

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 2022 SILC survey was 2021, a comparison was made with HBS data from 2021.

The Household Budget Survey is conducted annually and seeks to collect detailed information on households' income and expenditure. The survey samples about 3 300 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 30%. 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.

Comparisons with growth rate of national accounts are also presented in ch.3.

1. Comparison of SILC22-HBS21 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 8900 for the SILC and 3416 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 (12) 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 *Employee cash or near-cash income (PY010G)* and *Disability benefits (PY130G)*, whereas the components *Regular inter-household cash transfer received (HY080G)* and *Sickness benefits (PY120G)* are significantly higher in the HBS. With the exception of income from employment, none of these accounts for a significant proportion of disposable income. For several years the income from employment recorded in SILC has been higher than in the HBS. However, the average differences for all households were not statistically significant. For SILC22, this difference is just statistically significant. These differences are partially explained by differences in data sources. For SILC, about 97% of employment income is derived from a register, whereas for HBS, all employment income is derived from a paper questionnaire sent to households.

The differences concerning these components can be seen in Table 2, which this time only shows the average for households receiving the sub-component.

Analyses carried out on households receiving income (table 2) from employment show, as in previous years, significant differences in the percentage of households with a salaried income but no significant difference in the average income from employment. The percentage of households with a salaried income (>0) is greater in the SILC than it is in the HBS.

Table 1: Comparison HBS21-SILC22. 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.

		HBS21			SILC22		
		Confidence interval (95%)			Confidence interval (95%)		
		Average	min	max	Average	min	max
Employment income							
PY010G	Employee cash or near-cash income (Gross)	80 596	77 416	83 775	87 097	83 826	90 368
PY050G	Cash benefits or losses from self-employment	3 980	3 056	4 905	5 096	4 469	5 723
Investment and property income							
HY040G	Income from rental of a property or land	2 872	2 212	3 533	3 559	2 711	4 408
HY090G	Interest, dividends, profit from capital investments in unincorporated business	2 933	2 096	3 770	2 666	2 171	3 161
Transfer income							
PY100G	Old-age benefits	18 381	17 219	19 543	17 217	16 539	17 895
PY110G	Survivor's benefits	518	316	719	786	665	906
PY130G	Disability benefits	1 135	851	1 419	2 302	2 051	2 554
PY120G	Sickness benefits	1 911	1 481	2 342	243	144	342
PY080G	Pension from individual private plans	311	188	434	417	314	520
PY140G	Education-related allowances	86	7	165	85	55	116
HY050G	Family/Children-related allowances	1 419	1 298	1 540	1 617	1 523	1 710
HY060G	Social exclusion not elsewhere classified	1 675	1 404	1 945	1 734	1 453	2 016
HY070G	Housing allowances	109	55	163	103	30	177
HY080G	Regular inter-household cash transfer received	1 462	1 187	1 737	1 009	843	1 175
Mandatory deductions							
HY130G	Regular inter-household cash transfer paid	2 351	1 830	2 872	1 825	1 663	1 987
HY140G	Tax on income and social contributions	34 640	33 512	35 768	36 459	35 543	37 375

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), *Education related allowances* (PY140G) and *Family/ Children-related allowances* (HY050G). This can partly be explained by differences in the reference period: the whole of 2020 for the SILC / month of reference for the HBS.

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 is higher in the SILC than in the HBS (significantly for HY080G). However, the average of all households (Table 1) is ultimately higher for the HBS. 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 HBS21-SILC22. 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.

