Schweizer Haushalt-Panel
Panel suisse de ménages
Swiss Household Panel

Swiss Household Panel User Guide (1999 - 2022)

Wave 24
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1 User Guide SHP Table of Contents

1 THE SWISS HOUSEHOLD PANEL IN BRIEF

1.1 Aims and overview

The Swiss Household Panel (SHP) is a large-scale household panel, carried out by FORS and mainly funded by the Swiss National Science Foundation. The principal aim of the Swiss Household Panel (SHP) is to observe social change, in particular, the dynamics of changing living conditions and social representations in the population of Switzerland.

The SHP follows a random sample of households resident in Switzerland over time since 1999. The SHP is an indefinite life (simple) panel, in which the same persons and households are interviewed annually.

At present, the SHP consists of four samples drawn by the Swiss Federal Statistical Office: the initial sample SHP_I (interviewed for the first time in 1999), and three refreshment samples, the SHP_II (added in 2004), the SHP_III (added in 2013), and the SHP_IV (added in 2020).

In addition to the regular annual data collection, the SHP has conducted additional surveys among the participating households. These studies include biographical data collections (for the samples SHP_I and SHP_III), as well as an additional data collection at the end of the first wave of the Covid-19 pandemic (May and June 2020, SHP_I _II and _III). See for an overview Figure 2.1 in the next chapter.

1.2 Institutional Setting

The creation of the SHP was one of the key structural measures implemented by the Swiss Priority Program (SPP) “Switzerland Towards the Future” during the period 1998-2003 (Farago 1996, Joye and Scherpenzeel 1997). In this first phase (1998-2003), the SHP was a joint project run by the Swiss National Science Foundation, the Swiss Federal Statistical Office and the University of Neuchâtel. At the end of the SPP, the SHP entered its second phase (2004-2007). Still located at the University of Neuchâtel, the SHP developed a joint venture project “Living in Switzerland-2020” aimed at conducting the Statistics of Income and Living Conditions (SILC) pilot study 2004-2005 in collaboration with the Swiss Federal Statistical Office. The SILC pilot data were distributed by the SHP until the end of 2008. The third phase of the SHP constitutes the integration into the Swiss Centre of Expertise in the Social Sciences (FORS). Still mainly funded by the Swiss National Science Foundation, the SHP is now part of FORS and hosted by the University of Lausanne.

1.3 Harmonization with other household panels

The Cross-National Equivalent File (CNEF)

The SHP participates in the Cross-National Equivalent File (CNEF, https://www.cnefdata.org/). The CNEF contains equivalently defined variables for the following panel studies:

- The US Panel Study of Income Dynamics (PSID, since 1970)
- The German Socio-Economic Panel (GSOEP, since 1984)
- The UK Household Longitudinal Study (UKHLS) that incorporates the British Household Panel Study (BHPS, since 1991)
- The Household Income and Labour Dynamics in Australia (HILDA, since 2001)
- The Canadian Survey of Labour and Income Dynamics (SLID, 1993-2014)
- The Korea Labor and Income Panel Study (KLIPS, since 1998)
- The Swiss Household Panel (SHP, since 1999)
- The Russia Longitudinal Monitoring Survey (RLMS, since 1995)
- The Japan Household Panel Survey (since 2009).

The CNEF data allow researchers to perform cross-national analyses on harmonized versions of these panels.[1] The CNEF data for the SHP are distributed with a codebook through SWISSUbase with the regular SHP data (see Table 6.1 for an overview of the data files)

The Comparative Panel File (CPF)

The SHP data are also included in the Comparative Panel File (CPF, www.cpfdata.com). CPF harmonizes household panel surveys from seven countries: Australia (HILDA), Germany (SOEP), United Kingdom (BHPS and UKHLS), South Korea (KLIPS), Russia (RLMS), Switzerland (SHP), and the United States (PSID). The focus of the CPF is on comparative life course data. The CPF provides the codes for researchers to develop their own harmonized database.

1.4 Access to the data and data protection rules

The SHP data are available at no charge through SWISSUbase. Users must sign a user agreement to get access to the data. The procedure is explained on the SHP website, with a link to SWISSUbase:
https://forscenter.ch/projects/swiss-household-panel/data/

Access to the SHP data is only granted for non-commercial purposes. It is strictly forbidden to attempt to identify households or individuals and to make parts or all of the data available to a third party. In a research team, all team members that use the data must sign the contract individually. SHP data users commit themselves to sending a copy of all working papers, final reports, or publications to the SHP (swisspanel@fors.unil.ch).

[1] For more information, see Frick et al. (2007).

1.5 Citing the SHP

All work based on the SHP data should acknowledge this by citing the SHP in the bibliography:

SHP Group, Living in Switzerland Waves 1-24 + Covid 19 data [Dataset]. FORS - Swiss Centre of Expertise in the Social Sciences. Financed by the Swiss National Science Foundation, distributed by FORS, Lausanne, 2024. DOI: https://doi.org/10.48573/58nw-6a50

1.6 Getting more information

Questions? Please visit www.swisspanel.ch or contact us swisspanel@fors.unil.ch

Contact persons for specific topics

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2 STUDY DESIGN AND FIELDWORK

2.1 General design of the SHP

This chapter provides a concise description of the design and fieldwork of the SHP (see also Tillmann et al. (2021) and Tillmann et al (2016)). The SHP is an indefinite life (simple) panel in which participating households and their household members are interviewed annually. At present, the SHP comprises four samples drawn by the Swiss Federal Statistical Office: the original sample SHP_I (since 1999), and the refreshment samples SHP_II (2004), SHP_III (2013) and SHP_IV (2020) (see Figure 2.1). These households and their members are surveyed annually.

In addition to the annual data collections, a few additional surveys were conducted among (part of) the SHP households. The specifics of these studies are described in this user guide:

- the collection of biographical data from the SHP_I sample (see 4.1)
- the collection of biographical data from the SHP_III sample (see 4.2)
- a between-wave survey during the Covid-19 lockdown, the SHP Covid-19 Study (see 4.3).

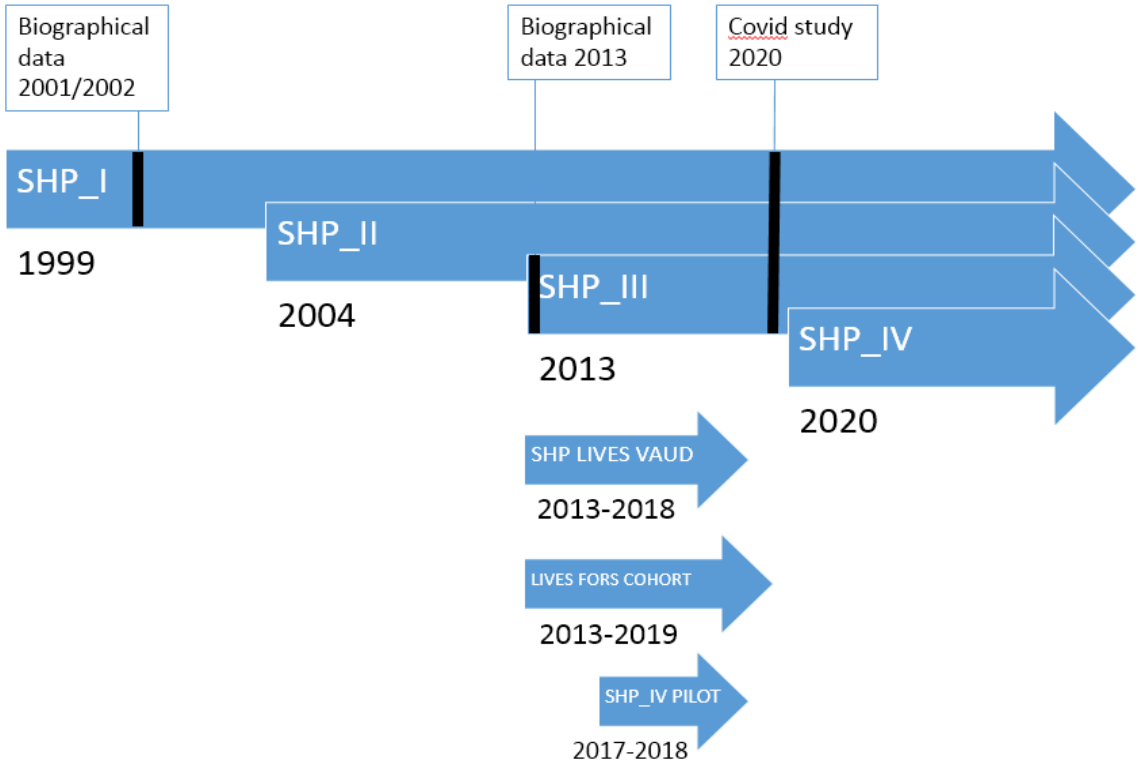


Figure 2.1. Overview of the SHP samples and associated studies

There are three studies closely associated with the SHP but conducted on separate samples. They are not part of the SHP data release, but are separate studies on SWISSUbase:

- The SHP LIVES Vaud Survey
  https://www.swissubase.ch/en/catalogue/studies/12273/16590/overview
- The LIVES FORS Cohort Survey
  https://www.swissubase.ch/en/catalogue/studies/13144/15297/overview
- The SHP_IV Pilot Study
  https://www.swissubase.ch/en/catalogue/studies/13816/16595/overview

Chapter 5 provides more information on these studies, which can be combined with the main SHP samples.

2.2 Sampling

Sampling frame and coverage

The population of reference of the SHP is all individuals living in private households in Switzerland. Individuals living in old peoples' homes, institutions, collective households, or prison, are not part of the population of reference. All samples were drawn by the Swiss Federal Statistical Office.

The sampling frame of the first sample (SHP_I) was the Swiss telephone directory (SRH – Stichprobenregister für Haushalterhebungen, or sample frame for household surveys). At the time of the selection of the sample for the SHP_I, the SRH's coverage rate was about 95%. This sampling frame was on the household level.

The sampling frame of the SHP_II in 2004 was CASTEM (Cadre de Sondage pour le Tirage d'Echantillons de Ménages), the follow-up register of SRH, which is owned by the Swiss Federal Statistical Office and also represents a telephone directory. An estimated 98.5% of private households had a telephone connection at the time of the selection of the sample for the SHP_II in 2004. The CASTEM covered about 93% of these households.

The sampling frames SRH and CASTEM were subject to the following errors:

- *undercoverage*: households with unlisted numbers and households without a telephone connection were not listed in the directory.
- *duplicates:* although rare, some households appeared more than once in the survey frame (due to an error or the presence of multiple telephone lines). This problem results in incorrect initial selection probabilities.
- *overcoverage*: selection of units outside the target population (e.g. businesses, homes, prisons, collective households, second homes). These addresses were considered out of sample.

The most recent refreshment samples (SHP III in 2013, SHP IV in 2020) were drawn from the SRPH (Stichprobenrahmen für die Personen- und Haushaltserhebungen), which consists of data coming from the cantonal and communal register of residents and which is owned by the Swiss Federal Statistical Office. As this sampling frame is on an individual level, the selection units of these two samples were individuals rather than households.
The SRPH is updated every three months. Although undercoverage or overcoverage can still occur, they are negligible.

Sampling design
All samples (SHP_I to SHP_IV) are stratified by major geographic region (the seven NUTS II regions, see Appendix A), in proportion to the number of households (SHP_I and SHP_II) or individuals (SHP_III and SHP_IV) per stratum, see Antal & Rothenbühler (2015). This means that for the SHP_I and the SHP_II the selection was proportional to the number of households per major region without overrepresentation of smaller regions. For the SHP_III and SHP_IV, the number of sampled persons was proportional to the number of individuals per major region. In both cases the selection did not consider the average number of persons in households per region. Within one major region, each household (SHP_I and SHP_II) or individual (SHP_III and SHP_IV) had the same inclusion probability. See Appendix A for the size of each stratum for the four samples.

2.3 Types of questionnaires

In the annual waves of data collection, the SHP uses three types of questionnaires.

- The household reference person completes a **grid questionnaire** to assess the household composition and a **household questionnaire**.
- Household members aged 14 and older complete **individual questionnaires**.

Households are free to designate and change over time which household member is the household reference person. Household members who are younger than 14 years old, who are absent for an extended period, or who are unable to respond due to illness or disability are covered by proxy questionnaires included in the household questionnaire. In the proxy questionnaires the household reference person provides basic information on these ineligible or absent household members.

2.4 Fieldwork protocol SHP main study

Protocol annual data collection SHP_I, SHP_II and SHP_III

Since the beginning in 1999, the fieldwork for the Swiss Household Panel (SHP) is done by M.I.S. Trend in Lausanne and Bern (www.mistrend.ch), in Swiss-German, French and Italian. The fieldwork is scheduled from September to February.

The SHP initially conducted interviews exclusively by telephone. Since 2010 the SHP offers alternative modes to reluctant respondents. Households that are unwilling to respond by telephone are offered the possibility to complete the household and individual questionnaires with a face-to-face interviewer, while a web-based version of the individual questionnaire is proposed after an initial refusal or stated reluctance to participate. Since 2018 also a web-based version of the household questionnaire is available. Face-to-face interviews remain rare in the SHP_I, SHP_II and SHP_III, but the use of web has been increasing over time (see Table 2.1 below).

