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**Working Paper — Digitized Version**

## Documentation of sample sizes and panel attrition in the German Socio Economic Panel (GSOEP) (1984 until 1995) [Subsamples A, B, C]

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Diskussionspapiere  
Discussion Papers

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by

Markus Pannenberg<sup>1</sup> and Ulrich Rendtel<sup>2</sup>

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# **Deutsches Institut für Wirtschaftsforschung**

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by  
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## 1 Development of the sample sizes

**General comment:** The sample sizes of the English public use version of the GSOEP and the German DIW version differ by approximately five percent. The exclusion of 5 percent of the original data from the GSOEP was necessary to fulfill the requirements of the German data protection laws. Technically this was achieved by dropping randomly 5 percent of the original wave 1 households. All persons and households which stem from these root households are excluded from the English public use version. As a consequence the difference in sample sizes is not always exactly 5 percent. The sample sizes documented here refer to the original DIW data base version. Our focus is on the subsamples A, B and C. The first wave of the new immigrant sample (subsample D) is documented in Burkhauser/Kreyenfeld/Wagner (1996).

The development of the sample sizes is documented here under the following aspects:

- Comparison of the number of successful interviews by cross-section.
- Longitudinal development of panel attrition.
- Entrants by birth or move-ins and their participation behavior.

### 1.1 Development of the number of successful interviews by cross-section

The following figures display the number of successful interviews under different aspects.

**Figure 1** Comparison for individuals and households (subsamples A and B), wave 1 (1984) to 11 (1995).

**Figure 2** Comparison between subsamples A and B on the individual level, wave 1 (1984) to 11 (1995).

**Figure 3** Comparison between the subsamples A,B and C on the individual level wave 1 to 6.

Figure 1: Comparison of successful interviews with persons and households (subsample A and B), waves 1 to 12.

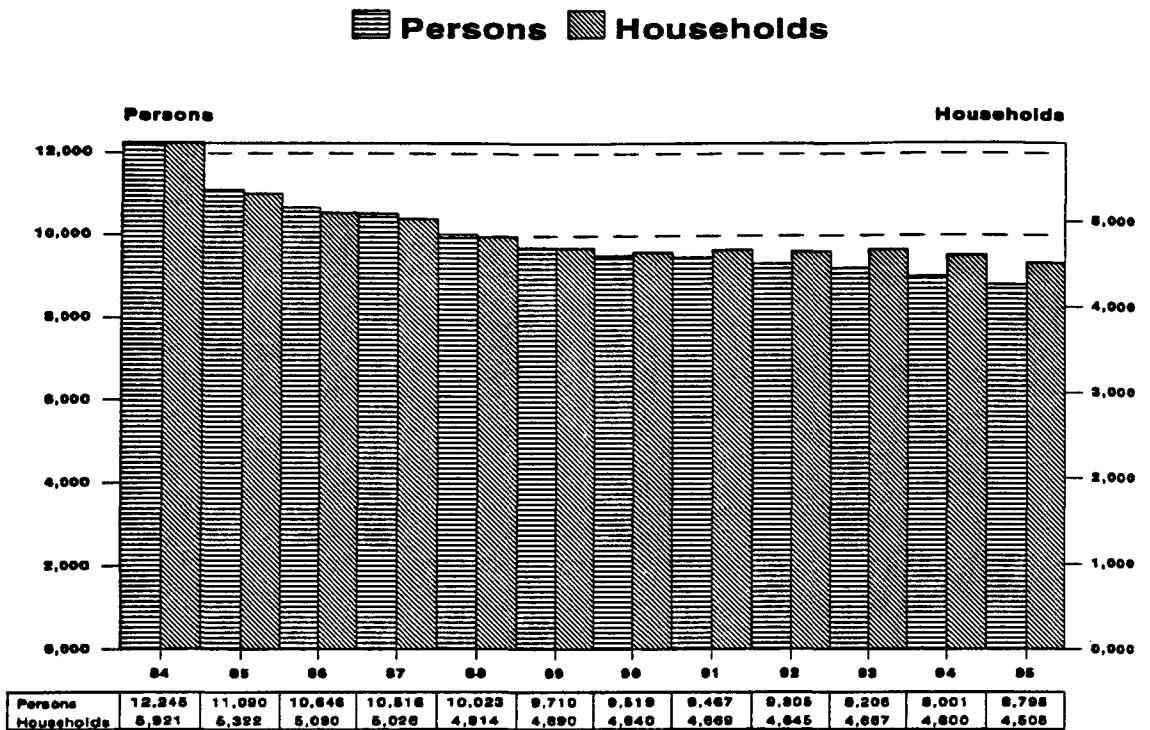


Figure 2: Comparison of successful interviews between subsamples A and B (individual level), waves 1 to 12.

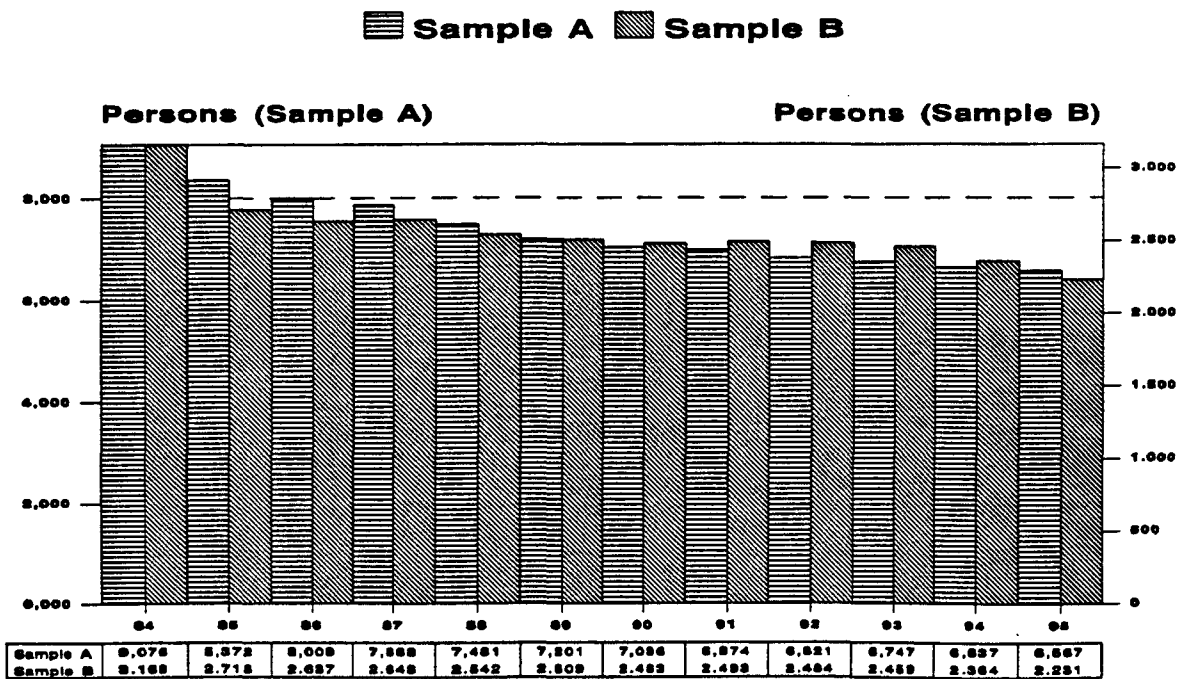
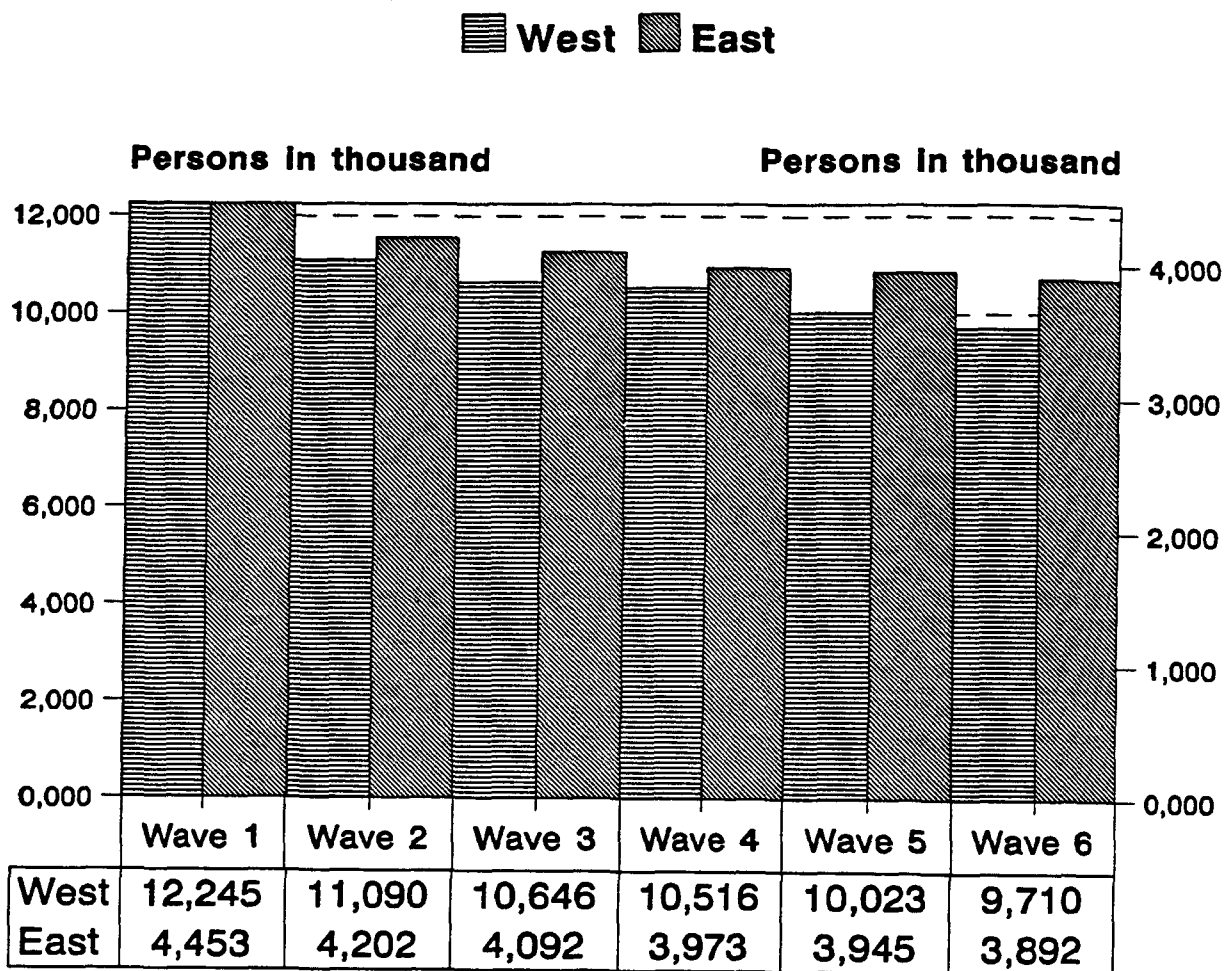


Figure 3: Comparison of successful interviews between subsamples A, B and C (individuals), waves 1 to 6.





