

Appendix Coherence- Cross domain

An in-depth coherence analysis was carried out between the SILC survey and the Household Budget Survey (HBS), which is also conducted by the FSO. This analysis covers the percentage of households receiving the various components, the distribution of amounts above 0 and at-risk-of-poverty rates by individual profile. As the reference year for income in the 2017 SILC survey was 2016, a comparison was made with HBS data from 2016.

The Household Budget Survey is conducted annually and seeks to collect detailed information on households' income and expenditure. The survey samples 3 000 households, primarily through the use of written questionnaires. The response burden of the HBS is high, explaining why unadjusted response rates are relatively low at less than 40%. Unlike the SILC survey, no register information is reconciled with information gathered during fieldwork. However, in the event of inconsistencies arising during HBS quality controls, householders are contacted again to clear up issues and correct information where appropriate.

1. Comparison of SILC17-HBS16 income components

Compared income components are those whose Eurostat definitions are relatively similar in the two surveys. However, HBS goes into more detail about various items of income that may at times be problematic for comparisons. Although the linking of these items to Eurostat components was subject to a coordinated assessment between the SILC survey and the HBS, definition mistakes or discrepancies may still arise.

Table 1 shows the average of core income components for all households (N non-weighted 8120 for the SILC and 3269 for the HBS), while table 2 indicates the proportion of households with a positive amount in relation to an income component, along with the average of values above 0. All results have been calculated with weightings.

Findings from table 1 indicate that, of the 16 income components that were compared, the majority (10) had a similar average (with statistical significance of 95%) in both surveys.

The average amount per household is significantly higher in the SILC for the components *Survivor benefits* (PY110G), *Disability benefits* (PY130G), *Pension from individual private plans* (PY080G), *Education-related allowances* (PY140G) and *Family /children-related allowances* (HY050G) whereas the components *Sickness benefits* (PY120G) is significantly higher in the HBS. None of these represents a significant part in the calculation of the available income. The differences concerning these latter components can be seen in Table 2 which this time only shows the average for households receiving the sub-component.

Table 1: Comparison SILC17-HBS16. Average and confidence interval of income sub-components for all households (with or without income) with weightings, in CHF. Components for which averages with confidence intervals of 95% do not correspond are outlined in red

		SILC17			HBS16		
		Average	Confidence interval (95%)		Average	Confidence interval (95%)	
			min	max		min	max
Employment income							
PY010G	Employee cash or near-cash income (Gross)	82 115	79 462	84 768	85 371	82 092	88 650
PY050G	Cash benefits or losses from self-employment	6 862	6 064	7 660	5 345	4 372	6 317
Investment and property income							
HY040G	Income from rental of a property or land	2 842	2 433	3 252	2 671	1 635	3 706
HY090G	Interest, dividends, profit from capital investments in unincorporated business	2 031	1 793	2 268	2 057	1 185	2 930
Transfer income							
PY100G	Old-age benefits	15 619	14 956	16 282	16 620	15 536	17 704
PY110G	Survivor benefits	822	688	955	381	236	525
PY130G	Disability benefits	2 448	2 169	2 727	1 200	955	1 445
PY120G	Sickness benefits	246	150	342	1 848	1 400	2 296
PY080G	Pension from individual private plans	785	638	933	294	184	404
PY140G	Education- related allow ances	109	78	139	9	1	16
HY050G	Family/Children-related allow ances	1 651	1 569	1 733	1 451	1 336	1 565
HY060G	Social exclusion not elsw here classified	1 480	1 278	1 682	1 419	1 200	1 638
HY070G	Housing allow ances	110	76	144	89	53	126
HY080G	Regular inter-household cash transfer received	1 185	1 015	1 356	1 568	1 331	1 805
Mandatory deductions							
HY130G	Regular inter-household cash transfer paid	1 735	1 538	1 931	1 896	1 643	2 149
HY140G	Tax on income and social contributions	33 672	32 778	34 566	33 017	31 846	34 187

We can see that there was no significant difference between the SILC and the HBS with regard to the average income from employment and self-employment across all households. Conversely, analyses carried out on households receiving income from employment show considerable differences in the percentage of households with a salaried income or an income from self-employment as well in the average income. The percentage of households with a salaried income (>0) is greater in the SILC than it is in the HBS. However, the percentage with an income from self-employed activity (>0) (PY050G *Cash benefits or losses from self-employment*) is higher in the HBS. Conversely, the average income from self-employment is higher in the SILC. This may be explained by a higher frequency of small amounts declared in the scope of the HBS, PAPI survey that also gives more rubrics for the income. In the SILC, the statutes of the activity (employed or self-employed) according to the CCO register are prioritised. In the HBS, priority is given to the option chosen by the respondent. It is thus possible that a proportion of the respondents classify themselves as self-employed even though they are considered to be employed in the CCO register (for example, employees of their own business) and are thus classified as such for the SILC.

