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Income, Wealth, and Redistribution in a Tax Haven: Distributional National Accounts for Switzerland ★

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Abstract

This paper analyzes the composition and distribution of national income, private wealth, and the extent of redistribution in Switzerland from 2003 to 2022, combining micro tax, survey, and national accounts data. Constructing Distributional National Accounts (DINA) requires addressing two features of the Swiss setting. Switzerland is a tax haven, so we correct for cross-border profit shifting by multinationals. It is also fiscally decentralized. Lacking nationally representative tax microdata, we reweight cantonal micro tax records to match national distributions. We find that pre-tax income inequality is substantially higher than suggested by tax statistics: the top 1% income share increases by 50% once retained earnings and privileged dividends are included. Compared to previous estimates, wealth inequality is somewhat higher but shows no upward trend. The overall Swiss tax-and-transfer system is close to flat across most of the distribution, at around 45% of pre-tax income, declining to below 30% for the top 0.01%.

Keywords: Inequality; Distributional National Accounts; Redistribution; Switzerland

JEL Classification: E01, D31, H2, H5, H77

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1 Introduction

Standard inequality measurement has a data problem: tax and survey microdata are rich in distributional detail but cover only part of the economy, while national accounts capture it in full yet remain distributionally silent. Distributional National Accounts (DINA; Piketty et al. 2018) resolve this by distributing macroeconomic totals across the full population. The importance of distributing the macroeconomic totals rather than simply relying on the distribution of taxable income and wealth is illustrated in Figure 1: in Switzerland, about one-third of total economic income and roughly half of all private wealth are missing from official *tabulated* tax data—the primary source used by researchers to study inequality. Because both the missing income components (particularly retained earnings and certain forms of capital income) and wealth (pension wealth and undervalued housing assets) are large and not randomly distributed across the population, their omission from tax data leads to biased measures of inequality.[1]

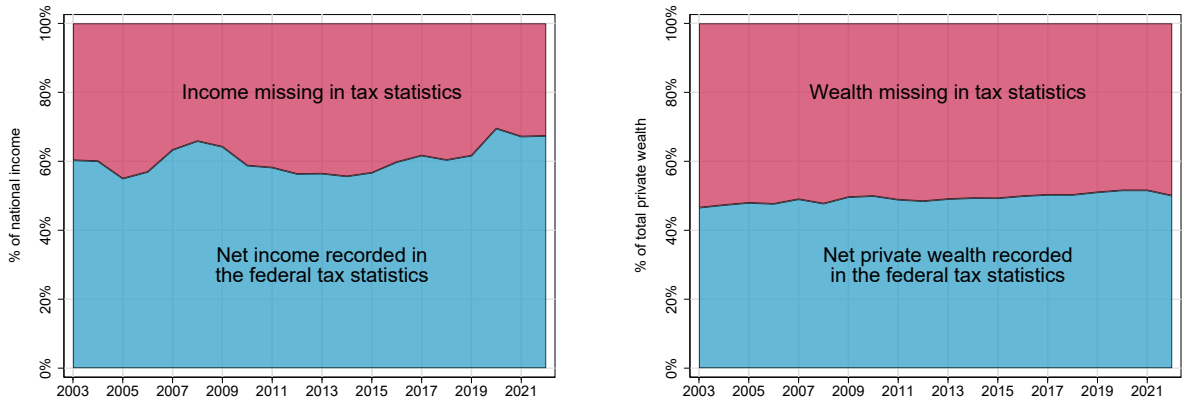
Producing DINA for Switzerland is unusually demanding for two main reasons: it is a major tax haven, and one of the fiscally and administratively most decentralized countries in the world (Dardanelli & Mueller, 2019). As a tax haven, Switzerland books a large and rising share of profits shifted by multinationals rather than earned by residents (Guvenen et al., 2022; Hines & Rice, 1994; Tørsløv et al., 2023). Separating the two is difficult because no corporate ownership registry exists (perhaps unsurprisingly, as this is the kind of opacity that characterizes a tax haven). Due to Switzerland's strong decentralization—income, wealth, and profits are taxed independently across the federal government, 26 cantons, and more than 2,500 municipalities—no nationally representative tax microdata containing detailed information on income, wealth, and taxes paid exist.

This paper overcomes these challenges, correcting Switzerland's national and financial accounts and combining them with comprehensive, reweighted individual-level tax microdata to build the first DINA for Switzerland, covering the period 2003 to 2022. The methods and solutions we develop should be valuable for other small and highly financialized open economies as well as fiscally decentralized countries with limited data availability.

But Switzerland is not merely a hard case—it is also a genuinely informative one for studying inequality and redistribution. First, it is one of the very few countries that still levies a

[1] Retained earnings are part of economic income and are hence included in national accounts aggregates such as GDP. Because they are not distributed to shareholders, however, they do not appear in tax data. In addition, preferential tax regimes, such as privileged dividend taxation (Baselgia, Martínez, & Rebetez, 2026), create further distortions. For wealth, the exclusion of tax-exempt pension wealth and the undervaluation of real estate explain a large share of the gap between total private wealth at market value and wealth recorded in tax data.

comprehensive, functioning personal wealth tax, at a moment when wealth taxation is being seriously debated as a policy tool in different parts of the world (see e.g., Zucman 2024; Boll et al. 2026; Jaros et al. 2026). Swiss DINA series show how a real wealth tax affects the distribution of the overall tax burden, rather than simulating it. As a byproduct, the wealth tax generates individual-level wealth records for the entire population, making Switzerland one of the few countries where the joint distribution of income and wealth can be analyzed directly. Second, Switzerland embodies, in functioning form, features that are proposed or contested elsewhere: strong fiscal decentralization with intense intergovernmental tax competition. Our finding that the overall tax burden is close to flat across most of the distribution and declines significantly at the very top provides a rare real-world benchmark for what such a system delivers in terms of redistribution.



(a) National income

(b) Private wealth

Figure 1: Missing income and wealth in federal tax statistics

Note: Subfigures 1a and 1b display the share of national income and private wealth missing from federal tax statistics, relative to the official national accounts and financial accounts, respectively.

Methodology. Following the DINA framework developed by Piketty et al. (2018) and detailed in Chancel et al. (2025), we distribute total economic income and private wealth across individuals such that the aggregates are fully consistent with national and financial accounts. To do so, we combine the universe of individual-level income and wealth tax returns from the canton of Bern—home to 12% of all Swiss taxpayers—with Swiss national and financial accounts.

Switzerland's role as major tax haven for corporate profits causes distortions in the national accounts that we need to correct to obtain an accurate picture of the *domestic* distribution of

economic income and the related tax burden. We first adjust national accounts for cross-border dividend outflows. Without such correction, the domestic capital income share would show an economically implausible strong decline. Second, based on Baselgia, Koller, and Torun (2026), we estimate profits shifted into Switzerland by benchmarking foreign multinationals' profit-to-employee ratio against that of Swiss multinationals (similar to Tørsløv et al. 2023), and remove the corresponding share of corporate tax revenue from residents' tax burden. Otherwise, we would obtain a heavily upward-biased estimate of corporate taxes paid by Swiss residents.

The rich tax microdata allow us to observe gender, age, and detailed income and wealth components, including privileged dividend income, at the individual level. To obtain nationally representative estimates from subnational tax microdata, we reweight individual observations such that we match the marginal distributions of income and wealth and the age-by-sex distributions at the national level observed in national tax statistics. This reweighting procedure offers a template for other fiscally decentralized countries and contexts where microdata exist only at the subnational level.

Due to Switzerland's strong fiscal decentralization and within-country tax competition, data from any single canton cannot accurately reflect the average tax burden along the income and wealth distributions. To assign personal income and wealth taxes, we therefore build a tax calculator that computes each individual's expected tax liability across all 2,500 Swiss municipalities, and weight the resulting tax rates by the probability that the individual lives in a specific municipality.

Main findings. The resulting data let us distribute pre-tax factor income, pre-tax national income, post-tax national income, and private wealth across the entire population for every year from 2003 to 2022, at the individual level. Five findings stand out.

First, wealth inequality in Switzerland is higher than previous estimates by Föllmi and Martínez (2017) based on tax statistics augmented with pension wealth statistics suggest. While accounting for tax-free pension wealth does reduce wealth inequality, our estimates capture the fact that pension wealth, too, is very unequally distributed. In contrast to previous estimates, we find no pronounced upward trend over the last two decades. We trace this reversal to the systematic and rising undervaluation of housing in fiscal assessments—since housing is the dominant asset for middle-wealth households, this undervaluation compresses their measured wealth and mechanically inflates the top's apparent share. This effect is particularly

strong when house prices rise, as was the case over the period we study. In international comparison, Swiss wealth concentration is intermediate, sitting above France's but below the United States'.

Second, income inequality is substantially higher than previous tax-based estimates suggest: once retained earnings and preferentially taxed dividends are accounted for, the top 1% receives roughly 15% of total pre-tax national income—about 50% more than tabulated tax statistics imply. This again positions Switzerland as an intermediate case internationally, between the United States and France. Taken together, our new estimates challenge an earlier conclusion: Switzerland being very unequal in wealth but very equal in income. Our results suggest it is moderately unequal in both dimensions. In per-capita terms, the average individual in the top 1% earns roughly fifty times as much, and holds around 500 times as much wealth, as the average individual in the bottom half of the distribution.

Third, economic growth over our sample period has been shared unequally. Pre-tax national income grew at an average of 1.9% per year, but growth followed a U-shaped pattern across the distribution. The bottom saw above-average gains, at 2.7% annually, driven by pension income, but incomes of the top 1% grew even faster, at 3.0%, driven mainly by capital income. It is noteworthy that in contrast to what has been found in some other countries, income growth remained positive throughout the distribution, but roughly half of the population (40th-95th percentile) saw their income grow below the economy's average. At an average rate of 3.75%, wealth grew much faster than income, but this growth was more evenly distributed.

Fourth, the private wealth-to-income ratio has risen from 5.6 to 8.5 between 2003 and 2022, and this increase occurred along the entire pre-tax income distribution. This broad-based rise suggests that wealth is becoming considerably more central to overall inequality in Switzerland: because wealth is far more concentrated than income, a rising wealth-to-income ratio means that disparities in wealth translate ever more forcefully into disparities in economic opportunity.

Fifth, the overall Swiss tax-and-transfer system is close to flat rather than progressive across most of the income distribution. The effective tax burden is around 45% of pre-tax income for most individuals, declining to just below 30% only at the very top 0.01%, and to clearly below 20% for the super-rich foreigners benefiting from a special tax privilege called expenditure-based taxation (see Baselgia and Martínez 2025a). What retains a certain degree of tax progressivity at the very top are corporate taxes and, to a lesser extent, the wealth tax, which is almost

exclusively borne by the top 1%.

Finally, two accounting exercises illustrate how the DINA framework may be used to analyze the distributional impacts of tax and transfer policies: (i) financing mandatory health insurance through the income tax rather than flat per-capita premiums (as is the case under the current policy) would make the Swiss tax system meaningfully progressive up to the 99.9th percentile. (ii) the sorting of high earners into low-tax municipalities measurably reduces tax progressivity compared to a scenario without sorting (but still keeping variation in tax rates).

Contribution to the literature. We contribute to three main strands of literature. First, we add Switzerland to a growing set of country-specific DINA papers that includes the United States (Piketty et al., 2018), Germany (S. Bach et al., 2026), France (Bozio et al., 2024; Garbinti et al., 2018), Italy (Guzzardi et al., 2024), the Netherlands (Bruil et al., 2025), and South Africa (Czajka & Gethin, 2025), among others.[2] We add to this literature in four ways. First, we provide the first multi-year DINA series for a tax haven, showing how to identify and correct for profit shifting when, by policy choice, no ownership registry exists.[3] Second, we construct DINA from subnational microdata alone, reweighted to national distributions—a method applicable to other decentralized countries lacking national tax microdata. Third, exploiting the Swiss wealth tax, we study the joint distribution of income and wealth in a DINA-consistent framework. Fourth, we use DINA for counterfactual policy analysis, quantifying the effects of concrete reform proposals on tax progressivity.[4]

Second, building on the above literature, more recent work estimates effective overall tax rates across the income distribution, with a distinct focus at the very top, often using linked administrative firm ownership data (L. Bach et al., 2025; Balkir et al., 2025; Bruil et al., 2025; Guzzardi et al., 2024; Palomo et al., 2025; Ring et al., 2026; Saez & Zucman, 2019). While Switzerland, as a tax haven, lacks the administrative firm ownership data these studies rely on, we nonetheless obtain the same qualitative result: tax progressivity declines sharply at the very top. This finding holds, however, only once we correct for the large and rising share of total corporate profits shifted into Switzerland. Absent this correction, standard DINA in-

[2]Switzerland has so far appeared only as one of about 30 countries in a harmonized European comparison relying on more aggregated inputs (Blanchet, Chancel, & Gethin, 2022; Blanchet & Martínez-Toledano, 2023). We instead construct a dedicated series based on comprehensive administrative microdata. Other studies cover Africa (Chancel et al., 2023), Australia (Fisher-Post et al., 2025), Austria (Jestl & List, 2023), India (Chancel & Piketty, 2019), Malaysia (Khalid & Yang, 2021), the Middle East (Alvaredo et al., 2019), Poland (Bukowski & Novokmet, 2021), Russia (Novokmet et al., 2018), and South Korea (Hong et al., 2025). For a recent survey, see Cartón-Villanueva et al. (2025).

[3]The Netherlands, arguably also a tax haven (Tørsløv et al., 2023), maintains an EU-mandated beneficial ownership registry used in Bruil et al. (2025); Switzerland has no equivalent to date.

[4]Cartón-Villanueva et al. (2025) note that such counterfactual analysis remains rare.

cidence assumptions would overstate tax progressivity at the top, a methodological caution likely relevant to other jurisdictions with large multinational sectors and limited ownership information.

Third, we contribute to the literature on inequality in Switzerland.[5] Particularly, we revise the empirical record built on tabulated tax data (Dell et al., 2007; Föllmi & Martínez, 2017) along two key dimensions: (i) reversing its conclusion on the level and direction of the wealth-inequality trend, and (ii) raising its level of measured income concentration. We also revisit the joint distribution of income and wealth as studied by Martínez (2021) and Gallusser and Krapf (2019): once pension wealth and market-valued housing are properly included, we no longer find that a substantial share of top earners holds little wealth. Finally, our inequality estimates are directly comparable, for the first time, to DINA series for the United States and France, positioning Switzerland as an intermediate case between the two on both income and wealth concentration.

Paper organization. The remainder of this article is organized as follows. Sections 2 and 3 describe the data and methodology, respectively. In Section 4 we present results on the pre-tax distributions of income and private wealth, followed by an analysis of their joint distribution. Section 5 quantifies the impact of different taxes on progressivity and measures the extent of redistribution undertaken by the Swiss government. Section 6 concludes.

2 Data

This section briefly describes the macrodata and microdata used in our analysis. We first present the national and financial accounts, which provide the aggregate income and wealth totals, and then describe the federal and cantonal tax data used to measure the distribution across individuals. Full details are provided in Appendix A and B, respectively.

2.1 Macrodata

2.1.1 National and financial accounts

We base our analysis on the official Swiss national and financial accounts, which provide the macroeconomic aggregates for income and wealth, respectively. All income and wealth dis-

[5] For additional work on inequality in Switzerland, see, e.g., Baselgia and Martínez (2024), Baselgia and Martínez (2025b), Baselgia, Martínez, and Rebetez (2026), Brülhart et al. (2018), Feld et al. (2021), Institut für Wirtschaftspolitik (IWP) (2025), Marti et al. (2023), and Schaltegger and Gorgas (2011).

tributions in this paper are constructed to match these official totals, ensuring full consistency between the microdata and the corresponding macroeconomic aggregates.

For income, we rely on official statistics from the sequence of accounts published by the Swiss Federal Statistical Office (FSO) for the period 1995–2024.[6] Switzerland's national accounts follow the European System of Accounts 2010 (ESA 2010; European Union 2013), which is fully consistent with the System of National Accounts 2008 (SNA 2008; European Commission et al. 2009). We implement one important adjustment to the official national accounts related to cross-border dividend flows, described in detail in Section 3.2.

For wealth, we use the household balance sheet from the financial accounts provided by the Swiss National Bank (SNB), which reports total assets and liabilities at market value.[7] Our wealth concept corresponds to household net worth and distinguishes housing assets, financial assets, pension entitlements (including life insurance), and liabilities, consistent with the definitions used in the financial accounts.[8] A minor limitation of the Swiss financial accounts is that they do not report the business wealth of non-incorporated firms (i.e., the self-employed). We therefore complement the Swiss financial accounts with macroeconomic estimates of this missing component from Blanchet and Martínez-Toledano (2023) to ensure full coverage of household wealth. We find that business wealth accounts for about 4–5% of total private wealth.[9]

All income and wealth variables are expressed in constant 2020 prices.[10]

2.1.2 Federal tax statistics

We use tabulated tax statistics on the federal level to assure that our Bern microdata, introduced in Section 2.2, is representative of the country as a whole. In Switzerland, tax authority rests with the cantons (subnational jurisdictions equivalent to US states), and taxpayers must file taxes in their canton of residence. Every adult is required to file and report their income and wealth, as Switzerland is one of the few countries that still has a wealth tax. Because cantons are not required to share return-level information with the federal government, detailed tax microdata are available only at the cantonal level (see Section 2.2.1). However, cantonal

[6] Retrieved from https://www.bfs.admin.ch/bfs/en/home/statistics/national-economy/national-accounts/sequence.html.
[7] Retrieved from https://data.snb.ch/en/topics/uvo/cube/frsekgevehup.
[8] We focus on private wealth and therefore do not distribute the positive net asset position of the government across individuals (see Baselgia and Martínez 2025b).
[9] This adjustment has no effect on our findings: excluding non-incorporated business wealth leaves our results qualitatively unchanged.
[10] Inflation adjustments are based on the consumer price index (CPI) published by the FSO: https://www.bfs.admin.ch/bfs/en/home/statistics/prices/consumer-price-index.html.

authorities report a limited set of variables to the Federal Tax Administration (FTA) for administrative purposes. The FTA therefore publishes tabulations of net income and taxable wealth in relatively fine brackets, allowing us to approximate the national marginal distributions of these two variables (also see Föllmi and Martínez 2017 who used these tabulations).[11, 12]

2.2 Microdata

2.2.1 Canton Bern tax data

To obtain micro-level information on the distribution of income and wealth, we draw on the universe of annual income and wealth tax returns submitted in the canton of Bern between 2002 and 2022 (Bern Tax Administration, 2025). Bern is the second most populated canton after Zurich and has 1 million inhabitants, making up 12% of the Swiss population. It is a diverse canton that combines both urban and rural, and German-speaking as well as French-speaking regions.

Since tax filing is mandatory for all adults irrespective of their income and wealth levels, there are in principle no non-filers.[13] Married couples must file jointly, but the Bern tax data reports incomes for each of the spouses separately, allowing us to reconstruct individual income distributions and to include information on gender and age of each individual. Capital incomes and wealth components, however, are only reported at the taxpayer level. We split those variables 50:50 between married spouses, which leads to an underestimation of wealth inequality at the individual level.

The Bern tax data contain a rich set of variables, described in detail in Appendix B.1. Notably, we rely on variables on different employment incomes. These are reported net of social contributions. To obtain gross wages and employer's social contributions, we impute social contributions based on statutory contribution rates (see Appendix Section B.1.2). The tax data also contains income from securities and real estate, as well as on debt service. A particular advantage of the Bern microdata is that we observe and hence are able to account for privi-

[11] Taxable net wealth is tabulated in 11 brackets, with the top bracket beginning at CHF 10 million, which corresponds to the cutoff for the top 0.1% of households at the beginning of our sample period and the top 0.4% at the end. Net income is tabulated in 27 brackets: the top bracket covers annual net household income above CHF 2 million, including both "normal cases" (*Normalfälle*) and "special cases" (*Sonderfälle*) of taxpayers. Statistics available on the website of the Federal Tax Administration ESTV (https://www.estv.admin.ch/de/statistiken-natuerliche-personen-kantone-1983-bis-heute for 2020 onward. For previous years, we obtained the tabulated statistics upon request.

[12] The only households excluded from the wealth tax statistics are expenditure-based taxpayers—wealthy foreigners benefiting from a privileged tax regime (see Baselgia and Martínez 2024 and Baselgia and Martínez 2025a). We make a conservative adjustment for their omission (see Appendix C.1).

[13] Exceptions are foreigners without permanent residence, who are taxed at the source if their annual income earned in Switzerland is below 120,000 CHF, if they do not own any real-estate in the country, and if their spouse is not subject to regular taxation. For married couples, the threshold of 120,000 CHF applies to their joint earnings.

leged dividends. Since a corporate tax reform in 2009, dividends of qualifying shareholders are only partially taxed, and in most cantons and at the federal level the untaxed portion never enters the tax base, biasing measured top incomes downward (see Baselgia, Martínez, and Rebetez (2026) for details). Because Bern applies the partial-rate method, under which privileged dividends are fully declared and then taxed at a reduced rate, we can include these incomes in full and thus measure top incomes and inequality more accurately. Pensions, unemployment benefits or alimony payments are also reported in the data, since in Switzerland most transfer incomes are fully taxable. The main exceptions are health care premium subsidies and social assistance payments. We outline our strategy to impute these variables in Section 3.4 and Appendix B.3.

Since Switzerland taxes personal wealth, we have information on real-estate wealth, financial wealth, and total debt. Unlike in some Nordic countries, we do not observe further details of taxpayers' portfolios. Private retirement savings are exempt from wealth taxation prior to retirement, but we observe the resulting pension annuity payments, and see when taxpayers withdraw the pension capital instead of opting for an annuity. We use this information to separately estimate the private pension wealth of retirees and working-age individuals (see Section 3.4 and Appendix B.2).

While the tax data from the canton of Bern is extremely rich, there are two drawbacks to working with data from only one canton. First, Bern has comparatively low per-capita taxable wealth, representing only 8.9% of the Swiss total (Swiss Federal Tax Administration, 2022). To take into account that Bern's income and wealth distributions may not be representative for Switzerland as a whole, we construct weights for each individual to match the income and wealth distributions at the national level (see Section 3.3). Second, we cannot simply extrapolate tax payments observed in Bern to the entire country, as tax rates vary extensively across Swiss cantons and municipalities. Instead, we compute the average expected tax rates for each taxpayer, taking into account taxes in *all* municipalities in a given year (see Section 3.6).

2.2.2 Household budget survey

To estimate consumption patterns across different household types, we rely on the Swiss Household Budget Survey (HBS). The survey covers all years in our sample period except for the final year, 2022. It is administered by the FSO and provides rich, detailed information

on household income, demographic characteristics, and expenditures on consumer goods at a highly disaggregated level. This granularity allows us to clearly distinguish between consumption subject to the standard VAT rate and consumption eligible for the reduced VAT rates (incl. VAT-exemption and lodging-rate).[14]

The HBS samples approximately 3,300 individuals per year, making it a comprehensive and reliable source for analyzing household-level consumption behavior over time.

3 Methodology

We follow the DINA framework developed by Piketty et al. (2018) and detailed in subsequent methodological guidelines (Chancel et al., 2025) to distribute total income and wealth reported in national accounts across individuals such that the resulting distribution is fully consistent with national aggregates. To achieve this, we seek to define individual-level variables consistent with the definitions of the components going into the SNA. Below we lay out the core definitions and concepts (Section 3.1), explain necessary data adjustments (Sections 3.2– 3.4), and describe how we ultimately distribute total national income and private wealth across individuals (Sections 3.5– 3.6).

3.1 Income and wealth definitions

Income concepts. We study the evolution and distribution of net national income, defined as GDP minus capital depreciation plus net income from abroad. National income provides a more relevant measure of economic income than GDP, as it captures the resources available to residents for consumption or saving. Throughout the paper, we consider three versions of national income that are equal in the aggregate but differ in their distribution across individuals: (i) pre-tax factor income, (ii) pre-tax national income, and (iii) post-tax national income.

First, pre-tax factor income comprises all labor and capital income generated by market activities, excluding pension contributions and benefits, before any taxes and government transfers (see Appendix Table A1 for a detailed overview of all components). Second, pre-tax national income—our benchmark income concept—adjusts factor income by accounting for contributions to and benefits from the pension system and other social insurance schemes, including old-age, disability, and unemployment insurance, but excluding general taxes and

[14] Detailed documentation of the survey is published by the FSO and is available at https://www.bfs.admin.ch/bfs/en/home/statistics/economic-social-situation-population/surveys/hbs.html.

government transfers (see Appendix Table A3). Third, post-tax national income subtracts all remaining taxes—including income, wealth, corporate, and consumption taxes—and adds all forms of government transfers and spending, both in cash and in kind (including collective expenditures), thereby capturing the full redistributive impact of government activity (see Appendix Table A7).[15]

Wealth concept. We study net private wealth at market prices, consistent with the definitions used in the financial accounts. Net private wealth comprises housing, pension, financial, and business assets, net of all liabilities (see Appendix Table A9).

3.2 Accounting for cross-border dividend flows

Constructing DINA for Switzerland requires an important adjustment to national account aggregates related to net cross-border dividend flows. As Switzerland is a well-known destination for multinational profit shifting (see, e.g., Guvenen et al. 2022 and Tørsløv et al. 2023), these activities generate large cross-border financial flows in the national accounts. A striking feature of the Swiss national accounts is that, between 2003 and 2020, recorded dividend payments increase by about 11.8 percentage points (pp) of national income, but the majority (around 70%) of these payments accrue to the rest of the world. In the official national accounts, these flows mechanically reduce retained earnings recorded in the domestic corporate sector—turning them negative in some years—and lead to a sharp decline in the measured domestic capital income share of about 10 pp (a drop of more than one third in relative terms) between 2010 and 2020. Such a marked decline in the capital share over such a short period appears economically implausible and is also inconsistent with the evolution observed in most other developed countries (Karabarbounis, 2024).

If these net cross-border dividend outflows are not accounted for, the resulting decline in domestic capital income would be mapped to individuals in the DINA framework. This would imply a substantial decline in top income shares (since capital income is predominantly attributed to top earners) inconsistent with trends observed in tax data. One possible driver of this large capital outflow is that MNEs—particularly from the US—have repatriated large stocks of previously locked-in profits from their Swiss subsidiaries (Baselgia, Koller, and Torun (2026) provide evidence of this behavior). Subtracting this large outflow from domestic cap-

[15] To move from pre-tax to post-tax national income, we additionally construct post-tax disposable income, which serves as an intermediate step (see Appendix Table A5 for details).

ital income makes it appear as though firms in Switzerland retained essentially no or even negative earnings in the later 2010s—at odds both with the behavior of firms in comparable European countries and with the dividend payments of Swiss firms observed in Compustat (see Appendix Figure A7).

To ensure a consistent measurement of *domestic* capital income, we therefore consistently add dividends flowing to the rest of the world back to the corporate sector when constructing the income aggregates used in our distributional accounts. Conceptually, this adjustment treats the observed surge in cross-border dividend flows as reflecting accounting flows associated with multinational profit shifting rather than genuine changes in the domestic distribution of capital income. The adjustment results in a more stable and economically plausible evolution of both the capital income share and income inequality. Appendix A.2 provides supporting evidence and a detailed discussion of this adjustment.

3.3 Weighting Bern microdata to match national distributions

Because our microdata cover only the canton of Bern (and thus around one in nine Swiss households), the income and wealth distributions observed in the tax microdata may not coincide with their national counterparts. We address this by reweighting the Bern microdata in each year so that they exactly reproduce (i) the national marginal distributions of taxable net income and taxable net wealth from the FTA tabulations (Section 2.1.2), and (ii) the national age distribution by sex. This procedure (explained in more detail in Appendix Section C.1) ensures that the reweighted microdata reproduce the national *marginal distributions* by construction. Appendix Figures D1 and D2 confirm that our weights allow us to closely reproduce top income and wealth shares based on Pareto extrapolations of tax data for the entire Swiss population using our microdata.

Because the corresponding *joint distribution* is not observed at the national level, we assume that the joint distribution implied by the reweighted Bern microdata is representative of Switzerland as a whole. We further assume that our reweighted data also produce representative results on the different income and wealth components (such as dividend income or housing wealth), which are unfortunately not directly observed in the national tax tabulations. Given the data limitations at the national level, these two assumptions cannot be tested.

3.4 Imputing variables not observed in the microdata

Some components of national income and total private wealth cannot be observed in individual-level tax data. We impute these missing components using institutional rules and external data sources, as described below.

Occupational pension wealth (BVG). The Swiss pension system consists of a pay-as-you-go component (AHV; first pillar) and a fully funded occupational pension system (BVG; second pillar). This second pillar pension wealth represents a substantial component of aggregate private wealth, accounting for approximately one fourth to one third of total personal wealth over our period of observation. Yet, because occupational pension wealth is not subject to the wealth tax, it is not observed in our tax microdata.

When imputing pension wealth, we use federal pension statistics to split aggregate pension wealth between retired and non-retired individuals (see Appendix Section B.2 for details). These statistics indicate that between 39% and 46% of total pension wealth is held by individuals who are already retired.

Once retired, individuals can either withdraw their occupational pension wealth as a lump sum payout or leave it in the system and receive an annuity. In the former case, pension wealth falls to zero and the withdrawal is observed directly as income in the tax microdata, so no imputation is required. For retirees who instead choose the annuity, we impute their private pension wealth at the time of retirement from their second-pillar annuity payout, which we observe in the tax microdata. For that, we assume that individuals retired at their respective statutory retirement age, and apply the statutory annuity conversion rules in the respective year.[16] After retirement, pension wealth decreases by the annuity payout in each year but increases proportionally to the average return earned by pension funds in the respective period.

For working-age individuals, we impute pension wealth in two steps. First, the aggregate stock of pension wealth is allocated across age cohorts. Individuals younger than age 25 are assigned no pension wealth, as mandatory contribution to the second pillar only starts at age 25. The distribution of pension wealth across age cohorts is constructed from the cumulative contributions made by each cohort from age 25 up to their current age. Contributions at each age are calculated as the product of average labor income at that age and the correspond-

[16] The statutory retirement ages closely correspond to the average realized retirement age. See FSO pension statistics: https://www.bfs.admin.ch/bfs/de/home/statistiken/arbeit-erwerb/erwerbstaetigkeit-arbeitszeit/alter-generationen-pensionierung-gesundheit/erwerbstaetigkeit-pensionierung.assetdetail.35227955.html

ing age-specific statutory contribution rate.[17] Under the assumption that the age–earnings profile remains stable over time, this approach provides a reasonable approximation of the cross-cohort distribution of second-pillar pension wealth in each year. Second, within each age cohort, pension wealth is allocated across individuals in proportion to their labor income.

Details regarding these computations and the underlying data sources are documented in Appendix B.2.

Social contributions. Swiss tax data always report labor incomes net of social contributions. To compute gross salaries of employees (D11, S14) and employers' social contributions (D12, S14), we apply the statutory rates to each of the income sources reported in the tax data. We impute mandatory contributions to the first pillar pension and disability insurance system (AHV/IV/EO), unemployment insurance (ALV), accident insurance (NBUV/BUV), and occupational pensions (BVG)—the "second pillar" pension system described above. For most of these mandatory public insurance systems, the rules apply equally across the board, and employers and employees split the contributions equally. Contributions for occupational pensions, however, can be more generous than the legal minimum. Typically, contribution rates for top earners are higher, and employers may cover more than half of all contributions. For simplicity, we assume that all contributions are split equally between employers and employees. As a result, we may underestimate gross incomes and employers' social contributions. The legal framework we follow and the imputation steps are explained in Appendix Section B.1.2.

Consumption taxes. Since consumption is not observed in tax returns, DINA typically impute value added taxes (VAT) paid by individuals. We follow a similar approach to Acciari et al. (2024) and use household consumption survey data, introduced in Section 2.2.2, to estimate VAT paid based on observable characteristics. We first classify reported household expenditures into VAT-exempt, reduced-rate, lodging-rate, and standard-rate categories, and apply the relevant statutory Swiss VAT rate in each year.[18] We then collapse the survey data by year, household gross-income ventile, marital status, retirement status, and VAT category. For each group-year cell, we compute average annual VAT paid and assign this amount to individuals belonging to the same group-year cell in the tax microdata. For 2022, where survey data are

[17] The average age is computed from our microdata using the weights derived in Section 3.3, ensuring representativeness for the full population.
[18] Taken from https://www.estv.admin.ch/en/development-swiss-vat-rates.

unavailable, we use the corresponding 2021 cell averages.[19]

Social assistance benefits in cash. Social assistance benefits in cash account for approximately 2% of aggregate post-tax national income over our sample period (see Table A8).

More than two thirds of this amount consists of Healthcare Premium Subsidies ("individuelle Prämienverbilligung", IPV) and Supplementary Benefits ("Ergänzungsleistungen", EL) for individuals receiving an old-age or disability pension (AHV/IV). These benefits are not observed in the tax microdata but can be approximated based on statutory eligibility rules. Their imputation is described in detail in Appendix B.3.

Need-based government scholarships (constituting about 0.07% of net national income) can only be imperfectly imputed, as eligibility depends on parental income and student status, both of which are not observed in our microdata. We therefore allocate scholarships on a per-capita basis to individuals younger than 25 with net income below CHF 15,000.

The remaining social assistance benefits in cash constitute approximately 0.5% of net national income and include mainly social welfare assistance ("*Sozialhilfe*"). We distribute this remainder negatively proportional to household net income.

3.5 Distributing pre-tax income and wealth across individuals

We use the reweighted Bern tax microdata, augmented with imputed missing income and wealth components, to distribute national account aggregates across individuals: for each national account aggregate, we assign amounts to individuals in proportion to a corresponding variable observed at the micro-level. This preserves cross-sectional heterogeneity in the microdata while ensuring that the sum of allocated individual amounts exactly matches the macroeconomic total.

We start with pre-tax national income—our preferred income concept (see Table A3 in the Appendix). Aggregate wages and salaries as well as employers' social contributions can be closely matched to corresponding variables in the tax microdata and are allocated accordingly. Most capital and entrepreneurial income components are mapped to their closest counterparts available in the tax data, allowing their distribution to be approximated reasonably well.

Some components, however, have no direct analogue in the tax data—for example, retained earnings (i.e., undistributed corporate profits) or primary income of government. These com-

[19] If a given group is not observed in a particular year—for example, if the survey does not include unmarried retired households in the top income ventile—we use the most recent available estimate for that group.

ponents are therefore distributed using proxy variables or predefined allocation rules. For example, retained earnings are allocated proportionally to observed income from financial assets, which likely understates their concentration at the top (see Alstadsæter et al. 2025) but is a reasonable approximation (see Bruil et al. 2025). Primary income of government, in accordance with international guidelines (Chancel et al., 2025), is distributed proportionally to factor income, effectively acting as a level shifter that preserves the cross-sectional distribution.

Detailed mappings between each national account aggregate and its corresponding micro-level distribution variable can be found in Tables A1 toA10 in Appendix A. We also show for each component its average weight in the national aggregate and the Gini coefficient over our sample period.

3.6 From pre-tax to post-tax national income

To move from pre-tax to post-tax national income, we subtract all taxes paid and add the value of government transfers and public spending.

A key feature of DINA is that *all* taxes paid are distributed across individuals, i.e., not just personal but also corporate taxes. For the economic incidence of the different taxes, we follow the *distributional current-tax analysis* developed in Saez and Zucman (2026) and assign taxes to the owners of the corresponding factors of production: labor taxes (e.g., personal income and payroll taxes) are borne by workers; capital taxes (e.g., corporate income taxes) are borne by firm owners; and consumption taxes (e.g., VAT) are borne by consumers.

Personal income and wealth taxes can be computed based on taxable income and wealth observed in our tax microdata. We account for the large heterogeneity in personal income and wealth tax schedules across municipalities and cantons by computing the nationwide *expected* income and wealth tax rates for each individual. This approach allows us to recover nationally representative effective tax schedules despite relying on single-canton microdata.

For the allocation of public goods and in-kind government transfers, we follow Chancel et al. (2025). We construct a benchmark series as well as upper and lower bound series for post-tax national income under alternative assumptions about the distribution of public goods.[20]

Expected income and wealth taxes. Wealth and income tax schedules in Switzerland vary across the 26 cantons, and each of the more than 2,000 municipalities then applies its own tax

[20] To ensure aggregate consistency between pre-tax and post-tax national income, any government surplus or deficit is allocated proportionally to pre-tax factor income (i.e., effectively as a level shifter), again following Chancel et al. (2025).

multiplier to the cantonal tax. The result is substantial variation in tax rates across the country, even within small geographic areas, and this tax competition has led to strong income and wealth sorting across municipalities.[21]

To capture this large variation in personal taxes despite having tax microdata from only one canton, we construct a new tax calculator that computes what we call the *expected* income and wealth tax, respectively. For every individual in our tax microdata, it first predicts individual income and wealth tax liabilities in each municipality in the respective year. In a second step, all these possible tax rates the individual faces are aggregated into a weighted average, where weights correspond to the probability that an individual resides in a given municipality conditional on income, marital status, and the presence of children, which constitute directly tax-relevant demographic characteristics. This is possible thanks to municipality-level tax tabulations from the FTA. All data and methodological details are provided in Appendix B.4.

We then allocate aggregate income and wealth tax revenues observed in the national accounts proportionally to these nationally representative expected tax rates.

Distributing transfers and public goods. Distributing public spending to individuals is inherently challenging, yet necessary to ensure that post-tax national income equals pre-tax national income from an accounting perspective. We follow the guidelines in Chancel et al. (2025) to approximate the micro-level distribution of in-kind transfers (such as healthcare spending) and public goods (such as security). More specifically, healthcare, primary and secondary education, and social protection spending are allocated per capita, whereas the remaining public expenditures are distributed proportionally to post-tax disposable income.[22] We therefore implicitly assume that high-income individuals benefit more from spending in these latter categories than low-income individuals.