For the first wave of the SHP_III sample in 2013, households without telephone numbers were approached face-to-face (8.9% of the households completed the household questionnaire face-to-face in 2013). Most of the face-to-face respondents from Wave 1 in 2013 participated by telephone in subsequent waves (see Table 2.1).

Table 2.1 Survey modes in the SHP_I, SHP_II and SHP_III (combined) for household and individual questionnaire completion (2010-2022)

	Household questionnaire				Individual questionnaire			
	Tele-phone	Face-to-face	Web	Total	Tele-phone	Face-to-face	Web	Total
2010	4,539	2	-	4,541	7,498	3	43	7,544
2011	4,495	1	-	4,496	7,560	2	18	7,580
2012	4,458	2	-	4,460	7,416	4	22	7,442
2013	7,614	741	-	8,355	7,191	1	11	7,203
2014	7,288	69	-	7,357	11,971	100	14	12,085
2015	6,745	40	-	6,785	10,902	57	206	11,165
2016	6,235	26	-	6,261	9,802	33	193	10,028
2017	5,928	26	-	5,954	9,165	32	281	9,478
2018	5,907	25	1	5,933	8,939	27	383	9,349
2019	5,688	0	21	5,709	8,359	0	481	8,840
2020	5,380	19	48	5,447	7,644	22	658	8,324
2021	4,932	13	109	5,054	6,779	16	829	7,624
2022	4,553	13	128	4,694	6,223	16	843	7,082

For the SHP_I, SHP_II and SHP_III the fieldwork starts with sending a letter to the participating households informing them of the upcoming interviews. Enclosed with the preliminary mail, participants receive a newsletter containing results of recent analyses of the SHP data as well as an unconditional incentive for each household

member that is eligible for an individual interview according to information on the household composition from the grid questionnaire of the previous wave.[2]

The newsletters can be viewed here: https://forscenter.ch/projects/swiss-household-panel/participants/

For the households that participate in a telephone interview, the letters are sent in five mailings with an interim of one week, to make sure that the first personal contact by an interviewer follows shortly after the initial mail (approximately one week later). Households are called on different days of the week and on different times during the day to minimize noncontact.

For households that participate by web, the preliminary household mailings all go out at the same time with login details and an incentive for the reference person. There are then two reminders at the household level at 2–3-week intervals. For household members (other than the reference person), a preliminary mail with login details and an incentive is sent the day after the reference person completed the grid. There are two reminders by mail at 2–3-week intervals for each eligible household member.

For face-to-face interviews, mailings are sent to the household when the interviewer in charge of that address is available (the name of the interviewer appears in the mailing), with incentives included for each eligible person in the household.

Protocol annual data collection SHP_IV

The SHP_IV was launched in 2020 using mixed mode telephone-web (about half and half). In the first wave households with a known telephone number were approached for a telephone interview, following the same protocol as for the other samples. If no number was available, the sampled individual received an invitation by mail containing a login code and an unconditional incentive, to complete the questionnaires by web. The protocol is the same as for the households that participate by web in earlier samples (see above).

For all samples, in subsequent waves, households are approached in the same mode as the previous wave, with the possibility to switch between survey modes on request.

Table 2.2 shows the completion of questionnaires in the different modes for the SHP_IV sample.

[2] In waves 12 to 14 (2010-2012), an additional conditional incentive was offered to *complete households* (if in addition to the reference person completing the grid and household questionnaire, all members of the household of 14 years or older completed the individual interview). This additional incentive was only offered to households consisting of at least two members. For budgetary reasons this additional incentive was dropped in wave 15.

Table 2.2 Survey modes in the SHP_IV for completed questionnaires on the household and the individual level (2020-2022)

	Household questionnaire				Individual questionnaire			
	Tele-phone	Face-to-face	Web	Total	Tele-phone	Face-to-face	Web	Total
2020	2426	-	1952	4378	4009	-	3545	7554
2021	1951	-	1294	3245	3016	1	2457	5474
2022	1602	-	962	2564	2421	-	1966	4387

Longitudinal follow-up of households and household members

For the SHP_I the sample of households to be recontacted in subsequent waves consisted of all households that were interviewed in the first wave with at least the household questionnaire and one individual questionnaire completed. For the SHP_II, SHP_III and SHP_IV, all households that completed at least the grid questionnaire in the first wave were re-approached. Households that could not be reached at all or did not supply any information during the first wave were not re-contacted in later waves.

Households were no longer approached if they could not be contacted for five waves, refused to participate any longer, moved away from Switzerland, or moved to an institution.

On the individual level, the SHP initially only followed original sample members (OSMs, household members living in the sampled households in the first wave) and their children; non-OSMs[3] were only (re-)interviewed if they lived with an OSM. Since 2007 the SHP also follows non-OSMs who left the original household and includes them as new households. As a rule, OSMs are followed indefinitely until they leave the target population (e.g., in the case of death, institutionalisation or leaving Switzerland).

Refusal conversion

Households with a known telephone number that did not participate in the previous wave receive a tailored preliminary letter with the request to come back to the study and are contacted toward the end of the fieldwork period by interviewers trained in refusal conversion. Households and individuals who refuse participation in the current wave are also re-contacted toward the end of the fieldwork period.

The refusal conversion rate, calculated as the percentage of completed individual interviews of all eligible individuals who refused previously, amounts to about 45% (Lipps, 2011). See the working paper by Dangubic and Voorpostel (2017) for more details on the refusal conversion procedure (http://ohs-shp.unil.ch/workingpapers/WP2_17.pdf).

[3] Non-OSMs are persons who entered the selected households after the first wave, and who are not children of any OSM.

Staying in contact with the participating households
To avoid dropout of the panel because households could not be traced (due to moving, changed phone numbers, household splits, etc.), several measures ensure that contact can be re-established with the households in later waves. Respondents are asked to leave their mobile number and/or their e-mail address. If respondents are not willing to give this information or do not have a mobile number or e-mail address, they are asked to leave the address of an auxiliary (e.g. a family member living outside of the household or a close friend) who can help in case of losing track of the respondent.

A bilingual interviewer is responsible for administration and tracking of the addresses and tracing relocated respondents. This interviewer takes the following measures when the advance letter is returned to sender:

- Checking whether phone number is still valid
- Contacting mobile phone, e-mail address or auxiliary
- Searching directories and the local inhabitant register
- Request the dcl data care (a service of the Swiss post mandated to seek currently valid household addresses and the corresponding phone numbers)
- If no phone number can be found, a form is sent to the address provided by the dcl data care asking to complete contact details.

Incentives for the interviewers
To increase motivation, the interviewers can earn two collective bonuses. If all interviewers together obtain at least 95% of last year's individual interviews they receive a collective bonus. The second bonus is only oriented towards interviewers who are engaged in refusal calls and is based on the refusal conversion rate.

2.5 Response rates and attrition

Initial response rates (in the first wave) at the household level were 64% for SHP_I, 65% for SHP_II, 60% for SHP_III and 52% for SHP_IV (59% in the telephone group and 45% in the web group). On the individual level, initial response rates (conditional upon household participation) were 85%, 76%, 81% and 73% (75% in the telephone group and 72% in the web group), respectively.

Figures 2.1 and 2.2 show the number of interviewed households and individuals over time for all the SHP samples. Appendix A contains more detailed statistics on participation and attrition.

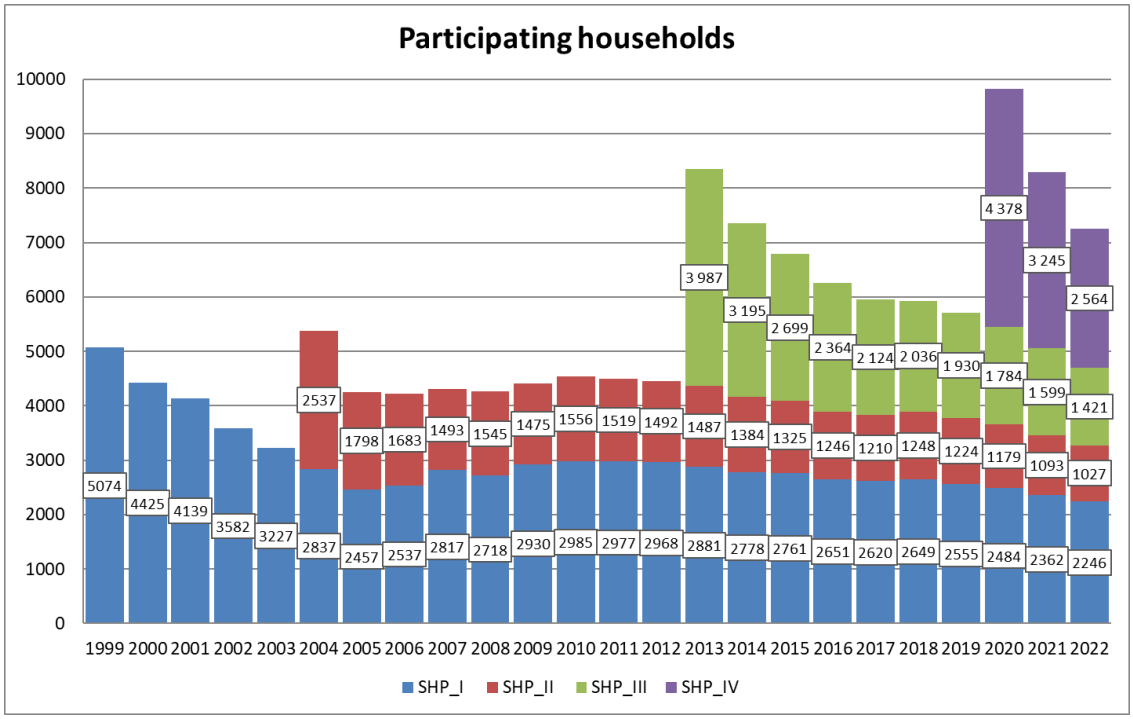


Figure 2.1: Completed household questionnaires by wave and sample

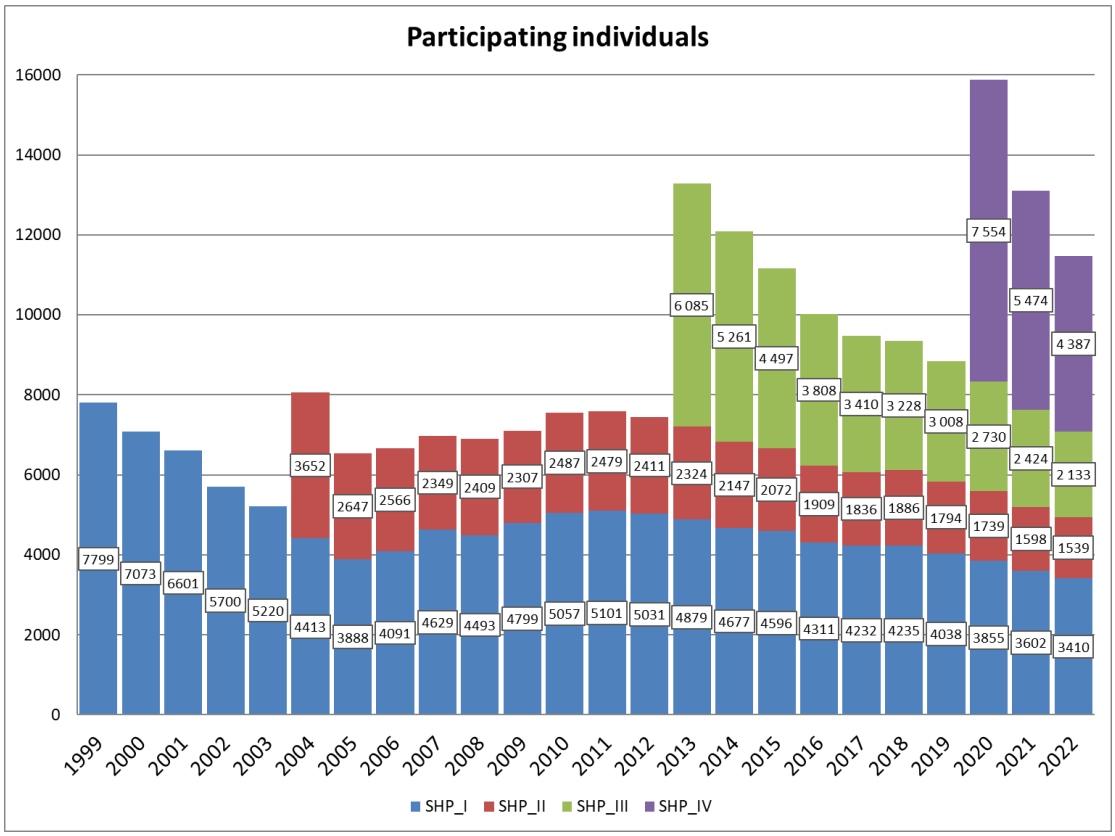


Figure 2.2: Completed individual questionnaires by wave and sample

Table 2.3 shows the longitudinal participation of respondents from all SHP samples combined (SHP_I to SHP_IV). A total of 33,617 respondents completed an individual questionnaire at least once (including the biographical questionnaire at Wave 1 of the SHP_III). For almost eighty percent of the sample, we have longitudinal data of at least two waves. For 37% we have more than five waves of data collection. For about 12% (4137 respondents) we have more than 15 waves of data collection.