		HBS21					SILC22						
		% of households w with income > 0			Average	Confidence interval		% of households w with 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	67.0%	65.1%	68.8%	120 353	116 789	123 918	73.8%	72.8%	74.8%	118 029	113 845	122 212
PY050G	Cash benefits or losses from self-employment	10.5%	9.3%	11.7%	37 918	30 383	45 454	10.2%	9.4%	10.9%	50 060	45 113	55 007
Investment and property income													
HY040G	Income from rental of a property or land	10.8%	9.6%	11.9%	26 628	21 192	32 063	10.5%	9.8%	11.2%	33 969	26 132	41 805
HY090G	Interest, dividends, profit from capital investments in unincorporated business	67.0%	65.1%	68.8%	4 381	3 137	5 625	60.6%	59.4%	61.8%	4 400	3 586	5 214
Transfer income													
PY100G	Old-age benefits	32.3%	30.5%	34.1%	56 837	54 812	58 862	31.5%	30.5%	32.6%	54 609	53 363	55 856
PY110G	Survivor's benefits	1.9%	1.3%	2.5%	27 328	21 725	32 932	3.0%	2.6%	3.4%	26 240	23 861	28 619
PY130G	Disability benefits	3.7%	2.9%	4.5%	30 723	26 548	34 899	8.2%	7.4%	8.9%	28 249	26 363	30 135
PY120G	Sickness benefits	4.2%	3.3%	5.0%	46 020	41 239	50 800	1.3%	1.1%	1.6%	18 110	11 857	24 362
PY080G	Pension from individual private plans	2.4%	1.9%	3.0%	12 717	8 790	16 644	2.0%	1.7%	2.3%	20 750	16 824	24 677
PY140G	Education-related allow ances	0.5%	0.2%	0.8%	16 968	5 965	27 971	1.4%	1.0%	1.7%	6 290	4 745	7 835
HY050G	Family/Children-related allow ances	24.2%	22.5%	25.9%	5 861	5 571	6 152	27.3%	26.1%	28.5%	5 927	5 731	6 122
HY060G	Social exclusion not elsew here classified	23.5%	21.8%	25.2%	7 122	6 091	8 152	23.4%	22.2%	24.6%	7 410	6 346	8 475
HY070G	Housing allow ances	1.2%	0.7%	1.7%	8 999	6 786	11 211	1.0%	0.6%	1.4%	10 041	5 713	14 370
HY080G	Regular inter-household cash transfer received	15.7%	14.3%	17.1%	9 335	7 818	10 853	6.5%	5.9%	7.2%	15 470	13 402	17 537
Mandatory deductions													
HY130G	Regular inter-household cash transfer paid	27.3%	25.6%	29.0%	8 608	6 756	10 460	16.3%	15.3%	17.2%	11 225	10 404	12 047
HY140G	Tax on income and social contributions	100.0%	99.9%	100.0%	34 657	33 528	35 785	100.0%	100.0%	100.0%	36 459	35 543	37 375

2. Comparison of at-risk-of-poverty rates SILC22-HBS21

Table 3 sets out estimated at-risk-of-poverty rates in regard to SILC22 and HBS21 for some socio-demographic sub-groups. Results show excellent consistency between the two sources regarding all sub-groups.

Table 3 SILC22-HSB21 Comparison of at-risk-of-poverty rates by socio-demographic category

