+	+												
1996 (A-B)	+	+	+												
1997 (A-B)	+	+	+												
1998 (A-E)	+ * E	+ * E	+ * E												
1999 (A-E)	+	+	+												
2000 (A-F)	+ * F	+ * F	+ * F												
2001 (A-F)	+	+	+												
2002 (A-H)	+ *	+ *	+ *				* G								
2003 (A-H)	+	+	+												
2004 (A-H)	+	+	+												
2005 (A-H)	+	+	+												
2006 (A-H)	+ * H	+ * H	+ * H												
2007 (A-H)	+	+	+												
2008 (A-H)	+	+	+												
2009 (A-I)	+	+	+												
2010 (A-L2)	+ *	+ *	+ *	+ *				L1 L2	L1 L2	L1	L2				
2011 (A-L3)	+ * J	+ * J	+ * J	+ * J				L3	L3			L3			
2012 (A-K)	+ * K	+ * K	+ * K	+ * K											
2013 (A-M1)	+ *	+ *	+ *	+ *	+ *	+ *		M1					M1	* M1	
2014 (A-M1)	+	+	+	+	+	+									
2015 (A-M2)	+ *	+ *	+ *	+ *	+ *	+ *		M2							M2

Table 5.4 – *Continued from previous page*

Year (Samples)	Age & Gender	H. Type	Ger.	Mig. 2 <sup>nd</sup> Gen.	Nat.	Imm. Year	Gender	Ref. M3/4	Ref. Fed. State	Ref. Reg.	Ref. Arr.	Ref. Orig.	Ref. Age	Ref.Age & Gender	P	P State Urb.	P Age	M678
2016 (A-M3/4)	+ *	+ * M3/4	+ *	+ *	+ *	+ *			+ M3/4		+ M3/4	M3/4	+ M3/4	+ M3/4				
2017 (A-N)	+ * N	+ * M5	+ * N	+ * N	+ * N	+ * N		*	+ M5	+ M5	+ M5	+ M5	+ M5	+ M5				
2018 (A-O)	+ * O	+ *	+ * O	+ * O	+ * O	+ * O			+ *		+ *	+ *	+ *	+ *				
2019 (A-Q)	+ *	+ *	+ *	+ *	+ *	+ *	P		+ *		+ *	+ *	+ *	+ *	P	P	P	
2020 (A-M8)	+ * M7 M8	+ * M6	+ *	+ *	+ * M7	+ *			+ * M6		+ * M6	+ * M6	+ * M6	+ * M6				+

*Note.* (+) margins for standard weights; (\*) margins for standard weights without the new samples;  
*(sample letter)* margins for standalone weights of a new sample

## 6 Summary Statistics of the Derived Longitudinal and Cross-Sectional Weights

Based on the regression models of successful vs. unsuccessful re-contacts and agreements vs. refusals to participate, we derive two sets of predicted probabilities, the product of which is the household's "staying probability". The inverse of the probability of staying in the SOEP in 2020 based on characteristics measured in 2019, variable `BKHBLEIB`, lends itself as a longitudinal weighting variable which itself corrects for selective attrition between waves 2019 and 2020. Tables 6.1, Table 6.2, Table 6.3, Table 6.4, Table 6.5, Table 6.6, and Table 6.7 report some subsample specific summary statistics of the longitudinal weights in each wave.

The product of the cross-sectional weight in 2019, variable `BJHHRF`, and the longitudinal weight in 2020, variable `BKHBLEIB`, provide the raw data for the cross-sectional weight in 2020. In a final step, the post-stratification of the cross-sectional weights corrects them to meet benchmarks of known marginal distribution characteristics of the underlying population as of the year 2020.

Tables 6.8 and 6.9 report subsample specific summary statistics of the derived cross-sectional weighting variable `BKHHRF` and in comparison all previous cross-sectional weights `AHHRF` through `BJHHRF`.

