



^b
**UNIVERSITÄT
BERN**

Faculty of Business, Economics and
Social Sciences

Department of Social Sciences

University of Bern Social Sciences Working Paper No. 59

The evolution of ‘working poverty’ during the COVID pandemic: A Swiss case study

Eric Crettaz, Lukas Schlittler, Rudolf Farys, Oliver Hümbelin, and Olivier
Lehmann

March 4, 2026

<http://ideas.repec.org/p/bss/wpaper/59.html>
<http://econpapers.repec.org/paper/bsswpaper/59.htm>

The evolution of ‘working poverty’ during the COVID pandemic: A Swiss case study¹

Eric CRETТАZ², Lukas SCHLITTLER³, Rudolf FARYS⁴, Oliver HÜMBELIN⁵, Olivier LEHMANN⁶

Abstract

This article examines the evolution of working poverty in Switzerland during the Covid-19 pandemic using detailed administrative register data, linked with survey data collected from over 200,000 people. Switzerland represents a distinctive case, as containment measures were comparatively short and less restrictive, while extensive policy support—most notably short-time work schemes with an 80 per cent replacement rate—helped stabilise labour incomes. Consistent with this institutional context, results show that working poverty did not increase during the pandemic; rather, all three indicators used in this study point to a modest decline in 2020. This pattern mirrors earlier findings from the Great Recession, suggesting that when downturns are neither deep nor prolonged, absolute and relative poverty indicators tend to converge. The analysis further highlights heterogeneous effects across worker groups. Solo self-employed workers and domestic workers recorded no rise in working poverty, reflecting the protective role of targeted business support measures, although undeclared domestic workers remain outside the scope of the data. Essential workers experienced declining poverty risks in 2020 but a rebound in 2021 despite improving macroeconomic conditions, pointing to possible delayed effects of heightened work strain and health risks. By contrast, workers with high teleworkability were largely shielded from working poverty. The findings underline the importance of crisis-specific income stabilisation policies and raise broader questions about extending social protection to solo self-employed workers in future downturns.

Keywords: Working poverty, Covid-19, social protection

JEL-Classification: I32, J38, J21, H55

¹ The authors thank the Federal Statistical office and the cantonal tax administrations for the provision of the data. This research was funded by Swiss National Science Foundation under the National Research Program “COVID-19 in Society” (NRP-80) within the project “Poverty and Social Security in Times of Crisis” grant no 210054.

² University of Applied Sciences and Arts Western Switzerland (HES-SO), eric.crettaz@hesge.ch

³ University of Applied Sciences and Arts, Northwestern Switzerland, lukas.schlittler@fhnw.ch

⁴ Universität Bern, rudolf.farys@unibe.ch

⁵ Bern University of Applied Sciences, oliver.huembelin@bfh.ch

⁶ Bern University of Applied Sciences, oliver.lehmann@bfh.ch

Introduction

The COVID pandemic had an impact on workers in Switzerland, as it had in virtually all nations, particularly during lockdowns (IMF, 2022). Employees in certain industries associated with indoor activities where many people congregate, like dining establishments, movie theaters, concert halls, and other cultural events, were impacted for a longer time because many of these activities were restricted or even outright forbidden even after the lockdowns were lifted.

As a result, many employees faced lower incomes and the incapacity to work, and many wage earners even lost their employment, while businesses filed for bankruptcy (see e.g. Crettaz 2021). However, in postindustrial economies, most governments put in place new policies, or expanded existing ones, to combat the negative economic impact of sanitary measures, particularly short-time work (STW) schemes, also known as furlough schemes, for wage earners (Beland et al. 2021, Moreira and Hick 2021). The majority of these national schemes, however, did not have a 100 per cent replacement rate (Müller and Schulten 2020, Hijzen and Salvatori 2022). In the case of Switzerland, in the spring of 2020, about half of wage earners (48.1 per cent) benefited from short-time work schemes (Müller and Schulten 2020) and got 80 per cent of their previous wage. There were also targeted initiatives for self-employed workers and independent contractors in most advanced economies, including Switzerland, as further discussed below. As a positive consequence of these measures, in Switzerland, the number of business bankruptcies decreased between 2020 and 2022 and fell below the pre-pandemic level. In 2021, for instance, average monthly company bankruptcies were about 17 per cent lower than in 2019 (KOF 2022, Eckert et al. 2022). Since the lifting of public health and economic measures, largely during the year 2022, the number of bankruptcies has started to rise again (KOF 2022), which could indicate that the measures largely postponed bankruptcies rather than permanently reducing the annual number of bankruptcies. According to the European Commission, a very similar trend was observed in the EU (Eurostat 2025).

In addition to the broader economic impact, which included job losses, soaring governmental spending, and economic recession, it should be noted that not all socioeconomic groups were impacted equally (Hijzen and Salvatori 2022). The ability to work from home emerged as a critical stratifying factor (Baruffini and Rossi 2024) ; higher-skilled workers were more likely to transition to teleworking, which exacerbated labour income disparity at the time, as these employees generally maintained their full wage. Furthermore, the so-called 'frontline workers' or 'essential workers' were more likely to be less educated. In this instance, they were not impacted by income loss, but they were at a significantly higher risk of contracting a coronavirus infection, which carried an unknown risk of post-COVID syndromes or 'long COVID' at the time - the WHO estimates that between 2020 and 2022, at least 17 million people in Europe suffered with long-term COVID. This also went with economic consequences for those affected, as in many advanced countries, individuals who are on medical leave do not get their wage in full.

Because many wage-earners experienced a decrease in working hours labour income – notwithstanding STW schemes - while many self-employed workers were hard-hit and the measures implemented could not always completely compensate the income loss, there is a strong basis to conclude that overall poverty has increased, and *in-work* poverty in particular, during the pandemic's initial phases. In addition, many workers probably did not get a pay rise during the pandemic that they would have gotten in normal times. However, most European governments reacted swiftly and implemented massive redistribution mechanisms towards employees and self-employed workers, as further discussed below for the Swiss case. This could mean that many failing companies might have avoided bankruptcy, which means that their employees, who would normally have lost their jobs, could keep them. This means, however, that once the sanitary measures were lifted, that these vulnerable companies could have gone bankrupt at a later point in time.

Last but not least, Russia waged a war against Ukraine and invaded the Eastern part of the country on 24 February 2022, that is, when most European economies were starting to get back to pre-pandemic

regulations – in the case of Switzerland, sanitary measures were lifted only a handful of days before the war started. As Russia is a fundamental player in the production of fossil energies, in particular natural gas, this triggered a level of inflation that had not been experienced in Europe for many years (Bruhin et al. 2023, Ozili 2024).

Hence, from a theoretical perspective as well as from a policy point of view, in-work poverty may have fluctuated during the pandemic, even after the sanitary measures were lifted. Some negative effects may have been delayed by the specific COVID-related economic measures implemented in the early stages of the pandemic but not eradicated. Some difficulties might just have been postponed.

However, there are few publications specifically analysing the fluctuations of in-work poverty during the pandemic in advanced economies. This article aims to fill this knowledge gap thanks to a high-quality dataset obtained through the merging of tax, social security, social assistance, census and survey data, as further discussed in the methodological part below⁷.

There are also theoretical reasons why this topic is interesting for poverty, labour market and social policy research. Indeed, the links between unemployment and poverty, on the one hand, and between low wages and IWP, on the other hand, are indirect for individuals who do not live alone. Most low-wage workers (Hick and Marx 2022, Nolan and Marx 2000, Salverda 2018; see Crettaz and Farine 2008 for Switzerland), and many unemployed persons are not poor, because their poverty status depends on other income sources, notably social benefits as well as other household members' earnings.

Finally, we aim to evaluate the sensitivity of our findings to various definitions of 'working poverty'. Indeed, we can expect that poverty measures based on the distribution of disposable household income can lead to other conclusions than indicators based on the cost of goods and services, i.e. on living conditions.

In what follows, for the sake of clarity, we will use the concept of 'in-work poverty' (IWP) to describe the EU's official indicator, or similar indicators using the EU's official at-risk-of-poverty line set at 60 per cent of national median equivalised disposable income, but a different definition of 'working', as is the case of our own definition. For all other indicators, we will use the notion of 'working poverty'.

General and specific social policy responses

Consistent with broader European trends, Switzerland implemented a suite of measures to mitigate the pandemic's economic impact (Bundesrat 2024). These included STW schemes, targeted support for employers, various exemptions and moratoria, designed to offset lockdown-related losses, while public health protocols – such as mandatory masking and sanitisation - when lockdown measures were relaxed, then lifted. The first (and by far longest) lockdown was comparatively short and less restrictive (at no point in time was the population forced to stay at home), and supermarkets e.g. remained open. Children got back to school in May 2020, and this general lockdown was lifted in June. Certain economic sectors, e.g. the catering industry, cinemas, theatres and other recreational and cultural activities, were affected for a much longer period.

It is noteworthy that Switzerland belongs to the Schengen area and that at the time of the pandemic it was – and still is – the EU's fourth trading partner (European Commission undated). Hence, most of the findings presented here should not be very different from other European countries who have similar economies (mostly in Northwestern Europe) and adopted similar policy responses.

⁷ This research was funded by the Swiss National Science Foundation under the National Research Programme "COVID-19 in Society" (NRP 80) within the project "Poverty and Social Security in Times of Crisis" grant no 210054.

However, there are some noteworthy specificities in the Swiss case. In 2020, Switzerland displayed the highest rate (48.1 per cent) of workers benefiting from STW schemes among OECD countries; however, France (47.8), Italy (46.6) and Luxembourg (44.4) were close (Müller and Schulten 2020). Such a high rate was in large part made possible by specific features of unemployment insurance. In fact, its full name is 'Unemployment Insurance and *Compensation in the Event of Insolvency*'. This means, more specifically, that this social insurance not only aims to provide insured workers with an appropriate compensation of earnings loss in the event of unemployment, but also of reduced working hours, of bad weather making it impossible to work, and of insolvency of the employer. This implies that there was no need to pass an emergency law in Parliament, because a measure adapted to the situation in which many companies found themselves due to the COVID pandemic was already available in the law. It was the scale of the phenomenon that was unprecedented, and procedures were simplified to take this into account.

In addition to this STW scheme, other measures were introduced and are briefly presented here (the list is not exhaustive, some very specific or regional programmes have been omitted):

1. Covid bridging loans: this measure provided liquidity support for businesses. SMEs could access loans up to 10 per cent of their turnover, with immediate payouts. Up to 500,000 CHF, which corresponded to about € 461,000 at the end of 2020, the credit was interest-free and fully guaranteed. Higher amounts were 85 per cent government-backed with a reasonable interest rate.
2. Self-employed individuals received compensation if their turnover dropped significantly, with additional extensions into mid-May 2020.
3. There were deferrals for social insurance contributions, VAT and other taxes. These deferrals were interest free.
4. Similarly, a debt enforcement freeze was in effect in March and April 2020, with a Covid-19-related moratorium on insolvency – creditors could not collect pre-existing debts. There was a three-month moratorium, renewable once.
5. There were specific measures for some economic sectors, notably the cultural sector, the tourism industry, and sport (professional as well as mass-sport organisations).

In Switzerland, some measures were relatively short-lived and were lifted after the end of the first lockdown. Eventually, the federal government lifted almost all remaining restrictions and measures on 17 February 2022, meaning that the access to shops, restaurants, cultural establishments, other establishments open to the public and other events was once again allowed without a mask or a vaccination certificate. Likewise, the recommendation to telework was also repealed.