With increasing duration of the GSOEP the initial subsample indicator loses its ability to predict the actual sampling region; i.e. members of subsample C (East-Germany) move to West-Germany and members of the subsample A and B (West-Germany) move to East-Germany. Table 1 displays the actual sampling region of the GSOEP households since 1990 (Wave 7 for subsamples A and B, wave 1 for subsample C).

**Table 1: Development of sample sizes by sampling region and institutional status 1990 to 1995.** n=Number of successful interviews, N=Estimated population total in thousands. Population margins for the number of households and individuals living in private households by sampling region are taken from the German microcensus. Figures for 1995 are provisional. Because of the different definitorial concepts the figures for the institutional population are not comparable to the microcensus.

Survey year		Sampling region							
		West				East			
		Sample A+B		Sample C		Sample C		Sample A+B	
		1*	2*	1*	2*	1*	2*	1*	2*
Households									
1990	n	4592	48	-	-	2158	21	-	-
	N	28173	417	-	-	6703	90	-	-
1991	n	4620	49	22	-	1988	20	-	-
	N	28466	408	117	-	6672	108	-	-
1992	n	4598	46	58	3	1946	13	1	-
	N	28776	387	266	18	6654	71	2	-
1993	n	4609	53	78	5	1878	9	5	-
	N	29310	436	399	28	6615	50	40	-
1994	n	4545	47	93	5	1850	11	8	-
	N	29542	430	457	24	6706	77	103	-
1995	n	4451	45	111	3	1814	10	12	-
	N	28208	453	533	9	6723	74	166	-
Persons (including children)									
1990	n	12151	59	-	-	6014	30	-	-
	N	62380	471	-	-	16313	120	-	-
1991	n	12100	61	44	-	5613	26	-	-
	N	62971	455	236	-	15808	128	-	-
1992	n	11884	58	133	3	5331	18	2	-
	N	63441	434	559	18	15618	84	4	-
1993	n	11724	63	182	5	5078	11	7	-
	N	63934	464	836	24	15501	54	44	-
1994	n	11467	55	225	5	4938	13	11	-
	N	64342	437	1058	17	15349	82	151	-
1995	n	11193	54	277	3	4796	12	23	-
	N	59794	483	1204	9	15175	81	293	-
1*: Private households									
2*: Institutionalized population									

Considering the estimated population for sample A and B in 1995 (West) at a household and a personal level, we have to take into account that beginning with wave 12 (1995), the A and B weights are reduced to reflect the fact that immigrants are contained now in sample D (see chapter 4 for details).

### 1.2 Longitudinal development of losses due to panel attrition

The following figures display the development of the number of losses due to panel attrition under different aspects:

**Figure 4:** All first wave persons of subsamples A and B. Whereabout until wave 12.

**Figure 5:** All first wave persons of subsample A. Whereabout until wave 12.

**Figure 6:** All first wave persons of subsample B. Whereabout until wave 12.

**Figure 7:** All first wave person of subsample C. Whereabout until wave 6.

**Figure 8:** Comparison of attrition rates between subsamples A, B and C in wave 6.

The figures in the center display the percentage of records that are without survey related attrition until the corresponding wave. These percentages may be taken as a score for panel stability.

**Figure 4:** All first wave persons (subsample A+B). Development until wave 12.

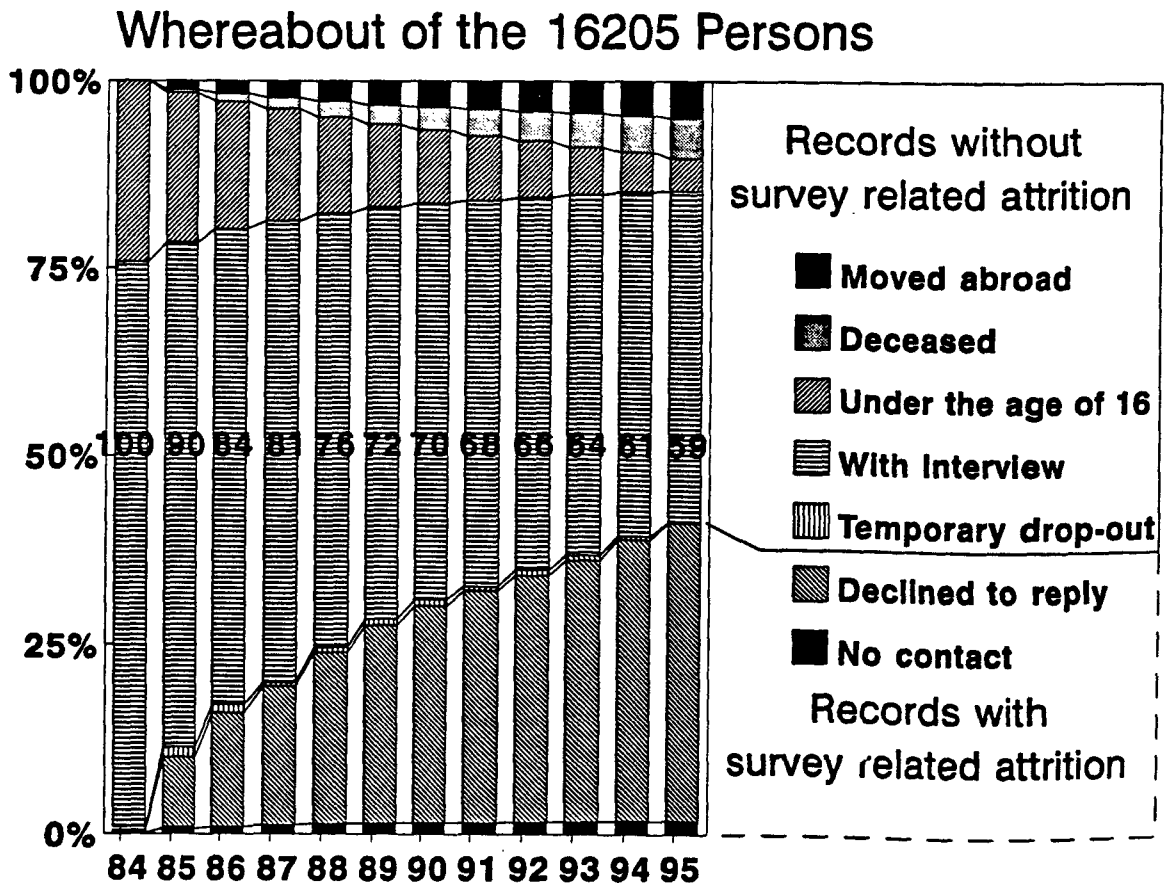


Figure 5: All first wave persons (subsample A). Development until wave 12.

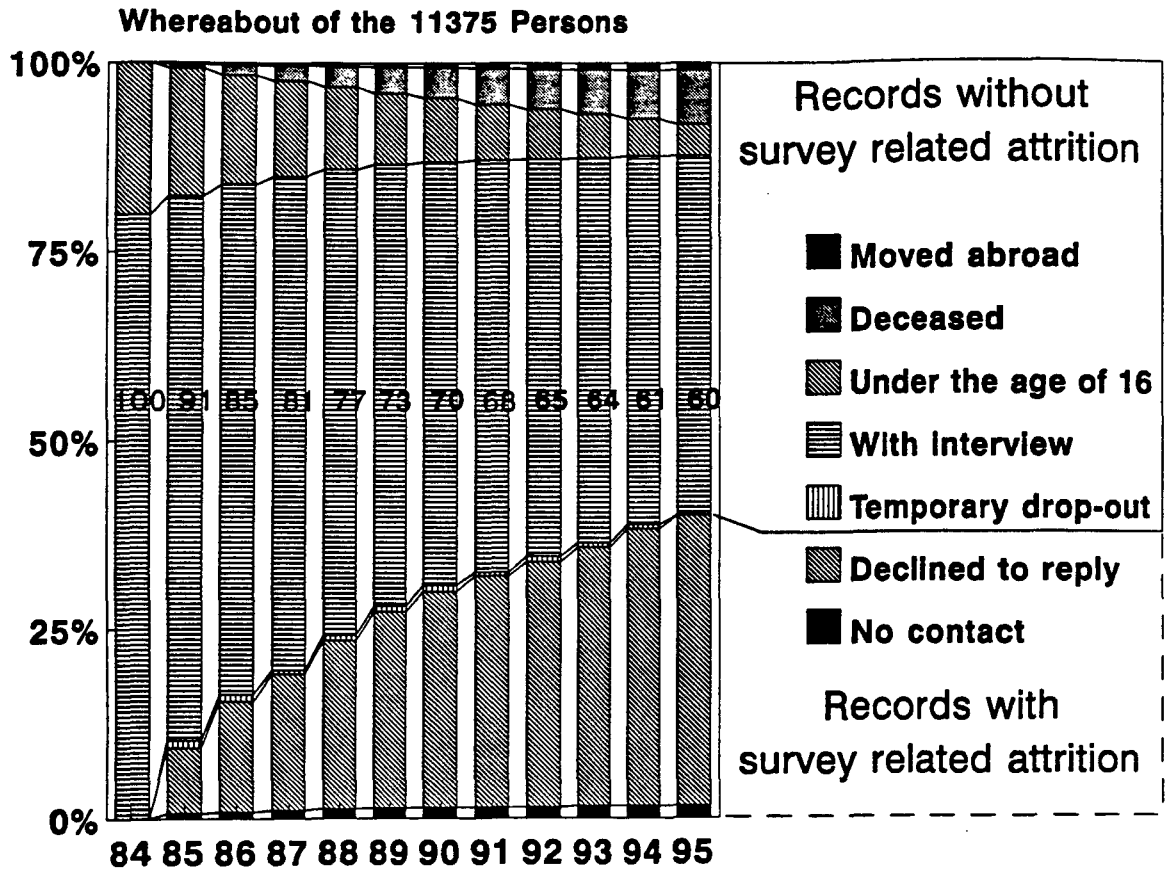


Figure 6: All first wave persons (subsample B). Development until wave 12.

