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Measuring poverty

Poverty rates in Switzerland before and after social transfers

Note by the Swiss Federal Statistical Office

Summary

This document studies how social transfers influence poverty rates for different population groups in Switzerland. The document pays special attention to the standard Eurostat concepts for measuring the disposable income before social transfers and their applicability to Switzerland. Empirical findings show that while the impact of social transfers on the level of income poverty in Switzerland is considerable, risk factors remain largely the same. There are however certain exceptions: for families with young children or many children and foreign nationals from outside of the region of European Union and European Free Trade Association, social transfers succeed in reducing high poverty rates to average values.

The document is presented to the Conference of European Statisticians' seminar on "Measuring poverty" for discussion.

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I. Introduction

1. As in other welfare states, in Switzerland there are many social transfers intended to hedge financial risks and prevent poverty. A comparison of poverty indicators before and after social transfers enables conclusions to be made as to how efficiently social security fulfils its purpose and can actually contribute to the reduction of poverty.

2. This document will examine how high poverty rates in Switzerland would be without social transfers and among which groups these rates are most reduced by social transfers. The document analyses if the structure of the population identified as poor is changed through social transfers.

3. Two variables are specified by Eurostat in the Statistics on Income and Living Conditions (EU-SILC) survey for measuring disposable income before social transfers. In the first variable, old-age and survivor's benefits are added to income and in the second they are not. According to these guidelines, social transfers are not considered on the income side, yet their taxation on the expenditure side is still to be deducted. An attempt to compensate for this imbalance is made in this document by adjusting the taxes paid based on the share of social transfers in the household income.

A. Measuring income and poverty before social transfers

4. The Federal Statistical Office (FSO) publishes annual poverty statistics based on the EU- SILC survey. The time series goes back to 2007 and the latest data are from 2014.

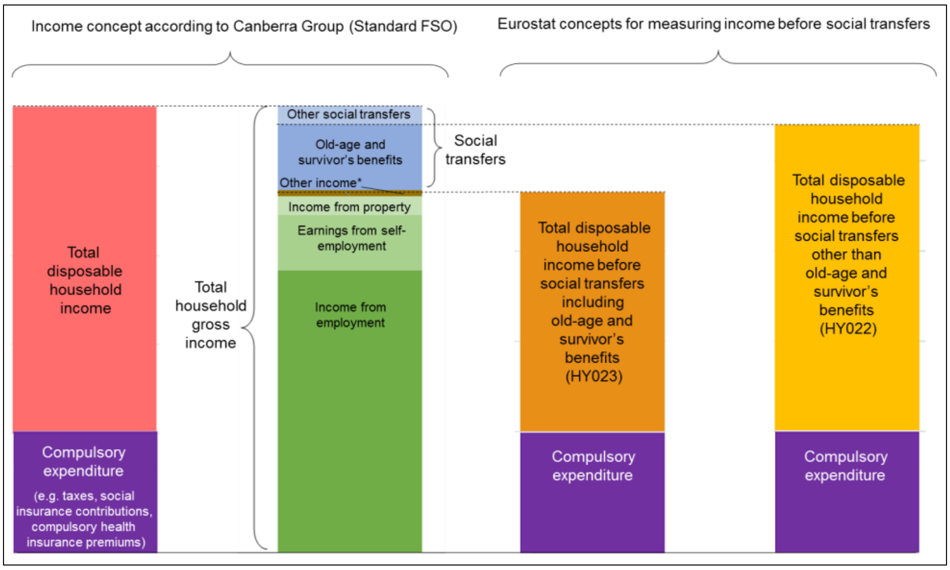
5. The Swiss poverty threshold is derived from the social assistance guidelines. It is based on a basket of commodities which is supposed to cover both basic material needs and a minimum level of participation in social life. This therefore involves a need-based poverty concept. The poverty rate defined in this manner is considered relevant for national politics but cannot be compared at international level.[1]

6. In order to calculate the poverty rate, the poverty threshold is compared with the disposable household income as defined by the Canberra Group[2]. Accordingly, disposable income is calculated by totalling all household income components including social transfers and then subtracting compulsory expenditure (see diagram 1). Poverty is, thus, generally defined as post-transfer poverty.

[1] Pursuant to the Eurostat guidelines, we also calculate a relative poverty indicator (at-risk-of-poverty rate) which refers to a relative poverty threshold of 60 per cent of the median equivalised disposable income. In the following analyses, however, only the poverty concept described above is used as we are primarily interested in whether social transfers in Switzerland contribute to ensuring that the population actually reaches the minimum standard of living which all inhabitants should enjoy.