Russia invaded Ukraine a few days later, which spurred inflation in most countries that depend on Russian fossil energy sources, Switzerland in particular. As far as the inflation is concerned, however, Switzerland's strong currency and comparatively very high price levels - it is the most expensive country in Europe in Purchasing Power Parities, according to the OECD (OECD 2024) – had a protective effect for the Swiss resident population's purchasing power (IMF 2022b).

State of the literature

A first literature review published at the very end of 2021 (Crettaz 2021) showed that, nearly two years into the pandemic, most existing publications dealing with the negative socioeconomic impacts of the COVID pandemic and the associated sanitary measures had mainly focused on three outcomes:

- Unemployment
- Wages
- Income poverty at the household level

In the case of unemployment and wages, short-term work measures and teleworking were often discussed.

Most of the literature dealing with household income was based on simulations, with models based on various macroeconomic hypotheses for the year 2020 and applied to data collected for the year 2019, while a few studies were based on ad hoc, real-time surveys carried out during the pandemic, that were much more limited in scope than the usual surveys devoted to employment situations and household income and living conditions (Menta 2021, Clark et al. 2021, Crettaz 2021). Even if this literature provided very relevant information, it did not say much about *working* poverty (Crettaz 2021, Mussida and Sciulli 2025).

From 2022 onwards, a few publications have dealt specifically with in-work poverty because, obviously, more data were available, allowing more accurate estimates to be produced, notably on the topic of poverty. Stancheva (2022), based on a review of findings shows that household income inequality did not increase in the EU27, the Eurozone, Spain, Italy, Germany, France, Sweden, and Ireland. In fact, thanks to policy responses, the Gini coefficient decreased in these countries / regions. These findings, however, do not distinguish working households from other households. She also shows that unemployment was higher among low-wage workers, and remote work was much less common for low-income workers (Stancheva 2022). These two findings point in the direction of a potential increase in IWP or other forms of working poverty, at least during lockdowns.

Mussida and Sciulli (2025), using EU-SILC data, have calculated the EU's official IWP indicator and slight variations of this indicator, as well as an absolute indicator in the form of the IWP rate anchored in time for the income years 2019 and 2021. For these comparisons, they calculate the mean value at the EU level over the whole period. This might be seen as problematic, but given the dearth of empirical evidence, this is an important contribution. IWP is a purely relative definition of 60 per cent of median household income after tax and transfers – more on this at-risk-of-poverty line, or AROP for short, below – and has slightly declined between 2019 and 2021, from 9.1 per cent to 8.7 per cent. However, if the AROP line is anchored in time – its 2019 value is kept constant in real value – the conclusion is the opposite: working poverty increased EU-wide, from 9.1 per cent in 2019 to 11.1 per cent in 2021. Indeed, in another table, the authors show that, in the vast majority of Member States, the AROP line anchored in 2019 leads to the conclusion that working poverty has increased. These results point in a very important direction: conclusions depend on the indicators used and, in times of crisis / recession, relative and absolute measures can lead to opposite conclusions regarding poverty among workers.

This was already highlighted 10 years ago in the case of the Great Recession of the late Noughties (Crettaz 2015): conclusions were significantly affected by the choice of the working poverty indicator, especially for the countries most hardly hit by the recession and the ensuing austerity measures. In the case of Greece, for instance, in-work poverty had decreased in Greece, while material deprivation (a measure of living conditions) had markedly increased among workers (Crettaz 2015).

In addition, Mussida and Sciulli (2025) bring other very important results to the forefront, namely that the evolution of IWP in times of crisis depends on how the labour market – employers in particular – react to the crisis / recession: in countries where the increase in temporary employment and low-wage employment was largest, so was the increase in IWP, even if the correlation is weak in the former case (temporary employment rate). Moreover, changes in the IWP rate varied widely across economic sectors in Europe: the increase was largest in the sectors 'Arts, Entertainment, and Recreation', 'Activities of Household Employers, Undifferentiated Goods—and Services—Producing Activities of Households for Own Use', and 'Accommodation and Food Services Activities'.

In the case of Spain, Palomino and colleagues (2023), using simulations applied to SILC 2019 data (a scenario of 2 months of lockdown plus 10 months of partial functioning of closed occupations at 70 per cent of full capacity), find that during the COVID-19 pandemic the percentage of wage-earners whose incomes are below Eurostat's poverty line at the national level goes from 25.6 to 36.2 per cent. It should be noted, however, that these IWP rates are much higher than those obtained by Eurostat (see Table 1 below), probably because the authors calculated an AROP line for each Autonomous Community (Comunidad Autónoma), (Palomino et al. 2023).

In the US, estimates of monthly changes in poverty rates were available as early as 2020 (Parolin 2020) and a book was published in 2023 on the evolution of poverty in the pandemic and the impact of public policies (Parolin 2023). However, the US labour market and institutional setup during the pandemic worked in a completely different way than in most European countries, notably with skyrocketing unemployment rates during lockdowns. Indeed, the US and the Member States of the EU adopted very different strategies: the US focused on income support while the EU put emphasis on short-time work schemes (Filauro and Parolin 2025).

The above-mentioned studies do not allow to draw conclusions about the evolution of IWP in Europe in general, and in Switzerland in particular over the period 2019-2023. The only source of consistent estimates are Eurostat's figures derived from the Survey on Income and Living Conditions, which was used in some of the above-mentioned contributions (Mussida and Sciulli 2025, Filauro and Parolin 2025).

Unfortunately, many Member States and associated countries have implemented changes in the way SILC data are collected in recent years. Indeed, register data is increasingly used in many participating countries, oftentimes in combination with survey data – even if some countries' income data are totally derived from official registers (taxes, social security datasets, etc.).

Precisely for this reason, during the COVID years, there were several breaks in time series because various countries implemented changes in the way income indicators (and sometimes other indicators) were calculated in SILC. This was the case in:

- Belgium, Ireland, and Hungary in 2019
- Denmark, Germany, Ireland again, France, and Luxembourg in 2020
- Luxembourg again and Norway in 2021
- France again and Luxembourg again in 2022
- Croatia and Malta in 2023

In addition, comparing the data we downloaded at the end of 2024 and the ones downloaded a year later, we found out that some countries had revised their IWP rates for some years, namely:

- Belgium for 2021 and 2022,
- Cyprus for the 2019-2021 period
- Hungary for the whole period considered here
- Switzerland for 2021

In the latter case, however, the change amounted to only 0.1 percentage point and we have decided to maintain this figure in the table below (yet we marked it in red). Finally, we had to drop further figures for the post-COVID-crisis years (2023 and 2024) for Croatia, Lithuania and Malta.

This situation is, obviously, very unfortunate, because it prevents European working poverty scholars from drawing conclusions about the impact of the pandemic on IWP (as defined by Eurostat) in many Member States. This is not a major issue for our article, however, as it is not comparative in nature.

What we can say, as of the writing of this article at the end of 2025, is that changes in IWP observed for the countries for which we have confidence in Eurostat times series, are the following:

Table 1: IWP rates in various EU Member States and in Switzerland, 2019-2024, in per cent.

	2019	2020	2021	2022	2023	2024	Change 19-20	Change 20-21	Change 19-22	Change 22-24
Bulgaria	8.9	9.6	10.0	9.7	11.4	11.8	8%	4%	9%	22%
Czechia	3.5	3.7	3.5	3.4	3.1	3.6	6%	-5%	-3%	6%
Estonia	10.0	10.0	10.0	10.5	10.3	10.3	0%	0%	5%	-2%
Greece	10.2	10.1	11.3	10.6	9.9	10.7	-1%	12%	4%	1%
Spain	12.7	11.8	12.7	11.7	11.3	11.2	-7%	8%	-8%	-4%
Croatia	5.1	5.1	4.9	4.7	...	...	0%	-4%	-8%	...
Italy	11.8	10.8	11.6	11.5	9.9	10.2	-8%	7%	-3%	-11%
Latvia	8.5	8.2	9.8	9.2	9.2	8.2	-4%	20%	8%	-11%
Lithuania	7.9	8.0	7.5	7.6	...	...	1%	-6%	-4%	...
Malta	6.5	7.4	7.3	7.1	...	...	14%	-1%	9%	...
Netherlands	5.5	5.6	5.2	5.0	5.2	4.7	2%	-7%	-9%	-6%
Austria	7.6	7.2	7.5	8.2	7.6	7.6	-5%	4%	8%	-7%
Poland	9.7	9.6	8.9	9.1	9.0	9.1	-1%	-7%	-6%	0%
Portugal	10.8	9.5	11.2	10.3	10.0	9.2	-12%	18%	-5%	-11%
Romania	15.7	14.9	15.5	14.5	15.3	10.9	-5%	4%	-8%	-25%
Slovenia	4.5	5.0	5.0	4.8	5.7	5.4	11%	0%	7%	13%
Slovakia	4.4	5.2	6.7	7.1	9.1	10.2	18%	29%	61%	44%
Finland	2.9	3.1	2.8	2.5	2.8	2.8	7%	-10%	-14%	12%
Sweden	7.8	7.8	6.7	7.5	7.1	7.7	0%	-14%	-4%	3%
Switzerland	7.7	8.0	7.4	8.2	9.0	8.7	4%	-8%	6%	6%

Source: Eurostat, In-work at-risk-of-poverty rate by sex [tesov110], retrieved on 22 December 2025.

Even if this is not the aim of the present article, we can first look at the impact the first year of the pandemic had across European countries, namely by measuring changes in the IWP rate between 2019 and 2020. It is striking that IWP decreased in some countries, with a maximal decrease in Portugal (-12 per cent) while it increased in others, with the maximal increase observed in Slovakia (+18 per cent). In the case of Switzerland, the increase was modest (from 7.7 to 8.0 per cent).

Conclusions are similar for the other comparisons presented in Table 1: there is a large degree of heterogeneity across countries. It seems that some of the largest decreases in IWP took place in countries hard hit by the pandemic, such as Italy and Spain, which would be in line with what was observed a decade ago during the Great Recession : IWP decreased in countries that were deeply affected by the recession and budget cuts, e.g. Greece, as the most vulnerable workers were the first to lose their jobs and, hence, the labour force became more homogenous and income inequality among workers less unequal. In countries where the recession had been milder, no such decrease was observed (Crettaz 2015). It is less clear why some countries experienced large increases in household income inequality among workers during the pandemic, however, such as Slovakia, Malta and Slovenia. In most countries, the variations in IWP rates were rather limited.

For the analyses presented here based on Swiss data, we can underline the fact that the increase in IWP in Switzerland was modest in 2020, followed by a decrease in 2021 and an increase in 2022. Interestingly, IWP increased more after the end of the sanitary measures in early 2022 and the concomitant invasion of Ukraine by the Russian army. These figures suggest that income inequality among workers slightly increased in 2020, which might be linked to the fact that higher-paid workers

were more able to work from home than the others (Heiniger and Höglinger 2023, OECD 2021), but that the largest growth in income inequality took place after the end of the sanitary measures, bearing in mind that this indicator does not reflect the impact of inflation on living standards.

In summary, based on the two literature reviews we carried out, we can conclude that the evidence on the evolution of in-work poverty during the COVID crisis is scarce and that there is no such thing as a converging trend across European countries. It is hence very difficult to formulate hypotheses as to the evolution of working poverty in Switzerland during the COVID crisis. Moreover, we have reasons to think that different indicators of working poverty could lead to different conclusions, depending on whether they rather reflect the level of income inequality among workers or changes in purchasing power / living conditions among this population group.