Given that the assumptions made to distribute public spending may be debatable, we further construct alternative post-tax national income series that provide upper and lower bounds on inequality after the allocation of public expenditures. Following Chancel et al. (2025), the upper bound distributes all public spending proportionally to post-tax disposable income, while the lower bound allocates it on a per-capita basis. We always include these lower and

[21] See e.g., Baselgia and Martínez (2025a), Brülhart et al. (2022), Koethenbuerger et al. (2026), Martínez (2022), Schmidheiny (2006), and Schmidheiny and Slotwinski (2018).

[22] Our benchmark differs slightly from Chancel et al. (2025), who allocate only healthcare spending on a per-capita basis. We extend the per-capita allocation to primary and secondary education, which are universally and presumably relatively uniformly provided in Switzerland, and to social protection spending. In contrast, higher education spending is allocated proportionally to post-tax disposable income, as it is more likely to benefit higher-income families.

upper bounds when reporting the results (see Figures 13 and D30).

4 Distribution of income and wealth

This section presents our results on the level, structure, and dynamics of inequality in Switzerland. We start with pre-tax income, analyzing its composition across percentiles and documenting the level of inequality and the distribution of past growth. We then turn to wealth, examining the composition of private wealth across the distribution, its level of inequality, and the distribution of its growth. Finally, we analyze income and wealth jointly.

4.1 Pre-tax income

4.1.1 Composition of pre-tax income across the distribution

Figure 2 disaggregates pre-tax income across the income distribution. For individuals below the top decile, labor and pension income, together with income from self-employment, account for around 80% of total income.[23] This share declines only modestly within the top decile excluding the top 1%, where capital income begins to play a more important role. The composition changes sharply at the very top: within the top 1%—and even more so within narrower groups such as the top 0.1% and top 0.01%—capital income and retained earnings account for a substantially larger fraction of total income. At the very top, labor and pension income together represent 20% or less of total income.

Capital income and retained earnings are extremely concentrated. The latter accrue almost exclusively to the top 1% of the pre-tax income distribution. Because these profits are not distributed, they do not appear in our tax microdata. We therefore proxy their distribution by allocating them proportionally to observed income from financial assets (see Section 3.5). Recent evidence suggests that this approach understates the true concentration of business income at the top (Bruil et al., 2025), by a significant margin in some contexts (Alstadsæter et al., 2025). The distribution of retained earnings shown in Figure 2 should therefore be considered a conservative estimate.

Appendix Figure D3 further distinguishes labor and pension income. Pension income turns negative in the middle 40% of the distribution, reflecting the fact that this group consists predominantly of working-age individuals who are net contributors to the pension system. By

[23] Income from self-employment is the main component of mixed income, which reflects both remuneration for the owner's labor and the return on invested capital, and additionally comprises rental income, including imputed rents.

contrast, pension income is positive for retirees, who are mainly found in the lower part of the distribution and among very high-income individuals.

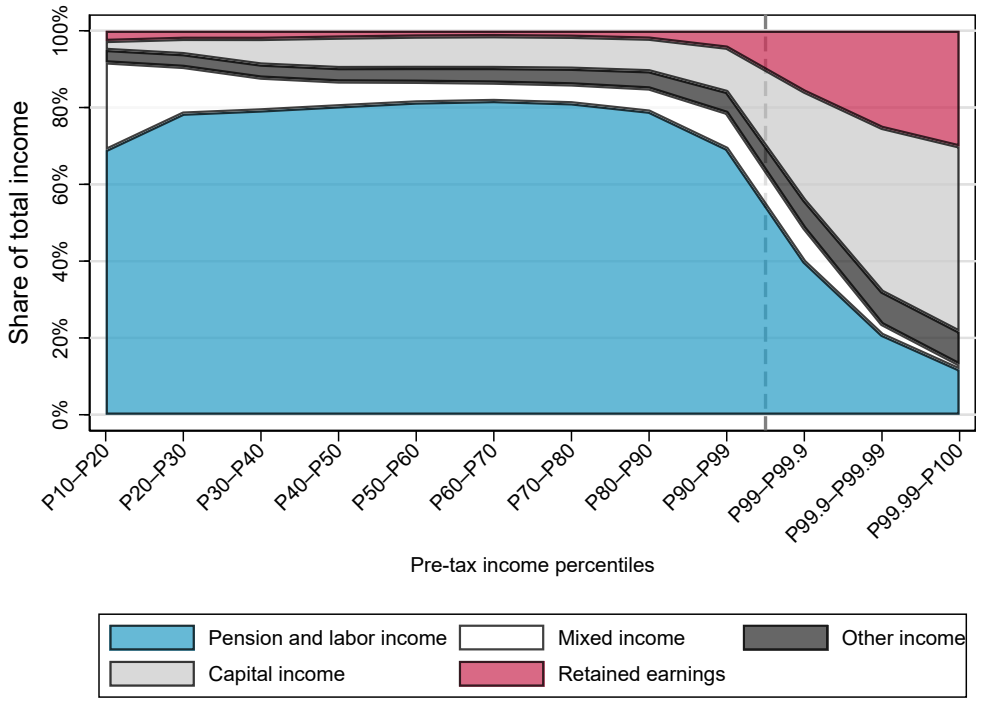


Figure 2: Income composition across the pre-tax income distribution

Note: The figure shows the composition of pre-tax national income across the income distribution (pooled 2003–2022). Shares sum to 100% within each percentile group. The dashed vertical line marks the top 1%.

4.1.2 Distribution of pre-tax income

Figure 3 reports the distribution of pre-tax national income across the full population for the period 2003–2022. The bottom 50% receive about 15–17% of total national income, while the top 1% alone captures a similar share. The top 10% excluding the top 1% receive an additional 23%, so that the top decile accounts for about 40% of aggregate income. About 45% of pre-tax income accrues to the middle 40% of the population. In per-capita terms, these shares imply large differences in income levels: because the top 1% of the population receives a similar aggregate share as the bottom 50%, the average individual in the top 1% earns roughly fifty times as much as the average individual in the bottom half of the distribution.

Over our sample period, income shares exhibit hardly any trend and remain broadly stable. The top 1% share fluctuates more than other groups, reflecting the importance of retained earnings at the top of the distribution. Because aggregate retained earnings vary substan-

tially relative to total national income over time, top income shares display greater year-to-year volatility even in the absence of structural shifts in underlying inequality.

Note that the inequality patterns documented in Figure 3 are not driven by our weighting procedure: Appendix Figure D1a demonstrates that while the raw Bern tax data understate top income shares relative to national benchmarks, the reweighted series closely track top income shares based on federal tax tabulations.[24] The reweighting thus corrects for regional composition differences without artificially inflating income concentration.

For comparison, Appendix Figure D4 presents the distribution of pre-tax *factor* income, which captures income generated by market activities without accounting for the pension system. As expected, inequality is more pronounced under this income concept: the bottom 50% receive less than 10% of total factor income, while the top 1% retains around 15%—very similar to their share in pre-tax total income. By contrast, the middle 40% account for a substantially larger share of factor income than of pre-tax income, consistent with this group being, on average, a net contributor to the pension system. Overall, these differences underscore both the strong concentration of capital income at the top, and the equalizing role of pension flows embedded in the pre-tax income concept, particularly in the lower and middle parts of the distribution.

[24] Some differences remain, as top shares derived from federal tax tabulations rely on Pareto interpolation, which itself approximates the underlying income distribution (see, e.g., Blanchet, Fournier, and Piketty 2022).

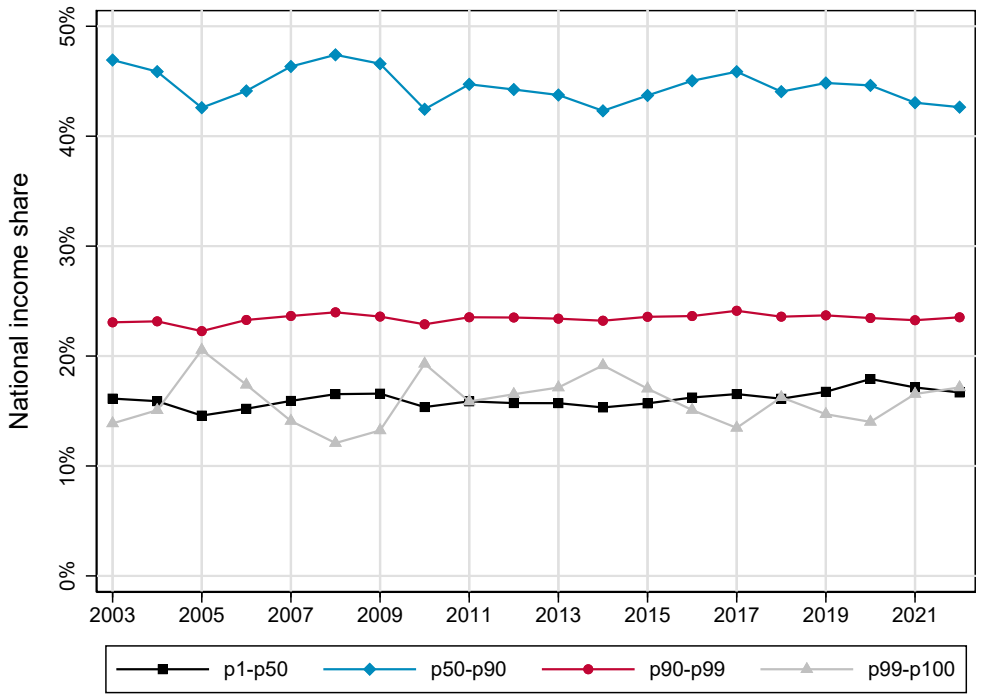


Figure 3: Distribution of pre-tax income, 2003–2022

Note: This figure plots the pre-tax national income shares of four groups spanning the full distribution—the bottom 50%, middle 40%, top 10% (excluding the top 1%), and top 1%—over the period 2003–2022.

Comparison with existing estimates. Appendix Figure D6 contrasts our top income shares with estimates based on tabulated tax data (Föllmi & Martínez, 2017).[25] Our DINA-based estimates are more volatile and imply a systematically higher income concentration at the top of the distribution. The differences are particularly pronounced for the top percentile. For instance, the top 1% receives roughly 15% of total income in our series (for both factor income and pre-tax national income), compared to about 10% in tax-based estimates—corresponding to an increase of approximately 50% in the measured top 1% income share.

These differences in inequality are primarily driven by data coverage. As shown in Figure 1, tax statistics omit a sizable fraction of total economic income—most importantly retained earnings that accrue disproportionately to individuals at the top of the income distribution (Figure 2). In addition, the preferential taxation of dividends paid to majority shareholders leads tax statistics to miss a further component of capital income that is highly concentrated at the very top, thereby biasing measured income inequality downward, especially at the very top (see Baselgia, Martínez, and Rebetez 2026). Once incorporated in a national-accounts-

[25] We display updated estimates produced by the Institute for Swiss Economic Policy (IWP); see the Swiss Inequality Database.

consistent framework, these components materially raise measured income concentration.

Beyond improving accuracy, our DINA estimates provide consistent income inequality measures for the *full distribution*. Previous tax-based series, including Föllmi and Martínez (2017), were limited to the upper tail, whereas our framework delivers harmonized estimates across the entire distribution.[26]

International comparison. Figure 4 compares the top 10% pre-tax income share in the United States, France, and Switzerland over the 20th century.[27] The results show that when measured in a way that is consistent with national accounts, Swiss top income shares are considerably higher and more volatile than what previous estimates based on federal income tax data suggest. The United States still exhibits the highest concentration of income—with the top 10% share in the mid-40 percent range—while French top shares range in the low-to-mid 30s. Switzerland occupies an intermediate position in terms of pre-tax income concentration: it is neither a high-inequality country like the United States, nor a low-inequality country such as France, but falls between the two. The position of Switzerland, however, depends on where in the distribution one looks: the Swiss top 10% share is in some years close to French levels, whereas further up the distribution, the top 1% share can reach US levels in some years (Appendix Figure D8). What is also noteworthy is the high volatility of these new DINA-based top income shares. This is partly driven by the high share of investment income accruing to the top, combined with the fact that Switzerland is a small open economy with particularly large swings in corporate profits and retained earnings.

[26] Rudimentary DINA-style estimates for Switzerland are available from the European comparison by Blanchet, Chancel, and Gethin (2022) and are published on the World Inequality Database (WID.world). These series were constructed in a harmonized cross-country exercise covering 26 European countries and therefore rely on more aggregated inputs for Switzerland. As shown in Appendix Figure D7, the resulting Swiss series from WID.world implies top income shares that are even lower than those derived from tax statistics. Given the types of income omitted from traditional tax data, this pattern likely reflects data constraints in a large-scale comparative project. Our contribution is to construct a dedicated Swiss DINA series based on comprehensive administrative microdata.

[27] For this comparison, we construct a Swiss series that splits the income of married couples equally between spouses, following the equal-split adult convention used in the US and French DINA series. This is less precise than the individualized income concept used in our main analysis, but ensures a like-for-like international comparison.

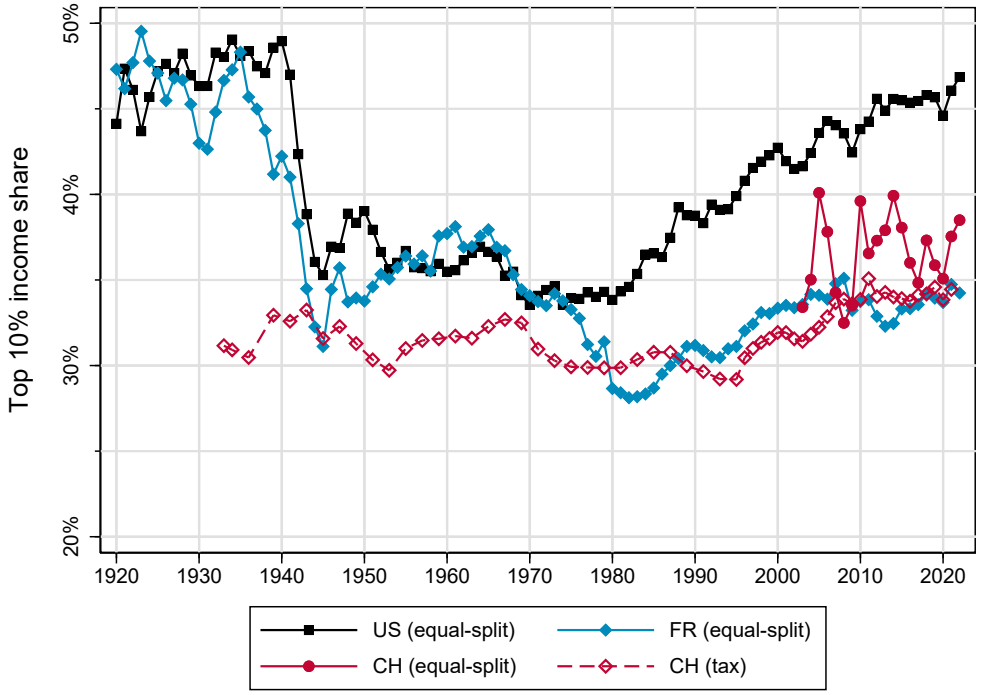


Figure 4: Top 10% pre-tax income share in international comparison

Note: The figure reports the share of total pre-tax income accruing to the top 10% of the income distribution for the United States (black squares), France (blue diamonds), and Switzerland (red dots). These estimates are all based on DINA, and shares are expressed as percentages of total pre-tax national income. All DINA series split the income of married couples equally between spouses. US estimates are from Piketty et al. (2018) and French estimates from Garbinti et al. (2018); updated series were downloaded from WID.world. The tax series (red hollow circles) is shown for comparison with previous estimates of Swiss top income shares (source for 1933–1994: Dell et al. (2007); 1995–2010: Föllmi and Martínez (2017); 2011–2021: Institut für Wirtschaftspolitik (IWP) (2025)). Appendix Figure D8 shows the corresponding top 1% series.

Income inequality by gender and age. Our microdata include demographic characteristics that allow us to examine how income is distributed across gender and age groups. Appendix Figure D9 shows that women receive a smaller share of total national income relative to men. Women are overrepresented in the bottom 50%, where they account for roughly 65% of individuals, and underrepresented in all groups in the upper half of the distribution. Overall, 37.3% of national income accrues to women, while 62.7% accrues to men. These numbers align well with time-use statistics, showing that women account for 60% of all unpaid work in Switzerland, while men account for 59% of all paid work.[28]

We observe a clear life-cycle pattern in the distribution of income (Appendix Figure D10). Individuals aged 41–65 account for the largest fraction of total income throughout the distribution, particularly in the upper segments. Individuals below age 40 are largely absent from the

[28]Source: Federal Statistical Office "Unpaid work 2024" https://www.bfs.admin.ch/bfs/de/home.gnpdetail.2025-0579.html.

top decile and especially from the top percentile. Income received by the retired population (65+) is more evenly distributed across the income distribution. Appendix Figure D11 further shows the share of individuals in each age group within each income group. The prime working age population (25-65) is distributed relatively evenly across income groups, i.e., roughly 90% belong to the bottom 90%, and roughly 9% are among P90-P99, and about 1% are in the top 1%. The young are concentrated at the bottom, while retirees are found both, at the bottom as well as at the top of the distribution.

4.1.3 Distribution of income growth

Between 2003 and 2022, real aggregate national income grew at an average rate of 1.9% per year. Figure 5 shows how growth in pre-tax income was shared across the income distribution (Figure D12 in the Appendix shows growth rates by income groups). A first notable feature is pronounced growth at both tails. Pre-tax income growth was relatively strong at the lower end: the bottom 30% as a whole experienced average annual growth of 2.7%.[29] At the upper end, income grew fastest within the top 1%, reaching 3.0% per year. Because income at the top grew about one percentage point faster annually than income in the bottom half (which grew at 2.0%), the relative gap between these groups widened over the sample period: the top 1% share went from 12% to 15%.

Growth was weakest for the upper middle part of the distribution (percentiles 50–90), whose pre-tax incomes grew by only 1.3% annually on average. By contrast, income growth for the top 10% excluding the top 1% averaged 2.0%, slightly above the macroeconomic growth rate. (Upper) middle-income groups therefore experienced the weakest pre-tax income growth over the sample period, leading to a slight decline in their share in total national income (Figure 3). That said, pre-tax income growth in Switzerland was considerably more evenly shared than in the United States, where growth rises monotonically across percentiles and becomes particularly steep at the very top (Piketty et al., 2018).

Appendix Figure D13 contrasts growth in pre-tax and factor income across percentiles. The two income concepts yield markedly different growth rates at the bottom of the distribution: for the bottom 30%, factor income grew by only 0.7% per year on average, compared to 2.7% for pre-tax income. This gap highlights the importance of pensions and social security benefits in sustaining income growth at the lower end of the distribution.

[29] We do not display the bottom 20% of the distribution in Figure 5, as growth rates become very large when income levels are close to zero (in particular below the 15th percentile).

Appendix Figure D14, which shows pre-tax income growth by income source, confirms this interpretation. Across most of the distribution, labor income accounts for the largest share of total growth. At the bottom, however, pension income makes a substantial contribution, offsetting weak labor income growth. Between approximately the 35th and 65th percentiles, factor income growth exceeds pre-tax income growth, reflecting that individuals in this range are net contributors to the pension system. Above the 65th percentile, the two series begin to converge and coincide at the very top, where market income is the primary driver of overall growth.

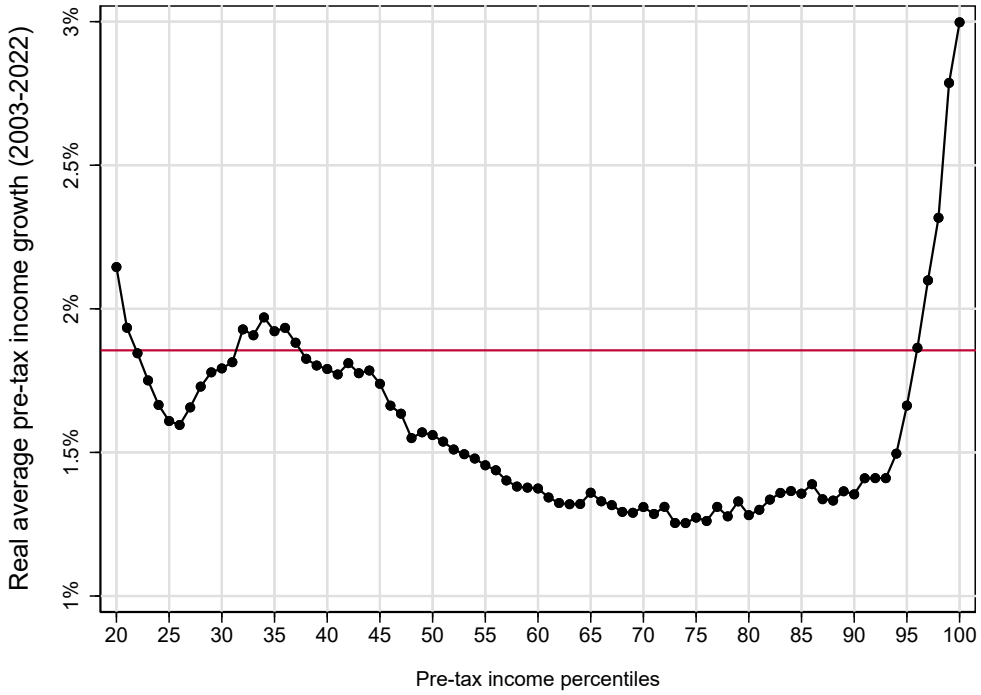


Figure 5: National income growth across the pre-tax income distribution, 2003–2022

Note: The figure displays annualized real growth rates of pre-tax national income by percentile over the period 2003–2022. By construction, percentile-specific growth rates aggregate to the macroeconomic growth rate of 1.9%, shown as a horizontal red line. Figure D12 in the Appendix shows growth rates by income groups.

4.2 Wealth

4.2.1 Composition of wealth across the distribution

The composition of private wealth in Figure 6 shows three distinct patterns: pension wealth (24% of aggregate private wealth, see Table A10) matters throughout the distribution except at the very top, housing wealth (40%) dominates in the middle, and financial and business assets

(43%) prevail at the top of the distribution.

At the bottom of the wealth distribution, pension wealth accounts for about a quarter of total wealth. This is a surprisingly large share given that individuals in this part of the distribution are predominantly young (see Appendix Figure D11), and it reflects that even lower-wealth households accumulate wealth through mandatory pension contributions. Financial assets also play a more important role than housing at the very bottom, where real estate ownership is rare. This is in line with Switzerland's low homeownership rate (around 35–40%), which is markedly lower than in most European countries and the United States, where homeownership rates typically exceed 60% (OECD, 2024).

For the middle 40% of the wealth distribution (P50-P90), housing wealth constitutes the largest share of total assets, accompanied by the highest debt shares across the distribution. These are driven primarily by corresponding mortgage liabilities, which can be explained by high real estate prices and tax incentives. In international comparison, Switzerland's already relatively few homeowners are characterized by a very small share of outright owners (OECD, 2024).

At the very top, the composition shifts dramatically: financial assets and business wealth together account for about 80% of total wealth within the top 1%, with privately held businesses and financial assets particularly concentrated among the very richest individuals. Unfortunately, the tax data does not allow us to distinguish incorporated business wealth (e.g., of owner-managers) from other financial assets.[30] Appendix Figure D15 extends the picture in Figure 6 to the very bottom of the distribution, where debt exceeds gross wealth for the lowest percentile group.

[30] For unincorporated businesses, we follow Blanchet and Martínez-Toledano (2022) and tentatively value business assets at 5% of total wealth based on their synthetic (survey) dataset.

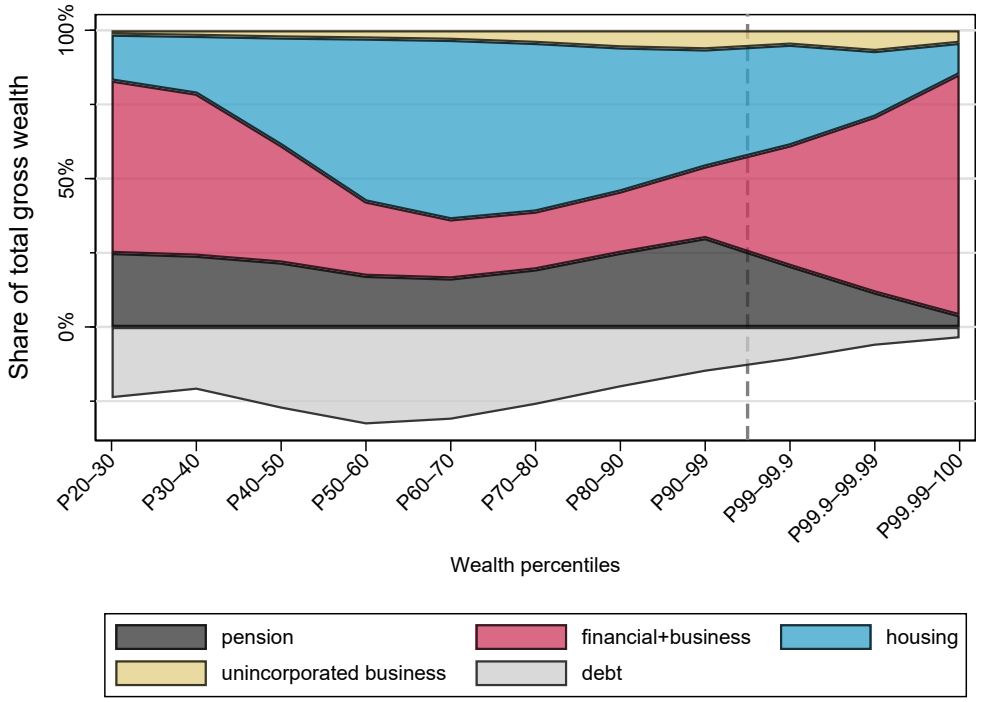


Figure 6: Wealth composition across the private wealth distribution

Note: The figure shows the composition of private wealth across the wealth distribution in Switzerland, pooled over 2003–2022. Each area represents the component's share of total gross wealth within each percentile group. "unincorporated business" refers to business wealth held in non-incorporated firms (Blanchet & Martínez-Toledano, 2023). The dashed vertical line marks the top 1% threshold.

4.2.2 Distribution of wealth

Private wealth is highly concentrated: the bottom 50% hold only around 3% of total net private wealth, while the top 1% alone own roughly 30% (Figure 7). In per-capita terms, this implies that the average individual in the top 1% holds around 500 times more wealth than the average individual in the bottom half of the distribution. The top 10% excluding the top 1% account for a share comparable to the entire middle 40% (P50–P90).

And while the top 1% wealth shares took a hit after the financial crisis (which reversed only in 2020 after the outbreak of the Covid-19 pandemic), the next 9% of the distribution experienced a much smoother evolution. Importantly, these results are not driven by our weighting procedure, something we show in Appendix Figure D1b.

Combining Figures 6 and 7, Appendix Figure D16 shows how the wealth share and its composition have evolved over time within each group. The bottom 50% experienced a considerable decrease in housing wealth (from 2% in total wealth to about 1%). At the same time their pension wealth gained in importance, but not enough to compensate the decrease

in housing wealth. In contrast, the composition of wealth for the middle 40% has remained remarkably stable, with housing continuing to represent the largest asset class throughout the sample period. For the richest households, the experience stands in contrast to the bottom 50%: housing wealth has been increasing and pension wealth is continuously losing weight in their portfolio. Financial wealth and business assets are driving year-to-year changes in total wealth shares of the richest individuals, which is reflected in the top 1% wealth share.

Figure D17 zooms further in on the top 1%. Even within this group, wealth is strikingly concentrated: the bottom 90% of the top 1% represents 0.9% of the population yet holds roughly 16% of total wealth, while the top 0.01% alone holds around 5-6% of all private wealth despite representing only 0.01% of individuals. In other words, the top 0.01% owns on average around 30 times more wealth than the average individual in the bottom 90% of the top 1%, and around 9,000 times more than the average individual in the bottom half of the distribution.[31]

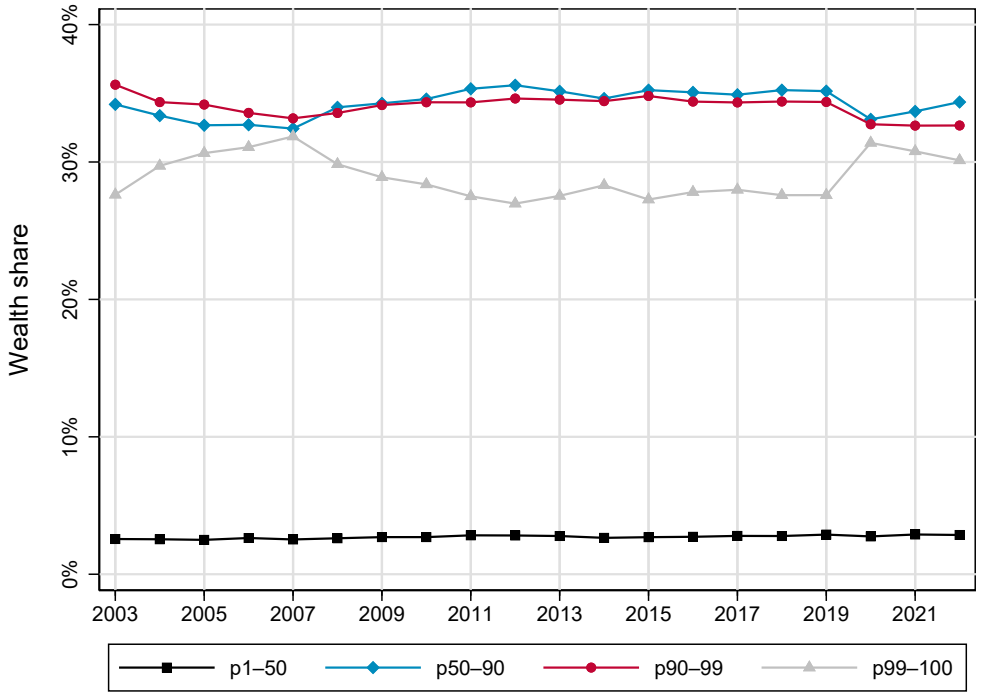


Figure 7: Distribution of private wealth, 2003–2022

Note: This figure shows the distribution of total private wealth across four percentile groups—p1–50, p50–90, p90–99, and p99–100—over the period 2003–2022. Wealth shares are calculated as the proportion of aggregate private net wealth held by each group in a given year.

[31] Note that these estimates may be less precise than those for larger population groups, as we are relying on a small number of observations.

Comparison with existing estimates. Appendix Figure D18 compares our wealth share estimates with those from Föllmi and Martínez (2017), who provide series based on tabulated tax data. Their upper-bound measure does not account for pension wealth at all, while their lower-bound measure distributes average pension wealth equally across all tax units. As one would expect, our new series lies in between those two extremes: we allocate pension wealth separately to retired and not-yet retired individuals, and distribute it based on their observed incomes rather than per capita (see Section 3.4). Furthermore, our unit of observation is the individual, while in tabulated tax data a tax unit consists of one single person or two married adults, thereby increasing inequality.

Equally noteworthy is the divergence in trends: in contrast to findings by Föllmi and Martínez (2017), our estimates display no increase in wealth inequality. A plausible explanation for this divergence lies in the measurement of housing wealth: tax statistics systematically undervalue real estate, as they rely on fiscal rather than market values (with the former being intentionally set 30-50% below market value and adjusted only irregularly, see Brülhart et al. 2026 for details). Given the sharp rise in housing prices over the past two decades (Baselgia & Martínez, 2025b), undervaluation has become more pronounced over time. Since housing is predominantly held in the middle of the wealth distribution (Figure 6), its undervaluation compresses middle-wealth holdings and mechanically inflates top wealth shares in tax-based series. Our data, which consistently value assets at market prices, are not subject to this distortion.

The absence of an upward trend in wealth inequality is also in line with recent top wealth share estimates based on rich lists (Baselgia & Martínez, 2024). These results further suggest that the true impact of expenditure-based taxpayers on wealth concentration at the very top (top 0.01%) may be substantially larger than previously thought, potentially by an order of magnitude. Since we can only account for expenditure-based taxpayers in a conservative way (i.e., we still underestimate their total wealth), our estimates remain conservative with respect to the level of wealth concentration at the very top. Indeed, if we excluded expenditure-based taxpayers, our top wealth shares would only decrease moderately, as shown in Appendix Figure D2b.

International comparison. DINA-consistent wealth accounts enable direct international comparison on a common methodological basis, while for wealth shares based on tax data, un-

derlying definitions often vary across countries. Figure 8 reports top 10% wealth shares for Switzerland alongside DINA-consistent estimates for France and the United States. Switzerland lies between the two countries: its top wealth share is modestly above France but well below the United States throughout our sample period. Given that our Swiss estimates are deliberately conservative—particularly in the upper tail—the true Swiss level is likely somewhat higher, but we conclude that wealth inequality in Switzerland lies below U.S. levels. In international perspective, Switzerland thus appears to be an intermediate case in terms of wealth concentration, a pattern that mirrors our findings for income inequality (see Section 4.1.2).

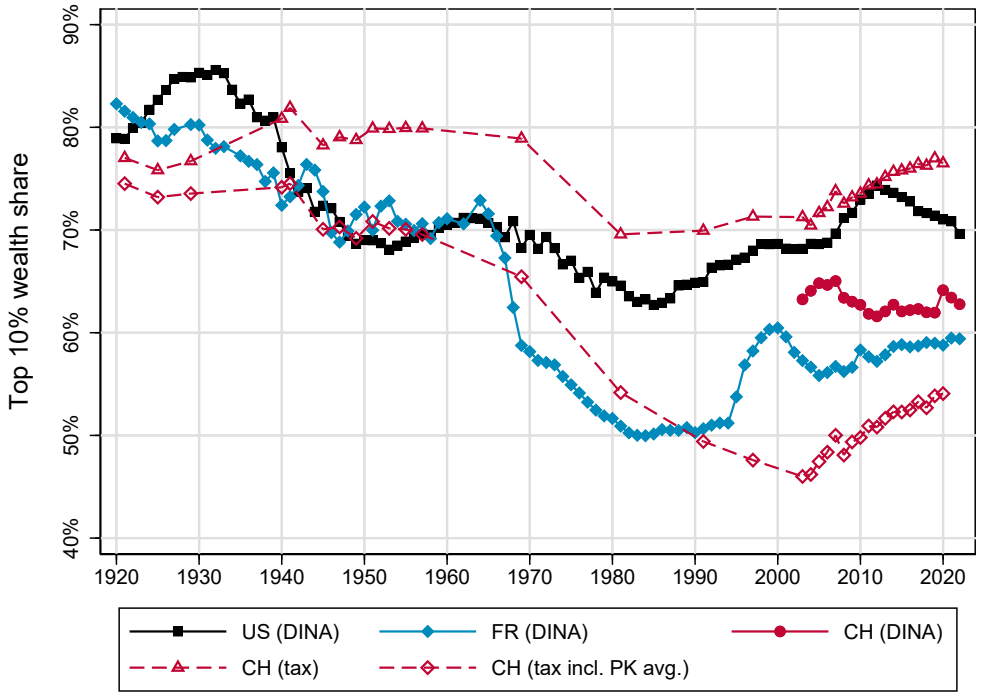


Figure 8: Top 10% private wealth share in international comparison

Note: The figure reports the share of total private wealth owned by the top 10% of the wealth distribution for the United States (black squares), France (blue diamonds), and Switzerland (red dots). These estimates are based on DINA wealth concepts and are therefore conceptually harmonized and comparable across countries. US estimates are from Saez and Zucman (2016) and French estimates from Blanchet and Martínez-Toledano (2022); both series were downloaded from the World Inequality Database (WID.world). The tax-based series (red hollow triangles), and the tax-based series when augmented with average pension wealth (red hollow diamonds) are shown for comparison with previous estimates of Swiss top wealth shares (Föllmi & Martínez, 2017). Appendix Figure D19 shows the corresponding top 1% series.

Wealth inequality by gender and age. Appendix Figure D22 shows that men hold a somewhat larger share of wealth in the upper percentiles, while wealth shares are more evenly distributed across gender in the middle and lower parts of the distribution. Because we al-

ways split wealth equally between married spouses, these estimates understate true gender disparities and must therefore be interpreted as lower bounds.

Turning to age, wealth is concentrated among individuals aged 41–65 and 65+, particularly in the upper percentiles, whereas younger cohorts account for only a small fraction of top wealth shares, consistent with life-cycle accumulation patterns (see Appendix Figure D20). While 75% of those aged 25-40 are in the bottom half of the wealth distribution, two percent of all retirees are in the top 1% (see Appendix Figure D21).

4.2.3 Distribution of wealth growth

Over the two decades we consider, wealth growth across the distribution can best be described as W-shaped, as shown in Figure 9. Below the 30th percentile, average annual real growth rates exceed average wealth growth in the economy. Wealth growth at the bottom was primarily driven by the accumulation of pension wealth and financial assets, shifting the portfolio composition away from housing. Between P30-P50, and beyond P80, wealth grew slower than in the economy as a whole—with the exception of the top 1%, who saw their wealth grow by more than 4%. The upper middle part (P50-P80) experienced wealth growth slightly above to the aggregate average of 3.75%. Overall, and especially when compared with income growth, wealth growth is remarkably equally shared across the distribution.

