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Analysis of the revision

Statistics on income and living conditions (SILC)

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1 Purpose of the document

This document provides an overview of the revisions to the Statistics on Income and Living Conditions (SILC) survey as they are introduced and a list of these revisions. A new chapter (dating from the SILC survey year in which the revision was introduced) and two new sub-chapters ("Explanation of the revision" and "Impact on results") are created for each revision. Revisions are listed from most recent to oldest. This document is introduced on the occasion of the introduction of a revision policy by the FSO in 2020.

2 Revision SILC 2023: Introduction of the CAWI survey method

2.1. Explanation of the revision

A new online survey method (CAWI) was introduced in 2023 for the SILC individual questionnaire, in parallel with the telephone survey method (CATI). The implementation of this survey method aims to increase response rates by offering online questionnaires to people who are more willing to respond via the Internet, as well as to people who no longer have a landline (ALTEL households, which have been increasing in our samples in recent years). It also reduces survey costs and increases flexibility for respondents.

In 2023, 5160 individual questionnaires (36.8%) were completed using CAWI. The response rate to the individual questionnaire in households that participated in the survey increased by 7 percentage points from 81% in 2022 to 88% in 2023. The percentage of CAWI respondents increases with the level of education and income and decreases with age. People living in a household that owns its main residence and people living in German-speaking Switzerland also participate more in CAWI. Young women participate more in CAWI than young men, while the trend is reversed for men over 65 compared to women of the same age group. These structural differences between CAWI respondents and CATI respondents can be corrected, at least in part, by weighting.

The survey method can have an effect on the answer itself. In CATI, the respondent tends to adapt their answers so as to be perceived positively by the interviewer. Thus respondents may adjust their answers, unconsciously or not, to conform to social norms, the expectations of the interviewers and their own perception of social ideals. This phenomenon of social desirability, observed in telephone surveys, does not occur in CAWI. CAWI, on the other hand, can lead to a form of critical and negative venting. It is also less suitable for complex questions that can be explained to the person when they respond in CATI method. The effect of the survey method on the answer cannot be corrected by weighting.

2.2. Impact on results

The introduction of this new survey method in 2023 only concerns the Individual questionnaire of the SILC survey. All the variables collected in the Grid, Household and Proxy questionnaires or from registers are therefore not affected by this revision. As a result, indicators on income and housing, for example, as well as structural variables (age, sex, nationality, etc.), are not concerned.

For the indicators calculated with variables collected in the Individual questionnaire, it is difficult to quantify precisely the effects of the survey method on the answers because the differences in results observed between CATI and CAWI may also be due to the fact that these two types of respondents do not have the same structural characteristics, as mentioned in 2.1. Additional undetected structural differences cannot, however, be ruled out, nor can they be integrated into the weighting due to lack of information. Various analyses were carried out to reduce the effect of the structural differences between people who respond using the CATI and CAWI methods and thus isolate the impact of the survey method on the answers.

The results of the analyses have enabled us to identify several scenarios:

1. The change between 2022 and 2023 is reinforced by the introduction of this new response method. For these indicators, a break in series is indicated in the footnotes of the tables, specifying that the real trend is accentuated by the introduction of the CAWI survey method.
2. The effect of the CAWI survey method explains the change between 2022 and 2023. For these indicators, a break in series is indicated in the footnotes of the tables, specifying that the introduction of CAWI limits comparability between 2022 and 2023.
3. No effect of the mode was detected between the CAWI and CATI respondents, even after the reduction of structural differences. In this case, no footnote is added in the tables.

In general, the main indicators showing a break in series following the introduction of the CAWI survey method are subjective evaluations such as satisfaction in different areas of life, trust in institutions and certain unmet needs for health care.

3 Revision SILC 2021: New concept of material and social deprivation and introduction of imputations

3.1 Explanation of the revision

The concept for measuring deprivation in Europe has been revised by Eurostat. The material and social deprivation indicator has replaced the material deprivation indicator. This revision was implemented in Switzerland with SILC-2021 data and then applied retroactively to SILC-2014. With this change in concept, the problem of missing values became more acute and necessitated the introduction of imputations.

The old material deprivation indicator has become less relevant over the years. In many European countries, certain areas of deprivation included in the old indicator, such as not having access to a washing machine or not owning a colour television for financial reasons, are no longer relevant. Conversely, other non-material criteria that were ignored in the old indicator have gained in importance.

With the addition of material and social deprivation items in the Individual questionnaire, non-response are around 17% in 2021. Although Eurostat does not provide for imputation for material and social deprivation, the risk of bias in Switzerland was too great to follow this recommendation. Imputations have been set up using the MissForest algorithm for all deprivation items, with retroactive application to 2014.

3.2 Impact on results

The conceptual and methodological changes between the old concept of material deprivation and the new concept of material and social deprivation are significant and mean that the two indicators must be considered as incomparable. They are therefore published in two different tables, each with a different name. The old material deprivation indicator will not be updated after 2020.

The imputation algorithm used (MissForest) performs well, with high concordance rates for the imputation of simulated missing values. It reproduces respondent distributions fairly well and the impact of imputations remains low.

