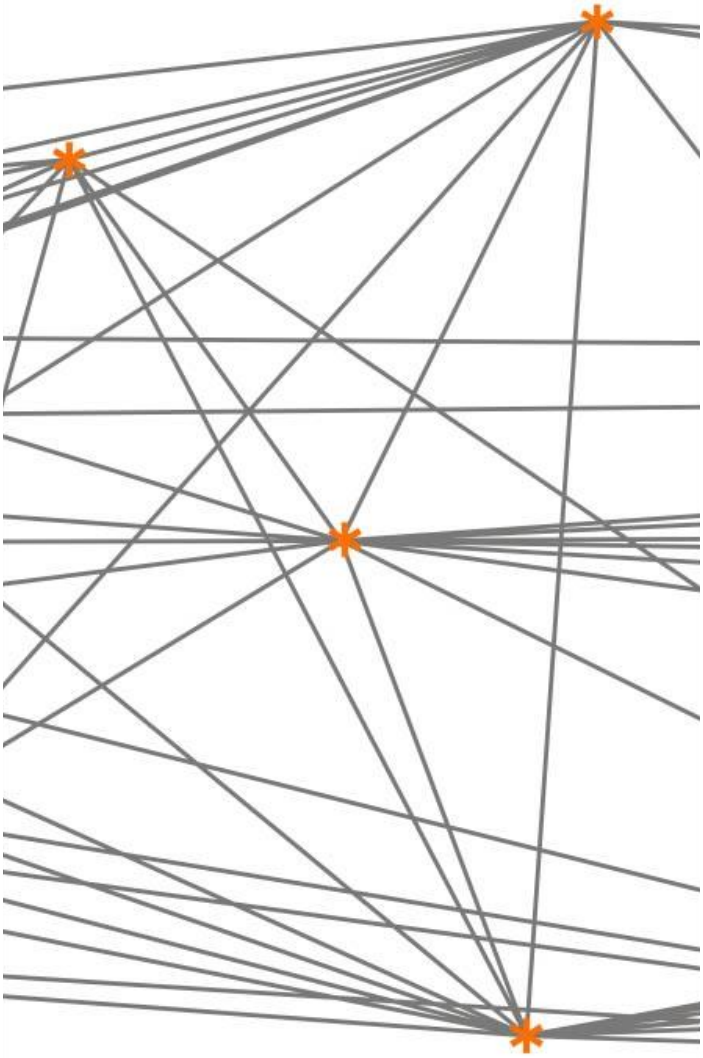
SHARE

Survey of Health, Ageing and Retirement in Europe

Release Guide 2.6.0
Waves 1 & 2



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1. Additional sources of information

Additional information to enable and facilitate the use of SHARE data is available on the "Data access & Documentation" pages of the SHARE website www.share-project.org. Table 1: below contains the links to the essential documentation files of SHARE.

All generic and country-specific **questionnaires** (CAPI, drop-off and vignettes) can be downloaded. We also provide information on known deviations between countries within waves as well as an overview of deviations between the generic English versions of questionnaires. In case you find deviations that are not yet documented please inform the SHARE Central-Team (info[at]share-project.org).

In addition to this integrated release guide for wave 1 and 2, the release guide for wave 4 data contains innovations and changes in wave 4. Because of its divergence from other waves the life history data of wave 3 is documented in a special SHARELIFE release guide.

Except for Wave 2 there are also wave-specific methodology volumes. Methodological changes in Wave 2 are shortly summarized in chapter 8 of the First Results Book (FRB) of Wave 2.

Furthermore the data resource profile published in the International Journal of Epidemiology gives a compact overview on SHARE.

Table 1: Links to additional information

	Wave 1	**Wave 2**	**Wave 3 (SHARELIFE)**	**Wave 4**
Questionnaires	w1-questionnaires	w2-questionnaires	w3-questionnaires	w4-questionnaires
Deviations between … countries	Country-specifics w1	Country-specifics w2		
… and waves	Deviation between waves 1, 2…			…and 4
Release Guides	SHARE Release Guide 2.6.0, wave 1 and wave 2		SHARELIFE Release Guide1	Release Guide 1.1.1 wave 4
Methodology	General Methodology	Chapter 8 of W2 FRB	SHARELIFE Methodology	Wave 4 Innovations & Methodology
Data Resource Profile	Börsch-Supan A. et al. (2013): Data Resource Profile: The Survey of Health, Ageing and Retirement in Europe (SHARE), *Int J of Epidemiology*			

2. SHARE data releases

You can download the data from the "Data Access and Documentation" page on our website. Releases are indicated as follows:

- Minor changes will be indicated by the third digit, e.g. release 2.2.1. Please check the website for updates regularly.
- Major changes will be indicated by the second digit, e.g. release 2.3.0. Major updates will be announced to users via e-mail.

From release 2.2.0 on releases of wave 1 and wave 2 are combined.

Table 2: Release history

Wave 1	Wave 2	Wave 3 SHARELIFE	Wave 4
Release 1: April 28th, 2005	Release 1.0.0: Nov 28th, 2008	Release 1.0.0: Nov 24th, 2010	Release 1.0.0: Nov 30th,2012
Release 2.0.0: June 19th, 2007	Release 1.0.1: December 4th, 2008		Release 1.1.1: March 28th,2013
Release 2.0.1: July 5thth, 2007			
Release 2.2.0: August 19th, 2009			
Release 2.3.0: November 13th, 2009			
Release 2.3.1: July 28th, 2010			
Release 2.4.0:March 17th, 2011			
Release 2.5.0: May 11th, 2011			
Release 2.6.0: November 29th, 2013			

3. What´s new in SHARE release 2.6.0

- Israel wave 2 data included
- Austrian interviews that could not be confirmed by the agency excluded

What was new in SHARE release 2.5.0?

- New imputations for Israel
- Newly computed cross-sectional and longitudinal weights
- Correction of children's ISCED mapping in wave 1
- New naming convention for double-looped variables in ep module w2
- Correction of variable *finsep* in cv_r module in wave 1

What was new in SHARE release 2.4.0

- Corrected imputations for non-Euro countries in waves 1 & 2
- Correction of erroneous values in as024e

What was new in SHARE release 2.3.1

- New imputations for waves 1 & 2

What was new in SHARE release 2.3.0

- Imputations for wave 2 and new imputations for wave 1
- Longitudinal weights and new structure of weights files
- Generated health variables added for wave 2 and revised for wave 1
- Some corrections in ph (w1 & w2), ep (w2), hc (w2) modules
- Correction of minor coding error in respondents' ISCED variable (w2)
- Greek vignettes (wave 2)

- Euro conversions for wave 1 ex module

What was new in SHARE release 2.2.0

- Ireland
- IDs and merging of data files
- Missing codes
- Naming of dummy variables and variables in drop-off and vignettes
- Coding of "other" citizenship and country of birth
- Israel: ISCO & NACE codes and additional modules
- Corrections of known problems in coding etc.

4. Countries in SHARE

All countries from wave 1 also participate in wave 2 of SHARE. Longitudinal data are thus available for Austria (AT), Belgium (BE), Switzerland (CH), Germany (DE), Denmark (DK), Spain (ES), France (FR), Greece (GR), Israel (IL), Italy (IT), the Netherlands (NL), and Sweden (SE). In addition, three new countries joined in wave 2: the Czech Republic (CZ), Poland (PL) and Ireland (IE). Table 3: shows the list of countries, country identifiers, participation in waves, and when the data collection was conducted. The definition of the wave results from the questionnaire version used.

Table 3: Countries and languages in SHARE wave 1 and wave 2

Country	Wave 1	Wave 2	ID	Code
Austria	2004	2006/07	11	AT
Germany	2004	2006/07	12	DE
Sweden	2004	2006/07	13	SE
Netherlands	2004	2007	14	NL
Spain	2004	2006/07	15	ES
Italy	2004	2006/07	16	IT
France	2004/05	2006/07	17	FR
Denmark	2004	2006/07	18	DK
Greece	2004/05	2007	19	GR
Switzerland (German)	2004	2006/07	20	Cg
Switzerland (French)	2004	2006/07	21	Cf
Switzerland (Italian)	2004	2006/07	22	Ci
Belgium (French)	2004/05	2006/07	23	Bf
Belgium (Flemish)	2004/05	2006/07	24	Bn
Israel (Hebrew)	2005/06	*2009/10*	25	Ih
Israel (Arabic)	2005/06	*2009/10*	26	Ia
Israel (Russian)	2005/06	*2009/10*	27	Ir
Czech Republic	-	2006/07	28	CZ
Poland	-	2006/07	29	PL
Ireland	-	2007	30	IE

5. Eligibility rules

Wave 1:

As a general rule the target population of individuals is defined as: All individuals born in 1954 or earlier, speaking the official language of the country and not living abroad or in an institution such as a prison during the duration of the field work. Furthermore all spouses or partners should be interviewed independent of their age, if they live in the same household. Partners can be identified using the variable *cividp* that contains the *cvid* of the corresponding spouse/partner. For further information on eligibility see: Klevmarken, N.A., Swensson, and Patrik Hesselius (2005): The SHARE Sampling Procedures and Calibrated Design Weights. In: Börsch-Supan, A., Jürges, H.: The Survey of Health, Ageing and Retirement in Europe. Methodology, p. 28-69.

Wave 2 and ongoing:

Longitudinal interview: The target population ("interview eligibles") for the longitudinal survey consists of all persons interviewed in the 2004 SHARE baseline study plus their spouses or partners (independent of age and independent of their participation in the 2004 baseline study).
Refresher/baseline interview: Unlike in wave 1 and longitudinal households, in refreshment sample households from wave 2 on only one age eligible person per household and his/her partner was interviewed.

6. Composition of the data set and types of respondents

Users should be aware that some steady information (e.g. education or height) is only available in the first interview of a respondent, the so called baseline interview; other information is only asked again in follow-up interviews and updated if it has changed (e.g. marital status). Generated variables which use this kind of information show a high percentage of missing values because of this. E.g. the body mass index (bmi) is generated using height and weight. As height contains a missing value for longitudinal respondents, their bmi is also missing.

This can be solved by using the information from the baseline interview in one of the previous waves. To merge the waves, you either have to take care of the order in which you merge them and use e.g. 'merge…, update' in Stata or rename the variables first (e.g. dn014_w1) and combine it after the merging.

6.1 Types of data

SHARE data collection is mainly based on a computer-assisted personal interviewing technique (CAPI). All questionnaires can be downloaded from the website: www.share-project.org. The SHARE interview consists of various data modules.

Table 4: Composition of the SHARE data set

Elements	Comments
CAPI	
Coverscreen interview **cv_h**	Data on the household level
Coverscreen interview **cv_r**	Data on the individual level for all household members, including non-eligible persons
Individual CAPI Modules	See also Table 5: Chapter 6.2
Paper and pencil questionnaires	
Drop-offs	Only asked in baseline interview
Vignettes	Vignette sample only
Generated variables	
Weights	Not yet available for Ireland
ISCED codes for education	
Physical and mental health	
Social support and household composition	Not yet available for wave 2
ISCO and NACE codes for occupation and industries	Not yet available for wave 2
Housing and region	
Imputations	
Alive or deceased	Applies to wave 1 respondents only
Gross sample	Available upon request

- The interview starts with a coverscreen interview on the household level, answered by one household member (filename cv_h). Coverscreen data on the individual level are available as well (cv_r). For Israel there is no cv_h-file in wave 2 due to a different questionnaire design. This is also the reason for *relpers* (variable in cv_r) not being available for Israel.
- The main questionnaire is based on various different CAPI modules (see Table 5: Chapter 6.2). 20 modules have been part of SHARE in wave 1. There are three new modules in wave 2 (CS, PF, XT).
- The last new module (XT) is available only for the longitudinal sample, and contains information on deceased former respondents, the so called end-of-life interviews. For the end-of-life interview, a proxy is asked about certain aspects of the deceased's last year of life. None of the other modules are present for the deceased in that case. Please refer to the questionnaires on the website for the questions in the XT module.
- In the *main* sample, the interview is finished with a self-completion paper & pencil questionnaire ("main drop-off questionnaire"; see Chapter 8.1).
- *Extra* samples ("vignette samples") were taken in most countries in order to collect (in addition to regular CAPI data) a special self-completion questionnaire with anchoring vignette questions designed to improve cross-national comparability (see Chapter 8.2).
- Additionally, the SHARE data contains **various generated variables** (see Chapter 19).

6.2 Types of respondents

The SHARE CAPI main questionnaire is designed in such a way that not every eligible household member has to answer every CAPI module (see Table 5: this chapter). Some modules or questions are restricted to certain subgroups of respondents, as can be seen from the if-statements in the questionnaires (e.g. CS: done only if younger than 75).

Proxy interviews were allowed for most of the modules.

Selected household members served as **family**, **financial or household respondents.** They answered questions about children and social support, financial issues or household features, on behalf of the couple or the household, respectively.

- The answers to finance, housing and family questions in modules FT and AS, HO, HH, CO, CH and the first part of SP are only coded for the financial, housing or family respondents, respectively.
- However, for the **generated variables**, the information is stored for all respondents, regardless of their status as regular or financial, housing or family respondent.

Selection of the financial, household and family respondent

The financial, household and family respondent was identified during the interview as follows:

- **Family respondents** answer the questions of the CH module and the first part of the SP module (*sp001* to *sp017*) on behalf of **couples**. They are indicated by the dummy variable *dumfamr*. They are selected by the chronological order of interviews per **couple** (married or not): The couple's first person interviewed is the family respondent. Note that the naming of the *cvid/respid* variable does not indicate the chronology of interviews within one household.
- The **financial respondent** is identified by question *cm003_* at the start of the individual interview before the DN module (see also questionnaire). The financial respondent answers the modules FT and AS and is indicated by the dummy variable *dumfinr*. In case of a one-person household or a respondent living as single, the respondent is **always** the financial respondent. In multi-person households, the number of financial respondents may vary: respondents living without a partner in multi-person households are always financial respondents. In **wave 1** eligible couples, i.e. spouses and partners, may decide to answer questions about their finances separately (this can be retrieved from *finsep,* see also *cm002_* in wave 1 questionnaire). Otherwise, one partner can answer on behalf of the **couple**. In this case, she or he is identified as the financial respondent for the couple, indicated by the dummy variable *dumfinr*.
- Only one **household respondent** answers on behalf of the **whole household** questions about household features (HO, HH, CO). The household respondent is selected before the individual interviews and indicated by the dummy *dumhhr*.

Table 5: Who answers what in the CAPI questionnaire?

CAPI Module	Name	All	Financial Respondent	Household Respondent	Family Respondent	non-proxy
CV	Coverscreen					
DN	Demographics	x				
PH	Physical Health	x				
BR	Behavioural Risks	x				
CF	Cognitive Function	x				x
MH	Mental Health	x				x (partly)
HC	Health Care	x				
EP	Employment and Pensions	x				
GS	Grip Strength	x				x
WS	Walking Speed	x				x
CH	Children				x	
SP	Social Support	x (partly)			x (partly)	
FT	Financial Transfers		x			
HO	Housing			x		
HH	Household Income			x		
CO	Consumption			x		
AS	Assets		x			
AC	Activities	x				x
EX	Expectations	x				x
IV	Interviewer Observations					
New modules in wave 2:						
CS	Chair Stand	x				x
PF	Peak Flow	x				x
XT	End-of-Life Interview	proxy interview, deceased respondents				

7. Merging the data

A new identification system was introduced with the first release of wave 2 and is now implemented in wave 1, too. For each individual the variable *mergeid* is a unique and non-changing identifier for all waves. It has the format "CC-hhhhhh-rr", where "CC" refers to the short country code (see Chapter 4, Table 3:), "hhhhhh" is the household identifier (the 6th to 11th digits of sampid2 in wave 1), and "rr" is the respondent identifier within each household ("0" and the wave 1 variable *respid*).

We also introduce new identification variables on the household level. A unique variable *hhid* identifies the household to which a person belonged when entering the panel. This variable is non-changing for each person

throughout all waves. A second household variable is *hhidW*, where "W" refers to the specific wave. Thus, hhid2 refers to the household in which the individual resided in wave 2. Both *hhid* and *hhidW* have the following format "CC-hhhhhh-S", where "CC" refers to the short country code (see Chapter 4, Table 3:), "hhhhhh" is the household identifier (the 6th to 11th digits of sampid2 in wave 1), and "S" identifies possible split households, i.e. households of a panel member who moved out of a previous household. An "A" is given to all original households, thus any split is identified through a "B", "C", etc.

Note that:

a) *mergeid* is NOT changed through a move out of a household and

b) *mergeid* is not uniquely defined for household members that did not participate in an individual interview. This means that in the cv_r all non-responding eligibles as well as other ineligible household members are included, but *mergeid* is defined as "no int. w.1" or "no int. w.2".
c) It is entirely possible that the non-changing household identifier, *hhid*, has a split identifier – for example for a new spouse who first came into the panel in a split household.

Researchers interested in identifying all household members (i.e. eligible and ineligible) in a current wave can use the *hhidW* in addition with the *cvid* variable from the **cv_r** dataset, similar to previous releases.

The variable *waveid* indicates when an individual entered SHARE. All household members present in wave 1 have a wave 1 *waveid*. In case a new person moves in a wave 1 household after wave 1, she or he gets a wave 2 *waveid*, because the first wave she or he is included in the coverscreen is wave 2. *Waveid* takes the following values corresponding to the following wave/questionnaire version:

"42", "51":	referring to wave 1
"61", "62", "64":	referring to wave 2

Note that when talking about "waves", we consider SHARE's data collection in 2004/05 to be wave 1, because the wave 1 questionnaire version was used. Hence even though there has been only one round of collection in Poland, the Czech Republic and Ireland, we refer to the data of these countries gathered in 2006/07 as SHARE wave 2 data, because these countries used the wave 2 questionnaire version.

The variable *mergeid* is present in all modules that contain individuals' answers and thus can be used to combine these modules on the individual level. An exception is the **cv_h** dataset of the CV module, which is on household level. To combine data from the household level **cv_h** with other individual level modules, *hhidW*, the wave specific household identifier must be used.

8. Self-completion questionnaires

8.1 Drop-offs

8.1.1 What is a "drop-off" questionnaire?

In the main sample, the baseline interview ends with a self-completion paper & pencil questionnaire. This questionnaire includes additional questions which address issues like mental and physical health, health care and social networks.

The Israeli drop-off includes additional questions that are not asked in other countries. These variables are marked by the prefix "il". In wave 1 they are not included in the general drop-off data file for all countries but are downloadable as an extra data file. An overview of deviations between the Israeli drop-off and the generic version is available on the SHARE website: www.share-project.org/t3/share/new_sites/SHARE-Website/Drop-offs_main/drop%20off%20deviations%20Israel.pdf

8.1.2 Drop-off respondents

Respondents fill in the drop-off questionnaire only once. New spouses, refreshers and respondents who weren't interviewed in wave 1 were asked to answer the drop-off questionnaire in wave 2.

8.1.3 How to work with the drop-off

Drop-offs of wave 1 and wave 2 differ in some aspects. This is due to new questions added and questions that are not asked anymore in the wave 2 drop-off. In addition some questions of the wave 1 drop-off are asked in the CAPI in wave 2.

In order to match according questions with each other, the **variable names are adjusted in wave 2**. If for example question three of wave 1 is asked as the first question in wave 2 its variable name is changed from "q1" to "q3" in wave 2. This guarantees that equal variable names always refer to the same question.

We recommend you to use the schedule provided in appendix A if you work with the wave 2 drop-off data. It gives an overview of all drop-off variables, the number of questions in the questionnaires and its corresponding (new) variable name.

8.2 Vignettes

8.2.1 What are "vignettes"?

In some countries (wave 1: Belgium, France, Germany, Greece, Italy, The Netherlands, Spain and Sweden; wave 2: also Denmark, Poland and the Czech Republic) parts of the respondents (vignettes sample) fill in a vignettes questionnaire instead of the drop-off questionnaire.

Anchoring vignettes are short descriptions of, e.g., the health or job characteristics of hypothetical persons. Respondents are asked to evaluate

the hypothetical persons on the same scale on which they assess their own health or job. Respondents are thus providing an anchor, which fixes their own health assessment to a predetermined health status or job characteristic. These anchors can then be used to make subjective assessments comparable across countries and socio-economic groups. You can find more detailed information about the vignettes on the COMPARE website: www.compare-project.org.