Whereabout of the 4830 Persons

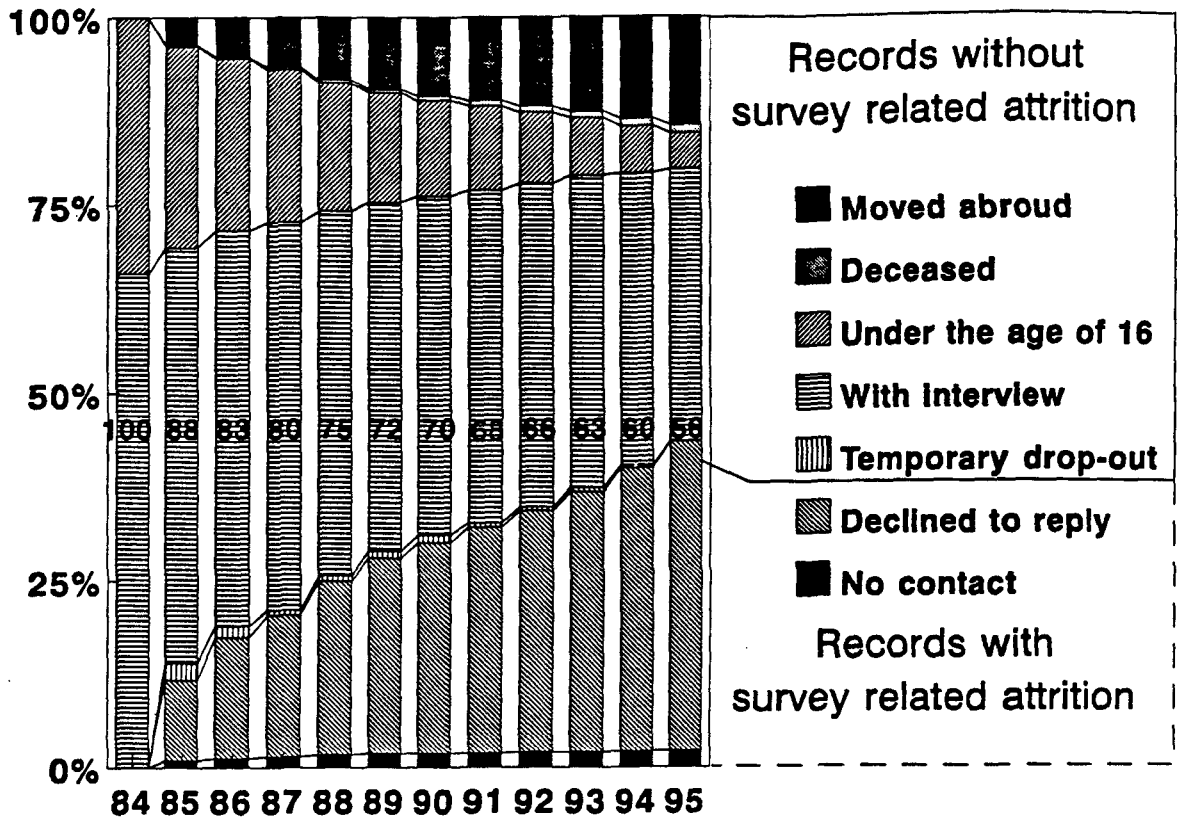


Figure 7: All first wave persons of the subsample C. Development until wave 6 (East).

**Whereabout of the 6131 Persons**

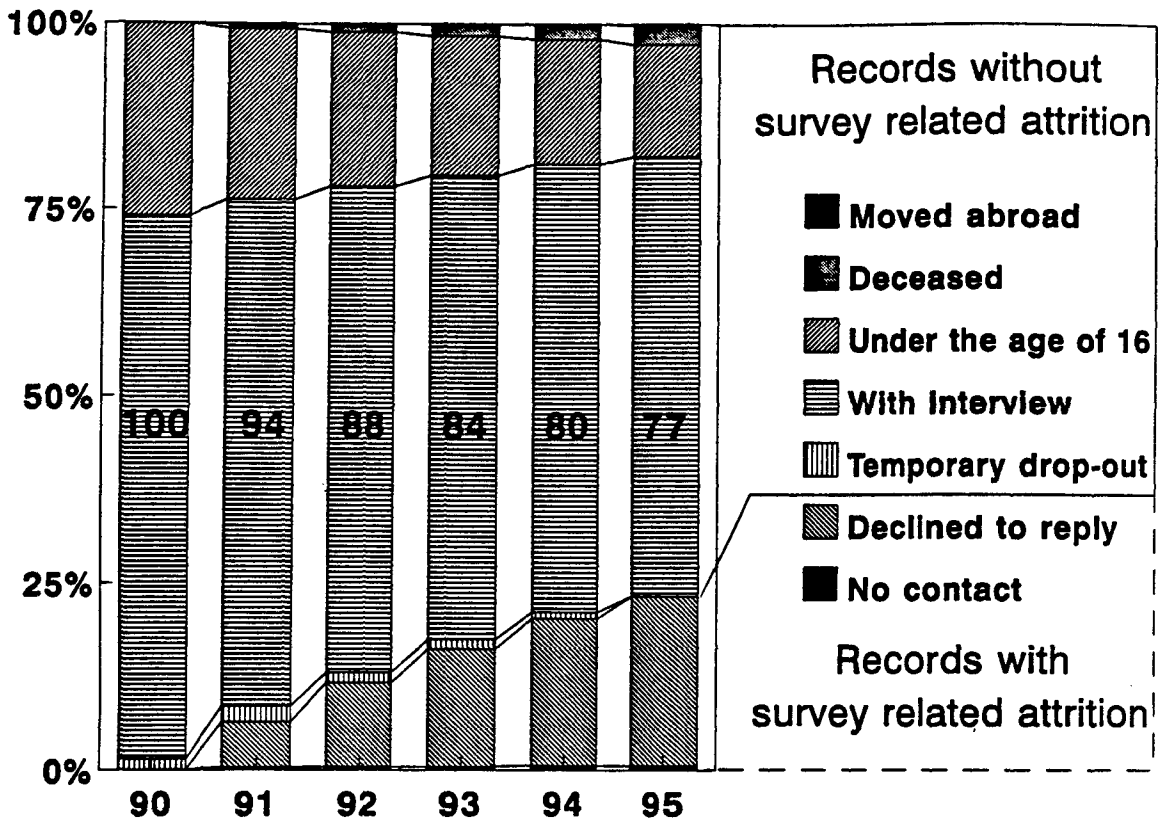
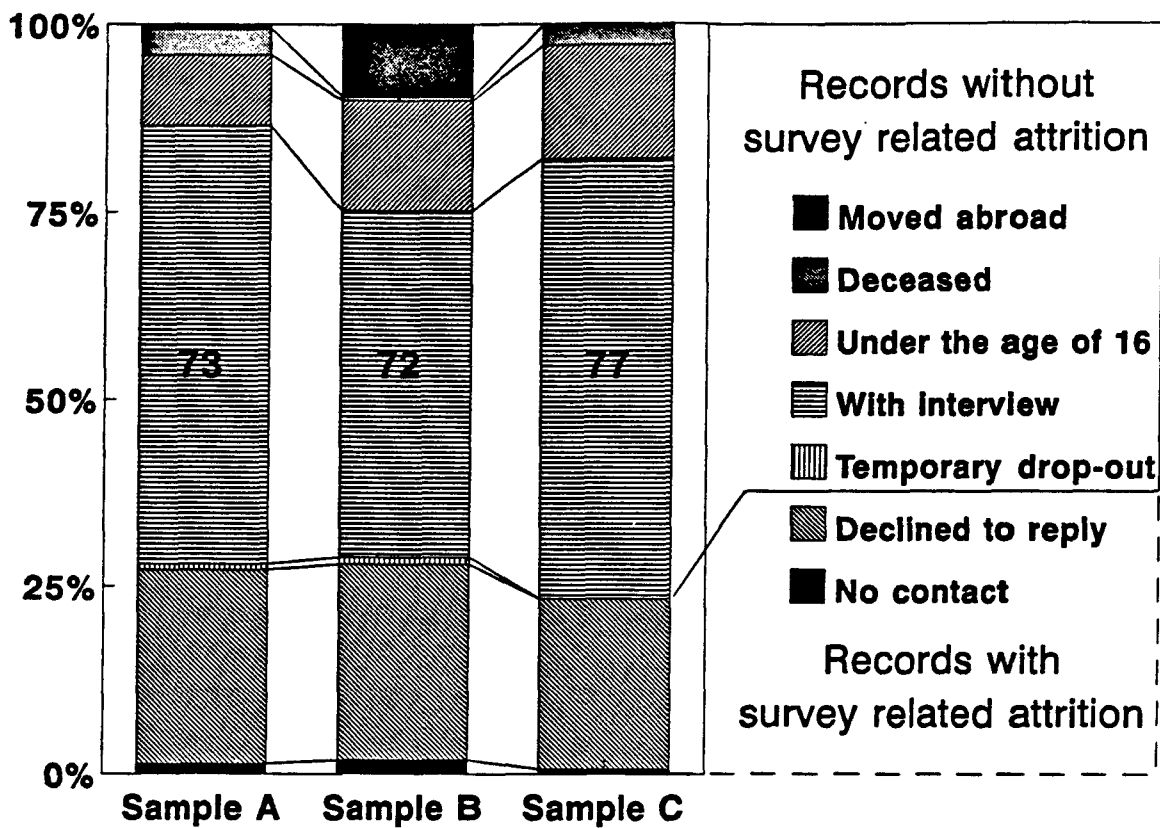
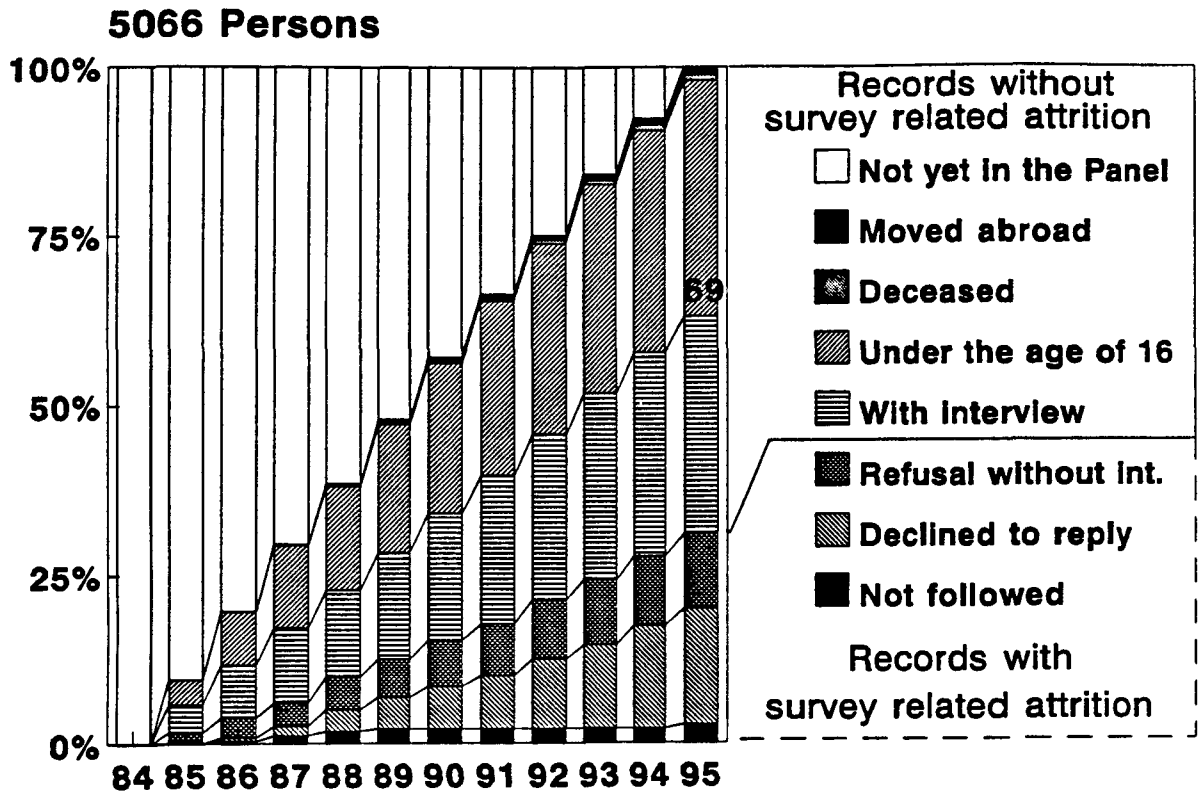