To get a better understanding of what happened to workers' households and the role the choice of indicators might play, we should now move on to theoretical and conceptual reflections before presenting our statistical analyses.

Theoretical framework and conceptual considerations

A theoretical model produced by Crettaz and colleagues (Crettaz 2011, Crettaz and Bonoli 2011, Lohmann and Crettaz 2018) has already been applied in Crettaz (2021), with the purpose of reflecting on the potential impact of the pandemic on IWP on European countries, can be useful here to better understand how the situation unfolded during the pandemic and to structure the presentation of our results.

Lohmann and Crettaz (2018) have identified four key mechanisms through which macroeconomic, demographic, and policy factors influence household income: a low remuneration rate, below-average labour market participation, above-average household needs, and insufficient social benefits / the non-take-up of benefits. They assume that these are the only household-level pathways through which workers end up in IWP. These mechanisms have been impacted significantly by the COVID-19 pandemic.

1. Low remuneration rate:

Low pay increases the risk of in-work poverty; yet it does not automatically lead to it, as other household income sources or social benefits can lift low-paid workers above the poverty line. The pandemic worsened the situation of low-skilled workers in sectors like hospitality and tourism who could not work remotely. On the other hand, essential workers often had lower education levels, but they largely maintained their wages. Short-time work (STW) schemes helped cushion income losses, but the replacement rate amounted to 80 per cent in Switzerland. In addition, STW may have led to lasting earning losses for certain categories of workers (Vogtenhuber et al. 2024).

2. Below-average labour market participation:

Bankruptcies and non-renewed contracts pushed some workers into unemployment and could, hence, push their households into poverty. However, in many European countries, there were only modest increases in unemployment due to the widespread use of short-term work schemes and to programmes aimed at maintaining companies afloat by offsetting their loss of revenue. However, long-term impacts remain uncertain, as many bankruptcies were not avoided, but only postponed. In addition, non-standard form might have increased in some economic sectors and some countries.

3. Above-average needs:

Households with many children or single parents are more vulnerable to poverty because of their high needs. The pandemic did not raise birth rates, but anecdotal evidence suggests divorce rates may have increased (Crettaz 2021), which might have led to a higher incidence of single parenthood.

4. Insufficient social benefits or non-take-up :

Many countries expanded unemployment and/or STW schemes, and sick leave benefits during the COVID crisis. Although the long-term effectiveness of these measures is still unclear due to limited

evidence, there is no obvious reason to believe that the poverty-reducing effects of social benefits have weakened, especially in Switzerland. Likewise, a significant rise in benefit non-take-up seems unlikely at this stage, though there is no evidence at the country level for Switzerland.

Impact of the choice of the ‘working poverty’ indicator

The IWP indicator provided by Eurostat based on the Survey of Income and Living Conditions (SILC) is, by far, the most used indicator of ‘working poverty’ in the European specialist literature (Lohmann and Marx 2018). However, it has several limitations that have already been discussed; as Kenworthy put it, ‘A relative poverty measure has an important drawback, however. It is essentially a measure of inequality in the bottom half of the income distribution’ (Kenworthy 2011: 2), which can be problematic in times of recession (see e.g. Crettaz 2015). This means that the AROP rate is highly correlated to other inequality measures, such as the Gini coefficient, and IWP rates depend on how the level of household income inequality varies among workers rather than on changes in living standards. Hence, the IWP rate can lead to other conclusions than working poverty indicators based on living conditions, such as those derived from a standard budget (see e.g. Goedeme et al. 2015, Bradshaw and Mayhew 2011), i.e. a basket of goods and services necessary to lead a decent life, and its cost.

These remarks do not mean that relative poverty lines should not be used anymore, nor that IWP is not an important indicator for European working poverty research. On the contrary, it is an important measure of poverty (risk); indeed, the idea that a person living amidst affluence should have a right to a minimum income that allows a frugal level of social participation matters to many if not most people in Europe as a matter of social justice (Marchal and Marx 2024). This is also brought to the forefront by the European Commission in its Pillars of Social Rights, more specifically in Principle No. 14 (Minimum Income), ‘Everyone lacking sufficient resources has the right to adequate minimum income benefits ensuring a life in dignity at all stages of life, and effective access to enabling goods and services.’ (European Commission undated, Marchal and Marx 2024).

However, for the specific purposes of this article, some characteristics of the IWP indicator could be problematic. In addition to the counterintuitive fact that a deep recession can lead to a decrease in IWP, as already mentioned above, Mussida and Sciuilli (2025) note that a macrolevel income shock may shift a relative poverty line to the left of the distribution, i.e. it may lead to a decrease in the level of median income, which could lead in many cases to an exit from poverty even if a household’s income did not change. Consequently, IWP may not depict a detailed and specific enough picture of what happened to working families during the pandemic, as further discussed below.

In addition, one of the authors of this article was involved in a research project a few years ago that showed that income inequality tends to decrease in times of recession in Switzerland and to increase when there is macroeconomic growth (Suter et al. 2016); we would, hence, expect that poverty defined in purely relative terms – as is the case with Eurostat’s in-work poverty indicator – should have decreased between 2020 and 2022. In addition, first analyses carried out within the framework of the above-mentioned SNSF research project showed that the Gini coefficient did decrease between 2019 and 2022 (Hümbelin et al. 2025).

All in all, in the case of Switzerland, given that the lockdowns were comparatively short and that the share of workers who benefited from short-term work schemes was very high, as mentioned above, it is not very surprising that IWP did not vary much according to Eurostat (see Table 1 above). We will assess empirically if our own dataset based on register data leads to similar conclusions for the IWP indicator. In addition, we hypothesise that workers’ living standards were not massively affected until the beginning of 2022, when sanitary measures were lifted. It is less clear whether the official poverty line used in Switzerland, which we use in this article and measures poverty with an absolute poverty line that is not systematically deflated with the consumer price index (CPI), will capture the changes

that took place after 2021, when inflation started to rise markedly. For this reason, we will also use another absolute poverty line, using the EU's harmonised CPI systematically.

We will also look at whether the 7-month threshold set by Eurostat in its definition of IWP has a notable impact, as we will not use it in our own estimation of 'in-work poverty', because our dataset does not allow us to calculate it. We defined an individual as working if they were active at any time during the fiscal year and have declared some earnings in their tax return.

Data and methods

Poverty analysis using linked administrative tax data

For the present study, we use a dataset constructed as part of the project "*Poverty and Social Security in Times of Crisis*" (Grant No. 210054). While tax data constitute a promising source for studying distributional patterns (Hümbelin and Farys 2016), additional data linkage and preparation steps are required to analyse poverty adequately (Hümbelin et al. 2022). As no national individual tax data-based statistics currently exist in Switzerland and taxes are levied at the cantonal level, it is necessary to contact each canton individually to obtain permission to use individual-level tax data for research purposes. For the present analysis, we use tax data from four large cantons covering the years 2019 to 2022. These include three German-speaking cantons (Aargau, St. Gallen and Zurich) and one predominantly French-speaking canton (Valais). The data cover the financial situation of more than three million residents, representing over one-third of the Swiss population. The dataset contains detailed information on labour income (from both employment and self-employment), capital income, and transfers from social insurance schemes (such as unemployment benefits and disability pensions). Through data linkage, it also includes information on means-tested social benefits such as social assistance, supplementary benefits, and health insurance premium subsidies. In addition, the data contain records on specific COVID-19-related measures, notably individual-level information from the Corona Income Compensation Program (Federal Social Insurance Office 2022) as well as emergency payments from *Suisseculture Sociale*, which provided targeted support to cultural workers. This allows us to calculate post-transfer poverty measures. Finally, linkage with the STATPOP household register allows us to construct household-level income measures. This is crucial, as the household represents the central unit of analysis in poverty research.

To construct indicators in line with the official Swiss poverty line (see below), additional preparation steps are required. These include deriving a household- and region-specific absolute poverty threshold in accordance with the recommendations of the Swiss Conference for Social Assistance. The poverty line consists of four components. First, a household-specific amount covering basic needs such as food and daily commodities. Second, an amount covering health insurance premiums, which varies by household composition and place of residence. This component is constructed using official statistics published annually by the Federal Office of Public Health, disaggregated by age and region. Third, a municipality- and household-size-specific housing cost component. Housing costs are derived from the structural survey data and a model is estimated using housing costs as the dependent variable and the number of household members as well as mean and median income levels in the municipality as predictors. Lastly, a lump sum per household member aged 16 and above, which approximates *situational benefits* as can be accorded by social services in Switzerland.

The large sample size, combined with comprehensive measures of financial resources, represents a key strength of the dataset. Some components also include longitudinal features. To leverage detailed labour market data, we restrict our sample to observations linked to the Structural Survey. However, the sampling design of the Structural Survey is such that individuals are typically surveyed only once within a four-year period. This lack of longitudinal observations for the same individuals precludes a

true panel analysis. We therefore treat the data as a series of independent cross-sections for the years 2019 to 2022.

Analytical strategy and poverty indicators

In what follows, we will first provide descriptive statistics on the evolution of IWP and other forms of working poverty from 2019 until 2022, broken down by the main sociodemographic characteristics identified in the specialist literature as impacting the risk of being working poor. In a second step, we will carry out regression models to see how the interaction of various factors played out across various years and if the conclusions vary (a) by year and (b) depending on the working poverty indicators used.

More specifically, we will use three poverty indicators, namely:

- **An IWP indicator**, based on Eurostat's AROP threshold. Our criterion to distinguish those belonging to the 'working' poor and those who do not is different from the European Commission's official indicator (for a discussion of the impact of the restrictive 7-month criterion on the extent and sociodemographic composition of IWP, see e.g. Mussida and Sciulli 2025, Crettaz 2015).
- **The Swiss official poverty line**. As indicated above, this poverty line is derived from recommendations regarding the calculation of social assistance benefits. These amounts are based on a reference budget and the price of the items that constitute this basket. The benefits derived from this calculation should enable beneficiaries' participation in economic, social, cultural and political life, and to lead decent life.⁸⁹
- Another absolute poverty line, namely the **IWP rate 'anchored in time'**, i.e. the IWP of 2019 kept constant in real terms with Eurostat's harmonised consumer price index (hereafter HCPI).

Before focusing on our own analyses, we need to compare our results with those available in official statistics. The latter rely on a survey, namely the Survey on Income and Living Conditions (SILC) carried out in EU Member States and in associated countries such as Switzerland, while our figures are based on register data, as mentioned above. As already indicated, our dataset does not include the whole of Switzerland, only a subset of cantons; luckily, the Swiss Federal Statistical Office (SFSO) breaks down its poverty statistics by regional levels, and one of these regional levels is the canton of Zurich. This canton represents about 17.8 per cent of the resident population of Switzerland.

The Swiss official poverty line is set at a very low level, especially compared to its EU counterpart – the IWP rate obtained with Eurostat's definition is about three to four times higher than the Swiss official working-poor rate. Interestingly, the SFSO also calculates a relative poverty line set at 50 per cent of median disposable income. For the years 2019 to 2022, based on this 50 per cent-threshold, the relative poverty rates among workers were 4.6, 4.6, 4.0, and 4.7 per cent, respectively. As the official working poverty rate amounts to 4.2 per cent from 2019 to 2021, and to 3.8 per cent in 2022, this means that the Swiss official poverty line tends to yield results that are even lower than those obtained with 50 per cent of median income. Hence, we expect working poverty rates based on the Swiss official poverty line to be much smaller than those derived from European indicators.