There are two versions of vignettes in each wave. In wave 1 they are called type A and type B, in wave two type B and type C. The type A of wave 1 corresponds with type B of wave 2; Type B of wave 1 corresponds with type C of wave 2. The two types differ with regard to question order and gender of the people in the short description. In wave 1 the two types of vignettes were randomly assigned to the respondents. In wave 2 the assignment depended on the age of the respondent. Type B was given to respondents aged up to 64, type C was given to respondents aged 65 and over.

The variable "type" contains information on the vignette type. The variable label shows which questions from type B correspond with the ones from type A.

8.2.2 The longitudinal dimension of the vignettes

Unlike the drop-offs the vignettes are longitudinal. This means that longitudinal respondents of the vignette sample filled in the vignettes questionnaires in both waves. Refresher, new spouses and respondents who didn't participate in wave 1 also answered the vignette questionnaire, if they are in the vignette sample. There is one exception: In France the refreshers were not part of the vignette sample and some respondents switched from the vignette sample to the main sample between wave 1 and wave 2.

8.2.3 How to work with the vignettes

The schedule (Appendix B) summarizes the variables of the vignettes in both waves. It includes the number of the question in the questionnaire and its new variable name.

9. Missing codes

When respondents reply with "don't know" (DK) or refuse (RF) to answer a question consistent missing value codes are included:

- In case of common variables including multiple response dummies, but excluding variables about a financial amounts, these are
  -1: "don't know"
  -2: "refusal"
- For missing values in variables indicating financial amounts:
  -9999991: "don't know"
  -9999992: "refusal"

Treating SHARE missing codes in Stata: Sharetom

Stata users can download an ado file (sharetom.ado & sharetom.hlp) from the data download website. This program recodes missing values to Stata's "extended missing values" and labels them appropriately. Stata's extended missing values, e.g. ".a" or ".b", are treated the same way as system missing values "." are treated. This means, in a *tabulate* var-command they are not tabulated, unless you add the missing option (tabulate var, missing). Sharetom should run before you do any other changes in the data.

Treating SHARE missing codes in SPSS

SPSS users should define missing values as all values below 0 for all variables except financial amounts. Missing values for financial amounts should be defined as below -9999990.

10. Naming conventions

10.1 General conventions

In general, the naming of variables is harmonized across waves. Variable names in the CAPI instrument data use the following format:

mmXXXyyy_LL

mm	module identifier, e.g. DN
XXX	question number, e.g. 001
yyy	optional digits for dummy variables, Euro conversion or unfolding brackets, using the following indications: d dummy variables (see also Chapter 11) e Euro conversion (see also Chapter 12) ub unfolding brackets (see also Chapter 0)
_	separation character, to indicate loops;
LL	optional digits for category or loop indication ("outer loop")

Examples:

*ho045_* stores "The main reason to move", hence does not allow multiple responses and is not asked within a loop

ft003_1 ft003_2 ft003_3 store the relationship to whom respondent provided financial gifts for up to three people ("outer loop" over three persons)

10.2 Double loops

In wave 2 variables ep111 – ep116 are embedded in a double loop: They are looped both over c:={1,2,…,6} and p:={1,2,…,20}, where c refers to the categories of dummy variable ep110 (received public benefits) and p refers to up to 20 periods of incidence the respondent may report. Up to release 2.4.0 these variables followed the general naming convention mmXXX_LL. In order to provide a more intuitive naming of the double-

looped variables, we now allow for multiple loop indicators. In the case of ep111 – ep116, mmXXX_LL was renamed to mmXXX_c_p according to the matrix of all possible values for LL below.

Additionally, we included information on the type of public benefit received, the referred period in the variable label, as well as a note containing the old variable name

Example:

old name: **ep111_45**
old label: receive payment period from month

new name: ep111_3_5
new label: receive *unemployment benefits* period *5* from month
notes: former name was ep111_45

p (period)	c (type of public benefit received)					
	1	2	3	4	5	6
1	1	21	41	61	81	101
2	2	22	42	62	82	102
3	3	23	43	63	83	103
4	4	24	44	64	84	104
5	5	25	45	65	85	105
6	6	26	46	66	86	106
7	7	27	47	67	87	107
8	8	28	48	68	88	108
9	9	29	49	69	89	109
10	10	30	50	70	90	110
11	11	31	51	71	91	111
12	12	32	52	72	92	112
13	13	33	53	73	93	113
14	14	34	54	74	94	114
15	15	35	55	75	95	115
16	16	36	56	76	96	116
17	17	37	57	77	97	117
18	18	38	58	78	98	118
19	19	39	59	79	99	119
20	20	40	60	80	100	120

11. Dummy variables

Answers to all questions that allow for multiple responses have dummy variables as final data. E.g. question br005 ("What do or did you smoke") has three answer categories:

1. Cigarettes
2. Pipe
3. Cigars or cigarillos

The data set thus contains three dummies: *br005d1*, *br005d2*, and *br005d3* corresponding to the three categories. (Note that we in general omit leading zeros for the first nine answers in a response set with more than ten answer categories to allow for easier looping in commands.) A

value "1" in any of these variables means that the respondent chose the particular category as an answer and in case of a value "0" the respondent did not choose the particular category as answer.

- In case the respondent answers with a "none of these" or in case an "other" option is provided, the naming of the dummy names has the following structure:

  mmXXXd**no** "none of these"
  mmXXXd**ot** "other"

- In case the respondent answers with "don't know" or "refusal", all corresponding dummy variables of that question are set to the respective missing codes, i.e. -1 for "don't know" and -2 for "refusal".

- In case the question requires loop indication (see Chaptre 10), the digit(s) right after the "d" correspond(s) to the multiple response categories. The loop indication is added as the last part of the variable name separated by a "_" as usual. Hence, all multiple response variables can be identified by the "d"-separator, all loops are identified by the presence of digit(s) after a separation indicator "_".

According to the missing codes (see Chapter 9) the dummies in the form mmXXXdrf ("refusal") and mmXXXddk ("don't know") don't exist in the data anymore.

Due to changes in the Dummy-naming-system variable names for most of the dummies changed. Appendix G lists changes in variable names between releases for wave 1 and wave 2.

In general, the numbering of answer categories in the generic questionnaire determines the optional digits YY in the dummy variables. We only deviate from this rule, if otherwise misleading variable names across waves emerge. Below, please find a list of variables where names do not align with the questionnaire. Please note: this list may be incomplete, so it is always a good idea to check in the questionnaires, the labels and the item correspondence tool.

ac004_: wave 2 includes fewer answer categories than wave 1, however, the reduced set is comparable. Variable names in wave 2 were adjusted to match the respective wave 1 answer categories in the following way:

wave 2: ac004_ questionnaire categories	**variable names**
1. To meet other people	*ac004d1_**
2. To contribute something useful	*ac004d2_**
3. Because I am needed	*ac004d**4**_**
4. To earn money	*ac004d**5**_**
5. To use my skills or to keep fit	*ac004d**7**_**
96. None of these	*ac004dno_**

as054_: in wave 1 and wave 2 the same answer categories are used, however in a different order. Wave 2 variable names were adjusted to match the respective wave 1 answer categories.

wave 2: as054_ questionnaire categories	**Var. names**
1. Debt on cars and other vehicles (vans/motorcycles/boats, etc.)	*as054d1*
2. Debt on credit cards / store cards	*as054d**3***
3. Loans (from bank, building society or other financial institution)	*as054d**4***
4. Debts to relatives or friends	*as054d**5***
5. Student loans	*as054d**6***
6. Overdue bills (phone, electricity, heating, rent)	*as054d**2***
96. None of these	*as054dno*
97. Other	*as054dot*

12. Euro conversion

All answers about an amount of money are converted into Euro values. For non-Euro countries a frozen exchange rate is chosen. For Euro countries the Euro value is either the given value or the converted pre-Euro value because respondents in Euro countries were given the option to report in either Euro or the pre-Euro currency in wave 1. However since almost all monetary values in wave 2 are asked in Euro for those countries having the Euro, a conversion for those countries was not necessary in wave 2. The only exceptions are *ft018m1* and *ft018m2*, where pre-euro currencies were allowed in wave 2.

The format of the variable name is mentioned in Chapter 10 except for the "e" following the question number. Possible digits that follow after a "_" separation reflect loop numbers as usual.

The format of the Euro converted variables is as follows:

mmXXXe_LL

with:

mm	module identifier, e.g. HC
XXX	question number, e.g. 045
e	indication of Euro conversion
LL	optional digits for loop indication

When the respondent answers with "don't know" (DK) or "refusal" (RF) to a question indicating a financial amount, the following values are included in the dataset:

-9999991: "refusal"
-9999992: "don't know"

The following exchange rates were used for the Euro conversion:

Table 6: Exchange rates used for Euro conversions

			Fixed Exchange	Exchange Rate (x to Euro)	
Country	**Currency**	**Old Currency**	**Rate** [1]	**Wave 1**	**Wave 2**
Sweden	Swedish Krona	-	-	9.180	9.210
Denmark	Danish Krone	-	-	7.439	7.450
Germany	Euro	German Mark	1.95583	1.000	1.000
Netherlands	Euro	Dutch Guilder	2.20371	1.000	1.000
Belgium	Euro	Belgium Franc	40.3399	1.000	1.000
France	Euro	French Franc	6.55957	1.000	1.000
Switzerland	Swiss Franc	-	-	1.534	1.621
Austria	Euro	Austrian Schilling	13.7603	1.000	1.000
Ireland	Euro	Irish Punt	0.787564		1.000
Italy	Euro	Italian Lira	1936.27	1.000	1.000
Spain	Euro	Spanish Peseta	166.386	1.000	1.000
Greece	Euro	Greek Drachma	340.750	1.000	1.000
Israel	New Sheqel	-	-	5.720	5.190
Czech Rep	Czech Koruna	-	-	-	28.130
Poland	Zloty	-	-	-	3.847

[1] Refers to the official exchange rate used when Euro was implemented in specific country. Is used mainly in wave 1 when pre-Euro currencies were possible in financial questions.

Exrate stores the exchange rate with respect to the old currency for euro countries and exchange for non-euro countries, whereas nomxCAPI includes only the exchanges rates for non-euro countries.

13. Unfolding brackets

When a respondent does not know (DK) or refuses (RF) the answer to a question about an amount of money, usually an unfolding sequence of bracket questions starts. There are three entry points, and the starting point is chosen randomly. All details of the sequence are stored in the dataset. However, in the public release only a few (summary) variables are included. For all sequences we have the country-specific bracket values (in Euros) and the final category where the respondent ended. When a DK or RF is given during the unfolding bracket sequence, the value for the final category is set to either DK or RF.

The format of the summarizing unfolding bracket variable is as follows:

mmXXXub_LL
with:
mm module identifier, e.g. HC
XXX question number, e.g. 045
LL optional digits for loop indication

The variable indicating where the respondent finally ends can take seven values:

1. Less than low entry point
2. About low entry point
3. Between low and mid entry point

4. About mid entry point
5. Between mid and high entry point
6. About high entry point
7. More than high entry point

The country-specific bracket values are indicated as:

mmXXXv1, mmXXXv2, and mmXXXv3

In case of a loop, there exists only one set of bracket values as the country-specific thresholds are constant over loop numbers. Thus, mmXXXv1 contains the lowest threshold for unfolding bracket variable mmXXXub1, as well as for mmXXXub2, etc.

14. CH module: selection in child loop

Questions *ch009 to ch020* about children are only asked a maximum of four children. When there are more than four children, the CAPI program selects the four children as follows:

1. Sort children in ascending order by
   - minor (defined as 0 for all children aged 18 and over and 1 for all others),
   - geographical proximity (*ch007*),
   - birth year.

2. Pick the first four children. When all sorting variables are equal, the CAPI program chooses a child randomly.

The variables *chselch1* up to *chselch4* contain the numbers of the children who were selected by the program. The numbers refer to the order in which the respondent listed the children.

15. Citizenship and country of birth

Country of birth (*dn005*) and citizenship (*dn008*) are coded according to ISO 3166-1 (numeric-3). The list is available from:
http://unstats.un.org/unsd/methods/m49/m49.htm
It contains all countries that currently exist. Codes for outdated countries can also be found under the above address. Few additional codes deemed useful were enclosed (see below).

How are changing countries coded?

An often-occurring case is a respondent born in the USSR, in a place that would now be part of Russia. In that case, we code by the mentioned birth country, not by the actual country at the time of birth. In this case: if the person answered “USSR”, she or he will be coded as being born in the USSR. If she or he answered “Russia”, her coding will read “Russia”, although this is factually incorrect, because it was USSR when the respondent was born. If it is important for you to know the country name at the time of birth, you will have to diligently deduce the code using the person’s year of birth.

The following additional codes are used for other country of birth or citizenship:

1010- Congo (both)
1011- Stateless
1012- Cypriote-American
1015- EU-Citizenship
1016- Argentinean-Italian
1017- Serbian-Bosnian
1020- Galicia-Central Europe
1030- Former Territories of German Reich
1031- Former Eastern Territories of German Reich
1040- Kosovo
1050- Minor Asia
1060- Former Netherlands-East Indies
1070- Former Austria-Hungary
1080- Kurdistan (region)
1090- Borneo-Island

16. HO module: top coding

In the public release of wave 1 top coding was done in the case of Sweden due to legal constraints, according to the Swedish Secrecy Act. The following variables had to be top coded (with the value displayed to the right):

ho024e: 1,000,000 Euros (or 9,000,000 SEK)
ho027e: 2,750,000 Euros (or 25,000,000 SEK)

17. PH module: *phrandom*

There are two types of answer categories for the question about self-perceived health in wave 1. Which type is asked at the beginning of section PH (questions *ph002/003*), and which (other) type for the end of this section (questions *ph052/053*), is randomized. The variable *phrandom* indicates which type is chosen:

1 for *ph002/ph052* (version 1)
2 for *ph003/ph053* (version 2)

18. Values used in EX module: *ex009age, ex012val*

ex009age: age used in question *ex009*
ex012val: value used in question *ex012*

19. Generated variables

19.1 ISCED-coding

Education is one of the most diverse international variables. Therefore a standard coding is required for international comparisons. SHARE uses the 1997 International Standard Classification of Education ISCED-97 (see

http://www.uis.unesco.org/ev.php?ID=3813_201&ID2=DO_TOPIC for details on ISCED coding).

SHARE ISCED coding was done in the following way: each Country Team asked a local expert to map the following SHARE education questions in the respective ISCED-97 code and years of education, based on the guidelines of the manual "Classifying Educational Programmes: Manual for ISCED-97 Implementation in OECD Countries" (1999 edition).

*dn010_* and *dn012_* provide information on the highest school degree and degrees of further education or vocational training of the respondent. The same applies to questions *dn021_* and *dn023_* which refer to the former spouse's education. These questions are asked if the respondent is divorced, widowed or living separated from the spouse.

Also, the education of up to four selected children (see Chapter 14 for details on how children were selected) is transferred into the ISCED coding. This transfer is based on answers to questions *ch017_*<i> and *ch018_*<i>, where <i> refers to the selected child 1 to 4.

Finally, in wave 1 this procedure was applied to the interviewer's level of education. It is derived from question *iv015_* and *iv016_*.

If the respondent reported to have obtained more than one degree of higher education – for example *dn012_* or *dn023_*, respectively – only the highest one is taken into consideration.

Please be aware that:

- **in wave 1 the years of education are not asked directly but are derived from ISCED categories,**
- **ISCED code 6 was not asked in all countries.**
- **In wave 2 the years of education are asked for all respondents. But the degree of education is asked for new respondents only.**

Also note that, for Release 2.5.0, we corrected an error in the wave 1 program deriving children's ISCED codes in Switzerland (variables isced_c1, isced_c2, isced_c3, isced_c4). Children with Swiss-specific highest further education category "3" had accidently been mapped into ISCED category 5 instead of category 4.

Country specific ISCED-97 codes and years of education are documented in Appendix C.

ISCED codes are provided in the following variables:

Table 7: ISCED variables

Variable	Description
Wave 1 and wave2:	
isced_r	ISCED-97 coding of the respondent's education
isced_sp	ISCED-97 coding of the respondent's former spouse's education
isced_c1	ISCED-97 coding of the education of the respondent's selected child 1
isced_c2	ISCED-97 coding of the education of the respondent's selected child 2
isced_c3	ISCED-97 coding of the education of the respondent's selected child 3
isced_c4	ISCED-97 coding of the education of the respondent's selected child 4
Wave 1 only:	
iscedy_r	respondent's years of education, derived from ISCED-97 coding
iscedy_sp	respondent's former spouse's years of education, derived from ISCED-97 coding
iscedy_c1	years of education of respondent's selected child 1, derived from ISCED-97 coding
iscedy_c2	years of education of respondent's selected child 2, derived from ISCED-97 coding
iscedy_c3	years of education of respondent's selected child 3, derived from ISCED-97 coding
iscedy_c4	years of education of respondent's selected child 4, derived from ISCED-97 coding
isced_iv	ISCED-97 coding of the interviewer's education
iscedy_i	interviewer's years of education, derived from ISCED-97 coding

19.2 Imputations

by Dimitris Christelis, SHARE, CSEF and CFS

19.2.1 Introduction

SHARE release data are supplemented by an additional dataset containing imputed variables. Imputed variables are available in the areas of demographics, individual and household level economic information, as well as generated variables. Flag variables indicating whether a case is imputed or not are also included in the data file. They have the same name as the corresponding variable and the suffix "i".

Imputations for Release 2.3.0 of the first two waves of SHARE had already incorporated significant changes with respect to those for earlier releases. The changes included, among other things, the use of information from wave 2 about wave 1 variables (e.g. with respect to employment, education) and the refinement of the statistical procedures used during the imputation process. The imputations for wave 2 included some wrong variable labels that have already been fixed with a minor update on December, 10th, 2009.

Changes for Release 2.3.1 consist of the different treatment of bank account amounts for non-responding partners, and minor corrections in the numeracy variable and in some other demographic variables. In wave 2 there are 5 fewer observations, corresponding to non-responding partners that had passed away between wave 1 and wave 2. Furthermore,

labels for imputation flags no longer include the full label of the variable they refer to as this convention produced labels with more than 80 characters that Stata is unable to display. The new terminology now is "imputation flag – *varname*", where varname is the variable name, not the label, of the original variable.

For Release 2.4.0 we corrected a mistake in the imputed data for the value of the owned business in non-Euro countries (SE, DK, CH in wave 1 and SE, DK, CH, CZ, PL in wave 2). In addition, we corrected the variable denoting income from dependent earnings the year prior to the interview (yipdv), when respondents answered it while having in mind their last payment in the current year. For more details, see chapter IV.4 of the imputation documentation.

19.2.2 Multiple Imputation

Imputations in SHARE are performed using the methodology of multiple imputation, i.e. there are more than one imputed values for each missing one.[1] The rationale for this approach is to try to recreate the distribution of the missing value of a particular variable (conditional on the observed values of other variables), rather than make a single guess about it. In SHARE there are five imputed values for each missing one, and thus there are five different datasets, indexed by the variable *implicat*, that differ with respect to the missing values and are identical with respect to the non-missing ones. In principle, all datasets should be used for the calculation of descriptive statistics or estimation of statistical models, as they all represent different draws from the distribution of missing values, and thus no single dataset is in any way "preferable" to the others.

The calculation of the magnitudes of interest in the context of multiple imputation can be performed as follows: let m=1,…, M index the imputation draw (with M in our case equal to 5) and let m be $\hat{\beta}_m$ our estimate of interest (e.g. sample median, regression coefficient etc.) from the mth implicate dataset. Then the estimate using all M implicate datasets is simply the average of the M separate estimates, i.e.

$$\overline{\beta}_M = \frac{1}{M}\sum_{m=1}^{M}\hat{\beta}_m$$

The variance of this estimate consists of two parts. Let V_m be the variance estimated from the mth implicate dataset. Then the first magnitude one needs to compute is the average of all M variances, which constitutes the within-imputation variance, i.e.