Table 6.1: Summary Statistics of the Derived Longitudinal Weights at the Household Level for Subsamples A through D (Percentiles of \$HLEIB up to Wave 37).

Year	Sample A				Sample B				Sample C				Sample D			
	p10	p50	p90	N	p10	p50	p90	N	p10	p50	p90	N	p10	p50	p90	N
1985	1.06	1.10	1.22	4,141	1.09	1.10	1.26	1,181								
1986	1.04	1.07	1.26	3,962	1.10	1.10	1.29	1,128								
1987	1.03	1.03	1.13	3,910	1.03	1.03	1.14	1,116								
1988	1.02	1.04	1.20	3,743	1.03	1.04	1.22	1,071								
1989	1.03	1.04	1.16	3,647	1.03	1.04	1.14	1,043								
1990	1.02	1.02	1.11	3,612	1.04	1.04	1.12	1,028								
1991	1.02	1.02	1.09	3,613	1.03	1.03	1.16	1,056	1.03	1.06	1.18	2,030				
1992	1.01	1.02	1.11	3,585	1.01	1.03	1.16	1,060	1.06	1.06	1.22	2,020				
1993	1.01	1.01	1.16	3,603	1.02	1.03	1.22	1,064	1.03	1.04	1.17	1,970				
1994	1.02	1.02	1.15	3,577	1.03	1.05	1.22	1,023	1.02	1.04	1.12	1,959				
1995	1.01	1.01	1.16	3,526	1.02	1.05	1.29	982	1.03	1.03	1.11	1,938				
1996	1.01	1.03	1.12	3,485	1.04	1.04	1.21	960	1.01	1.02	1.15	1,951	1.00	1.08	1.16	396
1997	1.01	1.02	1.13	3,458	1.02	1.04	1.29	931	1.02	1.04	1.12	1,942	1.05	1.09	1.09	340
1998	1.02	1.03	1.14	3,387	1.04	1.07	1.23	898	1.02	1.02	1.20	1,886	1.08	1.08	1.35	308
1999	1.02	1.02	1.20	3,325	1.04	1.04	1.22	858	1.01	1.03	1.10	1,894	1.05	1.05	1.27	300
2000	1.02	1.02	1.15	3,240	1.03	1.03	1.18	820	1.01	1.03	1.13	1,879	1.02	1.02	1.10	302
2001	1.02	1.02	1.18	3,168	1.02	1.02	1.23	809	1.02	1.02	1.16	1,850	1.03	1.03	1.18	286
2002	1.01	1.02	1.21	3,123	1.04	1.04	1.37	766	1.01	1.02	1.21	1,818	1.00	1.02	1.21	289
2003	1.01	1.03	1.14	3,072	1.01	1.03	1.31	742	1.01	1.03	1.14	1,807	1.01	1.01	1.09	290
2004	1.01	1.01	1.12	3,010	1.04	1.04	1.13	714	1.00	1.01	1.12	1,813	1.00	1.01	1.25	277
2005	1.02	1.02	1.16	2,937	1.05	1.05	1.17	698	1.00	1.02	1.15	1,771	1.00	1.02	1.34	273
2006	1.01	1.04	1.22	2,821	1.01	1.05	1.33	655	1.01	1.04	1.24	1,717	1.03	1.04	1.44	261
2007	1.01	1.03	1.14	2,723	1.03	1.07	1.24	614	1.00	1.03	1.15	1,654	1.01	1.04	1.12	248
2008	1.02	1.05	1.13	2,584	1.01	1.07	1.25	570	1.01	1.03	1.18	1,592	1.02	1.07	1.22	231
2009	1.02	1.05	1.25	2,423	1.01	1.05	1.60	500	1.00	1.03	1.21	1,535	1.00	1.02	1.16	217
2010	1.01	1.06	1.38	2,245	1.01	1.10	1.47	441	1.01	1.04	1.32	1,437	1.00	1.01	1.43	278
2011	1.00	1.04	1.27	2,148	1.01	1.07	1.55	391	1.01	1.05	1.24	1,355	1.01	1.02	1.28	266
2012	1.02	1.08	1.27	2,033	1.01	1.13	1.65	346	1.00	1.05	1.29	1,312	1.00	1.04	1.45	251
2013	1.01	1.06	1.25	1,949	1.01	1.09	1.58	321	1.01	1.07	1.27	1,250	1.01	1.06	1.39	232
2014	1.01	1.04	1.25	1,874	1.01	1.03	1.48	302	1.01	1.04	1.22	1,212	1.00	1.03	1.31	213
2015	1.01	1.06	1.29	1,760	1.01	1.09	1.61	268	1.02	1.07	1.37	1,131	1.00	1.02	1.63	117
2016	1.03	1.08	1.24	1,629	1.01	1.10	1.86	228	1.01	1.07	1.30	1,073	1.01	1.07	1.43	103
2017	1.02	1.09	1.24	1,528	1.02	1.17	1.79	201	1.02	1.08	1.22	997	1.02	1.02	1.28	99
2018	1.03	1.10	1.31	1,404	1.00	1.02	1.98	177	1.03	1.07	1.23	929	1.04	1.04	1.35	92
2019	1.03	1.10	1.28	1,282	1.03	1.15	2.05	151	1.03	1.11	1.40	830	1.00	1.00	1.46	83
2020	1.06	1.10	1.21	1,169	1.04	1.23	1.67	136	1.04	1.13	1.34	770	1.08	1.08	1.53	75