⁹ *ein menschenwürdiges Dasein* in German, *une existence digne* in French, *un'esistenza dignitosa* in Italian.

Here are the figures we obtained for the region of Zurich based on our large, register-based sample and those obtained by the SFSO, bearing in mind that the SFSO's definition of 'in-work' is aligned with Eurostat's definition, namely at least seven months spent in the labour market in the previous year, whereas ours is closer to the International Labour Organization's, namely being in work at the time of the interview. In our case, we check if individuals were active at any time during the fiscal year and if they have earned something over the year (either from a dependent job or from self-employment). Hence, we would expect our working poverty rates to be somewhat higher.

Table 2: Comparison of our results with comparable official statistics.

Geographical level	Post-tax/transfers	2019	2020	2021	2022
National level vs four cantons	SFSO, Official poverty line	4.2	4.2	4.2	3.8
	Our project	2.0	1.7	1.7	1.7
	SFSO, AROP line, with notional rent	8.2	8.2	7.4	7.9
	Our project	7.8	7.4	6.9	7.0
Zurich	SFSO, Official poverty line	2.9	2.8	3.9	3.3
	Our project	2.6	2.6	2.5	2.2
	SFSO, AROP line, with notional rent	5.4	6.5	6.3	6.3
	Our project	7.6	8.1	7.4	7.3

Sources: SFSO's website, SILC 2019-2021; own dataset described above, authors' calculations

First, when looking at the SFSO's relative poverty rates (in-work poverty) for the national level, it might be surprising that these figures are slightly different from those provided by Eurostat presented above (7.7, 8.0, and 7.4, respectively). This is because countries participating in the SILC survey must provide standard indicators to Eurostat, yet they are entitled to use slightly modified indicators in their national publications. In the case of the SFSO, the financial advantages of owner-occupied residential property or rental properties whose rents are below the market rate are taken into account in household income by means of a 'notional rent'. For this initial comparison focused on the Zurich area, we use this adjusted indicator, as it is the only one provided for regional analyses by the SFSO, while for national-level analyses, we will refer to the indicator calculated for Eurostat.

In the canton of Zurich, contrary to the national level, relative poverty (IWP) increased between 2019 and 2020, then decreased slightly the next year and remained at the same level in 2022, higher than in 2019. Our results, while following broadly the same pattern (increase in 2020, then a decrease in 2021 and stability in 2022), rather suggest that the level of IWP was slightly lower in 2022 than in 2019. It should be noted, however, that the SFSO results are derived from a survey, and hence, that there is a confidence interval associated with each percentage (around +/- 1.5 per cent), while in our case, some of the labour market variables are yielded from the structural survey described above. However, the latter sample is much larger and, consequently, the confidence interval is much smaller. In addition, our definition of 'in-work' is more encompassing.

As far as the more restrictive absolute poverty line provided by the SFSO is concerned, our working poverty rates are lower than the official figures for Zurich, which comes as a surprise given that we expected our rates to be somewhat higher. At first sight, we would assume that our results are more reliable, because very low earnings and other low-income components are notoriously unreliable in surveys. However, for some years now, the SFSO has included the use of register data in its calculations, which allows it to provide more accurate data for very low-income households. It should

be noted that the trends are very similar between 2019 and 2020. More surprising is the fact that the SFSO's indicator shows a marked increase between 2020 and 2021 in the Zurich area, whereas ours points in the direction of a decrease. This Zurich result is somewhat surprising, given that Zurich makes up about 18 per cent of the national population and that the SFSO shows a marked decrease at the national level in 2021 in terms of the official poverty rate among workers. The SFSO's and our results are convergent for 2022, with a decrease in working poverty.

All in all, we feel that our dataset adds elements to our understanding of how working poverty evolved in Switzerland by the large number of cases it contains, while the official statistics provide a complete coverage of the nation. Our dataset, however, allows us to provide detailed analysis for specific subgroups of the labour force, as will be shown further below, which is not possible with standard survey data, as well as detailed results regarding the antipoverty effect of Covid-specific measures, given that we had access to the specific registers containing this information.

In Table 2, the results we obtained for the four cantons included in our dataset are presented, based on the three indicators described above, namely the Swiss official poverty line, the European Commissions' at-risk-of-poverty (AROP) line set at 60 per cent of median equivalised disposable income, and another absolute poverty line, in the form of the AROP line of 2019 kept constant in real value with the EU's harmonised index of consumer prices (HICP). The latter will be named *AROP line anchored in 2019* in what follows.

Table 3: 'Working poverty' rates based on three different concepts, between 2019 and 2022, in per cent, and variations across years in per cent, weighted results

	2019	2020	2021	2022	2019-2020	2019-2021	2019-2022
Pre-tax/transfers/Covid, official poverty line	3.1	2.5	2.5	2.5	-20.2	-20.4	-19.4
Post-tax/transfers, official poverty line	2.0	1.7	1.7	1.7	-17.5	-15.5	-15.7
Post-tax/transfers/Covid, official poverty	2.0	1.5	1.6	1.7	-25.2	-19.8	-15.7
Pre-tax/transfers/Covid, AROP line	9.1	8.6	8.2	8.4	-5.5	-9.9	-7.7
Post-tax/transfers, AROP line	7.8	7.4	6.9	7.0	-4.6	-11.4	-9.8
Post-tax/transfers/Covid, AROP line	7.8	7.2	6.8	7.0	-7.6	-12.3	-9.8
Pre-tax/transfers/Covid, AROP anchored in 2019	9.1	8.0	7.8	7.7	-12.1	-14.3	-15.4
Post-tax/transfers, AROP anchored in 2019	7.8	6.8	6.5	6.4	-12.4	-16.2	-17.5
Post-tax/transfers/Covid, AROP anchored in 2019	7.8	6.4	6.3	6.3	-17.4	-18.8	-18.8

Source: Own dataset described above, authors' calculations.

A first conclusion is clear: various forms of poverty among workers decreased in Switzerland during the pandemic. Indeed, whether we use the Swiss official poverty line, Eurostat's, or AROP anchored in 2019, we come to the same conclusion: the rate of working poverty decreased between 2019 and 2022.

While the trend is broadly the same – a decrease during the pandemic – the *extent* of working poverty and its evolution over time depends on the indicator used. According to the restrictive Swiss official indicator, the post-tax and transfer working poverty rate decreased by 17.5 per cent between 2019 and 2020. If Covid-specific programmes are included in this pre-post calculation, the decrease amounts to 25.2 per cent, which shows that these programmes had a significant impact in 2020, the year of the only general lockdown, as further lockdowns only applied to certain economic sectors.

If we move on to the IWP rate – bearing in mind that we use the European Commission’s AROP line, yet a different definition of ‘in-work’ – we obtain much higher rates. In addition, the AROP line is essentially an indicator of income inequality in the bottom part of the distribution, and we expect social policies to have less impact on the income distribution than on living standards (which the Swiss official poverty line measures). Hence, we expect a lower antipoverty effect of social transfers when the IWP indicator is used. This is, indeed, the case: post-tax and transfers IWP decreased by only 4.6 per cent between 2019 and 2020, and by 7.6 per cent if Covid-specific measures are also accounted for. Interestingly, however, IWP continued to decline in 2021, while there was hardly any change in working poverty when the Swiss official poverty line is used.

The use of IWP anchored in 2019 is interesting here: it is based on an absolute poverty line, the level of which, however, is much less restrictive than that of the Swiss poverty line, because it is based on the 2019 AROP line kept constant in real terms with the EU’s Harmonised Index of Consumer Prices (also provided for Switzerland). This means that IWP anchored in 2019 measures the evolution of workers’ purchasing power rather than the evolution of income distribution. This explains why the antipoverty effect measure (i.e. the pre-post comparison) between 2019 and 2020 is larger than that obtained with the AROP line (-12.4 vs - 4.6 per cent). However, as this poverty line is less restrictive, the decrease over the same period is less marked than when measured with the Swiss official indicator (-12.4 vs -17.5 per cent). Interestingly, the gap between both indicators grows larger when Covid-specific programmes are included in the calculation (-17.4 vs -25.2 per cent), showing that these specific measures helped many very low-earning workers, in particular solo self-employed workers and small employers. Interestingly, the IWP rate, whether anchored in 2019 or not, shows that poverty among workers kept on decreasing in 2021, then stabilised in 2022, while the Swiss official indicator suggests stability between 2020 and 2022. This indicates that the decrease in IWP mainly happened for those living in households having incomes between around 50 and 60 per cent of the median, rather than among households with very low incomes.

It should be noted that IWP anchored in 2019 is adjusted every year with the EU’s HIPC in our calculations, which should reflect the impact of inflation. Interestingly, however, it does not point in the direction of an increase in this form of working poverty - it is essentially stable. This is in part due to the fact that the increase in the annual HIPC was small in Switzerland (+2.6 per cent), compared to the EU (+9.2 per cent) and the Euro Area (+8.4 per cent), which is in good part attributable to Switzerland’s strong currency and comparatively high price levels, as already mentioned above (Eurostat 2026). It would be interesting to know if the inflation that began in 2022 had a larger impact on absolute poverty measures in 2023, as the HIPC kept on increasing between 2022 and 2023. However, we will not have access to register data for the year 2023 within the framework of the research project this article is derived from.

Let us revisit these results and focus on the extent to which the tax and transfers system reduced the incidence of working poverty during the pandemic, whether we include the specific Covid measures described above or not. This is of paramount importance for social policy scholarship in general; it is also imperative to ascertain whether these measures will prove effective in the event of a future pandemic necessitating a lockdown. These various impacts are presented in Table 3:

Table 4: Pre-post comparisons of working poverty rates, with and without the inclusion of specific Covid-related measures, between 2019 and 2022, in per cent

	2019	2020	2021	2022
Pre-tax/transfers/Covid, official poverty line	3.1	2.5	2.5	2.5
Post-tax/transfers, official poverty line	2.0	1.7	1.7	1.7
Post-tax/transfers/Covid, official poverty	2.0	1.5	1.6	1.7
Pre vs Post Tax/Transfers	-35.0	-32.7	-30.9	-32.0
Pre vs Post Tax/Transfers/Covid	-35.0	-39.0	-34.4	-32.0
Pre-tax/transfers/Covid, AROP line	9.0	8.5	8.1	8.4
Post-tax/transfers, AROP line	7.8	7.4	6.9	7.0
Post-tax/transfers/Covid, AROP line	7.8	7.2	6.8	7.0
Pre vs Post Tax/Transfers	-13.9	-13.4	-15.3	-16.7
Pre vs Post Tax/Transfers/Covid	-13.9	-16.0	-16.2	-16.7
Pre-tax/transfers/Covid, AROP anchored in 2019	9.1	8.0	7.8	7.7
Post-tax/transfers, AROP anchored in 2019	7.8	6.8	6.5	6.4
Post-tax/transfers/Covid, AROP anchored in 2019	7.8	6.4	6.3	6.3
Pre vs Post Tax/Transfers	-14.7	-15.0	-16.7	-16.9
Pre vs Post Tax/Transfers/Covid	-14.7	-19.9	-19.2	-18.2

Source: Own dataset described above, authors' calculations.

As indicated above, the pre-post difference is much more marked for the Swiss official indicator (a reduction of about one-third), while it hovers around 13.9 to 19.2 per cent for the other indicators.