A detailed note on this revision can be found here (only available in French):
Nouveau concept de privation matérielle et sociale et imputations / Considérations méthodologiques

4 Revision SILC 2017: Revision of the longitudinal weighting

4.1 Explanation of the revision

The change in the rule for following households made it possible to use variables from data surveyed in wave 1 available only for complete households in the adjustment for household total non-response. The new weighting thus models better the probabilities of response. The SRPH survey frame, by offering a much more complete coverage of the reference population and access to a greater amount of data on the population, has led to an improved final calibration. The result is a fundamental revision of the methods of

longitudinal weighting and consequently a marked improvement in the quality of longitudinal estimates produced from SILC 2017. The dispersion of the revised weights is wider, resulting in an upward trend in confidence intervals.m arcu.

4.2 Impact on results

Analysis of the impact of the revision on the main indicators shows that it is essential to indicate a break in the series between the longitudinal results before and after the revision.

The at risk of persistent poverty rate has increased with the revision (percentage of people with an income lower than the risk of poverty threshold (60% of the median) for the current year and at least two of the three previous years).

Il rose by 2.2 percentage points, rising from 6.6% with the previous weighting to 8.8% with the new one. The most pronounced increase (3.5 percentage points) concerns per-sons aged 18-24, whose rate rose from 3.8% with the previous weighting to 7.3% with the new one, followed by the under 18s (from 15.0% to 18.0%). An undeniable increase was also observed among people aged over 65, whose rate rose from 7.4% to 10.9%.

A detailed note on this revision can be found here:
Summary report on the revision of the longitudinal weightings of SILC-2018 - Methodological considerations | Publication | Federal Statistical Office (admin.ch)

5 Revision SILC 2015: Revision of the health deprivation concept

5.1 Explanation of the revision

From 2015 onwards, the dental/medical examination or treatment will be recorded as follows. The survey processing will be conducted in three steps:

1. First, people are asked about the need for dental/medical examination or treatment in the 12 months prior to the survey. Was there any time during the past 12 months when you really needed…"
2. If the person answers "yes" to the question, they are asked whether they have always had an examination or treatment that they consider necessary:
3. If the question is answered with "no", the main reason for deprivation is asked (only one answer possible; in case of multiple occurrences, the last time counts):

Before 2015, the person was asked whether they were not able to receive a dental/medical examination or treatment during the past 12 months although this was needed. If the question was answered with "yes", the main reason for deprivation was asked.

5.2 Impact on results

Verification of the need for treatment reduced the rates of health deprivation for the dentist from 4.6% (2014) to 2.7% (2015) and from 1.3% for the doctor in 2014 to 0.4% in 2015.

6 Revision SILC 2014: Change in survey basis and revision of the cross-sectional weightings

6.1 Explanation of the revision

The sample for the Survey on Income and Living Conditions (SILC) has been drawn from the FSO's new population survey sample frame (SRPH) since 2014. The latter is compiled from data provided by the official registers of persons. It also covers households with no fixed-line telephone number, which was not the case in the previous survey sampling frame.
The weighting model has subsequently been revised and improved, taking into account new data from the administrative registers.

6.2 Impact on results

These changes entail a break in series between SILC 2013 and SILC 2014. Thus, from 2014 onwards, results can no longer be directly compared with those of previous years.

The most noticeable effect on the structure of results is an increase in the size of the population estimated by SILC. Most of this increase is due to the calibration revision.

This increase in population size estimated by SILC has an impact on the estimation of the number of people in a precarious situation. These revisions also result in a decline in the median and in the 1st quartile of equivalised disposable income, a decline in the average salaried income and an increase in income from social assistance and health insurance subsidies. However, there is no significant impact on the risk of poverty of the population as a whole.

A detailed note on this revision can be found here:
Summary report of the SILC 2014 revision | Publication | Federal Statistical Office (admin.ch)

7 Revision SILC 2014 : Revision of the household type

7.1 Explanation of the revision

Following a harmonisation of the definitions of household types at the Federal Statistical Office, a new typology is now used in the Survey on Income and Living Conditions (SILC).This harmonisation greatly increases the comparability of household types in household surveys.

This new typology was introduced in April 2017 with the dissemination of the SILC 2015 results. In the standard tables, the two typologies are released in parallel for SILC 2014.

Change to the definition of "couples"
Adults living in a household are classified as couples if they are partners (married or consensual). Households with two adults that are not couples are classified as "other types of households". The age of the couple is determined by the age of the older person.
Before the revision, the notion of two adults (couples or not couples) was published according to the Eurostat nomenclature.

Change to the definition of children
Persons aged 0-24 years living the household with another person of whom they are the son/daughter, whether economically active or not, are considered to be children.
Prior to the revision, children were defined as any person under the age of 18 (with or without a "child" relationship) as well as economically inactive persons aged 18 to 24.

6.2 Impact on results

The main effect of the new typology is a decrease in the share of households classified as "other types of households" (10% to 6.9%) in favour of the share of "single parent households" (3% to 4.7%) and "couples with children" (19.5% to 24.3%) due to the removal of the criterion of "economically inactive" for children aged 18 to 24.

A detailed note on this revision can be found here:
Révision des types de ménage dans l'enquête SILC | Publication | Federal Statistical Office (admin.ch)