Figure 8: All first wave persons. Comparison of the development until wave 6.



### 1.3 Entrants by birth or move-ins and their participation behavior

Figure 9: Entrants by birth or move-in and their participation behavior (subsamples A+B).



## **2 Losses due to unsuccessful follow-up**

In each panel wave it is necessary to re-contact the households of the proceeding wave. In doing this it will be assessed, whether:

- the household still lives at the old address.
- the entire household has moved.
- all household members deceased.
- all household members left the sampling area.
- all household members returned into an existing panel household.

### **2.1 Drop-out rates by mobility behavior**

Table 2 displays the success of the field work in re-contacting households. The drop-out rates refer to all households of the previous wave that still exist in the sampling area plus split-off households. A contact is regarded to be successfully established if the interviewer recorded an interview or a refusal in the address protocol. Also the detection that the household members returned into an existing panel household is taken as a successful follow-up.



**Table 2: Drop-out rates due to unsuccessful follow-up in the GSOEP subsamples A and B.** N= Number of households to be recontacted; %= percentage of households without contact.

Wave:	2	3	4	5	6	7	8	9	10	11	12
	Total										
N	6051	5814	5465	5342	5156	5044	5029	5006	5049	5008	4900
%	1.9	1.4	1.0	0.9	0.9	0.9	0.5	0.4	0.9	0.8	0.6
	Households without move										
N	5413	5039	4808	4683	4545	4472	4448	4447	4395	4359	4292
%	0.8	0.4	0.1	0.1	0.2	0.0	0.04	0.0	0.02	0.1	0.07
	Moved multi-person households										
N	298	307	272	274	228	186	197	195	231	239	264
%	7.4	3.6	4.0	5.5	0.5	1.6	0.5	0.5	0.9	0.0	1.9
	Moved single-person households										
N	119	180	142	143	126	122	94	90	105	146	127
%	21.0	14.4	7.7	5.6	4.7	5.7	1.1	0.0	7.6	6.2	0.8
	Split-off households										
N	221	295	242	242	246	263	290	273	317	264	217
%	11.7	8.4	10.4	7.4	11.8	12.9	7.6	7.3	10.7	9.9	9.2

**Table 3: Drop-out rates due to unsuccessful follow-up in the GSOEP subsample C.** N= Number of households to be recontacted; %= percentage of households without contact.

Characteristic	Wave 2		Wave 3		Wave 4		Wave 5		Wave 6	
	N	%	N	%	N	%	N	%	N	%
Total	2246	1.5	2304	0.5	2227	0.9	2136	0.6	2113	0.4
Households without move	2062	0.0	2043	0.05	2021	0.05	1904	0.0	1862	0.1
Moved multi-person households	81	11.1	106	0.0	82	3.7	92	2.2	119	0.0
Moved single-person households	21	14.3	43	9.3	14	0.0	39	2.6	30	3.3
Split-off households	82	25.6	112	6.3	110	13.6	104	8.6	102	6.9

## 2.2 Definition of the covariates for a Logit analysis

The estimation of the probability that a household is lost by unsuccessful follow-up uses a Logit model with the following characteristics:

Characteristic	Abbreviation	Code	Values
Moved	MOVE	1	household, not moved
		2	Moved multi-person household
		3	Moved single-person household
		4	Split-off household
Large City	LARGE	0	Else
		1	More than 500 thousand inhabitants
Household size	SIZE	1	Single-person household
		2	2 person household
		3	3 person household
		4	4 or more persons household
Single-person household	SINGLE	0	Else
		1	Single-person household
Typ of house	TYP	1	Single house or rural area
		2	Multi storey house
		3	Else
Split-off household	SPLIT	1	Moved multi-person household
		2	Moved single-person household
		3	Split-off household

### 2.3 Estimated coefficients of the Logit model

The covariates defined in the previous section were used in a multiple Logit analysis. The model estimates the probability  $P_c = (\text{contact} = \text{no})$ . For the computation of the GSOEP weighting schemes only model specifications with all covariates being significant were used.

Meaning of coefficients: 
$$\ln \frac{P_{c,t}}{1 - P_{c,t}} = \text{const} + X' \beta$$

Thus, positive coefficients indicate an increased drop-out rate compared to the sample average. Table 4 uses a simple symbolic notation for the models and their estimated coefficients. Here “+” means the addition of a main effect, an “\*” indicates an interaction term. Variable 1 (Variable 2 = c) symbolizes a conditional main effect which is linked to cases where variable 2 = c. The estimated coefficients are displayed under the model equation. The notation uses the convention: variable (value 1: coefficient 1/value 2: coefficient 2/...).

The estimated drop out rates due to unsuccessful follow-up may be easily calculated from table 4. For example: In wave 2, subsample A, we find for a multiple-person household, that moved (MOVE=2) from a large city (LARGE=1) the logit value  $-2.87 + 0.24 + 0.11 = -2.52$ .

Thus we have 
$$\Pr(\text{contact} = \text{no}) = \frac{e^{-2.52}}{1 + e^{-2.52}} = 0.074.$$

Table 4: The estimates of a Logit model for the probability of a drop-out due to unsuccessful follow-up in the GSOEP. Representation of coefficients: variable (value 1: coefficient 1/value 2: coefficient 2/...).

Subsample A (West-Germans)	
Wave	Model and coefficients
2	Model = CONST + LARGE + MOVE CONST (-2.87), LARGE (0: -0.24 / 1: 0.24) MOVE (1: -2.52 / 2: 0.11 / 3: 1.53 / 4: 0.84)
3	Model = CONST + LARGE + MOVE CONST (-3.62), LARGE (0: -0.36 / 1: 0.36), MOVE (1: -1.79 / 2: -0.49 / 3: 1.48 / 4: 0.80)
4	Model = CONST + MOVE CONST (-3.42), MOVE (1: -3.01 / 2: 0.78 / 3: 0.98 / 4: 1.35)
5	Model = CONST + MOVE + SINGLE (MOVE) CONST (-3.76), MOVE (1: -3.09 / 2,3: 1.34 / 4: 1.75) SINGLE (MOVE = 1) (0: -1.35 / 1: 1.35) SINGLE (MOVE = 2,3) 0: -0.28 / 1: 0.28) SINGLE (MOVE = 4) (0: -0.63 / 1: 0.63)
6	Model = CONST + MOVE + SINGLE (MOVE) CONST (-3.48), MOVE (1: -2.33 / 2,3: 0.64 / 4: 1.69) SINGLE (MOVE = 1) (0: -0.75 / 1: 0.75) SINGLE (MOVE =2,3) (0: -0.76 / 1: 0.76) SINGLE (MOVE= 4) (0: -0.26 / 1: 0.26)
7*	Model = CONST + LARGE + SPLIT CONST (-2.97), LARGE (0: -0.39 / 1: 0.39), SPLIT (1: -1.10 / 2: -0.07 / 3: 1.17)
8	Model = CONST + MOVE CONST (-5.03) MOVE 1: -2.79 / 2: -0.24 / 3: 0.50 / 4: 2.53)
9	Pr (contact = no) = 0 if MOVE = 1,2,3 / =0.06 if MOVE =4
10	Model = CONST + LARGE + MOVE CONST (-4.44), LARGE (0: -0.44 / 1: 0.44), MOVE (1: -3.65 / 2: 0.10 / 3: 1.12 / 4: 2.42)
11	Model = CONST + SINGLE + MOVE CONST (-6.01), SINGLE (0: -1.06 / 1: 1.06) MOVE (1: -0.99 / 2: -5.13 / 3: 1.84 / 4: 4.28)
12	Model = CONST + SINGLE + MOVE CONST (-4.61), SINGLE (0: -0.72 / 1: 0.72) MOVE (1: -2.68 / 2: 0.78 / 3: -0.83 / 4: 2.73)
* In wave 7 all households that did not move were successfully re-contact. The drop-out analysis therefore based only on households that moved.	

