

## *Weighting for an all German representative sample in ISSP 1991*

### **East-West weighting for analyses of reunified Germany**

ISSP 1991 was run as part of the ALLBUS baseline study 1991 where Eastern Germany was overrepresented by design compared to the sample size for Western Germany. This oversampling was deliberately done in order to obtain a sample size for Eastern Germany which allows for subgroup analyses.

If ISSP 1991 data are used for analyses of reunified Germany, this disproportionality between the Eastern and Western German samples should be taken into account by applying weighting procedures (see microcensus distribution in table 1a). In addition, due to the random route sample design of ALLBUS 1991 target persons have different inclusion probabilities depending on the number of adults in households which also need to be considered by a transformation weight (see table 2a with the frequency distribution of households in ISSP 1991).

Please find below the stepwise calculation process of an all German representative weight that takes both oversampling (see table 1b) and household sampling (see table 2b) into account. The final design weight is described in table 3.

SPSS syntax to achieve the final design weight is enclosed.

#### **1a. Microcensus 1991 and ISSP 1991 data.**

	Microcensus 1991 (in thousand)			ISSP 1991		
	West	East	Total	West	East	Total
	(N <sub>w</sub> )	(N <sub>o</sub> )	(N)	(n <sub>w</sub> )	(n <sub>o</sub> )	(n)
German and foreign persons in private households, 18 or older	52.456,2	12.263	64.719,2	1346	1486	2832

\* calculation of STATIS-Bund figures by Braun et al. 1993

#### **1b. Oversampling weight taking into account the disproportional distributions of Eastern and Western Germany**

- West	$\frac{n}{n_w}$	x	$\frac{N_w}{N}$	=	$\frac{2832/1346}{64719,2}$	x	$\frac{52456,2}{64719,2}$	=	1,7053435
- East	$\frac{n}{n_o}$	x	$\frac{N_o}{N}$	=	$\frac{2832/1486}{64719,2}$	x	$\frac{12263}{64719,2}$	=	0,3611088

#### **2a. ISSP 1991: modified variable v153 household size: n of adults in hh (=> hsize)**

Household size with n of adults	n <sub>hh-west</sub>	n <sub>hh-east</sub>	sum	total n of adults	n <sub>pers-west</sub>	n <sub>pers-east</sub>
1	339	284		1	339	284
2	732	936		2	1464	1872
3	173	189		3	519	567
4	75	63		4	300	252
5	21	11		5	105	55
6	6	2		6	36	12
7	0	1		7	0	7
total n of HH	1346	1486	2832	total n of persons	2763	3049

### 2b. Transformation weight taking into account inclusion probabilities of persons in households

- West	=	hhsiz	x	$\frac{n_{hh-west}}{n_{pers-west}}$	=	hhsiz	x	$\frac{1346}{2763}$	=	hhsiz	x	0,48715165
- East	=	hhsiz	x	$\frac{n_{hh-east}}{n_{pers-east}}$	=	hhsiz	x	$\frac{1486}{3049}$	=	hhsiz	x	0,48737291

### 3a. Combining oversampling and transformation weights into one total design weight

	West	East	
Oversampling weight East-West	1,7053435	0,3611088	based on micro census
Transformation weight	0,48715165	0,48737291	based on ISSP 1991
<b>product of both weights=total weight</b>	<b>0,8307609</b>	<b>0,17599465</b>	

### 3b. Weighting factors for analyses of overall Germany

$Weight_{west} = weight_{design\ west} * weight_{transformation\ west} * hhsiz = 0,8307609 * hhsiz$

$Weight_{east} = weight_{design\ east} * weight_{transformation\ east} * hhsiz = 0,17599465 * hhsiz$

(Calculation based on Gabler 1994)

### Reference

- Braun, Michael; Eilinghoff, Carmen; Gabler, Siegfried; Wiedenbeck, Michael (1993), Methodenbericht zur "Allgemeinen Bevölkerungsumfrage der Sozialwissenschaften" (ALLBUS) 1992, ZUMA-Arbeitsbericht 93/01;  
[http://www.gesis.org/Dauerbeobachtung/Allbus/documents/pdfs/ma93\\_01.pdf](http://www.gesis.org/Dauerbeobachtung/Allbus/documents/pdfs/ma93_01.pdf)
- Gabler, Siegfried (1994), ALLBUS-Baseline-Studie 1991 und ALLBUS 1992: Ost-West Gewichtung der Daten, ZUMA-Nachrichten 35, Jg. 18, November 1994, 77-81

### SPSS syntax to adjust for design (both household and East - West)

```

*** issp1991: v153=household cycle combining information on n of adults and n of children.
recode v153 (0,99=2)(else=copy) into hhsiz.
var labels hhsiz ' reduced household size: adults'.
**1 missing in east germany and 2 missing in west germany coded into most frequent category 2.
***0 non Germans: west=8; east=1.
recode hhsiz (99=2).
***v3=1: west; v3=2: east.
If (v3=1)weight=0.8307609*hhsiz.
If (v3=2)weight=0.17599465*hhsiz.
Execute.

```