[1] For introductory treatments of multiple imputation and missing data analysis in general, see Allison (2002) and McKnight et al. (2007). For a more advanced treatment, see Little and Rubin (2002).

$$WV_M = \frac{1}{M}\sum_{m=1}^{M} V_m$$

The second magnitude one needs to compute is the between-imputation variance, which is given by:

$$BV_M = \frac{1}{M-1}\sum_{m=1}^{M}\left(\hat{\beta}_m - \overline{\beta}_M\right)^2$$

Finally, the total variance of the estimate is equal to:

$$V_M = WV_M + \frac{M+1}{M} BV_M$$

As Little and Rubin (2002) point out, the second term in the above equation represents the share of the total variance due to missing values. One can perform a usual single variable t-test of significance employing the following formula to compute the degrees of freedom *n* equal to:

$$n = (M-1)*\left(1+\frac{1}{M+1}\frac{WV_m}{BV_M}\right)^2$$

In Stata 9 and 10, statistical analysis using multiple imputation can be performed by downloading the user-written package mim. In addition, one can perform likelihood ratio tests after estimation using mim by downloading the package milrtest. In Stata 11, one can find for the first time extensive in-built procedures that deal with multiply imputed datasets[2], while the creators of mim have also updated their procedures for Stata 11, and these can be downloaded as a package named mim2. There are also in-built procedures to deal with multiple imputation in SPSS and SAS.

19.2.3 Exchange Rates

In SHARE wave 1 there are three countries (Denmark, Sweden and Switzerland) that have currencies different than the euro, while in wave 2 Israel, Poland and the Czech Republic are added to the aforementioned group of non-euro countries. In the CAPI modules, all amounts are

[2] See http://www.stata.com/stata11/mi.html

expressed in euros, even for the observations belonging to the non-euro countries. The exchange rate used for the conversion to euros can be found in the variable *nomxCAPI*. As a result, in the case of non-euro countries users should multiply by *nomxCAPI* the amounts in euros found in the CAPI modules in order to convert them in local currency.

Since Release 2.3.0 of the imputation datasets, however, the amounts in non-euro countries are all expressed in local currency, in contrast to what took place for the imputations in earlier releases of wave 1 (the currency in which all amounts in a given country are denominated can be found in the variable *currency*). The reason for this is that, in a given country, the interviews can take place in different years. Therefore, if a question asks about what happened in the year prior to the interview or to what is true as of the time the interview, then the answer to it will refer to different years across the sample, depending on the year of the interview. In addition, for a given person, some questions might refer to the year before the interview, and some to the time of the interview. We have therefore provided nominal exchange rates for the relevant years in each survey that can be found in the variables *nomxWXYZ*, where WXYZ refers to the calendar year. The user should first deduce from the phrasing of the question the time period to which it refers, compare it with the interview year and then apply the appropriate exchange rate. For example, the question that refers to wages and salaries from employment (named *EP204_* in the questionnaire, *ydipv* in the imputed datasets), is asked with respect to the year prior to the interview. Therefore, for the wave 1 interviewees in Sweden during 2004, users should divide the amount in *ydipv* by the nominal exchange rate for 2003 (found in *nomx2003*), to convert the amount of *ydipv* into nominal euros.

There is an additional set of exchange rates that can be found in the variables *pppxWXYZ* (again, WXYZ refers to the calendar year). These exchange rates adjust for the difference in the purchasing power of money across countries and over time, and dividing by them any nominal amount (both in euros and in other currencies), will transform such amounts into real ones, denominated in prices obtaining in Germany in year 2005. It is important to note that this operation is also valid for countries that have the euro as a currency, because their price level changes over time, even if their nominal exchange rate does not.[3] As is the case with the nominal exchange rates, users should be careful to determine the time period each amount refers to.

19.2.4 Non-responding partners

As was the case in wave 1, partners in couples that are not interviewed are included in the imputation datasets, and are denoted by the indicator variable *nrpartn*. Not all values for non-responding partners are imputed,

[3] Data for this calculation were obtained from the benchmark purchasing power parity survey performed by the OECD in 2005, as well as from data on inflation rates in actual individual consumption also provided by the OECD.

however, because one can sometimes get information about them from their responding partners (e.g. with respect to their employment status, education), or because some questions are answered at the household level by the responding partner (e.g. assets in wave 2).

19.2.5 Changes in variables, new variables and other information

There have been various changes from releases prior to Release 2.3.0 of SHARE wave 1 regarding the variables in the imputation datasets. These include the following:

a. The variables *ftinh1v-ftinh5v*, referring to inheritances received, are not imputed any more in Release 2.3.0
b. The household-level variable referring to income from rent has been renamed from *hrentv* to *hyrentv*.
c. The variable referring to imputed rent from owner occupied housing *hirentv* is not present any more in Release 2.2.0. Users can apply an interest rate of their choice to the gross value of the home *homev*, in order to impute housing services from owner-occupied homes, or to the difference between *homev* and the value of the mortgage *mortv*, in order to impute the notional income accruing to the household owning the house.
d. The purchasing power-adjusted variables *hnetw_p*, *hrav_p*, *hgfinv_p*, *hnfinv_p*, *hgtincv_p*, which respectively refer to household net worth, gross financial assets, net financial assets and gross household income are not found any more in Release 2.3.0 Users can calculate them quickly by dividing the corresponding nominal magnitudes *hnetwv*, *hrav*, *hgfinv*, *hnfinv*, *hgtincv* by the appropriate purchasing power-adjusted exchange rates *pppxWXYZ*. An even more careful calculation could be performed by dividing each component of those aggregates by *pppxWXYZ* and then summing the purchasing power adjusted components in order to obtain the purchasing power adjusted aggregate.
e. The variable *ppp*, denoting the purchasing power adjustment coefficient, is not included anymore in the wave 1 data. It has been replaced by the variables *pppxWXYZ*, described in Section 3 above.

There are also a number of differences in the variables between wave 1 and wave 2. They are as follows:

a. Wave 2 data include the additional variables *riskpref*, *hprcv*, *pen11v* **-** *penn17v* (for descriptions see the variable list). The variable *riskpref* is asked only of the financial respondent, therefore it takes the value -99 (inapplicable) for the remaining observations.
b. The variable *insurv*, denoting health insurance premiums, is not included in wave 2 anymore.

c. The variable *reading*, denoting self-rated reading skills, is not asked of everybody in wave 2, but mostly only of those belonging to the refresher sample. As a result, it takes the value -99 (inapplicable), for the remaining observations.

d. The individual-level variables denoting amounts held in bank accounts (*baccv*), bonds (*bondv*), stocks/shares (*stocv*), mutual funds (*mutfv*), contractual savings for housing (*contv*), whole life insurance (*linsv*), the total value and own share of business (*gbusv* and *hownbv*), the value of cars (*carv*),) and the amount of debts (*liabv*), interest income from bank accounts (*ybaccv*), interest income from bonds (*ybondv*), dividends from stocks/shares (*ystocv*), and interest income and dividends from mutual funds (*ymutfv*) are not shown in wave 2 because the asset questions refer to the household and not to individuals, which also could be the case in wave 1 (especially if the two partners in a couple had separate finances). Only the corresponding household-level variables are included in wave 2, and they have the same name as the individual-level ones but with an h added in front (e.g. *hbaccv*).

e. The variable *yltcv* found in wave 1 and denoting long-term insurance payments has been split into two variables in wave 2: *pultv* and *prtlv*, denoting public and private long term insurance payments, respectively.

f. The variable *pen6v*, found in wave 1 and denoting public invalidity and incapacity pension has been consolidated in the variable *pen3v* in wave 2 that denotes both disability and incapacity pensions.

g. The variables *ydip*, *yindv*, *yohmv*, *yohbv*, and *hgtincv* denote aspects of *gross* income in wave 1, whereas they denote *net* income in wave 2. These variables were falsely labelled in previous releases of wave 2 but are now correct in Release 2.3.1.

Appendix E includes a detailed list of imputed variables.

A separate imputation documentation can be downloaded at www.share-project.org.

For any further information on the SHARE imputations, please contact Dimitris Christelis (e-mail: dimitris.christelis [at] gmail.com).

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19.2.6 Imputations for Israel

In addition, imputations for Israel are available; in wave 1 they are stored as an extra file based on a different format than the main imputations module. There is one change in the Israeli data with respect to release 2.3.1. Purchasing power (PPP) adjusted values of economic variables should now be computed as follows: users should *divide* any variable expressed in nominal euros by the included variable *pppcoeff*, in order to obtain the correct PPP-adjusted values in euros. From data release 2.4 onwards, there are going to be no separate PPP-adjusted variables in the dataset for Israel, which is also the practice followed for all other countries in SHARE.

Furthermore, there are two nominal exchange rate (shekels/euro) variables added in the Israeli imputations data: nomxIMP denotes the exchange rate used in the imputation calculations, while nomxCAPI denotes the exchange rate used in the CAPI modules.

Note that in wave 2 the imputations for Israel are equal to the other countries. Thus they are included in the regular imputations module.

19.3 ISCO and NACE coding wave 1

SHARE asks respondents in wave 1 for their own, their former partner's and their parents' occupation. SHARE uses the current (1988) International Standard Classification of Occupations (ISCO-88) by the International Labour Organization (ILO) to organize jobs into groups and international comparisons. Corresponding industries are classified according to the NACE Codes (Version 4 Rev. 1 1993), created by the European Union.

Table 8: Variables used for ISCO and NACE coding

	ISCO	**NACE**	
		employed	**self-employed**
Respondent's first job	*ep016_1*	*ep018_1*	*ep023_1*
Respondent's second job	*ep016_2*	*ep018_2*	*ep023_2*
Respondent's last job	*ep052_*	*ep054_*	*ep060_*
Former partner's job	*dn025*		
Mother's job	*dn029_1*		
Father's job	*dn029_2*		

19.3.1 ISCO

In general, the 4-digit ISCO88 is used. For details on the codes see: www.ilo.org/public/english/bureau/stat/isco/isco88/index.htm

In addition, the following codes are used for special values:

0000 Does not apply
0003 Not employed
0004 Not codeable
0005 Getting education
0006 Housewife / Houseman
0007 Welfare support / pension / etc.
0008 Respondent does not know
0009 No answer
0100 Armed forces / military / soldier
9999 Invalid answer

These codes are generated as ***isco_***<*> with a corresponding English description as ***text_***<*>. The following table shows the generated variables.

Table 9: Generated variables: ISCO

Generated Variable		Description	Derived From
isco_1job	*text_1job*	Respondent's first job	*ep016_1*
isco_2job	*text_2job*	Respondent's second job	*ep016_2*
isco_ljob	*text_ljob*	Respondent's last job	*ep052_*
isco_exp	*text_exp*	Former partner's job	*dn025*
isco_mo	*text_mo*	Mother's job	*dn029_1*
isco_fa	*text_fa*	Father's job	*dn029_2*

19.3.2 NACE

Please note that the industry the interviewee is working in is asked in two different questions, depending on his employment status (which is stored in *ep009_*). If she or he is in her or his first job self-employed, it is in variable *ep023_*1. Else, it is in *ep018_*1. For the NACE codes however, this information is combined in a single variable named nace_1job. The same is true for the industry of the second job *(ep023_2 / ep018_1*) which is stored in nace_2job, and for the last job (*ep054_ /ep060_*) in *nace_ljob*. The corresponding English descriptions are provided in *ind_1job*, *ind_2job*, and *ind_ljob* respectively.

SHARE uses fewer categories for the industry codes than NACE usually does (please see www.top500.de/nace4-e.htm). Moreover, SHARE employs three new general categories and five categories for missing values. Summarized NACE-Categories used in SHARE can be found in Appendix F.

19.4 Housing and NUTS

If the interview took place in the house of the respondent, the interviewer did not ask for the type of accommodation in the HO module. Instead, the interviewer filled in this kind of information in module IV him- or herself.

For user convenience, we created wave 1 generated variables *areabldg*, *typebldg*, *floorsbl*, and *nsteps* that combine the data from the HO module (*ho036, ho37, ho042* and *ho043*) and from the IV module (*iv009* to *iv012*). These information is stored for all responding household members (regardless whether they are housing respondents or not).

Table 10: Generated variables: housing

Generated Variable	Description	Derived from	
areabldg	Area of Building	*iv009_*	*ho037_*
typebldg	Type of Building	*iv010_*	*ho036_*
floorsbl	Number of Floors of Building	*iv011_*	*ho042_*
nsteps	Number of Steps to Entrance	*iv012_*	*ho043_*

The Nomenclature of Territorial Units for Statistics (NUTS) is used to indicate in which territorial unit the household is located. These variables are named *nuts1*, *nuts2* and nuts3. Privacy legislation is considered. Not all NUTS levels are provided for every country. For Ireland and Israel the information on NUTS is missing in wave 2. For details on NUTS see: http://epp.eurostat.ec.europa.eu/portal/page/portal/nuts_nomenclature/introduction

19.5 Health variables

Regarding cognitive function (CF), mental health (MH), physical health (PH), behavioural risk (BR), grip strength (GS) and walking speed (WS) the following variables were created for wave 1 and for wave 2. Note that some of the generated health variables are based on slightly different question wording (changes in answer categories in wave 2). See the Cross Wave Comparison for deviations.

Table 11: Generated variables: health

Variable	Description
Cognitive Function (CF)	
numeracy	numeracy score
orienti	orientation to date, month, year and day of week
Mental Health (MH)	
euro1-euro12	variables forming the EURO-D scale (see also below)
eurod	depression scale EURO-D
eurodcat	EURO-D caseness
Physical Health (PH)	
gali	limitations with activities (gali)
spheu	self-perceived health European version
sphus	self-perceived health US version
spheu2	spheu - less than good health
sphus2	sphus - less than very good health
chronic	number of chronic diseases
chronicw2	as *chronic*, but answer categories changed in wave 2
chronic2	2+ chronic diseases
chronic2w2	as *chronic2*, but answer categories changed in wave 2
symptoms	number of symptoms

Variable	Description
symptomsw2	as *symptoms*, but answer categories changed in wave 2
symptom2	2+ symptoms
symptom2w2	as *symptom2*, but answer categories changed in wave 2
bmi	body mass index (bmi)
bmi2	bmi categories
mobility	mobility, arm function and fine motor limitations
mobilit2	1+ mobility, arm function and fine motor limitations
mobilit3	3+ mobility, arm function and fine motor limitations
adl	number of limitations with activities of daily living (adl)
adl2	1+ adl limitations
iadl	number of limitations with instrumental activities of daily living
iadl2	iadl limitations no-yes
Behavioural Risks (BR)	
cusmoke	current smoking
drinkin2	drinking more than 2 glasses of alcohol almost every day
phactiv	physical inactivity
Walking Speed (WS)	
wspeed	walking speed
wspeed2	walking speed: cut-off point
Grip Strength (GS)	
maxgrip	maximum of grip strength measures

19.5.1 Cognitive function and mental health

by Michael Dewey

orienti orientation to date, month, year and day of week:
Orientation in time – the higher the better oriented (generated from *cf003* - *cf006*)

numeracy numeracy score:
Mathematical performance - the higher the better (generated from *cf012* - *cf015*)

eurod depression scale EURO-D:
The score on EURO-D – high is depressed (generated from *mh002* – *mh017*)

eurodcat EURO-D caseness:
EURO-D caseness - 1 is a case

The following 12 variables form the EURO-D scale:

- *euro1:* depression
- *euro2:* pessimism
- *euro3:* suicidality
- *euro4:* guilt
- *euro5:* sleep
- *euro6:* interest
- *euro7:* irritability
- *euro8:* appetite
- *euro9:* fatigue
- *euro10:* concentration
- *euro11:* enjoyment
- *euro12:* tearfulness

19.5.2 Physical health, behavioural risk and walking speed

by Mauricio Avendaño, Arja Aro & Johan Mackenbach

This paper documents the construction of new variables from the physical health (PH) and health behaviour (BR) modules, based on wave 1, release 2 of the SHARE data, last updated in June 2007. We have made a selection of the most important variables from the physical health and health behaviour modules that we have created for data analysis. These variables are:

GALI – Limitation with activities

This variable is based on variable *ph005_*, which has originally three categories: (1) severely limited; (2) limited, but not severely; & (3) not limited. The new variable aggregates the values that delimitate limitations, resulting in two categories: (0) not limited & (1) limited. The latter category includes severe and not severe limitations. The motivation to dichotomise this variable is the smaller numbers of severely limited when analysing data per country, gender and age groups.

SPHEU (Self-perceived health European version)

This variable is based on variables *ph002_* & *ph0053_*. This variable puts together respondents that were initially randomised to answer the self-perceived health item either at the beginning or at the end of the physical health (PH) questionnaire survey.

SPHUS (Self-perceived health US version)

This variable is based on variables *ph003_* & *ph0052_*. This variable puts together respondents that were initially randomised to answer the self-perceived health item either at the beginning or at the end of the PH questionnaire module.

SPHEU2

This variable dichotomises the European version of self-perceived health into two categories: (0) good or very good health & (1) less than good health.

SPHUS2

This variable dichotomises the US version of self-perceived health into two categories: (0) very good and excellent & (1) less than very good.

CHRONIC (number of chronic diseases)

This variable is based on items *ph006_1* to *ph006_16* and presents the number of chronic diseases reported by each individual.

CHRONIC2

This variable summarizes the variable *chronic* into the following categories: (0) less than 2 chronic diseases & (1) 2 or more chronic diseases.

SYMPTOMS (number of symptoms)

This variable is based on items *ph010_1* to *ph010_13* and presents the number of symptoms reported by each individual.

SYMPTOM2

This variable summarizes the variable *symptoms* into the following categories: (0) less than 2 symptoms & (1) 2 or more symptoms.

BMI (BODY MASS INDEX)

This variable is based on variables *ph012_* (weight) and *ph013_* (height), and is based on the following formula: BMI = (*ph012_*/(*ph013_*)^2)*10000. *bmi* is a continuous variable.

BMI2

This variable reclassifies the variable *bmi* into the standard categories of body mass index determined by the World Health Organisation. These categories are:

1. Underweight (below 18.5)
2. Normal (18.5 – 24.9)
3. Overweight (25 – 29.9)
4. Obese (30 or higher)

The value "9999997" was created and set as a missing value. It corresponds to those values of BMI that are not likely to be correct, mostly because of a mistake either in measurement or entering of data on weight. 9999997 corresponds to values that are smaller than 12, because all weight values (in variable *ph012_*) for these subjects were unlikely to be true.

MOBILITY (number of limitations with mobility, arm function & fine motor function)

This variable is based on items *ph048_1* to *ph048_11*. It corresponds to the number of limitations with mobility, arm function & fine motor function reported by each individual.

MOBILIT2

This variable re-categorises the variable *mobility* into the following values: (0) No limitations & (1) one or more limitations with mobility, arm function & fine motor function.

MOBILIT3

This variable re-categorises the variable *mobility* into the following values: (0) Less than three limitations & (1) three or more limitations with mobility, arm function & fine motor function.

ADL (number of limitations with activities of daily living)

This variable is based on items *ph049_1* to *ph049_14*. It describes the number of limitations with activities of daily living (ADL). Six activities are included:

- Dressing, including putting on shoes and socks
- Walking across a room
- Bathing or showering
- Eating, such as cutting up your food
- Getting in and out of bed
- Using the toilet, including getting up or down

ADL2

This variable reclassifies the variable *adl* into two categories: (0) no ADL limitations and (1) one or more limitations with ADL.

IADL (number of limitations with instrumental activities of daily living)

This variable is based on items *ph049_1* to *ph049_14*. It describes the number of limitations with instrumental activities of daily living reported by each individual. Seven activities are included:

- Using a map to figure out how to get around in a strange place
- Preparing a hot meal
- Shopping for groceries
- Making telephone calls
- Taking medications
- Doing work around the house or garden
- Managing money, such as paying bills and keeping track of expenses

IADL2

This variable reclassifies the variable *iadl* into two categories: (0) no IADL limitations and (1) one or more limitations with IADL.

CUSMOKE (current smoking)

This variable is based on variables *br0021_* and *br002_*. It comprises information into the following categories: (1) current smoker; (2) reported in br001_ that had never smoked daily for at least one year; and (5) Former smoker (stopped smoking).

DRINKIN2 (drinking more than two glasses of alcohol almost every day or 5/6 days a week)

This variable comprises information on drinking more than two glasses of any of the three main drinks surveyed almost every day or five/six days a week. It is constructed based on variables *br011_*, *br012_* and *br013_*. This generated variable is the closest approximation to "more than the recommended levels of drinking" available in SHARE.