Table 6.2: Summary Statistics of the Derived Longitudinal Weights at the Household Level for Subsamples E through G (Percentiles of \$HBLEIB up to Wave 37).

Year	Sample E				Sample F				Sample G			
	p10	p50	p90	N	p10	p50	p90	N	p10	p50	p90	N
1998												
1999	1.00	1.23	1.47	886								
2000	1.03	1.07	1.21	838								
2001	1.01	1.05	1.25	811	1.08	1.14	1.59	4,911				
2002	1.01	1.02	1.20	773	1.03	1.05	1.46	4,586				
2003	1.04	1.04	1.15	744	1.02	1.04	1.24	4,386	1.06	1.10	1.17	911
2004	1.00	1.01	1.08	732	1.02	1.03	1.19	4,235	1.02	1.03	1.25	904
2005	1.01	1.03	1.18	706	1.01	1.03	1.17	4,070	1.03	1.06	1.25	879
2006	1.00	1.03	1.21	686	1.01	1.03	1.29	3,895	1.00	1.04	1.31	859
2007	1.01	1.01	1.16	647	1.01	1.03	1.15	3,694	1.01	1.05	1.17	824
2008	1.00	1.01	1.19	602	1.01	1.03	1.14	3,513	1.01	1.03	1.18	787
2009	1.00	1.04	1.17	574	1.02	1.04	1.34	3,303	1.02	1.04	1.36	757
2010	1.01	1.04	1.25	553	1.01	1.05	1.40	3,055	1.00	1.01	1.23	743
2011	1.00	1.00	1.17	545	1.01	1.05	1.34	2,885	1.00	1.03	1.35	706
2012	1.05	1.24	1.66	92	1.02	1.08	1.30	2,702	1.02	1.07	1.24	687
2013	1.07	1.20	1.32	82	1.01	1.06	1.21	2,567	1.02	1.05	1.15	677
2014	1.03	1.03	1.42	78	1.02	1.05	1.25	2,414	1.01	1.07	1.32	641
2015	1.13	1.13	1.42	70	1.01	1.05	1.30	2,273	1.01	1.07	1.38	606
2016	1.06	1.06	1.38	68	1.03	1.08	1.24	2,094	1.02	1.02	1.26	590
2017	1.02	1.02	1.45	67	1.03	1.10	1.25	1,968	1.02	1.06	1.22	561
2018	1.03	1.03	1.36	59	1.03	1.08	1.24	1,811	1.02	1.08	1.28	533
2019	1.04	1.04	1.30	55	1.05	1.12	1.32	1,652	1.01	1.08	1.25	509
2020	1.13	1.13	1.13	52	1.06	1.13	1.21	1,534	1.02	1.10	1.25	480

Table 6.3: Summary Statistics of the Derived Longitudinal Weights at the Household Level for Subsamples H, J and K (Percentiles of \$HBLEIB up to Wave 37).