		SILC22			HBS21		
Variable		n	At-risk-of-poverty rate (%)	Confidence interval (95%) min max	n	At-risk-of-poverty rate (%)	Confidence interval (95%) min max
Total population		19 229	15.8	14.6 17.1	7 312	15.8	14.2 17.4
Age	0-17 years	3 451	17.1	13.5 20.7	1 358	14.0	10.7 17.3
	18-64 years	11 471	12.5	11.2 13.7	4 375	12.5	10.9 14.1
	18-24 years	1 216	16.1	12.5 19.7	347	13.6	8.7 18.4
	25-49 years	5 766	12.2	10.6 13.7	2 281	11.1	9.0 13.1
	50-64 years	4 489	11.7	10.0 13.3	1 747	14.4	12.0 16.7
	65 years and over	4 307	26.3	24.3 28.3	1 579	27.9	24.6 31.1
Sex	Men	9 382	15.2	13.8 16.7	3 538	14.5	12.8 16.3
	Swiss	7 879	13.0	11.8 14.1	2 934	13.4	11.6 15.2
	Foreign	1 503	21.4	16.7 26.1	604	18.0	13.4 22.6
	Women	9 847	16.4	15.1 17.7	3 771	17.1	15.2 18.9
	Swiss	8 446	14.6	13.3 15.8	3 193	15.9	14.1 17.8
	Foreign	1 401	22.4	18.2 26.7	578	20.7	15.5 25.9
Type of household	Single person aged below 65	1 813	17.1	15.0 19.2	745	17.2	14.1 20.4
	Single person aged 65 or over	1 305	32.9	29.8 36.0	392	33.7	28.1 39.3
	Couple aged below 65 with no child in the household	2 652	6.3	4.4 8.1	1 202	9.0	6.1 12.0
	Couple aged 65 or over with no child in the household	2 988	23.0	20.5 25.5	1 272	24.3	20.4 28.2
	Mother or father alone with child(ren)	1 023	24.2	18.6 29.8	315	21.9	12.8 31.1
	Couple with child(ren)	7 856	12.0	9.4 14.6	3 032	11.5	8.6 14.5
	Other type	1 592	19.6	12.5 26.6	354	15.3	6.2 24.3
Housing occupancy status	Owner	9 974	11.6	10.3 12.8	9 974	12.6	10.5 14.6
	Tenant	9 974	18.7	16.6 20.9	9 974	18.4	15.9 21.0
Region	Lake Geneva region	3 547	15.2	12.57 17.9	1 268	15.5	11.60 19.5
	Espace Mittelland	4 534	18.2	15.2 21.2	1 545	21.6	17.3 25.8
	Northwest Switzerland	2 514	18.3	12.35 24.3	873	13.5	8.82 18.1
	Zurich	3 314	11.5	8.87 14.2	1 142	8.6	5.96 11.3
	Eastern Switzerland	2 556	17.2	13.65 20.7	916	16.7	11.95 21.5
	Central Switzerland	1 896	11.1	7.84 14.3	759	15.1	10.23 20.0
	Ticino	868	23.4	17.25 29.5	809	23.1	17.11 29.1

3. Comparison of growth rates SILC22 - National accounts 2021

Table 4 Comparison and growth rate of several income components between SILC and national accounts

EU-SILC variables	National Accounts item (S14)			Coverage rate (EU-SILC and NA ratio)	EU-SILC growth rate (nominal, year to year)	National accounts growth rate (nominal, year to year)
Employee income						
PY010G Employee cash or near cash income	D1/rec	Wages and salaries		103.16%	3.62%	5.14%
Income from self-employment						
PY050G Cash benefits or losses from self-employment	B3g	Mixed income, gross		26.64%	-3.83%	0.79%
Social benefits other than social transfers in kind						
HY050G Family/children related allowances HY060G Social exclusion not elsewhere classified PY090G Unemployment benefits PY100G Old-age benefits PY110G Survivor's benefits PY120G Sickness benefits PY130G Disability benefits PY140G Education-related allowances HY070G Housing allowances	D62/rec	Social benefits, other than social transfers in kind		62.91%	1.79%	-1.61%
Social contributions and taxes on income paid						
HY140G Tax on income and social contributions	D61/use D51/use	net social contributions taxes on income			2.90%	1.77%
Total disposable household income HY020						
	B6	Gross disposable income		80.46%	2.85%	0.17%

Table 2 shows that the coverage rate for Employee income is very good, due to the registers used. The growth rate is also similar between the 2 sources.

On the other hand, the coverage rate for income from self-employment is very low, and the growth trends are opposite. The quality of the registers used in SILC for the self-employed is much poorer than for employees, and CATI incomes are more approximate. In addition, extreme incomes in the distribution are under-covered in SILC.

The coverage rate for Social benefits is also relatively poor, despite the use of registers for some of the sub-components. The private sub-component of old-age and survivor's benefits is not derived from a register, and it is possible that it is underestimated by CATI. However, growth remains relatively similar between the 2 sources.

Overall, Total disposable income has a good coverage rate, even if growth is greater for SILC than for the national accounts.