Appendix Figure D23 breaks these growth rates down by wealth component and helps explain the observed pattern. In the lower half, wealth accumulation is driven primarily by pension wealth and a rise in financial assets. From the middle up to the top 1% of the distribution, housing wealth has been the dominant and strong contributor to growth. Households in this range accumulate real estate wealth—and mortgage debt. Especially those who already owned have been benefiting from the sharp rise in house prices over our sample period. For the top 1%, wealth growth has been strongly capital-income driven, reflecting the prominent role of financial and business wealth for the top 1%. These patterns highlight how differences in portfolio composition shape the distributional pattern of wealth growth.

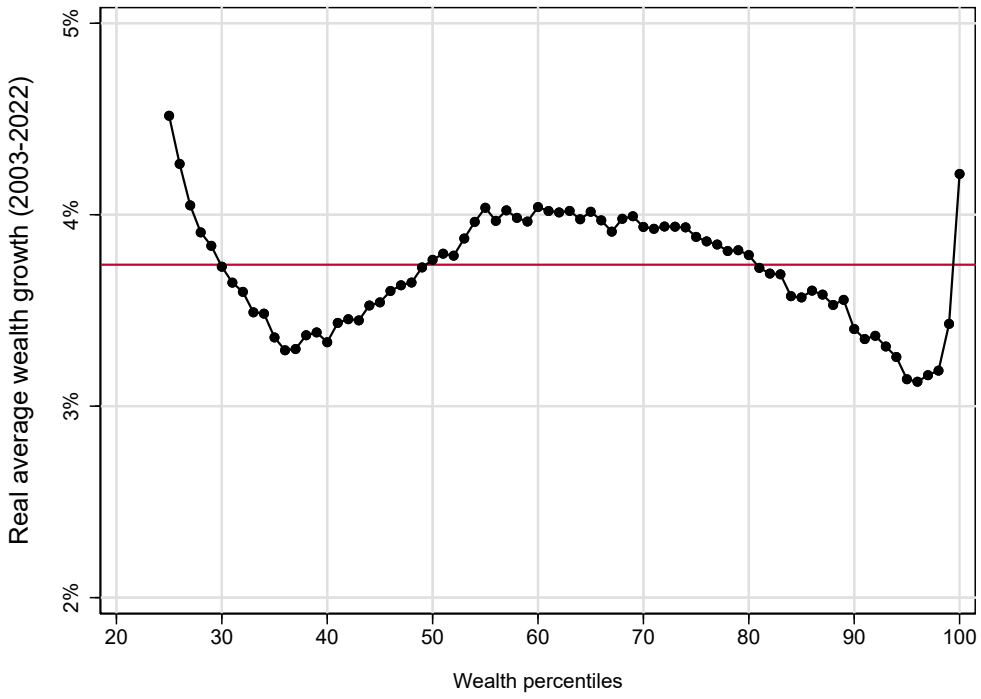


Figure 9: Wealth growth across the private wealth distribution, 2003–2022

Note: The figure reports average annual real growth rates of household wealth by percentile of the wealth distribution over the period 2003–2022. Wealth is measured at market value and expressed in constant 2020 prices. The horizontal red line denotes the aggregate average real wealth growth rate in the economy over this period.

4.3 Joint analysis of income and wealth

4.3.1 Wealth-to-income ratios across the distribution

As in Baselgia and Martínez (2025b), our DINA series imply a rise in the private wealth-to-income ratio, from 5.6 in 2003 to 8.5 in 2022. Figure 10 extends this aggregate finding by examining how this ratio and its sharp rise are distributed across the population. The wealth-to-income ratio is generally very high at the bottom of the income distribution, where retirees hold accumulated wealth but earn relatively little income, and at the top, where income increasingly stems from capital, which mechanically implies substantial wealth behind it. But even in the middle of the income distribution we find wealth-to-income ratios consistently above 3.5, reaching almost 6 in recent years.

Remarkably, the private wealth-to-pre-tax-income ratio has risen substantially across the entire income distribution between 2003 and 2022 (as can be seen comparing the lines for 2003 and 2022 in Figure 10), showing that the sharp rise in the macroeconomic aggregate documented in Baselgia and Martínez (2025b) is broad-based rather than driven by a narrow seg-

ment of the distribution. This increase takes the form of a roughly parallel upward shift, driven by relatively even wealth growth along the income distribution (Figure 11a).

This broad-based increase suggests that wealth—and thus wealth inequality—plays an increasingly central role in shaping overall economic inequality in Switzerland: for a given rate of return, a rising wealth-to-income ratio implies that capital income accounts for a growing share of total income, and since wealth is much more concentrated than labor income, disparities in wealth holdings translate more forcefully into disparities in income and economic opportunity.

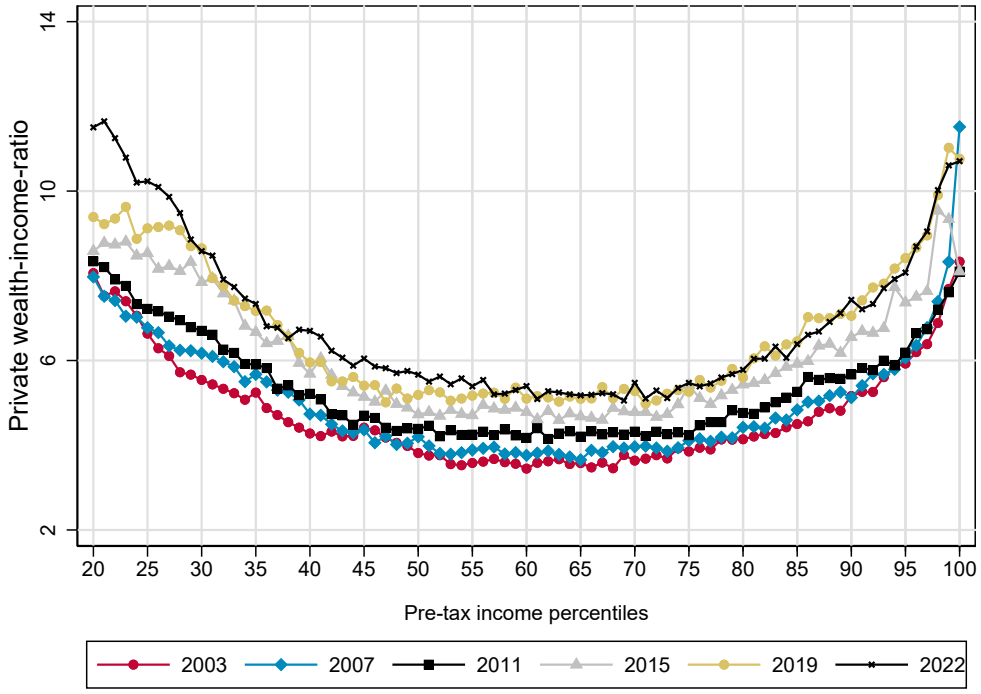


Figure 10: Wealth-to-income ratio across the pre-tax income distribution, 2003–2022

Note: The figure depicts the private wealth-to-income ratio by percentile of the pre-tax income distribution for selected years over the period 2003–2022. For each percentile, the ratio is computed as average net private wealth at market value divided by average pre-tax national income.

4.3.2 Joint distribution of income and wealth

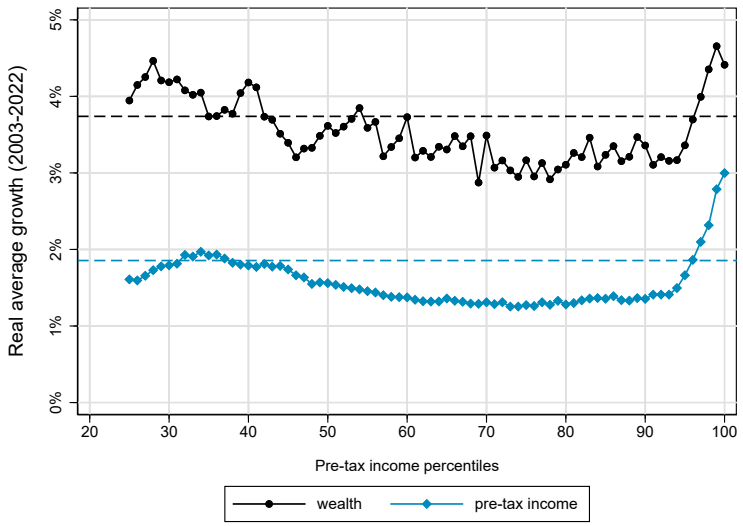
Appendix Figure D24 presents the joint distribution of income and wealth. A clear tail dependence emerges: more than 85% of individuals in the top 0.01% of the income distribution also belong to the top 0.1% of the wealth distribution (Fig. D24a). A similar pattern appears at the bottom: almost half of the individuals in the bottom 20% of the income distribution belong to the lowest wealth ventile. In the middle of the distribution, the relationship weakens but re-

mains clearly visible, with wealth increasing monotonically across income groups. In contrast to Martínez (2021) and Gallusser and Krapf (2019), who find that a substantial share of individuals in each income group—i.e., including top income earners—belongs to the bottom of the wealth distribution, we do not observe this pattern. This is likely due to two factors. First, we include and distribute private pension wealth, which raises measured wealth holdings particularly in the lower and middle parts of the distribution. Second, we measure housing wealth at market value, which increases the wealth held by the upper middle-class.

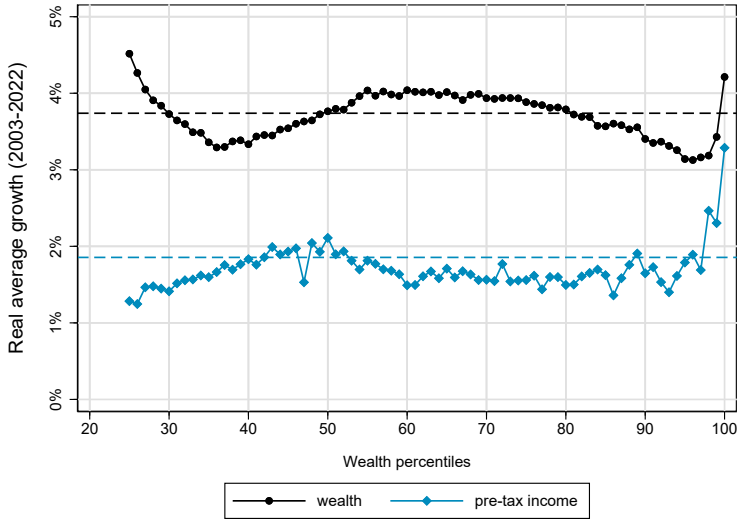
Appendix Figure D24b takes the opposite perspective and shows how each wealth group is distributed across the income distribution. Tail dependence is again evident: individuals at the top of the wealth distribution are overwhelmingly likely to also appear at the top of the income distribution, while those with very little wealth are concentrated at the lower end. Taken together, both panels point to the same conclusion: high wealth and high income tend to go hand in hand, but there are some nuanced differences: the top 1% of income earners together own about 20% of total private wealth, but the top 1% of the wealthiest account for less than 10-15% of all incomes (Figure D25).

4.3.3 Growth across the income and wealth distributions

Figure 11 shows real average growth rates of pre-tax income and private wealth across their respective distributions for the period 2003 to 2022. Regardless of whether individuals are ranked by income (Figure 11a) or wealth (Figure 11b), those at the top exhibit systematically higher growth rates in both dimensions. The pattern is particularly pronounced at the very top, where growth accelerates sharply in both income and wealth, suggesting that those at the top of the distribution are pulling away from the rest of the population.



(a) Income distribution



(b) Private wealth distribution

Figure 11: Income and wealth growth across the income and wealth distribution

Note: The figure shows average annual real growth rates of pre-tax income and private wealth over the period 2003–2022. Panel (a) ranks individuals by their position in the pre-tax income distribution, while Panel (b) ranks them by their position in the wealth distribution. The dashed horizontal lines denote the aggregate average growth rates of income and wealth respectively.

5 Redistribution

The DINA framework allows us to study how taxes are distributed across different income groups, and how taxation itself changes the distribution as we move from pre- to post-tax income. We further demonstrate how the DINA framework can be used to illustrate the distributional effects of policy changes through simple accounting exercises. We apply this approach

to two examples: the financing of mandatory health insurance and Swiss tax competition.

5.1 Taxation across the distribution

In Figure 12, we decompose the effective tax burden by tax type across the pre-tax income distribution. Two findings stand out. First, the overall tax burden is roughly constant across most of the distribution, averaging around 45% of pre-tax income, before declining within the top 1% and falling to just below 30% for the top 0.01%.

Second, the composition of that burden varies markedly across the distribution. At the bottom, the tax burden is dominated by two regressive components: consumption taxes, which reflect the higher consumption-to-income ratios at the lower end, and mandatory health insurance contributions, financed by flat per-capita premiums.[32] The latter are partially offset by premium subsidies, which appear as negative components in Figure 12 and reduce the effective burden for the lowest percentiles. However, for the bottom 50%, even after accounting for premium subsidies, mandatory health insurance amounts to almost 10% of pre-tax income. In contrast, the middle 40% spend around 3% of their pre-tax income on health insurance, and the top 10% below 1% (the effective tax rate of different taxes by income groups can be found in Appendix Figure D26).

Moving up the distribution, payroll taxes become the dominant component, rising from around 10% of pre-tax income in the bottom quintile to 25% for the (upper) middle income classes (P50–P90), and declining slightly in the top 10%.[33] This pattern mirrors the labor income share (see Figure D3): because payroll contributions are proportional to labor income, they dominate wherever labor is the primary income source.

Within the top 1%, capital increasingly displaces labor as the primary income source, and capital-based taxes become dominant. Within the top 10% and especially within the top 1%, corporate income taxes are the key driver of tax progressivity. The wealth tax—while modest in aggregate terms—also contributes to progressivity, as it is almost exclusively borne by the top 1%. Personal income taxes remain around 10%, while payroll taxes fall essentially to zero at the very top. Health insurance contributions and consumption taxes become negligible, while other taxes—including inheritance taxes and taxes on certain movable assets—also play

[32] Health insurance in Switzerland is mandatory but offered by private, highly regulated health insurances: they have to insure everyone—including those with pre-existing conditions and ill health—without discrimination, and they must cover a large, predefined catalog of drugs and treatments.

[33] Payroll taxes include contributions to PAYG social security pension plans (AHV), to occupational pension plans (BVG), to unemployment insurance (ALV), to disability insurance (IV), and to the income compensation scheme for maternity and military leave (EO).

some role.

It is noteworthy that while personal income and wealth taxes are typically progressive in their design, Figure 12 shows their effective progressivity is limited below the 90th percentile of pre-tax income. They make up around 10 pp (out of the 45% overall tax burden). Within the top 1%, where labor income and therefore payroll taxes lose importance, income and wealth taxes together account for up to 20 pp of the total tax burden, but only 15 pp in the top 0.01%. This figure thus highlights how income taxation alone cannot hold up progressivity once we rank individuals according to their true economic income, which contains incomes such as retained earnings that are never explicitly taxed at the personal level.

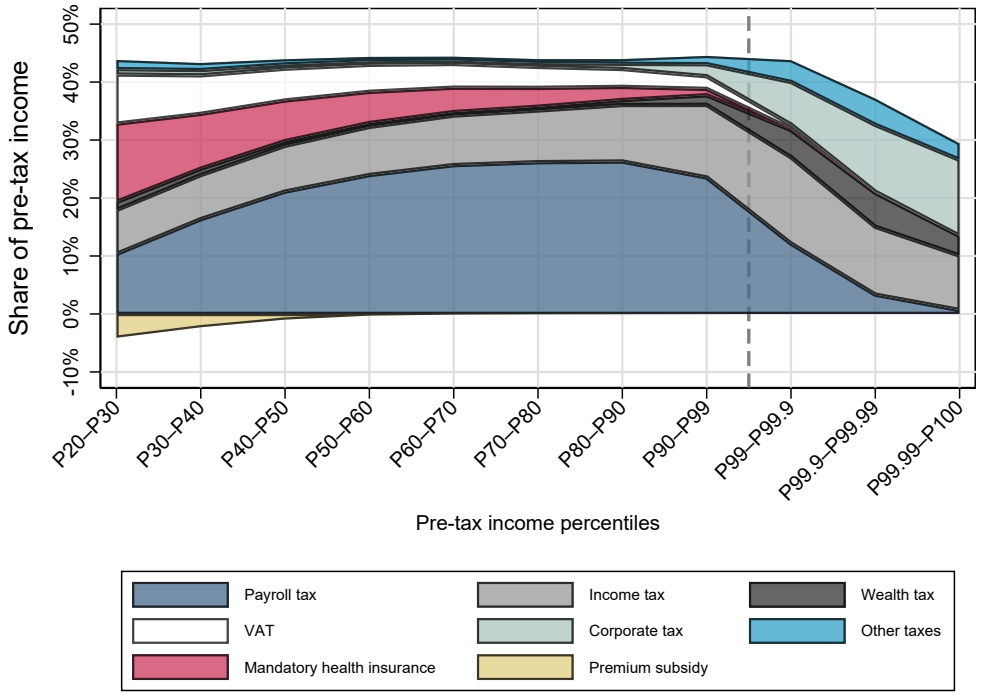


Figure 12: Tax burden composition across the income distribution, 2003–2022

Note: The figure shows the composition of the overall tax burden across the pre-tax income distribution, averaged over 2003–2022. The tax burden is expressed as a share of pre-tax income for each income percentile group. Stacked areas represent the contribution of different taxes and transfers: payroll taxes, value added taxes, mandatory health insurance contributions, income taxes, corporate taxes, wealth taxes, and other taxes. Negative values reflect premium subsidies that reduce the overall tax burden for lower-income households. The dashed vertical line indicates the top 1% of the income distribution.

A nascent literature estimates effective tax rates across the distribution with a particular focus on the very top (L. Bach et al., 2025; Balkir et al., 2025; Bruil et al., 2025; Guzzardi et al., 2024; Palomo et al., 2025; Ring et al., 2026; Saez & Zucman, 2019). Our results are qualitatively consistent with this strand of the literature, as we find a decline in effective tax rates (ETRs)

up to the top 0.1% similar to that documented for other European countries (see e.g., Figure 4 in Alstadsæter et al., 2024). However, because we are not able to zoom into the absolute top of the income distribution with sufficient precision—for instance, Bruil et al. (2025) are able to zoom into the top 0.0001% in the Netherlands and L. Bach et al. (2025) the top 0.0002% in France—the overall tax system appears slightly less regressive. Below we discuss how data limitations and the fact that Switzerland is a tax haven lead us to over-estimate the tax burden at the top, i.e., within the top 1%.

Distributing corporate taxes in a tax haven without ownership data. It is important to note that the degree of regressivity at the top of the distribution varies considerably from year to year. We find that 2005 is the most regressive year, with effective tax rates falling from 39% for the P90–P99 group to 16% for the top 0.01% (Appendix Figure D27a). In contrast, 2020 is the least regressive year[34], with effective tax rates falling only slightly, from 49% for the P90–P99 group to 46% for the top 0.01% (Appendix Figure D27b). These year-to-year differences in progressivity are driven almost entirely by corporate taxes—a fact that reflects the volatility of corporate profits in a small open economy that, in addition, serves as a corporate tax haven to the rest of the world. Because corporate taxes play an outsized role in shaping progressivity at the top of the distribution, their attribution to individuals is consequential—an issue we discuss in detail below.

Unlike L. Bach et al. (2025), Bruil et al. (2025), Palomo et al. (2025), and Ring et al. (2026), who use comprehensive ownership information to link firms to their owners, we cannot draw a clear distinction between Swiss-resident and foreign-owned corporate profits based on ownership registries, as they are inexistent for Switzerland. This matters a great deal here specifically, since a large share of corporate profits booked in Switzerland is not merely foreign-owned but actively shifted by multinationals seeking to exploit its low effective tax rates (see e.g., Guvenen et al., 2022; Tørsløv et al., 2023).

Despite statutory corporate tax rates *falling* from 22.9% to 16.2% over the 2003–2022 period, aggregate corporate tax revenue has risen, on average, due to significantly growing corporate profits. This increase in corporate profits has been fueled by profits from tax-privileged "status" firms whose income is primarily foreign-sourced (Brülhart et al., 2023). Appendix Figure D28 corroborates the increasing importance of foreign profits booked in Switzerland:

[34]Except 2008, which is an outlier shaped by the global financial crisis.

foreign multinationals' share in corporate profits rose from 37.2% in 2014 (the first year corresponding data is available) to 53.5% in 2022 (see Baselgia, Koller, & Torun, 2026, for details).

To address the resulting risk of over-attributing corporate taxes to Swiss residents, we estimate the share of profits shifted into Switzerland by foreign multinationals and remove the corresponding share of corporate tax revenue from residents' tax burden. Concretely, we benchmark the profit-to-employee ratio of foreign multinationals operating in Switzerland against that of Swiss multinationals (as in Tørsløv et al. 2023), treating any excess as an indicator of shifted foreign profits; see Appendix C.2 for details).

This adjustment is necessarily conservative: it corrects only for taxes on *shifted profits*. Profits of foreign-owned firms with genuine economic activity in Switzerland remain attributed to Swiss residents (conversely, we do not remove foreign profits accruing to Swiss residents abroad). Separating the two would require the ownership registry we lack.

The second reason why we tend to over-estimate the corporate income tax burden at the top is that—again due to nonexistent ownership registries—we must approximate how retained earnings are distributed. Like Guzzardi et al. (2024) and Piketty et al. (2018), we assume this distribution can be approximated using financial asset income. We then use these retained earnings to allocate corporate income taxes to individuals. This approach is likely too conservative and underestimates the true concentration of income at the top: financial income encompasses not only dividends but also income from deposits, bonds, and investment funds—incomes that are more evenly distributed than dividends (yet our data don't allow for a more granular distinction). Furthermore, Alstadsæter et al. (2025) show that even dividends—i.e., distributed profits—are more equally distributed than retained profits. As a result, we understate top incomes and therefore attribute too small a share of the corporate income tax base to top-income individuals (and too much to individuals who are not at the very top). Compared to the distortion from shifted foreign profits—for which we correct—this second issue is an order of magnitude smaller.[35]

Taken together, we conclude that the observed decline in the overall tax burden at the top—from around 45% to below 30%—represents a lower bound on true regressivity, primarily because retained earnings may be considerably more concentrated in practice at the very top than we are able to capture with full precision.

[35] The distortion depends on the extent to which we underestimate retained earnings at the top, and on the tax difference between corporate and personal income taxes. Simple simulations show that even for very extreme values—i.e., very high personal rates, very low corporate rates, and a large measurement error in retained earnings—the effect would at most make a difference of 3pp. With reasonable values, we would under-estimate the progressivity at the top by 1-2 pp.

Effective tax rates of super-rich foreigners with tax privileges. Switzerland is also known for its mild tax climate and its attraction of a disproportionate share of the global wealth elite—featuring the highest density of USD millionaires per capita in the world (UBS, 2025). One key reason is a special tax privilege offered exclusively to very wealthy foreigners: expenditure-based taxation. Under this scheme, rather than paying taxes on their true income and wealth, eligible taxpayers—who must be non-Swiss citizens with no labor income earned in Switzerland—are taxed on their global living expenses instead. This effectively decouples their tax liability from their actual economic resources, resulting in substantially lower effective tax rates relative to ordinary taxpayers (Baselgia & Martínez, 2025a). As, by design of the policy, expenditure-based taxpayers are exclusively among the wealthiest individuals in Switzerland, not accounting for their tax privileges leads to an overestimation of their tax burden. Appendix Figure D29 illustrates the consequences for effective tax rates at the very top. While ordinary taxpayers in the top 0.01% of the pre-tax income distribution face an overall tax burden of around 30% over the full sample period 2003–2022 (Figure 12), the effective tax rate for expenditure-based taxpayers at the same percentile drops below 20%. This divergence underscores, again, that the true regressivity at the very top is even more pronounced than our baseline estimates shown in Figure 12 suggest.

5.2 From pre-tax to post-tax inequality

To assess the degree of redistribution by the government, we compare pre-tax and post-tax national income shares. Post-tax national income subtracts all taxes from pre-tax income and adds back all public spending. The latter is distributed based on a set of assumptions laid out in Section 3.6. For transparency on the effect of these assumptions, in Figures 13 and D30 we report our benchmark estimates alongside series that either distribute all public spending proportionally to income—leading to higher top post-tax income shares and therefore less redistribution than in the benchmark case—or per capita—leading to lower top post-tax income shares and therefore more redistribution than in the benchmark case.

In the benchmark scenario, redistribution lowers the post-tax income share of the top 10% of the income distribution by one to three percentage points (Panel (a) of Appendix Figure D31). Similarly, for the top 1%, redistribution lowers the post-tax income share by one to two percentage points, but because their pre-tax income share is much smaller to begin with, this represents a substantially larger relative reduction—about 10% of their pre-tax income

share.

Over time, the degree of redistribution has increased slightly, benefiting the bottom 50%: their post-tax income share increases by about one to two percentage points thanks to redistribution (Appendix Figure D31). In relative terms, their income share increases by 5-10%. As a remarkable fact, we find that the bottom group hardly benefited at all from redistribution during the years marked by the financial crisis. Interestingly, the (upper) middle 40% (P50-P90) benefits from redistribution to a slightly greater extent than the bottom half when measured in absolute terms. By any measure, we find that for the middle 40%, pre- and post-tax income shares are remarkably stable. We therefore find no evidence that points towards an eroding middle class.

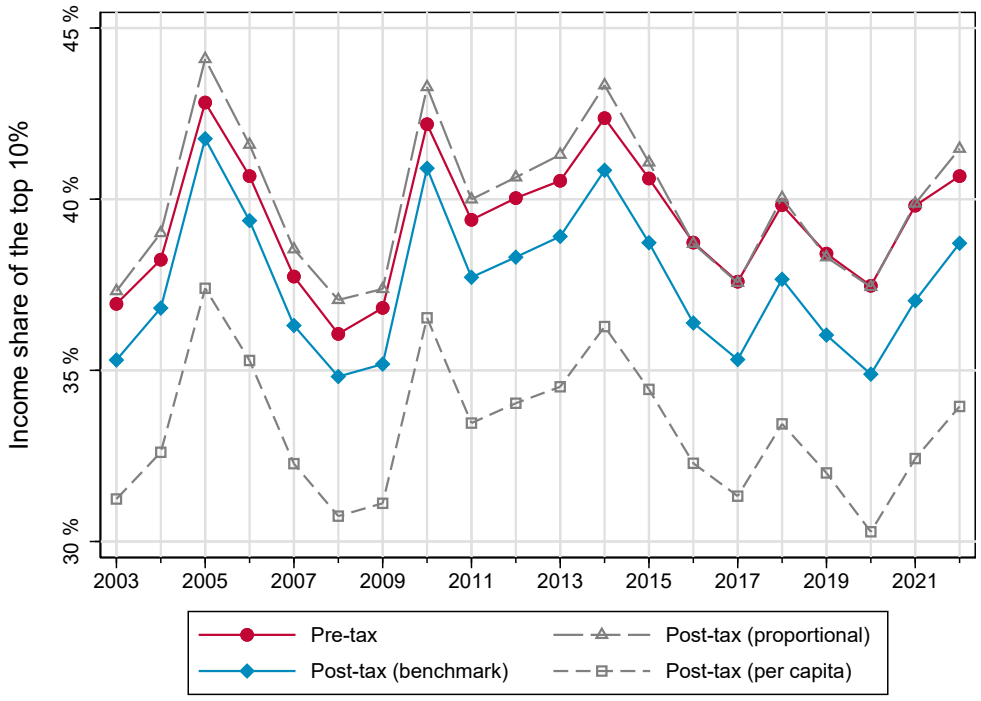


Figure 13: Top 10% income share: pre-tax vs. post-tax, 2003–2022

Note: The figure plots the top 10% share of pre-tax and post-tax national income under three allocation assumptions for public spending: a benchmark series, an upper bound (per-capita allocation), and a lower bound (allocation proportional to post-tax disposable income). All three series are constructed as detailed in Section 3.6. Equivalent figures for the top 1%, the middle 40%, and the bottom 50% are reported in Appendix Figure D30.

At the top and at the bottom, the extent of redistribution is sensitive to assumptions about how to distribute public spending. The lower bound on redistribution (where all public spending is distributed proportionally to post-tax disposable income) implies near-identical pre- and post-tax income shares at the top. Our upper bound implies a drop of around 6–8 percentage

points in the top 10% share relative to pre-tax income. We are hence confident that the true post-tax share lies within these bounds, suggesting that government redistribution shifts at most one fifth of the top 10%'s pre-tax income away from them.

For the bottom 50%, how public expenditure is distributed substantially changes the overall verdict on redistribution: the benchmark series implies only marginal gains from redistribution. Distributing government expenditure entirely proportional to income would suggest a *loss* of around 2-3 pp of total national income, while a per-capita distribution implies a pronounced rise in the income share from around 16% to above 20%, representing a 25% increase.

Consistent with the findings presented above, post-tax income in our benchmark scenario grew faster than pre-tax income for everyone below the 70th percentile over our sample period, while the reverse holds for the top 30%—with the exception of the top 1%, who benefit from the regressivity of the overall tax system (Appendix Figure D32). Overall, we conclude that the redistributive impact of the government is modest in Switzerland.

5.3 Accounting exercises for policy changes

Drawing on two widely discussed policy examples, we demonstrate how DINA can be used to assess the distributional effects of a policy change. It is important to emphasize that both exercises abstract from behavioral responses and should therefore be interpreted as first-order accounting exercises rather than fully modeled counterfactuals. We take income and wealth as given and ask how the tax burden would be redistributed under each alternative policy, abstracting from any incentive effects such changes might induce.

Health insurance financing. How would the tax burden and progressivity change if Switzerland moved from the current system of flat per-capita health insurance premiums to one in which basic health services are financed through the income tax? Such a system would be more similar to the financing of the NHS in the United Kingdom or health insurance in northern Europe (Denmark, Norway, Sweden, Finland), and is recurrently debated in Switzerland.

As documented in Section 5.1, the observed overall tax schedule is broadly flat at around 40–45% of pre-tax income across most of the distribution before declining within the top 1%. Financing mandatory health insurance through the income tax would transform this flat schedule into a progressive one up to the 99.9th percentile (results shown in Appendix Figures D33 and D34). The average tax burden would rise approximately linearly from 35% at the bottom

quintile to just about 50% at the 99.9th percentile, before the regressivity at the very top re-asserts itself. This is a striking change, given that mandatory health insurance contributions represent only around 4% of total pre-tax income. Their flat structure is nonetheless pivotal for overall progressivity: for households around the bottom quartile, premiums constitute the single largest tax component, absorbing approximately 12% of pre-tax income.

Fiscal federalism and tax sorting. Switzerland is known for its strong within-country tax competition between cantons and municipalities, which leads high-earners and wealthy taxpayers to systematically sort into low-tax municipalities (Baselgia & Martínez, 2025a; Brülhart et al., 2022; Koethenbuerger et al., 2026; Liebig & Sousa-Poza, 2006; Liebig et al., 2007; Martínez, 2022; Schmidheiny, 2006; Schmidheiny & Slotwinski, 2018). To what extent does this sorting lower the overall progressivity of the income and wealth tax system?

Our baseline estimates reflect taxpayer sorting, as we construct residence-probability-weighted expected tax rates for each individual across all municipalities (as explained in Section 3.6 and Appendix B.4). In this exercise, however, we ask how the aggregate schedule would change in the absence of any systematic sorting, namely if instead residence probabilities simply reflected each municipality's population share. As shown in Figure 14, below an annual pre-tax income of roughly CHF 250,000—corresponding to the 97.5th percentile of the pre-tax income distribution—taxpayer sorting has essentially no effect on effective income and wealth tax rates. Above this threshold, however, the gap between the actual and the no-sorting schedule gradually widens, reaching about 0.4 pp (or 3% in relative terms) at an annual pre-tax income of CHF 1.25 million (the 99.8th percentile of the pre-tax income distribution), beyond which it remains approximately constant.[36] This sorting effect is driven almost entirely by high-income individuals systematically selecting into low-tax municipalities, while low-income individuals do not seem to sort systematically in response to taxes.

[36] When tax savings are instead expressed relative to net income rather than pre-tax income, the gap between the actual and no-sorting schedule increases to about 2.4 pp. Net income is a statistical income concept used by the FTA, defined as gross income net of standard deductions for insurance premiums and savings interest, and net of the special deduction granted on the income of the lower-earning spouse. Pre-tax income, by contrast, includes income components that never face personal taxes, such as retained earnings. Consequently, our results, when expressed in net income, are in line with Roller and Schmidheiny (2016), who find that tax competition systematically reduces the progressivity of the income and wealth tax schedule at the upper end of the income distribution.

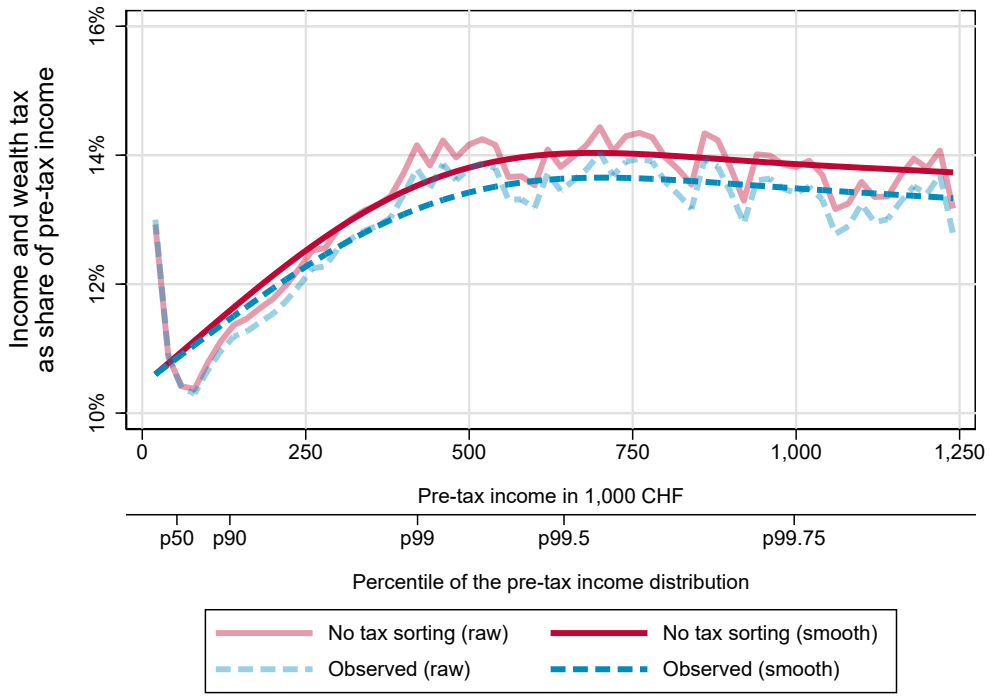


Figure 14: Average wealth and income tax rate with and without taxpayer sorting

Note: The figure shows average effective income + wealth tax rates as a share of pre-tax income. The x-axis shows individual pre-tax income, with the corresponding pre-tax income percentile cutoffs indicated below. Blue lines show our benchmark estimates, which reflect taxpayer sorting via residence-probability-weighted expected tax rates across municipalities (see Section 3.6 and Appendix B.4); red lines show a counterfactual schedule without strategic taxpayer sorting, in which residence probabilities are set equal to each municipality's population share.

6 Conclusion

This paper constructs the first Distributional National Accounts for Switzerland, covering the period 2003–2022. By linking comprehensive individual-level income and wealth tax data with national and financial accounts, we provide an internally consistent picture of how income and wealth are distributed across the Swiss population, how economic growth has been shared, and how the tax and transfer system reshapes that distribution. Switzerland is a particularly informative setting for this exercise: a large share of national income and wealth is of a type that tax data typically miss, the country remains one of the few to levy a functioning wealth tax, and it plays an outsized role in international corporate profit shifting—so the corrections we develop here speak to tax-based inequality measurement, to the wealth-tax debate, and to DINA methodology for small open economies more broadly, not only to the Swiss case.

Several findings stand out. First, wealth inequality is intermediate relative to existing es-

timates: our DINA-consistent series lies between tax-based series with and without the inclusion of pension wealth, and—in contrast to tax-based series—displays no pronounced upward trend over our sample period. Income inequality, meanwhile, is substantially higher than suggested by tax-based estimates: the top 1% receives roughly 15% of total pre-tax national income—about 50% more than implied by tabulated tax statistics.

Second, growth over our sample period has been unequally shared. Pre-tax income growth follows a U-shaped pattern across the distribution, with the strongest gains at the bottom—driven largely by pension income—and at the very top, driven by capital income. Wealth growth, on the other hand, is somewhat more equally distributed. Strikingly, regardless of whether individuals are ranked by income or wealth, those at the top exhibit systematically higher growth in both dimensions.

Third, wealth has become markedly more important relative to income across the full distribution. The private wealth-to-income ratio has risen substantially at all income percentiles over the past two decades, suggesting that wealth inequality plays an increasingly central role in shaping overall economic inequality in Switzerland.

Fourth, the Swiss tax system is broadly flat rather than progressive. The overall effective tax burden averages around 45% of pre-tax income across most of the distribution before declining to below 30% at the very top, and to clearly below 20% for the super-rich foreigners benefiting from expenditure-based taxation. Given our conservative assumptions, this decline likely understates the true extent of regressivity. Our two counterfactual exercises show that replacing flat health insurance premiums with income-tax financing would substantially increase the overall progressivity of the Swiss tax system, while taxpayer self-selection into low-tax municipalities reduces progressivity, but only at very high income levels.