[2] UNECE (2011): Canberra Group Handbook on Household Income Statistics. Second Edition, Geneva: United Nations.
www.unece.org/fileadmin/DAM/stats/publications/Canberra_Group_Handbook_2nd_edition.pdf

Diagram 1
Income concepts



* Other income: alimony and other private household payments, pensions from individual private plans, income received by people aged under 16

Source: own diagram

7. As mentioned above, however, (hypothetical) income before transfers may also be calculated. For this purpose, Eurostat defines two variables for measuring disposable income before social transfers. In the case of HY023 ("Total disposable household income before social transfers including old-age and survivor's benefits"), all social transfers are dismissed, while in the case of HY022 ("Total disposable household income before social transfers other than old-age and survivor's benefits") old-age and survivor's benefits are the only social transfers to be included in the income. According to the guidelines, the variables should be formed by subtracting social transfers received (gross amounts) from the disposable income as defined by the Canberra Group (red in the diagram), while the compulsory expenditure remains unchanged (violet in the diagram).[3]

8. For Switzerland, proceeding in this way is potentially problematic as compulsory expenditure must be paid on many social transfers. For instance, old-age and survivor's benefits, unemployment insurance benefits, sick-day benefits and child allowances must all be taxed in full. In households with a high level of such transfers, compulsory expenditure often exceeds the other income components. This means that in a substantial share of these households the disposable income before social transfers according to the Eurostat definition is negative: While the disposable income in 0.2 per cent of cases is negative, among HY022 it is 1.4 per cent and among HY023 16.5 per cent. Consequently, there is a tendency to overestimate poverty before transfers.

9. From a conceptual perspective, it would be more accurate if social transfers could only be subtracted from the disposable income as net benefits. For pension benefits, this would for example mean that only the benefit amount before taxes (= net benefit) would have to be subtracted from the disposable income instead of the entire amount as has been

[3] Eurostat (2015): "Methodological Guidelines and Description of EU-SILC Target Variables, 2014 operation (Version October 2014)", https://circabc.europa.eu/w/browse/cdfb4afb-c91a-4d8b-b68b-a71188d83947.

the case until now (= gross benefit). Due to the Swiss tax system, however, this is rather complicated: In Switzerland, taxes are not continuously deducted from income as is the case for withholding tax but are collected the following year via a tax declaration based on the income and wealth declared. The amount of tax is calculated based on the income from the previous year and may thus vary from the current situation.

10. In the next section, net social transfers will be estimated using a simple model and their impact on poverty rates analysed. Through the subsequent comparison of poverty rates before and after social transfers, the influence of social transfers in Switzerland will also be shown.

II. A comparison of poverty before and after transfers

A. The influence of net social transfers

11. As a first step, the following will analyse the degree to which poverty before social transfers in Switzerland is overestimated due to the subtraction of social transfers from the disposable income as gross amounts instead of as net amounts. As a simple method to calculate net social transfers, all households were credited with an imputed income which was calculated as follows:

$$\begin{gathered} Share\ of\ social\ transfers\ received\ in\ gross\ household\ income \\ *\ total\ amount\ of\ taxes\ paid \end{gathered}$$

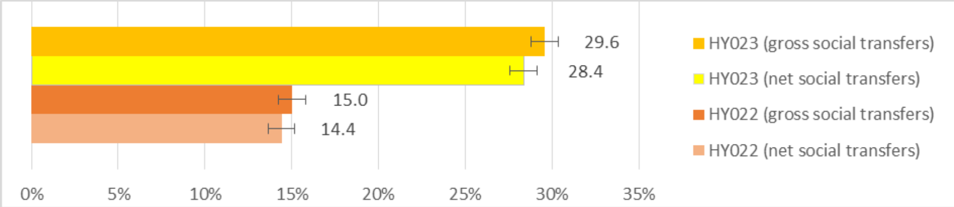
12. As a result, taxes on income and wealth that households have to pay are reduced proportionally to the share of social transfers in their gross household income. From a conceptual perspective, this is equal to subtracting net social transfers from the disposable income. Following this correction, the share of negative income falls from 1.4 per cent to 1.2 per cent (HY022) or from 16.5 per cent to 13.9 per cent (HY023). The remaining negative values are mainly attributable to compulsory basic health insurance costs which are not income dependent in Switzerland.[4]

13. Since the interest is in the impact of this adjustment on the estimated poverty rates, the poverty threshold will be compared with the various income variants (see diagram 2). As expected, the poverty rates before transfers are slightly higher when gross social transfers are deducted from disposable income than when only the net benefits are considered. However, with 0.6 (HY022) to 1.2 (HY023) percentage points, the changes remain within the confidence interval. This suggests that the poverty rates before social transfers are only slightly overestimated using the Eurostat method. More detailed analyses (not shown) confirm that this applies to all of the sub-groups considered.