Year	Sample H				Sample J				Sample K			
	p10	p50	p90	N	p10	p50	p90	N	p10	p50	p90	N
2007	1.04	1.16	1.46	1,188								
2008	1.01	1.03	1.18	1,082								
2009	1.01	1.03	1.22	996								
2010	1.01	1.04	1.37	913								
2011	1.00	1.05	1.31	858								
2012	1.00	1.03	1.36	818	1.05	1.19	1.52	2,555				
2013	1.00	1.05	1.27	783	1.03	1.13	1.36	2,305	1.04	1.15	1.47	1,281
2014	1.01	1.05	1.27	732	1.03	1.09	1.31	2,110	1.02	1.09	1.34	1,187
2015	1.01	1.09	1.26	684	1.02	1.06	1.25	1,983	1.02	1.05	1.31	1,108
2016	1.01	1.04	1.29	639	1.02	1.06	1.20	1,883	1.02	1.05	1.27	1,046
2017	1.01	1.05	1.35	594	1.06	1.10	1.22	1,776	1.03	1.07	1.20	987
2018	1.01	1.06	1.37	548	1.02	1.06	1.18	1,692	1.03	1.07	1.13	934
2019	1.02	1.09	1.41	491	1.03	1.09	1.31	1,538	1.04	1.09	1.32	837
2020	1.03	1.13	1.13	461	1.04	1.10	1.19	1,469	1.04	1.10	1.33	796

Table 6.4: Summary Statistics of the Derived Longitudinal Weights at the Household Level for Subsamples L1, L2 and L3 (Percentiles of \$HBLEIB up to Wave 37).

Year	Sample L1				Sample L2				Sample L3			
	p10	p50	p90	N	p10	p50	p90	N	p10	p50	p90	N
2011	1.10	1.20	1.46	1,647	1.03	1.12	1.37	1,958				
2012	1.04	1.16	1.58	1,467	1.03	1.11	1.35	1,907	1.01	1.10	1.37	806
2013	1.03	1.11	1.59	1,362	1.03	1.09	1.37	1,805	1.02	1.11	1.47	750
2014	1.02	1.11	1.47	1,247	1.10	1.26	1.67	1,416	1.10	1.25	1.76	593
2015	1.01	1.06	1.36	1,184	1.04	1.15	1.91	1,379	1.03	1.12	1.74	582
2016	1.02	1.08	1.25	1,122	1.05	1.16	1.97	1,265	1.03	1.15	1.66	533
2017	1.02	1.06	1.24	1,055	1.03	1.12	1.64	1,247	1.03	1.10	1.93	516
2018	1.03	1.10	1.25	991	1.03	1.15	1.62	1,170	1.05	1.12	1.53	501
2019	1.01	1.13	1.47	894	1.02	1.12	1.75	1,121	1.01	1.11	1.82	466
2020	1.02	1.11	1.42	866	1.08	1.14	1.64	1,087	1.02	1.14	1.64	446



Table 6.5: Summary Statistics of the Derived Longitudinal Weights at the Household Level for Subsamples M1, M2 and M3/M4 (Percentiles of \$HBLEIB up to Wave 37).