Table 2.3 Number of waves a household member completed an individual questionnaire. Number of respondents per category, percentage of all household members who participated at least once (SHP_I-SHP_IV combined, 1999-2022)

Number of waves	Respondents	%
1	7 207	21.4
2	4 438	13.2
3	6 066	18.0
4	1 812	5.4
5	1 643	4.9
6-10	6 179	18.4
11-15	2 135	6.4
16-20	2 317	6.9
>20	1 820	5.4
Total	33 617	100.0

3 QUESTIONNAIRES

3.1 General content of the questionnaires

The Swiss Household Panel survey is a comprehensive survey. The questionnaires cover a broad range of fields and topics. They collect both „objective" (resources, social position, participation, etc.) and „subjective" data (satisfaction, values, evaluation, etc.). The whole constitutes an operationalisation of the different elements of the microsocial level: living conditions, life events, attitudes and perceptions, and lifestyles (Budowski et al., 1998). Table 3.1 gives an overview of the topics covered in the household and individual questionnaire. Over the course of the panel, questions and topics have been added and dropped. Please consult our online documentation and overview table for a complete and detailed overview of all variables in the different waves (see search tools on https://forscenter.ch/projects/swiss-household-panel/documentation/).

The documentation included in the data release contain all questionnaires in four languages in pdf format (Documentation/SHP_Questionnaires). They can also be downloaded separately from SWISSUbase.

Table 3.1 Overview of content of the SHP questionnaires

Household questionnaire content	
Composition of the household	- basic information about all household members and their relations
Accommodation	- characteristics, - home ownership or tenancy, - cost of and subsidies received for housing, - satisfaction - evaluation of the state of the accommodation - reasons for moving
Standard of living	- possession of various goods and participation in various activities, - the reasons households do not have these goods or carry out these activities
Financial situation	- financial difficulties, - indebtedness, income and wealth, - assessment of income and expenses, - satisfaction with income - assessment of the evolution of the financial situation - wealth
Household and family organisation	- external help (housework, childcare, care for household members) - division of housework and childcare - decision-making within the household

Individual questionnaire content	
Household and family, demographic information	- partner status and civil status - nationality and permits - information on children living outside the household, - time spent on housework and care work - satisfaction with living with household members and with the share of housework
Life events	- occurrence of events such as the termination of relationships, bereavement, and conflicts with relatives
Health and quality of life	- general illness and health problems - doctor and hospital visits, psychological help - long-term health issues and disabilities, type of illness - self-perceived state and evolution of health, - satisfaction with health and with life in general, - feelings of safety, - tobacco consumption, - health insurance, - physical activities - perceived stress - identification with different social categories (SHP_III only) - experiences of discrimination (SHP_III only)
Social origin	- information related to each respondent's parents, including profession, professional position, educational level, political positioning, nationality, and financial difficulties in the family of origin at the reference age of 15
Education	- the respondent's native language(s), - level of education completed, - education currently pursued, - participation in on-the-job training - aspirations
Employment	- information on the respondent's profession, such as working conditions, number of hours worked, work schedule, atypical work, status in the labour market, previous jobs, job satisfaction, job insecurity, personal qualifications, and monthly professional activity calendar
Income and wealth	- total personal income, - total professional income, - social security pensions, - social and private transfers, - rental income, - interest and dividend and other income, - satisfaction with the financial situation and - evaluation of changes in financial situation - wealth estimate
Participation, integration, and networks	- frequency of social contacts, - volunteering and informal support, - membership of associations, - assessment of social capital measured as potential practical help and emotional support from various social network ties

	- values and general trust in people
Politics and values	- political interest, participation, and membership, - party identification and political positioning, - satisfaction with the political system, - issues, political values and opinions, - environmental behaviour and values, - gender equality, - tolerance towards religion - the respondents' experiences of anomie in society (SHP_III only) - regional sense of belonging (SHP_III only)
Leisure and media	- leisure and cultural activities, - holidays, - use of various media - satisfaction with leisure and free time
Psychological dimensions	- self-perception, emotions, sense of control and self-esteem, and other aspects like the Big Five personality traits

3.2 Modular design

In 2009 the SHP introduced a system of modularization with three different types of questions: (1) questions asked only once (usually in the first interview), (2) questions asked each wave and (3) questions asked regularly, but not each year (see for an overview Table 3.2).

Table 3.2: Questionnaire content

Topics	Unique[1]	Core	Rotating core
Last job[2]	X		
Social origin	X		
Socio-demographics		X	
Life events		X	
Health		X	
Education		X	
Current job		X	
Occupational calendar		X	
Income		X	
Social network			X
Leisure			X
Social participation			X
Politics			X
Religion			X
Psychological scales			X

[1]) In addition to these modules, there are specific questions within other modules that are only asked once

[2]) Last job refers to the last job held prior to entering the panel for those respondents who were not in employment at the time of the first interview (see 6.3).

Table 3.3 shows the rotation calendar for the rotating modules.

Table. 3.3: Rotation calendar of the SHP modules from 2010 to 2027

	Social network	Religion	Social participa-tion	Political behaviour and values	Leisure and culture	Psychologi-cal dimen-sions
2010	X				X	
2011			X	X		
2012		X				X
2013	X				X	
2014			X	X		
2015		X				X
2016	X				X	
2017			X	X		
2018		X				X
2019	X				X	
2020			X	X		
2021		X				X
2022	X				X	
2023			X	X		
2024		X				X
2025	X				X	
2026			X	X		
2027		X				X

3.3 Changes to question formulations and response categories over time

Over time, some questions in the SHP questionnaires have changed (e.g. in question wording or response categories), which makes comparison over time potentially problematic. In the case of relevant changes in the question, a different variable name was assigned. The variable name was retained for changes in the response categories. We here provide a list of variables concerned with such changes. We refer to the SHP long file user guide for details on the variables mentioned below regarding when which changes occurred, as well as suggestions for harmonization.

Table 3.4 Variables with changes from the household questionnaire

Outsourcing	
H$$F03/H$$F03A	External help, housework
H$$F14/H$$F14A	External help: elderly person
H$$F25/H$$F25A	External help: handicapped person
Financial situation, deprivation	
H$$I20/H$$I20N/ H$$I20AC	Savings
H$$I21/H$$I21N/	Reason for not saving

H$$I21AC	
H$$I76/H$$I76A	Financial help
H$$I136	Car: type of engine

Table 3.5 Variables with changes from the individual questionnaire

Demographic variables	
SEX$$	Sex
Employment	
P$$W06	Job offered, earliest starting date
P$$W12	Reason for not working
P$$W13	Reason for not working
P$$W14	Reason for not working
P$$W29/P$$W29A/ P$$W29B	Type of employment
P$$W34/P$$W34A	Job position: management, supervision, production
P$$W37	Type of contract if limited in time
P$$W43	Reason for parttime work
P$$W71/P$$W71A	Type of working hours
P$$W80/P$$W80A	Work at home
P$$W86/P$$W86A	Job security: estimation
P$$W600	Reason for change of job or employer
Education	
P$$E01	First education completed, type
P$$E04	Education completed since last wave, type
P$$E05	Second education completed, type
P$$E07	Third education completed, type
P$$E15	Current training, type
X$$E01	Current training, type
Life events	
P$$L35/P$$L90 P$$L36/P$$L91 P$$L37/P$$L92 P$$L38/P$$L93	Other life events
Social networks	
P$$N10	Contact with relatives, number
P$$N17	Contact with neighbours, number
P$$N24	Contact with close friends, number
P$$N31	Contact with colleagues, number
P$$N109	Type of online social networks
Politics and attitudes	
P$$P11	Member of political party: which
P$$P19	Party choice if elections tomorrow
Health	
P$$C04/P$$C04A	Back problems last 12 months/4 weeks
P$$C05/P$$C05A	Weakness, weariness last 12 months/4 weeks
P$$C06/ P$$C06A	Sleeping problems last 12 months/4 weeks
P$$C07/P$$C07A	Headaches, facial pains last 12 months/4 weeks
P$$C19/P$$C19A	Chronic illness
P$$C21/P$$C21A	Chronic problem, since when
P$$C22A/P$$C22B	Chronic problem, physical or psychological
Religion	
P$$R01	Confession or religion
P$$R05	Prayers apart from church or religious community

4 ADDITIONAL DATA COLLECTIONS FROM THE MAIN SHP SAMPLES

4.1 Biographical questionnaire SHP_I

To obtain additional information about the SHP_I respondents' life course prior to the panel study, a retrospective biographical questionnaire questionnaire was administered in 2001 and 2002 with questions regarding respondents' educational, working, and family histories. Respondents received this self-completion paper-and-pencil questionnaire by mail.

A test survey was conducted in 2001 among a selection of SHP_I sample members. When the results showed that the drop-out rates did not increase substantially as a result of the questionnaire sent in between two waves (Scherpenzeel et al., 2002), the main survey was carried out in 2002 with the remaining SHP_I sample members.

SHP_I *biographical data* are available for 5,560 individuals with the 2001 and 2002 surveys combined. Some variables only exist for one of the survey years (e.g. education history only for 2002), or only in an aggregated form (e.g. living arrangement for 2001). The overall participation rate was 53%, but over 80% of the respondents who participated in every wave between 1999 and 2004 participated in the biography survey (Budowski and Wernli, 2004).

The questionnaires are available on the website (https://forscenter.ch/projects/swiss-household-panel/documentation/ under SHP Main Study Documentation, questionnaires) and on SWISSUbase (under Questionnaires, included in the zip-file). See Table 6.1 for an overview of the data files.

4.2 SHP_III Life Calendar (Wave 1)

The life calendar

The first wave of the SHP_III consisted of collecting retrospective individual biographical data. Respondents in the SHP_III sample did not complete an individual questionnaire in Wave 1, but instead completed a life calendar.

The SHP_III life calendar is presented as a two-way grid with the temporal dimension in years in rows, and various domains of life in columns. Respondents were asked to report events for each domain of life in this grid. This life calendar was developed in collaboration with the NCCR LIVES and is available on the website

(https://forscenter.ch/projects/swiss-household-panel/documentation/ under SHP Main Study Documentation, questionnaires) and on SWISSUbase.

The grid provides a visual structure, which enhances several aspects of memory retrieving (Caspi et al., 1996). The SHP_III participants can visualize their life trajectories in all domains and can therefore link the occurrence and duration of events in different domains. Interrelatedness facilitates recall of distinct events, because interrelated themes reflect the individual autobiographical memory (Belli, 1998; Belli, Lee, Stafford, & Van Hees, 2002). The visual structure also helps to detect gaps and inconsistencies. Overall, this method produces high quality retrospective data (Freedman et al., 1988).

The life calendar covered the following domains of life: residential trajectory, residence permit, living arrangements, partner relationships and changes in civil status, family events, professional activities, and health.

The domain of *education* was not included in the life calendar. Instead, the educational trajectory of the SHP_III respondents was assessed in the regular individual questionnaire of Wave 2.

Fieldwork protocol

Fieldwork for the first wave of the SHP_III took place from September 2013 to March 2014, in parallel with the SHP_I and SHP_II. The life calendar replaced the individual questionnaire in this first wave, so it was completed in addition to the grid and the household questionnaires, which were administered by telephone or face-to-face. Only household members aged 16 or older were eligible to complete the life calendar.

Households with a known telephone number were contacted by phone to complete the grid and household questionnaire. Two to four days after this initial interview, all eligible participants received by mail the life calendar, an instruction manual and a return envelope. Participants who did not return the biographical questionnaire within two weeks received a reminder. Participants who still did not respond within the two weeks following this first reminder were re-contacted by a special face-to-face team. This team provided help with the completion of the questionnaire if needed.

If no telephone number was available, interviewers went to the households to recruit households into the study and complete the grid and household questionnaire face-to-face. If possible, the respondents also completed the biographical questionnaire at this time. Otherwise, the biographical questionnaire, a manual and a return envelope were left with the respondent who could complete the questionnaire later. The follow up of nonrespondents was the same as for the households with a known telephone number.

See Table 6.1 for an overview of the files containing the data collected with the life calendars.

4.3 SHP Covid-19 Study

The pandemic of the new Corona virus in 2020 and the economic crisis that followed has had a profound global impact. To get more insight into how the households in the Swiss Household Panel were affected by and fared during the Corona crisis, the SHP conducted an additional wave of data collection between Wave 21 and 22.

The SHP Covid-19 Study questionnaire covered the following topics:

- Health
- Work situation
- Financial situation
- Home schooling from the perspective of pupils/students
- Time use
- Reconciliation of work and family
- Wellbeing
- Social cohesion
- Evaluations of government policies
- Social support

The Covid-19 Study questionnaire included several questions taken from the main SHP questionnaire as well as additional measures specific for the situation experienced in relation to the pandemic.