**Table 4: continued**

Subsample B (Foreigners)	
2	<b>Model = CONST + LARGE + MOVE + SIZE</b> CONST (-2.28), LARGE (0: -0.50 / 1: 0.50), MOVE (1: -1.66 / 2: 0.69 / 3: -0.07 / 4: 1.04) SIZE (1: 1.23 / 2: 0.26 / 3: -0.82 / 4: -0.67)
3	<b>Model = CONST + LARGE + MOVE</b> CONST (-2.65), LARGE (0: -0.72 / 1: 0.72), MOVE (1: -3.06 / 2: 0.16 / 3: 1.64 / 4: 1.26)
4	CONST (-3.34), MOVE (1: -3.60 / 2: -0.46 / 3: 2.19 / 4: 1.87)
5	like Subsample A
6	like Subsample A
7*	<b>Model = CONST + LARGE + SPLIT + TYPE</b> CONST (-2.93), LARGE (0: 0.064 / 1: -0.64), SPLIT (1: -1.65 / 2: 0.58 / 3: 1.07), TYPE (1: -0.73 / 2: 1.32 / 3: -0.59)
8	like Subsample A
9	Pr (contact = no) = 0 if MOVE = 1,2,3 / = 0.10 if MOVE = 4
10	<b>Model = CONST + LARGE + MOVE</b> CONST (-7.98), LARGE (0: -0.81 / 1: 0.81), MOVE (1: -7.63 / 2: -4.69 / 3: 6.50 / 4: -5.82)
11	<b>Model = CONST + SINGLE + MOVE</b> CONST (-5.39), SINGLE (0: -1.5 / 1: 1.54), MOVE (1: -1.19 / 2: -4.26 / 3: 2.07 / 4: 3.39)
12	<b>Model = CONST + MOVE</b> CONST (-5.34), MOVE (1: -1.52 / 2: 2.21 / 3: -3.86 / 4: 3.17)
* In wave 7 all households that did not move were successfully re-contact. The drop-out analysis therefore based only on households that moved.	
Subsample C (East-Germans)	
Wave	Model and coefficients
2 East	Pr(contact=no) = MOVE (1: 0.0 / 2: 0.11 / 3: 0.14 / 4: 0.25)
3 East	Pr(contact=no) = MOVE (1,2: 0.0 / 3: 0.09 / 4: 0.07)
4 East	Pr(contact=no) = MOVE (1: 0.0 / 2: 0.04 / 3: 0.0 / 4: 0.14)
5 East	Pr(contact=no) = MOVE (1: 0.0 / 2: 0.02 / 3: 0.03 / 4: 0.09)
6 East	Pr(contact=no) = MOVE (1: 0.0 / 2: 0.0 / 3: 0.03 / 4: 0.07)

### **3 Losses due to refusals**

#### **3.1 Drop-out rates by different household characteristics**

The subsequent tables display the drop-out rates due to refusal by different household characteristics. In general the characteristics refer to their status at the previous interview. However, the survey related characteristics refer to the actual sampling wave.

The person related characteristics refer to the head of the household in the previous wave. However, for split-off households the person related characteristics refer to the person that moved from the panel household (In case of several persons that moved from a panel household: the person first mentioned in the address protocol).

For households which were successfully re-contacted two alternative outcomes were considered:

- an interview is achieved at the household level.
- the household interview was not achieved.

Here, no differences were made between various reasons for the refusal like explicit denial or refusal because of lack of time, bad health conditions, etc..

**Table 5: Participation behavior of re-contacted households by socio demographic characteristics of the head of the household. N = Number of eligible households. % = Percentage of households without interview.**

		Wave										
		2	3	4	5	6	7	8	9	10	11	12
All households	N	5937	5732	5398	5285	5095	4982	4985	4977	4994	4960	4863
	%	10.4	11.2	6.9	8.9	7.9	6.9	6.3	6.7	6.6	7.3	7.3
Drop-out in previous wave	N	-	259	197	154	169	154	183	145	164	146	150
	%	-	59.5	52.8	71.6	57.4	49.3	48.1	62.1	50.6	54.1	60.7
		Households with participation in previous wave										
All	N	5937	5473	5201	5131	4926	4828	4802	4832	4830	4814	4713
	%	10.4	8.9	5.1	7.0	6.2	5.5	4.7	5.0	5.1	5.8	5.6
		Sample										
A West-Germans	N	4611	4275	4058	3993	3834	3755	3716	3724	3718	3713	3661
	%	10.2	8.7	5.2	7.1	6.2	5.3	4.6	4.9	5.1	5.3	5.0
B Foreigners	N	1326	1198	1143	1138	1092	1073	1086	1108	1112	1101	1052
	%	10.9	9.6	5.0	6.9	6.4	6.1	5.3	5.5	6.2	7.7	7.6
		Gender										
Male	N	4664	4226	3951	3840	3624	3486	3413	3372	3340	3286	3173
	%	9.8	8.3	4.7	6.7	6.2	5.0	4.2	4.9	4.5	5.5	5.1
Female	N	1273	1247	1250	1291	1303	1342	1389	1460	1490	1528	1540
	%	12.2	11.0	6.5	7.9	6.5	6.9	6.1	5.3	6.3	6.6	6.6
		Age										
75 +	N	448	394	374	386	381	380	371	367	353	340	344
	%	18.3	13.7	6.7	6.5	6.8	5.0	3.0	5.2	6.2	5.0	9.8
65-74	N	562	513	487	480	465	462	477	503	527	550	554
	%	10.1	9.4	2.9	5.4	6.0	3.0	2.9	3.2	2.9	4.2	3.4
55-64	N	947	860	809	803	798	783	782	811	821	832	857
	%	9.8	8.7	4.2	4.7	5.9	5.5	3.8	3.4	3.4	4.7	3.6
35-54	N	2621	2401	2272	2226	2112	2017	1970	1899	1851	1797	1675
	%	9.2	7.8	4.3	6.3	6.1	4.9	4.7	4.1	3.6	5.8	5.3
25-34	N	1116	1034	976	963	904	926	957	983	1020	1077	1107
	%	8.9	8.0	6.1	9.9	6.1	7.7	6.1	6.2	7.7	6.3	6.1
16-24	N	243	271	283	273	266	260	245	269	258	218	176
	%	17.3	15.1	13.4	13.2	9.0	8.1	8.9	14.8	13.2	13.3	13.6

**Table 5: continued**

		Wave										
		2	3	4	5	6	7	8	9	10	11	12
		Households with participation in previous wave										
		Marital status										
Married, living together	N	3893	3600	3366	3301	3144	3029	3015	3008	2990	2949	2869
	%	9.6	8.0	4.4	6.2	6.2	4.6	3.4	4.9	4.3	5.2	4.6
Married, living separate	N	104	157	119	97	120	110	96	102	102	106	106
	%	7.7	12.1	5.9	13.4	6.7	8.2	12.5	6.9	8.8	9.4	6.6
Single	N	836	811	802	783	764	764	782	797	824	846	837
	%	12.6	9.6	9.4	11.5	6.8	8.6	9.1	9.7	8.3	7.9	7.7
Divorced	N	349	345	328	347	327	351	356	369	353	364	380
	%	10.3	10.4	4.6	6.3	7.0	7.1	4.8	4.9	3.4	6.0	7.9
Widowed	N	671	560	533	542	534	532	518	515	523	514	500
	%	12.6	11.9	3.9	5.1	4.7	4.5	4.4	3.9	4.8	4.9	6.0
		School degree										
Without exam	N	493	445	411	407	376	373	380	379	380	379	367
	%	10.9	11.0	6.3	8.8	6.7	5.6	5.8	5.5	5.0	6.3	8.7
Lower second- ary school	N	2952	2669	2493	2488	2405	2340	2314	2296	2272	2240	2190
	%	11.8	9.8	4.7	6.2	6.3	5.2	4.6	4.6	4.8	5.6	4.6
Intermediate secondary school	N	852	849	818	805	798	780	784	812	835	846	856
	%	6.8	8.8	5.6	8.3	8.0	6.3	4.9	4.7	4.4	5.7	6.3
Technical school	N	223	205	205	201	183	180	184	188	199	212	212
	%	9.4	6.8	6.3	9.5	5.5	5.6	7.6	4.8	5.0	7.1	5.7
Upper second- ary school	N	601	588	582	569	542	552	533	557	564	580	572
	%	7.5	6.0	5.5	7.6	4.2	7.4	5.1	7.0	6.2	5.5	5.1
		Occupational status										
Not gainfully employed	N	1527	1325	1290	1302	1276	1329	1339	1279	1314	1320	1349
	%	13.9	10.1	5.5	6.9	6.4	5.2	4.3	4.9	4.4	4.5	6.2
Jobless	N	206	297	260	258	265	193	199	215	197	239	285
	%	9.7	10.7	7.7	8.5	4.9	2.6	6.0	6.5	6.6	8.4	4.9
Hight status	N	585	578	522	530	519	511	496	518	531	557	524
	%	7.9	6.2	4.4	7.7	7.1	8.4	5.9	5.6	4.7	6.3	4.4
Middle status	N	2248	2202	2053	1982	1911	1803	1857	1932	1989	1855	1878
	%	8.8	8.1	5.3	6.6	6.2	5.1	4.7	5.1	5.5	5.7	5.2
Low status	N	1364	1071	1076	1059	954	992	911	888	799	843	677
	%	11.2	10.0	4.3	7.4	6.2	5.9	4.6	4.3	5.0	7.2	6.7



**Table 6: Participation behavior of re-contacted households by survey related characteristics. N = Number of eligible households. % = Percentage of households without interview.**

		Wave										
		2	3	4	5	6	7	8	9	10	11	12
		Households with participation in previous wave										
		Type of household										
Household, not moved	N	5372	4810	4646	4567	4421	4353	4313	4379	4285	4242	4182
	%	9.6	8.0	4.2	5.8	5.6	4.6	3.6	3.9	4.0	5.8	4.7
Household which moved	N	370	425	373	370	322	277	274	275	309	362	367
	%	11.6	12.7	10.7	14.1	9.0	7.6	9.9	9.5	8.4	7.7	8.7
Split-off household	N	195	238	182	194	183	198	215	208	235	204	164
	%	29.2	21.4	17.6	23.7	16.9	23.2	21.4	22.1	20.4	17.2	22.0
		Change of interviewer										
Yes	N	2041	1203	816	715	826	742	717	751	340	385	199
	%	14.9	17.5	12.5	19.0	12.9	14.4	10.7	12.1	8.2	8.6	9.6
No	N	3896	4265	4385	4416	4100	4086	4085	4081	3879	3824	3888
	%	7.9	6.5	3.8	5.1	4.9	3.9	3.7	3.7	3.3	3.4	3.2
Special cases	N									611	605	626
	%									14.6	19.3	19.0
		Number of interviews with the head										
Complete from first wave	N	-	5419	5018	4826	4600	4384	4225	4060	3856	3693	3520
	%	-	8.7	4.7	5.9	5.6	4.4	3.6	3.3	3.4	3.9	4.1
1 interview missing	N	-	-	161	246	253	294	346	389	399	416	412
	%	-	-	16.7	23.1	14.6	13.9	13.8	10.8	10.3	11.1	10.4
2 interviews missing	N	-	-	-	46	43	73	93	127	163	173	174
	%	-	-	-	43.5	16.2	23.2	12.9	18.9	14.7	17.3	8.6
3 interviews missing	N	-	-	-	-	24	49	63	104	137	164	168
	%	-	-	-	-	12.5	14.3	9.5	10.6	8.0	8.5	9.5
		New entrant living in the household										
Yes	N	257	243	218	211	209	220	198	210	197	197	168
	%	9.0	11.1	6.4	6.6	4.8	6.4	6.6	2.4	3.6	4.0	3.0
No	N	5680	5230	4983	4920	4717	4608	4604	4622	4633	4616	4545
	%	10.4	8.8	5.1	7.1	6.3	5.5	4.7	5.1	5.2	5.9	5.7
		A respondent person left the household										
Yes	N								209	243	201	168
	%								7.2	6.3	5.0	1.2
		Household without telephone										
Yes	N									248	253	-
	%									9.7	7.9	-