The differences observed between SILC17 and HBS16 on other sub-components have already been observed in previous years.

For several income sub-components, the percentage of households receiving a non-zero amount is higher in SILC than in HBS, as shown in Table 2. These are the sub-components *Survivor's benefits* (PY110G), *Disability benefits* (PY130G), *Pension from individual private plans* (PY080G), *Education-related allowances* (PY140G) and *Social exclusion not elsewhere classified* (HY060G). This can largely be explained by differences in the reference period: the whole of 2016 for the SILC / month of reference for the HBS. Furthermore, the latter sub-component has a rather vague definition in both the SILC and the HBS, encouraging us to treat findings cautiously.

With regard to income from wealth (HY090G), the rate of households receiving an income (>0) is higher in the HBS. This is undoubtedly due to the different survey methods and the fact that in CATI, households with a small income from interest and dividends state these less frequently than in PAPI.

The percentage of households with transfers paid to other households (HY130G) or received from other households (HY080G *Regular inter-household cash transfer received*) is far higher in the HBS, even though the average of the positive amounts, both the transfers received and paid, is significantly higher in the SILC than in the HBS. However, the average of all households (Table 1) is ultimately higher for the HBS although not significantly for HY080G, and equal for HY030G. This can largely be explained by the fact that the irregular transfers between households are integrated into this component for the HBS, whereas in the SILC only the regular transfers are considered.

Table 2: SILC17-HBS16: Proportion (%) of households with income sub-component (>0) and average (in CHF) thereof where this is non-zero. Sub-components for which ratios or averages with confidence intervals of 95% do not correspond are outlined in red.

		SILC17						HBS16					
		% of households w ith income > 0			Average	Confidence interval		% of households w ith income > 0			Average	Confidence interval	
		Confidence interval				(95%)		Confidence interval				(95%)	
		%	min	max		min	max	%	min	max		min	max
Employment income													
PY010G	Employee cash or near-cash income	74.7%	73.6%	75.7%	109 970	106 691	113 249	70.6%	68.8%	72.3%	121 000	117 460	124 540
PY050G	Cash benefits or losses from self-employment	11.8%	11.0%	12.6%	58 052	52 456	63 648	17.4%	15.9%	18.9%	30 724	26 008	35 441
Investment and property income													
HY040G	Income from rental of a property or land	10.1%	9.5%	10.8%	28 011	24 408	31 614	10.4%	9.3%	11.6%	25 595	16 324	34 867
HY090G	Interest, dividends, profit from capital investments in unincorporated business	84.4%	83.5%	85.4%	2 405	2 125	2 686	89.4%	88.1%	90.6%	2 302	1 326	3 279
Transfer income													
PY100G	Old-age benefits	30.0%	28.9%	31.0%	52 097	50 770	53 424	30.3%	28.6%	32.0%	54 837	52 809	56 864
PY110G	Survivor benefits	3.4%	2.9%	3.8%	24 291	22 005	26 577	1.3%	0.9%	1.7%	28 542	21 790	35 294
PY130G	Disability benefits	9.3%	8.5%	10.0%	26 431	24 540	28 323	4.1%	3.3%	4.8%	29 602	26 444	32 760
PY120G	Sickness benefits	1.5%	1.1%	1.8%	16 560	12 567	20 553	4.3%	3.4%	5.2%	43 053	37 404	48 702
PY080G	Pension from individual private plans	3.6%	3.2%	4.0%	21 810	18 382	25 237	2.3%	1.7%	2.8%	12 943	9 106	16 779
PY140G	Education- related allow ances	1.8%	1.5%	2.2%	5 878	4 777	6 980	0.2%	0.0%	0.3%	4 614	2 374	6 854
HY050G	Family/Children-related allow ances	27.9%	26.8%	29.0%	5 925	5 752	6 098	25.2%	23.5%	26.8%	5 764	5 508	6 021
HY060G	Social exclusion not elsew here classified	23.7%	22.6%	24.9%	6 236	5 470	7 001	16.6%	15.2%	18.0%	8 554	7 434	9 675
HY070G	Housing allow ances	1.3%	1.0%	1.7%	8 180	6 460	9 899	1.3%	0.8%	1.7%	7 145	5 524	8 765
HY080G	Regular inter-household cash transfer received	8.6%	7.9%	9.3%	13 768	12 180	15 357	19.8%	18.3%	21.4%	7 904	6 856	8 952
Mandatory deductions													
HY130G	Regular inter-household cash transfer paid	14.5%	13.6%	15.4%	11 952	10 809	13 096	31.2%	29.4%	32.9%	6 080	5 341	6 820
HY140G	Tax on income and social contributions	100.0%	100.0%	100.0%	33 672	32 778	34 566	100.0%	100.0%	100.0%	33 017	31 846	34 187