The SHP Covid-19 Study sample consisted of all respondents who completed the individual questionnaire of Wave 21 (2019-2020), except for respondents who left the study after completion of the individual questionnaire in Wave 21.

The survey was administered by M.I.S. Trend using web and paper questionnaires. All respondents who provided a valid e-mail address for the electronic newsletter of the SHP received an invitation with link to the web questionnaire by e-mail on May 12 (6359 sample members). The remaining respondents received an invitation for the web questionnaire by mail (2413 sample members). This invitation included information that a paper version of the questionnaire was available upon request. In total, 8772 sample members from 5540 households received an invitation to participate in the study.

A reminder was sent by mail on June 2 to all sample members who had not yet replied nor explicitly refused (5045 sample members). This reminder letter included a paper version of the questionnaire as well as a return envelope. No incentives were used for this study. Fieldwork ended on June 26, at which point 5843 of the 8772 sample members had completed the Covid questionnaire, which is a

response rate of 66.6%. 67% completed the questionnaire online and 33% completed the paper version. Also, 2 respondents completed the questionnaire by telephone after calling the hotline.

The information collected in the Covid-19 Study can be linked to past and future waves of the SHP, allowing longitudinal analyses on the consequences of the pandemic in the short and longer term. **In such longitudinal analyses it is important to account for a change in mode, for example by including the survey mode as a covariate in the analyses to obtain reliable conclusions.**

See for more details the SHP Covid-19 Study User guide and questionnaire (released with the data, available on SWISSUbase and on the website (https://forscenter.ch/projects/swiss-household-panel/documentation/ under SHP Main Study Documentation).

Main descriptive results of the SHP Covid-19 Study are available as a FORS Working Paper:
https://forscenter.ch/working-papers/first-results-of-the-swiss-household-panel-covid-19-study/

5 ADDITIONAL SAMPLES: STUDIES ASSOCIATED WITH THE SHP

5.1 The SHP LIVES-Vaud and the LIVES-FORS Cohort

The LIVES-FORS Cohort and SHP LIVES-Vaud surveys are closely associated with the SHP. They are separate studies but form additional samples of the SHP and can be combined with the SHP main samples. The studies ran in parallel and shared most of the questions and modules with the SHP.

The **SHP LIVES-Vaud Survey** is a stratified sample of the population in the canton of Vaud with an over-representation of poor households. The SHP LIVES-Vaud Survey used the same design as the SHP and interviewed all people older than 14 years in the household. The survey was conducted annually from 2013 to 2018. It was managed in collaboration with the Department of Health and Social Action (DSAS) of the canton of Vaud, FORS, and LIVES. In addition to the regular SHP questionnaire, the study included additional questions on social policies, welfare transfers and the financial situation of the household. For more information, and to get access to the data of SHP-Vaud Survey, see SWISSUbase:
https://www.swissubase.ch/en/catalogue/studies/12273/13258/overview

The **LIVES-FORS Cohort** over-represented second-generation immigrants, operationalized as respondents whose parents were both born abroad and who arrived in Switzerland after the age of 18 years. The sample includes individuals born between 1988 and 1997 residing in Switzerland on the 1st of January 2013 and schooled in Switzerland prior to the age of 10. Only the targeted member of the household completed an individual questionnaire. The aim of this study was to build an extensive sample of second-generation immigrants across Switzerland. Starting from a stratified random sample, the selection process used a controlled network sampling method. The survey was conducted from 2013 to 2019 and is now completed. For more information, and to get access to the data of LIVES-FORS Cohort, see SWISSUbase:
https://www.swissubase.ch/en/catalogue/studies/13144/15297/overview

5.2 SHP_IV Pilot Study

In preparation of the refreshment sample SHP_IV that started in 2020, the SHP ran a two-wave pilot study in 2017 and 2018 to test alternative modes of data collection, to assess the ways in which offering web as an alternative mode affects response rates, sample composition and measurement. The aim of the pilot that incorporated a mixed-mode experiment was to compare the standard SHP

telephone-based fieldwork (and recruitment) strategy with two online alternatives: a mixed mode group (telephone for the household reference person interview plus web for individual household members) and a web-only group.

The data of the pilot are available to SHP data users and are especially suited to answer methodological research questions related to interview modes in household panels. As the study was based on a stratified random sample and used the complete SHP questionnaires, the data can also be used for substantive analysis. It is important to note, however, that the weights provided with the data do not weight for the mode of data collection and the sample of the pilot cannot be easily combined with the main samples of the SHP.

Complete documentation, including a user guide on the SHP_IV Pilot Study is available on SWISSUbase: https://www.swissubase.ch/en/catalogue/studies/13816/latest

6 USING THE SHP DATA

6.1 Data files

Overview of downloaded data files

Whereas all documentation is openly accessible, SHP data files are only available after signing a data user contract. When you download the SHP data and documentation, you obtain several datasets. Table 6.1 provides an overview. All files are available in Stata[4], SPSS and SAS format.

Table 6.1 Overview of datasets in the SHP release (in bold the core SHP files)

Folder	File name	description	More information
SHP-Data-WA		Unique files	
	shp_mh	**Master household file**	**See below**
	shp_mp	**Master person file**	**See below**
	shp_ca	Monthly employment calendar	See below
	shp_lj	Last job prior to panel entry for not employed respondents at first interview	See below
	shp_so	Social origin	See below
	shp_hldcomp	New household typology of parental and filial relationships for all waves	See below
	shplong_h_user	Longitudinal file combining all annual household files in long format	See below
	shplong_p_user	Longitudinal file combining all annual individual files in long format	See below and the SHP long file user guide
SHP-Data-W1-W24		Annual files	
	shp$$_h_user[1]	**Household annual file**	**See below**
	shp$$_p_user[1]	**Individual annual file**	**See below**
SHP-Data-SHP-3-W1		SHP_III biographical files	See 4.2 and the SHP_III 2013 Codebook
	shpiii_cs_user	Partner relationships and civil status	
	shpiii_fa_user	Family events	
	shpiii_hea_user	Operations, accidents and mental health problems	
	shpiii_la_user	Living arrangements	

[4] Please not that Stata is case sensitive and that Stata data file names are in lower-case.

	shpiii_pm_user	Residence permit and acquisition of Swiss citizenship	
	shpiii_prof_act_user	Professional activity, unemployment, social benefits	
	shpiii_re_user	Residence, geographical mobility	
SHP-Data-Biography		SHP_I biographical data	See 4.1. To combine files also see the syntax delivered with the data. See also the biography userguide
	SHP0_bh_user	Biography data file (horizontal)	
	shp0_bvcs_user	Changes in civil status	
	shp0_bved_user	Educational trajectory	
	shp0_bvfe_user	Family events	
	shp0_bvla_user	Living arrangements	
	shp0_bvlp_user	Learned professions	
	shp0_bvre_user	Retirement	
	shp0_bvsa_user	Periods outside of Switzerland	
	shp0_bvwl_user	Work life	
	shp0_mbi	Master file including weights	
SHP_Covid		SHP Covid-19 Study	
	shp_covid_user		See 4.3 and SHP Covid-19 Study User Guide
SHP-Data-Interviewers			
	Shp$$_v_user[1]	Data collected from interviewers	See below
SHP-Data-imputed-Income-Wealth		Imputed income and wealth data	See 6.9 (additional income variables)
	imputed_income_hh_long_shp	Imputed household income in long format	
	imputed_income_hh_wide_shp	Imputed household income in wide format	
	imputed_income_pers_long_shp	Imputed personal income in long format	
	imputed_income_pers_wide_shp	Imputed personal income in wide format	
	Imputed_wealth_2012_2020	Imputed wealth	See 6.9 (wealth)
SHP-DATA-CNEF		Harmonized variables for CNEF	See 1.3 and CNEF codebook
	shpequiv_yyyy[2]		

[1]) $$ refers to the wave, hence one file for each wave is included.
[2]) yyyy refers to the year, with one file per year included (from 2003 onwards)

After signing an additional contract, data users can also get access to the following data files:

- A file that provides the commune codes for all participating households, allowing the enhancement of SHP data with contextual data (contact boris.wernli@fors.unil.ch).
- A file with details on the geographical mobility of respondents (SHP_III only) to practice their religious activities (collected in Wave 17) and with regard to education and employment (collected in Waves 16-18) and mobility related to associations (Wave 16). Contact robin.tillmann@fors.unil.ch for information.

Master files: households and individuals

The master files of households and of individuals include all households and individual respondents that are in the panel or have been in the panel in the past. The files contain an overview of response statuses for all waves.

The household master file (SHP_MH) contains all households of the four samples of the SHP. The file includes for every wave who the reference person is, whether the grid and the household questionnaire were completed, and if so, when.

The individual master file (SHP_MP) contains all individuals who have resided in the participating households in any of the waves. This file includes the time-invariant variables gender,[5] date of birth (month and year), identification number of father and mother, as well as response statuses and interview dates for all waves.

Annual files: households and individuals

The annual household files (SHP99_H_USER, SHP00_H_USER, etc.) contain information from the household interviews complemented by information from the grid questionnaire. The annual individual files (SHP99_P_USER, SHP00_P_USER, etc.) includes information from the annual individual interviews.

This overview table provides an overview of which variables are included in which waves of the annual household and individual files (also available on our website https://forscenter.ch/projects/swiss-household-panel/documentation/ under search tools, overview of variables by waves).

You find more information on constructed variables on the website (under SHP Main Study Documentation, additional documentation). There you also find an overview and references for the psychological dimensions included in the questionnaires.

[5] Gender is not by definition time invariant, in the annual files over time gender may vary. In the master file the most recently reported gender is included.

Long files: households and individuals, combining all annual waves
To facilitate working with longitudinal data, we have prepared two long files combining all waves into one dataset, for the individual data and the household data separately. The long files contain, in principle, the same information as the annual file, with some variables harmonised. Before working with these data, we advise data users to read the long file user guide first.

Monthly employment calendar
Based on the variables included in the annual individual files, the calendar file combines for every person the professional activity status in each month over all waves. For persons who completed the individual questionnaire in wave x, information on their activity is included for:

- the last 12 months if the person did not answer the individual questionnaire in the preceding wave;
- all months since the interview in wave x-1 if the person participated in both waves x and x-1.

The activity calendar is empty for waves in which a respondent did not answer the individual questionnaire.

The variable names in the calendar file are as follows:

- JAN$$: activity status in January in the year $$
- FEB$$: activity status in February in the year $$
- MAR$$: activity status in March in the year $$
- etc ...

The calendar questions in the questionnaire have changed twice over the course of the years, in wave 4 and in wave 6. For all waves, however, the professional status at the time of the survey is determined by the variables:

- P$$W01 to P$$W03 (to distinguish between in paid employment or not);
- P$$W39 and P$$W42 (to distinguish between fulltime and part-time employment);
- P$$W06 (to distinguish between unemployment and inactivity).

The respondents who did not work during the week preceding the survey or did not have a job are asked (variable P$$W154):

You are not currently in paid employment. However, since (month-year) have you had a paid job, also be it casual or on an irregular basis?

Respondents who worked at the time of the survey were asked (variable P$$W177):

Since (month-year) has there been a change in the number of hours you work, have you started or ended an activity or even been unemployed? (Waves 2-5)

Since (month, year) have you changed your professional status (employee, self-employed), changed the amount of hours you work (full time, part time), started or stopped work, or been unemployed? (Wave 6 and after)

In case the answer to this question is “no”, the activity status at the time of the interview is assumed to hold for every month that elapsed since the preceding interview, or for the last 12 months if the respondent did not respond to the individual questionnaire in the preceding wave. For these cases, the appropriate value is imputed for all months since the last wave.

In case the answer is “yes” to one of the questions above, i.e. if the person reported any changes in his/her status during the period considered, the respondent is asked to report the employment situation for every month since the previous wave/since the last twelve months.

The calendar questions changed twice since the start of the survey. First, in Wave 2 and 3 different questions were asked depending on whether the respondent had a paid job. Response categories differed between these two questions (see Table 6.2). In Wave 4 and 5 both active and inactive respondents answered the same questions, with slightly adapted response categories compared with earlier waves. Until Wave 5, it is possible to distinguish between large and small part time jobs. From Wave 6 onwards this distinction is no longer made, but separate response categories for self-employed respondents and employees are introduced instead.

Because the calendar file contains information from all waves, some detail present in the separate waves has been lost. The calendar file does not include a distinction between small and large part-time jobs, nor does it have a distinction between self-employed individuals and employees. Users of the data interested in analysing these distinctions are advised to use the calendar questions in the personal files of the appropriate waves and to contact us if they need support with this task.

In the calendar file the following codes are used:

1. Employed full time
2. Employed part time
3. Unemployed
4. Inactive
5. Unemployed or inactive (relevant for inactive respondents in W2 and W3 only when these two categories were grouped together)

Table 6.2 shows the different versions of the calendar questions in the individual interviews and the corresponding codes in the calendar file.