**Table 6: continued**

		Wave										
		2	3	4	5	6	7	8	9	10	11	12
		Households with participation in previous wave										
		Households with a separation of a couple										
All	N								94	116	103	83
	%								24.5	20.7	9.7	19.3
Old household	N								47	60	52	43
	%								14.6	16.7	7.7	4.7
Split-off household	N								47	56	51	40
	%								34.8	25.0	11.7	35.0
		Subjective characteristics										
		General life satisfaction										
More or less dissatisfied ( $\leq 4$ )	N									302	380	393
	%									7.3	7.6	6.9
More or less satisfied ( $\geq 5$ )	N									4528	4434	4320
	%									4.9	5.7	5.5

**Table 7: Participation of re-contacted households by household income and the number of different assets. N = Number of eligible households. % = Percentage of households without**

		Wave										
		2	3	4	5	6	7	8	9	10	11	12
		Households with participation in previous wave										
		Household income not reported										
	N	335	310	272	237	210	203	197	226	193	220	199
	%	17.9	18.4	12.9	16.9	11.4	15.2	12.7	10.6	7.8	15.0	12.6
		Household income in DM										
≤ 1000	N	456	368	293	270	241	213	182	165	157	151	137
	%	13.8	10.1	5.5	9.3	7.1	6.1	6.6	8.5	7.0	6.6	8.8
1000-2000	N	1816	1521	1383	1243	1140	995	870	802	721	665	651
	%	11.2	9.7	5.3	6.6	6.2	4.8	5.1	4.5	5.0	7.2	6.5
2000-3000	N	1713	1572	1469	1404	1354	1329	1260	1202	1129	1063	1040
	%	8.3	7.6	4.2	6.5	6.6	4.6	4.0	5.1	4.4	4.9	5.3
3000-4000	N	992	996	1008	1087	1060	1073	1069	1085	1103	1039	1045
	%	9.6	6.4	4.3	6.1	5.0	4.7	3.7	4.4	5.4	4.9	5.7
≥ 4000	N	625	706	776	890	921	1015	1224	1352	1527	1676	1641
	%	8.2	8.9	5.0	6.4	5.9	6.2	4.7	4.4	4.8	5.2	4.3
		Number of different assets in the household										
0	N	823	769	743	735	578	661	573	604	567	563	541
	%	12.5	12.3	6.9	11.3	8.3	8.8	6.6	9.9	6.5	10.7	7.8
1	N	1714	1561	1468	1429	1431	1262	1256	1191	1140	1197	1149
	%	13.2	10.4	5.1	6.8	6.7	5.5	4.4	4.5	5.3	5.7	6.0
2	N	1709	1549	1427	1449	1444	1310	1350	1367	1412	1277	1278
	%	8.3	8.2	5.6	5.8	5.9	5.2	5.0	4.1	5.5	5.6	5.8
3	N	1224	1161	1134	1122	1107	1152	1201	1180	1210	1250	1180
	%	8.7	6.7	3.9	5.9	5.7	4.1	3.7	4.2	4.3	4.1	4.4
4	N	403	388	374	343	326	377	375	447	451	476	489
	%	7.7	5.9	3.7	7.0	4.6	5.3	4.5	4.5	3.8	5.9	3.5
5	N	64	45	55	53	40	66	47	43	50	51	52
	%	9.4	6.7	9.1	11.3	2.5	7.5	14.9	4.7	0.0	3.9	11.5
		Drawing of social aid payments										
Yes	N								133	133	135	143
	%								6.8	8.3	6.7	8.4

**Table 8: Comparison of drop-out rates between the GSOEP West (Subsample A and B) and East (Subsample C) until wave 6. % = Percentage of households without interview.**

Characteristic	Wave 2		Wave 3		Wave 4		Wave 5		Wave 6	
	West %	East %	West %	East %	West %	East %	West %	East %	West %	East %
All re-contacted households	10.4	8.3	11.2	11.8	6.9	10.8	8.9	7.7	7.9	7.8
Drop-out in previous wave	-	-	59.4	53.1	52.8	67.1	71.6	50.0	57.4	62.8
Else	-	-	8.9	8.6	5.1	7.2	7.0	6.0	6.2	5.6
Households with participation in previous wave										
Age of the head of household										
75+	17.5	18.1	13.7	11.3	6.5	11.7	6.5	8.5	6.8	6.4
65-74	9.9	8.0	9.5	7.3	2.9	6.0	5.4	3.4	6.0	5.2
55-64	9.7	7.0	9.0	7.0	4.2	5.4	4.7	4.3	5.9	1.8
35-54	9.3	6.3	7.7	6.8	4.3	6.6	6.3	5.3	6.1	5.3
25-34	8.9	9.2	7.9	9.4	6.1	7.8	9.9	7.7	6.1	7.4
-25	19.9	13.4	14.8	23.4	13.4	13.1	13.2	11.3	9.0	13.5
Gender of the head of the household										
Male	9.8	7.6	8.2	8.9	4.7	8.1	6.7	6.2	6.2	6.0
Female	12.4	8.9	11.4	8.3	6.5	6.4	7.9	5.8	6.5	5.3
Occupational status of the head										
Not gainfully employed	12.9	10.8	10.1	8.2	5.5	7.3	6.9	6.6	6.4	5.6
Jobless	9.8	14.3	10.8	9.4	7.7	8.3	8.5	4.6	4.9	5.9
Highest status	7.9	5.5	6.4	5.8	4.4	6.0	7.7	3.9	7.1	9.4
Lowest status	10.6	9.4	10.0	9.5	4.3	8.6	6.6	9.0	6.2	6.0
Else	9.1	7.8	8.1	9.2	5.3	6.8	7.4	5.9	6.2	6.1
Highest school degree										
Upper secondary school	7.5	7.1	6.0	7.6	5.5	7.3	7.6	3.7	4.2	3.6
Intermediate secondary school	6.8	7.0	8.8	8.6	5.6	7.7	8.3	6.6	8.0	5.9
Lower secondary school	11.8	9.9	9.8	8.8	4.7	6.4	6.2	5.9	6.3	5.3
Without exam	10.9	-	11.0	-	6.3	-	8.8	-	6.7	-
Net household income										
Not reported	17.9	9.4	18.4	17.5	12.9	20.0	16.9	17.2	11.4	18.8
West <1000	13.8	14.3	10.1	8.7	5.5	7.8	9.3	10.0	7.1	11.1
East <800	11.2	8.7	9.7	8.8	5.3	8.6	6.6	6.2	6.2	7.7
West 1000-2000	8.3	8.1	7.6	9.8	4.2	8.0	6.5	5.9	6.6	6.3
East 800-1200	9.6	6.2	6.4	7.5	4.3	6.9	6.1	7.1	5.0	4.2
West 2000-3000	8.2	6.5	8.9	8.1	5.0	6.0	6.4	4.7	5.9	4.9
East 1200-1800										
West 3000-4000										
East 1800-2500										
West >4000										
East >2500										

**Table 8: continued**

Characteristic	Wave 2		Wave 3		Wave 4		Wave 5		Wave 6	
	West %	East %	West %	East %	West %	East %	West %	East %	West %	East %
	<b>Marital status</b>									
Married living together	-	-	-	-	4.4	6.5	6.2	4.6	6.2	4.4
Married living separately	-	-	-	-	5.9	26.7	13.4	10.7	6.7	14.0
Single	-	-	-	-	9.4	12.2	11.5	9.2	6.8	8.9
Divorced	-	-	-	-	4.6	3.9	6.3	7.6	7.0	5.0
Widowed	-	-	-	-	3.9	5.9	5.1	8.2	4.7	7.4
	<b>Type of household</b>									
Old household not moved	9.6	7.7	7.9	7.3	4.2	6.5	5.8	5.1	5.6	4.6
Old household moved	11.6	8.9	12.7	16.6	10.7	13.2	14.1	7.4	9.0	7.8
Split-off household	29.2	24.6	21.4	23.8	17.6	18.6	23.7	23.5	16.9	25.3
	<b>Interviewer has changed</b>									
Yes	14.9	8.4	17.5	11.6	12.6	11.4	19.0	7.8	12.9	5.9
No	7.9	5.5	6.5	7.4	3.8	5.5	5.1	4.4	4.9	4.1
Special cases	-	13.6	-	36.4	-	26.2	-	25.2	-	17.2
	<b>General life satisfaction</b>									
More or less dissatisfied ( $\leq 4$ )	-	-	-	-	-	8.7	-	7.3	-	6.9
More or less satisfied ( $\geq 5$ )	-	-	-	-	-	7.0	-	5.7	-	5.4
	<b>Loss of job</b>									
Loss expected or probable	-	9.1	-	8.9	-	5.4	-	7.6	-	7.1
Else	-	7.8	-	8.5	-	7.6	-	5.6	-	5.4
Household moved to West-Germany	-	15.4	-	15.8	-	9.6	-	10.0	-	3.5
Drawing of social aid payments	-	-	-	-	-	10.3	-	4.6	-	13.5
Household without telephone	-	-	-	-	-	7.9	-	6.6	-	-

### 3.2 Definition of the covariates for a Logit analysis

The characteristics used in the tabulations of the preceding section were used as covariates in a multiple Logit analysis of the refusal rate. However, for the estimation of the drop-out probabilities we used only model specification where all included covariates have significant coefficients. Thus, one may conclude that the omitted variables (or some differences between its values) do not have a systematic influence on the participation behavior of re-contacted households. The definition of the covariates that were finally used is given in the list below:

Characteristic	Abbreviation	Code	Values
Age of the head of household	ALTHV	1	Older than 75 years
		2	65-74 years
		3	55-64 years
		4	35-54 years
		5	25-34 years
		6	Younger than 25 years
Gender of the head	SEX	0	Male
		1	Female
Typ of the household	HTYP	1	Old household without move
		2	Old household moved
		3	Split-off household
Change of interviewer	INTW	0	No change
		1	Change since previous wave
		2	Not regular interviewer number
Number of interviews	BETREUUNG		Number of interviews with the interviewer of the present wave
Starting from the beginning	BEGINN	0	Else
		1	Heads participation since wave 1
Person moving out	AUSZUG	0	Else
		1	A respondent left the household since the previous wave
Separation of a couple	PAAR	0	Else
		1	The head or the spouse (cohabitor) of the previous wave left the household
Interaction of household type and separation of the couple	TYP	0	HH Typ = 1,2 and Paar = 1
		1	HH Typ = 1 and Paar = 0
		2	HH-Typ = 2 and Paar = 0
		3	HH-Typ = 3 and Paar = 0
		4	HH-Typ = 3 and Paar = 1
East-Berlin	OSTB	0	Else
		1	household is located in East-Berlin
Marital status	FAMSTD	1	Married living together
		2	Married living separately
		3	Single
		4	Divoreed
		5	Widowed