Year	Sample M1				Sample M2				Sample M3/4			
	p10	p50	p90	N	p10	p50	p90	N	p10	p50	p90	N
2014	1.08	1.28	1.81	2,012								
2015	1.08	1.27	1.89	1,667								
2016	1.07	1.21	1.90	1,493	1.24	1.50	2.23	660				
2017	1.03	1.16	1.61	1,350	1.10	1.36	3.02	559	1.10	1.31	2.06	2,178
2018	1.09	1.18	1.45	1,203	1.04	1.19	2.10	487	1.13	1.37	2.02	2,037
2019	1.07	1.21	1.74	1,030	1.04	1.31	2.00	391	1.06	1.26	2.33	1,763
2020	1.07	1.21	1.68	952	1.06	1.25	1.58	344	1.05	1.18	1.66	1,595

Table 6.6: Summary Statistics of the Derived Longitudinal Weights at the Household Level for Subsamples M5, N, and O (Percentiles of \$HBLEIB up to Wave 37).

Year	Sample M5				Sample N				Sample O			
	p10	p50	p90	N	p10	p50	p90	N	p10	p50	p90	N
2018	1.08	1.32	2.37	1,005	1.05	1.13	1.36	2,050				
2019	1.05	1.26	2.65	929	1.03	1.14	1.44	1,889	1.07	1.33	2.20	623
2020	1.12	1.24	1.66	812	1.03	1.12	1.36	1,844	1.04	1.18	1.87	568

Table 6.7: Summary Statistics of the Derived Longitudinal Weights at the Household Level for Subsamples P and Q (Percentiles of \$HBLEIB up to Wave 37).

Year	Sample P				Sample Q			
	p10	p50	p90	N	p10	p50	p90	N
2020	1.18	1.52	2.14	1,229	1.01	1.07	1.31	423

Table 6.8: Summary Statistics of the Derived Cross-Sectional Weights at the Household Level (Percentiles of \$HHRF up to Wave 37).

Year	p5	p10	p25	p50	p75	p90	p95	N
1984	431	597	3,805	4,725	5,647	7,130	8,248	5,921
1985	480	684	3,873	5,084	6,459	8,541	10,179	5,322
1986	537	758	3,541	5,298	6,918	9,625	11,465	5,090
1987	548	791	3,450	5,391	7,193	10,054	11,880	5,026
1988	538	817	3,485	5,642	7,760	11,099	12,639	4,814
1989	558	830	3,528	5,841	8,137	11,662	13,089	4,690
1990	715	1,085	2,227	4,602	7,170	10,574	13,091	6,819
1991	701	1,071	2,359	4,736	7,345	10,915	13,520	6,699
1992	690	1,061	2,378	4,717	7,335	11,205	14,058	6,665
1993	704	1,082	2,462	4,759	7,510	11,311	14,150	6,637
1994	6,719	1,130	2,480	4,764	7,540	11,833	14,969	6,559
1995	718	1,148	2,452	4,445	7,237	11,501	15,350	6,768
1996	764	1,210	2,480	4,483	7,397	12,009	16,344	6,699
1997	774	1,252	2,516	4,463	7,448	12,509	17,055	6,621
1998	1,043	1,425	2,455	4,100	6,567	10,237	13,776	7,492
1999	1,029	1,412	2,454	4,184	6,934	11,406	15,065	7,220
2000	845	1,156	1,802	2,582	3,675	5,124	6,156	13,082
2001	805	1,099	1,817	2,837	4,288	6,212	7,067	11,796
2002	528	697	1,299	2,659	4,436	6,707	7,443	12,320
2003	537	724	1,334	2,711	4,649	7,149	7,849	11,909
2004	527	721	1,304	2,672	4,754	7,469	8,801	11,644
2005	6,533	738	1,332	2,693	4,872	7,804	9,800	11,294
2006	495	702	1,365	2,536	4,458	6,964	9,246	12,361
2007	498	712	1,373	2,656	4,864	7,605	9,757	11,552
2008	509	730	1,412	2,786	5,227	8,422	10,595	10,921
2009	517	731	1,421	2,812	5,409	9,322	11,924	10,270
2010	230	378	688	1,492	3,792	7,720	11,541	13,888
2011	219	330	620	1,519	3,073	5,792	8,440	16,703
2012	219	331	643	1,643	3,140	5,694	8,431	16,397
2013	182	274	533	1,315	2,929	5,475	7,921	17,992
2014	207	317	631	1,542	3,342	6,203	9,121	15,946
2015	189	303	623	1,495	3,330	6,329	9,296	15,908
2016	40	79	335	1,165	3,086	6,120	9,424	17,715
2017	39	73	328	1,159	2,786	5,529	8,401	19,628
2018	41	91	390	1,239	2,912	5,649	8,871	18,622
2019	45	91	304	1,049	2,805	5,887	9,037	18,971
2020	21	42	183	853	2,671	5,705	8,785	20,128