Table 6.2 Questions related to the activity calendar and the corresponding codes in the calendar file

W2 and W3				W4 and W5		W6 to present	
Original question Employed respondents	Cal-en-dar value	Original question Inactive respondents	Cal-en-dar value	Original question	Cal-en-dar value	Original question	Cale n dar value
We are going to review the months between now and (month-year) and for each month, I would like you to tell me if you have worked full-time or part-time or if you have not worked due to a period of unemploy-ment, training or other rea-son?		We are going to review the months between now and (month-year) and for each month, I would like you to tell me if you have worked full-time or part-time?		We are going to review the months between now and (month-year) and for each month, I would like you to tell me if you have worked full-time or part-time or if you have not worked due to a period of unemployment, training or other reason?		We are going to review the months since (month, year) and for each month you should tell me whether your main activity was: full-time employee, part-time employee, full-time self-employed, part-time self-em-ployed, unemployed, retired, training/education, housework, or any other situation?	
1 fulltime job (>37h)	1	1 fulltime paid job (>37h)	1	1 fulltime paid job (>37h)	1	1 Employee fulltime	1
2 part-time job (19-36h)	2	2 part-time paid job (19-36h)	2	2 part-time paid job (19-36h)	2	2 Employee part-time	2
3 small part-time job (1-18h)	2	3 small part-time job (1-18h)	2	3 small part-time job (1-18h)	2	3 Self-employed fulltime	1
4 unemployed	3	4 no job	5	4 unemployed	3	4 Self-employed part-time	2
5 continued education/ vo-cational retraining	4			5 continued education/ vo-cational retraining	4	5 Unemployed	3
6 other	4			6 retired	4	6 Retired	4
				7 other	4	7 Student	4
				8 student	4	8 At home (domestic work, chil-dren)	4
						9 Other inactive	4

Last job file
This file contains information on the last job of all household members who were a) inactive at the time of their first interview, and b) interviewed in person or by proxy in any of the waves since 1999.

The information on the last job is collected during the individual interview if the following three conditions hold:

- The person is interviewed for the first time, and
- the person does not currently work (P$$W01, P$$W02 and P$$W03 ≠ 1), and
- the person has worked in a regular way in the past (P$$W07 = 1)

The information on the last job may also be collected in a proxy interview, if the following three conditions are met:

- It is the person's first proxy, and
- the person does not work (i.e. in the household grid, G$$OCC ≠ 1 or 2), and
- the person has worked in the past for at least one year (X$$W05)

Because this information is collected only once, the information is combined in a file « last job», comprising the variables of the individual questionnaire and the proxy questionnaire, in which the wave identifier is renamed by $$ (SPSS) or __ (Stata, SAS). A separate variable (LJYY) indicates the wave in which the information was collected.

Note that if a respondent is not working in a given wave, but was working in any of the previous waves, this information is not included in the last job file, but in the previous annual individual files.

Social origin file
The social origin file contains information on several characteristics of the parents when the respondent was 15 years old. All individuals who completed an individual interview in any of the waves are included, with some exceptions described below.

The following information about a person's social origin (at the age of 15) is collected in the first interview:

- the composition of the household;
- the level of education, professional activities and nationality of both parents;
- the political positioning of the parents.

Persons younger than 20 years old who still live with their parents do not complete the social origin module. Consequently, individuals who had their first interview before they turned 20 were initially not in the social origin file. But social origin information is available for the respondents whose parents live in the household and completed their own questionnaire. Hence, when available, this information is taken from the individual interviews with the parents and included in the social origin file (the variable SOURCE indicates if the information is

collected from the child or is constructed from the parents' individual questionnaires).

The social origin file contains variable names, in which the usual two-digit number showing the year of the data collection is replaced by $$ (SPSS) or __ (Stata, SAS). A separate variable (OSYY) indicates the wave during which the data on the respondent's social origin have been collected.

The questions corresponding to the variables P$$O60 to P$$O65 have only been asked in the first wave (1999). Therefore, valid values are only available for respondents interviewed for the first time in Wave 1. For all others, these values are labelled 'missing'.

The questions regarding the parents' political orientation when the respondent was 15 years old are asked since Wave 4 (2002):
- P$$P46 Political position: Left, Right: Father
- P$$P47 Political position: Left, Right: Mother

In Wave 4, every person responding to the individual questionnaire answered these two questions. Hence, we obtained this information also from persons already interviewed in previous waves in which these questions were not asked. Since Wave 5, these two questions are part of the social origin module and are only posed to persons who are interviewed for the first time. Consequently, the information is missing for respondents who completed the social origin module before Wave 4 and who did not participate in Wave 4.

Household typology of parental and filial relationships

The SHP now includes a variable that distinguishes among the couple-with-children households between couple households with common children, couples with children from a previous relationship, and those with children from a previous and current relationship. For the moment, this variable is available as a separate file including the household identifier and the variable for all waves. See for more information this FORS Working Paper by Sandrine Morel, who developed the variable. Detailed documentation including the codes to create the variable in SPSS and in R is available on our website (https://forscenter.ch/projects/swiss-household-panel/documentation/) under additional documentation, Documentation on household typology of parental and filial relationships.

Biographical files 2001-2002 (SHP_I)

The Biographical files include two "*horizontal" files* with lines representing individuals (Biography Master File and Biography Data File), and "*vertical" files* for **each** of the eight domains with lines representing "events".

Biography Master File SHP0_MBI

The Biography master file contains the identification numbers (idpers) of all individuals who completed the biographical questionnaire in 2001 or 2002. The master file further includes individual *population* weights (wp00tbgp) and *sample* weights

(wp00tbgs). Weights of zero had to be attributed to 199 persons for methodological reasons[6].

Biography Data File SHP0_BH_USER
In the **horizontal file** each row represents one respondent. It contains in total 281 variables representing for each domain per episode the beginning, end and description. For example, for every employment, starting date, end date and several characteristics of the job are included, all as separate variables. Also, individual *population* weights (wp00tbgp) and *sample* weights (wp00tbgs) are included in this file.

In the eight vertical files (one file per domain), a row represents one episode. Respondents experiencing different episodes in a given domain - for example they have held several jobs - take up multiple rows in the file (one for every job). An index variable is included to preserve the order of the episodes of respondents.

Biographical files SHP_III

For each life domain there is a file containing the complete life history for all respondents. The files on the various domains are “long files” where each row contains one episode. Respondents are included with as many rows as they mentioned episodes in the domain in question. For example, respondents who have held several jobs take up one row for every job. The index variable preserves the order of the episodes within respondents.

The domain of *education* was not included in the life calendar. Instead, the educational trajectory was assessed in Wave 2 of the SHP_III.

Interviewer files

The interviewer files contain information from paper-and-pencil questionnaires (initially by paper-and-pencil, by web since 2021) completed by the SHP interviewers. In all waves (except wave 1, 3 and 4) the interviewers completed a short questionnaire, collecting information on demographic traits of the interviewer such as sex, age, language and education, but also characteristics such as the attitude of the interviewers towards the study and towards sensitive questions. The content of the questionnaires varies somewhat over time, following changing SHP research interests.

Attention!
The values of the variable "idint" in the Interviewer data files have been encrypted to protect the identity of the Interviewers. **Merging the Interviewer-data with the Household and Individual level files is only possible after de-coding.** Please contact Oliver Lipps for more details (oliver.lipps@fors.unil.ch). Note further that in 2008 (Wave 9), the interviewer ID changed: a value of 10’000 was added to the ID of all interviewers located in the Lausanne office, and a value of 50’000 was added

[6] The information of these respondents was of poor quality, or information needed to construct weights was lacking.

to the ID of interviewers in the Bern office. This is important for longitudinal interviewer analyses.

6.2 Variable naming conventions

The variable names are coherent over time. Only the year indicator changes. The names of the variables follow these conventions.

Year related variables: _yydnn
Non-year related variables (individual number, sex,…): _dnn

Where _ depends on the level of information:
P = Person
H = Household
G = Grid
X = Proxy

Where **yy** denotes the year:
99 = 19**99** 00 = 20**00** 01 = 20**01** , ….

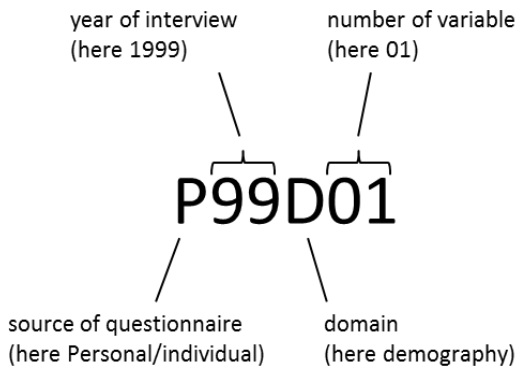
Where **d** denotes the **d**omain:

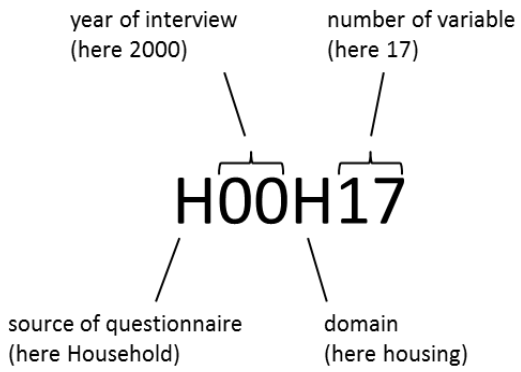
a	Hobbies, leisure, free time, lifestyle, holidays, etc.
B	Biography
C	Health, constitution
D	Demographic variables
E	Education
F	Family (climate, relationships, work repartition,…)
G	Grid
H	Housing
I	Income, financial situation and living conditions
L	Life-events
M	Geographical mobility
N	Social networks
O	Social origin
P	Politics
R	Religion
V	Values, aspirations, (other than political ones)
W	Labour force, work ,social status
Y	Violence

Yth	Youth
Z	Other variables

Where **nn** is a two-digit number which refers to the **n**umber of the question, normally the position in a block dedicated to a specific topic.

Two examples:





Constructed variables do not follow the convention of variable naming and codification. These variables have a name corresponding to their contents (for example wstat00 for working status in 2000). They are classified by their respective domains and are located in the module to which they belong.

6.3 Missing value conventions and imputation procedures

The following missing value labels are used:

-1 does not know
-2 no answer
-3 inapplicable. This means either
  a) the specific question was not applicable and hence not asked
  b) the respondent did not participate in this particular wave
  c) the entire household did not respond/was not contacted
-7 filter error (a question should have been asked but was not)
-8 other error

Apart from some basic consistency checks and corrections, no values are changed or imputed, except for some income variables (see 6.8).

6.4 Combining data files

Table 6.3 shows the identification numbers that are available in the different data files. The personal ID (idpers) is included in all files on the individual level, always referring to the same individual. The interviewer ID is available in the interviewer files and the annual individual and household files.

As the composition of households can change over time, their identification number is wave specific.

Identification numbers of parents and spouses refer to their personal ID. For example, to match parents and children, one can attach the information of the parent to the child, by matching idmoth$$ and idfath$$ (idmoth__ and idfath__ in Stata and SAS) of the child to idpers of the parent.

To combine information from the household reference person with the household, refper$$ should be matched to idpers in the individual file. To add information from the partner of the reference person to this file, rpspou$$ in the household file should be matched to idpers.

Table 6.3 Identification numbers

Variable	in files[a]	description
idint[b]	P, H, V	ID of interviewer
Idpers	P, MP, SO, CA, LJ, BIO, COV	ID of person
Idhous$$	P, H, MP, MH, BIO, COV, HLD	ID of household
Idfath$$	MP	ID of father
Idmoth$$	MP	ID of mother
Idspou$$	P	ID of partner
Refper$$	H, MH	ID of reference person in household
Rpspou$$	H	ID of partner of reference person

[a]) P annual individual files (wave specific) and long file
H annual household files (wave specific) and long file
MP master file individuals
MH master file households
V interviewer file
SO social origin
CA activity calendar
LJ last job
BIO biographical files
COV Covid-19 file
HLD File with a household composition variable for all waves

[b]) **Attention!**
The values of the variable "idint" in the Interviewer data files have been encrypted to protect the identity of the Interviewers. Consequently, merging the Interviewer data with the Household and Individual level files is only possible after de-coding. Please contact Oliver Lipps for more details (oliver.lipps@fors.unil.ch).

Syntax combining files
Downloaded with the data, in the folder documentation/examples-syntax-file-creation, are example codes in SPSS, Stata, SAS and R for:

- Merging individual annual file with master person file and other unique files
- Merging individual annual files
- Merging individual and household annual files
- Creating an individual or household longitudinal file (all waves, wide format)
- Creating a longitudinal file (all waves, long format) with all individual and household annual files
- Creating a partner file for a single wave

These codes are also available on:
https://forscenter.ch/projects/swiss-household-panel/documentation/ (under data management).

6.5 Using survey weights

Please also consult the FAQ on weighting on our website (https://forscenter.ch/projects/swiss-household-panel/documentation/ under SHP Main Study Documentation, additional documentation).