These findings carry broader implications, both for Switzerland and beyond. Domestically, the combination of relatively high income and wealth concentration, a broadly flat tax system, and rapidly rising wealth-to-income ratios suggests that distributional pressures may intensify in the coming decades. More generally, the scale of the corrections required to move from tax-based measures to DINA-consistent ones—particularly for wealth—suggests that similar biases are likely at work wherever real estate is fiscally undervalued, pension wealth is tax-exempt, or capital income goes undistributed, and our approach to handling cross-border profit shifting offers a template for constructing distributional accounts in other small, financially open economies. Our reweighting procedure, which reconstructs nationally represen-

tative estimates from subnational microdata, offers a further template for other federal or fiscally decentralized countries where representative microdata exist only at a subnational level. The DINA framework developed here provides the empirical foundation for monitoring these trends and evaluating the distributional consequences of future tax and social policy reforms.

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Appendix

Income, Wealth, and Redistribution in a Tax Haven: Distributional National Accounts for Switzerland

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A Data Appendix: Macrodata

This data appendix describes the macroeconomic data and variables that we subsequently distribute with microdata.

A.1 Income and wealth concepts in the national accounts

We obtain national income statistics from the Swiss Federal Statistical Office (FSO).[37] The System of National Accounts provides a systematic framework for recording all transactions affecting a sector over a given period—from income generation (production and income accounts) to accumulation, including distribution and redistribution. It allows for the calculation of key aggregate measures such as pre-tax and post-tax national income, disaggregated into its components for the total economy as well as for each institutional sector representing the Swiss economy. For our analysis we construct different Distributional National Accounts (DINA) concepts, following the DINA Guidelines by Chancel et al. (2025).

Pre-Tax Factor Income. Table A1 documents the construction of pre-tax factor income. It reports the macro variables, their labels and accounting signs, the corresponding SNA codes, and the micro variables used to distribute each aggregate. Components without a direct micro counterpart are either constructed as sums of sub-components, left undistributed because they enter only through an aggregate, or imputed using the proxy indicated in parentheses. Further details on these approximations are discussed in the corresponding sections of the main text or appendix.

Pre-Tax National Income. Table A3 extends the framework in Table A1 by documenting the construction of pre-tax national income. It adds components related to the social insurance and pension system, including social contributions, social security and insurance benefits, and the surplus or deficit of social insurance schemes. These components transform pre-tax factor income into pre-tax national income and provide a mapping from national accounts aggregates to their micro-level counterparts.

Post-Tax Disposable Income. To move from pre-tax to post-tax national income, we construct post-tax disposable income as an intermediate step. It subtracts taxes but does not

[37] Available from the FSO: https://www.bfs.admin.ch/bfs/en/home/statistics/national-economy/national-accounts/sequence.html

yet add the corresponding government spending and transfers (see Table A5). Post-tax disposable income therefore does not equal national income in aggregate, because it excludes remaining government expenditures, including the government surplus (see Table A7). The sub-components of taxes on income and wealth are provided by the Federal Department of Finance (FDF).[38]

Post-Tax National Income. Finally, we obtain post-tax national income by adding remaining government consumption, capital taxes, the government surplus, and government property income to post-tax disposable income, as described in Table A7.

Wealth. Based on data from the Swiss National Bank (SNB), we construct aggregate household wealth in Switzerland.[39] Net wealth is defined as non-financial and financial assets minus liabilities. Non-financial assets consist primarily of housing wealth, including dwellings and the underlying land, as well as business wealth and other non-financial assets. Since the national accounts do not provide comprehensive information on private business wealth, we complement these data with estimates from the World Inequality Database (WID).[40] Financial assets include currency, deposits, bonds, equities, fund shares, and pension and life insurance claims. At the micro level, wealth components are distributed using corresponding proxies, such as real estate wealth, financial securities, and debt measures; components without a direct counterpart are imputed as detailed in Table A9.

[38] Received from Elio Bolliger, Federal Department of Finance, on 14 October 2025.
[39] Data available at: https://data.snb.ch/en/topics/uvo/cube/frsekgevehup. The data were last updated in October 2025.
[40] See: https://wid.world/

Table A1: Definition of pre-tax factor income

Variable name	Variable label	SNA code	Micro variable
nninc	(=) Net national income	B5n, S1	sum
fainc	(=) Pre-tax factor income	-	sum
priho	(+) Primary income household sector	B5n, S14	sum
comho	(+) Compensation of employees	D1, S14	sum
wsiho	(+) Wages and salaries	D11, S14	*y_emp_p*1
ectho	(+) Employers' social contributions	D12, S14	sum
ecaho	(+) Employers' actual social contributions	D.121, S14	*ssc_emp_p*1
eciho	(+) Employers' imputed social contributions	D.122, S14	impute (ecaho)
prpho	(+) Property income (net)	D4, S14	sum
sciho	(=) Revenue from securities	D41+D42, S14	*y_securitydvd_avg*
ireho	(+) Interest (received)	D41, S14	none
dicho	(+) Distributed income of corporations	D42, S14	none
divho	(+) Dividends	D421, S14	none
wqcho	(+) Withdrawals from income of quasi-corporations	D422, S14	none
ipaho	(-) Interest (paid)	D41, S14	*d_interest_avg*
fdiho	(+) Reinvested earnings on direct foreign investment	D43, S14	none
oiiho	(+) Other investment income	D44, S14	sum
insho	(+) Investment income attributable to insurance policy holders	D441, S14	*y_emp_p*1
penho	(+) Investment income payable on pension entitlements	D442, S14	*y_emp_p*1
cinho	(+) Investment income attributable to collective investment fund shareholders	D443, S14	*y_securitiesdvd_avg*
nsmho	(+) Net operating surplus and mixed income	B2n + B3n, S14	sum
nsrho	(+) Net operating surplus	B2n, S14	*w_realestate_adj_avg*
nmxho	(+) Net mixed income	B3n, S14	*y_selfemp_avg*
prico	(+) Primary income corporate sector	B5n, S11+S12	*y_securitiesdvd_avg*
prpcn	(+) Property income (net)	D4, S11+S12	none
nsrco	(+) Net operating surplus	B2n, S11+S12	none
prigo	(+) Primary income government sector	B5n, S13	impute (factor income)
ptxgo	(+) Taxes on production and imports, less subsidies	D2-D3, S13	none
prpgo	(+) Property income (net)	D4, S13	none
prinp	(+) Primary income of NPISH sector	B5n, S15	impute (factor income)

Note: This table shows the macro variables included in pre-tax factor income and their microdata counterparts. The first column reports the variable name used in our dataset. Column 2 reports the variable label, column 3 the national accounts code, and column 4 the micro variable used to distribute the macro aggregate. Detailed descriptions of the micro variables are provided in Appendix B. Entries marked *sum* are aggregated from sub-components; entries marked *none* are not distributed separately but enter through an aggregate; entries marked *impute* are allocated using the indicated proxy or method.

Table A2: Composition and distribution of pre-tax factor income

Variable label	SNA code	Share NNI	Gini
(=) Net national income	B5n, S1	100.0%	–
(=) Pre-tax factor income	-	100.0%	0.60
(+) Primary income household sector	B5n, S14	89.7%	0.59
(+) Compensation of employees	D1, S14	69.0%	0.58
(+) Wages and salaries	D11, S14	57.9%	0.57
(+) Employers' social contributions	D12, S14	11.0%	0.61
(+) Employers' actual social contributions	D.121, S14	10.6%	0.61
(+) Employers' imputed social contributions	D.122, S14	0.4%	0.61
(+) Property income (net)	D4, S14	13.2%	0.74
(=) Revenue from securities	D41+D42, S14	8.1%	0.79
(+) Interest (received)	D41, S14	2.2%	0.79
(+) Distributed income of corporations	D42, S14	5.9%	0.79
(+) Dividends	D421, S14	5.8%	0.79
(+) Withdrawals from income of quasi-corporations	D422, S14	0.1%	0.79
(-) Interest (paid)	D41, S14	2.3%	0.40
(+) Reinvested earnings on direct foreign investment	D43, S14	0.0%	–
(+) Other investment income	D44, S14	7.4%	0.61
(+) Investment income attributable to insurance policy holders	D441, S14	1.5%	0.57
(+) Investment income payable on pension entitlements	D442, S14	4.7%	0.57
(+) Investment income attributable to collective investment fund shareholders	D443, S14	1.2%	0.79
(+) Net operating surplus and mixed income	B2n + B3n, S14	7.6%	0.49
(+) Net operating surplus	B2n, S14	7.6%	0.38
(+) Net mixed income	B3n, S14	imputed	0.58
(+) Primary income corporate sector	B5n, S11+S12	5.5%	0.95
(+) Property income (net)	D4, S11+S12	-9.7%	0.79
(+) Net operating surplus	B2n, S11+S12	15.3%	0.70
(+) Primary income government sector	B5n, S13	4.5%	0.70
(+) Taxes on production and imports, less subsidies	D2-D3, S13	3.9%	0.70
(+) Property income (net)	D4, S13	0.7%	0.70
(+) Primary income of NPISH sector	B5n, S15	0.2%	0.70

Note: This table reports the composition and distribution of pre-tax factor income. Column 1 reports the variable label, column 2 the national accounts code, column 3 the component's average share of net national income, and column 4 the average Gini coefficient across the sample period. Entries marked "–" indicate that no Gini estimate is reported for that component. Negative income values are truncated at zero.

Table A3: Definition of pre-tax national income

Variable name	Variable label	SNA code	Micro variable
nninc	(=) Net national income	B5n, S1	sum
ptinc	(=) Pre-tax national income	–	sum
fainc	(=) Pre-tax factor income	Table A1	sum
priho	(+) Primary income household sector	B5n, S14	sum
comho	(+) Compensation of employees	D1, S14	sum
wsiho	(+) Wages and salaries	D11, S14	*y_emp_p*1
ectho	(+) Employers' social contributions	D12, S14	sum
ecaho	(+) Employers' actual social contributions	D.121, S14	*ssc_emp_p*1
eciho	(+) Employers' imputed social contributions	D.122, S14	impute (ecaho)
	Start: Broad pension-based treatment (recommended WID)		
scnho	(-) Net social contributions	D61, S14	sum
easho	(-) Employers' actual social contributions	D611, S14	*ssc_emp_p*1
eisho	(-) Employers' imputed social contributions	D612, S14	impute
ecahh	(-) Households' actual social contributions	D613, S14	sum
kvgho	(-) Households' actual obligatory health insurance contributions (OKVG)	kvg statistic	impute (per capita)
oasho	(-) Other households' actual social contributions		*dina_D*613*_other_avg*
ecihh	(-) Households' social contribution supplements	D614, S14	*y_emp_p*1
sissc	(+) Social insurance scheme service charges	D.61SC, S14	*y_emp_p*1
sbcho	(+) Social security benefits in cash	D621, S14	*dina_D*621*_p*1
sboho	(+) Other social insurance benefits	D622, S14	*dina_D*622*_avg*
sdsss	(+) Surplus (+) or Deficit (-) of Social Insurance Systems	D61-D62-D622, S14	impute (national income)
	End: Broad pension-based treatment (recommended WID)		
prpho	(+) Property income (net)	D4, S14	sum
sciho	(=) Revenue from securities	D41+D42, S14	*y_securitydvd_avg*
ireho	(+) Interest (received)	D41, S14	none
dicho	(+) Distributed income of corporations	D42, S14	none
divho	(+) Dividends	D421, S14	none
wqcho	(+) Withdrawals from income of quasi-corporations	D422, S14	none
ipaho	(-) Interest (paid)	D41, S14	*d_interest_avg*
fdiho	(+) Reinvested earnings on direct foreign investment	D43, S14	none
oiiho	(+) Other investment income	D44, S14	sum
insho	(+) Investment income attributable to insurance policy holders	D441, S14	*y_emp_p*1
penho	(+) Investment income payable on pension entitlements	D442, S14	*y_emp_p*1
cinho	(+) Investment income attributable to collective investment fund shareholders	D443, S14	*y_securitiesdvd_avg*
nsmho	(+) Net operating surplus and mixed income	B2n + B3n, S14	none
nsrho	(+) Net operating surplus	B2n, S14	*w_realestate_adj_avg*
nmxho	(+) Net mixed income	B3n, S14	*y_selfemp_avg*
prico	(+) Primary income corporate sector	B5n, S11+S12	*y_securitiesdvd_avg*
prpcn	(+) Property income (net)	D4, S11+S12	none
nsrco	(+) Net operating surplus	B2n, S11+S12	none
prigo	(+) Primary income government sector	B5n, S13	impute (factor income)
ptxgo	(+) Taxes on production and imports, less subsidies	D2-D3, S13	none
prpgo	(+) Property income (net)	D4, S13	none
prinp	(+) Primary income of NPISH sector	B5n, S15	impute (factor income)

Note: This table shows the macro variables included in pre-tax national income and their microdata counterparts. The first column reports the variable name used in our dataset. Column 2 reports the variable label, column 3 the national accounts code, and column 4 the micro variable used to distribute the macro aggregate. Detailed descriptions of the micro variables are provided in Appendix B. Entries marked *sum* are aggregated from sub-components; entries marked *none* are not distributed separately; entries marked *impute* are allocated using the indicated proxy or method.

Table A4: Composition and distribution of pre-tax national income

Variable label	SNA code	Share NNI	Gini
(=) Net national income	B5n, S1	100.0%	–
(=) Pre-tax national income	-	100.0%	0.52
(=) Pre-tax factor income	-	100.0%	0.60
(+) Primary income household sector	B5n, S14	89.7%	0.50
(+) Compensation of employees	D1, S14	69.0%	0.47
(+) Wages and salaries	D11, S14	57.9%	0.46
(+) Employers' social contributions	D12, S14	11.0%	0.50
(+) Employers' actual social contributions	D.121, S14	10.6%	0.50
(+) Employers' imputed social contributions	D.122, S14	0.4%	0.50
Broad pension-based treatment (recommended WID)			
(-) Net social contributions	D61, S14	27.9%	0.42
(-) Employers' actual social contributions	D611, S14	10.7%	0.51
(-) Employers' imputed social contributions	D612, S14	0.4%	0.51
(-) Households' actual social contributions	D613, S14	13.8%	0.34
(-) Households' actual obligatory health insurance contributions (OKVG)	kvg statistic	3.9%	0.09
(-) Other households' actual social contributions	-	9.8%	0.51
(-) Households' social contribution supplements	D614, S14	5.0%	0.46
(+) Social insurance scheme service charges	D.61SC, S14	1.9%	0.46
(+) Social security benefits in cash	D621, S14	9.5%	0.28
(+) Other social insurance benefits	D622, S14	13.2%	0.59
(+) Surplus (+) or Deficit (-) of Social Insurance Systems	D61-D62-D622, S14	5.2%	0.63
Broad pension-based treatment (recommended WID)			
(+) Property income (net)	D4, S14	13.2%	0.73
(=) Revenue from securities	D41+D42, S14	8.1%	0.83
(+) Interest (received)	D41, S14	2.2%	0.83
(+) Distributed income of corporations	D42, S14	5.9%	0.83
(+) Dividends	D421, S14	5.8%	0.83
(+) Withdrawals from income of quasi-corporations	D422, S14	0.1%	0.83
(-) Interest (paid)	D41, S14	2.3%	0.39
(+) Reinvested earnings on direct foreign investment	D43, S14	–	–
(+) Other investment income	D44, S14	7.4%	0.53
(+) Investment income attributable to insurance policy holders	D441, S14	1.5%	0.46
(+) Investment income payable on pension entitlements	D442, S14	4.7%	0.46
(+) Investment income attributable to collective investment fund shareholders	D443, S14	1.2%	0.83
(+) Net operating surplus and mixed income	B2n + B3n, S14	7.6%	0.45
(+) Net operating surplus	B2n, S14	7.6%	0.39
(+) Net mixed income	B3n, S14	imputed	0.50
(+) Primary income corporate sector	B5n, S11+S12	5.5%	0.83
(+) Property income (net)	D4, S11+S12	-9.7%	.95
(+) Net operating surplus	B2n, S11+S12	15.3%	0.83
(+) Primary income government sector	B5n, S13	4.5%	0.63
(+) Taxes on production and imports, less subsidies	D2-D3, S13	3.9%	0.63
(+) Property income (net)	D4, S13	0.7%	0.63
(+) Primary income of NPISH sector	B5n, S15	0.2%	0.63

Note: This table reports the composition and distribution of pre-tax national income. Column 1 reports the variable label, column 2 the national accounts code, column 3 the component's average share of net national income, and column 4 the average Gini coefficient across the sample period. Negative income values are truncated at zero.

Table A5: Definition of post-tax disposable income

Variable name	Variable label	SNA code	Micro variable
nninc	(≠) Net national income	B5n, S1	sum
cainc	(=) Post-tax disposable income	-	sum
ptinc	(+) Pre-tax national income	-	Table A3
taxpd	(-) Taxes on production (particularly VAT)	D2-D3, S13	consumption expenditure (HABE)
taxiw	(-) Taxes on income and wealth	D5, S13	sum
taxpy	(-) Taxes on individual or household income excluding holding gains	1D51A	tax calculator (Subsec. 3.6)
taxcy	(-) Taxes on the income or profits of corporations excluding holding gains	1D51B	*y_securitiesdvd_avg* (Subsec. C.2)
taxhg	(-) Other taxes on holding gains n.e.c.	1D51E	as taxpw
taxpw	(-) Current taxes on capital	1D59A	tax calculator (Subsec. 3.6)
taxpo	(-) Poll taxes	1D59B	per capita
taxca	(-) Payments by households for licences	1D59D	mobile wealth
taxoh	(-) Other current taxes n.e.c.	1D59F	per capita
taxih	(-) Capital taxes (inheritance tax)	D.91r, S13	impute (taxpw)
sabic	(+) Social assistance benefits in cash	D623, S14	impute (Subsec. 3.4)

Note: This table shows the macro variables included in post-tax disposable income and their microdata counterparts. The first column reports the variable name used in our dataset. Column 2 reports the variable label, column 3 the national accounts code, and column 4 the micro variable used to distribute the macro aggregate. Detailed descriptions of the micro variables are provided in Appendix B. Entries marked *sum* are aggregated from sub-components; entries marked *none* are not distributed separately.

Table A6: Composition and distribution of post-tax disposable income

Variable label	SNA code	Share NNI	Gini
(≠) Net national income	B5n, S1	100.0%	–
(=) Post-tax disposable income	-	80.8%	0.50
(+) Pre-tax national income	-	100.0%	0.52
(-) Taxes on production (particularly VAT)	D2-D3, S13	3.8%	0.12
(-) Taxes on income and wealth	D5, S13	17.2%	0.59
(-) Taxes on individual or household income excluding holding gains	1D51A	10.7%	0.55
(-) Taxes on the income or profits of corporations excluding holding gains	1D51B	2.5%	0.78
(-) Other taxes on holding gains n.e.c.	1D51E	1.4%	0.64
(-) Current taxes on capital	1D59A	1.9%	0.64
(-) Poll taxes	1D59B	0.0%	0.09
(-) Payments by households for licences	1D59D	0.6%	0.56
(-) Other current taxes n.e.c.	1D59F	0.1%	0.09
(-) Capital taxes (inheritance tax)	D.91r, S13	0.2%	0.55
(+) Social assistance benefits in cash	D623, S14	2.0%	0.37

Note: This table reports the composition and distribution of post-tax disposable income. Column 1 reports the variable label, column 2 the national accounts code, column 3 the component's average share of net national income, and column 4 the average Gini coefficient across years. Negative income values are truncated at zero.

Table A7: Definition of post-tax national income

Variable name	Variable label	SNA code	Micro variable
nninc	(=) Net national income	B5n, S1	sum
psinc	(=) Post-tax national income	-	sum
cainc	(+) Post-tax disposable income	-	Table A5
regov	(+) Remaining government spending	P3, S13	Subsection 3.6
ingov	(+) Individual consumption expenditure	P31, S13	Subsection 3.6
cogov	(+) Collective consumption expenditure	P32, S13	Subsection 3.6
taxih	(+) Capital taxes (inheritance tax)	D.91r, S13	Subsection 3.6
sugov	(+) Total government surplus	-	(Chancel et al., 2025)
sudef	(+) Government surplus/deficit, net (as in DINA guidelines; see Tab. 2.8)	B8n+D7, S13	(Chancel et al., 2025)
dedef	(+) Delta in government surplus from broad pension treatment	-D51-(D62-D623), S13	(Chancel et al., 2025)
propg	(+) Government's property income	D.4n, S13	(Chancel et al., 2025)

Note: This table shows all macro variables included in the post-tax national income and its microdata correspondents. The first column defines the variable name used in our dataset. Column 2 reports the variable label, column 3 the National Accounts code and column 4 the corresponding micro variable we used to distribute the macro total. Detailed descriptions of the micro variables can be found in Appendix B. *sum* implies it was simply aggregated by sub-components, *none* indicates that we do not observe this component

Table A8: Composition and distribution of post-tax national income

Variable label	SNA code	Share NNI	Gini
(=) Net national income	B5n, S1	100%	–
(=) Post-tax national income	-	100%	0.49
(+) Post-tax disposable income	-	80.8%	0.50
(+) Remaining government spending	P3, S13	15.0%	0.39
(+) Individual consumption expenditure	P31, S13	7.7%	0.61
(+) Collective consumption expenditure	P32, S13	7.3%	0.61
(+) Capital taxes (inheritance tax)	D.91r, S13	0.2%	0.55
(+) Total government surplus	-	4%	0.63
(+) Government surplus/deficit, net (as in DINA guidelines; see Tab. 2.8)	B8n+D7, S13	2.3%	0.64
(+) Delta in government surplus from broad pension treatment	-D51-(D62-D623), S13	2.5%	0.64
(+) Government's property income	D.4n, S13	0.8%	0.64

Note: This table shows all macro variables included in the post-tax national income. The first reports the variable label, column 2 the National Accounts code, column 3 the share in net national income, and column 4 the average Gini coefficient across years. Negative income values are truncated at zero.

Table A9: Definition of private household wealth

Variable name	Variable label	SNA code	Micro Variable
pweal	(=) Net wealth of private households	AN, S14	sum
pwhou	(+) National housing assets	-	*w_realestate_adj_avg*
	(+) Dwellings	AN111, S14	none
	(+) Land underlying dwellings	AN21111, S14	none
	(+) National business and other non-financial assets	-	none
	(+) Agricultural land	AN2112, S14	none
	(+) Other domestic capital	-	*WID*
pwfin	(+) Financial assets	AF, S14	*w_securities_avg*
pwfiw	(+) Currency, deposits, bonds and loans	AF2+AF3+AF4+AF7+AF8, S14	none
pweqi	(+) Equities and fund shares	AF5, S14	none
pwpen	(+) Pension funds and life insurance	AF6, S14	impute
pwdeb	(-) Liabilities	AF, S14	*w_debt_total_avg*

Note: The table reports the components used to construct private household wealth. SNA codes refer to the System of National Accounts asset categories for the household sector (S14). Micro variables indicate the corresponding household-level wealth concepts used in the microdata; "none" denotes components allocated without a directly observed micro variable, and "impute" denotes imputed pension funds and life insurance wealth.

Table A10: Composition and distribution of private household wealth

Variable label	SNA code	Share Total Wealth	Gini
(=) Net wealth of private households	AN, S14	100.0%	0.76
(+) National housing assets	-	39.8%	0.68
(+) Dwellings	AN111, S14	-	-
(+) Land underlying dwellings	AN21111, S14	-	-
(+) National business and other non-financial assets	-	-	-
(+) Agricultural land	AN2112, S14	-	-
(+) Other domestic capital	-	-	-
(+) Financial assets	AF, S14	43.3%	0.78
(+) Currency, deposits, bonds and loans	AF2+AF3+AF4+AF7+AF8, S14	22.0%	0.78
(+) Equities and fund shares	AF5, S14	19.3%	0.78
(+) Pension funds and life insurance	AF6, S14	24.4%	0.73
(-) Liabilities	AF, S14	10.0%	0.60

Note: The table reports the composition and distribution of private household wealth. Shares are expressed as percentages of total net private household wealth. Gini coefficients measure inequality in the distribution of each wealth component across households. Negative wealth values are truncated at zero. Dashes indicate components for which no separate share or Gini coefficient is reported.

A.2 Adjustments for cross-border dividend flows

Constructing DINA for Switzerland requires an adjustment to the national accounts to ensure a consistent measurement of *domestic* capital income. Switzerland is a well-known destination for international profit shifting by multinational enterprises (MNEs), which have historically benefited from preferential tax regimes and comparatively low corporate income tax rates (see, e.g., Tørsløv et al. 2023 and Guvenen et al. 2022 for evidence on profit shifting). As a consequence, the Swiss national accounts record exceptionally large cross-border dividend flows. If not properly accounted for, these flows mechanically distort the measurement of domestic capital income and the domestic capital share, thereby affecting the distribution of income when national accounts aggregates are allocated to individuals.

The puzzle: a sharp decline in the domestic capital income share. We construct the labor and capital shares following the definitions proposed in Chancel et al. (2025). Figure A1 shows that, using the unadjusted national accounts, the capital income share falls sharply—from about 27% in 2003/2010 to 17% in 2020. A ten-percentage-point decline within a decade appears implausibly large, especially given that capital shares have generally been rising—or at least remaining broadly stable in recent years—across most advanced economies (see Karabarbounis (2024) for an excellent overview). When these unadjusted national accounts aggregates are used to construct DINA, the sharply declining capital share mechanically implies a substantial decline in top income shares, as capital income is highly concentrated at the top of the income distribution. Figure A2 illustrates this implication for the top 1% income share, which falls markedly over the same period. Such a large reduction in income inequality is inconsistent with the evolution observed in tax data and therefore suggests a measurement issue at the macro level.

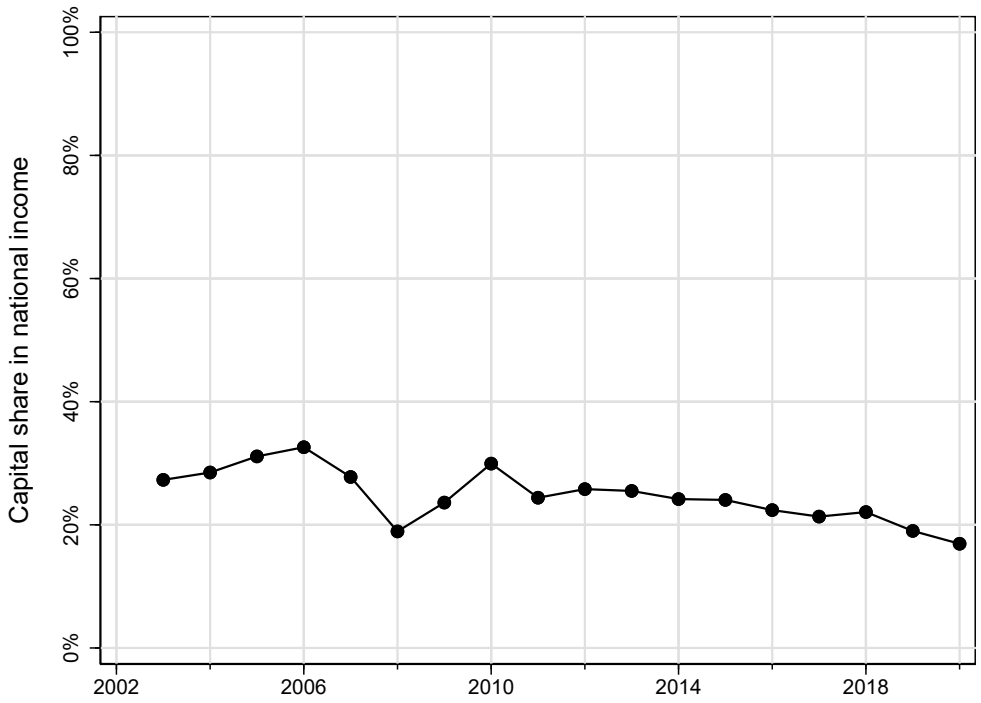


Figure A1: Capital income share (unadjusted)

Note: This figure shows a sharp decline in the capital income share, from 27% to 17% between 2003/2010 and 2020, using unadjusted national accounts data published by the Swiss FSO.

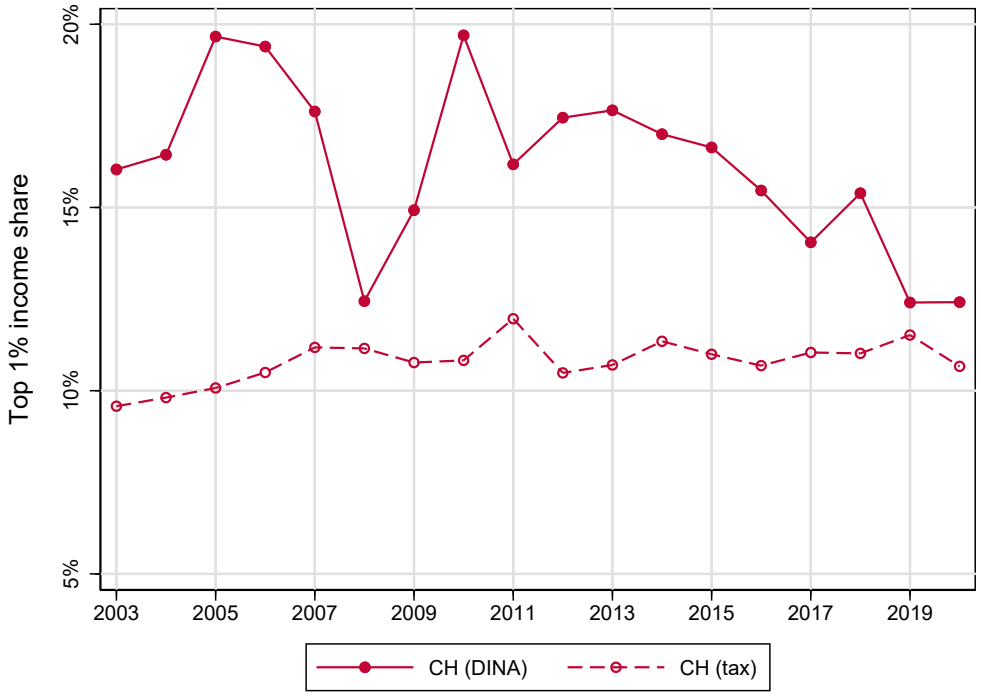


Figure A2: Top 1% income share (unadjusted)

Note: This figure shows the DINA top 1% income share constructed using unadjusted national accounts data alongside top 1% income share estimates based on federal tax data from the FTA; the latter estimates are taken from the IWP.

The mechanism: a surge in international dividend outflows. The sharp decline in the capital income share is closely linked to a pronounced decline in retained earnings recorded for the corporate sector (S11+S12) in the Swiss national accounts. Figure A3 shows that retained earnings fall from 11.1% to –3.9% of national income between 2003 and 2020 – a decline of roughly 15 percentage points. As can be seen from Figure A3, the decline in retained earnings was not driven by lower firm operating surplus, but by the fact that firms paid out more than they earned (which is puzzling and not a pattern typically observed internationally). This pattern is in fact difficult to reconcile with firm-level evidence on corporate payout behavior (discussed below).

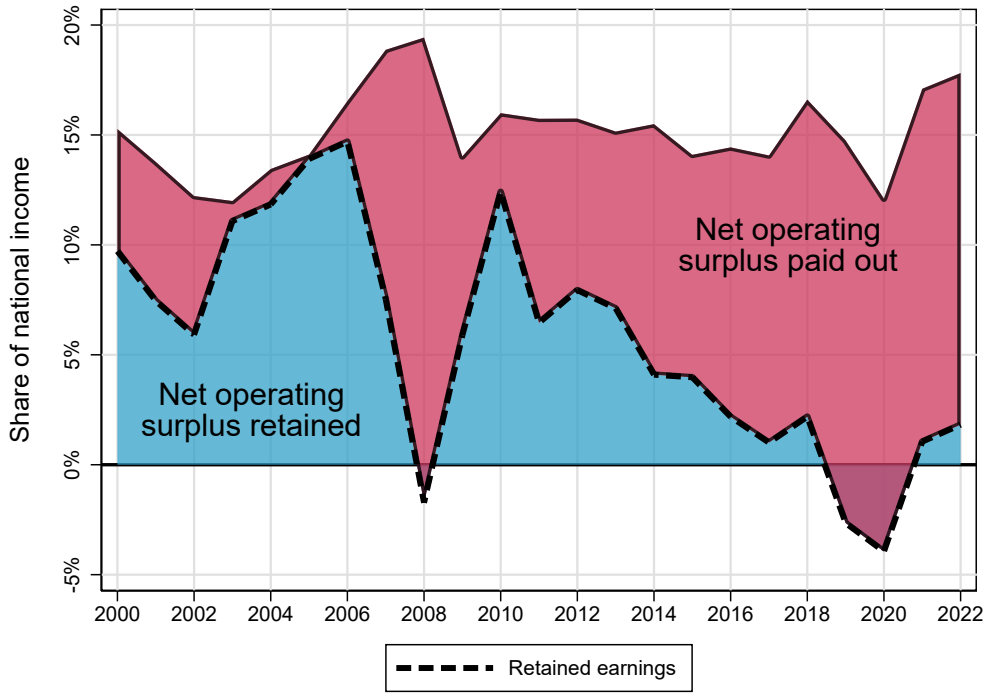


Figure A3: Retained earnings (unadjusted)

Note: This figure documents the evolution of retained earnings (net operating surplus plus net property income, where net property income is defined as receipts minus payments) in the corporate sector (S11+S12) based on unadjusted national accounts data.

The decline in retained earnings reflects a large increase in recorded dividend payouts. Figure A4 shows that dividend payments rise by 11.8 percentage points of national income between 2003 and 2020. In principle, higher dividend payouts should not substantially affect the measurement of domestic capital income. When firms distribute more profits as dividends rather than retaining them, these payments typically accrue to the household sector (S14) and therefore remain part of domestic capital income and should not alter the capital share.

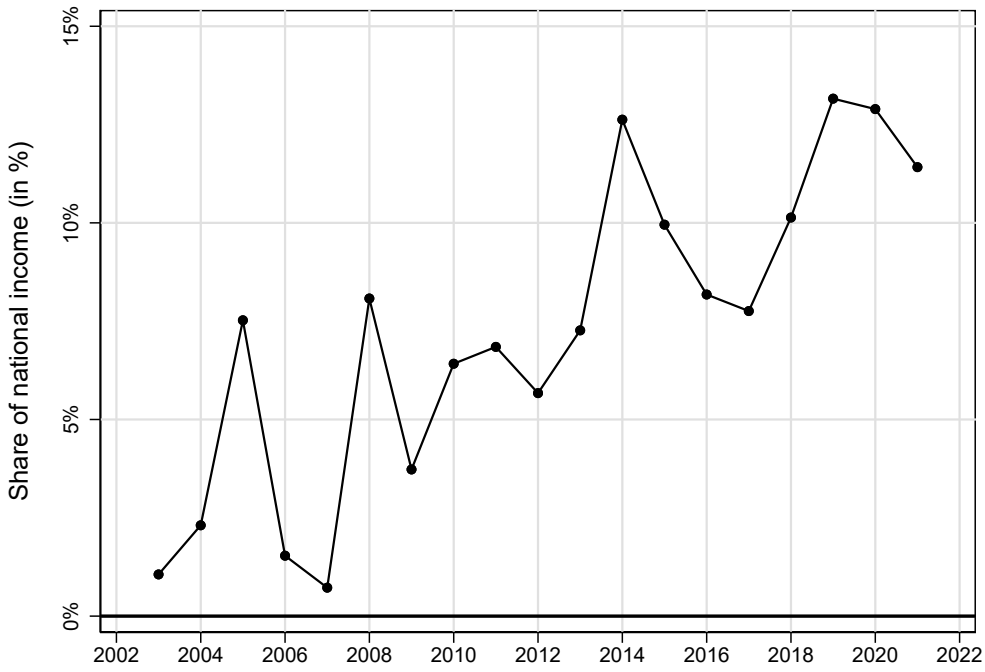


Figure A4: Dividend payouts (unadjusted)

Note: This figure shows dividend payouts of the corporate sector (S11+S12) based on unadjusted national accounts data between 2003 and 2020.

In the Swiss national accounts we observe, however, that the increase in dividend payments largely reflects net cross-border outflows. Figure A5 decomposes dividend payouts by recipient sector. Of the 11.8 pp increase in dividend payments, 8.2 pp accrue to the rest of the world (RoW; S2), while only a much smaller fraction accrues to domestic households (S14) or the government sector (S13). As a result, these rising cross-border dividend outflows mechanically reduce retained earnings recorded in the domestic corporate sector and thereby depress the measured domestic capital income share. In fact, of the 10 pp decline in the capital share, 8.2 pp (or 82%) are explained by the rise in net cross-border dividend outflows.

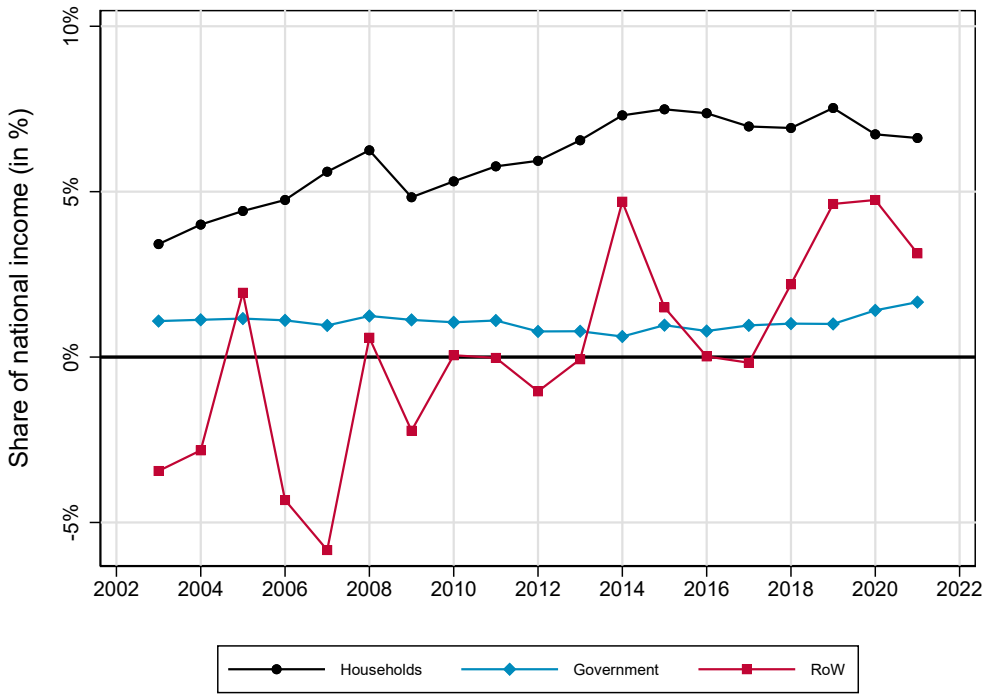


Figure A5: Dividend payouts by recipient sector (unadjusted)

Note: The figure decomposes net dividend payouts of the corporate sector (S11+S12) by recipient sector—households (S.14), government (S.13), and the rest of the world (S.2)—between 2003 and 2020 using unadjusted national accounts data.