2. Comparison of at-risk-of-poverty rates SILC17-HBS16

Table 3 sets out estimated at-risk-of-poverty rates in regard to SILC17 and HBS16 for some socio-demographic sub-groups. The findings shown in the table substantiate the high degree of consistency between the two sources, except for women of foreign origin and homeowners, where the at-risk-of-poverty rates are significantly different. At-risk-of-poverty rates are situated within confidence intervals at 95%.

Table 3 SILC17-HSB16 Comparison of at-risk-of-poverty rates by socio-demographic category

Variable		SILC17				HBS16			
		n	At-risk-of-poverty rate (%)	Confidence interval (95%)		n	At-risk-of-poverty rate (%)	Confidence interval (95%)	
				min	max			min	max
Total population		18 700	15.5	14.4	16.6	7 396	15.1	13.4	16.7
Age	0-17 years	3 621	18.0	16.9	19.1	1 520	16.5	14.9	18.2
	18-64 years	11 668	11.9	10.9	13.0	4 560	11.2	9.6	12.8
	18-24 years	1 535	14.2	13.1	15.3	453	13.7	12.0	15.3
	25-49 years	6 065	12.2	11.1	13.2	2 479	9.7	8.1	11.3
	50-64 years	4 068	10.7	9.6	11.8	1 628	12.8	11.2	14.4
	65 years and over	3 411	25.9	24.8	27.0	1 316	27.8	26.2	29.4
Sex	Men	9 600	16.1	15.0	17.2	3 848	16.1	14.5	17.7
	Swiss	8 122	14.8	13.7	15.9	3 262	15.2	13.6	16.8
	Foreign	1 478	20.2	19.2	21.3	586	19.3	17.7	20.9
	Women	9 100	14.9	13.8	16.0	3 548	14.0	12.4	15.6
	Swiss	7 547	12.6	11.5	13.7	2 965	12.5	10.8	14.1
	Foreign	1 553	21.1	20.0	22.2	583	18.3	16.7	19.9
Type of household	Single person aged below 65	1 512	16.2	14.0	18.3	639	13.0	11.4	14.6
	Single person aged 65 or over	983	32.8	30.6	35.0	354	36.1	34.5	37.7
	Couple aged below 65 with no child in the household	2 580	6.7	4.5	8.9	1 284	6.9	5.2	8.5
	Couple aged 65 or over with no child in the household	2 400	22.4	20.2	24.6	1 016	22.5	20.9	24.1
	Mother or father alone with child(ren)	940	20.7	18.5	22.9	389	22.8	21.1	24.4
	Couple with child(ren)	8 544	13.5	11.3	15.7	3 339	13.5	11.9	15.2
	Other type	1 741	14.3	12.2	16.5	375	12.2	10.5	13.8
Housing occupancy status	Owner	9 341	9.8	7.6	12.0	3 813	13.8	12.2	15.5
	Tenant	9 154	18.9	16.7	21.1	3 583	16.1	14.4	17.7
Region	Lake Geneva region	3 444	15.5	13.3	17.7	1 244	15.4	13.8	17.0
	Espace Mittelland	4 553	17.2	15.0	19.3	1 608	18.6	17.0	20.2
	Northwest Switzerland	2 687	14.6	12.4	16.8	802	18.3	16.7	19.9
	Zurich	3 246	12.2	10.0	14.4	1 209	8.5	6.9	10.1
	Eastern Switzerland	2 338	16.2	14.0	18.4	977	13.1	11.5	14.7
	Central Switzerland	1 699	11.8	9.6	14.0	806	11.1	9.5	12.7
	Ticino	733	29.2	27.1	31.4	750	26.9	25.2	28.5