Overview of the current weights

Longitudinal household panels like the SHP have complex weighting schemes, as different types of weights are required. The main objective of a longitudinal survey is to analyse change over time, for which longitudinal weights are required. The longitudinal individual weights of the SHP refer to the population of individuals in the first wave of a particular sample (1999, 2004, 2013 and 2020 for SHP_I, SHP_II, SHP_III, and SHP_IV respectively). Longitudinal surveys are also used for cross-sectional analyses. For this purpose, we also offer individual and household cross-sectional weights, referring to the population of individuals and households in any given year. Moreover, we developed cross-sectional weights for the children (<15 years old) living in the SHP households.

For all waves three types of weights are delivered with the SHP data: (a) individual longitudinal weights, (b) individual cross-sectional weights, (c) and household cross-sectional weights. From wave 16 onward (respectively 11 for the SHP_II and 2 for the SHP_III), besides of these three types mentioned above the SHP also delivers cross-sectional weights for children and weights for the SHP_III sample only, to offer the possibility to analyse the SHP_III biographical data in combination with the annual files.

In addition, to simplify the use of weights for longitudinal analysis of a sample with a different starting date than the first wave, we also deliver longitudinal weights with different starting years (since Wave 18).

Selection of the appropriate weight

It is essential to use weights to have estimates that are representative of the underlying population.

Cross-sectional weights are assigned to individual respondents, children and households and always refer to the year analysed. These weights assure that the sample is representative for any given year of data collection and should be used for cross-sectional analysis (for example, to calculate the percentage of households living in poverty or the population's general satisfaction with life in 2015).

The *longitudinal weights* (individuals) always refer to the population resident in Switzerland at the first wave (in 1999 for SHP_I, in 2004 for the combined panel SHP_I and SHP_II, in 2013 for the combined panel SHP_I, SHP_II and SHP_III and in 2020 for all of the four SHP samples combined). These weights should be used if respondents are followed over time from the first wave. Although not always ideal, for longitudinal analyses it is generally better to use a slightly imperfect longitudinal weight, which will at least consider inclusion probabilities and non-response then none at all.

We recently adapted the naming conventions of the weight variables to help data users determine the nature of the weight variable according to its name, to simplify

the understanding which weights concerns which panel for which year etc. The new names reflect these different aspects of the weight variables.

The naming convention of the weights is the following:

- W as first letter for all weight variables
- Followed by I for individual, H for household or C for child's weight
- $$ representing the last two digits of the year
- CS for cross-sectional or L for longitudinal weights
- S for weights that keep the sample size or P for weights inflating to the population size (the latter are available upon request)
- && representing the last two digits of the year that indicates a starting year of a "panel" for longitudinal weights
- If there is a 3 at the end, the weight is only for the SHP III.

Thus, for example, WI15LS143 is the individual longitudinal weight that keeps the sample size, in 2015 for the SHP III panel members only, where the starting date of the panel is 2014.

Note that for longitudinal analyses based on the SHP_I sample the longitudinal weights have changed name twice (at the start of the SHP_II in 2004, and in 2014). The longitudinal weights for the SHP_II have changed name once (in 2014). For an overview of name changes concerning the weight variables see Appendix C.

Adapting weights when analysing a subsample of the SHP

The delivered weights are developed for the analysis of the whole sample and need to be adjusted if a sub-sample is analysed. Of central importance is to identify the reference population of the subsample. If you would like to take only the sub-sample of men for example, or only certain age groups or only the inhabitants of one specific region of Switzerland, the reference population of these subsamples is not the same as that of the whole sample (the population older than 14 living in private households in Switzerland). For the subsample of men, the reference population is only the population of men older than 14, living in private households in Switzerland. For the group of persons in certain age categories, the reference population also only refers to these age categories, and so on.

The basic weights delivered with the SHP data are calculated to adjust for the reference population of the whole sample. Consequently, they are not completely suitable for these subsamples and need to be slightly modified. For example in the case of the weights that keep the sample size (W.$$..S) the sum of these weights for the entire sample is equal to the sample size. So, when not all units are used, you should adapt the weights so that the sum of the new weights for the subsample is equal to the size of the subsample. That is:

$$W_k^{new} = SS^{new} \times \frac{W_k^{old}}{\sum_{l=1}^{SS^{new}} W_l^{old}}$$

where SS is the sample size, k=person k and l=the lth person in the sample (ranging from 1 to SS). This means that for each person the new weight is calculated by dividing the old weight by the sum of all old weights in the new sample and multiplying it with the new sample size.

Adapting the weights when combining the SHP samples with other samples.

When merging the SHP samples with other samples you should also adapt the weights. Please note the following:

1. The reference population of the merged sample is always the combination of the reference populations of the different samples.
2. In the case when the populations of reference are the same (for the different samples and consequently for the merged sample, i.e. both refer to the total population of 15 years and older living in private households in Switzerland) the delivered weights can be used without modification.
3. When the populations of reference are mutually exclusive, modifications are not needed either (for example if you combine a sample from Vaud with one from Geneva).
4. In all other cases, you should adapt the weights by applying the formulae mentioned above for the combined sample.

Important notes of caution

We would like to share two additional notes of caution. First, household weights are calculated for the household level, and need to be adjusted when they are used in an individual-level analysis. In a dataset containing both individual and household level data, the weight of each household gets multiplied by the number of household members. Each household weight should be divided by the number of individuals of the respective household included in the dataset to get valid results at the household level. The syntax (SPSS, STATA, SAS and R) for this correction can be found in the syntax example released with the data.

Second, the complex sample structure of the data must be considered when using the SHP. The standard procedures of common statistical software packages (e.g. SAS, SPSS, STATA) underestimate variance because they assume a simple random sample (Plaza and Graf, 2007). As with most surveys, the SHP sample selection is more complex as it has stratification, clustering, and adjustments due to nonresponse. This complexity needs to be considered in the analysis to obtain appropriate estimates of the variance. For SAS users, the recommendation is to rely on the “survey” procedures, for example PROC SURVEYFREQ, PROC SURVEYMEANS, PROC SURVEYREG, PROC SURVEYLOGISTIC. For STATA users, the commands ‘svyset’ and ‘svy:’ should be used. For SPSS users, the module ‘complex sample’ is required.

For a detailed exposition on the construction and the production of the weights, a complete documentation can be found here.

6.6 Using the income and wealth variables

Respondents report on various income sources. The SHP user files provide constructed variables on yearly income amounts for each income source, total personal income, and household income. For income from employment and self-employment, variables with monthly amounts are provided in addition. The yearly and monthly income amounts refer to the situation at the moment of the interview, and not the calendar year. Some components used for the construction of the income variables are not collected in the survey but simulated: social security contributions on earnings to estimate both net and gross incomes, as well as taxes and health-care premiums, to estimate disposable household income. All constructed variables have passed a series of plausibility checks. These checks involve typing errors, implausibly large income increases or decreases since the last wave, extreme income, inconsistencies between the sum of income sources and total income and inconsistencies between individual and household income. Details on income construction and plausibility checks are described in the documentation "Collection, construction and plausibility checks of Income Data in the Swiss Household Panel".
Original responses to the income questions are not released but are available upon request (contact ursina.kuhn@fors.unil.ch).

Individual income
In the individual interview, household members (from 16 years of age) are asked about their personal income and some basic information is collected in proxy interviews. Respondents are free to report gross or net amounts (after deduction of social security contributions) and to report monthly or annual income. If respondents have indicated a monthly income, annual income is calculated using information from the number of months the respondent has received this income and from the activity calendar. If respondents have indicated yearly earnings, the variable monthly earnings is only constructed if the employment situation during the year was stable. This document on constructed variables (on the website under additional documentation) and Table 6.6 gives an overview of the constructed income variables of individuals.

The questions on income have changed over the duration of the panel (cf. Table 6.6). With the exception of family allowances (only asked from 2004 onward) and old-age pensions (old-age pension was not asked in 1999), these changes should not influence comparisons across waves. The variables collected from 1999-2001 can be constructed for all years by aggregating different income sources as shown in the table.

Table 6.6 Collection of individual income, by wave

1999	2000-2001	2002-2003	2004-2013	From 2014
I$$WY	I$$WY	I$$EMPY	I$$EMPY	I$$EMPY
		I$$INDY	I$$INDY	I$$INDY
-	I$$AVSY	I$$OASIY	I$$OASIY	I$$OASIY
		I$$AIY	I$$AIY	I$$AIY
		I$$PENY	I$$PENY	I$$PENY
I$$STPY	I$$STPY	I$$UNEY	I$$UNEY	I$$UNEY
		I$$WELY	I$$WELY	I$$WELY
		I$$GRAY	I$$GRAY	I$$GRAY
		I$$INSY	I$$INSY	I$$INSY
-	-	-	I$$FAMY	I$$FAMY
I$$STFY	I$$STFY	I$$PIHY	I$$PIHY	I$$PIHY
		I$$PNHY	I$$PNHY	I$$PNHY
I$$OSY	I$$OSY	I$$OSY	I$$OSY	I$$CAPY
				I$$RENTY
				I$$OTHY
I$$WM	I$$WM	I$$EMPM	I$$EMPM	I$$EMPM
		I$$INDM	I$$INDM	I$$INDM

Household Income

Gross and net household income

The variables I$$HTYN and I$$HTYG include the sum of all income sources of all household members. There are two different ways to construct household income. Firstly, in the household questionnaire, reference persons are asked to estimate total household income (sum of all household members). Secondly, household income can be obtained by summing amounts collected in the individual questionnaire.

The constructed variables on household income represent the sum of individual income (corrected for within household transfers) if:

- either all individuals have answered the income questions in the individual questionnaire
- or if the sum of individual income is larger than the household-income from the household questionnaire.

In the other cases, household income is taken from the household interview.[7]

Only if household income is based on individual income, adjustments are made for gross and net income.

[7] An alternative construction of household income is provided in the CNEF-data (separate data file, see below), where all individual sources of income within a household are added using imputed income if income variables were missing.

Important note for I13HTYN and I13HTYG!

Income information of the SHP III sample in 2013 has only been collected at the household level, because there was no regular individual interview (biographic interview in the first wave 2013 instead). Therefore, the variables I13HTYN and I13HTYG rely only on estimated total household income by the household reference person. Because total household income is typically underestimated by the household questionnaire, **household income in 2013 is lower for the SHP III sample compared to the older samples (SHP I, SHP II). For the analysis of time trends or for income mobility, household income of the SHP III sample in 2013 should therefore be excluded.** Figure 6.1 illustrates that the decline in net household income in 2013, when all samples are considered, can be attributed uniquely to this methodological effect. Disposable household income and simulated taxes cannot be computed for the SHP III sample in 2013 due to lacking individual information.

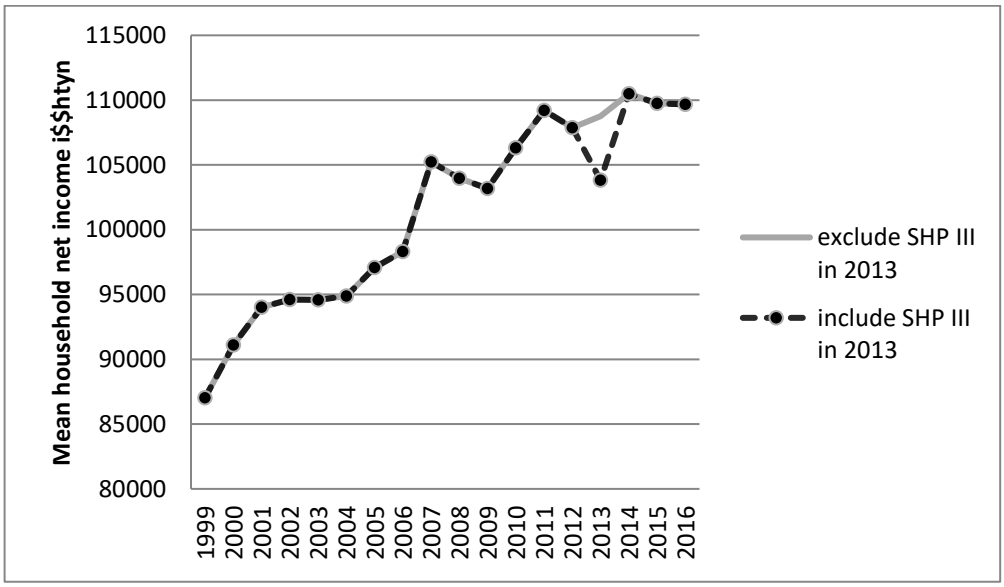


Figure 6.1: Mean household income in 1999 to 2016, by inclusion of the SHP III sample in 2013

Simulated Taxes

The variable I$$HTAX simulates the direct taxes paid by the household at the municipal, cantonal and federal level and corresponding to the household income (variable I$$HTYN and I$$HTYG). Tax levels for municipalities published by the Swiss Federal Tax administration are used to assign tax percentages to households. The simulation includes household specific tax-deductions for children, child-care costs, double earning married couples, support for dependents and 3rd pillar contributions, in addition to standard deductions (social deduction, professional costs) considered in these tables. Taxes are calculated at the level of tax units (individuals or married couples) and then aggregated to the household level.