**List: continued**

Characteristic	Abbreviation	Code	Values
Jobless	ALOS	0	Else
		1	Head is jobless
Loss of job (subjective notion)	VERLUST	0	Else
		1	Loss expected or probable
Occupational status of the head	STATUSH	0	Else
		1	High status
Social aid	SOZH	0	Else
		1	Household is recipient of social aid payments
Household income West-Germany	EINKW	1	Income not reported
		2	≤ 2000 DM
		3	2000 - 4000 DM
		4	≥ 4000 DM
Household income (East-Germany)	EINKO	1	Income not reported
		2	≤ 800 DM
		3	800-1200 DM
		4	1200-1800 DM
		5	1800-2500 DM
		6	≥ 2500 DM
Household income not reported	KAEINK	0	Else
		1	Income not reported
Balance of assets not reported	KAVB	0	Else
		1	Balance not reported in wave 5
Number of different kinds of assets in the households	ANZAHL	1	Number = 0
		2	Number = 5 (Maximum)
		3	Else
No assets reported	ANZO	0	Else
		1	Number of reported assets = 0
Firm assets	BETRIEB	0	Else
		1	Household owns firm assets
Savings reported as one kind of assets	SPAR	0	No
		1	Yes
Household migrated from East to West Germany	OSTWEST	0	No
		1	Yes

### 3.3 Estimated coefficients of the Logit model

The covariates defined above were used in a multiple Logit analysis. The model estimates the probability  $P_R = P(\text{Response=no})$ . For the computation of the GSOEP weighting schemes only model specifications with all covariates being significant were used. Meaning the coefficients:

$$\ln \frac{P_{x,i}}{1 - P_{x,i}} = \text{const} + X' \beta$$

Thus, positive coefficients indicate an increased drop-out rate compared to the sample average.

Table 9 uses a simple symbolic notation for models and their coefficients. Here “+” means the addition of a main effect an “\*” indicates an interaction term. Variable 1 (Variable 2 = c) symbolizes a conditional main effect which is linked to cases where variable 2 = c. The estimated coefficients are displayed under the model equation. The notation uses the convention: variable (value 1: coefficient 1/value 2: coefficient 2).

The estimated drop-out rates due to refusals may be easily calculated from the coefficients displayed in table 9. For example: In wave 2, subsample A, we find for a household with no change of the interviewer (INTW = 0) and age of the head between 35 and 74 years (ALTHV = 2,3,4) and the reported household income below 2000 DM (EINKW = 2), which did not move (HTYP = 1) the logit value  $-1.53 - 0.25 + 0.03 - 0.68 + 0.12 = -2.31$ . Thus we have Pr

$$(\text{Response=no}) = \frac{e^{-2.31}}{1 + e^{-2.31}} = 0.09.$$



**Table 9: The estimates of a Logit model for the probability of a drop-out due to refusal in the GSOEP. Representation of coefficients: variable (value 1: coefficient 1/value 2: coefficient 2/...).**

Subsample A (West-Germans)	
Wave	Model and coefficients
2	<p><b>Model = CONST + INTW + ALTHV + HTYP + EINKW</b>            CONST (-1.53), INTW (0: -0.25 / 1: 0.25),            ALTHV (1: 0.66 / 2,3,4: 0.03 / 5: -0.39 / 6: -0.30),            HTYP (1: -0.68 / 2: -0.19 / 3: 0.87),            EINKW (1: 0.61 / 2: 0.12 / 3: -0.35 / 4: -0.38)</p>
3	<p><b>Model = CONST + INTW + ALTHV + INTW * ALTHV + HTYP + ALOS + KAEINK</b>            CONST (-1.22), INTW (0: -0.39 / 1: 0.39),            ALTHV * (INTW =0) (1: -0.13 / 2: -0.11 / 3,4: -0.39 / 5: 0.26 / 6: 0.37),            ALTHV * (INTW =1) (1: 0.13 / 2: 0.11 / 3,4: 0.39 / 5: -0.26 / 6: -0.37),            ALTHV (1: 0.59 / 2: 0.16 / 3,4: -0.06 / 5: -0.53 / 6: -0.16)            HTYP (1: -0.52 / 2: 0.10 / 3: 0.42 ),            ALOS (0: -0.21 / 1: 0.21),            KAEINK (0: -0.39 / 1: 0.39)</p>
4	<p><b>Model = CONST + ALTHV + INTW (ALTHV) + HTYP + KAEINK</b>            CONST (-1.83), INTW (ALTHV = 1) (0: -0.44 / 1: 0.44),            INTW (ALTHV =2) (0: -0.74 / 1: 0.74),            INTW (ALTHV =3,4) (0: -0.59 / 1: 0.59),            INTW (ALTHV =5) (0: -0.41 / 1: 0.41),            INTW (ALTHV =6) (0: -0.32 / 1: 0.32),            ALTHV (1: 0.21 / 2: -0.38 / 3,4: -0.24 / 5: 0.06 / 6: 0.35),            HTYP (1: -0.45 / 2: 0.29 / 3: 0.19),            KAEINK (0: -0.39 / 1: 0.39)</p>
5	<p><b>Model = CONST + BETREUUNG + ALTHV (INTW =1) + HTYP + KAEINK + ANZO</b>            CONST (-1.60),            BETREUUNG (1: 1.15 / 2: 0.41 / 3: 0.18 / 4: -0.71 / 5: -1.03),            ALTHV (INTW = 1) (1,2: 0.52 / 3,4,5: -0.11 / 6: -0.40),            HTYP (1: -0.49 / 2: 0.11 / 3: 0.38),            KAEINK (0: -0.45 / 1: 0.45),            ANZO (0: -0.38 / 1: 0.38)</p>

**Table 9: continued**

Subsample A (West-Germans)	
Wave	Model and coefficients
6	<p><b>Model = CONST + BETREUUNG + ALTHV (INTW = 1) + HTYP + KAEINK + KAVB + BETRIEB</b></p> <p>CONST (-2.44),            BETREUUNG (1: 0.75 / 2: 0.58 / 3: 0.21 / 4: -0.59 / 5: -0.43 / 6: -0.52),            ALTHV (INTW = 1) (1,2: 0.26 / 3,4,5: 0.05 / 6: -0.31),            HTYP (1: -0.32 / 2: -0.04 / 3: 0.37),            KAEINK (0: -0.26 / 1: 0.26),            BETRIEB (0: 0.41 / 1: -0.41)</p>
7	<p><b>Model = CONST + HTYP + INTW (HTYP) + KAEINK + STATUSH</b></p> <p>CONST (-1.34),            INTW (HTYP = 1) (0: -0.75 / 1: 0.75),            INTW (HTYP = 2) (0: -0.56 / 1: 0.56),            INTW (HTYP = 3) (0: -0.12 / 1: 0.12),            HTYP (1: -0.66 / 2: -0.24 / 3: 0.90),            KAEINK (0: -0.58 / 1: 0.58)            STATUSH (0: -0.30 / 1: 0.30)</p>
8	<p><b>Model = CONST + INTW + HTYP + KAEINK + ANZAHL</b></p> <p>CONST (-1.15),            INTW (=: -0.55 / 1: 0.55),            HTYP (1: -0.83 / 2: -0.14 / 3: 0.97),            KAEINK (0: -0.57 / 1: 0.57),            ANZAHL (1: -0.08 / 2: 0.70 / 3: -0.62)</p>
9	<p><b>Model = CONST + INTW (BEGINN) + BEGINN (ALTHV) + HTYP + AUSZUG (HTYP=1) + KAEINK + ANZO + SEX</b></p> <p>CONST (-1.31),            INTW (BEGINN = 0) (0: -0.17 / 1: 0.17),            INTW (BEGINN = 1) (0: -0.68 / 1: 0.68),            BEGINN (ALTHV = 1) (0: -0.09 / 1: 0.09),            BEGINN (ALTHV = 2) (0: 0.70 / 1: -0.70),            BEGINN (ALTHV = 3) (0: 1.20 / 1: -1.20),            BEGINN (ALTHV = 4) (0: 0.49 / 1: -0.49),            BEGINN (ALTHV = 5) (0: 0.48 / 1: -0.48),            BEGINN (ALTHV = 6) (0: 0.10 / 1: -0.10),            HTYP (1: -0.53 / 2: 0.07 / 3: 0.46),            AUSZUG (HTYP=1) (0: -0.47 / 1: 0.47),            KAEINK (0: -0.25 / 1: 0.25),            ANZO (0: -0.29 / 1: 0.29),            SEX (0: 0.15 / 1: -0.15)</p>

**Table 9: continued**

Wave	Model and Coefficients
10	<p><b>Model = CONST + HTYP + BEGINN (HTYP) + INTW (HTYP) + PAAR (HTYP=1) + ALTHV (HTYP=1)</b>            CONST (-1.89),            HTYP (1: -0.12 / 2: -0.39 / 3: 0.51),            INTW (HTYP=1) (0: -0.95 / 1: -0.08 / 2: 0.88),            INTW (HTYP=2) (0: -0.24 / 1: -0.06 / 2: 0.30),            INTW (HTYP=3) (0: 0.16 / 1: -0.47 / 2: 0.31),            BEGINN (HTYP=1) (0: 0.43 / 1: -0.43 ),            BEGINN (HTYP=2) (0: 0.21 / 1: -0.21 ),            BEGINN (HTYP=3) (0: -0.07 / 1: 0.07 ),            PAAR (HTYP=1) (0: -0.58 / 1: 0.58),            ALTHV (HTYP=1) (1: 0.41 / 2: -0.26 / 3: -0.08 / 4: -0.50 / 5: 0.01 / 6: 0.42)</p>
11	<p><b>Model = CONST + HYTP + BEGINN + INTW + KAEINK + TELEPHON (INTW=1)</b>            CONST (-1.68)            HTYP (1: -0.39 / 2: -0.09 / 3: 0.48)            BEGINN (0: 0.27 / 1: -0.27)            INTW ( 0: -0.63 / 1: -0.10 / 2: 0.73)            KAEINK (0: -0.35 / 1: 0.35)            TELEPHON (INTW=1) (0: 0.49 / 1: -0.49)</p>
12	<p><b>Model = CONST + HTYP + INTW + ALTHV (HTYP = 1)</b>            CONST (-1.92)            HTYP (1: -0.36 / 2: -0.52 / 3: 0.88)            INTW (0: -1.10 / 1: 0.03 / 2: 1.07)            ALTHV (HTYP =1) (1: 0.57 / 2,3,4,5,6: -0.57)</p>