PHACTIV (physical inactivity)

This variable is constructed on the basis of variables *br015_* and *br016_* regarding levels of vigorous and moderate physical activity, respectively. Physical inactivity is defined as never or almost never engaging in neither moderate nor vigorous physical activity.

WSPEED (walking speed)

This variable is based on variables *ws011_* and *ws013_*, which were measured among individuals aged 76 years and older ONLY. Walking speed was measured twice, and the average speed of the two tests is taken. *wspeed* indicates the value of walking speed, which is obtained by dividing the sums of the distances by the times of the two measurements. Individuals who need more than 0.54 seconds and fewer than 30 seconds are included.

WSPEED2

wspeed2 offers a cut-off point for walking speed as used in previous studies, and can take two values: (1) walking speed is 0.4 meters/second or less; (0) walking speed is more than 0.4 meters/second.

19.5.3 Grip strength

by Karen Andersen-Ranberg and Inge Petersen

Maxgrip (maximum of grip strength measures)

According to instructions two grip strength measurements on each hand were recorded with a dynamometer at the interview.

Valid measurements are defined as grip strength measurements, where the two measurements of one hand differ by less than 20kg. If the difference was above (>20kg) the measurements for that hand have been recoded as MISSING.

If grip strength was only measured once on one hand, this measurement has also been recoded as MISSING. However, if there were two measurements on the other hand, these measurements have been included in this dataset.
Grip strength measurements of zero "0" or grip strength measurements above 100 kg (≥100 kg) have been recoded as MISSING.
The *maxgrip* is defined as the maximum grip strength measurement of both hands (2x2) or of one hand (1x2).

19.6 Social support and household composition

The file ShareRel2_GV_SUPPORT* contains derived summary variables from coverscreen (CV) and the support (SP) module. Additionally, it provides the household composition variable *hhold_in*, the type of household at the individual level and in more detail the variable *hhold_i1*. This variable is calculated from information in the CV module.

19.6.1 Social support

by Jim Ogg

Table 12: Generated variables: social support

Variable	Description
nb_help	Number of different types of help received from outside the household (i.e. care, practical tasks and administrative tasks)
who_hlp1	Identity of helper from outside the household
who_hlp2	The identity of the helper in the household
n_help_gi	The total number of different types of help given outside the household (i.e. care, practical tasks and administrative tasks)
whom_gi1	The identity of the person helped outside the household
whom_gi2	The identity of the person cared for inside the household

19.6.2 Household composition

The following table includes the generated variables concerning the household composition.

Table 13: Generated variables: household composition

Variable	Description
hhold_in	The household composition: the type of household (individual level). This is calculated from information in the file cv_r
hhold_i1	Detailed household composition: the type of household (individual level). This is calculated from information in the file cv_r
mother_i	Mother in household
father_i	Father in household
motlaw_i	Mother-in-law
fatlaw_i	Father-in-law
child_in	Child and/or child-in-law in household
gchild_i	Grandchild in household
family_i	Other relative in household
other_in	Other relative in household
apti_in	Great-grandchild in household

20. Alive or deceased

The sharew1_gv_dol module informs you if wave 1 respondents are still alive in wave 2 or deceased; sharew2_gv_dol if wave 1/wave 2 respondents are still alive in wave 3 or deceased.

21. Israel: additional modules

21.1 Re-interview EP-module Israel

Since the question EP005 in Israel differed from the generic version (see also the "Cross Wave Comparison" on the website) in wave 1, there is an extra module to facilitate working with the data. While in all the other countries there are 5 response categories to question EP005, there are 7 in Israel: category 3 "Unemployed" was subdivided into "Unemployed, looking for a job" (Israeli category 3) and "Unemployed, not looking for a job" (Israeli category 4); category 4 "Permanently sick or disabled" (Israeli category 6) was complemented by the category "Temporarily sick or disabled" (Israeli category 5). This results in the following scheme:

Response categories EP005

Generic questionnaire	**Israeli questionnaire**
1) Retired	1) Retired
2) Employed or self-employed	2) Employed or self-employed
3) Unemployed	3) Unemployed, looking for a job
	4) Unemployed, not looking for a job
4) Permanently sick or disabled	5) Temporarily sick or disabled
	6) Permanently sick or disabled
5) Homemaker	7) Homemaker

Due to the generic programming of the CAPI the additional Israeli response categories caused some routing problems. The affected respondents were therefore re-interviewed by phone. In this phone interview the CAPI instrument was not used and only a subset of the questions was asked again. The newly created dataset (now: sharew1_rel2-6-0_ep_ilextra) contains all respondents affected by routing problems (604 people), irrespective of whether they participated in this second interview or not. Participation in the second interview is indicated by the variable *reint*. The variables *reint_month and reint_year* provide the date of the second interview. The variables with the extension "*_reint*" contain the new answers, and variables with the extension "*_old"* retain the original answer. Note that due to the correct routing, many of these old questions were not asked again, and thus may not show up in a cross-tabulation of the old and new question.

All Israeli variables in the regular EP-module (sharew1_rel2-6-0_ep) which resulted from the wrong routing were recoded as "missing" (sysmiss).

21.2 Additional drop-off questions

The Israeli drop-off in wave 1 includes additional questions on difficult life events and pension reforms that are not asked in other countries. These variables are marked by the prefix "il". They are not included in the general drop-off data file for all countries but are downloadable as an extra data file (sharew1_rel2-6-0_dropoff_ilextra). An overview of deviations between the Israeli drop-off and the generic version is available on the SHARE website:
www.share-project.org/t3/share/new_sites/SHARE-Website/Drop-offs_main/drop%20off%20deviations%20Israel.pdf

21.3 Imputations Israel

From release 2.2.0 on SHARE includes imputations for Israel, too. Since in wave 1 they are different from the imputations for other countries they are available as a separate data module (sharew1_rel2-6-0_imputations_ilextra). In wave 2 Israel is included in the regular imputations module.

22. Weights in the first three waves of SHARE

Giuseppe De Luca Claudio Rossetti

SHARE provides different types of weights. Which weights to use really depends on the concrete research question, i.e. the cross-sectional or longitudinal nature of the study, the sample under investigation (main sample alone, vignette sample alone, or the two samples combined), and the unit of analysis (household or individual). Thus, although it is not possible to give any general advice, we provide a large set of weights in order to satisfy most of the data users' needs.

22.1 Sampling design weights

Sampling design weights are defined as the inverse of the probability of being included in the sample of any specific wave. These weights compensate for unequal selection probabilities of the sample units. They allow obtaining unbiased estimators of the population parameters only under the ideal situation of complete response.

Since the SHARE data are affected by problems of unit nonresponse and sample attrition, estimators constructed on the basis of sampling design weights may be biased estimators of the population parameters of interest. Therefore, we discourage data users to rely on sampling design weights unless they are used for alternative nonresponse correction methods or other specific purposes.

Sampling design weights are computed separately by country to account for the peculiar features of each national sampling design. A detailed documentation on the national sampling designs and the computation of the inclusion probabilities will follow soon.

For most countries, sample consists of two parts: a baseline sample drawn in the first wave and a refreshment sample drawn in the second wave. Among the countries which participated in the first two waves, those with no refreshment sample are Austria and the Dutch part of Belgium. No additional sample was drawn in the third wave. New sizable refreshment samples are instead planned for the fourth wave of the survey.

Table 13 shows the sampling design weights available for the first three waves. In particular, the sampling design weights for the first wave can be found in the *sharew1_rel#_gv_weights* data file, those for the second wave in the *sharew2_rel#_gv_weights* data file, those for the third wave in the *sharew3_rel#_gv_weights* data file. Notice that, weights for the first wave are constructed as the inverse of the probability of being included in the baseline sample.

For each wave, sampling design weights are available for three variants of the SHARE sample (main sample alone, vignette sample alone and the two samples combined). The Swedish supplementary sample was treated as part of the main sample. Sample units belonging to the main and the vignette sub-samples can be easily identified through the variable *samptype*.

In SHARE, the basic units of analysis can be either individuals or households. By the SHARE design, the inclusion probability of any eligible household member is the same as the inclusion probability of the household. Thus, sampling design weights for any eligible household member coincide with the sampling design weight of the household.

22.2 Calibrated weights

The strategy adopted by SHARE to deal with problems of unit nonresponse and sample attrition is to provide calibrated weights based on the procedure by Deville and Särndal (1992). This procedure gives calibrated weights which are as close as possible, according to given distance measure, to the original sampling design weights while also respecting a set of known population totals (the calibration margins). Under certain conditions, these weights may help reduce the potential selectivity bias generated by unit nonresponse and sample attrition.

In what follows, we first outline the main differences in new calibration procedure adopted for this release of the SHARE data. Then, we present the overall set of calibrated weights available in the first three waves of SHARE. All these weights are listed in Tables 13 and 14.

Notice that, all calibrated weights share some common features:

- They are designed to compensate for unit nonresponse and sample attrition in the CAPI interview by ignoring additional problems of unit nonresponse and sample attrition in the drop-off questionnaire.
- They are available for three variants of the SHARE sample (main sample alone, vignette sample alone and the two samples combined). Sample units belonging to the main and the vignette sub-samples can be easily identified through the variable *samptype*.
- They are available at both the individual and the household level. At the individual level, each 50+ respondent receives a calibrated weight which depends on the household design weight and the respondent's calibration variables. At the household level, each interviewed household member receives a common calibrated weight which depends on the household design weight and the calibration variables of all 50+ household respondents. These weights are therefore designed for inference to the target population of individuals and households respectively.
- For each type of weight, we also provide a flag variable which is equal to 1 when the corresponding calibrated weight is missing. Calibrated weights are missing for respondents younger than 50, respondents with missing data on the set of calibration variables (year of birth, gender and NUTS1 code), and respondents with missing sampling design weights (i.e. missing data on sampling frame information).

22.2.1 What's new in the calibration procedure?

The calibration procedure has been improved to account for a number of issues that were still unsettled. The major changes with respect to the calibration procedure adopted in the previous releases of the data are:

1. We changed the distance function to be minimized when solving the constrained optimization problem underlying calibration. In the previous releases of the data, the distance between the original sampling design weight w_k and the calibrated weight w^* was arbitrarily taken as a chi-square distance function of the form,

$$(w_k^* - w_k)^2 / \ w_k. \qquad (1)$$

On the one hand, this was a convenient choice because it guarantees that calibrated weights exist with probability 1 and they have a closed form expression. On the other hand, however, this distance function is unbounded. This feature of the distance function may give some problems with the range of values that calibrated weights can take. These weights can indeed be negative or extremely large. Negative weights are inadmissible. Extremely large weights can instead lead to unrealistic estimates of various population domains. To overcome these problems, the new version of the calibration procedure uses the following distance function (case 6 in Deville and Särndal 1992),

$$\left(\frac{w_k^*}{w_k} - L\right) \log\left[(1-L)^{-1}\left(\frac{w_k^*}{w_k} - L\right)\right] + \left(U - \frac{w_k^*}{w_k}\right) \log\left[(U-1)^{-1}\left(U - \frac{w_k^*}{w_k}\right)\right] \qquad (2)$$

where L and U are constant coefficients such that $L < 1 < U$. Notice that, by varying the coefficients U and L, one can obtain a class of different distance functions. Furthermore, if these coefficients are finite, the corresponding distance functions are necessarily bounded and they ensure that $Lw_k < w_k^* < U\, w_k$. Thus, choosing $L > 0$ guarantees positive calibrated weights. In addition, calibrated weights cannot be larger than U times the sampling design weight w_k. Additional methodological details are given in section 22.4.

2. Notice that, depending on the selected values of U and L, a solution for the constrained optimization problem may not exist. Moreover, even if a solution exists, it is not possible to obtain a closed form expression for the calibrated weights. In this case, one needs to use an iterative optimization method.

3. Calibrated weights are calculated using a grid of alternative values for U and L (see section 22.4). Among all possible combinations of U and L which lead to a solution for the constrained optimization problem, we selected the values of U and L which give calibrated weights w_k^* with minimum standard deviation.

4. We finally introduced additional calibration margins to improve plausibility of the missing at random assumption. Calibrated weights are always calculated separately by country. Within each country, we used a set of calibration margins for the size of the population by age class and gender and by NUTS1 regional area.

22.2.2 Calibrated cross sectional weights

Calibrated cross sectional weights are computed for the sample of responding units (individuals or households) in a single wave or cross section of SHARE. Calibrated weights for the first wave can be found in the data file *sharew1_rel#_gv_weights*, those for the second wave in the data file *sharew2_rel#_gv_weights*, those for the third wave in the data file *sharew3_rel#_gv_weights*.

The calibrated weights for the first wave are designed to match the size of national populations of individuals born in 1954 or earlier. In this case, we used a set of calibration margins for the size of the target population across 8 gender and age groups (i.e. males and females with year of birth in the classes (-1924], [1925-34], [1935-44], [1945-54]), plus a set of country specific calibration margins for the size of the target population across NUTS1 regional areas.

The calibrated weights for the second wave are designed to match the size of national populations of individuals born in 1956 or earlier. In this case, we used a set of calibration margins for the size of the target population across 8 gender and age groups (i.e. males and females with year of birth in the classes (-1926], [1927-36], [1937-46], [1947-56]), plus a set of country specific calibration margins for the size of the target population across NUTS1 regional areas. For those countries involved in oversampling of individuals born between 1955 and 1956 (Belgium-FR, Denmark, France, Germany, Italy, Netherlands, Spain, Sweden, Switzerland), we used a larger set of calibration margins by splitting the class [1947-56] into the classes [1947-54] and [1955-56].

The calibrated weights for the third wave are designed to match the size of national populations of individuals born in 1956 or earlier that survive up to 2008. In this case, we account for mortality of the target population between the second and the third waves by using estimates of mortality rates obtained from life tables. Unlike other sources of attrition, mortality is indeed a phenomenon that affects both the sample and the population. Furthermore, the sample of the third wave does not include any refreshment sample. Here, the set of calibration margins is given by the set of calibration margins used in the second wave minus the estimated number of deaths from each margin.

Notice that, this release of the data includes calibrated cross sectional weights for the first wave of Israel. For wave 1 and wave 2, we also added calibrated cross sectional weights at the individual level where non-responding partners (”missing spouse”) are treated as true respondents.

22.2.3 Calibrated longitudinal weights

Calibrated longitudinal weights are computed for the balanced sample of responding units (individuals or households) in two or more waves of SHARE. Accordingly, we provide calibrated longitudinal weights for the following combinations of waves: 1-2, 1-3, 2-3 and 1-2-3. The calibrated longitudinal weights for waves 1-2 can be found in the data file *sharew2_rel#_gv_weights*, those for waves 1-3, waves 2-3, and waves 1-2-3 in the data file sharew2_rel#_gv_weights.

The calibrated longitudinal weights for waves 1-2 are designed to match the size of national populations of individuals born in 1954 or earlier that survive up to 2006. In this case, we used a set of calibration margins for size of the target population across 8 gender and age groups (i.e. males and females with year of birth in the classes (-1924], [1925-34], [1935-44], [1945-54]), plus a set of country specific calibration margins for size of the target population across NUTS1 regional areas. Mortality is accounted for by subtracting from each margin the estimated number of deaths between 2004 and 2006.

The calibrated longitudinal weights for waves 1-3 and the waves 1-2-3 are designed to match the size of national populations of individuals born in 1954 or earlier that survive up to 2008. In this case, we used a set of calibration margins for size of the target population across 8 gender and age groups (i.e. males and females with year of birth in the classes) (-1924], [1925-34], [1935-44], [1945-54]), plus a set of country specific calibration margins for size of the target population across NUTS1 regional areas. Mortality is accounted for by subtracting from each margin the estimated number of deaths between 2004 and 2008.

The calibrated longitudinal weights for waves 2-3 are designed to match the size of national populations of individuals born in 1956 or earlier that survive up to 2008. In this case, we used a set of calibration margins for size of the target population across 8 gender and age groups (i.e. males and females with year of birth in the classes (-1926], [1927-36], [1937-46], [1947-56]), plus a set of country specific calibration margins for size of the target population across NUTS1 regional areas. Again, for those countries involved in oversampling of individuals born between 1955 and 1956, we used a larger set of calibration margins by splitting the class [1947-56] into the classes [1947-54] and [1955-56]. Mortality is accounted for by subtracting from each margin the estimated number of deaths between 2006 and 2008.

Calibrated longitudinal weights are available at the individual and the household level. Notice that, for the weights at the household level, we only require that there is at least one eligible respondent in each wave. For instance, households with one partner participating to the first wave and the other partner participating to the second wave belong to the balanced sample of households for waves 1-2, even if none of the two partners belong to the balanced sample of individuals for waves 1-2.

Table 14: Sampling design and calibrated cross sectional weights in the first three waves of SHARE (Hhs: households, Res: respondents, MS: ”missing spouses”)

File	Variable	Weight type	Units	Sample type
weights1	w1adh	Sample design weights wave 1	Hhs, Res	overall
	w1mdh	Sample design weights wave 1	Hhs, Res	main/drop-off
	w1vdh	Sample design weights wave 1	Hhs, Res	vignette
	w1ach	Calibrated weights wave 1	Hhs	overall
	w1mch	Calibrated weights wave 1	Hhs	main/drop-off
	w1vch	Calibrated weights wave 1	Hhs	vignette
	w1aci	Calibrated weights wave 1	Res	overall
	w1mci	Calibrated weights wave 1	Res	main/drop-off
	w1vci	Calibrated weights wave 1	Res	vignette
	w1acms	Calibrated weights wave 1	Res + MS	overall
	w1mcms	Calibrated weights wave 1	Res + MS	main/drop-off
	w1vcms	Calibrated weights wave 1	Res + MS	vignette
weights2	w2adh	Sample design weights wave 2	Hhs, Res	overall
	w2mdh	Sample design weights wave 2	Hhs, Res	main/drop-off
	w2vdh	Sample design weights wave 2	Hhs, Res	vignette
	w2ach	Calibrated weights wave 2	Hhs	overall
	w2mch	Calibrated weights wave 2	Hhs	main/drop-off
	w2vch	Calibrated weights wave 2	Hhs	vignette
	w2aci	Calibrated weights wave 2	Res	overall
	w2mci	Calibrated weights wave 2	Res	main/drop-off
	w2vci	Calibrated weights wave 2	Res	vignette
	w2acms	Calibrated weights wave 2	Res + MS	overall
	w2mcms	Calibrated weights wave 2	Res + MS	main/drop-off
	w2vcms	Calibrated weights wave 2	Res + MS	vignette
weights3	w3adh	Sample design weights wave 3	Hhs, Res	overall
	w3mdh	Sample design weights wave 3	Hhs, Res	main/drop-off
	w3vdh	Sample design weights wave 3	Hhs, Res	vignette
	w3ach	Calibrated weights wave 3	Hhs	overall
	w3mch	Calibrated weights wave 3	Hhs	main/drop-off
	w3vch	Calibrated weights wave 3	Hhs	vignette
	w3aci	Calibrated weights wave 3	Res	overall
	w3mci	Calibrated weights wave 3	Res	main/drop-off
	w3vci	Calibrated weights wave 3	Res	vignette

Table 15: Calibrated longitudinal weights in the first three waves of SHARE

File	Variable	Weight type	Units	Sample type
weights12	w12ach	Calibrated weights waves 1-2	Hhs	overall
	w12mch	Calibrated weights waves 1-2	Hhs	main/drop-off
	w12vch	Calibrated weights waves 1-2	Hhs	vignette
	w12acil	Calibrated weights waves 1-2	Res	overall
	w12mci	Calibrated weights waves 1-2	Res	main/drop-off
	w12vci	Calibrated weights waves 1-2	Res	vignette
weights13	w13ach	Calibrated weights waves 1-3	Hhs	overall
	w13mch	Calibrated weights waves 1-3	Hhs	main/drop-off
	w13vch	Calibrated weights waves 1-3	Hhs	vignette
	w13aci	Calibrated weights waves 1-3	Res	overall
	w13mci	Calibrated weights waves 1-3	Res	main/drop-off
	w13vci	Calibrated weights waves 1-3	Res	vignette
weights23	w23ach	Calibrated weights waves 2-3	Hhs	overall
	w23mch	Calibrated weights waves 2-3	Hhs	main/drop-off
	w23vch	Calibrated weights waves 2-3	Hhs	vignette
	w23aci	Calibrated weights waves 2-3	Res	overall
	w23mci	Calibrated weights waves 2-3	Res	main/drop-off
	w23vci	Calibrated weights waves 2-3	Res	vignette
weights123	w123ach	Calibrated weights waves 1-2-3	Hhs	overall
	w123mch	Calibrated weights waves 1-2-3	Hhs	main/drop-off
	w123vch	Calibrated weights waves 1-2-3	Hhs	vignette
	w123aci	Calibrated weights waves 1-2-3	Res	overall
	w123mci	Calibrated weights waves 1-2-3	Res	main/drop-off
	w123vci	Calibrated weights waves 1-2-3	Res	vignette

22.3 The new calibration procedure

Consider a finite population $P = \{1, \cdots, k, \cdots, N\}$ from which a probability sample $S \subset P$ is drawn according to a given sampling design. Let w_k be the original sampling design weight of the k^{th} unit, and assume that only a subsample of respondents $R \subseteq S$ agree to participate to the survey.