Unsurprisingly, in 2020 and 2021, the poverty-reducing effect of public policies was higher when specific Covid measures are added in the calculations. When Covid-specific measures are included, the antipoverty effect measured with the Swiss indicator increases by 6.3 percentage points (hereafter pts, from 32.7 to 39 per cent) in 2020 and by 3.5 pts (30.9 to 34.4 per cent) in 2021. For IWP, the antipoverty effect increases by 1.8 ppt (14.2 to 16 per cent) in 2020 and by 0.9 ppt in 2021 (15.3 to 16.2 per cent). With the IWP rate anchored in time, the poverty-reducing impact increases by 4.1 pts in 2020 and by 2.6 pts in 2021.

For all three working poverty indicators, the impact of Covid-related measures was larger in 2020 than in 2021. This comes as no surprise, given that lockdowns were much more limited in 2021 than in 2020, and that the Swiss economy had largely recovered in 2021 after the recession of 2020.

In terms of overall trends, we can, hence, draw two important conclusions:

- a) "working poverty" has decreased between 2019 and 2022 in Switzerland, despite the economic upheaval triggered by the pandemic and the health measures adopted
- b) the poverty-reducing effect of public policies was limited among workers, fluctuating between ca. one-third to ca. one-seventh, depending on the year and of the indicator used,

Let us now zoom in on **specific subgroups of the labour force** that have been identified in the literature as being of particular interest in periods of lockdown, namely domestic workers, many of whom lost their job during lockdowns, notably those who were undeclared workers (Borges et al. 2025, Carbajal et al. 2024), as well as so-called essential or frontline workers, as they continued to work during lockdowns, thereby keeping their employment and their full wage. However, at the same time, they were much more exposed to infections, which probably forced many of them to take medium- or even long-term leave from work, not to mention those who had to withdraw from the labour market because of long Covid.

Last but not least, the fate of solo self-employed workers was a particular source of concern, given their vulnerability to even relatively short periods of lockdowns. It is, hence, of particular importance to see if Covid-specific measures implemented by the Swiss authorities were able to prevent a strong increase of working poverty among this category of workers. In the case of essential and domestic workers, most are wage-earners who could benefit from short-term work schemes that were already included in the unemployment insurance, as already mentioned above.

Table 5: Evolution of post-tax and transfers poverty among domestic workers, essential workers and the solo self-employed, between 2019 and 2022, weighted results, in per cent

		Official poverty rate, post- tax/transfers	IWP, post- tax/transfers	IWP anchored in 2019, post- tax/transfers
Solo self-employed	2019	10.9	23.9	23.9
	2020	8.0	20.8	19.8
	2021	7.6	20.0	19.5
	2022	9.0	21.8	20.7
Essential workers	2019	2.0	7.9	7.9
	2020	1.6	7.3	6.7
	2021	1.9	7.3	7.0
	2022	1.7	7.0	6.4
Domestic workers	2019	6.7	22.3	22.3
	2020	5.2	17.1	15.9
	2021	4.8	16.3	15.3
	2022	4.6	18.1	16.5

Source: Own dataset described above, authors' calculations.

As has already been shown many times in the specialist literature, self-employed workers without employees are much more exposed to various forms of working poverty than the rest of the labour force (see e.g. Lohmann and Marx 2018, Crettaz 2018b for Switzerland). Interestingly, the difference between the most restrictive poverty line (the Swiss official indicator) and the IWP rate is less marked than for the entire workforce. Indeed, the IWP rate is three to four times higher than the working poverty rate derived from the Swiss official indicator, as mentioned above. However, for the solo self-employed, the IWP rate lies between two and three times the Swiss official working poor rate. This means that solo self-employed workers who are at-risk-of-poverty (less than 60 per cent of median income) are more concentrated among the most deprived (below the Swiss official poverty line) than the rest of the workforce.

Interestingly and very importantly, poverty among the solo self-employed decreased in 2020, despite the various lockdowns, whatever the indicator used. This is in line with the information that the number of bankruptcies also decreased during the pandemic: the support provided to all companies, in particular to small businesses, allowed many flailing companies that would have gone bankrupt in normal times to survive for some more time. Since the sanitary measures were lifted, however, the number of bankrupt companies has increased again.

For essential workers and domestic workers, we see that the difference between the various indicators is more marked, in line with what we have observed for the total working population. It is noteworthy that essential workers experienced a decrease in various forms of working poverty in 2020, slightly more pronounced than the average worker. However, in contrast to the workforce in general, they

experienced a slight increase in working poverty in 2021 when measured with an absolute poverty line (the Swiss official one and AROP anchored in 2019), while relative poverty remained constant. This might indicate that, after being able to earn their wages in full during 2020, most notably during the general lockdown, they were more likely to have stagnating earnings than the average wage-earner in 2021.

As far as domestic workers are concerned, the trend looks very similar to that of the overall workforce. This seemingly counterintuitive finding – the situation of undeclared migrant domestic workers who lost their jobs overnight during lockdowns having been much discussed – lies in the fact that the domestic workers analysed here are individuals who fill tax returns, meaning that they reside legally in Switzerland and probably hold a work contract. Hence, these domestic workers could not be sacked overnight and were entitled to short-term work schemes during the general two-month lockdown of 2020, unless they were legal residents but were nonetheless undeclared workers.

Another factor that has played an important role during the pandemic, especially during periods of lockdown, was the degree to which workers were able and authorized to work from home. In the specialist literature it quickly became clear that this was a fundamental aspect, as those who were able to work from home usually got their full wage, while salaried workers who could not had to rely on short-term schemes, whose replacement rate usually are smaller than 100 per cent. Based on Dingel and Neiman's methodology and classification (2020), we have calculated an index of teleworkability (Strazzeri et al, forthcoming), based on the International Standard Classification of Occupations (ISCO) in its two-digit version. This allows us to classify working people according to how easily their job can be done remotely or, conversely, absolutely requires them to be present at the workplace.

We have set two thresholds based on these teleworkability scores. The higher the threshold, the higher the probability that the worker could get their full wage and keep their job, and, probably, the higher their sociodemographic status, as individuals with higher educational levels and hierarchical responsibilities were more likely to be able to work from home (Younes et al. 2024, Heiniger and Höglinger 2023, OECD 2021, Crettaz 2021). The first threshold is the median score (namely 0.39), and we look at the top half of the index, the second being set at a higher level.

Table 6: Levels of working poverty, post-tax and transfers, depending on the degree of teleworkability compared to the average worker, 2019-2022, weighted results, in per cent

	Above median (=0.38)			Above 0.5			All workers		
	Official poverty line	IWP	IWP anchored	Official poverty line	IWP	IWP anchored	Official poverty line	IWP	IWP anchored
2019	1.5	4.5	4.5	1.6	4.3	4.3	2.0	7.8	7.8
2020	1.2	4.3	4.0	1.1	3.7	3.5	1.7	7.4	6.8
2021	1.2	3.8	3.6	1.1	3.3	3.2	1.7	6.9	6.5
2022	1.2	4.1	3.7	1.2	3.7	3.4	1.7	7.0	6.4

Source: Own dataset described above, authors' calculations.

As could be expected, working poverty is very low for workers more likely to be able to work from home compared to the situation of the average worker. And if the threshold is set at a higher level than the median value, the working poor rate is slightly lower. Whether this is mainly because they were able to work during the lockdowns, usually without any reduction in the salary, or rather due to compositional effects (these workers have above-average educational level and earnings) requires regression analyses to be carried out. Such analyses are presented below.

Another very important policy-related element is the impact of Covid-specific measures. As indicated above, wage-earners were entitled to short-term work schemes, and this possibility already existed in the *Federal Act on Unemployment Insurance and Compensation in the Event of Insolvency*. This means that Covid-specific measures were mainly targeted at employers, solo self-employed workers and other individual contractors. Here, a comparison of working poverty after tax and transfers, on one hand, and after tax, transfers and Covid-specific measures on the other hand (Table 7) is very useful. We compare the years 2020 and 2021, as most of these measures were lifted at the beginning of 2022, as discussed above. Moreover, Table 8 quantifies the additional antipoverty effect provided by the Covid-specific measures:

Table 7: Impact of Covid-specific measures, as well as other taxes and benefits, among the solo self-employed in 2020 and 2021, weighted results, in per cent

	Official poverty rate, post-tax/transfers	Official, Post-tax/transfers & Covid measures	IWP, post-tax/transfers	IWP, Post-tax/transfers & Covid measures	IWP anchored in 2019, post-tax/transfers	IWP anchored, Post-tax/transfers & Covid measures
2020	8.0	5.8	20.9	16.6	19.9	15.5
2021	7.6	6.6	20.3	18.4	19.5	17.5

Source: Own dataset described above, authors' calculations.

Table 8: Comparison of the post-tax/transfers working poverty rates and the post-tax/transfers & Covid-specific measures among the solo self-employed, weighted results, in per cent

	Swiss official poverty line	IWP	IWP anchored in 2019
2020	-27.4	-20.5	-22.3
2021	-12.7	-9.5	-10.2

Source: Own dataset described above, authors' calculations.

As expected, Covid-specific measures had the largest impact on solo self-employed workers when measured with the most restrictive indicator (-27.4 and -12.7 per cent in 2020 and 2021); however, the difference between this indicator and the two others used here is not very marked, even if the two other poverty lines are set at a much higher level. This is another indication that these specific programmes mainly helped very low-earning self-employed workers.

Unsurprisingly, given the large difference in macroeconomic conditions between 2020 and 2021 in most European countries – in particular, 2021 was a good year in macroeconomic terms in Switzerland – the impact of Covid-specific measures was significantly more marked in 2020 than the following year.

After having analysed the overall labour market trends and the impact of social policies, as well as the situation of specific groups of workers, another empirical element is of central importance here, namely workers' sociodemographic profile: as is well-known, gender, age, educational level, and migration background are very important determinants of many labour-market related outcomes, in particular working poverty (see e.g. Hick and Marx 2022). It should be noted, however, that gender has much less impact on the risk of working poverty than other labour-market related disadvantages, in particular unemployment and low earnings, this paradox being linked to the household context and the assumption of the equal repartition of income within the household, meaning that all household members have the same poverty status (Ponthieux 2018).

