

Estimation process of Finnish EU-SILC

This presentation shows some special characteristics of the sampling design, rotation and calibration in Finnish EU-SILC.

- 1) Cross-sectional SILC data based on two waves*
- 2) Selection of a master sample*
- 3) Allocation for strata*
- 4) Calibration process*

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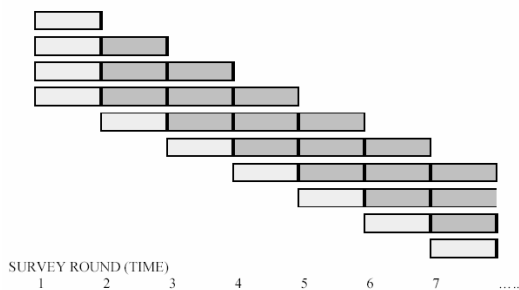
Cross-sectional SILC data based on two waves



- Eurostat proposes an integrated design, where the cross-sectional and longitudinal statistics are produced from essentially the same set of observations.
- Two waves of the IDS are utilised in the cross-sectional part of EU-SILC. In the future third and fourth waves are surveyed separately from the IDS, not included in the cross-sectional part of EU-SILC.

Figure 3. Illustration of the rotation pattern in the first years

PATTERN FROM YEAR 1



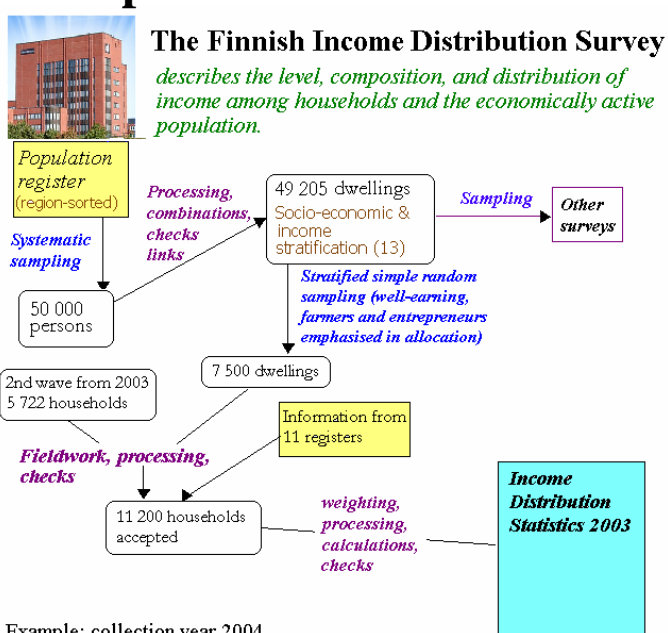
2004	2005	2006	2007
1. year	2. year	3. year	4. year
3 200			
2 500			
2 500	1 900		
2 500	1 900	1 748	
2 500	1 900	1 748	1 608
	5 000	3 800	
	2 500	1 900	1 748
		5 000	3 800
		2 500	1 900

→ - parallel results from the IDS & SILC
- "wasting" two rotations

Selection of a master sample / Allocation for strata

- + The dwelling unit preparations for several surveys at the same time
 - + Master sample calibration used for creating household distributions
 - More complexity to the sampling design
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- + Allocation emphasising well-earning, farmers and entrepreneurs ensures the sample size of these vital groups
 - + Improves the quality of “income-based” indicators (gini, share ratio)
 - Allocation not good for poverty indicators
 - Proportional allocation outperforms the others

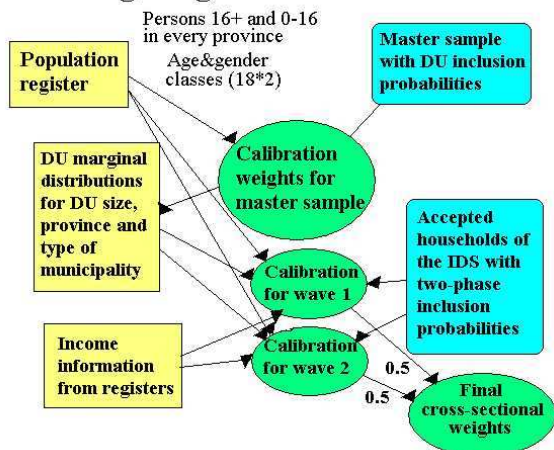
Table by Guillaume Osier, Eurostat



	Variance phase 2 (current allocation)	Variance phase 2 (simple random sampling)	Variance phase 2 (proportional allocation)
Poverty threshold	1217	1088	907
Poverty rate	0.095	0.069	0.067
Income quantile share ratio	7.2×10^{-4}	11.4×10^{-4}	6.3×10^{-4}
Gini coefficient	0.025	0.046	0.024
Relative median gap	0.31	0.23	0.22
Mean equivalized income	1312	2467	1288

Calibration process

Weighting Procedure of the IDS



- Income variables from registers, e.g. **Cash or near cash employee income, Pensions, Unemployment benefits, Income from self-employment, Capital income, Income from agriculture, Income from property and forestry, Capital gains, Mortgage interests**

STANDARD ERRORS

	Poulpe	Bootstrap
At-risk... after social tr.	0.38	0.35
At-risk... before s.tr. exc.old-	0.40	0.42
At-risk... before social tr.	0.36	0.40
Inequality of inc.dist. S80/S20	0.034	0.088
Relative median at-risk-of-p.	0.68	0.70
Dispersion around the risk-...	0.13	0.14
Gini coefficient	0.20	0.63

*Poulpe calculations (Eurostat), calibration included
Bootstrap (StatFi), calibration process not in replications*

- Integrative calibration improving significantly the estimation of e.g. S80/S20 and gini coefficient

- The results with very narrow confidence intervals may cause disbelief at the estimation methods