[4] Persons on a low income are in principle entitled to insurance premium discounts. These, however, are also social transfers and are therefore not considered in income before social transfers.

Diagram 2

Poverty rates before social transfers, with and without adjustment of taxes paid



Source: SILC 2014, Version 4.4.2016

Results from a distribution of persons. HY023 = total disposable household income before social transfers including old-age and survivor's benefits; HY022 = total disposable household income before social transfers other than old-age and survivor's benefits. For "gross social transfers", pursuant to Eurostat's standard guidelines, the social transfers are subtracted from the disposable income without changing the compulsory expenditure. For "net social transfers", the taxes paid are reduced proportionately to the share of social transfers in the household income.

B. Influence of social transfers on the poverty rate

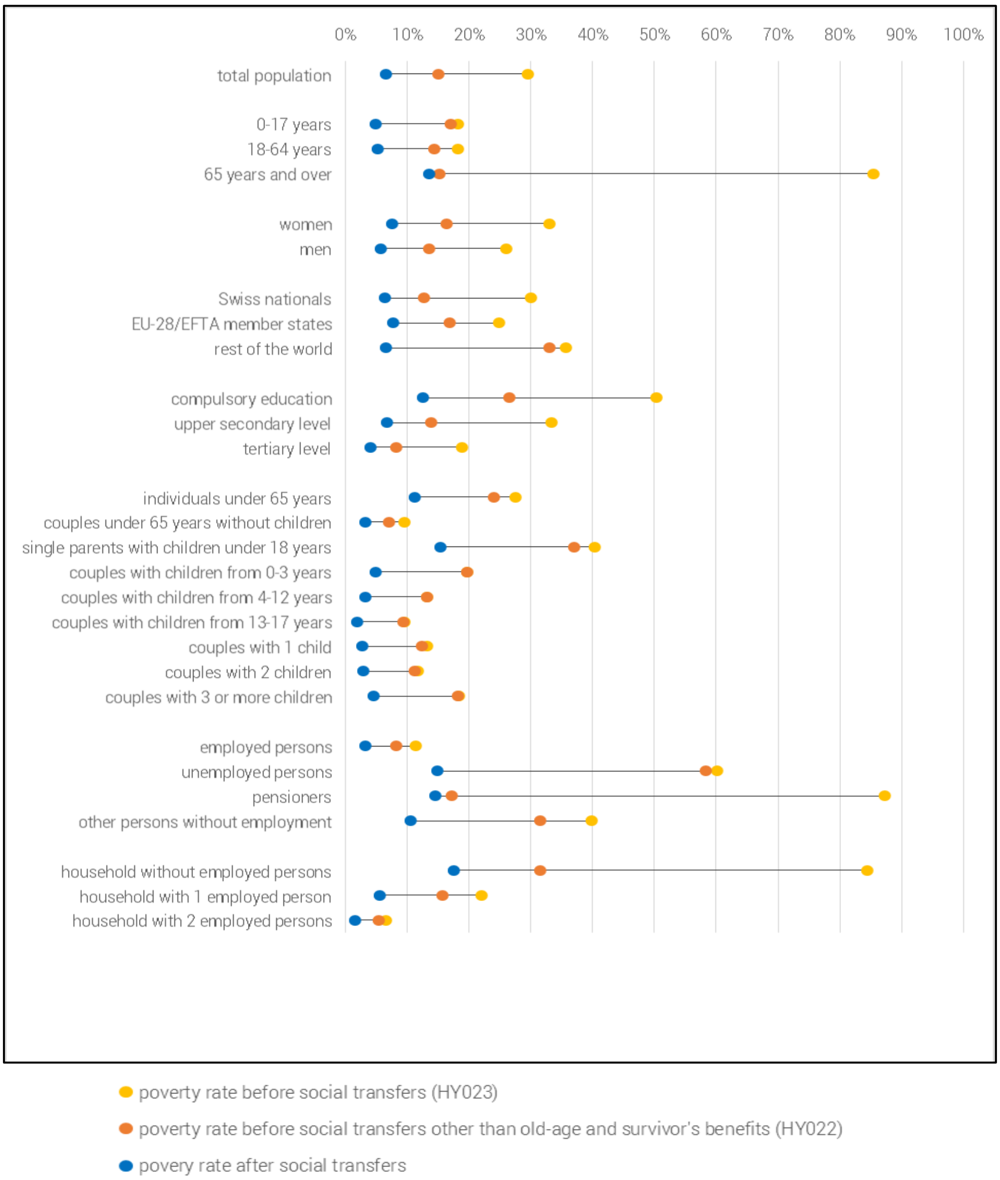
14. Assuming that poverty rates before social transfers are only slightly distorted using the Eurostat method, the following will focus on comparing poverty rates before and after social transfers.