Figure 1 displays the distribution of the working poverty risk across genders:

Figure 1: Working poor rates broken down by gender, 2019-2022, weighted results

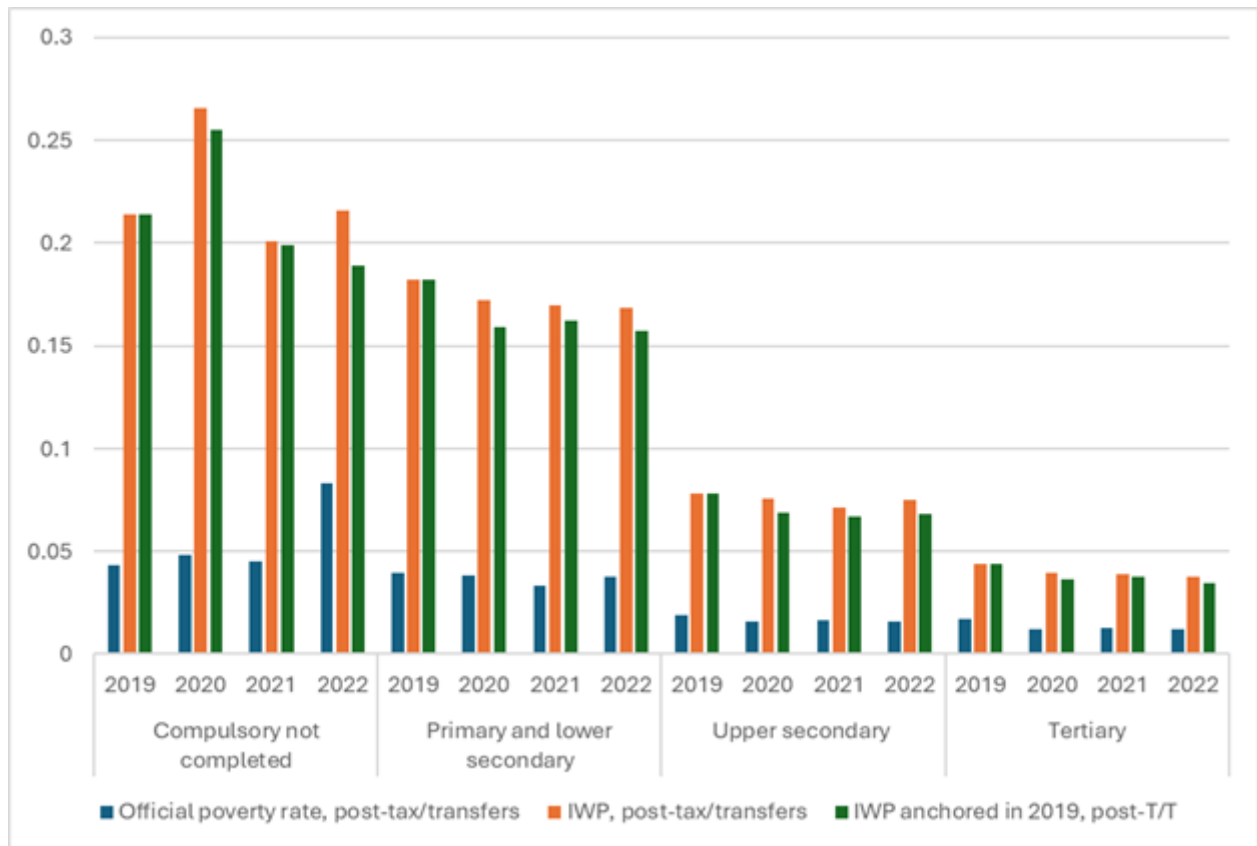


Source: Own dataset described above, authors' calculations.

Women are slightly more affected than men by working poverty according to the three indicators, and the evolution over time is also similar with these three measures: working poverty declined among men and women between 2019 and 2022. However, while working poverty declined among men in 2022, among women, both absolute working poverty indicators remained at the same level, while in-work poverty increased slightly. This suggest that income inequality slightly increased among female workers at the bottom of the distribution, while their purchasing power remained broadly constant.

We can see in Figure 2 that differences between educational levels are much more marked:

Figure 2: Working poor rates broken down by educational level, 2019-2022, weighted results



Source: Own dataset described above, authors' calculations.

While individuals who hold a tertiary degree display very low levels of working poverty, with an IWP rate (the higher of the three rates calculated in this article) falling from 4.4 in 2019 to 3.8 in 2022, those with an upper secondary educational level – i.e. they either have completed a vocational training (Switzerland has an apprenticeship similar to Germany's) or got secondary degrees necessary to enter the tertiary level but did not go further – display IWP rates that are still quite low yet noticeably higher than for the former category (IWP moved from 7.8 to 7.5 per cent between 2019 and 2022).

The quantitative leap occurs between upper secondary education and lower educational levels. Indeed, among those who have no post-compulsory training or a lower secondary educational level (essentially short apprenticeships), the level of Swiss official working poverty is about twice as high as for the upper secondary level. Differences are more marked in terms of IWP, with rates more than twice as high as that of workers with an upper secondary educational level.

The most affected group is the least educated one, unsurprisingly, and by far. Our contribution is nonetheless original. Usually, in studies based on surveys, it is not possible to analyse the situation of individuals who have not completed compulsory education. Here, however, as we have a very large number of observations in our dataset based on register data, we have several hundreds of individuals in this situation. Their IWP rate fluctuated between more than one-fifth and one-quarter between 2019 and 2022. The other working poverty indicators were also much above average. Perhaps more importantly, while the three other educational groups experienced a slight decrease in working poverty in 2020, those who did not complete compulsory education experienced a marked increase, namely by around 12 per cent relative to the 2019 level according to the Swiss official poverty line, while this increase amounted to about 24 per cent for the IWP rate and to around 19 per cent for the IWP rate anchored in 2019.

This strong increase among unskilled workers in 2020 is particularly interesting. A likely (partial) explanation lies in the fact that many of the industries that were affected for much longer periods of time by recurrent lockdowns, notably because their activity is linked to the reunion of numerous individuals in closed spaces, e.g. the catering industry, the hospitality sector, tourism, the entertainment sector, and still others, typically have labour-intensive activities that only require limited skills, most of which can be learnt on the job (waiters and waitresses, cleaning staff, cashiers, etc.).

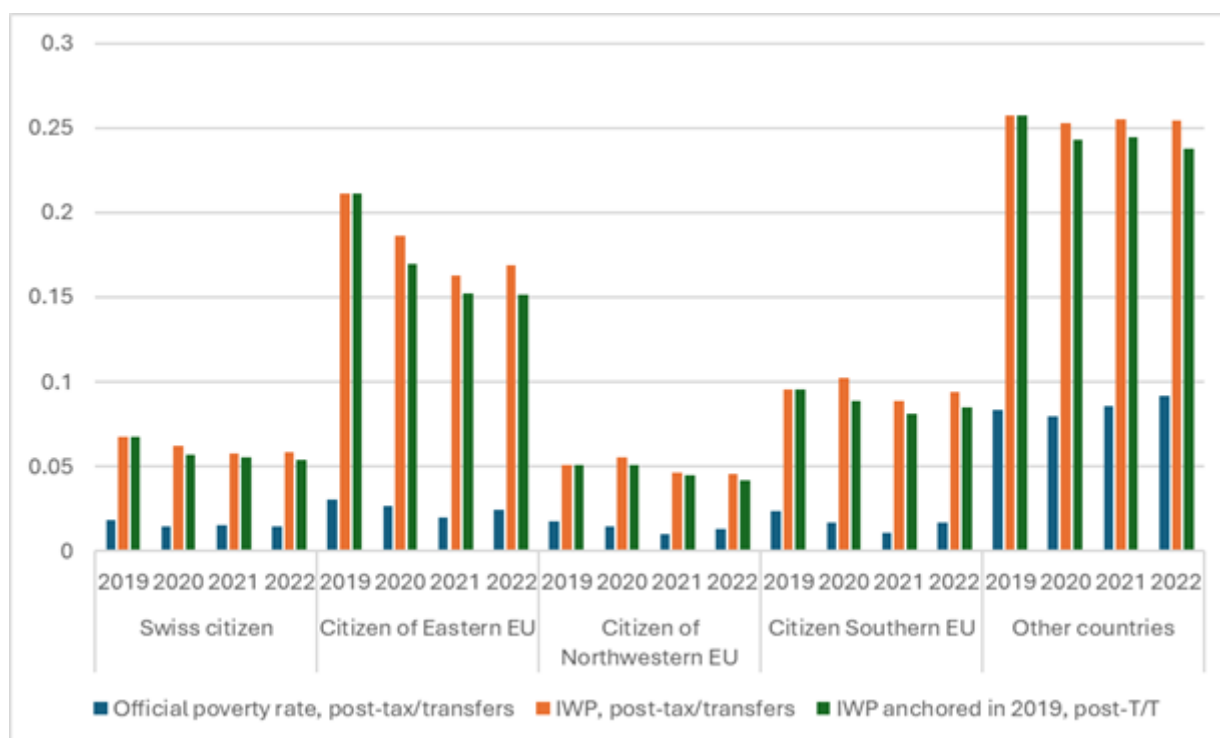
Likewise, while working poverty tended to decrease or be stable in 2022 for the three other education categories, those who did not complete compulsory education experienced an increase in the Swiss official working poverty and in the IWP rates (+84 and + 7.5 per cent respectively), yet not in IWP anchored in 2019. The very sharp increase in working poverty measured with the Swiss official poverty line should be taken with a grain of salt, however, as the number of cases is limited. However, these results mean that income inequality grew among this specific category of workers, and this was mainly due to many more workers having very low purchasing power.

Partly related to education is the role of citizenship status in determining the risk of poverty among workers. We are not aware of official statistics or scientific publications analysing the specific situation of individuals working in Switzerland who have not completed compulsory education. However, based on the OECD's Programme for the International Assessment of Adult Competencies (PIAAC), the Swiss Federal Statistical Office estimates the incidence of very low levels of literacy, numeracy, and adaptive problem solving (Office fédéral de la statistique 2024). And these results clearly show that individuals who have very low scores are strongly overrepresented among non-EU citizens (for literacy, e.g., the rate amounts to 40 per cent compared to only 4 per cent among Swiss citizens). At the same time, EU citizens hailing from France, Germany, Austria and Italy display the highest percentage of individuals displaying the highest literacy level, followed by Swiss citizens.

Moreover, as has already been shown, workers who are non-citizens of their country of residence and/or have a migration background are more exposed to IWP in virtually all EU Member states (Crettaz 2018a), and this is also the case in Switzerland. In fact, migrant workers are overrepresented at both extremes of the labour market, i.e. in the least-skilled occupations that do not require any formal training but also among CEOs, scientists and academics, highly ranked diplomats, etc. And this can vary strongly across nationalities. As can be seen in Figure 2, Northern and Western Europeans tend to be better off than Swiss citizens, as they display the lowest working poor rates of all the groups analysed here, because they are more likely to have a tertiary degree and of being executives in large companies, or scientists and academics. On the contrary, individuals who hail from Central and Eastern EU as well as non-EU citizens are more heterogeneous and are more likely to be found in less enviable occupations. The various working poverty rates displayed in Figure 3 are much higher for these groups than for Swiss citizens or citizens of Northwestern EU Member States. It is so-called 'third-country nationals' - i.e. citizens of non-EU countries, the vast majority of whom are not European at all - who display, by far, the highest rates.

The case of Southern Europeans is particular in Switzerland, because many of them are second generation 'foreigners' who were born in Switzerland (some even belong to the third generation), which is due to Switzerland's very restrictive naturalisation laws. However, even if most were born in Switzerland, they have, on average, a (much) more modest social origin than their Swiss counterparts, because earlier migrant waves from Southern Europe were largely made up of low-skilled workers (Crettaz 2018b).

Figure 3: Working poor rates broken down by citizenship, 2019-2022, weighted results



Source: Own dataset described above, authors' calculations.

In terms of trends, the three rates of working poverty decreased steadily between 2019 and 2021 among Swiss citizens, citizens from Central/Eastern EU and third-country nationals (for the latter the decline was very limited, however). Northwestern and the Southern EU citizens, however, experienced a slight increase in 2020 followed by a decrease in 2021. Further analyses should explore whether these fluctuations are due to the distribution of various nationalities across economic sectors, leading to compositional effects, notably if some nationality groups were more likely to leave Switzerland during the pandemic, particularly those holding seasonal jobs or other forms of fixed-term employment.

In 2022, IWP stabilised among Swiss citizens, Northwestern EU citizens and third-country nationals, and even slightly increased among Eastern and Southern EU citizens, while IWP *anchored in 2019* decreased except among Eastern Europeans, among whom it was stable. It is not unusual for income inequality to increase in times of economic growth in Switzerland (Suter et al. 2016), and the Swiss economy recovered significantly in 2021 and 2022.