Following Deville and Särndal (1992), the calibrated weight w_k^* can be obtained by minimizing the sum of the distances $\sum_{k \in R} G(w_k^*, w_k)$ subject to a set of J calibration equations

$$t_x = \sum_{k \in R} w_k^* x_k$$

where $x_k = (x_{k1}, \ldots, x_{kJ})$ and $t_x = (t_1, \ldots, t_J)$ are J-vectors of calibration variables and known population totals respectively. If the distance function is specified as a chi-square function of the form

$$G(w_k^*, w_k) = (w_k^* - w_k)^2 / w_k,$$

then calibrated weights have, with probability 1, the following closed form solution

$$w_k^* = w_k \left[1 + \left(t_x - \sum_{k \in R} w_k x_k \right)^\top \left(\sum_{k \in R} w_k x_k x_k^\top \right) x_k \right]$$

As discussed above, this distance function may lead to negative or extremely large calibrated weights. Thus, the new calibration procedure uses a bounded distance function of the following form (case 6 in Deville and Särndal 1992),

$$G(q_k) = (q_k - L) \log \left[(1 - L)^{-1} (q_k - L) \right] + (U - q_k) \log \left[(U - 1)^{-1} (U - q_k) \right]$$

where $q_k = w_k^* / w_k$, and *L* and *U* are constant coefficients such that $L < 1 < U$. Let $g(\cdot)$ denote the partial derivative of $G(\cdot)$ with respect to w_k^* and $F(\cdot)$ denotes the inverse function of $g(\cdot)$. With the above distance function, we obtain

$$F(v) = \frac{L(U-1) + U(1-L)\exp(A\,v)}{(U-1) + (1-L)\exp(A\,v)}$$

where $A = (U - L) / [(1 - L)(U - 1)]$. Deville and Särndal (1992) show that the calibrated weights w_k^* can be computed in two steps. In the first step, we determine the vector of the Lagrange multiplies $\lambda = (\lambda_1, \ldots, \lambda_J)$ which solves the following system of first order conditions,

$$\sum_{k \in R} w_k [F(x_k^\top \lambda) - 1] x_k = t_x - \sum_{\in R} w_k x_k.$$

This is done by using an iterative optimization procedure. In the second step, we compute the calibrated weights by

$$w_k^* = w_k F(x_k^\top \lambda).$$

This procedure guarantees that $Lw_k < w_k^* < Uw_k$. However, as pointed out by Deville and Särndal (1992), a solution for the above optimization problem may not exist. For each type of calibrated weight, we therefore use more than 400 alternative combinations of *U* and *L*. Among the values of *U* and *L* which lead to a solution for the optimization problem, we selected the values of *U* and *L* which give calibrated weights w_k^* with the minimum standard deviation.

Responsible for data cleaning and preparation of the releases:

Stephanie Stuck, Sabrina Zuber,
Morten Schuth, Markus Kotte,
Thorsten Kneip, Christian Hunkler,
Fabio Franzese, Stefan Gruber

and all SHARE country team operators

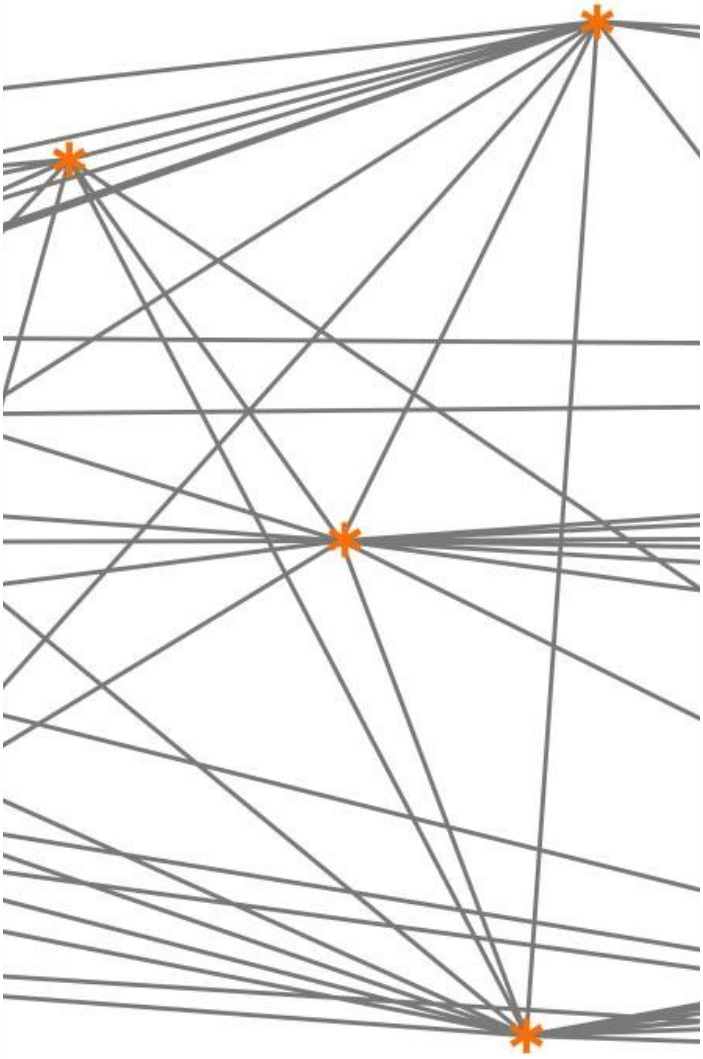
Contact: info[at]share-project.org

SHARE

Survey of Health, Ageing and Retirement in Europe

Release Guide 2.6.0
Waves 1 & 2

- Appendix -



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A. Drop-off schedule

Table 1: Drop-off correspondence

Topic	Wave 1 (question)	Wave 1 (variable)	Wave 2 (question)	Wave 2 (variable)	Wave 2 CAPI (variable name)
	number of question in drop off	name of variable in data	number of question in drop off	name of variable in data	question correspondence: (1) = accurate (2) = almost equal (3) = related
Life satisfaction	1	q1	-		ac012 (3)
CASP-12	2 a)	q2_a	-		ac014 (2)
(For more information about CASP	2 b)	q2_b	-		ac015 (2)
see: Hyde, M. (2003) A measure	2 c)	q2_c	-		ac016 (2)
of quality of life in early old age:	2 d)	q2_d	-		ac017 (2)
The theory, development and	2 e)	q2_e	-		ac018 (2)
properties of a needs satisfaction	2 f)	q2_f	-		ac019 (2)
model (CASP-19). *Aging and*	2 g)	q2_g	-		ac020 (2)
mental health, 7 (3), 186-194)	2 h)	q2_h	-		ac021 (2)
	2 i)	q2_i	-		ac022 (2)
	2 j)	q2_j	-		ac023 (2)
	2 k)	q2_k	-		ac024 (2)
	2 l)	q2_l	-		ac025 (2)
LOT-R	3 a)	q3_a	1 a)	q3_a	
(Life Orientation Test:	3 b)	q3_b	1 b)	q3_b	
pessimism/optimism)	3 c)	q3_c	1 c)	q3_c	
	3 d)	q3_d	1 d)	q3_d	
	3 e)	q3_e	1 e)	q3_e	
	3 f)	q3_f	1 f)	q3_f	
	3 g)	q3_g	1 g)	q3_g	

Topic	Wave 1 (question)	Wave 1 (variable)	Wave 2 (question)	Wave 2 (variable)	Wave 2 CAPI (variable name)
Depression/feelings (CES-D)	4 a)	q4_a	-		ac027 (3)
	4 b)	q4_b	-		ac028 (3)
	4 c)	q4_c	-		ac029 (3)
	4 d)	q4_d	-		ac030 (3)
	4 e)	q4_e	-		ac031 (3)
	4 f)	q4_f	-		
	4 g)	q4_g	-		ac032 (3)
	4 h)	q4_h	-		ac033 (3)
	4 i)	q4_i	-		
	4 j)	q4_j	-		ac034 (3)
	4 k)	q4_k	-		
	4 l)	q4_l	-		
	4 m)	q4_m	-		
	4 n)	q4_n	-		
Expectations of others	5 a)	q5_a	-		
	5 b)	q5_b	-		
	5 c)	q5_c	-		
	5 d)	q5_d	-		
Family duties	6 a)	q6_a	2 a)	q6_a	
	6 b)	q6_b	2 b)	q6_b	
	6 c)	q6_c	2 c)	q6_c	
	6 d)	q6_d	2 d)	q6_d	
Family/state responsibility	7 a)	q7_a	3 a)	q7_a	
	7 b)	q7_b	3 b)	q7_b	
	7 c)	q7_c	3 c)	q7_c	
Conflicts with others	8 a)	q8_a	4 a)	q8_a	
	8 b)	q8_b	4 b)	q8_b	
	8 c)	q8_c	4 c)	q8_c	
	8 d)	q8_d	4 d)	q8_d	
	8 e)	q8_e	4 e)	q8_e	
	8 f)	q8_f	4 f)	q8_f	
	9	q9	5	q9	

Topic	Wave 1 (question)	Wave 1 (variable)	Wave 2 (question)	Wave 2 (variable)	Wave 2 CAPI (variable name)
Ever lived with partner: Responsibility for different tasks	10 11 a) 11 b) 11 c) 11 d)	q10 q11_a q11_b q11_c q11_d	6 7 a) 7 b) 7 c) 7 d)	q10 q11_a q11_b q11_c q11_d	
Health General practitioner/ usual source of care questions and checks	12 13 a) 13 b) 13 c) 13 d) 13 e) 13 f)	q12 q13_a q13_b q13_c q13_d q13_e q13_f	- 8 a) 8 b) 8 c) 8 d) 8 e)	 q13_a q13_b q13_c q13_d q13_f	
Health Talk about problems	- - - - -		9 a) 9 b) 9 c) 9 d) 9 e)	q39_a q39_b q39_c q39_d q39_e	
Health Explanations/listening	- - -		10 a) 10 b) 10 c)	q40_a q40_b q40_c	
Health Prevention	14 15 16 17 18 19 20 21	q14 q15 q16 q17 q18 q19 q29 q21	- - 12 13 - - - - 11 a) 11 b) 11 c) 11 d)	 q16 q17 q41_a q41_b q41_c q41_d	

Topic	Wave 1 (question)	Wave 1 (variable)	Wave 2 (question)	Wave 2 (variable)	Wave 2 CAPI (variable name)
Health	22	q22	-		
Joint pain	23	q23	-		
	24	q24	-		
	25	q25	-		
	26	q26	-		
	27	q27	-		
	28 a)	q28_a	-		
	28 b)	q28_b	-		
	28 c)	q28_c	-		
	29 a)	q29_a	-		
	29 b)	q29_b	-		
	29 c)	q29_c	-		
Accommodation	30 a)	q30_a	-		ho050(1)
	30 b)	q30_b	-		ho051(1)
	30 c)	q30_c	-		ho052(1)
	30 d)	q30_d	-		ho053(1)
	30 e)	q30_e	-		ho054(1)
	30 f)	q30_f	-		ho055(1)
	31 a)	q31_a	-		
	31 b)	q31_b	-		
	31 c)	q31_c	-		
	31 d)	q31_d	-		
Area of accommodation	32 a)	q32_a	-		ho056(1)
	32 b)	q32_b	-		ho057(1)
	32 c)	q32_c	-		ho058(1)
	32 d)	q32_d	-		ho059(1)
Pet animals	33 a)	q33_a	14 a)	q33_a	
	33 b)	q33_b	14 b)	q33_b	
	33 c)	q33_c	14 c)	q33_c	
	33 d)	q33_d	14 d)	q33_d	
	33 e)	q33_e	14 e)	q33_e	
	33 f)	q33_f	-		
Religion	34	q34	-		
	35	q35	-		ex029 (1)
	36	q36	-		

B. Vignettes schedule

Table 2: Vignette correspondence

Question *Legend:- = question not included* *(2)=different gender* *(3)=deviations in text*	Wave 1 (question)	Wave 1 (variable)	Wave 1 (question)	Wave 1 (variable)	Wave 2 (question)	Wave 2 (variable)	Wave 2 (question)	Wave 2 (variable)
	Vignettes A		Vignettes B		Vignettes B		Vignettes C	
Own health								
bodily aches	1	v1	6	v1	1	v1	1	v1
sleeping	2	v2	5	v2	2 (3)	v2	2 (3)	v2
moving around	3	v3	4	v3	3	v3	3	v3
concentrating	4	v4	3	v4	4	v4	4	v4
shortness of breath	5	v5	2	v5	5	v5	5	v5
sadness	6	v6	1	v6	6	v6	6	v6
impairment	7	v7	7	v7	7	v7	-	-
Health examples								
headache	8	v8	25 (2)	v8	8 (3)	v8	7 (3)	v8
sleeping	9	v9	24 (2)	v9	-	-	-	-
arm and wrist	10	v10	23 (2)	v10	-	-	-	-
wake up at night	11	v11	22 (2)	v11	-	-	-	-
knees, elbows	12	v12	21 (2)	v12	-	-	-	-
sleepless at night	13	v13	20 (2)	v13	9 (3)	v13	8 (3)	v13
swelling in legs	14	v14	19 (2)	v14	-	-	-	-
forgetfulness	15	v15	18 (2)	v15	11 (3)	v15	10 (3)	v15
physical activities	16	v16	17 (2)	v16	-	-	-	-
learn recipes	17	v17	16 (2)	v17	-	-	-	-
walk 200m	18	v18	15 (2)	v18	10 (3)	v18	9 (3)	v18
concentrating	19	v19	14 (2)	v19	-	-	-	-
walking slowly	20	v20	13 (2)	v20	12 (3)	v20	11 (3)	v20
depressed	21	v21	12 (2)	v21	-	-	-	-
infection	22	v22	11 (2)	v22	-	-	-	-
nervous	23	v23	10 (2)	v23	-	-	-	-
smoker	24	v24	9 (2)	v24	-	-	-	-
satisfied/depressed	25	v25	8 (2)	v25	13 (3)	v25	12 (3)	v25

Question *Legend:- = question not included* *(2)=different gender* *(3)=deviations in text*	Wave 1 (question) Vignettes A	Wave 1 (variable) Vignettes A	Wave 1 (question) Vignettes B	Wave 1 (variable) Vignettes B	Wave 2 (question) Vignettes B	Wave 2 (variable) Vignettes B	Wave 2 (question) Vignettes C	Wave 2 (variable) Vignettes C
Health limitations examples								
back pain	26	v26	34 (2)	v26	-	-	-	-
stiffness	27	v27	33 (2)	v27	14 (3)	v27	-	-
back and legs	28	v28	32 (2)	v28	-	-	-	-
worried	29	v29	31 (2)	v29	-	-	-	-
mood swings	30	v30	30 (2)	v30	-	-	-	-
mood swings	31	v31	29 (2)	v31	15 (3)	v31	-	-
heart problems	32	v32	28 (2)	v32	16 (3)	v32	-	-
blood pressure	33	v33	27 (2)	v33	-	-	-	-
heart surgery	34	v34	26 (2)	v34	-	-	-	-
Satisfaction with aspects of own life								
income	-	-	-	-	*17*	*v39*	*13*	*v39*
social contacts	-	-	-	-	*18*	*v40*	*14*	*v40*
daily activities	-	-	-	-	*19*	*v41*	*15*	*v41*
life in general	-	-	-	-	*20*	*v42*	*16*	*v42*
Satisfaction with aspects of life of examples								
income	-	-	-	-	21	v43	17	v43
income	-	-	-	-	22	v44	18	v44
social contacts	-	-	-	-	23	v45	19	v45
social contacts	-	-	-	-	24	v46	20	v46
daily activities	-	-	-	-	-	-	21	v63
daily activities	-	-	-	-	-	-	22	v64
job	-	-	-	-	25	v47	-	-
job	-	-	-	-	26	v48	-	-
life in general	-	-	-	-	27	v49	23	v49
life in general	-	-	-	-	28	v50	24	v50

Question *Legend:- = question not included* *(2)=different gender* *(3)=deviations in text*	Wave 1 (question) Vignettes A	Wave 1 (variable) Vignettes A	Wave 1 (question) Vignettes B	Wave 1 (variable) Vignettes B	Wave 2 (question) Vignettes B	Wave 2 (variable) Vignettes B	Wave 2 (question) Vignettes C	Wave 2 (variable) Vignettes C
Own political influence								
influence on local level	-	-	-	-	*29*	*v51*	*25*	*v51*
Political influence of examples								
others influence on local level	-	-	-	-	30	v52	26	v52
others influence on local level	-	-	-	-	31	v53	27	v53
Health care responsiveness, own situation								
wait for medical treatment	-	-	-	-	32	v54	28	v54
health facilities	-	-	-	-	33	v55	29	v55
communication with the doctor	-	-	-	-	34	v56	30	v56
Health care responsiveness, others								
wait for medical treatment	-	-	-	-	35	v57	31	v57
communication with the doctor	-	-	-	-	36	v58	32	v58
conditions of the health facility	-	-	-	-	37	v59	33	v59
wait for medical treatment	-	-	-	-	-	-	34	v60
communication with the doctor	-	-	-	-	-	-	35	v61
conditions of the health facility	-	-	-	-	-	-	36	v62

C. Country-specific ISCED-97 codes and years of education

C 1 Austria			
Value	**Name of the degree (as in questionnaire)**	**ISCED CODE**	**Years**
Highest education *wave 1 & 2*			
1	Volksschule	1	4
2	Hauptschule	2	8
3	Gymnasium (öffentlich) mit Matura	3	12
4	Gymnasium (privat) mit Matura	3	12
5	Berufsbildende Schule mit Matura (HAK, HTL,...)	4	13
6	Berufsbildende Schule ohne Matura	3	11
Further education *wave 1 (DN012_)*			
1	Lehrabschlussprüfung	3	12
2	Meisterprüfung	5	14
3	Fachakademie (Sozialakademie, Krankenpflegeausbildung, Pädagog. Ausbildung, ...)	5	15
4	Fachhochschulabschluss	5	16
5	Universität	5	17
Further education *wave 1 (DN023_ & CH018_ & IV016_)*			
1	Lehrabschlussprüfung	3	12
2	Meisterprüfung	5	14
3	Fachakademie (Sozialakademie, Krankenpflegeausbildung, Pädagog. Akademie,...)	5	15
4	Hochschulabschluss	5	17
Please note *"Hochschulabschluss" applies to both "University" and "Fachhochschulabschluss"*			
Further education *wave 2*			
1	Lehrabschlussprüfung	3	12
2	Meisterprüfung	5	14
3	Fachakademie (Sozialakademie, Krankenpflegeausbildung, Pädagog. Ausbildung, ...)	5	15
4	Hochschulabschluss	5	17
5	Weiterführender Hochschulabschluss (Doktorat)	6	20