The detailed procedures to simulate taxes are described in SHP technical paper 4_09 "Tax simulation in the SHP". In 2019, the tax percentages provided by the Swiss Federal Tax administration have been revised. The tax variables in the SHP from 2017 (wave 19) onward use the tax percentages provided by the new system. Despite adaptations to harmonise the tax percentages in the old and new system, the data user should be aware that the simulated taxes are slightly higher as of 2017 (and hence the disposable income slightly lower) due to the system change.

Household disposable income

The variable I$$DISPY indicates yearly household disposable income, which refers to income available after compulsory deductions:

I$$DISPY = I$$HTYN – I$$HTAX - compulsory health insurance premiums - payments to other households.

- Health insurance premiums are simulated according to mean premiums by canton and age group (below 18, 18-26, adults) for the minimum franchise. Public subsidies for health care are taken into account (at the basis of the share of population receiving subsidies and mean amount of subsidies paid per canton).
- Payments to other households (e.g. child alimonies) include compulsory and freely agreed pensions according to information collected in the household questionnaire (variables H$$I71, H$$I72, H$$I73, H$$I74). Payments to persons not in the household are only considered up to the amount that keeps individuals above the poverty line defined by the SCIAS/SKOS (25'752 equivalised income per year).

Additional income variables

Imputed data

The constructed annualised income variables in the SHP user files contain missing values ("don't know", no answer, implausible value). In a separate file delivered with the main SHP data, we deliver the income variables with missing values imputed, using an imputation procedure described here. The file of imputed variables also contains consumer price indexes provided by the Swiss Federal Statistical Office to take inflation into account (real amounts instead of nominal amounts).

CNEF income variables

The SHP cross-national equivalent file (CNEF) contains income sources defined slightly differently than in the SHP user file. The CNEF-variables – with the exception of professional income – report income on the household level. Missing values at the individual level have been imputed to construct household income. The

CNEF-variables for the SHP are released with the main SHP data. To access CNEF-variables of other household panels, see the CNEF-homepage: https://www.cnefdata.org/.

Wealth

The SHP has collected information on household's net wealth in 2012, 2016 and 2020. Households are asked to estimate their total wealth in a general question, owners are asked about the net value of their property in addition. For these years, two constructed variables (wealthh$$, wealtho$$) and imputation of missing values in case of item non-response are provided. For 2020, more detailed information on housing wealth is available, as market value of the property and mortgage have been collected with separate questions. Information on wealth has also been collected in 2009/2010 (SHP II in 2009, SHPI in 2010), but question wordings are not identical between years.

The constructed and imputed wealth variables can be found in a separate folder in the zip file containing the data under "imputed income wealth". More detailed documentation of these variables and the imputation can be found in the document "Collection, Construction, Checks of income variables".

6.7 Longitudinal analysis examples

You find some examples of longitudinal analyses using the SHP (SPSS, Stata and AMOS) here. For analytical examples using R, see here (with thanks to Marco Giesselmann).

References

Antal, E., & Rothenbühler, M. (2015). Weighting in the Swiss Household Panel. Technical report. Lausanne: FORS.

Belli, R. F. (1998). The structure of autobiographical memory and the event history calendar: Potential improvements in the quality of retrospective reports in surveys. Memory, 6(4), 383-406.

Belli, R. F., Lee, E. H., Stafford, F. P., & Chou, C.-H. (2004). Calendar and question-list survey methods: Association between interviewer behaviors and data quality. Journal of Official Statistics-Stockohlm-, 20(2), 185-218.

Budowski, M., Niklowitz, M., Scherpenzeel, A., Tillmann, R., Wernli, B., and Zimmermann, E. (1998). Description of life domains and indicators of the Swiss Household Panel. SHP Working Paper 2-98. Neuchâtel: Swiss Household Panel.

Budowski, M., and Wernli, B. (2004). Echantillon et taux de réponse de l'expérience méthodologique 2001 et du questionnaire biographique 2002. SHP Working Paper 2-04. Neuchâtel: Swiss Household Panel.

Caspi, A., Moffitt, T. E., Thornton, A., Freedman, D., Amell, J. W., Harrington, H., et al. (1996). The life history calendar: a research and clinical assessment method for collecting retrospective event-history data. International journal of methods in psychiatric research.

Farago, P. (1996). Gesellschaftliche dauerbeobachtung im SP "Zukunft Schweiz/Demain la Suisse" [Swiss Priority Programme "Switzerland towards the future". Bern: Swiss National Science Foundation.

Frick, J. R., Jenkins, S. P., Lillard, D. R., Lipps, O., and Wooden, M. (2007). The Cross-National Equivalent File (CNEF) and its Member Country Household Panel Studies. Schmollers Jahrbuch, 127,627-654.

Freedman, D., Thornton, A., Camburn, D., Alwin, D., & Young-DeMarco, L. (1988). The life history calendar: A technique for collecting retrospective data. Sociological methodology, 18(1), 37-68.

Joye, D., and Scherpenzeel, A. (1997). Observation à long terme: Projet de panel. Programme Prioritaire Demain la Suisse. Bern: Fonds national suisse de la recherche scientifique.

Lipps, O. (2011). Refusal Conversion in telephone panels: Is it worth it ? SHP Working Paper 3-11. Lausanne: Swiss Household Panel.

Plaza, S. and Graf, E. (2007). Recommandations et exemples pratiques concernant l'application des pondérations. Neuchâtel: Swiss Household Panel.

Scherpenzeel, A., Zimmermann, E., Budowski, M., Tillmann, R., Wernli, B., and Gabadinho, A. (2002). Experimental pre-test of the biographical questionnaire. SHP Working Paper 5-02. Neuchâtel: Swiss Household Panel.

Tillmann, R., Voorpostel, M., Kuhn, U., Lebert, F., Ryser, V. A., Lipps, O., ... & Antal, E. (2016). The Swiss household panel study: Observing social change since 1999. *Longitudinal and Life Course Studies*, 7(1), 64-78.

Tillmann, R., Voorpostel, M., Antal, E., Dasoki, N., Klaas, H., Kuhn, U., ... & Ryser, V. A. (2022). The Swiss household panel (SHP). *Jahrbücher für Nationalökonomie und Statistik*, 242(3), 403-420.

Appendix A Sampling strata

The addresses/persons of the gross sample are distributed according to the following proportions (SHP_I: census 1990; SHP_II: 2000 census; SHP_III: STATPOP 2012; SHP_IV: STATPOP 2018) (Table A.1) and population sizes (Table A.2):

Table A.1 Stratification of gross sample

Strata	Cantons[a]	Proportion of addresses/persons			
		SHP_I (%)	SHP_II (%)	SHP_III (%)	SHP_IV (%)
Lake Geneva region	VD, VS, GE	18.45	18.22	18.90	18.87
Mittelland	BE, FR, SO, NE, JU	23.25	22.92	22.25	22.02
North-west Switzerland	BS, BL, AG	13.44	13.86	13.57	13.71
Zurich	ZH	17.51	18.22	17.52	18.16
Eastern Switzerland	GL, SH, AR, AI, SG, GR, TG	15.68	13.70	13.98	13.68
Central Switzerland	LU, UR, SZ, OW, NW, ZG	7.20	8.75	9.53	9.33
Ticino	TI	4.47	4.33	4.25	4.23
Total		100	100	100	100

[a]) VD=Vaud, VS=Valais, GE=Geneva, BE=Bern, FR=Fribourg, SO=Solothurn, NE=Neuchâtel, JU=Jura, BS=Basel-Stadt, BL=Basel-Landschaft, AG=Aargau, ZH=Zurich, GL=Glarus, SH=Schaffhausen, AR=Appenzell Ausserrhoden, AI=Appenzell Innerrhoden, SG=St. Gallen, GR=Graubünden, TG=Thurgau, LU=Luzern, UR=Uri, SZ=Schwyz, OW=Obwalden, NW=Nidwalden, ZG=Zug, TI=Ticino

Table A.2 Sizes of strata at the time of selection (number of households for SHP_I and SHP_II and numbers of individuals for SHP_III and SHP_IV)

Strata	Cantons[a]	SHP_I (N): households	SHP_II (N): households	SHP_III (N): Individuals	SHP_IV (N): Individuals
Lake Geneva region	VD, VS, GE	714’725	648’590	1’519’189	1’561’641
Mittelland	BE, FR, SO, NE, JU	837’452	784’266	1’788’791	1’822’328
North-west Switzerland	BS, BL, AG	484’667	455’833	1’091’302	1’134’610
Zurich	ZH	646’469	587’850	1’408’575	1’502’882
Eastern Switzerland	GL, SH, AR, AI, SG, GR, TG	531’731	493’606	1’123’672	1’132’127
Central Switzerland	LU, UR, SZ, OW, NW, ZG	313’548	306’605	765’879	772’131
Ticino	TI	180’623	160’123	341’652	350’066
Total		3’709’215	3’436’873	8’039’060	8’275’785

[a]) VD=Vaud, VS=Valais, GE=Geneva, BE=Bern, FR=Fribourg, SO=Solothurn, NE=Neuchâtel, JU=Jura, BS=Basel-Stadt, BL=Basel-Landschaft, AG=Aargau, ZH=Zurich, GL=Glarus, SH=Schaffhausen, AR=Appenzell Ausserrhoden, AI=Appenzell Innerrhoden, SG=St. Gallen, GR=Graubünden, TG=Thurgau, LU=Luzern, UR=Uri, SZ=Schwyz, OW=Obwalden, NW=Nidwalden, ZG=Zug, TI=Ticino

Appendix B Participation in the Swiss Household Panel

Table B.1: Participation in the Swiss Household Panel 1999-2022 (SHP_I)

Wave	**Year**	Households with grid completed	**Household interview completed**	Persons living in participating households	Persons aged >=14 years eligible for individual interviewing	**Personal interview completed**	Proxy Interviews [a]	Persons responding in current and all previous waves	Grid level net response rates %[b]	Individual level net response rates %[c]
1	**1999**	5 074	**5 074**	12 930	10 288	**7 799**	2 637	7 799	64%	76%
2	**2000**	4 532	**4 425**	11 677	9 266	**7 073**	2 380	6 345	91%	76%
3	**2001**	4 314	**4 139**	11 115	8 878	**6 601**	2 173	5 433	88%	74%
4	**2002**	3 685	**3 582**	9 536	7 512	**5 700**	1 983	4 483	86%	76%
5	**2003**	3 289	**3 227**	8 477	6 715	**5 220**	1 723	3 891	90%	78%
6	**2004**	2 918	**2 837**	7 516	5 983	**4 413**	1 481	3 077	82%	74%
7	**2005**	2 526	**2 457**	6 490	5 224	**3 888**	1 240	2 622	91%	74%
8	**2006**	2 580	**2 537**	6 586	5 337	**4 091**	1 236	2 399	87%	77%
9	**2007**	2 893	**2 817**	7 224	5 974	**4 629**	1 226	2 209	86%	77%
10	**2008**	2 793	**2 718**	6 904	5 746	**4 493**	1 127	2 060	91%	78%
11	**2009**	3 052	**2 930**	7 468	6 225	**4 799**	1 216	1 952	91%	77%
12	**2010**	3 065	**2 985**	7 476	6 289	**5 057**	1 162	1 879	94%	80%
13	**2011**	3 055	**2 977**	7 448	6 335	**5 101**	1 085	1 813	93%	81%
14	**2012**	3 032	**2 968**	7 272	6 227	**5 031**	1 029	1 739	93%	81%
15	**2013**	2 936	**2 881**	6 998	6 044	**4 879**	923	1 661	94%	81%
16	**2014**	2 821	**2 778**	6 702	5 801	**4 677**	882	1 598	92%	81%
17	**2015**	2 802	**2 761**	6 570	5 724	**4 596**	831	1 547	94%	80%
18	**2016**	2 700	**2 651**	6 267	5 473	**4 311**	779	1 461	92%	79%
19	**2017**	2 657	**2 620**	6 059	5 252	**4 232**	782	1 404	91%	81%
20	**2018**	2 678	**2 649**	6 062	5 271	**4 235**	777	1 346	91%	80%
21	**2019**	2 586	**2 555**	5 834	5 049	**4 038**	772	1 264	91%	80%
22	**2020**	2 513	**2 484**	5 643	4 893	**3 855**	726	1 205	93%	79%
23	**2021**	2 384	**2 362**	5 305	4 598	**3 602**	688	1 134	95%	78%
24	**2022**	2 266	**2 246**	4 971	4 298	**3 410**	660	1 061	94%	79%

[a] The SHP proxy interviews include children under 14 years and adult persons unable to respond to the survey (old age, handicap, etc.)
[b] Referring to all gross households minus those with neutral problems (neutral problems: invalid telephone, etc.).
[c] Referring to all called individuals minus those with neutral problems (foreign language etc.).