It should be noted, finally, that the overall working poverty rate measured with the Swiss official indicator was stable between 2021 and 2022, yet it increased among all foreign-national groups and decreased only among Swiss citizens, suggesting that Swiss citizens benefited more from the economic recovery since 2021.

Finally, and importantly, we must understand which household types were more affected by the pandemic and the related sanitary measures. The fact that single parents display the highest levels of working poverty and childless couples the lowest rates, while singles and couples with children are located in between these extremes is what is usually found in the specialist literature (Lohmann and Marx 2018, Crettaz 2018b for Switzerland). Interestingly, however, single parents were the only ones to experience an increase in poverty in 2020, even if only in terms of IWP (relative measure). Absolute measures of working poverty decreased in 2020 for all household types. Even more interesting is the fact that single parents were the only ones to experience a deterioration in their financial circumstances in 2022 on all indicators, while other household types were likely to experience either stability or slight improvements in that year. This suggests that single parenthood among workers is a

risk factor at any point in time, but also in dynamic terms, with more fluctuations when macroeconomic shocks occur (lockdown / recession, recovery combined with inflation).

Figure 4: Working poor rates broken down by household type, 2019-2022, weighted results



Source: Own dataset described above, authors' calculations.

Having now provided detailed descriptive statistics, we need to test the interplay of these factors by means of regression models. More specifically, we used linear probability models to measure effects on the likelihood of being 'working poor' based on the three definitions presented above. The independent variables included in our models are age (and age squared to account for known non-linear effects found in many European countries in the working poverty literature, see e.g. Lohmann and Marx 2018), the educational level, whether or not the person was born in Switzerland, their citizenship status (divided in Switzerland, large EU areas and outside of the EU), household type, weekly hours of work, logarithm of hourly earnings (both wage-earners and self-employed workers are included in the analysis), whether they are solo self-employed or not, whether an essential worker or not, whether a domestic worker or not, and the teleworkability index. We produced standard errors that are robust to heteroskedasticity, as individuals are clustered in regions and economic sectors that are more exposed to various forms of working poverty.

Table 8: Regression of the (post-tax and transfers) official Swiss poverty line (absolute), linear probability models with robust standard errors (HC3), evolution over the 2019-2022 period.

	2019	2020	2021	2022
(Intercept)	0.2593***	0.2246***	0.2089***	0.2490***
Age	-0.0016	-0.0011	-0.001	-0.0007
Age squared	0	0	0	0
Female	-0.0187***	-0.0160***	-0.0133***	-0.0159***
Education: Primary and lower secondary (ref. compulsory education not completed)	-0.0023	-0.0066	-0.0028	-0.0325**
Upper secondary	-0.011	-0.0163	-0.0108	-0.0421***
Tertiary education	-0.0019	-0.0098	-0.0044	-0.0357***
Citizenship: Eastern EU (ref. Swiss national)	0.0124*	0.0099*	0.0032	0.0081*
Northern and Western EU	-0.0016	-0.0003	-0.0057*	0.0014
Southern EU	0.0018	-0.0041	-0.0067**	-0.0018
Third-country nationals	0.0396***	0.0420***	0.0478***	0.0555***
Dummy migration background (yes=1)	0.0044*	0.0025	0.0014	0.0005
Household type: Multiple non-related individuals (ref. single individuals)	-0.014	-0.0184***	-0.0281***	-0.0149*
Childless couples	-0.0371***	-0.0299***	-0.0328***	-0.0288***
Couples with children	-0.0426***	-0.0367***	-0.0377***	-0.0349***
Single parents	-0.0015	0.0054	0.0071	0.0127*
Multi-family households	-0.0671***	-0.0477***	-0.0443***	-0.0425***
Working hours in per cent of a full-time job	-0.0008***	-0.0006***	-0.0005***	-0.0006***
log(hourly wage + 0.1)	-0.0253***	-0.0209***	-0.0221***	-0.0244***
Dummy solo self-employed	-0.015	-0.0440***	-0.0436***	-0.0237**
Dummy domestic worker	0.0268***	0.0197***	0.0073	0.0097
Dummy essential worker	-0.0047**	-0.0026*	0	-0.0027
Teleworkability	0.0084***	0.0026	0.0044**	0.0072***
R ²	0.0928	0.0735	0.0746	0.0928
Adj. R ²	0.0921	0.073	0.074	0.0923
Num. obs.	30823	42362	38220	38883

***p < 0.001; **p < 0.01; *p < 0.05. Significance tests based on robust standard errors (HC3)

The goal of these regressions is not to test assumptions in terms of causality, as this would require more refined models and different data, e.g. fixed-effects panel regressions applied to panel data to be able to control for unobserved individual time-constant characteristics, as well as to check the presence of confounding factors linked to one or more independent variables and the working poverty rates. Our aim is mainly to see whether there were structural changes over the four years, in particular if the impact of some variables has become significant over time, or, on the contrary, ceased to be significant. We also aim to provide answers to some of the questions asked above, notably in terms of compositional effects. For the sake of conciseness, we have only used the Swiss official absolute poverty indicator in the following models.

It is interesting to note that the educational level, while strongly linked to working poverty levels, loses its significance when the hours of work and the earnings are controlled for. The citizenship and the teleworkability variable might also absorb part of the impact of the educational level. As could be expected, the more hours individuals work and the more they earn, the less likely they are to be working poor.

However, the educational level had a statistically significant impact on the probability of being working poor in 2022, contrary to previous years. This is probably attributable to the fact, already discussed above, that working poverty, according to the Swiss official indicator, increased by more than 80 per cent among those who have not completed compulsory education in 2022, while this rate remained very stable among the other education categories. As the number of cases is (very) limited for workers who did not complete compulsory school, we should take this result with a grain of salt.

It is interesting to note that being a female worker is a poverty risk, as shown in the descriptive statistics above, most probably because part-time work is more widespread among women, wages tend to be lower, and women make up the overwhelming majority of single parents in Switzerland. Once these three variables are controlled for (earnings, hours of work, household type), being a woman *all else being equal* tends to be associated with a *lower* probability of being working poor, which is usually attributed to the household context (Lohmann and Marx 2018), because female workers are more likely to have a partner who works full-time than male workers. Put differently, women are more exposed to working poverty because they are less paid than men for the same job and they are more likely to work part-time; however, the household context has a protective effect, except if they are single parents. In 2022, being a single parent had a statistically significant impact on the probability of being working poor, which was not the case in previous years. This confirms what was discussed above when we presented descriptive statistics: the relative position of single parents vis-à-vis other household types seems to have worsened in 2022. Further research should have a closer look at a potentially interesting phenomenon, in Switzerland as in other European countries.

In terms of citizenship, it is noteworthy that even when controlling for earnings, hours of work, educational level and household types, Eastern Europeans are still significantly more affected by working poverty (but only at the 10%-level), while third-country nationals are clearly more exposed to working poverty. The latter results points to other obstacles such as less resourceful social networks, perhaps poorer knowledge of national languages than Europeans, and a probably higher exposure to hiring and wage discrimination, especially if they are 'non-white' (Crettaz 2018a).

Interestingly, while the solo self-employed are much more exposed to various forms of working poverty, once earnings, education, working hours, citizenship and gender are control for, being solo self-employed *per se* is less correlated to working poverty. This is not surprising given the high degree of heterogeneity in this worker category. While they are over-represented among the working poor, a subcategory of contractors and own-account workers whose skills are high demand are also over-represented among the top quintile of the household income distribution in Switzerland (Crettaz 2011).

Domestic workers were more exposed to poverty even after controlling for the earnings level and the hours of work in 2019 and 2020. It is noteworthy that these workers display the highest incidence of atypical contracts and precarious jobs (i.e. combining atypical contract and low pay, Hümbelin and

Strazzeri 2025), factors that we cannot control for with our dataset. Interestingly, however, this was not the case anymore in 2021 and 2022. This last finding is somewhat puzzling, because compositional effects in terms of nationality, migration status, age, educational level, and working hours can be eliminated as potential explanations, because these variables are included in the model. However, one explanation is conceivable, because individuals could fluctuate between two types of situations: being unemployed or working poor. This dynamic might explain the puzzle, at least in part, if some domestic workers worked few hours in 2019-2020 and then quit their job after the situation relaxed in 2021-2022. Hence, the domestic workers of the period 2021-2022 could be a more homogeneous and stable group of workers, compared to a more heterogeneous sample in 2019-2020, because the 2019-2020 group became either better paid domestic workers or unemployed/employed in another economic sector.

Last but not least, we can answer one of the questions asked above. The fact that individuals with jobs that can easily be done from home have a clearly below-average poverty risk linked to their higher socio-economic status (as shown e.g. by the impact of log earnings and of working hours). However, once the earnings, the educational level and the hours of work are controlled for, having a higher degree of teleworkability *per se* is not a protection against working poverty. On the contrary, being able to work from home, *all else being equal*, seems to be correlated with a slightly higher probability of experiencing working poverty. There is one very notable exception, though: in 2020, this effect was not statistically significant, contrary to 2019, 2021 and 2022. This points in the direction of a poverty-reducing effect in times of lockdowns - as 2020 was, by far, the year in which various lockdowns had the strongest negative impact - but not in 'normal' times. In addition, part of the explanation could also be that some of the more vulnerable workers, who are more exposed to working poverty, lost their jobs in 2020, even if their tasks could have been performed from home, meaning that those who have 'teleworkable' tasks became a more homogeneous group of workers.

Conclusion and discussion

Swiss authorities only imposed one general lockdown that was, in addition, comparatively short – about two months – and a comparatively little restrictive lockdown policy, as the population was never forced to stay at home, while some economic sectors enjoyed comparatively few restrictions. This was e.g. the case of the tourism industry: ski resorts remained opened during the first winter of the pandemic in Switzerland, while they were closed, e.g., in Austria. Moreover, a high percentage of wage-earners could benefit from short-time work schemes with a comparatively generous replacement rate of 80 per cent. These STW schemes prevented increases in layoffs by keeping many workers in their jobs until the end of the lockdowns. This explains, at least in part, why the recession was comparatively short and not very deep, in comparison to several EU Member States. Hence, it is not very surprising that various 'working poverty' rates did not skyrocket during the pandemic and point in the same direction (namely that of a small decrease in 'working poverty').

Indeed, working poverty decreased in 2020, the first year of the pandemic, and the three indicators used in this article lead to the same conclusion. Hence, as in the case of the Great Recession of the late noughties, we conclude that during recessions, if the economic downturn is not very deep nor very long, absolute and relative indicators of 'working poverty' lead to similar conclusions, because compositional effects / selection effects are not pronounced, contrary to deep recessions in which more vulnerable workers are much more likely to be laid off, which leads to a more homogeneous workforce and less income inequality among workers (Crettaz 2015). Hence, we should find similar and converging conclusions in other European countries that did not experience deep recessions in 2020 and 2021, especially if they allowed a large percentage of wage-earners to access STW schemes that allowed them a) to keep on receiving a large share of their earnings and b) to be able to go back to work after the lockdowns without experiencing a layoff.

In addition, our use of detailed register data allowed us to get reliable measures

- for specific and relatively small groups of workers
- of the impact of specific Covid-related measures, notably those that made payments to businesses according to their previous turnover, in order to prevent them from going bankrupt.