**Table 9: continued**

Subsample B (Foreigners)	
Wave	Model and coefficients
2	<b>Model = CONST + INTW + HTYP</b> CONST (-1.96), INTW (0: -0.55 / 1: 0.55) HTYP (1: -0.03 / 2: -0.58 / 3: 0.62)
3	<b>Model = CONST + SEX + HTYP</b> CONST (-1.60), SEX (0: -0.31 / 1: 0.31), HTYP (1,2: -0.46 / 3: 0.46)
4	<b>Model = CONST + INTW (ALTHV) + HTYP + EINKW</b> CONST (-1.69), INTW (ALTHV =1,2,3) (0: -0.47 / 1: 0.47), INTW (ALTHV =4) (0: -0.73 / 1: 0.73), INTW (ALTHV =5) (0: -0.60 / 1: 0.60), INTW (ALTHV =6) (0: -0.26 / 1: 0.26), HTYP (1: -0.34 / 2: 0.46 / 3: -0.12), EINKW (1: 0.75 / 2: 0.10 / 3: -0.85)
5	<b>Model = CONST + BETREUUNG + HTYP + KAEINK</b> CONST (-1.87), BETREUUNG (1: 1.26 / 2: 0.14 / 3: -0.21 / 4: -0.70 / 5: -0.50), HTYP (1: -0.47 / 2: 0.89 / 3: -0.42), KAEINK (0: -0.43 / 1: 0.43)
6	<b>Model = CONST + BETREUUNG + HTYP + KAEINK</b> CONST (-1.89), BETREUUNG (1: 0.83 / 2: 0.37 / 3: -0.31 / 4: -0.55 / 5: 0.04 / 6: -0.37), HTYP (1: -0.41 / 2: 0.22 / 3: 0.19), KAEINK (0: -0.54 / 1: 0.54)
7	<b>Model = CONST + HTYP + INTW (HTYP) + KAEINK</b> CONST (-1.50), INTW (HTYP=1) (0: -0.55 / 1: 0.55), INTW (HTYP=2) (0: -0.98 / 1: 0.98), INTW (HTYP=3) (0: -1.06 / 1: 1.06), HTYP (1: -0.50 / 2: -0.88 / 3: 1.38), KAEINK (0: -0.66 / 1: 0.66)
8	<b>Model = CONST + INTW + HTYP</b> CONST (-2.05), INTW (0: -0.48 / 1: 0.48), HTYP (1: -0.85 / 2: 0.22 / 3: 0.63)

**Table 9: continued**

Wave	Subsample B (Foreigners)
9	<p><b>Model = CONST + INTW + BEGINN + TYP + ALTHV + KAEINK + ANZO + SOZH</b>            CONST (-1.79),            INTW (0: -0.50 / 1: 0.50),            BEGINN (0: 0.39 / 1: -0.39),            TYP (0: 0.16 / 1: -0.59 / 2: -1.90 / 3: -0.03 / 4: 2.36),            ALTHV 1,2,3: 0.28 / 4: -0.10 / 5: -0.65 / 6: 0.47),            KAEINK (0: -0.66 / 1: 0.66),            ANZO (0: -0.53 / 1: 0.53),            SOZH (0: 0.73 / 1: -0.73)</p>
10	<p><b>Model = CONST + HTYP + PAAR + ALTHV + INTW (ALTHV)</b>            CONST (-1.58)            HTYP (1: -0.44 / 2: -0.11 / 3: 0.55),            PAAR (0: -0.63 / 1: 0.63),            ALTHV (1,2,3: -0.79 / 4: -0.04 / 5: 0.77 / 6: -0.05),            INTW (ALTHV = 4) (0: -1.11 / 1: -0.10 / 2: 1.21),            INTW (ALTHV = 5) (0: -0.79 / 1: -0.22 / 2: 1.01)</p>
11	<p><b>Model = CONST + BEGINN + HTYP + INTW + ANZO + FAMSTD</b>            CONST (-1.43),            INTW (0: -0.69 / 1: 0.01 / 2: 0.70),            BEGINN (= 0.33 / 1: -0.33),            HTYP (1,2: -0.48 / 3: 0.48),            ANZO (0: -0.31 / 1: 0.31),            FAMSTD (1: 0.25 / 2,3,4,5: -0.25)</p>
12	<p><b>Model = CONST + HTYP + INTW + PAAR + ALTHV</b>            CONST (-0.88)            HTYP (1: -0.97 / 2: 0.36 / 3: 0.61)            INTW (0: -0.67 / 1: -0.45 / 2: 1.12)            PAAR (0: -0.84 / 1: 0.84)            ALTHV (1,2,3: -0.35 / 4,5,6: 0.35)</p>

**Table 9: continued**

Subsample C (East-Germans)	
Wave	Model and coefficients
2 East	<p><b>Model = CONST + HTYP + INTW + ALTHV + EINKO + VERLUST + OSTB</b></p> <p>CONST (-0.91),            INTW ( 0: -0.47 / 1: -0.04 / 2: 0.51),            ALTHV (1: 0.41 / 2,3,4,5,6: -0.41),            HTYP (1,2: -0.84 / 3: 0.84),            EINKO (1: 0.24 / 2: 0.44 / 3: 0.12 / 4: 0.00 / 5: -0.37 / 6: -0.44),            VERLUST (0: -0.17 / 1: 0.17),            OSTB (0: -0.29 / 1: 0.29)</p>
3 East	<p><b>Model = CONST + HTYP + INTW (HTYP) + ALTHV + SPAR</b></p> <p>CONST (-1.36),            HTYP (1: -0.39 / 2: 0.08 / 3: 0.31),            INTW (HTYP=1) (0: -0.28 / 1,2: 0.28),            INTW (HTYP=2) (0: 0.42 / 1,2: -0.42),            INTW (HTYP=3) (0: -0.36 / 1,2: 0.36),            ALTHV ( 1: 0.02 / 2,3,4: -0.38 / 5: -0.20 / 6: 0.56),            SPAR (0: 0.35 / 1: -0.35)</p>
4 East	<p><b>Model = CONST + HTYP + INTW + ALTHV + KAEINK + FAMSTD</b></p> <p>CONST (0: -0.62),            HTYP (1: -0.47 / 2: 0.25 / 3: 0.12),            INTW (0: -0.78 / 1: -0.04 / 2: 0.82),            ALTHV ( 1: 0.47 / 2,3,4,5,6: -0.47),            KAEINK (0: -0.54 / 1: 0.54),            FAMSTD (1: -0.12 / 2: 1.13 / 3: 0.24 / 4: -0.73 / 5: -0.51),</p>
5 East	<p><b>Model = CONST + HTYP + INTW + KAEINK + VANZAHL + VERLUST</b></p> <p>CONST (-0.82),            HTYP ( 1: -0.45 / 2: -0.32 / 3: 0.77),            INTW (0: -0.67 / 1: -0.18 / 2: 0.84),            KAEINK (0: -0.49 / 1: 0.49),            VANZAHL (0: 0.0 / 1: -0.31 / 2: -0.62 / 3: -0.93 / 4: -1.24 / 5: -1.51),            VERLUST (=: -0.19 / 1: 0.19)</p>
6 East	<p><b>Model = CONST + HTYP + KAEINK + INTW (OSTWEST = 0) + BEGINN (OSTWEST = 0)</b></p> <p>CONST (-1.33);            HTYP (1: -0.65 / 2: -0.32 / 3: 0.97);            KAEINK (0: -0.66 / 1: 0.66);            INTW (OSTWEST = 0) (0: -0.46 / 1: -0.31 / 2: 0.47);            BEGINN (OSTWEST = 0) (0: 0.31 / 1: -0.31)</p>

#### **4 Changes due to the Incorporation of the new immigrant sample (sample D)**

The new immigrant sample (sample D) of the GSOEP provides information concerning immigrants to Germany (for details, see Burkhauser/Kreyenfeld/Wagner 1996). It covers households, containing at least one member who immigrated to the western states of Germany between 1984 and 1993. Because few people immigrated to the eastern states of Germany over this period, they were not included in this sample. People living in public institutions (nursing homes, mental institutions, etc.) or provisional housing for asylum seekers are not included unless they were in the sample before moving into such an institution.

From a user's point of view, the weighting procedure of sample D has to fulfill some requirements:

- (1) Representative structural and longitudinal analysis of the new immigrant population (sample D).
- (2) When combining sample D with the other three GSOEP samples, the weighted entire GSOEP population has to be representative for the private households in Germany in 1995.
- (3) Concerning the 'old' GSOEP samples (A, B, C), the computed weights provided in the database have to guarantee a lasting representative analysis of the population of interest.

However, we have to point out that sample D includes some households, who have a positive selection probability with respect to sample A, B or C. The following two groups of households, with a positive selection probability are observed: so-called 'mixed' households (households, living in West-Germany) with new immigrants and East German households, who migrated to West Germany after the starting date (1990) of sample C ('Spät-Übersiedler'). These households make up about 20 % of the entire sample D and hence are not ignorable. Therefore it was necessary to create **two different weighting variables** to integrate sample D into the GSOEP weighting scheme. The first variable is to be used with the full GSOEP and the second is to be used when working with sample D, only. When the entire sample (A,B,C and D) is used, the 'mixed' households and the 'Spät-Übersiedler' of sample D are assigned a zero weight.

Beginning with wave 12 (1995), the following sample weights are included in the GSOEP data files:

**LPHRF** Person level weight for cross-sectional analysis for wave L (1995), if all sample (A, B, C and D) are used. This weight assigns zeros to not only all households in sample D with immigrants *and* non-immigrants but also households in sample D with *Übersiedler* who moved after 1990.

**LHHRF** Household level weight for cross-sectional analysis for wave L (1995), if all samples (A, B, C, D) are used. This weight assigns zeros to not only all households in sample D with immigrants *and* non-immigrants but also households in sample D with *Übersiedler* who moved after 1990.

**LPHRFD** Person level weight for cross-sectional analysis for wave L (1995), if only sample D is used.

**LHHRFD** Household level weight for cross-sectional analysis for wave L (1995), if only sample D is used.

If only sample A and B are used in a weighted analysis, it has to be taken into account that beginning with wave 12 (1995), the A and B weights are reduced to reflect the fact that immigrants are contained now in sample D. Therefore, in this special case, the sample weights of A and B in wave 12 must be multiplied by 1.056 (for details, see Burkhauser/Kreyenfeld/Wagner 1996 or Rendtel/Daschke 1996). **This value represents the weight of immigrants in the calculation of the weights.**



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