C 2 Belgium			
Value	**Name of the degree (as in questionnaire)**	**ISCED CODE**	**Years**
Highest education *wave 1 & 2*			
11	Lager onderwijs, Enseignement primaire	1	6
12	Lager secundair onderwijs - *kunst* Enseignement secondaire *inférieur général*	2	8
13	Lager secundair onderwijs - *algemeen* Enseignement secondaire inférieur *artistique*	2	8
14	Lager secundair onderwijs - technisch Enseignement secondaire inférieur technique (2;9)	2	8
15	Lager secundair onderwijs – beroeps Enseignement secondaire inférieur professionnel	2	8
16	Hoger secundair onderwijs – *kunst* Enseignement secondaire supérieur *général*	3	12
17	Hoger secundair onderwijs – *algemeen* Enseignement secondaire supérieur *artistique*	3	12
18	Hoger secundair onderwijs – technisch Enseignement secondaire supérieur technique	3	12
19	Hoger secundair onderwijs – beroeps Enseignement secondaire supérieur professionnel	3	12
***Please note** that between the Flemish and the Dutch questionnaire categories 12 and 13 as well as 16 and 17 are switched against each other (general versus artistic). However, these categories still refer to the same ISCED code.*			
Further education *wave 1 & 2*			
11	Hoger onderwijs buiten de universiteit, korte type Enseignement supérieur non-universitaire de type court	5	13
12	Hoger onderwijs buiten de universiteit, lange type Enseignement supérieur non-universitaire de type long	5	15
13	Universiteit Enseignement universitaire	5	19

C 3 Czech Republic			
Value	**Name of the degree (as in questionnaire)**	**ISCED CODE**	**Years**
Highest education *wave 2*			
11	Základní škola	1	
12	Učiliště 2leté bez maturity	2	
13	Učiliště 3leté bez maturity	2	
14	Střední všeobecně vzdělávací škola s maturitou	3	
15	Gymnázium	3	
Further education *wave 2*			
11	Střední odborné učiliště 3leté nebo 4leté s maturitou	3	
12	Střední odborná škola s maturitou SOš (průmyslovka)	3	
13	Vyšší odborná škola (absolvent má maturitu a je DIS - diplomovaný specialista v oboru)	4	
14	Vysoká škola	5	

C 4 Denmark			
Value	**Name of the degree (as in questionnaire)**	**ISCED CODE**	**Years**
Highest education *wave 1 &2*			
1	7. klasse eller kortere	1	7
2	8. klasse eller kortere	2	8
3	9. klasse, mellemskoleeksamen	2	9
4	10. klasse, realeksamen	2	10
5	Studentereksamen eller HF	3	12
6	Højere Handelseksamen (HH, HF, HHX) eller højere teknisk eksamen (HTX)	3	12
Further education *wave 1& 2*			
1	Specialarbejderuddannelse	3	10.5
2	Laerlinge- elev eller EFG-uddannelse	3	11
3	Anden faglig uddannelse på mindst 1 år	3	14
4	Kort videregående uddannelse under 3 år	5	15
5	Mellemlang videregående uddannelse på 3-4 år	5	16
6	Lang videregående uddannelse over 4 år	5	18

C 5 France			
Value	**Name of the degree (as in questionnaire)**	**ISCED CODE**	**Years**
Highest education *wave 1 & 2*			
1	Certificat d'études primaires (CEP) (1;5)	1	5
2	Brevet des collèges, BEPC, brevet élémentaire	2	9
3	CAP, BEP, ou diplôme de ce niveau	3	11
4	Baccalauréat technologique ou professionnel	3	12
5	Baccalauréat général	3	12
***Please note** that for the interviewer's level of education, categories 4 and 5 are switched in question IV015_ . However, these categories still refer to the same ISCED code and number of years of education.*			
Further education *wave 1 & 2 (dn012_ & dn023_ & ch018_)*			
1	Diplôme de premier cycle universitaire	5	14
2	BTS, DUT ou équivalent	5	14
3	Diplôme des professions sociales et de la santé de niveau Bac+2	5	14
4	Autre diplôme de niveau Bac+2	5	14
5	Diplôme de 2eme cycle universitaire	5	15
6	Diplôme d'ingénieur, de grande école	5	17
7	Diplôme de 3eme cycle universitaire (y compris médecine, pharmacie, dentaire), doctorat	6	20
8	Autre diplôme de niveau supérieur à Bac+2	5	14
Further education *wave 1 (iv016)*			
1	Premier cycle de l'enseignement supérieur	5	14
2	Deuxième cycle de l'enseignement supérieur	5	15
3	Grande école, école d'ingénieur, de commerce, 3eme cycle de l'université	5-6	17-20

C 6 Germany			
Value	**Name of the degree (as in questionnaire)**	**ISCED CODE**	**Years**
Highest education *wave 1 & 2*			
1	Volks- oder Hauptschulabschluss; 8. Klasse Polytechnische Oberschule (POS)	2A	8
2	Realschulabschluss; 10. Klasse POS	2A	10
3	Fachhochschulreife (3A;12)	3A	12
4	Abitur (3A;13)	3A	13
Further education *wave 1 & 2*			
1	Lehre *if highest education = 1 or 2*	3B	13
	Lehre *if highest education = 3 or 4*	4A	16
2	Berufsfachschule *if highest education = 1 or 2*	3B	13
	Berufsfachschule *if highest education = 3 or 4*	4A	16
3	Fachschule	5B	16.5
4	Fachhochschulabschluss	5A	17
5	Hochschulabschluss	5A	18

C 7 Greece			
Value	**Name of the degree (as in questionnaire)**	**ISCED CODE**	**Years**
Highest education *wave 1*			
1	Δημοτικό	1	6
2	Γυμνάσιο (3τάξιο)	2	9
3	Γενικό ή Επαγγελματικό Λύκειο (ΤΕΛ,ΤΕΕ,Πολυκλαδικό) ή 6τάξιο Γυμνάσιο	3	12
4	ΙΕΚ	4	13
Highest education *wave 2 (dn010_ & dn021_)*			
1	Μερικές τάξεις Δημοτικού	0	
2	Απολυτήριο Δημοτικού	1	6
3	Γυμνάσιο (3τάξιο)	2	9
4	Γενικό ή Επαγγελματικό Λύκειο (ΤΕΛ,ΤΕΕ,Πολυκλαδικό) ή 6τάξιο Γυμνάσιο	3	12
5	ΙΕΚ	4	13
Highest education *wave 2 (ch017_)*			
1	Απολυτήριο Δημοτικού	1	6
2	Γυμνάσιο (3τάξιο)	2	9
3	Γενικό ή Επαγγελματικό Λύκειο (ΤΕΛ,ΤΕΕ,Πολυκλαδικό) ή 6τάξιο Γυμνάσιο	3	12
4	ΙΕΚ	4	13
Further education *wave 1*			
1	(Διετής) νοσηλευτική σχολή	4	14
2	ΤΕΙ	5	15.5
3	ΑΕΙ, Ανώτατες στρατιωτικές	5	17
4	Μεταπτυχιακά (MSC, MBA)	5	18
5	Διδακτορικό PhD	6	20
Further education *wave 2 (dn012 & dn023)*			
1	Ανώτερες επαγγελματικές σχολές με διάρκεια έως δύο χρόνια (νοσηλευτική, σχολές | υπαξιωματικών, κομμωτική, σχολές λογιστών, σχολές ΟΑΕΔ)	4	14
2	ΤΕΙ	5	15.5
3	ΑΕΙ, Ανώτατες στρατιωτικές	5	17
4	Μεταπτυχιακά (MSC, MBA)	5	18
5	Διδακτορικό PhD	6	20
6	Έχει φοιτήσει σε πανεπιστήμιο χωρίς να πάρει πτυχίο	3	
Further education *wave 2 (ch018)*			
1	(Διετής) νοσηλευτική σχολή	4	14
2	ΤΕΙ	5	15.5
3	ΑΕΙ, Ανώτατες στρατιωτικές	5	17
4	Μεταπτυχιακά (MSC, MBA)	5	18
5	Διδακτορικό PhD	6	20

C 8 Ireland			
Value	**Name of the degree (as in questionnaire)**	**ISCED CODE**	**Years**
Highest education *wave 2*			
1	postgraduate (higher) degree	5	19-21
2	primary (bachelor's) degree	5	15-17
3	diploma or certificate	5	15-18
4	leaving certificate or equivalent	3	11-12
5	group / intermediate / junior cert or equivalent	2	9
6	primary school or equivalent	1	6
Further education *wave 2*			
1	commercial course	4	15-16
2	nurses' training	5	15-17
3	teacher's training college	5	15-17
4	agricultural college	4	16-17
5	regional technical college	5	15-17
6	institute of technology	5	15-17
7	university	5	17
8	other college or training establishment		

C 9 Israel	
Name of the degree	**CODE**
***Hebrew* Highest education**	
1. יסודית	1
2. תיכונית מקצועית חלקית (לא סיים/ה תיכון מקצועי)	2
3. תיכונית מקצועית מלאה, ללא תעודת בגרות	3
4. תיכונית מקצועית מלאה, עם תעודת בגרות	3
5. תיכונית עיונית חלקית (לא סיים/ה) תיכון עיוני	2
6. תיכונית עיונית מלאה, ללא תעודת בגרות	3
7. תיכונית עיונית מלאה, עם תעודת בגרות	3
8. ישיבה תיכונית ללא תעודת בגרות	3
9. ישיבה תיכונית עם תעודת בגרות	3
***Hebrew* Further education**	
1. ישיבה	1
2. בי"ס לאחיות	4
3. בי"ס להנדסאים	4
4. אוניברסיטה - תואר ראשון	5
5. אוניברסיטה - תואר שני או יותר	5
***Arabic* Highest education**	
1. إبتدائية.	1
2. ثانوية مهنية جزئية (لم ينهي الثانوية المهنية)	2
3. ثانوية مهنية تامة، لكن بدون شهادة بجروت	3
4. ثانوية مهنية تامة مع شهادة بجروت.	3
5. ثانوية نظرية جزئية (لم ينهي الثانوية النظرية).	2
6. ثانوية نظرية تامة، لكن بدون شهادة بجروت.	3
7. ثانوية نظرية تامة مع شهادة بجروت.	3
***Arabic* Further education**	
1. كلية دينية	1
2. كلية التمريض	4
3. كلية للهندسيين	4
4. جامعية تامة - شهادة لقب أول	5
5. جامعية تامة - شهادة لقب ثاني أو أكثر (M? أو أعلى)	5
***Russian* Highest education**	
1) Начальная школа	
2). Профессионально-техническое училище (не оконченое)	1
3) Профессионально-техническое училище (без аттестата)	2
4). Профессионально-техническое училище (с аттестатом)	3
5) Общеобразовательная средняя школа (не оконченая)	3
6) Общеобразовательная средняя школа (без аттестата)	2
7) Общеобразовательная средняя школа (с аттестатом)	3
8) Религиозная школа (без аттестата)	3
9). Религиозная школа (с аттестатом)	1
***Russian* Further education**	
1) Ешива	1
2) Медицинское училище	4
3) Техникум или колледж	4
4) Институт или незаконченный университет	5
5) Оконченый университет или аспирантура или докторантура	5

C 10 Italy			
Value	**Name of the degree (as in questionnaire)**	**ISCED CODE**	**Years**
Highest education *wave 1 & 2*			
1	Esame di seconda elementare	1	2
2	Licenza elementare	1	5
3	Scuola media o avviamento professionale	2	8
4	Diploma ginnasiale	3	10
5	Diploma di scuola professionale, scuola magistrale o istituto d'arte (3 anni)	3	11
6	Diploma di scuola magistrale o liceo artistico (4 anni)	3	12
7	Maturità liceale (classico, scientifico, linguistico, artistico)	3	13
8	Maturità tecnica, professionale o istituto d'arte (5 anni)	3	13
Further education *wave 1 & 2*			
1	Scuole di formazione paramediche	4	14
2	Scuole di formazione professionale post-maturità (inclusi assistenti sociali)	4	15
3	ISEF, accademie artistiche o conservatorio	5	16
4	Università: laurea, laurea breve, diploma universitario, scuole dirette a fini speciali	5	16
5	Università post-laurea: scuole di specializzazione, corsi di perfezionamento, dottorati di ricerca	6	21

C 11 Netherlands			
Value	**Name of the degree (as in questionnaire)**	**ISCED CODE**	**Years**
Highest education *wave 1 & 2*			
1	Basisonderwijs	1	6
2	VGLO of LAVO (2; 10)	2	10
3	Voortgezet (speciaal) onderwijs (b.v. MLK, VSO, LOM, MAVO of MULO)	2	10
4	HAVO, VWO, Atheneum, Gymnasium, HBS, MMS, Lyceum	3	12
5	Lager beroepsonderwijs (b.v. LTS, LEAO, Lagere Land- en Tuinbouwschool)	2	10
6	Middelbaar beroepsonderwijs (b.v. MTS, MEAO, Middelbare Land- en Tuinbouwschool)	3	14
7	Hoger beroepsonderwijs (b.v. HTS, HEAO, opleidingen MO-akten)	5	15
8	Hoger beroepsonderwijs 2e fase (b.v. accountant NIVRA, opleidingen	5	16
9	Wetenschappelijk onderwijs (universiteit)	5	18
10	Speciaal onderwijs	97	97
11	Leerlingwezen	2	10
Further education			
Question was not included in the questionnaire since highest and further education were jointly asked for in dn010&dn021			

C 12 Poland			
Value	**Name of the degree (as in questionnaire)**	**ISCED CODE**	**Years**
Highest education *wave 2*			
6	Szkoła podstawowa	1	
9	Gimnazjum	2	
10	Zasadnicza szkoła zawodowa	3	
11	Technikum	3	
12	Liceum zawodowe	3	
13	Liceum ogólnokształcące	3	
Further education *wave 2*			
1	Studium medyczne lub pielęgniarskie	4	
3	Inna szkoła pomaturalna lub policealna	4	
4	Politechnika	5	
5	Uniwersytet	5	
6	Akademia medyczna	5	
7	Inna Akademia (ekonomiczna, rolnicza, itp.) zakończona stopniem inżyniera lub magistra	5	
8	Wyższa szkoła pedagogiczna	5	
9	Tytuł czeladnika w zawodzie	4	
10	Tytuł mistrza w zawodzie	5	

C 13 Spain			
Value	**Name of the degree (as in questionnaire)**	**ISCED CODE**	**Years**
Highest education *wave 1 & 2*			
1	Enseñanza primaria, o primera etapa de la EGB, o equivalente	1	6
2	Bachillerato elemental, EGB, Graduado escolar, o equivalente	2	10
3	Bachillerato superior, BUP, o equivalente	3	12
4	Pre-universitario o COU	3	12
5	Estudios técnicos no superiores, FP, o equivalente	3	11.5
Further education *wave 1 & 2*			
1	Magisterio, ATS, diplomado de Escuela universitaria, o equivalente.	5	13.5
2	Aparejador, ingeniero técnico, o equivalente.	5	13.5
3	Licenciado	5	16
4	Ingeniero superior, arquitecto, o equivalente.	5	17
5	Otros estudios de tercer grado no universitarios.	5	14

C 14 Sweden			
Value	**Name of the degree (as in questionnaire)**	**ISCED CODE**	**Years**
Highest education *wave 1 & 2 (dn010_ & dn021_ & ch017)*			
1	Folkskola (motsvarande) mindre än sex år	1	6
2	Folkskola 6-8 år (1;7)	1	7
3	Folkskoleexamen och yrkesutbildning minst ett år	2	8
4	Folkskola och läroverk åtta år	1	8
5	Avgångsbetyg från nioårig grundskola	2	9
6	Realexamen	2	9
7	Avgångsbetyg från grundskola eller realexamen, samt yrkesutbildning minst ett år	2	10
Highest education *wave 1 (IV015)*			
1	Folkskola (motsvarande) mindre än sex år	1	6
2	Folkskola 6-8 år	1	7
3	Folkskoleexamen och yrkesutbildning minst ett år	2	8
4	Avgångsbetyg från nioårig grundskola	2	9
5	Realexamen	2	9
6	Avgångsbetyg från grundskola eller realexamen, samt yrkesutbildning minst ett år	2	10
Further education *wave 1 & 2*			
1	Normalskolekompetens (flickskola)	3	12
2	Tvåårigt gymnasium	3	11
3	Tre- eller fyraårigt gymnasium	3	12
4	Utbildning minst ett år utöver gymnasium eller flickskola, men EJ fullständig ögskoleexamen	4	13
5	Examen från universitet/högskola efter minst tre års studier	5	15

C 15 Switzerland			
Value	**Name of the degree (as in questionnaire)**	**ISCED CODE**	**Years**
Highest education *wave 1*			
6	Ecole primaire Abschluss der Primarschule Scuola elementare	1	5
7	Ecole secondaire Sekundarschulabschluss Certificato di studi (scuola media o ginnasio)	2	10
Highest education *wave 2*			
1	Ecole primaire Primarschule Scuola elementare	1	5
2	Cycle d'orientation, école secondaire inférieure, pré-gymnase Real-/Sekundar-Bezirks-, Orientierungsschule, Untergymnasium Scuola media	2	9
3	10ème année, pré-apprentissage, programme d'enseignement spécial (1 an) 10. Schuljahr, Vorlehre, Besonderer Lehrplan (1 Jahr) Corso preparatorio. Corso di pre-tirocinio, programma didattico speciale (1 anno)	2	10
4	Ecole de culture générale (2 ans). École ou cours préparant á une formation professionnelle initiale (1 ou 2 ans) Diplommittelschule (bis 2 Jahre), berufsvorbereitende Schule oder Anlehre (1 bis 2 Jahre) Scuola di cultura generale, ciclo biennale	3	11.5
5	Ecole de degré diplôme (3 ans) Diplommittelschule (3 Jahre) Scuola di cultura generale, ciclo triennale	3	13
6	Lycée, Ecole préparant à la maturité gymnasiale ou professionnelle, Ecole Normale Maturitätsschule, Berufsmatura, Lehrseminar Stufe 1 Liceo, scuola di maturità, scuola magistrale	3	13
continued next page			

Switzerland *continued*			
Value	**Name of the degree (as in questionnaire)**	**ISCED CODE**	**Years**
Further education *wave 1*			
1	Ecole d'infirmières Lehrabschluss/Krankenpflege-/Laborantenausbildung Scuola per le professioni infermieristiche	3	13
2	Maturité fédérale Eidgenössische anerkannte Maturität/Lehrerseminar, Maturità liceale riconosciuta a livello federale	3	14
3	Ecoles professionnelles supérieures (école de physiothérapie, école normale, hygiéniste dentaire, ESCA, ETS...) Abschluss von professionellen Hochschulen/Höhere Fachschulen,Technikum (Physiotherapeuten, HWV,..) Maturità profesisonale e scuole professionali superiori	4	17
5	Université (licence)/EPFL (diplôme) Universitätsabschluss/ETHZ-ETHL Università o Polytechnico	5	17
Further education *wave 2*			
1	Apprentissage long (CFC ou équivalent) ou école professionnelle à plein temps 3-4 ans Berufslehre (Eidg. Fähigkeitszeugnis o.ä.) oder Vollzeit-Berufsschule Apprendistato (AFC o equivalente) o scuola professionale a tempo pieno della durata di 3-4 ans	3	13
2	Formation professionnelle supérieure Höhere Fach- und Berufsausbildung Formazione professionale superiore	4	16
3	Ecole professionnelle supérieure d'une durée minimale de trois ans de formation à plain temps (y compris diplôme post-grade) Höhere Fachschule bei Vollzeitausbildung mit Mindestdauer von 3 Jahren (inklusive Weiterbildungsdiplom) Scuola specializzata superiore con formazione a tempo pieno di almento 3 anni (inclusa attestato postdiploma)	4	17
4	Université, Haute école (y compris diplôme postgrade) Universität, Hochschule (inklusicve Weiterbildungsdiplom) Università, Politecnico (inclusa la formazione post-universitaria)	5	21