Supporting evidence from firm-level data. The interpretation that the increase in net cross-border dividend outflows reflects a profit-shifting anomaly rather than genuine changes in corporate performance and payout behavior is supported by firm-level evidence from other data sources. Figure A6 compares dividend payouts recorded in the Swiss national accounts with dividend payments of large Swiss firms covered by Compustat. Prior to 2012, the levels of dividend payments as a share of national income are broadly similar (although the Compustat series is less volatile). After 2012, however, the two series diverge markedly. By 2020, the gap in dividend payments between the two data sources reaches approximately 6.8 pp of national income.

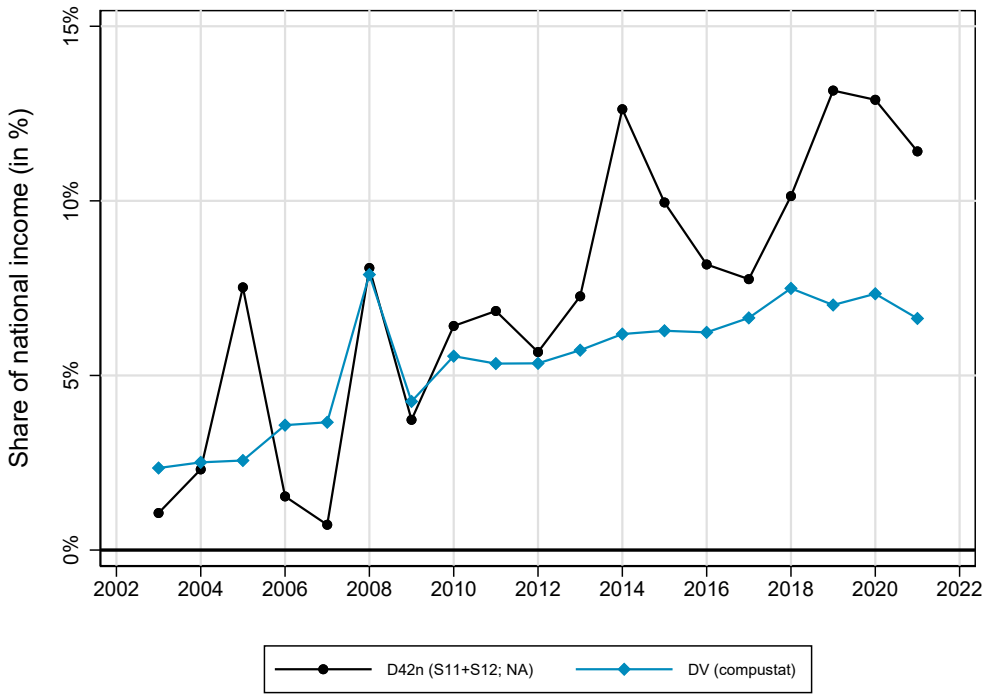


Figure A6: Dividend payments as a share of national income: National accounts vs. Compustat

Note: The figure compares dividend payouts recorded in the Swiss national accounts with dividend payments reported by large Swiss firms in Compustat, both expressed as a share of national income.

Figure A7 plots the difference between dividend payments recorded in the national accounts and in Compustat (the national-accounts series (blue) minus the Compustat series (black) in Figure A6) alongside the evolution of net cross-border dividend outflows. As the figure shows, nearly the entire divergence is driven by dividend payments to the rest of the world. This pattern suggests that cross-border dividend flows—compiled by the SNB and incorporated into the national accounts by the FSO—may be affected by Switzerland's role as a hub for multinational profit shifting and therefore do not accurately capture the evolution of domestic capital income.

In correspondence with the team responsible for compiling the Swiss national accounts, the FSO confirmed that the dynamics of cross-border dividend flows described here warrant further scrutiny. The FSO indicated that these issues will be examined as part of the next benchmark revision of the national accounts. Future versions of the Swiss national accounts may therefore incorporate revisions related to the adjustment we propose below.

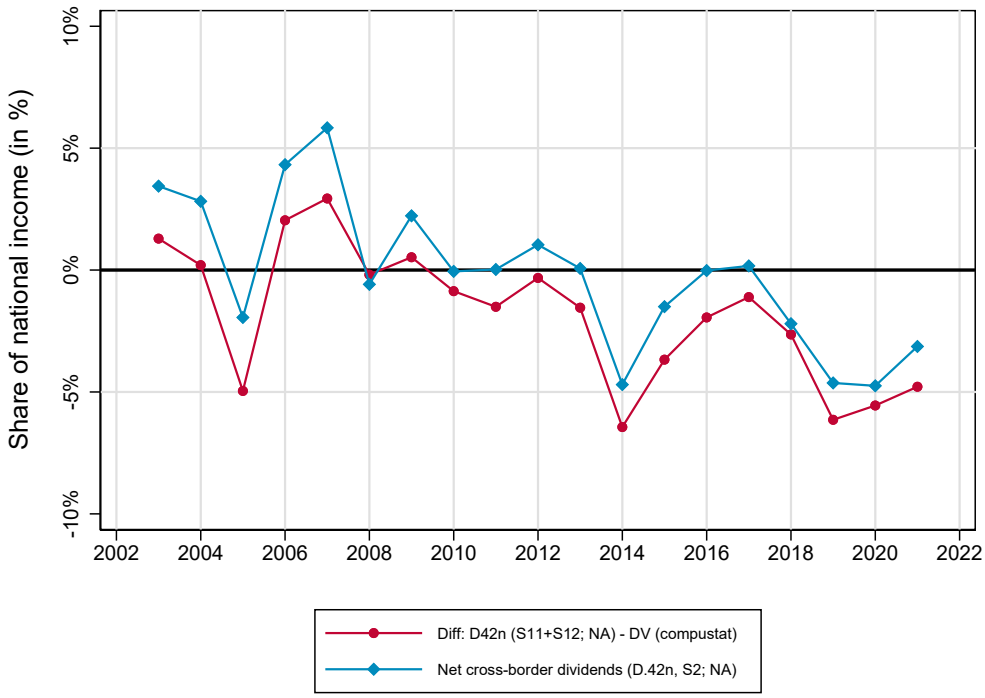


Figure A7: Dividend gap: National accounts vs. Compustat and cross-border dividend outflows

Note: The figure plots the difference between dividend payments recorded in the Swiss national accounts and dividend payments reported by Swiss firms in Compustat, together with net dividend outflows to the RoW.

Adjustment. To address this measurement issue, we adjust the official national accounts by excluding dividend outflows to the RoW from the measurement of domestic corporate retained earnings (S11+S12). Conceptually, this adjustment treats the observed surge in dividend outflows to the RoW as reflecting accounting flows associated with multinational profit shifting rather than genuine changes in the domestic distribution of capital income. Removing these flows increases retained earnings and restores a more economically plausible evolution of the capital income share.

Result. Figure A8 shows the result of this adjustment and presents the corrected capital income share. After the adjustment, the capital share declines only moderately—from 24.6% to 20.8% between 2003 and 2020—corresponding to a decline of 3.8 pp rather than the 10 pp decline implied by the unadjusted national accounts. This yields a substantially more stable time path that is consistent with international evidence on the evolution of capital income shares (Karabarbounis, 2024). As documented throughout the main text, the adjustment also results in a more plausible evolution of inequality trends, which are more consistent with evidence

from other data sources; compare Figure A2 to Figure D6b.

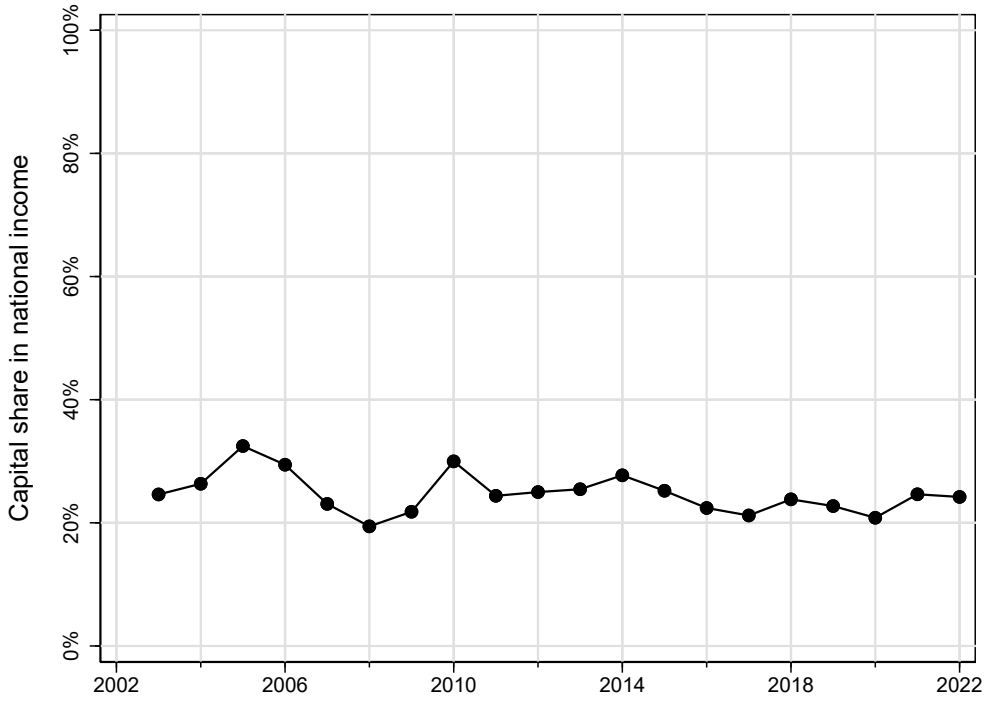


Figure A8: Corrected capital income share

Note: After adjustment, the capital share declines from 24.6% to 20.8% between 2003 and 2020.

A.3 Demographics

Demographic data are collected from Federal Statistical Office and include male and female population shares in each age percentile.[41]

A.4 Consumer price index (CPI)

We use Swiss CPI measures from the Federal Statistical Office to adjust values to 2020 prices.[42]

A.5 Tabulated income data

For the weighting exercise in Subsection C.1, we rely on annual tabulated income statistics at the cantonal level for different income groups. We received these data from the Swiss Federal Tax Administration upon request.[43]

[41] Data available at https://www.pxweb.bfs.admin.ch/pxweb/de/px-x-0102030000_101/-/px-x-0102030000_101.px/, last downloaded in May 2025.
[42] Data available at https://www.bfs.admin.ch/bfs/en/home/statistics/prices/consumer-price-index/detailresultate.assetdetail.35567120.html, last downloaded in May 2025.
[43] Contact: walter.flueckiger@estv.admin.ch

B Data Appendix: Microdata

This appendix describes the microdata used to distribute macroeconomic aggregates. It is structured around the micro variables used in the distribution procedure.

B.1 Tax data Canton of Bern

Most micro variables are obtained from detailed tax return data covering the full taxpayer population of the canton of Bern. Appendix C.1 describes how we reweight the Bern microdata to obtain a dataset representative of the Swiss population.

In Switzerland, married taxpayers must file jointly. However, in the Bern tax data, many variables are available at the individual level, and individuals can be followed over time even when their civil status changes. We therefore construct a panel in which the unit of observation is the individual. Wealth and capital income variables are available only at the tax-unit level; for married couples, we split these variables equally between spouses. The suffix *_p1* indicates that a variable is observed at the individual level, while the suffix *_avg* indicates that a tax-unit-level variable, or one of its components, has been split equally between spouses.

B.1.1 Net income from employment (y_emp_net_p1)

Used to distribute: this variable is not used directly to distribute any macro component.

The tax data of the canton of Bern contain the following variables on income from employment, net of all social contributions. We observe these variables separately for each individual, even if they are married.

- *he_p1*: Income from main occupation(s)

  We only observe the total amount for the entire year, even if someone has several main occupations over the year, e.g., due to a job change or due to multiple part-time employments.
- *ne_p1*: Income from secondary occupation(s)

  Secondary employment can only exist in addition to the primary employment, with another employer, in another occupation (broadly defined), and must generate only a modest additional income. All of the above conditions must be met, otherwise multiple small-scale employments fall under the main occupation.
- *es_p1*: Compensation not included in net salary

These are benefits received from the employer not already listed in the Sections 2.1, 2.3, and 3 to 10 of the salary statement issued by the employer ("Lohnausweis").

Examples include benefits in kind (housing, board, lodging, etc.), tips, cash contributions for lunch at the place of work, etc. In addition, child allowances must also be declared here if they were not paid by the employer but by the compensation fund.

These income components are typically not subject to social contributions.

- *sg_p1*: Per diem and attendance allowances

  These are typically board of directors' remuneration, or income from a public office that includes attendance fees, e.g., municipal councillor, parish councillor, member of a commission, etc.

  These income components are not always or only partially subject to social contributions. As we lack detailed information, we assume that 80% of the amount is subject to social contributions.

B.1.2 Social contributions of employers/employees (ssc_emp_p1)

Used to distribute

ecaho (Employers' actual social contributions)

easho (Employers' actual social contributions)

To compute gross wages and salaries of employees, and the employers' social contributions, we follow the statutory frameworks separately for the variables *he_p1*, *ne_p1*, and *sg_p1*. **ssc_emp_p1** is then the sum of all social contributions paid on these incomes.

Assumption: We only observe the total annual income from employment in the tax data. We therefore treat each of the variables above as if they were one job. In practice, each of the variables above could consist of several employments throughout the year, in which case capped contributions (ALV) or contributions applicable above a certain income level only (BVG) may be estimated imprecisely.

Assumption: For simplicity, we assume that all the contributions are split equally between employers and employees, although in practice employers can choose to cover more than 50% of the 2nd pillar pension contributions.

Social contributions include the following five components:

1. Social security (AHV/IV/EO)

- These are contributions to the public PAYG pension system (1st pillar, AHV), to the disability insurance (IV), and to the loss of earnings compensation scheme (EO), which covers the salary during military service and paid parental leave.
- The rates are flat and apply to the entire gross salary.
  Assumption: Retirees do not have to pay AHV/IV/EO on the first 16,800 CHF earned per year. We assume that everyone beyond legal retirement age makes use of this income exemption and implement this exemption accordingly.

2. Non-work-accident insurance (NBUV)

   - Employees who work at least 8h per week are insured against non-work accidents through their employer. These contributions do not have to be split and hence are typically paid by the employee.
   - Rates vary by employer and risk profile of the workforce, but no official/legal/statutory rates exist.
     Assumption: We assume a uniform rate of 1.3%, which according to information from the Federal Office of Public Health (BAG) corresponds to the aggregate average rate. We further assume that the insurance premium is paid up to the salary insured under the unemployment insurance scheme, and that the amount is paid entirely by the employee.

3. Work-accident insurance (BUV)

   - Employers must insure their workforce against work-related accidents. These contributions are covered fully by the employer.
   - Rates vary by employer and risk profile of the workforce, but no official/legal/statutory rates exist.
     Assumption: We assume a uniform rate of 0.67%, which according to information from the Federal Office of Public Health (BAG) corresponds to the aggregate average rate. We further assume that the insurance premium is paid up to the salary insured under the unemployment insurance scheme, and that the amount is paid entirely by the employer.

Table B1: Mandatory social insurance contribution rates

Year	AHV (%)	IV (%)	EO (%)	NBUV (%)	BUV (%)
2002	8.4	1.4	0.30	1.3	0.67
2003	8.4	1.4	0.30	1.3	0.67
2004	8.4	1.4	0.30	1.3	0.67
2005	8.4	1.4	0.30	1.3	0.67
2006	8.4	1.4	0.30	1.3	0.67
2007	8.4	1.4	0.30	1.3	0.67
2008	8.4	1.4	0.30	1.3	0.67
2009	8.4	1.4	0.30	1.3	0.67
2010	8.4	1.4	0.30	1.3	0.67
2011	8.4	1.4	**0.50**	1.3	0.67
2012	8.4	1.4	0.50	1.3	0.67
2013	8.4	1.4	0.50	1.3	0.67
2014	8.4	1.4	0.50	1.3	0.67
2015	8.4	1.4	0.50	1.3	0.67
2016	8.4	1.4	**0.45**	1.3	0.67
2017	8.4	1.4	0.45	1.3	0.67
2018	8.4	1.4	0.45	1.3	0.67
2019	8.4	1.4	0.45	1.3	0.67
2020	**8.7**	1.4	0.45	1.3	0.67
2021	8.7	1.4	**0.50**	1.3	0.67
2022	8.7	1.4	0.50	1.3	0.67
2023	8.7	1.4	0.50	1.3	0.67
2024	8.7	1.4	0.50	1.3	0.67

Note: The table lists mandatory contribution rates for the indicated social insurance schemes. Changes relative to the previous year are marked in bold.

4. Unemployment insurance (ALV)

   - Unemployment insurance contributions are a fixed percentage of the gross salary, up to a cap. In some years, there are two gross income brackets, with a reduced rate in the second bracket. In some years, the top rate only applies up to a cap, in others, the top rate applies to the entire income above the standard cap.
   - Employees beyond the legal retirement age are exempt from unemployment insurance contributions.

Table B2: Unemployment insurance contribution rates

Year	ALV (%)	ALV cap (CHF)	ALV top rate (%)	ALV top-rate cap (CHF)
2002	3.0	106,800	2.0	267,000
2003	**2.5**	106,800	2.0	267,000
2004	**2.0**	106,800	**0.0**	**–**
2005	2.0	106,800	0.0	–
2006	2.0	106,800	0.0	–
2007	2.0	106,800	0.0	–
2008	2.0	**126,000**	0.0	–
2009	2.0	126,000	0.0	–
2010	2.0	126,000	0.0	–
2011	**2.2**	126,000	**1.0**	**315,000**
2012	2.2	126,000	1.0	315,000
2013	2.2	126,000	1.0	315,000
2014	2.2	126,000	1.0	**–**
2015	2.2	126,000	1.0	–
2016	2.2	**148,200**	1.0	–
2017	2.2	148,200	1.0	–
2018	2.2	148,200	1.0	–
2019	2.2	148,200	1.0	–
2020	2.2	148,200	1.0	–
2021	2.2	148,200	1.0	–
2022	2.2	148,200	1.0	–
2023	2.2	148,200	1.0	–
2024	2.2	148,200	**0.0**	–

Note: The table lists mandatory contribution rates for unemployment insurance. Changes relative to the previous year are marked in bold.

5. Occupational pension (BVG)

   - Occupational pension contributions (which can be either defined benefit plans or defined contribution plans) are mandatory for incomes above a defined annual income ("Eintrittsschwelle").

     Assumption: We assume that those with incomes below the entry level are not subject

to any contributions, although employers may choose to offer the plans to employees with annual salary below the threshold, e.g. those working part-time. However, we do not observe this.

- Contributions apply only on incomes above a threshold ("Koordinationsabzug")
- Contributions are mandatory up to a cap. This cap is rather low (less than 60% of the wage insured under the unemployment insurance), and contributions are made well beyond the cap (but contributions beyond the mandatory legal framework may carry less interest and are annuitized at lower rates upon retirement). In particular for high earners, there are executive pension plans with even higher contribution rates, even though they are typically still capped.

  Assumption: We cap the contributions to occupational pension plans at 500,000 CHF gross income. We know that caps are used, but we have no reliable information about how high these caps are on average. We choose a rather high cap, as we always use the minimum contributions, even though we know the contributions in the executive plans can be as high as 25% (compared to the highest minimum rate of 18% defined by law).
- Minimum contribution rates are defined by law. They increase with age (ranging from 7% to 18%). Employers can choose higher total contribution rates, but in any case, the employer must cover at least half of the total contribution.

  Assumption: We apply the mandatory minimum, age-dependent rates. This approach will underestimate the amount of contributions, if employers and employees contribute more than the minimum (note that this is typically not a choice an employee can make, but which the employer can decide to do for all its staff or certain categories of the staff). It seems that with decreasing annuitization rates and a decade with interest rates of safe assets hovering around zero, employers' and employees' way to ensure they reach a certain contribution level has been to increase contribution rates beyond the statutory minima.
- Risk insurance: The occupational pension scheme also insures the risks of disability and death, resulting in disability or widow/widower pensions, respectively. These rates are not specified in the law.

  Assumption: We assume that contributions for risk and management of the pension

fund together amount to 2% of the insured salary, as suggested by SwissStaffing, which offers occupational pension funds for temporary employment agencies https://www.swissstaffing-bvg.ch/de/arbeitgeber/beitragssaetze.php. We do not apply these 2% for workers beyond legal retirement age, as they do not pay risk insurance.

- For workers beyond legal retirement age, conditions in the second pillar vary by employer. We abstain from making assumptions on i) who still contributes to a second pillar plan and who doesn't, ii) at which rates, or iii) whether the "Koordinationsabzug" is still applied. We simply lack information on what is the most common practice in these regards. We therefore use the same conditions as for younger cohorts. Because the BVG contribution rates increase with age, however, we assume a reduced rate for workers beyond retirement age of 10%. We also take into account that no further contributions are possible beyond age 70.

Table B3: Occupational pension scheme income parameters

Year	Coordination deduction (CHF)	Entry threshold (CHF)	Minimum insured salary (CHF)
2002	24,720	24,720	3,090
2003	**25,320**	**25,320**	**3,165**
2004	25,320	25,320	3,165
2005	**22,575**	**19,350**	**3,225**
2006	22,575	19,350	3,225
2007	**23,205**	**19,890**	**3,315**
2008	23,205	19,890	3,315
2009	**23,940**	**20,520**	**3,420**
2010	23,940	20,520	3,420
2011	**24,360**	**20,880**	**3,480**
2012	24,360	20,880	3,480
2013	**24,570**	**21,060**	**3,510**
2014	24,570	21,060	3,510
2015	**24,675**	**21,150**	**3,525**
2016	24,675	21,150	3,525
2017	24,675	21,150	3,525
2018	24,675	21,150	3,525
2019	**24,885**	**21,330**	**3,555**
2020	24,885	21,330	3,555
2021	**25,095**	**21,510**	**3,585**
2022	25,095	21,510	3,585
2023	**25,725**	**22,050**	**3,675**
2024	25,725	22,050	3,675

Note: The table lists the income parameters for the occupational pension scheme. Changes relative to the previous year are marked in bold.

Table B4: BVG contribution rates by age group

Age group	**BVG (%)**
25–34	7.0
35–44	10.0
45–54	15.0
55–65 (men)	18.0
55–63 (women, 2001–2004)	18.0
55–64 (women, 2005 onward)	18.0
65–70 (men)	10.0*
63/64–70 (women)	10.0*
Risk and administration contribution	2.0

Note: The table lists contribution rates for the occupational pension scheme by age. The age groups and rates have remained constant, except for the increase in the statutory retirement age for women in 2005. Before age 25, employees contribute only to the risk scheme, which insures disability and death.
* We assume a lower contribution rate for workers beyond the legal retirement age.

Implications of our assumptions: With this approach where we use the legal mandatory minimum contributions, we are under-estimating the social contributions that go into the second pillar pension funds and hence the gross wages and salaries (other contributions cannot be more generous than the law). We are also under-estimating the social contributions paid by the employers, as they can offer to cover more than half of the contributions.

Another minor source of uncertainty are the contributions for accident insurance. In practice, they vary by sector and firm (some firms can choose the private insurer themselves, others must be insured with the public Swiss accident insurance SUVA). Since this contribution is small and because our approach will err on both sides, we do not think that this has a large impact. Similarly, the contributions for risk and management are not defined by law. But they are small, and again our approach will likely err on both sides.

Empirical social contributions and gross wages

An alternative approach to obtain the social contributions associated with a reported net labor income would be to use information from the wage structure survey (Lohnstrukturerhebung LSE). This is a biennial survey where sampled employers report their employees' wages in October, plus annual extra pay and bonuses. The sample has been increasing over time and includes 1.1–2.3 million wages (in 2002 and 2022, respectively). Since 2002, large firms with more than 50 employees are always in the sample, smaller firms with 3 or more employees are included according to a random sample. Sampled employers must participate. Importantly, the

employers report gross wages as well as the sum of social contributions and the corresponding net wage.

We proceeded as follows. For each wave of the LSE, we took the median social contributions by gender, age group, and income group. Since some of the resulting cells are sparsely populated in the LSE data (e.g., young women in a high-income category), we manually pooled some categories before computing the cell median. We used the median rather than the average within each cell, as the average social contributions can be affected by outliers.

However, this approach led to very unstable and sometimes unreasonable results. We assume that this must be due to changes in the sampling method over time. To avoid introducing errors in our computation of social contributions and gross wages through these survey data, our preferred approach relies on statutory contribution rates.

B.1.3 Gross income from employment (y_emp_p1)

Used to distribute

wsiho (Wages and salaries)

insho (Investment income attributable to insurance policyholder)

penho (Investment income payable on pension entitlements)

This variable is defined as: $y\_emp\_p1 = y\_emp\_net\_p1 + ssc\_emp\_p1$.

B.1.4 Income from securities (y_securitiesdvd_avg)

Used to distribute

sciho (Revenue from securities)

cinho (Investment income attributable to collective investment fund shareholders)

prico (Primary income corporate sector)

taxcy (Taxes on the income or profits of corporations excluding holding gains)

The tax data contain the following variables on financial incomes, from which we construct a proxy for income from securities.

- *wsert*: Investment income

  This variable is the sum of all kinds of financial income, including interest earned on checking or savings accounts and bonds; dividends; fund distributions (income from units in collective investment schemes) and reinvested fund income; bonus/free shares

("Gratisaktien") or bonus/free nominal value increases ("Gratisnennwerterhöhungen")—however, to the extent that the payment is made at the expense of reserves from capital contributions, bonus shares or bonus nominal value increases are not subject to income tax.

Realized capital gains as well as repayments of nominal value and distributions from reserves from capital contributions (repayment of contributions, premiums and subsidies from holders of participation rights) are not considered investment income.

- *wseink_betert*: Privileged dividend income

  Income from shareholdings in corporations or cooperatives is only 50% taxable if the shareholding is at least 10%. This privileged dividend taxation was introduced in the canton of Bern in 2008, and nationwide in 2009.

Our variable of interest **y_securitiesdvd_avg** is the sum of *wsert* and 1/2 of *wseink_betert*, to account for the missing part of dividends that benefit from privileged dividend taxation. As these variables are only available at the taxpayer level, for married couples, we split the value equally between spouses.

B.1.5 Debt service (d_interest_avg)

Used to distribute

ipaho (Interest paid)

The tax data contain the following variables on debt service:

- *abz_hypo*: Interest on debt

  This is the sum of all interest paid on mortgages, credits, and loans, which are all deductible from taxable income.

- *brz*: Building leasehold interest

  Building lease interest can be deducted from taxable income.

Our variable of interest **d_interest_avg** is the sum of *abz_hypo* and *brz*. As these variables are only available at the taxpayer level, for married couples, we split the value equally between spouses.

B.1.6 Real estate (w_realestate_adj_avg)

Used to distribute

nsrho (Net operating surplus and mixed income)

pwhou (Private housing assets)

- *verm_lieg*: Sum of all privately held real estate

  For Swiss properties, this corresponds to the official value for tax purposes, which has two shortcomings:

  i) The official value is significantly below the market value. The Federal Supreme Court has stated in several rulings that the value used for tax purposes should be at least 60 to 70 percent of the market value. For real estate abroad, the canton of Bern indeed values the property at 70% of the purchase price. While the extent of under-valuation seems to hold on average, we cannot pin down the undervaluation at the individual level. We have therefore not attempted to adjust the values to market values.

  ii) The official value is only adjusted at irregular intervals. In Bern, a comprehensive valuation of all properties in the canton took place in 1999 and 2020. In order to take into account the price development between 1999 and 2020, we inflate the property prices with a real estate price index for the canton of Bern.[44] Unfortunately, we do not have more granular data to take into account the different development by region or municipality within the canton, as we also do not know the exact location of the properties.

Assumptions/Implications: Point i) should not affect our estimates, assuming that the extent of the undervaluation is not systematically correlated with the market values of the property. To the extent that prices rose more in wealthier regions, such as urban centers, than in poorer or more remote regions, we underestimate the degree of inequality in real estate wealth due to point ii).

Our variable of interest **w_realestate_adj_avg** is based on *verm_lieg*, adjusted for average annual price increases in the canton of Bern as described above. As this variable is only available at the taxpayer level, for married couples, we split the value equally between spouses.

B.1.7 Net income from self-employment (y_selfemp_net_avg)

Used to distribute: this variable is not used directly to distribute any macro component

[44] Data source: Wuest+Partner.

For self-employed, we proceed similarly as described above for employees, but taking into account the statutory provisions that apply in any given year for self-employed. We observe net self-employment income at the taxpayer level for the following income categories:

- *erfolg_s*: Income from self-employed activity

  This is personal net income from sole proprietorship (after social contributions and before taxes).

- *kk_ertrag*: Income from general and limited partnerships

  This is personal net income from general, limited, or simple partnerships (after social contributions and before taxes).

  General Partnership (Kollektivgesellschaft): A legal form in which two or more individuals operate a business together, typically used for long-term business ventures. Partners are jointly and personally liable for the company's obligations.

  Limited Partnership (Kommanditgesellschaft): Involves at least one general partner with unlimited liability and one or more limited partners whose liability is restricted to their capital contribution. The general partner manages the business, while the limited partners are more passive investors. Partners are personally liable (limited).

  Simple Partnership (Einfache Gesellschaft): A very informal structure, used when two or more individuals come together for a specific goal, like a one-off project (typically temporary, smaller-scale ventures). Partners are personally liable, and it is not a separate legal entity.

- *bg_ertrag*: Income from construction company or consortia

  Construction Company (Baugesellschaft): A legal entity formed specifically for construction projects. It can take various legal forms, such as a corporation, a partnership, or even a consortium. The primary purpose is the execution of a construction project, and it is often dissolved after the project's completion.

  Consortium (Konsortium): A consortium is a temporary alliance or agreement between two or more parties to work together on a specific project or venture. Each party remains independent, but they share resources and expertise for the duration of the project. Commonly used in large-scale infrastructure projects like construction, where companies pool resources but do not create a new legal entity. Liability is typically limited to each party's contribution, unless otherwise agreed.

- *erfolg_l*: Income from agricultural activity

B.1.8 Gross income from self-employment (y_selfemp_avg)

Used to distribute

nmxho (Net mixed income)

This variable is defined as: $y\_selfemp\_avg = y\_selfemp\_net\_avg + ssc\_selfemp\_avg$. As this variable is only available at the taxpayer level, for married couples, we split the value equally between spouses.

B.1.9 Other social insurance benefits (dina_D622_avg)

Used to distribute

sboho (Other social insurance benefits)

In the SNA, D.622 corresponds to benefits payable by social insurance schemes, other than S.1314, namely:

1. Allowances and pensions (Pflegeleistungen, Kostenvergütungen, Taggelder, Renten und Kapitalleistungen inkl. Teuerungszulagen, abzüglich Kostenbeteiligung der Versicherten) paid by private accident insurers and health insurers.
2. Benefits paid for collective insurance (health, disability, accident, life)
3. The part of wages and salaries that continues to be paid during periods of absence from work as a result of ill health, accident, maternity, etc. and which is not covered by an insurance enterprise; plus pension benefits paid directly by the employer (general government S.13) to former magistrates, federal, cantonal and communal council members (without involving an autonomous pension fund). This amount corresponds to D.122.
4. 2nd Pillar benefits (annuities and capital benefits, without Freizügigkeitsleistungen, Wohneigentumsförderung (WEF) Zahlungen, Kollektivtransfers); plus benefits paid by the Substitute Occupational Benefit Institution (Stiftung Auffangeinrichtung BVG) for the insurance of unemployed people.
5. Family allowances

Accordingly, we construct the variable **dina_D622_avg** as the sum of the following items in the tax data:

- *y_tr_tagg_p1*: Daily allowances from health, disability, or military insurance
- *y_tr_rente_p1*: Pensions from restricted pension plans, accident, and military pensions
- *y_tr_annuity_p1*: Life annuities (Leibrenten)
- *y_tr_SUVA_p1*: SUVA pensions (public collective accident insurance)
- *y_tr_EO_p1*: Income compensation during military service/maternity leave
- *y_tr_BVG_p1*: Annuities from 2nd pillar (BVG)
  These are occupational pensions that supplement the state pension (first pillar, AHV/IV).

Capital benefits from 2nd pillar paid out due to...

- *cap_sum_reason1_avg*: ... survival to maturity
  Instead of annuitized pensions, retirees may also choose to cash out their 2nd pillar pension wealth upon retirement.
- *cap_sum_reason2_avg*: ... early withdrawal
  Taxpayers may withdraw their 2nd pillar pension wealth early in certain circumstances (e.g., job loss).
- *cap_sum_reason4_avg*: ... disability
  Insured workers who become fully or partially disabled may cash out (part of) their 2nd pillar pension wealth.
- *cap_sum_reason5_avg*: ... death
  These are capital payments from the 2nd pillar made to a surviving spouse upon death of the insured person.

This set of variables allows us to cover all components of D.622, except for the family allowances, which are part of the net wage and which we do not observe separately. While we can clearly attribute the income streams to individuals, capital benefits from the 2nd pillar are split equally among married couples.

B.1.10 Social benefits paid in cash (dina_D621_p1)

Used to distribute

sbcho (Social benefits in cash)

In the SNA, D.621 covers all social benefits paid in cash (i.e., annuities, allowances) by social security funds (S.1314: AHV/IV/EO, ALV, family allowances in agriculture), including what would be the employer's part of social contributions to social insurances paid on unemployment benefits (ALV). Accordingly, we construct the variable **dina_D621_p1** as the sum of the following two items in tax data:

- *y_tr_AHV_p1*: 1st Pillar social security pensions (AHV/IV)
  This includes all old age, survivor (i.e., widow/widower), and disability pensions paid through the public social security system, the 1st pillar of the Swiss pension system.
- *y_tr_ALV_p1*: Net benefits from unemployment insurance

B.1.11 Households' actual social contributions (dina_D613_other_avg)

Used to distribute

oasho (Other households' actual social contributions)

In the SNA, D.613 contains

1. Portion of social contributions borne by employees
2. Social contributions of self-employed and non-working individuals (but not retired nor disabled)
3. One-off contributions to the 2nd pillar (BVG) by the employee
4. Contributions to compulsory health insurance (KVG), as well as non-occupational accident insurance (NBUV), accident insurance of unemployed workers (UVAL)
5. Payments of social contributions by the unemployment insurance (ALV) to other social insurances on Covid-related allowances for reduced working hours (RHT)

Accordingly, we construct the variable **dina_D613_other_avg** as the sum of the following items in the tax data:

- **ssc_emp_p1**: social contributions of employees
  Because we do not observe social contributions directly but impute them and have to

assume that employers and employees split the contributions equally, we use the same variable as for employers' social contributions.

- **ssc_selfemp_avg**: social contributions of the self-employed
- *ssc_nonworking_p1*: social contributions of non-working individuals

  Everyone is required to contribute to the 1st pillar (AHV/IV) until they reach the legal retirement age. Those out of the labor force must therefore make contributions out of pocket (based on their wealth and income), which are however tax-deductible.
- *d_pillar2_avg*: One-off payments to 2nd pillar

  These contributions are tax-deductible. We use the average amount reported for married couples, as they can optimize their joint one-off contributions.

Note that we do not observe items 4) and 5). However, because we distribute premiums to mandatory health insurance per capita (reflecting the fact that the premiums are not income dependent), not including this element has no effect on the distribution.

B.2 Pension wealth data: second pillar

The pension system in Switzerland is a hybrid between a fully funded and a pay-as-you-go system. The fully funded component is called the second pillar and consists of salary deductions made over the course of an individual's employment history, which are matched one-to-one by the employer.[45] Thus, an individual's wealth in the fully funded pension system is proportional to their earnings over the course of their whole employment history plus the accumulated returns on the contributions.[46]

Importantly, the wealth which individuals hold as part of their fully-funded pension account is tax-free, implying that we cannot observe it in our microdata, which is based on tax returns. Thus, we must impute second pillar pension wealth on the basis of observables in the tax microdata. To this end, we differentiate between *active* and *passive* individuals. Passive individuals refer to everyone who is no longer making contributions to their second pillar fund, whereas active ones must pay the salary deductions if income from employment accrues.

Retired individuals. Once people are eligible to receive benefits from their second pillar fund, they can either choose to withdraw their pension wealth or leave it in the pension system

[45] On a voluntary basis, some employers may contribute more than the employee - however, we cannot account for this in our methodology.