Table 6.9: Summary Statistics of the Derived Cross-Sectional Weights at the Person Level (Percentiles of \$PHRF up to Wave 37).

Year	p5	p10	p25	p50	p75	p90	p95	N
1984	397	553	1,176	4,365	5,222	6,049	6,799	16,173
1985	460	641	1,440	4,612	5,716	6,913	8,137	14,508
1986	495	690	1,549	4,672	6,022	7,654	9,186	13,804
1987	518	729	1,614	4,703	6,220	7,990	9,717	13,563
1988	494	700	1,634	4,895	6,566	8,648	10,675	12,872
1989	539	770	1,766	4,996	6,894	9,145	11,262	12,443
1990	700	1,040	1,910	3,439	6,150	8,402	10,565	18,254
1991	750	1,095	1,944	3,735	6,231	8,635	10,956	17,844
1992	805	1,176	2,042	3,786	6,322	8,850	11,397	17,429
1993	876	1,278	2,152	3,900	6,411	9,094	11,742	17,072
1994	909	1,327	2,167	3,928	6,452	9,408	12,343	16,715
1995	800	1,200	2,074	3,686	6,177	9,268	12,289	17,345
1996	841	1,250	2,088	3,741	6,253	9,524	12,961	16,944
1997	893	1,282	2,153	3,802	6,387	9,768	13,651	16,583
1998	977	1,344	2,150	3,650	5,737	8,537	11,364	18,249
1999	975	1,333	2,145	3,663	6,020	9,202	12,678	17,501
2000	764	1,024	1,611	2,350	3,269	4,602	5,641	30,784
2001	735	986	1,588	2,506	3,732	5,427	6,775	27,956
2002	469	640	1,115	2,264	3,843	5,920	7,378	29,101
2003	475	656	1,154	2,306	4,009	6,313	7,830	27,867
2004	466	654	1,157	2,295	4,114	6,676	8,463	26,918
2005	475	677	1,202	2,368	4,252	7,087	9,184	25,638
2006	444	641	1,201	2,287	3,870	6,465	8,551	27,442
2007	450	654	1,226	2,377	4,178	7,141	9,405	25,505
2008	471	679	1,273	2,496	4,462	7,868	10,290	23,792
2009	480	685	1,286	2,541	4,603	8,465	11,866	22,096
2010	182	289	548	1,062	2,587	5,657	8,761	35,945
2011	169	257	462	999	2,374	4,468	6,740	42,031
2012	170	252	473	1,117	2,519	4,531	6,849	40,351
2013	143	215	411	914	2,252	4,292	6,354	44,633
2014	160	247	486	1,099	2,585	4,934	7,399	38,839
2015	146	232	476	1,104	2,592	5,106	7,786	38,224
2016	26	42	189	789	2,297	4,834	7,534	44,042
2017	25	41	165	789	2,158	4,386	6,721	48,249
2018	28	49	213	858	2,317	4,684	7,292	44,576
2019	29	54	197	789	2,323	4,970	7,767	43,443
2020	17	33	136	696	2,281	5,062	7,937	44,121

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