D. Imputations

Table 3: Imputations SHARE wave 1

Name	Corresponding Questionnaire Variables	Definition and Comments
D 1 **Demographics etc. (wave 1)**		
edu	*dn010, dn012*	Education, ISCED code
srhealtha	*ph003, ph052*	Self-reported health, US scale
gali	*ph005*	Limited in usual activities
numeracy	*cf012, cf013, cf014, cf015*	Numeracy score
reading	*cf001*	Self-rated reading skills
adlno	*ph048*	Number of limitations in ADLs
iadlno	*ph049*	Number of limitations in IADLs
depress	*mh002*	Depressed last month
hrooms	*ho032*	Number of rooms in the main residence
fdistress	*co007*	Hhd makes ends meet
nchild	*ch001*	Number of children
n_gchild	*ch021*	Number of grandchildren
urban	*iv009, ho037*	Location of the main residence
nrpartn		Indicator for Non-responding partners
D 2 **Individual-level economic variables (wave 1)**		
ydipv	*ep205*	Annual gross income from employment previous year
yindv	*ep207*	Annual gross income from self-employment previous year
pen1v	*ep078_1*	Monthly public old age pension previous year
pen2v	*ep078_2*	Monthly public early or pre-retirement pension previous year. In **Sweden**, it refers to invalidity and disability pension
pen3v	*ep078_3*	Monthly public disability insurance previous year. In **Sweden**, it refers to the survivor pension
pen4v	*ep078_4*	Monthly public unemployment benefit or insurance previous year. In **Sweden**, it refers to occupational pensions for blue-collar workers in the private sector
pen5v	*ep078_5*	Monthly public survivor pension from partner previous year. In **Sweden**, it refers to occupational pensions for white-collar workers in the private sector
pen6v	*ep078_6*	Monthly public invalidity or incapacity pension previous year. In **Sweden**, it refers to occupational pensions for goverment workers
pen7v	*ep078_7*	Monthly war pension previous year. In **Sweden**, it refers to occupational pension for municipal and local government workers
pen8v	*ep078_8*	Monthly private (occupational) old age pension previous year. In **Sweden**, it refers to other occupational pension benefit
pen9v	*ep078_9*	Monthly private (occupational) early retirement pension previous year. In **Sweden**, it refers to unemployment insurance benefits

pen10v	*ep078_10*	Monthly private (occupational) disability insurance previous year. In **Sweden**, it refers to sickness benefits
pen11v	*ep078_11*	Monthly private (occupational) survivor pension from partner's job previous year
reg1v	*ep094_1*	Monthly life insurance payment received previous year
reg2v	*ep094_2*	Monthly private annuity or private personal pension previous year
reg3v	*ep094_3*	Monthly private health insurance payment received previous year
reg4v	*ep094_4*	Monthly alimony received previous year
reg5v	*ep094_5*	Monthly regular payments from charities received previous year
yltcv	*ep086*	Monthly long-term care insurance previous year
inpatv	*hc045*	Out-of-pocket inpatient care expenditure
outpav	*hc047*	Out-of-pocket outpatient care expenditure
drugsv	*hc049*	Out-of-pocket expenditure for prescribed medicines
nursv	*hc051*	Out-of-pocket expenditure for nursing home care, day-care and home care
insurv	*hc061*	Annual payment for all health insurance contracts
oresv	*ho027*	Other real estate
yrentv	*ho030*	Income from rent
mortv	*ho015*	Mortgage on main residence
baccv	*as003*	Bank accounts
ybaccv	*as005*	Interest income from bank accounts
bondv	*as007*	Government and corporate bonds
ybondv	*as009*	Interest income from bonds
stocv	*as011*	Stocks/shares
ystocv	*as015*	Dividends from stocks/shares
mutfv	*as017*	Mutual funds
ymutfv	*as058*	Interest and dividend income from mutual funds
irav	*as021, as024*	Individual retirement accounts
contv	*as027*	Contractual savings for housing
linsv	*as030*	Whole life insurance
gbusv	*as042*	Total value of (partly) owned business
sbusv	*as044*	Percentage share of ownership in the business (in percentage points)
ownb	*=gbusv*(sbusv/100)*	Value of own share of the business
carv	*as051*	Cars
liabv	*as055*	Debts (non-mortgage)
ftgiv1v	*ft004_1*	First financial transfer given
ftgiv2v	*ft004_2*	Second financial transfer given
ftgiv3v	*ft004_3*	Third financial transfer given
ftrec1v	*ft011_1*	First financial transfer received
ftrec2v	*ft011_2*	Second financial transfer received
ftrec3v	*ft011_3*	Third financial transfer received

D 3 Household-level economic variables (wave 1)

yohmv	*hh002*	Annual other hhd members' gross income previous year
yohbv	*hh011*	Annual other hhd members' gross income from other sources previous year
homev	*ho024*	Hhd main residence
fahcv	*co002*	Hhd monthly expenditure on food at home
fohcv	*co003*	Hhd monthly expenditure on food outside the home
telcv	*co004*	Hhd monthly telephnone expenditure
rentcv	*ho005*	Hhd monthly rent paid
ocscv	*ho008*	Hhd monthly other rent-related expenditures

D 4 Individual-level generated variables (wave 1)

annpen1v	Annual value of pen1v in the previous year
annpen2v	Annual value of pen2v in the previous year
annpen3v	Annual value of pen3v in the previous year
annpen4v	Annual value of pen4v in the previous year
annpen5v	Annual value of pen5v in the previous year
annpen6v	Annual value of pen6v in the previous year
annpen7v	Annual value of pen7v in the previous year
annpen8v	Annual value of pen8v in the previous year
annpen9v	Annual value of pen9v in the previous year
annpen10v	Annual value of pen10v in the previous year
annpen11v	Annual value of pen11v in the previous year
annreg1v	Annual value of reg1v in the previous year
annreg2v	Annual value of reg2v in the previous year
annreg3v	Annual value of reg3v in the previous year
annreg4v	Annual value of reg4v in the previous year
annreg5v	Annual value of reg5v in the previous year

D 5 Household-level generated variables (wave 1)

hmortv	Hhd mortgage of main residence
horesv	Hhd other real estate
hbaccv	Hhd bank accounts
hbondv	Hhd government and corporate bonds
hstocv	Hhd stocks/shares
hmutfv	Hhd mutual funds
hirav	Hhd individual retirement accounts
hcontv	Hhd contractual savings for housing
hlinsv	Hhd whole life insurance
hownbv	Hhd value of own share of businesses
hcarv	Hhd cars
hliabv	Hhd debts (non-mortgage)
hybaccv	Hhd interest income from bank accounts
hybondv	Hhd interest income from bonds
hystocv	Hhd dividends from stocks/shares
hymutfv	Hhd interest and dividend income from mutual funds

hyrentv	Hhd income from rent
hrav	Hhd real assets net of any debts on them. Their value is equal to the sum of **homev**, **horesv**, **hownbv**, **hcarv** minus **hmortv**
hgfinv	Hhd gross financial assets.Their value is equal to the sum of **hbaccv**, **hbondv**, **hstocv**, **hmutfv**, **hirav**, **hcontv**, and **hlinsv**
hnfinv	Hhd net financial assets. Their value is equal to **hgfinv** minus **hliabv**
hnetwv	Hhd net worth. Its value is equal to the sum of **hrav** and **hnfinv**
hgtincv	Hhd total gross income. It value is equal to the sum over all household members of the individual-level values of **ydipv**, **yindv**, **annpen1v** – **annpenn11v**, **annreg1v** – **annreg5v**, 12 times **yltcv**, **ybaccv**, **ybondv**, **ystocv**, **ymutfv**, **yrentv**. To this sum one has to add the sum of the values of the household-level variables **yohmv** and **yohbv**

D 6 Other (wave 1)

implicat	Indicator for the five implicate datasets
nomxCAPI	Nominal exchange rate to the euro used for conversion to euro in the CAPI modules, common for all interview years. One has to **divide** nominal non-euro amounts by this exchange rates to obtain amount in euros
nomxWXYZ	Nominal exchange rate used for year WXYZ (2003, 2004, 2005). One has to **divide** nominal non-euro amounts by this exchange rate to obtain amounts in euros for year WXYZ
pppxWXYZ	Purchasing power-adusted (ppp) exchange rate used for year WXYZ (2003, 2004, 2005). One has to **divide** nominal amounts (both in euros and in other currencies) by this exchange rate to obtain ppp-adjusted amounts in euros for year WXYZ. The price level of reference is that of Germany in 2005
wave	Wave identifier. Equal to 1 for all observations
currency	Currency in which all amounts are denominated

Table 4: Imputations SHARE wave 2

Name	Corresponding Questionnaire Variables	Definition and Comments
D 7 **Demographics (wave 2)**		
edu	*dn010, dn012*	Education, ISCED code
srhealtha	*ph003*	Self-reported health, US scale
riskpref	*as068*	Risk preferences
gali	*ph005*	Limited in usual activities
numeracy	*cf012, cf013, cf014, cf015*	Numeracy score

reading	*cf001*	Self-rated reading skills (only for refresher sample)
adlno	*ph048*	Number of limitations in ADLs
iadlno	*ph049*	Number of limitations in IADLs
depress	*mh002*	Depressed last month
hrooms	*ho032*	Number of rooms in the main residence
fdistress	*co007*	Hhd makes ends meet
nchild	*ch001*	Number of children
n_gchild	*ch021*	Number of grandchildren
urban	*iv009, ho037*	Location of the main residence
nrpartn		Indicator for non-responding partners

D 8 Individual-level economic variables (wave 2)

ydipv	*ep205*	Annual net income from employment, previous year
yindv	*ep207*	Annual net income from self-employment, previous year
pen1v	*ep078_1*	Monthly public old age pension, previous year
pen2v	*ep078_3*	Monthly public early or pre-retirement pension, previous year. In **Sweden**, it refers to invalidity and disability pension
pen3v	*ep078_4*	Monthly main public disability insurance pension, or sickness benefits, previous year. In **Sweden**, it refers to the survivor pension
pen4v	*ep078_6*	Monthly public unemployment benefit or insurance, previous year. In **Sweden**, it refers to occupational pensions for blue-collar workers in the private sector
pen5v	*ep078_7*	Monthly public survivor pension from partner, previous year. In **Sweden**, it refers to occupational pensions for white-collar workers in the private sector
pen7v	*ep078_9*	Monthly war pension, previous year. In **Sweden**, it refers to occupational pension for workers in municipalities, in counties or in the government
pen8v	*ep324_1*	Monthly private (occupational) old age pension, previous year
pen9v	*ep324_4*	Monthly private (occupational) early retirement pension, previous year. In **Sweden**, it refers to unemployment insurance benefits
pen10v	*ep324_5*	Monthly private (occupational) disability insurance, previous year. In **Sweden**, it refers to sickness benefits
pen11v	*ep324_6*	Monthly private (occupational) survivor pension from partner's job, previous year
pen12v	*ep078_2*	Monthly public old age supplementary pension or public old age second pension, previous year
pen13v	*ep078_5*	Monthly secondary public disability insurance pension, or sickness benefits, previous year
pen14v	*ep078_8*	Monthly secondary public survivor pension from spouse or partner, previous year
pen15v	*ep324_2*	Monthly occupational old age pension from a second job, previous year
pen16v	*ep324_3*	Monthly occupational old age pension from a third job, previous year
pen17v	*ep324_5*	(**only in Sweden**) - Monthly private (occupational) disability insurance, previous year

pultv	*ep078_10*	Monthly public long-term insurance payments, previous year
reg1v	*ep094_1*	Monthly life insurance payment received, previous year
reg2v	*ep094_2*	Monthly private annuity or private personal pension, previous year
reg3v	*ep094_2*	(**only in Greece**) Monthly private health insurance payment received, previous year
reg4v	*ep094_3*	Monthly alimony received, previous year
reg5v	*ep094_4*	Monthly regular payments from charities received, previous year
prltv	*ep094_5*	Monthly private long-term care insurance payments, previous year
inpatv	*hc045*	Out-of-pocket inpatient care expenditure, annual, previous year
outpav	*hc047*	Out-of-pocket outpatient care expenditure, annual, previous year
drugsv	*hc049*	Out-of-pocket expenditure for prescribed medicines, annual, previous year
nursv	*hc051*	Out-of-pocket expenditure for nursing home care, day-care and home care, annual, previous year
oresv	*ho027*	Other real estate
yrentv	*ho030*	Income from rent
mortv	*ho015*	Mortgage on main residence
ftgiv1v	*ft004_1*	First financial transfer given
ftgiv2v	*ft004_2*	Second financial transfer given
ftgiv3v	*ft004_3*	Third financial transfer given
ftrec1v	*ft011_1*	First financial transfer received
ftrec2v	*ft011_2*	Second financial transfer received
ftrec3v	*ft011_3*	Third financial transfer received

D 9 Household-level economic variables (wave 2)

yohmv	*hh002*	Annual other hhd members' net income previous year
yohbv	*hh011*	Annual other hhd members' net income from other sources previous year
homev	*ho024*	Hhd main residence
hbaccv	*as003*	Hhd bank accounts
hbondv	*as007*	Hhd government and corporate bonds
hstocv	*as011*	Hhd stocks/shares
hmutfv	*as017*	Hhd mutual funds
hirav	*as021, as024*	Hhd individual retirement accounts
hcontv	*as027*	Hhd contractual savings for housing
hlinsv	*as030*	Hhd whole life insurance
hownbv	*as042, as044*	Hhd value of own share of businesses
hcarv	*as051*	Hhd cars
hliabv	*as055*	Hhd debts (non-mortgage)
hybaccv	*as005*	Hhd interest income from bank accounts
hybondv	*as009*	Hhd interest income from bonds
hystocv	*as015*	Hhd dividends from stocks/shares
hymutfv	*as058*	Hhd interest and dividend income from mutual funds

fahcv	*co002*	Hhd monthly expenditure on food at home
fohcv	*co003*	Hhd monthly expenditure on food outside the home
telcv	*co004*	Hhd monthly telephnone expenditure
hprcv	*co011*	Hhd monthly home production of food
rentcv	*ho005*	Hhd monthly rent paid
ocscv	*ho008*	Hhd monthly other rent-related expenditures

D 10 Individual-level generated variables (wave 2)

annpen1v	Annual value of pen1v in the previous year
annpen2v	Annual value of pen2v in the previous year
annpen3v	Annual value of pen3v in the previous year
annpen4v	Annual value of pen4v in the previous year
annpen5v	Annual value of pen5v in the previous year
annpen7v	Annual value of pen7v in the previous year
annpen8v	Annual value of pen8v in the previous year
annpen9v	Annual value of pen9v in the previous year
annpen10v	Annual value of pen10v in the previous year
annpen11v	Annual value of pen11v in the previous year
annpen12v	Annual value of pen12v in the previous year
annpen13v	Annual value of pen13v in the previous year
annpen14v	Annual value of pen14v in the previous year
annpen15v	Annual value of pen15v in the previous year
annpen16v	Annual value of pen16v in the previous year
annpen17v	Annual value of pen17v in the previous year (only exists in **Sweden**)
annpultv	Annual value of pultv in the previous year
annreg1v	Annual value of reg1v in the previous year
annreg2v	Annual value of reg2v in the previous year
annreg3v	Annual value of reg3v in the previous year
annreg4v	Annual value of reg4v in the previous year
annreg5v	Annual value of reg5v in the previous year
annprltv	Annual value of prltv in the previous year

D 11 Household-level generated variables (wave 2)

hmortv	Hhd mortgage on main residence
horesv	Hhd other real estate
hyrentv	Hhd income from rent
hrav	Hhd real assets net of any debts on them. Their value is equal to the sum of **homev**, **horesv**, **hownbv**, and **hcarv** minus **hmortv**
hgfinv	Hhd gross financial assets.Their value is equal to the sum of **hbaccv**, **hbondv**, **hstocv**, **hmutfv**, **hirav**, **hcontv**, and **hlinsv**
hnfinv	Hhd net financial assets. Their value is equal to **hgfinv** minus **hliabv**
hnetwv	Hhd net worth. Its value is equal to the sum of **hrav** and **hnfinv**

hgtincv	Hhd total net income. Its value is equal to the sum over all household members of the individual-level values of **ydipv**, **yindv**, **annpen1v – annpen5v**, **annpen7v – annpen16v**, **annpultv**, **annprltv**, **annreg1v– annreg5v**, and **yrentv**. To this sum one has to add the sum of the values of the household-level variables **yohmv**, **yohbv**, **hybaccv**, **hybondv**, **hystocv**, and **hymutfv**

D 12 Other (wave 2)

implicat	Indicator for the five implicate datasets
match_w1w2	Indicator for the patterns of response/non-response in waves 1 and 2. The values denote: **1** – Main interview in both waves; **2** – Non-responding partner (NRP) in wave 1, main interview in wave 2; **3** – Main interview in wave 1, NRP in wave 2; **4** – NRP in both waves; **5** – Is not part of the sample in wave 1, main interview in wave 2; **6** – Is not part of the sample in wave 1, NRP in wave 2
nomxCAPI	Nominal exchange rate to the euro used for conversion to euro in the CAPI modules, common for all interview years. One has to **divide** nominal non-euro amounts by this exchange rates to obtain amount in euros
nomxWXYZ	Nominal exchange rate used for year WXYZ (2005, 2006, 2007). One has to **divide** nominal non-euro amounts by this exchange rate to obtain amounts in euros for year WXYZ
pppxWXYZ	Purchasing power-adusted (ppp) exchange rate used for year WXYZ (2005, 2006, 2007). One has to **divide** nominal amounts (both in euros and in other currencies) by this exchange rate to obtain ppp-adjusted amounts in euros for year WXYZ. The price level of reference is that of Germany in 2005
wave	Wave identifier. Equal to 2 for all observations
currency	Currency in which all amounts are denominated

Contact:

Dimitris Christelis
SHARE, CSEF and CFS
dimitris.christelis [at] gmail.com

E. NACE-categories in SHARE

Table 5: Summarized NACE-Categories in SHARE:

SHARE	NACE	Description
01	01	Agriculture, hunting and related service activities
	02	Forestry, logging and related service activities
	05	Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing
10	10	Mining of coal and lignite; extraction of peat
	11	Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction excluding surveying
	12	Mining of uranium and thorium ores
	13	Mining of metal ores
	14	Other mining and quarrying
15	15	Manufacture of food products and beverages
	16	Manufacture of tobacco products
	17	Manufacture of textiles
	18	Manufacture of wearing apparel; dressing and dyeing of fur
	19	Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear
20	20	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
	21	Manufacture of pulp, paper and paper products
22	22	Publishing, printing and reproduction of recorded media
23	23	Manufacture of coke, refined petroleum products and nuclear fuel
	24	Manufacture of chemicals and chemical products
	25	Manufacture of rubber and plastic products
26	26	Manufacture of other non-metallic mineral products
27	27	Manufacture of basic metals
	28	Manufacture of fabricated metal products, except machinery and equipment
29	29	Manufacture of machinery and equipment n.e.c.
30	30	Manufacture of office machinery and computers
	31	Manufacture of electrical machinery and apparatus n.e.c.
	32	Manufacture of radio, television and communication equipment and apparatus
	33	Manufacture of medical, precision and optical instruments, watches and clocks
34	34	Manufacture of motor vehicles, trailers and semi-trailers
	35	Manufacture of other transport equipment
36	36	Manufacture of furniture; manufacturing n.e.c.
37	37	Recycling
40	40	Electricity, gas, steam and hot water supply
	41	Collection, purification and distribution of water
45	45	Construction
50	50	Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel

SHARE	NACE	Description
51	51	Wholesale trade and commission trade, except of motor vehicles and motorcycles
52	52	Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods
55	55	Hotels and restaurants
60	60	Land transport; transport via pipelines
	61	Water transport
	62	Air transport
	63	Supporting and auxiliary transport activities; activities of travel agencies
	64	Post and telecommunications
65	65	Financial intermediation, except insurance and pension funding
	66	Insurance and pension funding, except compulsory social security
	67	Activities auxiliary to financial intermediation
70	70	Real estate activities
	71	Renting of machinery and equipment without operator and of personal and household goods
72	72	Computer and related activities
73	73	Research and development
74	74	Other business activities
75	75	Public administration and defence; compulsory social security
80	80	Education
85	85	Health and social work
90	90	Sewage and refuse disposal, sanitation and similar activities
91	91	Activities of membership organization n.e.c.
92	92	Recreational, cultural and sporting activities
93	93	Other service activities
95	95	Private households with employed persons
99	99	Extra-territorial organizations and bodies
Additional general categories:		
86	-	Production, industry, factory without further specification
87	-	Services without further specification
88	-	Engineering without further specification
98	-	Soldiers; Military
Categories for missing values:		
00	-	Does not apply
76	-	Illegible
77	-	Refusal
78	-	Don’t know
79	-	No answer