[46] In practice, it is proportional to the historical earnings with age-specific weights, since the salary share which is deducted for the fully funded system increases with age.

forever and receive an annuity on it every year. In the first case, their pension wealth goes to zero and we observe the transfer as income in the tax data - thus no imputation is required. For people who choose the annuity option however, we must calculate the pension wealth underlying their observed annuity payments. To do this, we first calculate the year in which an individual reached their *de jure* retirement age, denoted t^*.[47] This is a first approximation, since some people may have retired earlier, but we cannot observe this (however, the average age of retirement in Switzerland throughout our sample period was at 65 years according to official statistics[48]). Subsequently, we collect data on historical annuity conversion rates for second pillar wealth[49]. This allows us to compute the individual's second pillar wealth in its year of de jure retirement, denoted $W^P_{t^*}$, as $W^P_{t^*} = \frac{A^P}{r^A_{t^*}}$ - in which $r^A_{t^*}$ is the annuity conversion rate in year t^* and A^P is the second pillar annuity payment. In the Swiss system, A^P is not time-varying (i.e., it is completely determined by the conversion rate and the pension wealth in the year of retirement). Each year, a passive individual's second pillar wealth decreases by the withdrawn annuity payments, but it can earn a return since pension insurance invests it in the meantime. Thus, we also collect historical rates of return for pension insurances in Switzerland. These rates are estimated using Pictet BVG indices based on a 40% equity share opting for the average model between 25% and 60% equity.[50] Denote the average gross pension insurance investment return in year t as r^P_t. Therefore, we can compute an individual's pension wealth one year after their de jure retirement as $W^P_{t^*+1} = r^P_{t^*+1} W^P_{t^*} - A^P$. Then, to impute this person's pension wealth in the year we observe him or her in the tax data, t^{obs}, we simply iterate this equation forward for all years between t^* and t^{obs}.

Finally, we distribute the passively owned pension wealth from the national accounts to these individuals using the same weighted DINA algorithm as for all other variables. Note that the national accounts contain aggregate pension wealth but no distinction on the share owned by active and passive individuals. To this end, we use the official federal pension statistics which compute the share of aggregate pension wealth held by either group in each year.[51]

[47] For women, this is time-varying as it increased from 63 to 65 since the second pillar pension system was introduced

[48] https://www.bfs.admin.ch/bfs/en/home/statistics/work-income/employment-working-hours/age-generations-retirement-health/employment-retirement/average-age-leaving-labour-market.html

[49] https://www.bsv.admin.ch/dam/de/sd-web/icRMLk5siLmb/technische_aspektederobligatorischenberuflichenvorsorge.pdf

[50] Received from Oezlem Reinhard (oreinhard@pictet.com) on 27.11.2024.

[51] 2004-2006: https://www.bfs.admin.ch/bfs/en/home/news/whats-new.assetdetail.346530.html
2005-2011: https://www.bfs.admin.ch/bfs/en/home/news/whats-new.assetdetail.350781.html
2013-2017: https://www.bfs.admin.ch/bfs/en/home/news/whats-new.assetdetail.7386148.html
2015-2019: https://www.bfs.admin.ch/bfs/en/home/news/whats-new.assetdetail.15944717.html
2016-2020: https://www.bfs.admin.ch/bfs/en/home/news/whats-new.assetdetail.21304941.html
2021-2023: https://www.bfs.admin.ch/bfs/en/home/news/whats-new.assetdetail.33553953.html

Working-age individuals. For individuals actively paying into their second pillar fund, we unfortunately have to make some additional assumptions. We observe employment income, but not people's employment history in the tax data. Thus, we can only make an approximate imputation here. First, for each tax year, we distribute the active individuals' aggregate pension wealth to age cohorts between 25 (when people start contributing to the second pillar) and their de jure retirement age. The distribution of pension wealth across age cohorts is constructed from the cumulative contributions accrued by each cohort from age 25 up to their current age, taking into account the average returns of pension funds on the contributions made earlier in an individual's life cycle. Contributions at a given age are calculated as the product of average labor income at that age and the corresponding age-specific statutory contribution rate.[52] We also take into account that contributions only accrue for earnings above a certain cutoff.[53] Aggregating these age-specific contributions multiplied by the expected return over the relevant time horizon over the life cycle yields an estimate of cohort-level pension wealth. Under the assumption of a stable age–earnings profile over time, this procedure provides a consistent approximation to the cross-cohort distribution of second-pillar pension wealth in each year.

Subsequently, we move on to the within age cohort distribution of active pension wealth. Here, we use our standard weighted DINA distribution algorithm to allocate within-cohort pension wealth proportional to the distribution of within-cohort employment income.[54] This is once more only an approximation, since in practice it is the entire employment history which determines pension wealth. Thus, active individuals with a sudden negative (positive) earnings shock would receive too little (too much) pension wealth with our imputation strategy. However, for most people their position within the cohort earnings distribution is relatively persistent, such that the ranking in the contemporary earning distribution is a good proxy for the ranking in the cumulative earnings distribution.

B.3 Imputation of further variables

Mandatory health insurance. The mandatory component of health insurance expenses amounts to around 5% of GDP over our sample period and is not observed in the microdata on the

[52] The average is computed from our microdata using the weights derived in Section 3.3, ensuring representativeness at the national level.

[53] We use the average cutoff over our sample period which lies at approximately 24'000 CHF of annual earnings.

[54] Again we take into account that only employment income above the annual threshold of 24'000 CHF is relevant for pension wealth accumulation.

individual level. However, mandatory health insurance is financed on a per-capita basis in Switzerland such that we simply distribute its cost equally to all individuals. There is some cross-cantonal variation in the magnitude of the contribution, from which we abstract. The flat cost of health insurance is paid by all individuals independently of income, but lower-income households may receive a subsidy that partially covers the cost of mandatory health insurance, the imputation of which is detailed in the following paragraph.

Health care premium subsidies. In the canton of Bern, households below a certain net income cutoff are automatically allocated a subsidy for the mandatory healthcare premium.[55] However, this subsidy is tax-free and thus not reported in our microdata. Our approach is to impute it negatively proportional to income to eligible households, implying that the subsidy decreases linearly with income until it reaches zero at the net income cutoff.[56] In practice, though the subsidy is decreasing with income, it may not be exactly linear, but we consider this a reasonable approximation. Healthcare premium subsidies are also relatively small in the aggregate, totaling less than 1% of national pre-tax income.

Old-age supplementary contributions. Low-income and wealth beneficiaries of old age or invalidity insurance may be eligible for a supplementary contribution (*Ergänzungsleistungen*) in Switzerland, which is also not observed in the microdata because it is tax-free. In the aggregate, this transfer lies around 0.5% of pre-tax income over our period of observation. Only individuals receiving an old-age or invalidity insurance transfer with below-cutoff net wealth are eligible, both conditions which we observe in the microdata.[57] Eligible individuals may receive a transfer if their net income is below their "allowable expenses" (*anerkannte Ausgaben*). We observe households' net income in the data and compute their allowable expenses according to the social security offices' official guidelines.[58] Then, we can distribute the aggregate supplementary contribution observed in the national accounts proportionally to the difference between allowable expenses and net income, whenever this difference is positive and the household is eligible.

[55] The income cutoff varies by familial status: Households without kids are eligible below an income of 35,000 and with kids the cutoff raises to 45,000. We can account for this however, since the number of children is visible in the tax microdata.

[56] For this imputation we truncate net income at zero to avoid giving unreasonably large transfers to few observations with negative net income in a given year.

[57] For singles this cutoff lies at 100,000 in net wealth and it raises to 200,000 for married households.

[58] We use our available data to approximate the formulas available online: https://www.ahv-iv.ch/p/5.01.d (in German). We cannot observe whether households rent, but assume that they live in the property that they own if they pay real estate tax. In terms of the number of children, we add 7,000 per child registered on households' tax return.

Social assistance benefits in cash As highlighted in Section 3.4, a remainder of social assistance benefits in cash is distributed negatively proportional to household net income in the microdata. For this imputation, net income is truncated at zero to avoid allocating unrealistically large benefits to households with negative net income. Although this approach is necessarily imperfect, the residual component accounts for only about 0.5% of net national income and is therefore unlikely to materially affect our results.

B.4 Tax rates beyond Bern

The weighting scheme described in Section C.1 corrects for the fact that the distribution of wealth, income, and demographic variables in Bern is not perfectly representative of their nationwide counterparts. However, it does not yet account for the fact that also the tax rates in Bern differ from other cantons, since income and wealth taxes in Switzerland are highly decentralized. We follow a similar methodology as Schmidheiny (2006) and Roller and Schmidheiny (2016). Namely, we compute the tax rate each individual would face in each of the about 2'500 constituencies in Switzerland and weight this rate by the conditional probability that an individual with these characteristics lives in each constituency. If both the tax rates and the conditional probabilities are accurate, we can calculate the average tax rate faced by an individual with similar characteristics to those in our data in Switzerland.

To obtain local wealth and income tax rates in each constituency after 2008 we can use data from the official tax calculator of the Swiss Tax Administration.[59] However, this data is not available prior to 2008. Thus, we merge the official tax calculator data with the data collected by Parchet (2019) and Brülhart et al. (2025). Jointly, these datasets cover our entire period of interest from 2002 to 2022. In this data we observe income tax rates on a discrete grid containing 27 levels of annual income ranging from 1500 to 100 Million Swiss Francs. The wealth data contains a similar grid for each constituency (though with only 24 entries). Following Parchet (2019), we further differentiate between tax rates faced by singles, married couples without kids, and couples with kids since tax rates can vary substantially between these groups. Finally, for each group in each constituency and year we fit a spline to the wealth and income tax grid to interpolate individual tax rates.

To compute the conditional residence probabilities we obtained detailed demographic data at the constituency level from the Swiss Federal Tax Administration containing the number of

[59] See: https://swisstaxcalculator.estv.admin.ch/?ref=awesometechstack.com#/calculator/income-wealth-tax

households by each civil status and income bracket in our tax data for every constituency and year. This allows us to calculate the conditional probability that an individual with a given civil status and income in a certain year lives in constituency i simply as the share of households of this type in the whole country residing in i in the given year. Importantly, we can only observe this demographic data by income but not by wealth bracket. Thus, we implicitly assume that correcting tax rates for spatial income sorting will also correct them for wealth sorting. In the Swiss context, we consider this assumption plausible for three main reasons. First, the variation in local income tax rates is much more pronounced than in wealth tax rates. Second, wealth and income are strongly correlated in our data, and third, for the vast majority of people the income tax is quantitatively much more important than the wealth tax.

A final note about this data is that entries which contain between one and four households are not available to preserve anonymity. Importantly though, we know if an entry contains zero households. Our baseline assumption is that an entry contains two households in cases for which we just know that the number lies between one and four. However, we expect this assumption to be of little consequence since the residence probability in these constituencies is quite close to zero in either case.

C Methods Appendix

C.1 Weighting the microdata

Only about 12% of the Swiss population reside in Bern, which we observe in our microdata. This sub-sample is unlikely to be perfectly representative in terms of our variables of interest. Fortunately, the Swiss Federal Tax Administration publishes tabulated data containing information about the marginal distributions of some key variables (see 2.1.2), allowing us to weight the Bern data to be consistent with the nationwide distribution of these variables.

However, there is one group of wealthy households which is not covered by tabulated federal income tax statistics: expenditure-based taxpayers. Though the number of these very wealthy individuals is small relative to the overall population, they matter in the extreme upper tail of the wealth distribution. By definition of the expenditure-based tax scheme, these taxpayers hold at least 8 million CHF in wealth, and include many billionaires (Baselgia & Martínez, 2024). We take a conservative approach to take expenditure-based taxpayers into account by simply adding the number of expenditure-based taxpayers in each year (obtained upon request from the Swiss Federal Tax Administration) to the top wealth bracket ($>$ 10 million CHF). Thus, we assume that within this top bracket, expenditure-based taxpayers' wealth and income are distributed similarly to individuals observed in the microdata. We consider this a conservative assumption with respect to inequality, since expenditure-based taxpayers are likely even more wealthy than normal taxpayers in the top wealth bracket.

Given these tabulations, we need to find a vector of weights for observations in each year, $\mathbf{w}_y \in \mathbb{R}_+$, which corrects our microdata to perfectly match the population-wide tabulated marginal distribution of household net wealth and income, as well as the joint distribution of gender and age.[60] In order to calculate $\mathbf{w}_y$, we resort to the widely used iterative proportional fitting (IPF) procedure, also known as raking or the RAS algorithm. It was originally proposed in the context of weighting census data by Deming and Stephan (1940). Pukelsheim (2014) provides a review of the history and relevant proofs for the algorithm. In essence, IPF simply starts with an initial non-negative guess for $\mathbf{w}_y$ and then cycles through all target marginal distributions, scaling the elements of $\mathbf{w}_y$ such that its distribution reflects the target marginal. This process is then iterated as long as it takes for the vector of weights to converge in the

[60] Population-wide tabulated data from ESTV:
https://www.estv.admin.ch/en/statistics-natural-persons-cantons-1983-to-present
Population statistic on age and gender:
https://www.pxweb.bfs.admin.ch/pxweb/en/px-x-0102030000_101/-/px-x-0102030000_101.px/

sense that $||\mathbf{w}_y^{(i+1)} - \mathbf{w}_y^{(i)}||_\infty < \epsilon$, in which i refers to the i'th iteration and epsilon is a small tolerance level.[61] The only difference of our setup to any other application of IPF is that we observe some target variables, such as age, on the individual level and others (net income and wealth) on the household level. Though this somewhat complicates the implementation, none of the core properties of IPF are affected by this.

Table C1: Weights Summary Statistics in five year intervals for our period of observation.

	Mean	Median	Std	Min	Max	Q1	Q3	N
2005	1.04	1.00	0.29	0.22	8.62	0.83	1.19	773126
2010	1.05	1.01	0.34	0.15	5.45	0.82	1.23	796517
2015	1.04	1.00	0.31	0.20	3.86	0.84	1.22	823514
2020	1.05	0.99	0.37	0.12	8.51	0.82	1.23	837527

Crucially, the resulting $\mathbf{w}_y$ can depend on the initial guess for it. In this respect we simply follow the convention in the literature and initialize all weights at unity. Table C1 displays summary statistics for the resulting weights for selected years from our period of observation. Most moments remain quite stable over the years and the vast majority of weights is not too far from their initial value of one (about 96% of weights are contained in the $[0.5, 2]$ interval).

There are two key assumptions implied by our weighting scheme. The first is that we also correct for sample non-representativeness of other key variables by weighting for gender, age, net income and wealth. For example, we assume that on average 25-year-old females with a given wealth and income should have similar capital income in Bern and nationwide. If this group were however more likely to participate in the stock market in Bern than in the rest of the country, this assumption could be violated. However, we do believe that our weighting corrects for the most striking differences between the overall and the sub-population and provide some evidence for that in the following validity check paragraph. The second crucial assumption is that the joint distribution from the microdata is representative for the joint distribution of nationwide variables, once weighted to match the marginals. Since tabulated tax statistics are only published in terms of marginals we cannot empirically verify this assumption, but note that only our results on joint distributions would be affected if it were violated.

[61] In our application we pick $\epsilon = 10^{-6}$.

C.2 Adjusting residents' corporate income tax burden for profit shifting

One fundamental challenge in constructing DINA for a tax haven is that a large share of corporate income tax revenue accrues from shifted profits. These profits are likely overwhelmingly foreign-owned such that attributing them to Swiss residents would substantially overstate residents' corporate income tax burden. This issue is particularly salient in Switzerland, as it is one of the world's most prominent corporate income tax havens (Tørsløv et al., 2023). While we lack the data for a comprehensive distinction between resident and foreign-owned profits as for example in Bruil et al. (2025), we do make an adjustment to remove taxes paid on shifted profits from Swiss residents' corporate income tax burden. To this end, we estimate foreign-owned profit shifting based on tax return and ownership data of multinationals active in Switzerland collected in Baselgia et al. (2026).[62]

Specifically, we compute the profit-to-employee ratio of *Swiss* multinationals and *foreign-owned* multinationals separately and assume that the portion of foreign MNEs' profit-to-employee ratio exceeding that of Swiss MNEs represents profit shifting by foreign MNEs (see Figure C1). This approach bears close resemblance to the measurement of profit shifting proposed in Tørsløv et al. (2023). However, we take domestic MNEs as the benchmark rather than the average domestic firm in Switzerland. This has the advantage that the firms in our benchmark are more comparable to foreign-owned MNEs—but of course Swiss MNEs may themselves shift profits to Switzerland from foreign affiliates. We do not attempt to exclude such inward-shifted profits, since they are arguably more likely to be owned by Swiss residents; if anything, this inflates our benchmark profit-to-employee ratio and causes us to understate rather than overstate the extent of foreign-owned profit shifting. Our adjustment should therefore be interpreted as conservative: it is unlikely to remove more corporate tax from residents' burden than is actually warranted.

[62] These microdata cover the near universe of multinational profits and employment in Switzerland (see Baselgia et al. (2026) for details).

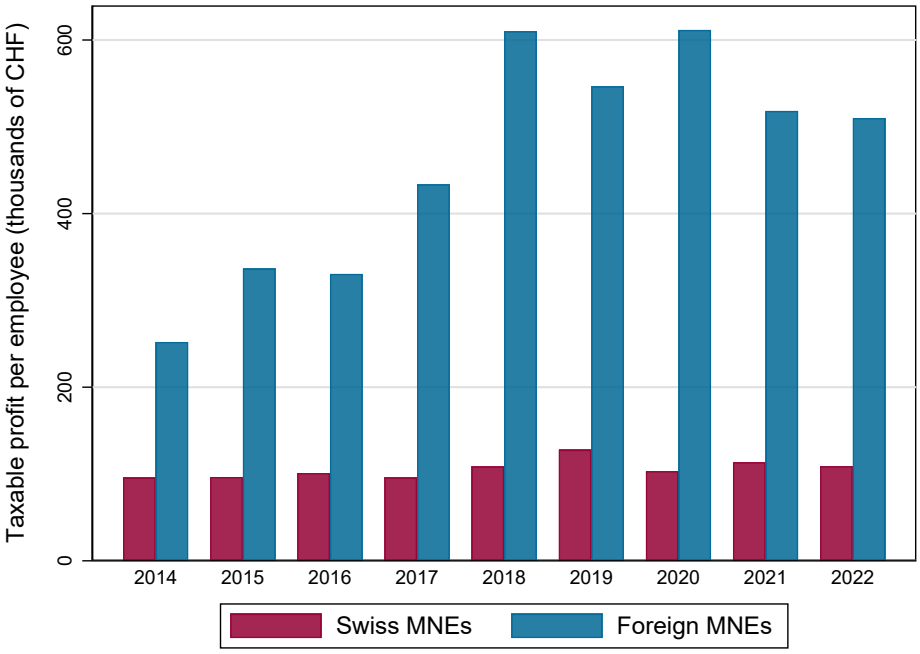


Figure C1: Taxable profit per employee: Swiss vs. foreign-owned multinationals, 2014–2022

Note: The figure shows average taxable profit per employee for Swiss multinationals (red) and foreign-owned multinationals (blue) operating in Switzerland, 2014–2022. The underlying tax return and ownership data are described in full detail in Baselgia et al. (2026).

As is evident from Figure C1, foreign MNEs' profit-to-employee ratio vastly exceeds Swiss MNEs' profit-to-employee ratio, indicating substantial shifting of foreign-owned profits to Switzerland, consistent with prior research (Guvenen et al., 2022; Tørsløv et al., 2023). We convert this excess profit (per employee) into an aggregate estimate of shifted profit by multiplying it by the number of employees at foreign MNEs, and express the result as a share of total taxable corporate profit in the same year. Hence, Figure C2 displays this estimated share of foreign-owned shifted profits in total taxable profits in Switzerland.

Because our microdata only cover the years from 2014 to 2022, we use the 2014 share for all prior years. As discussed in Baselgia et al. (2026), the increase in profit shifting after 2016 is driven by reforms in international taxation—particularly the Tax Cuts and Jobs Act of 2017—that do not have comparable counterparts in the early 2000s, such that we consider the 2014 value a reasonable approximation to the extent of profit shifting earlier in our sample (subject to revision once better data become available).

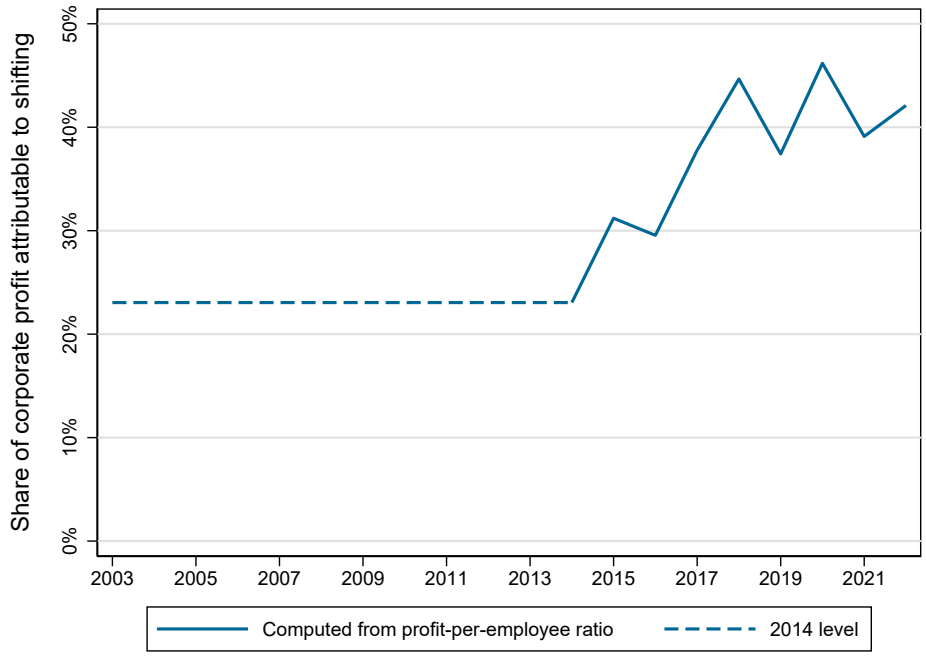
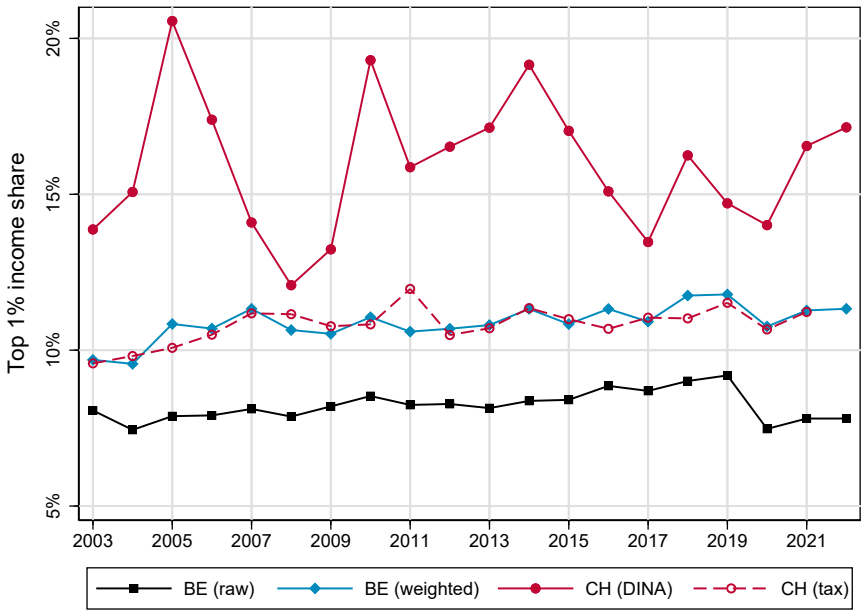


Figure C2: Estimated share of corporate profits attributable to profit shifting, 2003–2022

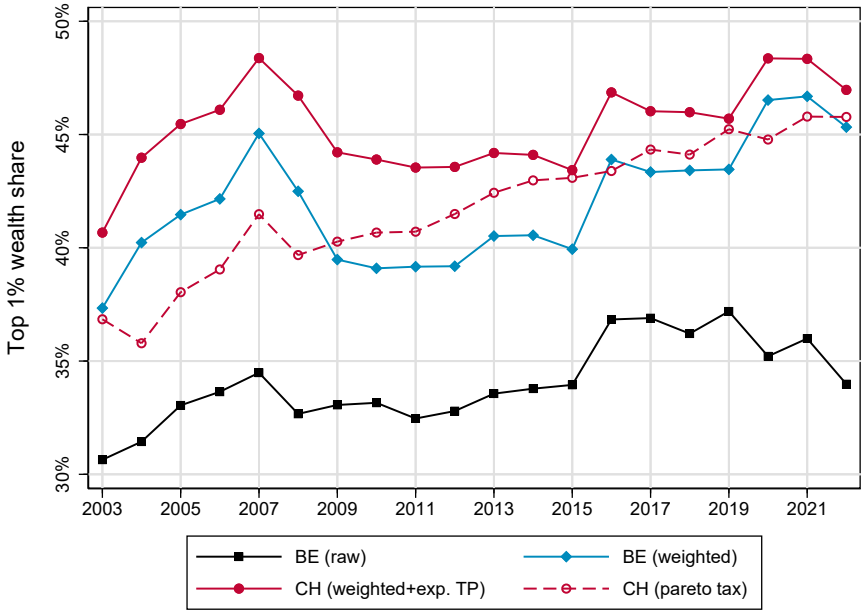
Note: The figure shows the estimated share of total corporate profit attributable to profit shifting by foreign multinationals, computed from the excess of foreign MNEs' profit-to-employee ratio over the Swiss-MNE benchmark shown in Figure C1. The solid line covers 2014–2022, the years for which ownership microdata are available. The dashed line simply extrapolates the 2003–2013 period by holding the share constant at its 2014 level.

From an accounting perspective, we reduce the corporate income tax burden attributed to Swiss residents by the estimated share of taxes associated with foreign-owned shifted profits, applying the profit-shifting share from Figure C2 directly to corporate tax revenue under the assumption that shifted and non-shifted profits face the same average effective tax rate. This adjustment does not affect aggregate pretax income, as the corresponding corporate tax revenue is instead recorded as additional government surplus. However, it does increase the post-tax income of Swiss residents, reflecting the lower corporate income tax burden ultimately assigned to them.

D Additional Figures



(a) Income



(b) Wealth

Figure D2: Robustness of the weighting procedure, top 1%

Note: The figures compare top 1% income (D2a) and wealth (D2b) shares in Bern (BE) and Switzerland (CH) under different weighting schemes. "BE (raw)" denotes unweighted Bern microdata, while "BE (weighted)" applies the IPF-based reweighting to match national marginals. Swiss aggregates are shown for comparison using DINA estimates and tax-based measures; in the wealth panel, "CH (weighted–exp. TP)" includes expenditure-based taxpayers and "CH (pareto tax)" applies a Pareto adjustment to the upper tail. The figure assesses whether the weighting procedure brings the Bern distribution closer to national benchmarks and evaluates the sensitivity of top shares to alternative macro-consistent adjustments.

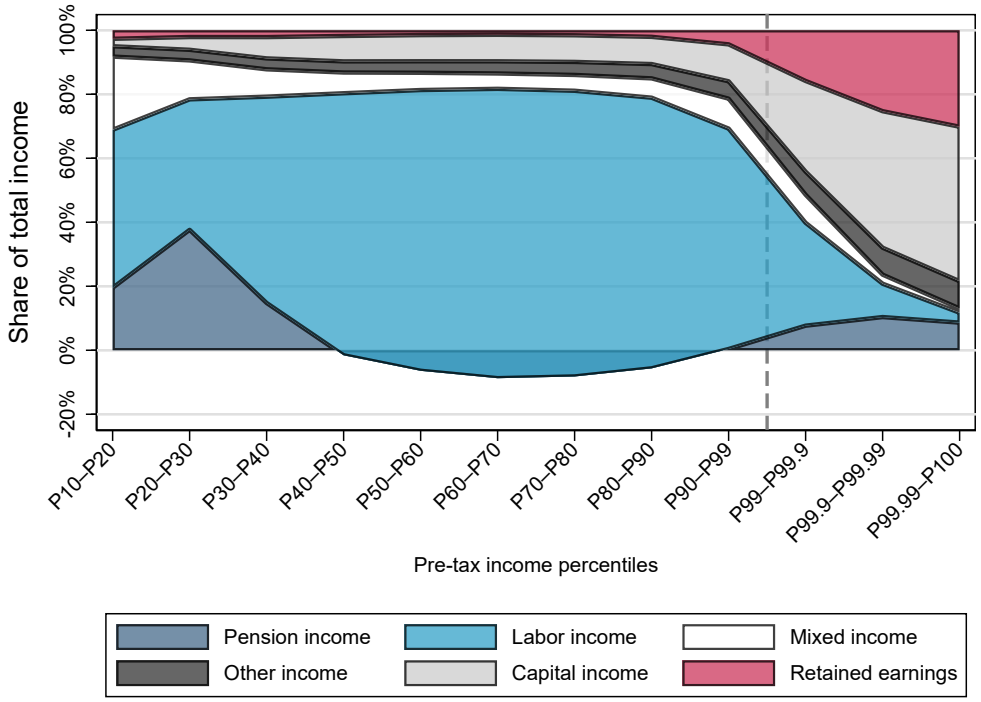


Figure D3: Income composition across the pre-tax income distribution

Note: The panel shows the composition of pre-tax income across income percentiles, pooling observations over 2003–2022. For each group, we report the share of (i) pension income, (ii) labor income, (iii) mixed income (operating surplus, including rental income and imputed rents, as well as income of the self-employed), (iv) capital income, (v) retained earnings, and (vi) other income, which includes the primary income of the government sector and Non-Profit Institutions Serving Households (NPISH). Shares sum to 100% within each percentile group. The dashed vertical line marks the top 1%; percentile groups become increasingly granular thereafter, separately identifying the top 0.1% and top 0.01% of the distribution.

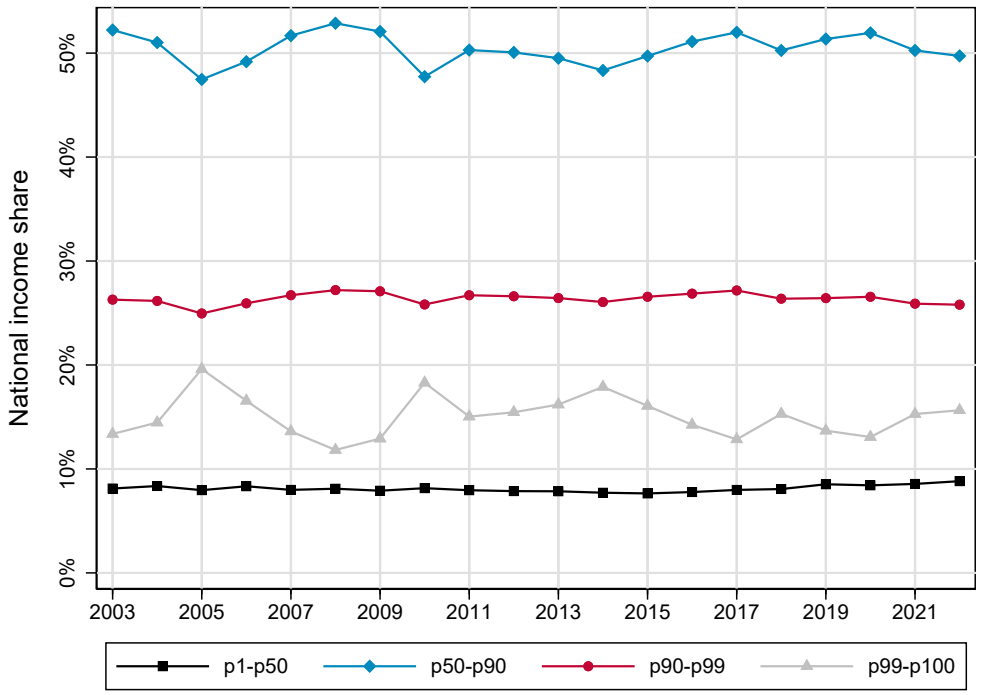


Figure D4: Distribution of factor income, 2003–2022

Note: This figure displays the pre-tax factor income shares of four income groups: the bottom 50%, middle 40%, top 10% (excluding the top 1%), and top 1% over the period 2003–2022. Income shares remain remarkably stable throughout the sample period. Under this income concept, which abstracts from redistribution through the pension system, the income share of the top 1% exceeds that of the bottom 50%.

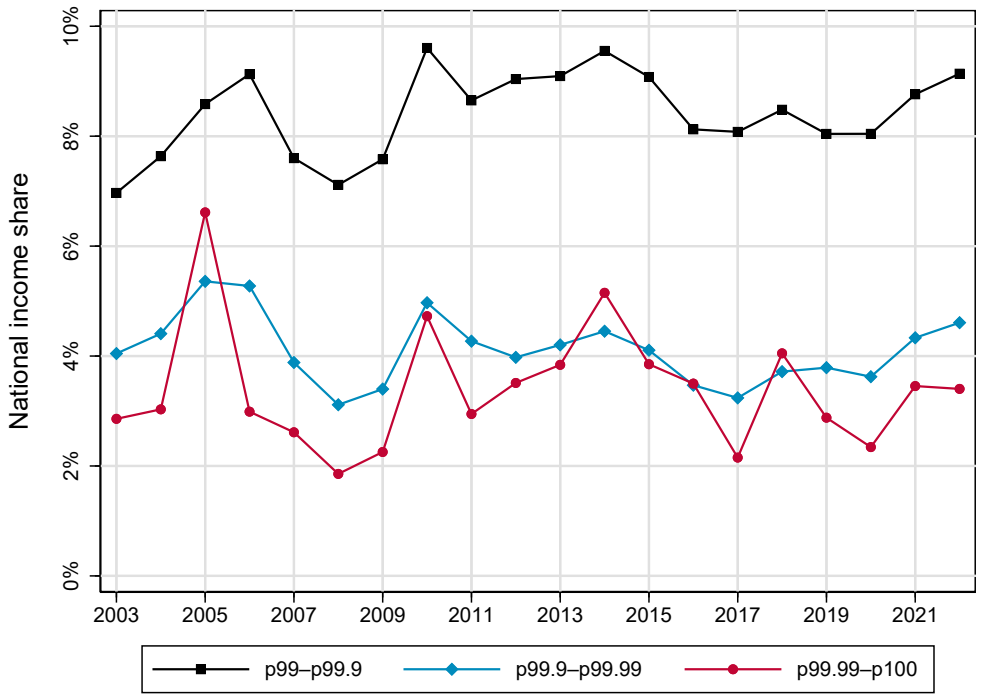
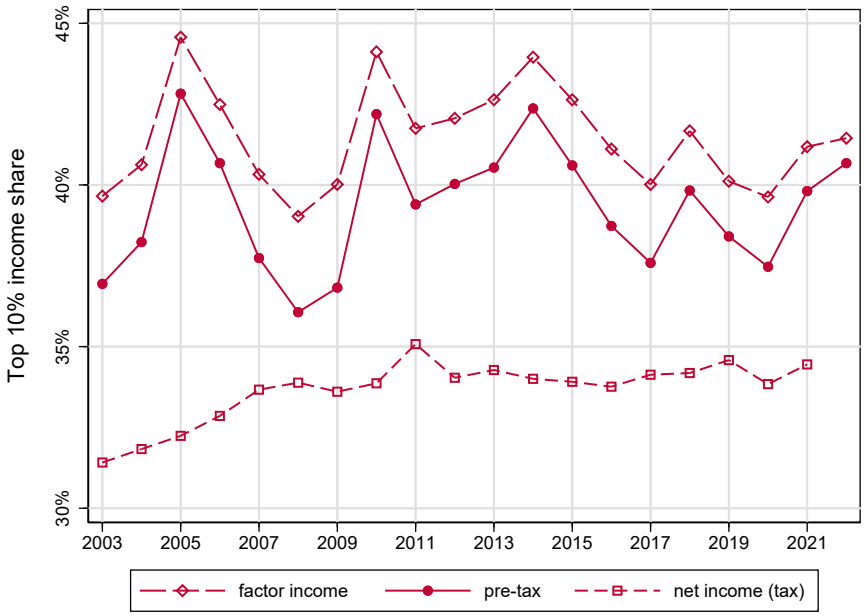
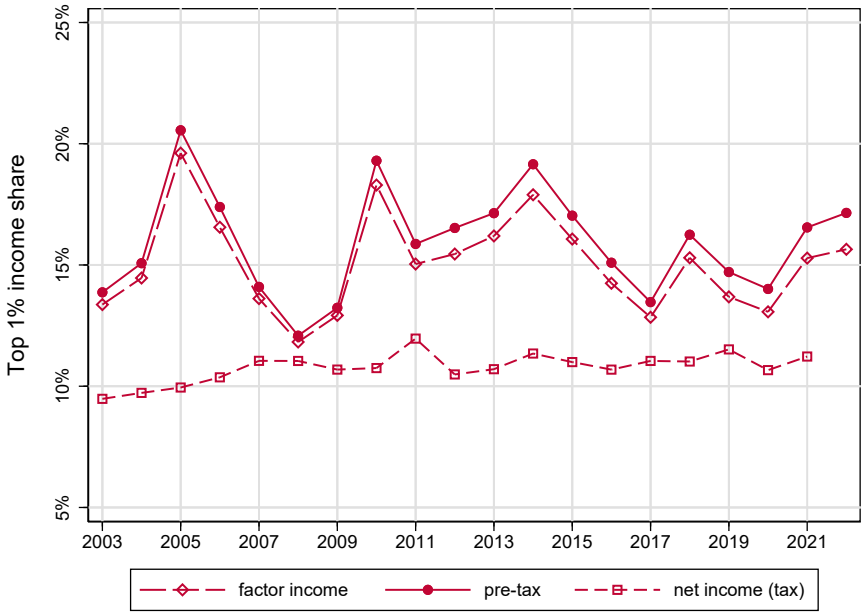


Figure D5: Pre-tax income inequality within the top 1%, 2003–2022

Note: The figure reports pre-tax national income shares for three groups within the top 1 percent: p99–p99.9, p99.9–p99.99, and p99.99–p100, over 2003–2022. Income concentration increases sharply within the upper tail, with the top 0.01 percent capturing a substantial and more volatile share of national income.