15. Poverty in Switzerland is considerably reduced by social transfers (see diagram 3). If all social transfers (including old-age and survivor's benefits) are subtracted from disposable income (HY023), almost a third of the Swiss population is affected by poverty (29.6 per cent, corrected value: 28.4 per cent). Particularly high poverty rates before transfers are found in households aged 65 and over, where almost 100 per cent of persons receive old-age and survivors' benefits. Such benefits usually constitute the greatest part of income or indeed are the only source of income.[5] According to the Eurostat concept HY022 which counts old-age and survivors' benefits as income, the poverty rate before social transfers of the total population falls to 15.0 per cent (or 14.4 per cent when adjusted for net social transfers). When all transfers are taken into account the poverty rate is 6.6 per cent. Depending on the income concept being used, the percentage of income of poor people in Switzerland is thus reduced by roughly 50 per cent to 75 per cent through social transfers.

16. The structure of the population defined as poor, however, changes little. Although social transfers are more important to certain groups than to others, the greatest risk factors for poverty in Switzerland both before and after transfers are a low level of education and insufficient household labour market participation. By household type, single-parent households are especially affected by income poverty. Although social transfers considerably reduce poverty rates in these groups, they are still more likely to suffer from income poverty than the population as a whole.

[5] The poverty rates of persons aged 65 and over should be interpreted with caution, as in this age group, people are more likely able to fall back on their savings. See FSO (2014): "Poverty in old age", https://www.bfs.admin.ch/bfsstatic/dam/assets/349389/master, (in German and French only).

Diagram 3
Poverty rates before and after social transfers



Source: SILC 2014, Version 4.4.2016
Results from a distribution of persons. The poverty rate is based on income and does not take into account any financial assets. As persons aged 65 and over are comparatively more able to fall back upon savings, their poverty rates should be interpreted with caution. The same applies to pensioners.

17. The situation is different for foreign nationals originating from outside of the region of the European Union (EU) and European Free Trade Association (EFTA). If old-age and survivors' benefits are included in before transfer income (HY022) this group shows considerably higher poverty rates before social transfers than the other nationality groups. After transfers, however, their poverty rate is comparable to that of other foreign nationals and not significantly higher than that of Swiss nationals either.

18. People of non-European nationality are more often poorly integrated in the labour market or even officially excluded from working due to their permit status. For this reason,

they are more likely than all other groups to rely upon social assistance. In contrast, foreign nationals from EU/EFTA states tend to receive fewer social transfers than average. This means that social transfers help to even out the varying risk of poverty between people from different countries of origin.

19. Social transfers (excluding old-age and survivors' benefits) also play a greater role in combating poverty among families with children than they do in comparable households without children. Single mothers or fathers with minor children are considerably more likely to be income poor before receiving social transfers than single-person households without children, whereas their poverty rates after social transfers are not significantly different. However, these two household types have considerably higher poverty rates both before and after transfers than the population as a whole.

20. Measured in terms of disposable income before social transfers (HY022), poverty rates among couples with children are in almost all cases higher than for couples without children, especially if the youngest child is under the age of three, or three or more children live in the household. Poverty rates tend to be more similar once all social transfers are taken into account.

III. Conclusions and recommendations

21. While social transfers have a major influence on the level of poverty rates in Switzerland, the structure of the population identified as poor remains largely unchanged. However, for couples with small children as well as foreign nationals from non EU/EFTA states, social transfers do have a compensatory effect. Whereas these groups display considerably higher poverty rates than the population as a whole before social transfers, no significant differences can be seen after these transfers.

22. At a conceptual level, it was argued that in their present form, both Eurostat concepts HY022 and HY023 tend to overestimate the importance of social transfers in combating poverty because benefits are deducted from income without adjusting for taxes that have to be paid on them. Empirical evaluations have shown, however, that the poverty rates before social transfers do not decline significantly when adjustment is made to taxes paid. This suggests that the method proposed by Eurostat leads only to a slight overestimation of poverty before social transfers in Switzerland.