F. Renamed dummy variables

Table 6: Renamed dummy variables wave 1

Wave 1	
Release 2.0.1 or below	**Release 2.2.0 or above**
AC	
ac004d11	ac004d1_1
ac004d12	ac004d2_1
ac004d13	ac004d3_1
ac004d14	ac004d4_1
ac004d15	ac004d5_1
ac004d16	ac004d6_1
ac004d17	ac004d7_1
ac004d18	ac004d8_1
ac004d1n	ac004dno_1
ac004d21	ac004d1_2
ac004d22	ac004d2_2
ac004d23	ac004d3_2
ac004d24	ac004d4_2
ac004d25	ac004d5_2
ac004d26	ac004d6_2
ac004d27	ac004d7_2
ac004d28	ac004d8_2
ac004d2n	ac004dno_2
ac004d31	ac004d1_3
ac004d32	ac004d2_3
ac004d33	ac004d3_3
ac004d34	ac004d4_3
ac004d35	ac004d5_3
ac004d36	ac004d6_3
ac004d37	ac004d7_3
ac004d38	ac004d8_3
ac004d3n	ac004dno_3
ac004d41	ac004d1_4
ac004d42	ac004d2_4
ac004d43	ac004d3_4
ac004d44	ac004d4_4
ac004d45	ac004d5_4
ac004d46	ac004d6_4
ac004d47	ac004d7_4
ac004d48	ac004d8_4
ac004d4n	ac004dno_4
ac004d51	ac004d1_5
ac004d52	ac004d2_5
ac004d53	ac004d3_5
ac004d54	ac004d4_5
ac004d55	ac004d5_5
ac004d56	ac004d6_5
ac004d57	ac004d7_5
ac004d58	ac004d8_5

Wave 1	
Release 2.0.1 or below	**Release 2.2.0 or above**
ac004d5n	ac004dno_5
ac004d61	ac004d1_6
ac004d62	ac004d2_6
ac004d63	ac004d3_6
ac004d64	ac004d4_6
ac004d65	ac004d5_6
ac004d66	ac004d6_6
ac004d67	ac004d7_6
ac004d68	ac004d8_6
ac004d6n	ac004dno_6
ac004d71	ac004d1_7
ac004d72	ac004d2_7
ac004d73	ac004d3_7
ac004d74	ac004d4_7
ac004d75	ac004d5_7
ac004d76	ac004d6_7
ac004d77	ac004d7_7
ac004d78	ac004d8_7
ac004d7n	ac004dno_7
AS	
as054d7	as054dot
CH	
ch018d11	ch018d1_1
ch018d12	ch018d2_1
ch018d13	ch018d3_1
ch018d14	ch018d4_1
ch018d15	ch018d5_1
ch018d16	ch018d6_1
ch018d17	ch018d7_1
ch018d18	ch018d8_1
ch018d19	ch018d9_1
ch018d1n	ch018dno_1
ch018d1o	ch018dot_1
ch018d21	ch018d1_2
ch018d22	ch018d2_2
ch018d23	ch018d3_2
ch018d24	ch018d4_2
ch018d25	ch018d5_2
ch018d26	ch018d6_2
ch018d27	ch018d7_2
ch018d28	ch018d8_2
ch018d29	ch018d9_2
ch018d2n	ch018dno_2
ch018d2o	ch018dot_2
ch018d31	ch018d1_3

Wave 1	
Release 2.0.1 or below	**Release 2.2.0 or above**
ch018d32	ch018d2_3
ch018d33	ch018d3_3
ch018d34	ch018d4_3
ch018d35	ch018d5_3
ch018d36	ch018d6_3
ch018d37	ch018d7_3
ch018d38	ch018d8_3
ch018d39	ch018d9_3
ch018d3n	ch018dno_3
ch018d3o	ch018dot_3
ch018d41	ch018d1_4
ch018d42	ch018d2_4
ch018d43	ch018d3_4
ch018d44	ch018d4_4
ch018d45	ch018d5_4
ch018d46	ch018d6_4
ch018d47	ch018d7_4
ch018d48	ch018d8_4
ch018d49	ch018d9_4
ch018d4n	ch018dno_4
ch018d4o	ch018dot_4
DN	
dn012d01	dn012d1
dn012d02	dn012d2
dn012d03	dn012d3
dn012d04	dn012d4
dn012d05	dn012d5
dn012d06	dn012d6
dn012d07	dn012d7
dn012d08	dn012d8
dn012d09	dn012d9
dn023d01	dn023d1
dn023d02	dn023d2
dn023d03	dn023d3
dn023d04	dn023d4
dn023d05	dn023d5
dn023d06	dn023d6
dn023d07	dn023d7
dn023d08	dn023d8
dn023d09	dn023d9
EP	
ep064d01	ep064d1
ep064d02	ep064d2
ep064d03	ep064d3
ep064d04	ep064d4
ep064d05	ep064d5
ep064d06	ep064d6
ep064d07	ep064d7

Wave 1	
Release 2.0.1 or below	**Release 2.2.0 or above**
ep064d08	ep064d8
ep064d09	ep064d9
ep064d10	ep064d10
ep071d01	ep071d1
ep071d02	ep071d2
ep071d03	ep071d3
ep071d04	ep071d4
ep071d05	ep071d5
ep071d06	ep071d6
ep071d07	ep071d7
ep071d08	ep071d8
ep071d09	ep071d9
HC	
hc039d01	hc039d1
hc039d02	hc039d2
hc039d03	hc039d3
hc039d04	hc039d4
hc039d05	hc039d5
hc039d06	hc039d6
hc039d07	hc039d7
hc039d08	hc039d8
hc039d09	hc039d9
hc039dot	hc039dot
hc041d01	hc041d1
hc041d02	hc041d2
hc041d03	hc041d3
hc041d04	hc041d4
hc041d05	hc041d5
hc041d06	hc041d6
hc041d07	hc041d7
hc041d08	hc041d8
hc041d09	hc041d9
hc043d01	hc043d1
hc043d02	hc043d2
hc043d03	hc043d3
hc043d04	hc043d4
hc043d05	hc043d5
hc043d06	hc043d6
hc043d07	hc043d7
hc043d08	hc043d8
hc043d09	hc043d9
hc059d01	hc059d1
hc059d02	hc059d2
hc059d03	hc059d3
hc059d04	hc059d4
hc059d05	hc059d5
hc059d06	hc059d6
hc059d07	hc059d7

Wave 1	
Release 2.0.1 or below	**Release 2.2.0 or above**
hc059d08	hc059d8
hc059d09	hc059d9
hc060d01	hc060d1
hc060d02	hc060d2
hc060d03	hc060d3
hc060d04	hc060d4
hc060d05	hc060d5
hc060d06	hc060d6
hc060d07	hc060d7
hc060d08	hc060d8
hc060d09	hc060d9
PH	
ph006d01	ph006d1
ph006d02	ph006d2
ph006d03	ph006d3
ph006d04	ph006d4
ph006d05	ph006d5
ph006d06	ph006d6
ph006d07	ph006d7
ph006d08	ph006d8
ph006d09	ph006d9
ph006dot	ph006dot
ph008d01	ph008d1
ph008d02	ph008d2
ph008d03	ph008d3
ph008d04	ph008d4
ph008d05	ph008d5
ph008d06	ph008d6
ph008d07	ph008d7
ph008d08	ph008d8
ph008d09	ph008d9
ph008dot	ph008dot
ph010d01	ph010d1
ph010d02	ph010d2
ph010d03	ph010d3
ph010d04	ph010d4
ph010d05	ph010d5
ph010d06	ph010d6
ph010d07	ph010d7
ph010d08	ph010d8
ph010d09	ph010d9
ph010dot	ph010dot
ph011d01	ph011d1
ph011d02	ph011d2
ph011d03	ph011d3
ph011d04	ph011d4
ph011d05	ph011d5
ph011d06	ph011d6

Wave 1	
Release 2.0.1 or below	**Release 2.2.0 or above**
ph011d07	ph011d7
ph011d08	ph011d8
ph011d09	ph011d9
ph048d01	ph048d1
ph048d02	ph048d2
ph048d03	ph048d3
ph048d04	ph048d4
ph048d05	ph048d5
ph048d06	ph048d6
ph048d07	ph048d7
ph048d08	ph048d8
ph048d09	ph048d9
ph049d01	ph049d1
ph049d02	ph049d2
ph049d03	ph049d3
ph049d04	ph049d4
ph049d05	ph049d5
ph049d06	ph049d6
ph049d07	ph049d7
ph049d08	ph049d8
ph049d09	ph049d9
SP	
sp004d11	sp004d1_1
sp004d12	sp004d2_1
sp004d13	sp004d3_1
sp004d21	sp004d1_2
sp004d22	sp004d2_2
sp004d23	sp004d3_2
sp004d31	sp004d1_3
sp004d32	sp004d2_3
sp004d33	sp004d3_3
sp010d11	sp010d1_1
sp010d12	sp010d2_1
sp010d13	sp010d3_1
sp010d21	sp010d1_2
sp010d22	sp010d2_2
sp010d23	sp010d3_2
sp010d31	sp010d1_3
sp010d32	sp010d2_3
sp010d33	sp010d3_3
sp015d01	sp015d1
sp015d02	sp015d2
sp015d03	sp015d3
sp015d04	sp015d4
sp015d05	sp015d5
sp015d06	sp015d6
sp015d07	sp015d7
sp015d08	sp015d8

Wave 1	
Release 2.0.1 or below	**Release 2.2.0 or above**
sp015d09	sp015d9
sp019d01	sp019d1
sp019d02	sp019d2
sp019d03	sp019d3
sp019d04	sp019d4
sp019d05	sp019d5
sp019d06	sp019d6
sp019d07	sp019d7
sp019d08	sp019d8
sp019d09	sp019d9

Wave 1	
Release 2.0.1 or below	**Release 2.2.0 or above**
sp021d01	sp021d1
sp021d02	sp021d2
sp021d03	sp021d3
sp021d04	sp021d4
sp021d05	sp021d5
sp021d06	sp021d6
sp021d07	sp021d7
sp021d08	sp021d8
sp021d09	sp021d9

Table 7: Renamed dummy variables wave 2

Wave 2	
Release 1.0.1 or below	**Release 2.2.0 or above**
AC	
ac004d11	ac004d1_1
ac004d12	ac004d2_1
ac004d13	ac004d4_1
ac004d14	ac004d5_1
ac004d15	ac004d7_1
ac004d1n	ac004dno_1
ac004d21	ac004d1_2
ac004d22	ac004d2_2
ac004d23	ac004d4_2
ac004d24	ac004d5_2
ac004d25	ac004d7_2
ac004d2n	ac004dno_2
ac004d31	ac004d1_3
ac004d32	ac004d2_3
ac004d33	ac004d4_3
ac004d34	ac004d5_3
ac004d35	ac004d7_3
ac004d3n	ac004dno_3
ac004d41	ac004d1_4
ac004d42	ac004d2_4
ac004d43	ac004d4_4
ac004d44	ac004d5_4
ac004d45	ac004d7_4
ac004d4n	ac004dno_4
ac004d51	ac004d1_5
ac004d52	ac004d2_5
ac004d53	ac004d4_5
ac004d54	ac004d5_5
ac004d55	ac004d7_5
ac004d5n	ac004dno_5
ac004d61	ac004d1_6

Wave 2	
Release 1.0.1 or below	**Release 2.2.0 or above**
ac004d62	ac004d2_6
ac004d63	ac004d4_6
ac004d64	ac004d5_6
ac004d65	ac004d7_6
ac004d6n	ac004dno_6
ac004d71	ac004d1_7
ac004d72	ac004d2_7
ac004d73	ac004d4_7
ac004d74	ac004d5_7
ac004d75	ac004d7_7
ac004d7n	ac004dno_7
AS	
as054d2	as054d3
as054d3	as054d4
as054d4	as054d5
as054d5	as054d6
as054d6	as054d2
as054d7	as054dot
CS	
cs005d7	cs005dot
cs009d7	cs009dot
CH	
ch018d11	ch018d1_1
ch018d12	ch018d2_1
ch018d13	ch018d3_1
ch018d14	ch018d4_1
ch018d15	ch018d5_1
ch018d16	ch018d6_1
ch018d17	ch018d7_1
ch018d18	ch018d8_1
ch018d19	ch018d9_1
ch018d1a	ch018d10_1

Wave 2	
Release 1.0.1 or below	**Release 2.2.0 or above**
ch018d1b	ch018d11_1
ch018d1c	ch018d12_1
ch018d1e	ch018d13_1
ch018d1f	ch018d14_1
ch018d1s	ch018d95_1
ch018d1n	ch018dno_1
ch018d1o	ch018dot_1
ch018d21	ch018d1_2
ch018d22	ch018d2_2
ch018d23	ch018d3_2
ch018d24	ch018d4_2
ch018d25	ch018d5_2
ch018d26	ch018d6_2
ch018d27	ch018d7_2
ch018d28	ch018d8_2
ch018d29	ch018d9_2
ch018d2a	ch018d10_2
ch018d2b	ch018d11_2
ch018d2c	ch018d12_2
ch018d2e	ch018d13_2
ch018d2f	ch018d14_2
ch018d2s	ch018d95_2
ch018d2n	ch018dno_2
ch018d2o	ch018dot_2
ch018d31	ch018d1_3
ch018d32	ch018d2_3
ch018d33	ch018d3_3
ch018d34	ch018d4_3
ch018d35	ch018d5_3
ch018d36	ch018d6_3
ch018d37	ch018d7_3
ch018d38	ch018d8_3
ch018d39	ch018d9_3
ch018d3a	ch018d10_3
ch018d3b	ch018d11_3
ch018d3c	ch018d12_3
ch018d3e	ch018d13_3
ch018d3f	ch018d14_3
ch018d3s	ch018d95_3
ch018d3n	ch018dno_3
ch018d3o	ch018dot_3
ch018d41	ch018d1_4
ch018d42	ch018d2_4
ch018d43	ch018d3_4
ch018d44	ch018d4_4
ch018d45	ch018d5_4
ch018d46	ch018d6_4
ch018d47	ch018d7_4

Wave 2	
Release 1.0.1 or below	**Release 2.2.0 or above**
ch018d48	ch018d8_4
ch018d49	ch018d9_4
ch018d4a	ch018d10_4
ch018d4b	ch018d11_4
ch018d4c	ch018d12_4
ch018d4e	ch018d13_4
ch018d4f	ch018d14_4
ch018d4s	ch018d95_4
ch018d4n	ch018dno_4
ch018d4o	ch018dot_4
DN	
dn023d04	dn023d4
dn023d05	dn023d5
dn023d06	dn023d6
dn023d07	dn023d7
dn023d08	dn023d8
dn023d09	dn023d9
EP	
ep064d01	ep064d1
ep064d02	ep064d2
ep064d03	ep064d3
ep064d04	ep064d4
ep064d05	ep064d5
ep064d06	ep064d6
ep064d07	ep064d7
ep064d08	ep064d8
ep064d09	ep064d9
ep071d01	ep071d1
ep071d02	ep071d2
ep071d03	ep071d3
ep071d04	ep071d4
ep071d05	ep071d5
ep071d06	ep071d6
ep071d07	ep071d7
ep071d08	ep071d8
ep071d09	ep071d9
ep089d01	ep089d1
ep089d02	ep089d2
ep089d03	ep089d3
ep089d04	ep089d4
ep089d05	ep089d5
ep098d01	ep098d1
ep098d02	ep098d2
ep098d03	ep098d3
ep098d04	ep098d4
ep098d05	ep098d5
ep110d01	ep110d1
ep110d02	ep110d2

Wave 2	
Release 1.0.1 or below	**Release 2.2.0 or above**
ep110d03	ep110d3
ep110d04	ep110d4
ep110d05	ep110d5
ep141d06	ep110d6
ep141d01	ep141d1
ep141d02	ep141d2
ep141d03	ep141d3
ep141d04	ep141d4
ep141d05	ep141d5
ep324d01	ep324d1
ep324d02	ep324d2
ep324d03	ep324d3
ep324d04	ep324d4
ep324d05	ep324d5
ep324d06	ep324d6
GS	
gs010d7	gs010dot
HC	
hc005d01	hc005d1
hc005d02	hc005d2
hc005d03	hc005d3
hc005d04	hc005d4
hc005d05	hc005d5
hc005d06	hc005d6
hc005d07	hc005d7
hc005d08	hc005d8
hc005d09	hc005d9
hc039d01	hc039d1
hc039d02	hc039d2
hc039d03	hc039d3
hc039d04	hc039d4
hc039d05	hc039d5
hc039d06	hc039d6
hc039d07	hc039d7
hc039d08	hc039d8
hc039d09	hc039d9
hc039d12	hc039dot
hc070d01	hc070d1
hc070d02	hc070d2
hc070d03	hc070d3
hc070d04	hc070d4
hc070d05	hc070d5
hc070d06	hc070d6
hc070d07	hc070d7
hc070d08	hc070d8
hc070d09	hc070d9
hc071d01	hc071d1
hc071d02	hc071d2

Wave 2	
Release 1.0.1 or below	**Release 2.2.0 or above**
hc071d03	hc071d3
hc071d04	hc071d4
hc071d05	hc071d5
hc071d06	hc071d6
hc071d07	hc071d7
hc071d08	hc071d8
hc071d09	hc071d9
PH	
ph006d01	ph006d1
ph006d02	ph006d2
ph006d03	ph006d3
ph006d04	ph006d4
ph006d05	ph006d5
ph006d06	ph006d6
ph006d07	ph006d7
ph006d08	ph006d8
ph006d09	ph006d9
ph006d18	ph006dot
ph008d01	ph008d1
ph008d02	ph008d2
ph008d03	ph008d3
ph008d04	ph008d4
ph008d05	ph008d5
ph008d06	ph008d6
ph008d07	ph008d7
ph008d08	ph008d8
ph008d09	ph008d9
ph008d23	ph008dot
ph010d01	ph010d1
ph010d02	ph010d2
ph010d03	ph010d3
ph010d04	ph010d4
ph010d05	ph010d5
ph010d06	ph010d6
ph010d07	ph010d7
ph010d08	ph010d8
ph010d09	ph010d9
ph010d13	ph010dot
ph011d01	ph011d1
ph011d02	ph011d2
ph011d03	ph011d3
ph011d04	ph011d4
ph011d05	ph011d5
ph011d06	ph011d6
ph011d07	ph011d7
ph011d08	ph011d8
ph011d09	ph011d9
ph048d01	ph048d1

Wave 2	
Release 1.0.1 or below	**Release 2.2.0 or above**
ph048d02	ph048d2
ph048d03	ph048d3
ph048d04	ph048d4
ph048d05	ph048d5
ph048d06	ph048d6
ph048d07	ph048d7
ph048d08	ph048d8
ph048d09	ph048d9
ph049d01	ph049d1
ph049d02	ph049d2
ph049d03	ph049d3
ph049d04	ph049d4
ph049d05	ph049d5
ph049d06	ph049d6
ph049d07	ph049d7
ph049d08	ph049d8
ph049d09	ph049d9
PF	
pf007d6	pf007dot
SP	
sp004d11	sp004d1_1
sp004d12	sp004d2_1
sp004d13	sp004d3_1
sp004d21	sp004d1_2
sp004d22	sp004d2_2
sp004d23	sp004d3_2
sp004d31	sp004d1_3
sp004d32	sp004d2_3
sp004d33	sp004d3_3
sp010d11	sp010d1_1
sp010d12	sp010d2_1
sp010d13	sp010d3_1
sp010d21	sp010d1_2
sp010d22	sp010d2_2
sp010d23	sp010d3_2
sp010d31	sp010d1_3
sp010d32	sp010d2_3
sp010d33	sp010d3_3
sp015d01	sp015d1

Wave 2	
Release 1.0.1 or below	**Release 2.2.0 or above**
sp015d02	sp015d2
sp015d03	sp015d3
sp015d04	sp015d4
sp015d05	sp015d5
sp015d06	sp015d6
sp015d07	sp015d7
sp015d08	sp015d8
sp015d09	sp015d9
sp019d01	sp019d1
sp019d02	sp019d2
sp019d03	sp019d3
sp019d04	sp019d4
sp019d05	sp019d5
sp019d06	sp019d6
sp019d07	sp019d7
sp019d08	sp019d8
sp019d09	sp019d9
sp021d01	sp021d1
sp021d02	sp021d2
sp021d03	sp021d3
sp021d04	sp021d4
sp021d05	sp021d5
sp021d06	sp021d6
sp021d07	sp021d7
sp021d08	sp021d8
sp021d09	sp021d9
XT	
xt020d01	xt020d1
xt020d02	xt020d2
xt020d03	xt020d3
xt020d04	xt020d4
xt020d05	xt020d5
xt020d06	xt020d6
xt020d07	xt020d7
xt020d08	xt020d8
xt020d09	xt020d9