Despite the undeniable qualities of the dataset used in this paper, a few limitations are worth noting. We have used data from four cantons, mainly from German-speaking Switzerland, which are not fully representative of the whole country. Other analyses carried out within the framework of the above-mentioned project, based on social security records for the old-age insurance, have shown that the drop in labour income was particularly marked in cantons not included in the dataset used here, namely Basel-City, Geneva, Neuchatel, and Vaud. There may also be limitations due to the definition of 'working' derived from the Structural Survey. It is not inconceivable that workers living in low-income households are less likely to be reached and are therefore underrepresented.

Interestingly, we found that the solo self-employed and domestic workers did not experience a hike in various forms of working poverty during the pandemic. It is fundamental to remember, however, that the domestic workers mentioned here are those who pay income taxes and social security contributions (because they are in our dataset), meaning that undeclared domestic workers, who are often also undeclared migrants, are not included in the analyses presented here.

The case of essential or frontline workers is interesting: their working poverty rate, however measured, also declined in 2020. Nevertheless, they experienced an increase in 2021, even if the macroeconomic situation improved in Switzerland. This finding should be further investigated in future research. Indeed, while these essential workers kept their jobs and their full wage in most cases during lockdowns, they were confronted with high physical and psychological strains, notably in terms of pace, deadlines, and sustained risk exposure, which in turn might have affected their somatic and mental health (Eurofound 2023). This could have led some of them to experience financial difficulties in 2021.

Finally, workers who may and can easily work from home were largely spared the experience of income poverty during the pandemic, both because they have an above-average socioeconomic status and because this is an obvious advantage during lockdowns.

While the discussion on the impact of Covid-specific measures presented here was focused on the specific programmes implemented by the Swiss Federal government during the Covid crisis, it can be expanded to discuss a much broader topic that concerns virtually all advanced economies. As indicated above, the programmes we discussed in this article mainly targeted self-employed workers and businesses. As is well known in the specialist literature, solo self-employed workers are significantly more exposed to various forms of working poverty than the rest of the workforce, regardless of whether relative or absolute indicators are used, and regardless of whether household income or living conditions are looked at. The fact that these specific Covid-related programmes largely protected the solo self-employed against poverty and bankruptcies during the pandemic is a very interesting stimulus for social policy analysis. If specific programmes could be put in place to support self-employed workers without employee during difficult economic spells, for a period that obviously remains to be defined, this would limit their exposure to the risk of working poverty. The question of the cost of such programmes and their financing is obviously fundamental. It would be interesting to consider implementing a kind of social contribution for solo self-employed workers, who could then apply for temporary assistance in the event of a 'hard blow' – the details of which, obviously, remain to be defined – probably with a focus on recessions. This would be, to a certain extent, the equivalent of short-time work schemes for wage-earners.

Such a reflection requires a change in economic and political philosophy. In Switzerland's case, the prevailing idea found in social policies is that anyone who wants to become self-employed must bear the economic risk of their activity on their own shoulders. They are not entitled to unemployment benefits, nor do they have to pay contributions to an occupational pension fund (compulsory for wage-

earners), and many own-account workers cannot afford it. However, this perception is not a law of nature and could be changed. Furthermore, this issue is even more acute in contexts where activation programmes encourage unemployed people to become self-employed.

Bibliography

Baruffini, M., & Rossi, F. (2024). Who was more likely to work from home during the COVID-19 pandemic? A gender perspective in Switzerland. *Regional Studies, Regional Science*, 11(1), 236–254.

Béland, D., Cantillon, B., Hick, R., & Moreira, A. (2021). Social policy in the face of a global pandemic: Policy responses to the COVID-19 crisis. *Social Policy & Administration*, 55(2), 249–260.
<https://doi.org/10.1111/spol.12718>

Borges, A., Greve, M., & Massoudi, K. (2025). An Investigation of Work Precarity Among Paid Domestic Cleaning Workers in Switzerland. *Journal of Career Assessment*, 33(3), 569–591.

Bradshaw, J., & Mayhew, E. (2011). *The measurement of extreme poverty in the European Union*. EU, Directorate-General for Employment, Social Affairs and Inclusion.

Bruhin, J. M., Scheufele, R., & Stucki, Y. (2023). *The economic impact of Russia's invasion of Ukraine on European countries – a SVAR approach* (Swiss National Bank Working Papers 2023–4). Swiss National Bank.

Bundesamt für Sozialversicherungen (2022). *Evaluation des Corona-Erwerbsersatzes für Selbständigerwerbende*. Eidg. Finanzkontrolle zuhanden des BSV.

Bundesrat (2024). *Wirtschaftliche Folgen der Corona-Krise, Bericht des Bundesrates in Erfüllung des Postulats 20.3132 der WAK-S vom 20. April 2020*. Bundesrat.

Carbajal, M., Müller-Suleymanova, D., & Chimienti, M. (2024). *Hypervulnerability and Agency: The Impact of Covid-19 Pandemic on Migrant Women Working in the Domestic Services Sector* [NFP 80 Research Project]. Swiss National Science Foundation.

Clark, A. E., D'Ambrosio, C., & Lepinteur, A. (2021). The fall in income inequality during COVID-19 in four European countries. *The Journal of Economic Inequality*, 19(3), 489–507.
<https://doi.org/10.1007/s10888-021-09499-2>

Crettaz, E. (2015). Poverty and material deprivation among European workers in times of crisis. *International Journal of Social Welfare*, 24(4), 312–323.

Crettaz, E. (2018a). In-work poverty among migrants. In H. Lohmann & I. Marx (Eds.), *Handbook on In-Work Poverty*. Edward Elgar Publ.

Crettaz, E. (2018b). *Working Poor in der Schweiz: Ausmass und Mechanismen* (Social Change in Switzerland 15). University of Lausanne, FORS, LIVES.

Crettaz, E. (2021). The impact of the Covid-19 pandemic on working poverty: Theoretical and conceptual reflections. *Sociologia Del Lavoro*, 161(3), 7–24. <https://doi.org/10.3280/SL2021-161001>

Crettaz, E., & Farine, A. (2008). *Bas salaires et working poor en Suisse. Ampleur des phénomènes et groupes à risque d'après l'Enquête sur la structure des salaires 2006 et l'Enquête suisse sur la population active 2006*. Office fédéral de la statistique.

Dingel, J. I., & Neiman, B. (2020). How many jobs can be done at home? *Journal of Public Economics*, 189, 104235.

Filauro, S., & Parolin, Z. (2025). Poverty reduction during the COVID-19 pandemic: How did the European union perform relative to the United States? *Journal of European Social Policy*, 35(3).

International Monetary Fund (2022a). *European labor markets and the COVID-19 pandemic: Fallout and the path ahead* (IMF Departmental Papers 004). International Monetary Fund.

International Monetary Fund (2022b). *Here Comes the Change: The Role of Global and Domestic Factors in Post-Pandemic Inflation in Europe* (IMF Working Paper 240). International Monetary Fund.

Kenworthy, L. (2011). *Progress for the Poor*. Oxford University Press.

KOF Swiss Economic Institute. (2022). *Corporate bankruptcies exceeding pre-crisis levels for the first time*. Swiss Institute of Technology Zurich. <https://kof.ethz.ch/en/news-and-events/kof-bulletin/kof-bulletin/2021/12/Company-bankruptcies-returning-to-pre-crisis-levels.html>

Lohmann, H., & Crettaz, E. (2018). Explaining cross-country differences in in-work poverty. In H. Lohmann & I. Marx (Eds.), *Handbook on In-Work Poverty* (p. 528). Edward Elgar Publishing.

Marchal, S., & Marx, I. (2024). *Zero Poverty Society. Ensuring a Decent Income for All*. Oxford University Press.

Menta, G. (2021). *Poverty in the COVID-19 Era: Real Time Data Analysis on Five European Countries* (ECINEQ Working Papers 568). ECINEQ, Society for the Study of Economic Inequality. <https://doi.org/DOI:10.13140/RG.2.2.11574.63045>

Müller, T., & Schulten, T. (2020). *Ensuring fair short-time work-a European overview* (ETUI Research Paper-Policy Brief 7). European Trade Union Institute.

Mussida, C., & Sciuli, D. (2025). In-Work Poverty and COVID-19. In K. F. Zimmermann (Ed.), *Handbook of Labor, Human Resources and Population Economics*. Springer.

Nolan, B., & Marx, I. (2000). Low pay and household poverty. In M. Gregory, W. Salverda, & S. Bazen (Eds.), *Labour market inequalities: Problems and policies of low-wage employment in international perspective*. Oxford University Press.

OECD (2021). *COVID-19 and Well-being: Life in the Pandemic*. OECD Publishing.

OECD (2024). *New purchasing power parities reveal large relative cost of living difference across the OECD in 2022*. OECD. https://oecdstatistics.blog/2024/04/10/new-purchasing-power-parities-reveal-large-relative-cost-of-living-difference-across-the-oecd-in-2022/?utm_source=chatgpt.com

Office fédéral de la statistique (2024). *Littératie, numératie et résolution adaptative de problèmes—Répartition en pourcentage des niveaux de compétences selon la région d'origine*. OFS. <https://www.bfs.admin.ch/bfs/fr/home/statistiques/education-science/niveau-formation/competences.assetdetail.32349158.html>

Ozili, P. K. (2024). Global Economic Consequences of Russian Invasion of Ukraine. In P. K. Ozili (Ed.), *Dealing with Regional Conflicts of Global Importance*. IGI Global – Scientific Publishing.

Parolin, Z. (2020). *Monthly poverty rates in the US during the Covid 19 pandemic* (Poverty and Social Policy Brief 20409). Center on Poverty and Social Policy, Columbia University.

Parolin, Z. (2023). *Poverty in the Pandemic: Policy Lessons from COVID-19*. Oxford University Press.

Ponthieux, S. (2018). Gender and in-work poverty. In H. Lohmann & I. Marx (Eds.), *Handbook on In-Work Poverty*. Edward Elgar Publ.

Salverda, W. (2018). Low earnings and their drivers in relation to in-work poverty. In H. Lohmann & I. Marx (Eds.), *Handbook on In-Work Poverty*. Edward Elgar Publ.

Strazzeri, M., Hümbelin, O., & Lehmann, O. (forthcoming). *Labor earnings of native and foreign workers during the COVID-19 pandemic in Switzerland* (SOWI Working Papers). University of Bern.

Suter, C., Kuhn, U., Gazareth, P., Crettaz, E., & Ravazzini, L. (2016). Considering the various data sources, survey types and indicators: To what extent do conclusions regarding the changing income inequality in Switzerland since the early 1990s converge? In R. Tillman, M. Voorpostel, & P. Farago (Eds.), *Social Dynamics in Swiss Society*.

Vogtenhuber, S., Steiber, N., & Mühlböck, M. (2024). The lasting earnings losses of COVID-19 short-time work. *Research in Social Stratification and Mobility*, 89, 100889.

World Health Organisation (2022). *At least 17 million people in the WHO European Region experienced long COVID in the first two years of the pandemic; millions may have to live with it for years to come*,. <https://www.who.int/europe/news/item/13-09-2022-at-least-17-million-people-in-the-who-european-region-experienced-long-covid-in-the-first-two-years-of-the-pandemic--millions-may-have-to-live-with-it-for-years-to-come>

Younes, H., Noland, R. B., Iacobucci, E., & Zhang, W. (2024). Working from home during COVID-19: Flash in the pan or wave of the future? *Journal of Policy Studies*, 39(4), 55–75.