Table B.2: Participation in the Swiss Household Panel 2004-2022 (SHP_II)

Wave	**Year**	Households with grids completed	**Household interview completed**	**Persons living in participating households**	Persons aged >=14 years eligible for individual interviewing	**Personal interview completed**	Proxy Interviews [a]	Persons responding in current and all previous waves	Grid level net response rates [b]	Individual level net response rates [c]
1	**2004**	2 703	**2 537**	6 565	5 382	**3 652**	1 115	3 652	65%	68%
2	**2005**	1 907	**1 798**	4 669	3 847	**2 647**	770	2 393	81%	69%
3	**2006**	1 753	**1 683**	4 272	3 502	**2 566**	743	1 928	77%	73%
4	**2007**	1 547	**1 493**	3 773	3 124	**2 349**	637	1 600	84%	75%
5	**2008**	1 662	**1 545**	3 980	3 293	**2 409**	645	1 399	81%	73%
6	**2009**	1 539	**1 475**	3 682	3 036	**2 307**	622	1 288	91%	76%
7	**2010**	1 608	**1 556**	3 851	3 186	**2 487**	653	1 220	88%	78%
8	**2011**	1 560	**1 519**	3 724	3 137	**2 479**	570	1 156	90%	79%
9	**2012**	1 560	**1 492**	3 692	3 114	**2 411**	564	1 101	89%	77%
10	**2013**	1 530	**1 487**	3 572	3 019	**2 324**	543	1 038	92%	77%
11	**2014**	1 412	**1 384**	3 324	2 806	**2 147**	511	956	89%	77%
12	**2015**	1 353	**1 325**	3 149	2 658	**2 072**	482	899	88%	78%
13	**2016**	1 277	**1 246**	2 905	2 464	**1 909**	433	837	87%	77%
14	**2017**	1 241	**1 210**	2 812	2 382	**1 836**	418	781	86%	77%
15	**2018**	1 263	**1 248**	2 866	2 421	**1 886**	432	747	88%	78%
16	**2019**	1 241	**1 224**	2 792	2 361	**1 794**	422	697	88%	76%
17	**2020**	1 188	**1 179**	2 645	2 245	**1 739**	384	648	91%	77%
18	**2021**	1 103	**1 093**	2 453	2 085	**1 598**	351	591	95%	77%
19	**2022**	1 037	**1 027**	2 273	1 947	**1 539**	316	560	94%	79%

[a] The SHP proxy interviews include information about children under 14 years and adult persons unable to respond to the survey (old age, handicap, etc.)

[b] Referring to all gross households minus those with neutral problems (neutral problems: invalid telephone, etc.).

[c] Referring to all called individuals minus those with neutral problems (foreign language etc.).

Table B.3 Participation in the Swiss Household Panel 2013-2022 (SHP_III)

Wave	**Year**	Households with grids completed	**Household interview completed**	**Persons living in participating households**	Persons aged >=14 years eligible for individual interviewing	**Personal interview completed**	Proxy Interviews [a]	Persons responding in current and all previous waves	Grid level net response rates %[b]	Individual level net response rates %[c]
1	**2013**	4 064	**3 987**	9 878	8 394	**6 085**		6 087	63%	72%
2	**2014**	3 282	**3 195**	7 988	6 501	**5 261**	1 455	4 450	88%	81%
3	**2015**	2 731	**2 699**	6 622	5 387	**4 497**	1 219	3 587	88%	83%
4	**2016**	2 424	**2 364**	5 786	4 773	**3 808**	980	2 900	85%	80%
5	**2017**	2 177	**2 124**	5 076	4 176	**3 410**	880	2 392	85%	82%
6	**2018**	2 087	**2 036**	4 821	3 970	**3 228**	824	2 104	83%	81%
7	**2019**	1 963	**1 930**	4 525	3 776	**3 008**	731	1 879	87%	80%
8	**2020**	1 813	**1 784**	4 148	3 488	**2 730**	641	1 629	88%	78%
9	**2021**	1 629	**1 599**	3 639	3 108	**2 424**	518	1 438	92%	78%
10	**2022**	1 434	**1 421**	3 167	2 710	**2 133**	446	1 261	91%	79%

[a] The SHP proxy interviews concern children under 14 years and adult persons unable to respond to the survey (old age, handicap, etc.).
[b] Referring to all gross households minus those with neutral problems (neutral problems: invalid telephone, etc.).
[c] Referring to all contacted individuals minus those with neutral problems (foreign language etc.).

Table B.4 Participation in the fourth sample of the Swiss Household Panel 2020-2022 (SHP_IV)

Wave	**Year**	Households with grids completed	**Household interview completed**	**Persons living in participating households**	Persons aged >=14 years eligible for individual interviewing	**Personal interview completed**	Proxy Interviews [a]	Persons responding in current and all previous waves	Grid level net response rates [b]	Individual level net response rates [c]
1	**2020**	4 557	**4 378**	12 284	10 197	**7 554**	1 996	7 554	60%	74%
2	**2021**	3 305	**3 245**	8 579	7 170	**5 474**	1 391	5 066	76%	76%
3	**2022**	2 605	**2 564**	6 640	5 618	**4 387**	1 003	3 819	82%	78%

[a] The SHP proxy interviews include information about children under 14 years and adult persons unable to respond to the survey (old age, handicap, etc.).
[b] Referring to all gross households minus those with neutral problems (neutral problems: invalid telephone, etc.).

Table B.5 Number of *households* interviewed in the SHP samples (1999-2022)

Year	Wave	SHP_I n	%* A	%** B	SHP_II n	%* A	%** B	SHP_III n	%* A	%** B	SHP_IV n	%* A	%** B	I+II+III +IV n
1999	1	5 074	100%											5 074
2000	2	4 425	87%	87%										4 425
2001	3	4 139	82%	94%										4 139
2002	4	3 582	71%	87%										3 582
2003	5	3 227	64%	90%										3 227
2004	6/1	2 837	56%	88%	2 537	100%								5 374
2005	7/2	2 457	48%	87%	1 798	71%	71%							4 255
2006	8/3	2 537	50%	103%	1 683	66%	94%							4 220
2007	9/4	2 817	56%	111%	1 493	59%	89%							4 310
2008	10/5	2 718	54%	96%	1 545	61%	103%							4 263
2009	11/6	2 930	58%	108%	1 475	58%	95%							4 405
2010	12/7	2 985	59%	102%	1 556	61%	105%							4 541
2011	13/8	2 977	59%	100%	1 519	60%	98%							4 496
2012	14/9	2 968	58%	100%	1 492	59%	98%							4 460
2013	15/10/1	2 881	57%	97%	1 487	59%	100%	3 987	100%					8 355
2014	16/11/2	2 778	55%	96%	1 384	55%	93%	3 195	80%	80%				7 357
2015	17/12/3	2 761	54%	99%	1 325	52%	96%	2 699	68%	84%				6 785
2016	18/13/4	2 651	52%	96%	1 246	49%	94%	2 364	59%	88%				6 261
2017	19/14/5	2 620	52%	99%	1 210	48%	97%	2 124	53%	90%				5 954
2018	20/15/6	2 649	52%	101%	1 248	49%	103%	2 036	51%	96%				5 933
2019	21/16/7	2 555	50%	96%	1 224	48%	98%	1 930	48%	95%				5 709
2020	22/17/8/1	2 484	49%	97%	1 179	46%	96%	1 784	45%	92%	4 378	100%		9 825
2021	23/18/9/2	2 362	47%	95%	1 093	43%	93%	1 599	40%	90%	3 245	74%	74%	8 299
2022	24/19/10/3	2 246	44%	95%	1 027	40%	94%	1 421	36%	89%	2 564	59%	79%	7 258

*These percentages are calculated on the basis of the number of interviews conducted in the first year (1999, 2004, 2013, or 2020).
**These percentages are calculated on the basis of the number of interviews conducted in the previous year. They may therefore exceed 100%.

Table B.6 Number of *persons* interviewed in the SHP samples (1999-2022)

Year	Wave	SHP_I n =	%* A	%** B	SHP_II n =	%* A	%** B	SHP_III n =	%* A	%** B	SHP_IV n=	%* A	%** B	I+II+III+IV n =
1999	1	7 799	100%											7 799
2000	2	7 073	91%	91%										7 073
2001	3	6 601	85%	93%										6 601
2002	4	5 700	73%	86%										5 700
2003	5	5 220	67%	92%										5 220
2004	6/1	4 413	57%	85%	3 652	100%								8 065
2005	7/2	3 888	50%	88%	2 647	72%	72%							6 535
2006	8/3	4 091	52%	105%	2 566	70%	97%							6 657
2007	9/4	4 629	59%	113%	2 349	64%	92%							6 978
2008	10/5	4 493	58%	97%	2 409	66%	103%							6 902
2009	11/6	4 799	62%	107%	2 307	63%	96%							7 106
2010	12/7	5 057	65%	105%	2 487	68%	108%							7 544
2011	13/8	5 101	65%	101%	2 479	68%	100%							7 580
2012	14/9	5 031	65%	99%	2 411	66%	97%							7 442
2013	15/10/1	4 879	63%	97%	2 324	64%	96%	6 085	100%					13 288
2014	16/11/2	4 677	60%	96%	2 147	59%	92%	5 261	86%	86%				12 085
2015	17/12/3	4 596	59%	98%	2 072	57%	97%	4 497	74%	85%				11 165
2016	18/13/4	4 311	55%	94%	1 909	52%	92%	3 808	63%	85%				10 028
2017	19/14/5	4 232	54%	98%	1 836	50%	96%	3 410	56%	90%				9 478
2018	20/15/6	4 235	54%	100%	1 886	52%	103%	3 228	53%	95%				9 349
2019	21/16/7	4 038	52%	95%	1 794	49%	95%	3 008	49%	93%				8 840
2020	22/17/8/1	3 855	49%	95%	1 739	48%	97%	2 730	45%	91%	7 554	100%		15 878
2021	23/18/9/2	3 602	46%	93%	1 598	44%	92%	2 424	40%	89%	5 474	72%	72%	13 098
2022	24/19/10/3	3 410	44%	95%	1 539	42%	96%	2 133	35%	88%	4 387	58%	80%	11 469

*These percentages are calculated on the basis of the number of interviews conducted in the first year (1999, 2004, 2013 or 2020).
**These percentages are calculated on the basis of the number of interviews conducted in the previous year. They may therefore exceed 100%.

Appendix C. Weight variables

Table C.1 List of weights, variable names and description (Waves 1-15, 1999-2013)

Types of weights	Variable name	Description
Longitudinal weights		
SHP_I individuals	wp$$LP1S	Weights inflated to the sample size of longitudinal adults in the first panel
SHP_I and SHP_II (combined) individuals	wp$$L1S	Weights inflated to the sample size of longitudinal adults in the combined panels
Cross-sectional weights		
SHP_I and SHP_II (combined) individuals	wp$$T1S	Weights inflated to the sample size of the combined samples in year $$
SHP_III Individuals	wp$$T3S	Weights inflated to the sample size of the SHP_III in year $$
SHP_I, II and III (combined) Individuals	wp$$TS	Weights inflated to the sample size of the combined panels (SHP_I, II and III)
SHP_I and SHP_II (combined) House-holds	wh$$T1S	Weights inflated to the sample size of households
SHP_III Households	wh$$T3S	Weights inflated to the sample size of households
SHP_I_II and III (combined) Households	wh$$TS	Weights inflated to the sample size of households

Note $$ corresponds to the two last digits of the year in question.

Table C.2 List of weights, variable names and description (Waves 16 (2014)-present)

Types of weights	Variable name	Description
Longitudinal weights		
SHP_I individuals	wi$$LS99	Weights maintaining the sample size of longitudinal adults in the first panel (SHP_I)
SHP_I and SHP_II (combined) Individuals	wi$$LS04	Weights maintaining the sample size of longitudinal adults (SHP_I_II)
SHP_I_II_III (combined) Individuals	wi$$LS13	Weights maintaining the sample size of longitudinal adults (SHP_I_II_III)
SHP_I_II_III_IV (combined) Individuals	wi$$LS20	Weights inflated to the sample size of longitudinal adults (SHP_I_II_III_IV)
SHP_I_II_III (combined) Individuals - different start year	wi$$LS&&	Weights maintaining the sample size of longitudinal adults in the “panel” starting at year 20&& (SHP_I_II_III)
SHP_III Individuals - different start year	wi$$LS&&3	Weights maintaining the sample size of longitudinal adults in the “panel” starting at year 20&& (SHP_III only)
Cross-sectional weights		
SHP_I_II_III_IV (combined) Individuals	wi$$CSS	Weights maintaining the sample size (SHP_I_II_III_IV)
SHP_III Individuals	wi$$CSS3	Weights maintaining the sample size (SHP_III only)
SHP_I_II_III_IV (combined) Households	wh$$CSS	Weights maintaining the sample size (SHP_I_II_III_IV)
SHP_III Households	wh$$CSS3	Weights maintaining the sample size of households (SHP_III only)
SHP_I_II_III_IV (combined) Children	wc$$CSS	Weights maintaining the sample size (SHP_I_II_III_IV)
SHP_III Children	wc$$CSS3	Weights maintaining the sample size (SHP_III only)

Note $$ corresponds to the two last digits of the year in question.