(a) Top 10% income share



(b) Top 1% income share

Figure D6: Top income inequality estimates for Switzerland, 2003–2022

Note: Panels D6a and D6b report top 10% and top 1% income shares based on pre-tax factor and pre-tax national income, alongside tabulated tax statistics. The red lines in solid ("pre-tax") and in long-dash ("factor income") show our DINA-based estimates. The dashed red line with square markers at the bottom shows estimates based on tabulated tax statistics from Föllmi and Martínez (2017, years up to 2010) and Institut für Wirtschaftspolitik (IWP) (2025, years after 2010). National-account-consistent measures imply substantially higher top income shares than tax data alone.

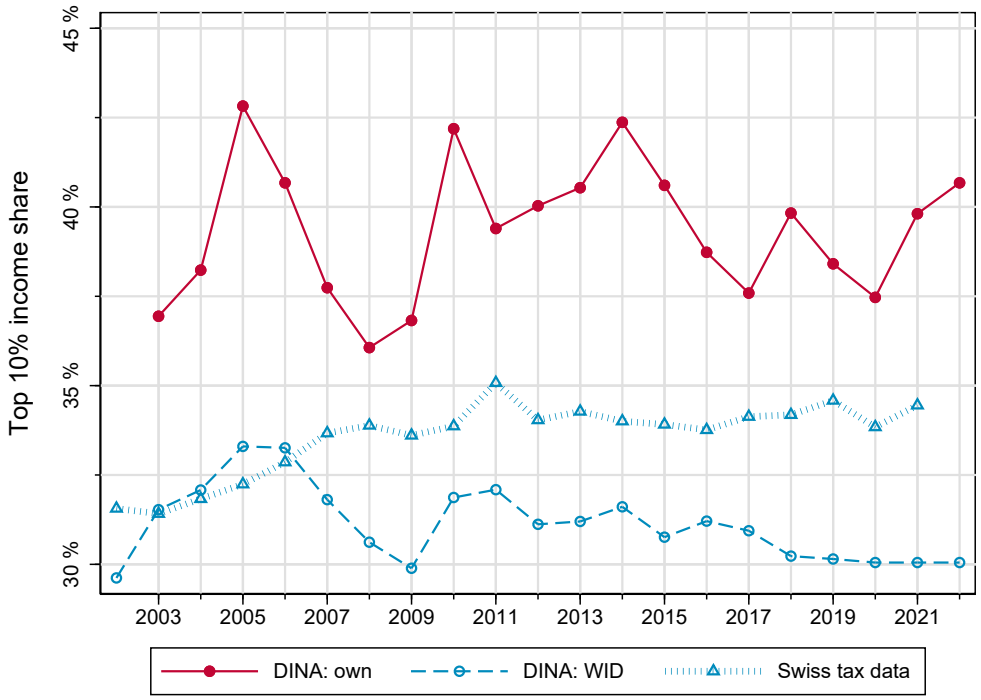


Figure D7: Top 10% income share estimates for Switzerland, 2003–2022

Note: The figure reports the pre-tax national income share of the top 10 percent in Switzerland over 2003–2022. The solid red line ("Own") shows our DINA-based estimates. The dashed red line ("WID") reports the DINA-series published in the World Inequality Database based on Blanchet et al. (2022). Both DINA series are expressed as shares of national income. Our estimates consistently exceed the WID series, due to differences in data coverage and the treatment of capital income components. The blue line with triangles shows estimates based on tabulated tax statistics from Föllmi and Martínez (2017, years up to 2010) and Institut für Wirtschaftspolitik (IWP) (2025, years after 2010).

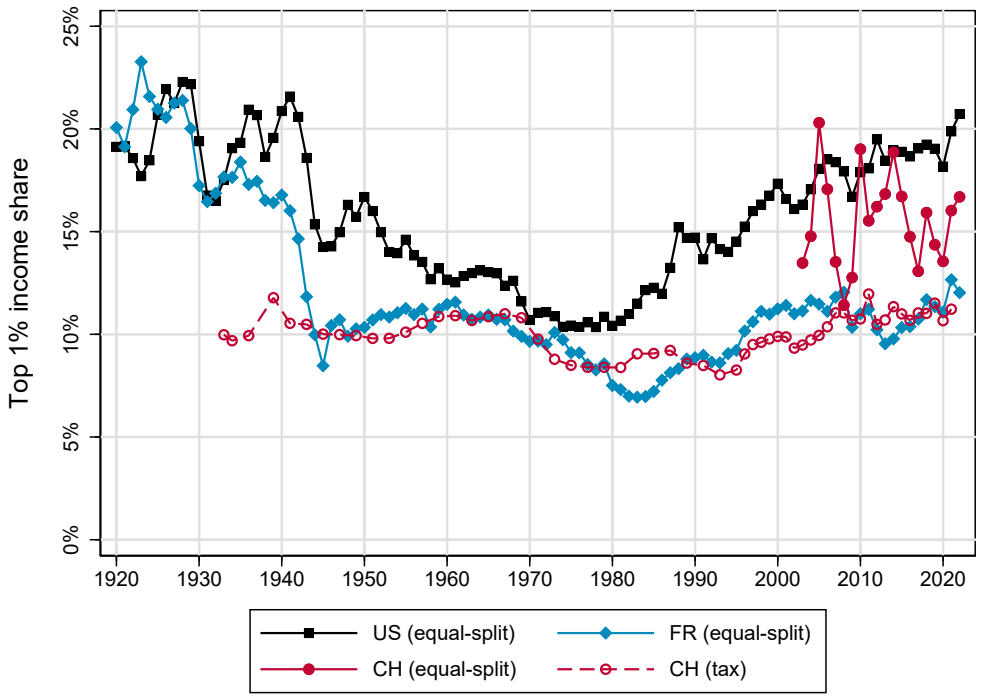


Figure D8: Top 1% pre-tax income share in international comparison

Note: The figure reports the share of total pre-tax income accruing to the top 1% of the income distribution for the United States (black squares), France (blue diamonds), and Switzerland (red dots) according to DINA income concepts. Estimates are based on Distributional National Accounts (DINA), and shares are expressed as percentages of total national income. All DINA series split the income of married couples equally between spouses. US data follow (Piketty et al., 2018), French data follow (Garbinti et al., 2018); updated series downloaded from https://wid.world/. Swiss DINA series are constructed using comparable DINA concepts. Tax series (red hollow circles) are shown for comparison with previous estimates of Swiss top income shares (source for 1933-1994: Dell et al. 2007; 1995-2010: Föllmi and Martínez 2017; 2011-2021: Institut für Wirtschaftspolitik (IWP) 2025). Figure 4 shows the corresponding top 10% series.

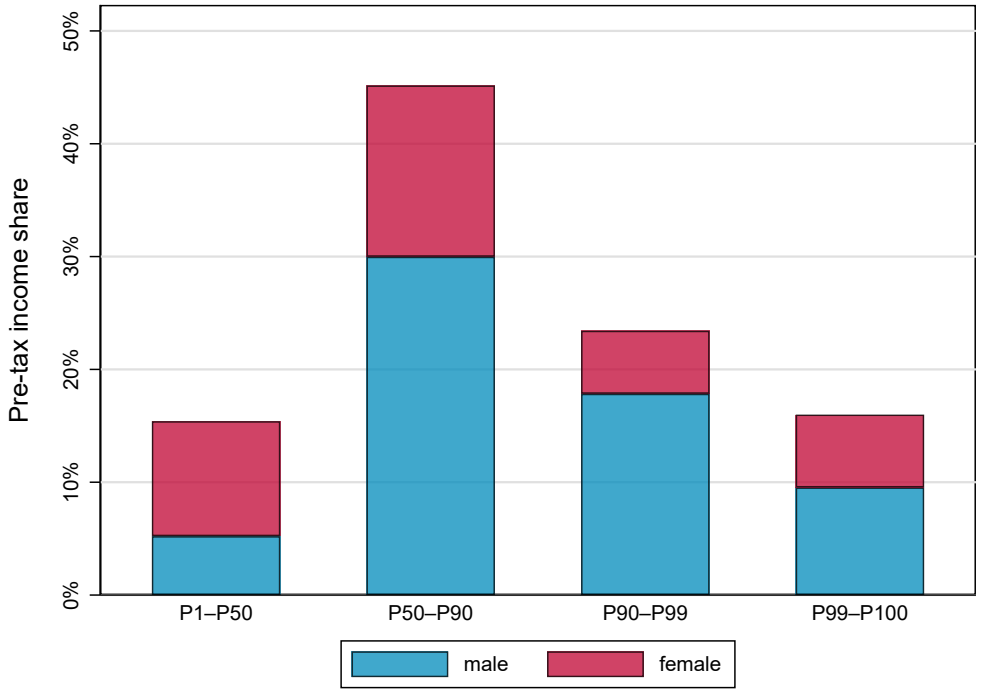


Figure D9: Gender shares across the pre-tax income distribution

Note: The figure reports the distribution of pre-tax national income by gender across income groups (P1–P50, P50–P90, P90–P99, and P99–P100), pooled over 2003–2020. Bars show each group's share of total pre-tax national income, decomposed into male and female components. Income shares are constructed using DINA-consistent concepts and scaled to match aggregate national income totals.

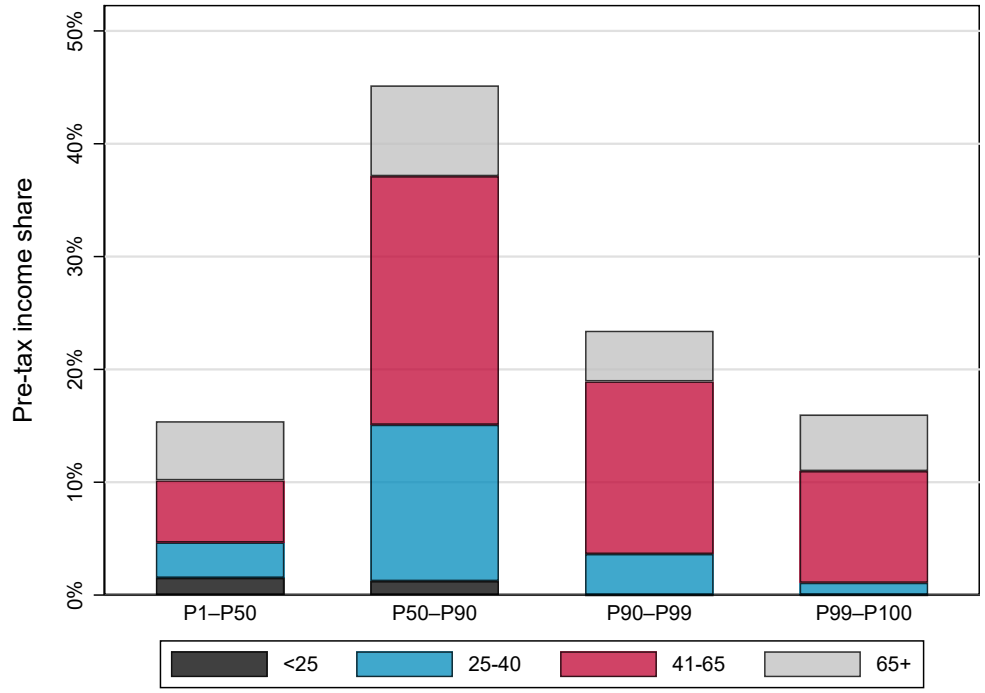


Figure D10: Age-group income shares across the pre-tax income distribution

Note: The figure decomposes pre-tax national income shares accruing to different income groups (P1–P50, P50–P90, P90–P99, and P99–P100) by age group (<25, 25–40, 41–65, and 65+). Data pooled over 2003–2020. Income shares are constructed using DINA-consistent concepts and scaled to match aggregate national income totals.

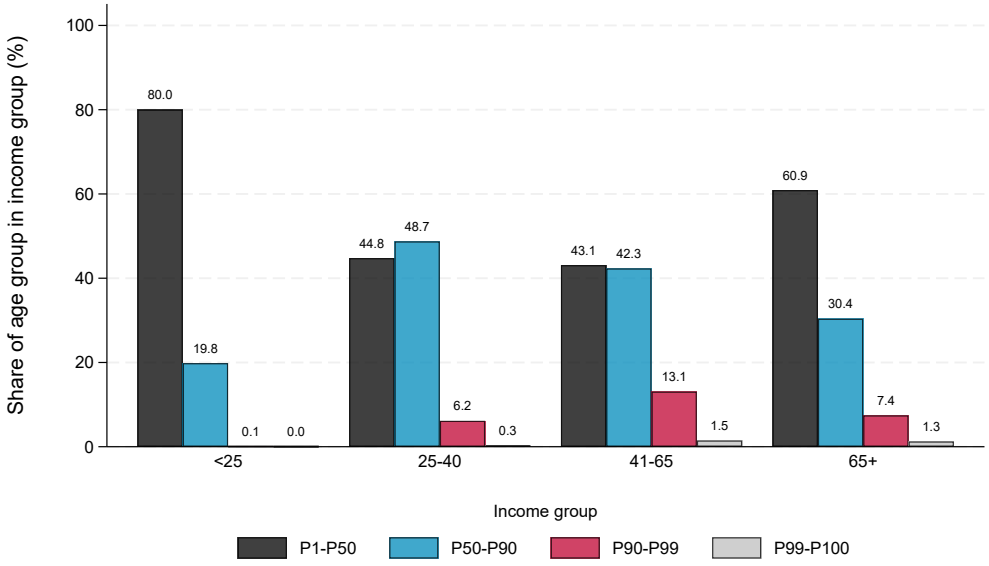


Figure D11: Distribution of age-groups across the pre-tax income distribution

Note: The figure shows how the different age groups (<25, 25–40, 41–65, and 65+) are distributed across income groups (P1–P50, P50–P90, P90–P99, and P99–P100). Data pooled over 2003–2020.

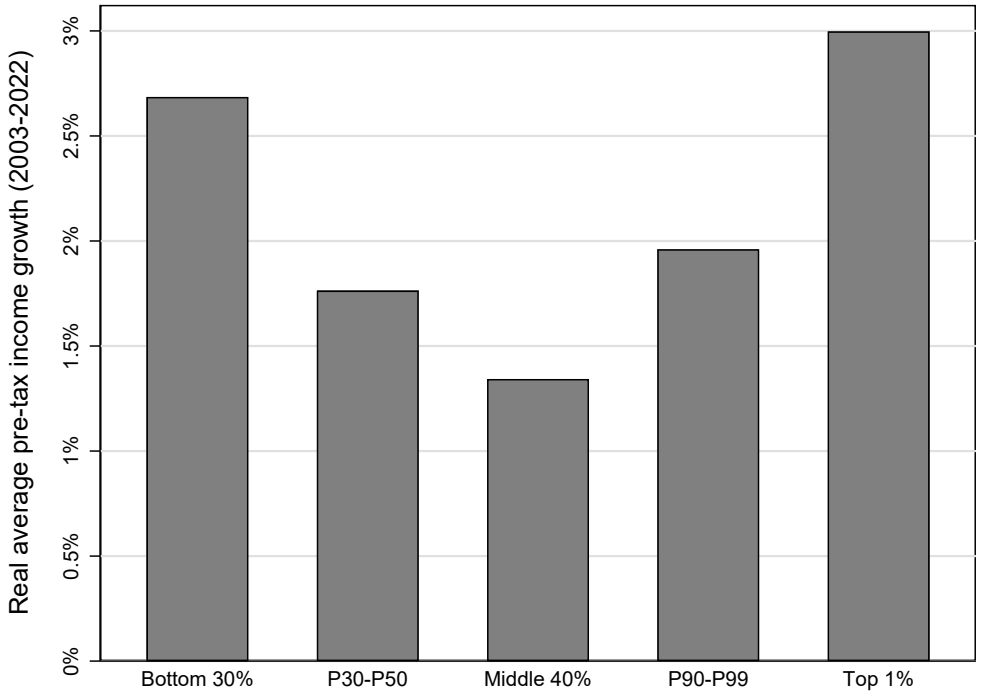


Figure D12: National income growth by income group, 2003–2022

Note: The figure displays annualized real growth rates of pre-tax national income by income group over the period 2003–2022. By construction, percentile-specific growth rates aggregate to the macroeconomic growth rate of 1.9%. Figure 5 shows how growth in pre-tax income was shared across the entire income distribution by percentile.

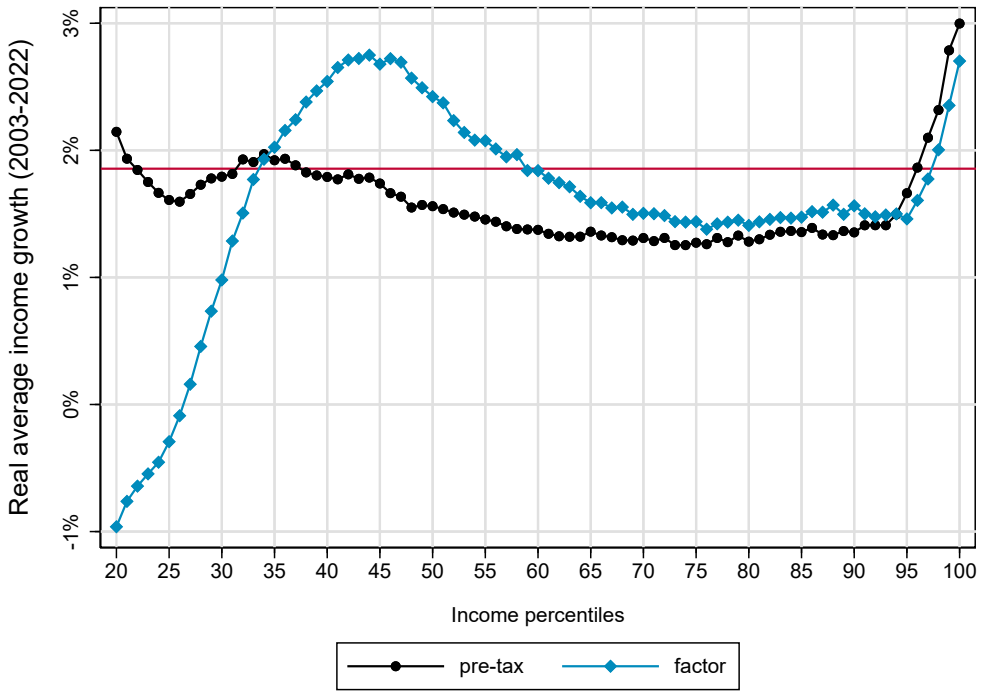


Figure D13: Income growth across the pre-tax and factor income distribution, 2003–2022

Note: The figure compares annualized real income growth across the pre-tax and factor income distributions over the period 2003–2022. For each percentile, the black line reports growth in per-adult pre-tax national income, while the blue line reports growth in factor income. The horizontal red line indicates the aggregate macroeconomic growth rate over the same period. Percentiles refer to the respective income concept, so individuals may occupy different ranks in the pre-tax and factor income distributions.

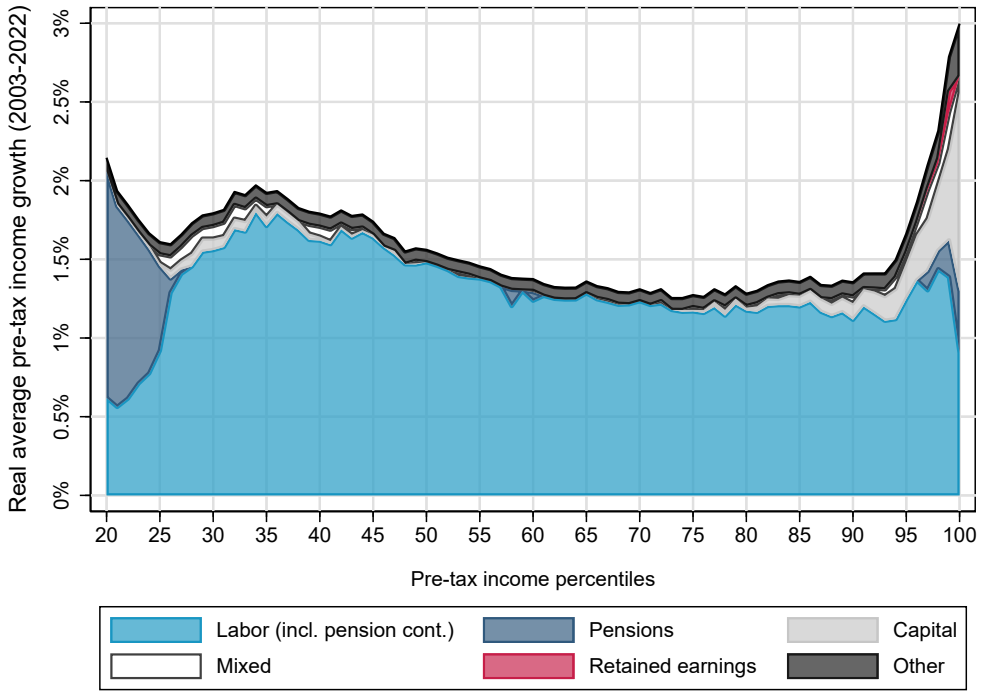


Figure D14: Income growth decomposition across the pre-tax income distribution, 2003–2022

Note: The figure displays the decomposition of annualized real growth in (per-adult) pre-tax national income across the income distribution over the period 2003–2022. For each percentile, total income growth is broken down into contributions from labor income (including pension contributions), pensions, capital income, retained earnings, mixed income, and other income sources. Areas represent the contribution of each income component to overall growth at a given percentile. By construction, the sum of all components at each percentile equals the total growth rate shown in the corresponding distributional growth profile.

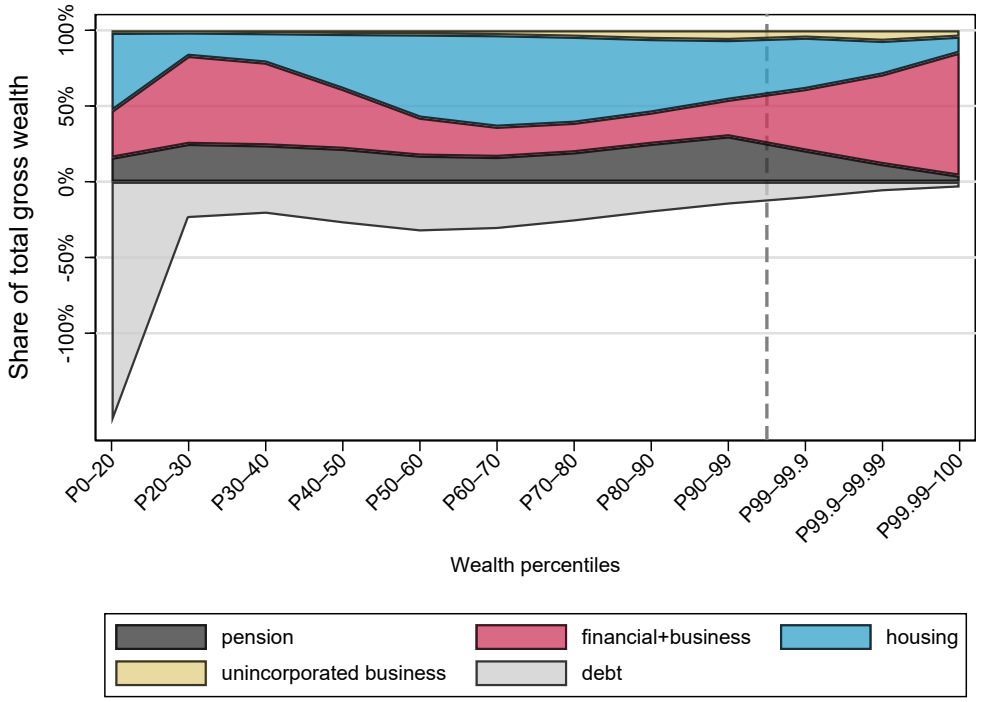
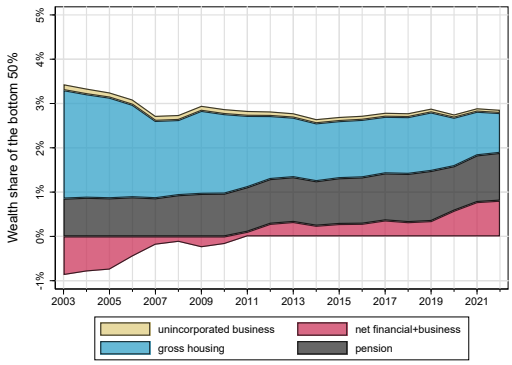
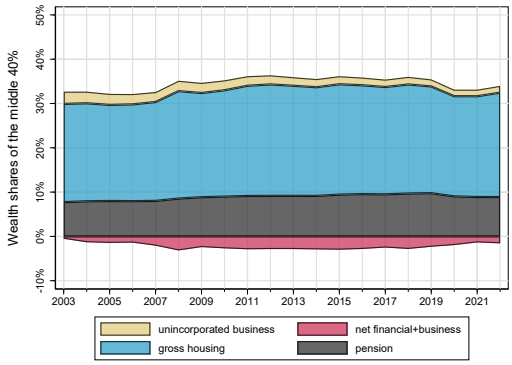


Figure D15: Wealth composition across the full private wealth distribution

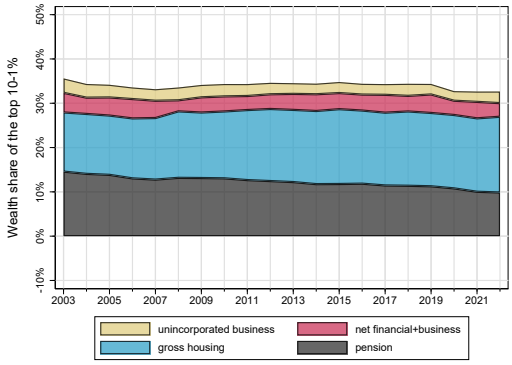
Note: The figure displays the composition of private wealth across the distribution, from the bottom 20% to the top 0.01%, measured as shares of total wealth within each percentile group. Wealth is decomposed into pensions, housing, financial and business assets, unincorporated business wealth, and debt (negative values). "Unincorporated business" refers to business wealth held in non-incorporated firms (Blanchet & Martínez-Toledano, 2023). The dashed vertical line marks the top 1% threshold. Estimates are based on Distributional National Accounts (DINA) concepts and are expressed as percentages of total wealth within each group.



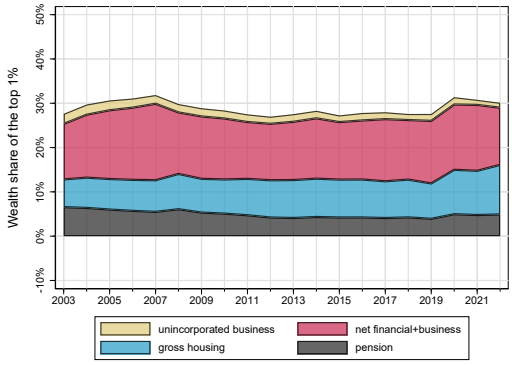
(a) Bottom 50%



(b) Middle 40%



(c) Top 10-1%



(d) Top 1%

Figure D16: Wealth composition by wealth group over time

Note: The figure shows the composition of private net wealth over time (2003–2022) for different wealth groups: bottom 50%, middle 40%, top 10-1%, and the top 1%. Negative values (dashed line) reflect net liabilities in financial and business assets. "Unincorporated business" refers to business wealth held in non-incorporated firms (Blanchet & Martínez-Toledano, 2023). In each panel, the component areas sum to the respective group's share of aggregate private wealth.

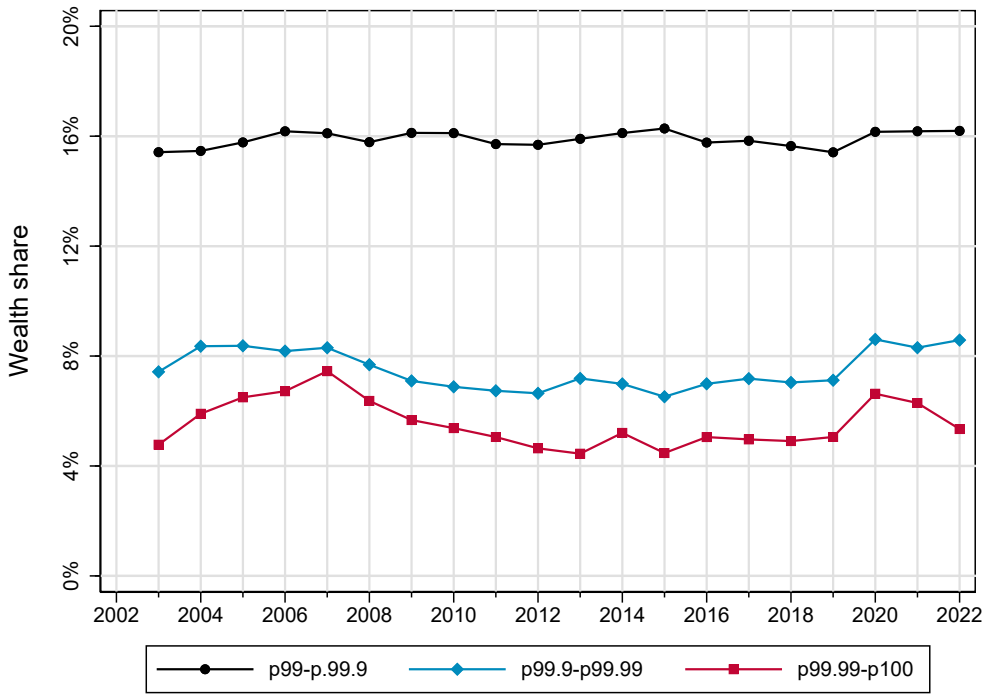


Figure D17: Private wealth inequality within the top 1%, 2003–2022

Note: The figure decomposes the top 1% wealth share into three subgroups: p99–p99.9, p99.9–p99.99, and p99.99–p100. Wealth is measured at market value and based on our DINA-consistent microdata. The unit of observation is the individual; wealth of married couples is split equally between spouses. Shares are expressed as percentages of total private wealth in each year. Note that these estimates may be less precise than those for larger population groups, as we are relying on a small number of observations.

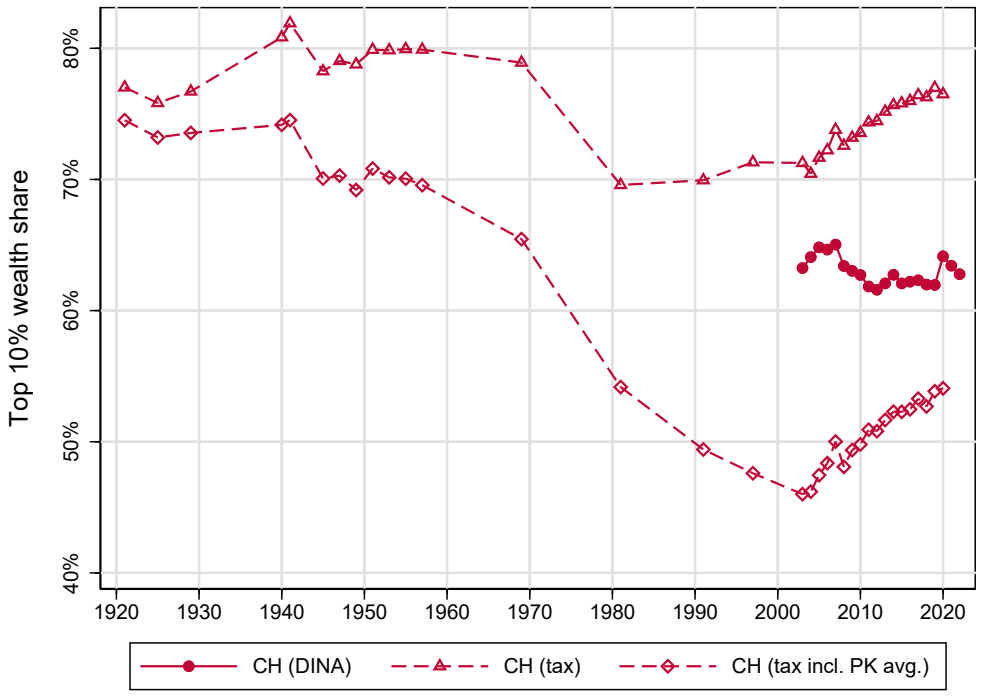


Figure D18: Top wealth inequality estimates for Switzerland

Note: The figure compares alternative estimates of the Swiss top 10% private wealth share. The CH (DINA) series is constructed in this paper using market-value wealth and DINA-consistent methodology. The CH (tax) series is based on tabulated wealth tax statistics. The CH (tax incl. PK avg.) series augments tax data with average pension wealth. The tax statistics are taken from Föllmi and Martínez (2017). Differences across series reflect valuation methods, pension treatment, and unit of observation. Wealth shares are expressed as percentages of total private wealth.

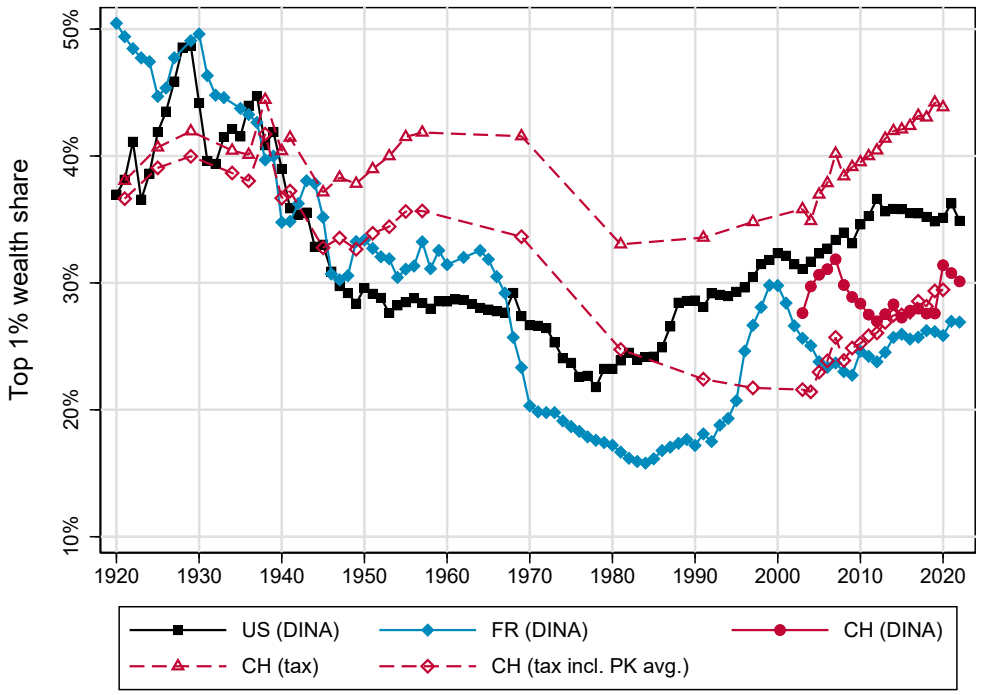


Figure D19: Top 1% private wealth share in international comparison

Note: The figure reports the share of total private wealth owned by the top 1% of the wealth distribution for the United States (black squares), France (blue diamonds), and Switzerland (red dots) according to DINA wealth concepts. Estimates for the United States and France are obtained from the World Inequality Database (WID.world), based on work by (Saez & Zucman, 2016) for the US and (Blanchet & Martínez-Toledano, 2022) for France. All DINA series are conceptually harmonized and therefore comparable across countries. For comparison with previous estimates for Switzerland, we also report updated Swiss estimates based on tabulated wealth tax statistics (red hollow triangles), and on wealth tax statistics augmented by pension wealth averages (red hollow diamonds) from Föllmi and Martínez (2017). Figure 8 shows the corresponding top 10% series.

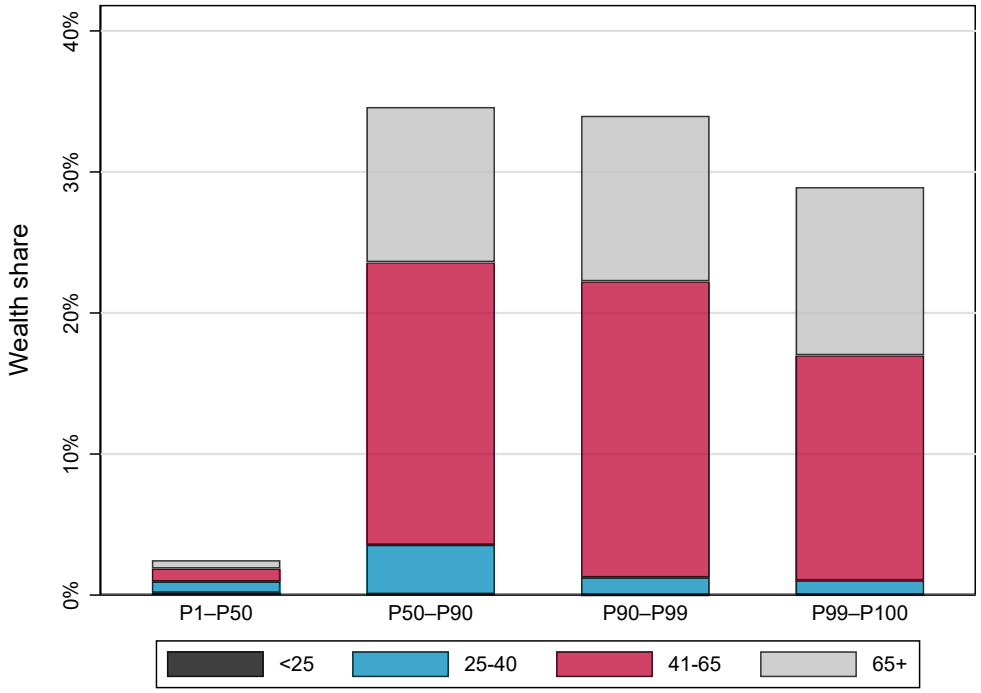


Figure D20: Age-group wealth shares across the private wealth distribution

Note: The figure decomposes net wealth shares owned by different wealth groups (P1–P50, P50–P90, P90–P99, and P99–P100) by age group (<25, 25–40, 41–65, and 65+). Data pooled over 2003–2020. Wealth shares are constructed using DINA-consistent concepts and scaled to match aggregate private wealth totals. The unit of observation is the individual; for married couples, wealth is split equally between spouses.

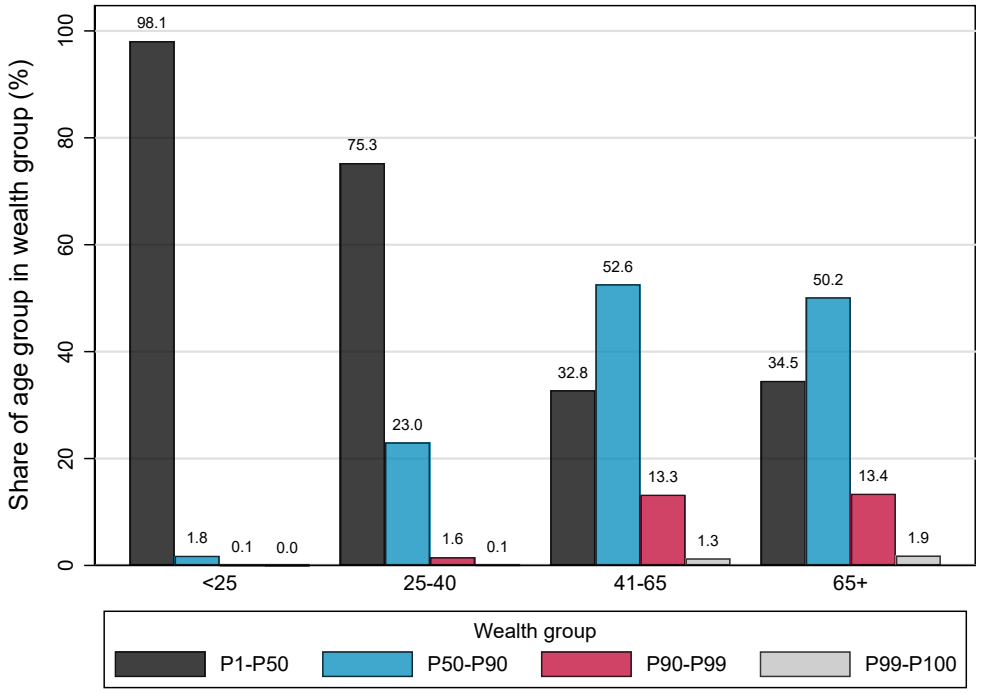


Figure D21: Distribution of age-groups across the private wealth distribution

Note: The figure shows how the different age groups (<25, 25–40, 41–65, and 65+) are distributed across wealth groups (P1–P50, P50–P90, P90–P99, and P99–P100). Data pooled over 2003–2020.

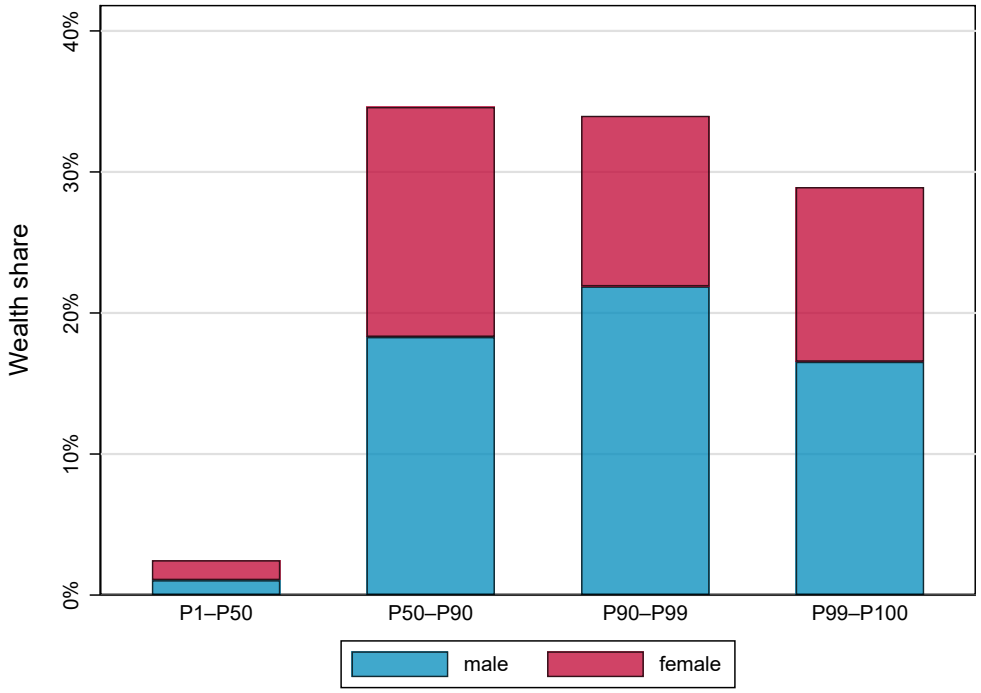


Figure D22: Gender shares across the private wealth distribution

Note: The figure decomposes the share of total private wealth owned by different wealth groups (P1–P50, P50–P90, P90–P99, and P99–P100) by gender. For married couples, wealth is split equally between spouses. Shares therefore understate gender inequality to the extent that intra-household wealth is unevenly distributed. Data pooled over 2003–2020.

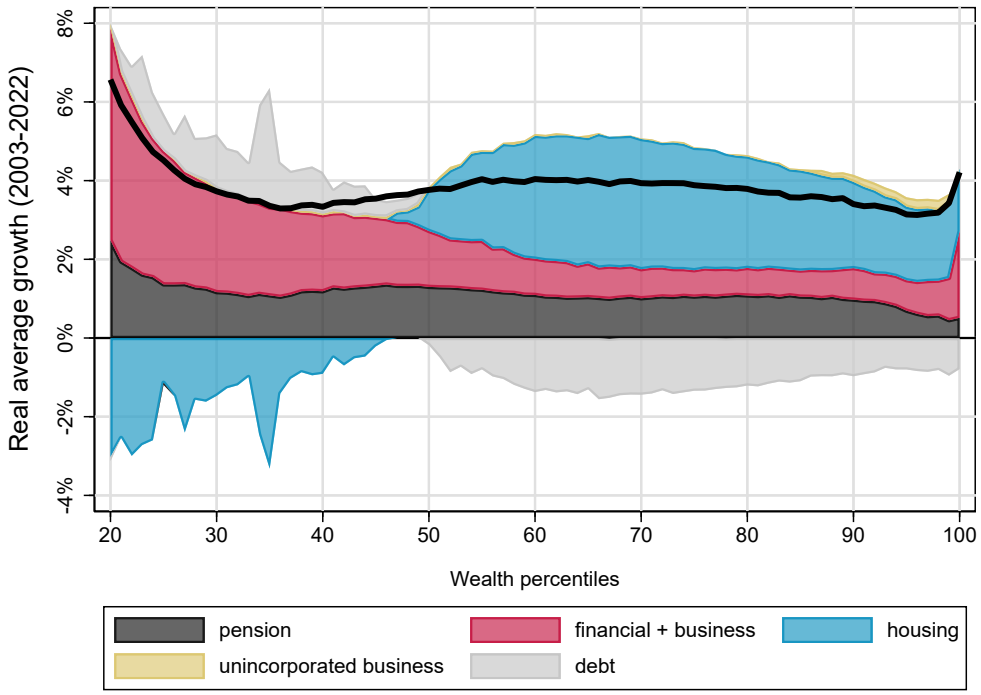
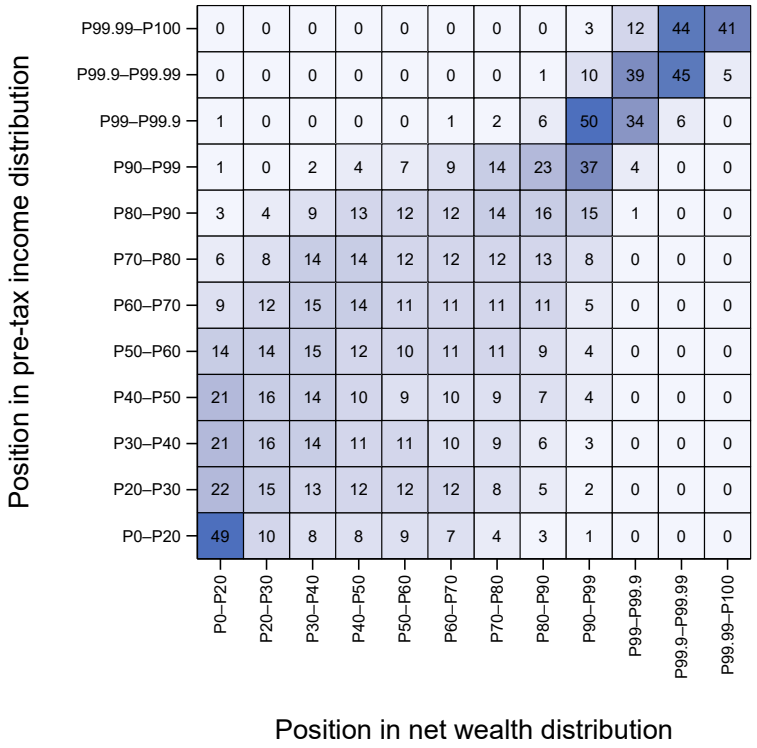


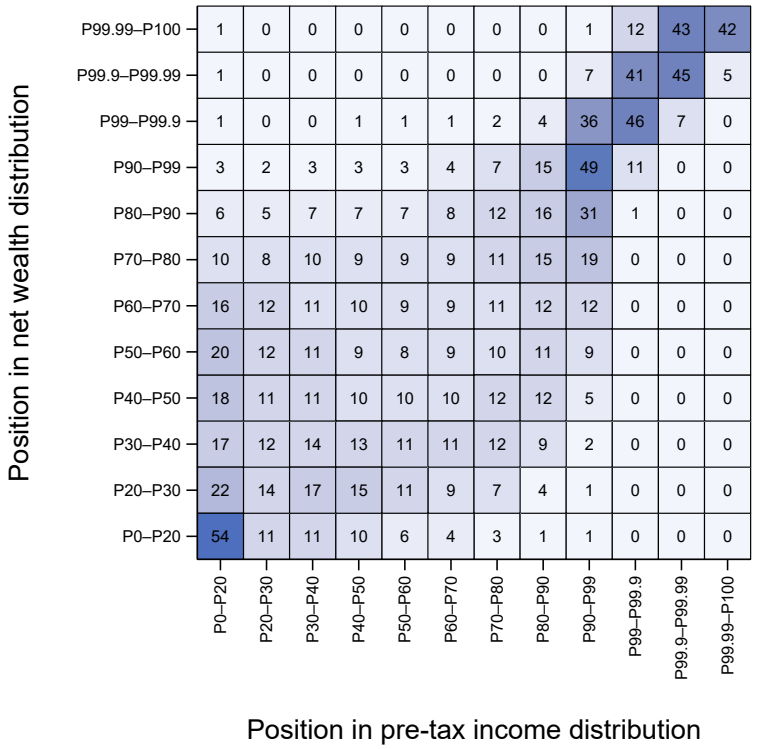
Figure D23: Wealth growth decomposition across the private wealth distribution, 2003–2022

Note: The figure decomposes average annual real wealth growth by percentile of the wealth distribution over the period 2003–2022. The solid black line shows total real wealth growth (as in 9). Colored areas indicate the contribution of major asset components—pension wealth, financial and business assets, housing, unincorporated business assets, and debt—to overall growth at each percentile. Wealth is measured at market value and based on our DINA-consistent microdata. Contributions are computed at the percentile level and sum to total growth. The unit of observation is the individual; wealth of married couples is split equally between spouses.



Note: relative row frequencies.

(a) By pre-tax income

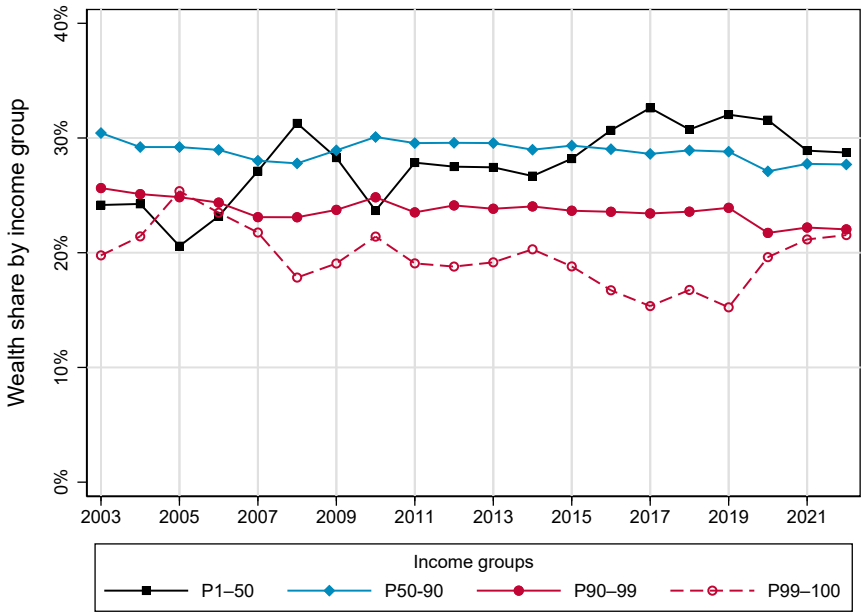


Note: relative row frequencies.

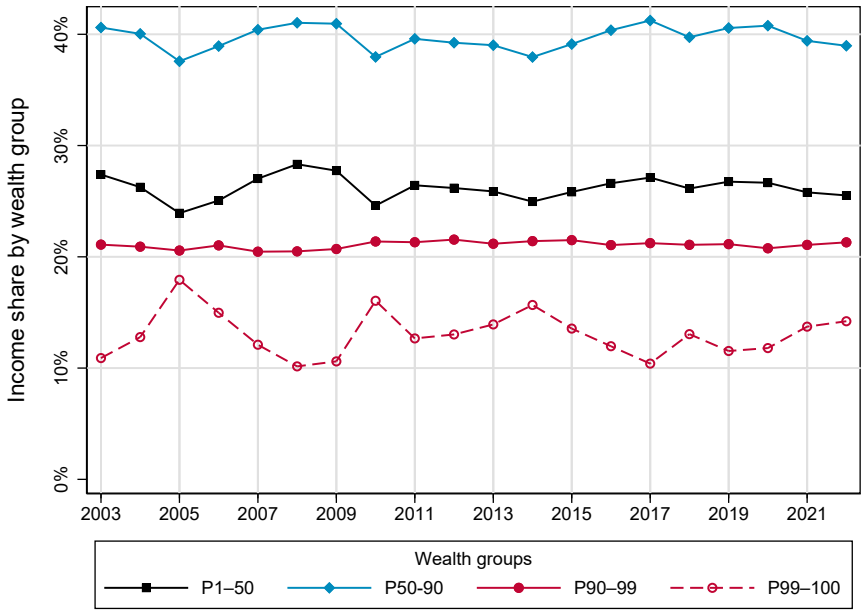
(b) By private wealth

Figure D24: Joint distribution matrix by income and wealth groups

Note: Each cell reports the relative row frequency (in percent) of individuals belonging to a given percentile group in the joint distribution of pre-tax income and net wealth. Rows therefore sum to 100. Darker shading indicates a higher concentration of observations within a given income–wealth cell. Panel (a) conditions on the pre-tax income distribution, while panel (b) conditions on the net wealth distribution.



(a) Wealth share by pre-tax income groups



(b) Income share by wealth groups

Figure D25: Wealth and income shares by income and wealth groups

Note: This figure reports the share of private wealth owned by each pre-tax national income group (Panel a), and the share of pre-tax national income flowing to each wealth group (Panel b).

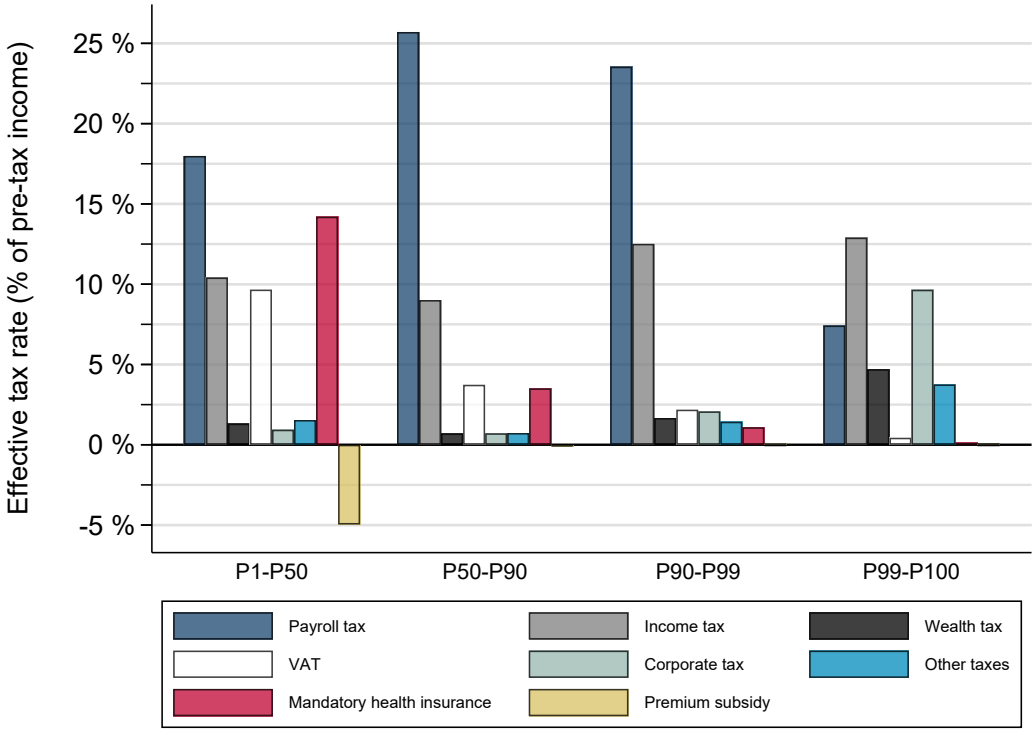
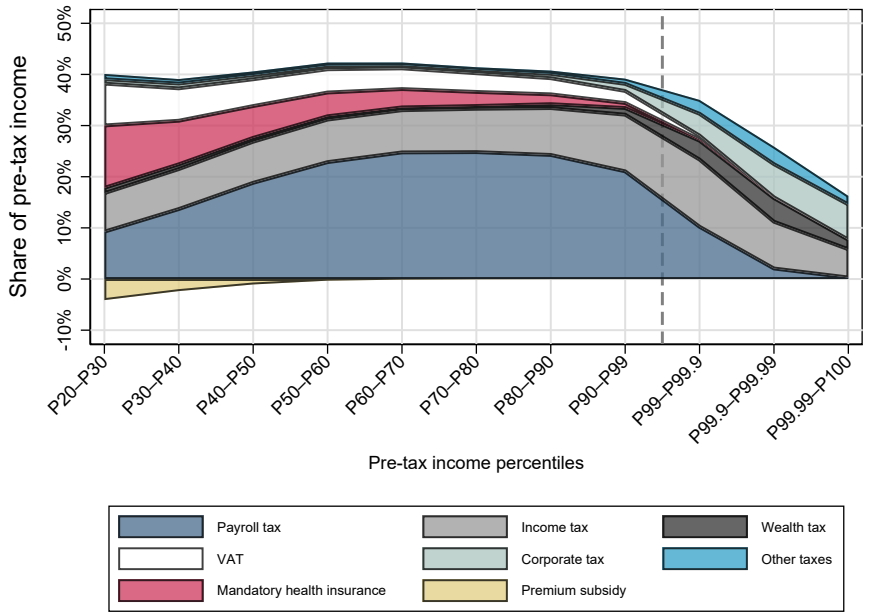
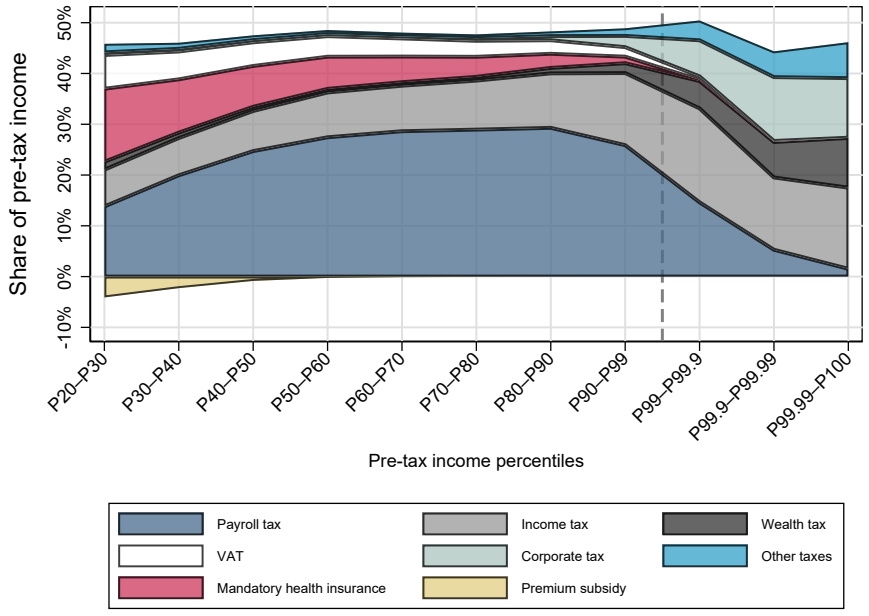


Figure D26: Tax burdens for different income groups, 2003–2022

Note: The figure shows the composition of the overall tax burden for different pre-tax income groups, averaged over 2003–2022. The tax burden is expressed as a share of pre-tax income for each income group. Each bar represents the contribution of a different tax or transfer: payroll taxes, value added taxes, mandatory health insurance contributions, premium subsidies (negative), income taxes, corporate taxes, wealth taxes, and other taxes. Figure 12 shows the effective tax burden by percentile along the entire distribution.



(a) 2005: the most regressive year



(b) 2020: the most progressive year

Figure D27: Tax burden composition across the income distribution, 2005 and 2020

Note: The figure shows the composition of the overall tax burden across the pre-tax income distribution in 2005 (Panel a), the most regressive year in the 2003-2022 period, and 2020 (Panel b), the most progressive year (except 2008, which is an outlier shaped by the global financial crisis). The tax burden is expressed as a share of pre-tax income for each income percentile group. Stacked areas represent the contribution of different taxes and transfers: payroll taxes, value added taxes, mandatory health insurance contributions, income taxes, corporate taxes, wealth taxes, and other taxes. Negative values reflect premium subsidies that reduce the overall tax burden for lower-income households. The dashed vertical line indicates the top 1 percent of the income distribution, with further detail provided for the top 0.1 percent and top 0.01 percent.

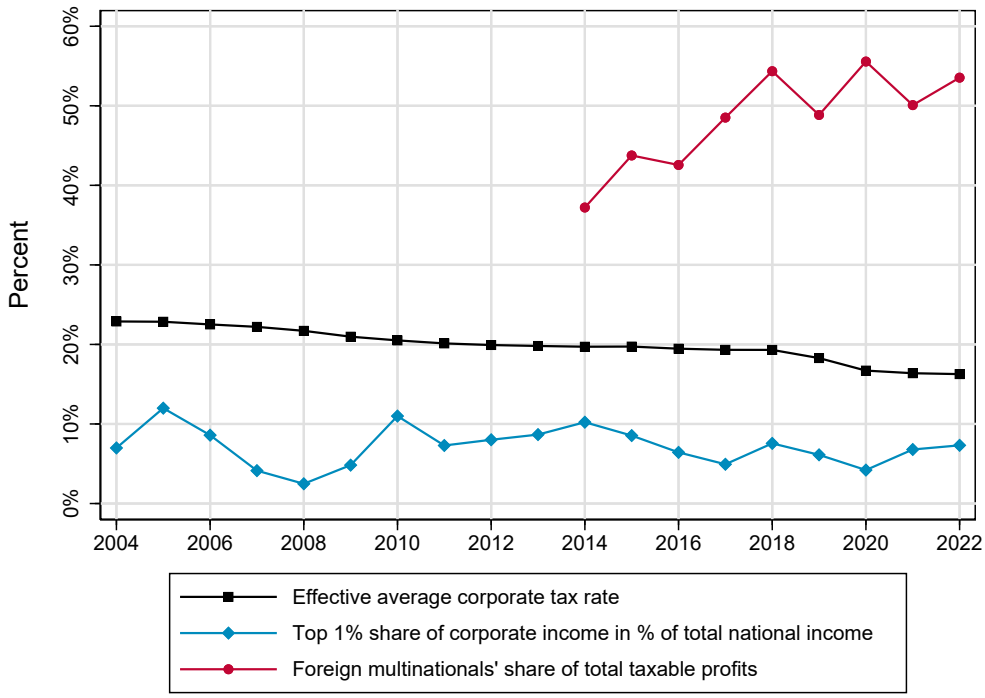


Figure D28: Effective corporate tax rates and foreign multinationals' profit share, 2004–2022

Note: The figure shows the evolution of corporate tax rates and foreign taxable profits in Switzerland over the period 2004–2022. The black line reports the average effective corporate tax rate in Switzerland, based on data from the FTA, an updated version of Krapf and Staubli (2025). The blue line shows the top 1%'s share of corporate income as a share of total national income. The red line reports the share of foreign multinationals' profits in total taxable corporate profits, based on linked micro tax data from the FTA and the Enterprise Group Statistics of the FSO, following Baselgia et al. (2026).

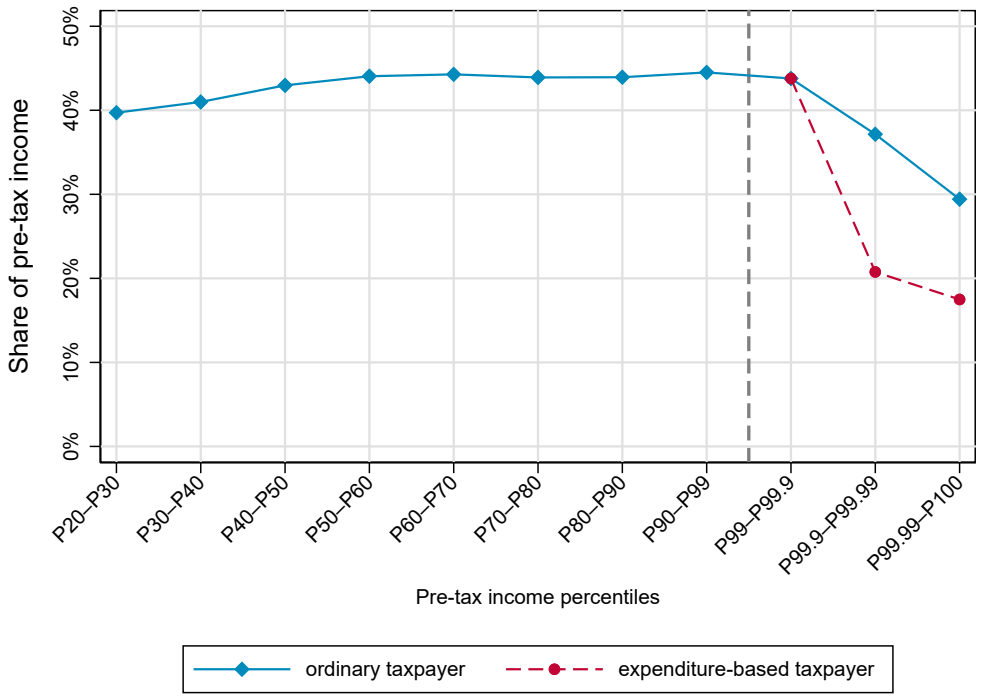
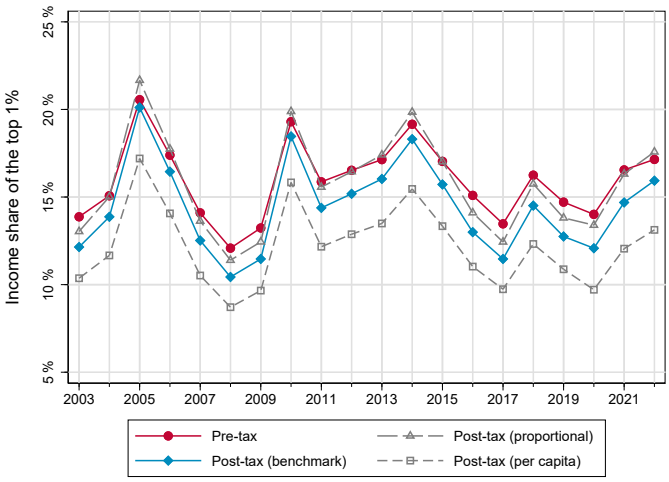
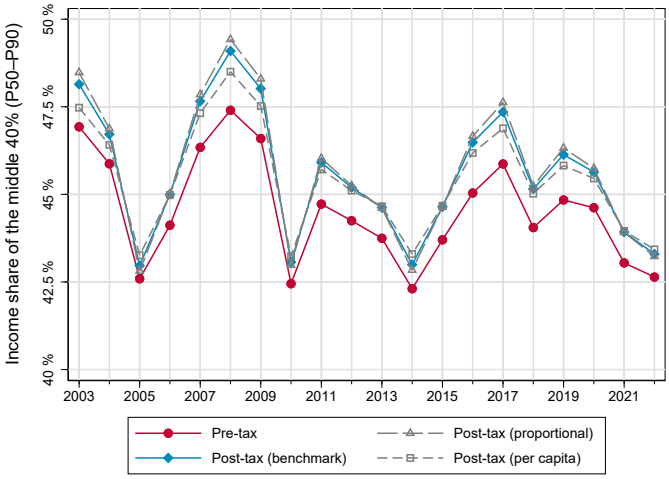


Figure D29: Tax progressivity across the income distribution, 2003–2022

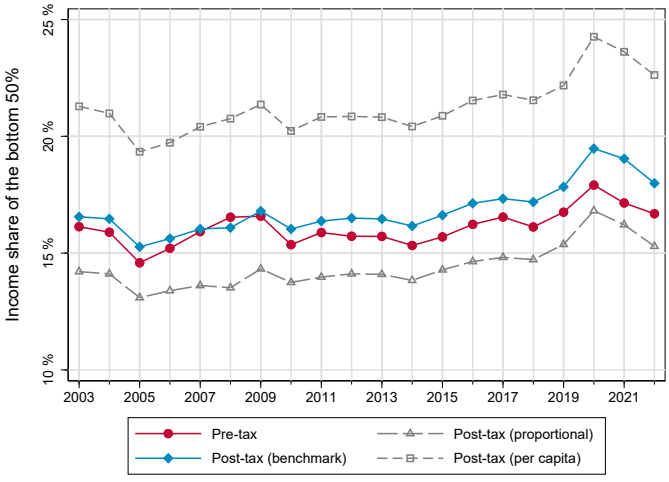
Note: The figure shows average tax rates across the pre-tax income distribution over the period 2003–2022. The blue line reports effective tax rates for ordinary taxpayers, while the red dashed line shows rates for expenditure-based taxpayers at the top of the distribution. The dashed vertical line marks the threshold above which the expenditure-based taxation regime applies. All values are expressed as a share of pre-tax income.



(a) Top 1%



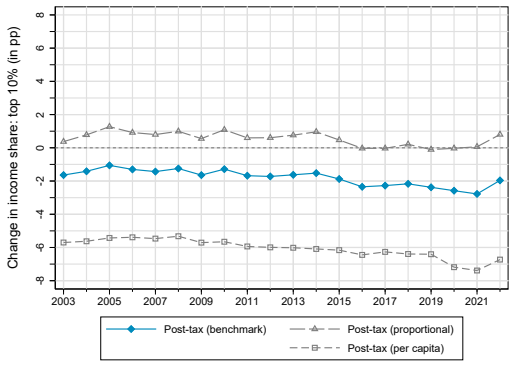
(b) Middle 40%



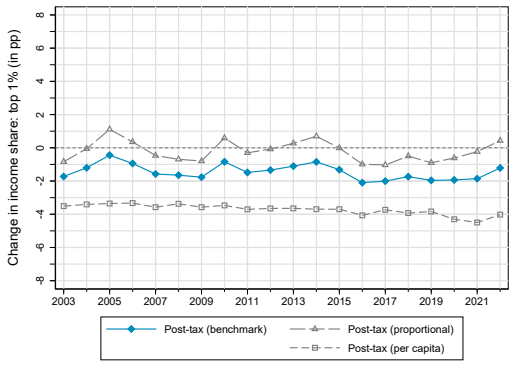
(c) Bottom 50%

Figure D30: Top income shares: pre-tax vs. post-tax, 2003–2022

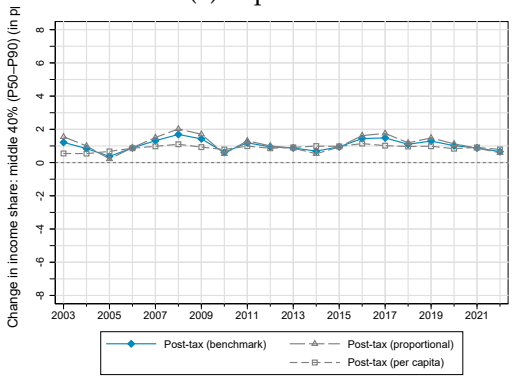
Note: The figure plots the bottom 50%, middle 40% and top 1% share of pre-tax and post-tax national income from 2003 to 2022. The post-tax series correspond to three different allocation assumptions for public spending: our benchmark series, an upper bound (per-capita allocation), and a lower bound (allocation proportional to post-tax disposable income). All three series are constructed as detailed in Section 3.6. The top 10% series reported in Figure 13.



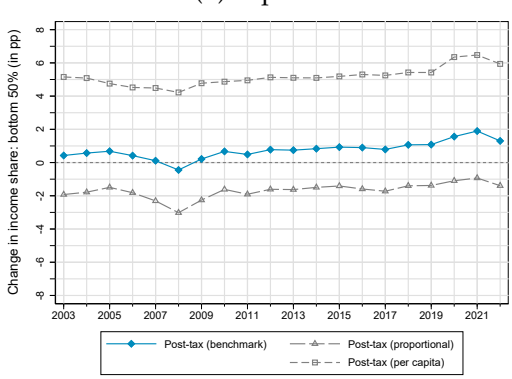
(a) Top 10%



(b) Top 1%



(c) Middle 40%



(d) Bottom 50%

Figure D31: Top income shares: pre-tax vs. post-tax, 2003–2022

Note: The figure shows the percentage-point change in income shares for different income groups when going from pre-tax to post-tax national income under three different allocation assumptions for public spending: our benchmark series, an upper bound (per-capita allocation), and a lower bound (allocation proportional to post-tax disposable income). All three series are constructed as detailed in Section 3.6.

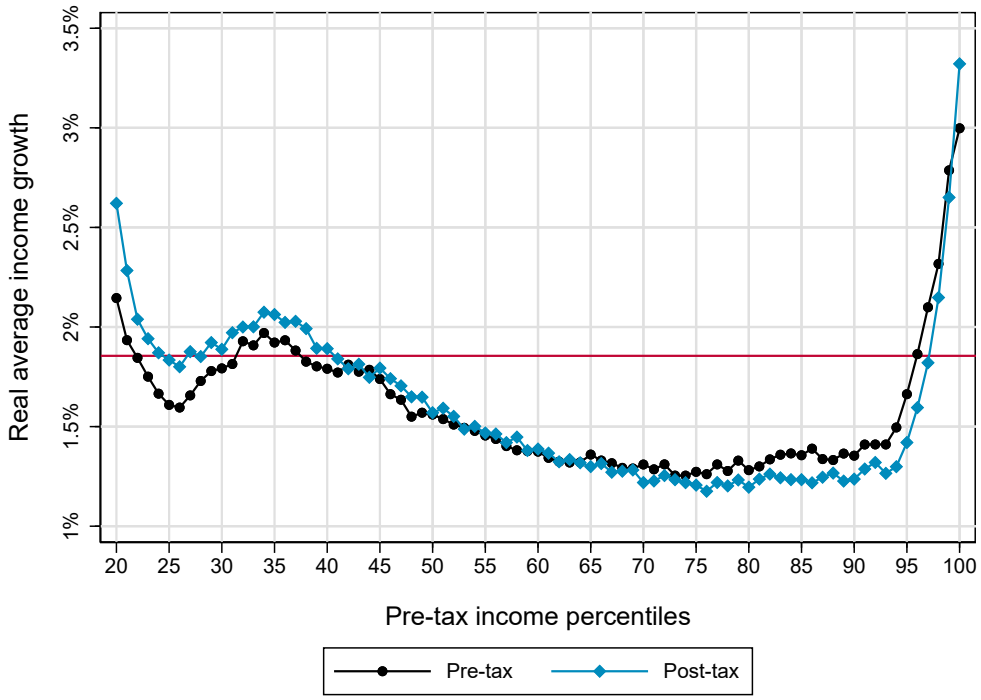
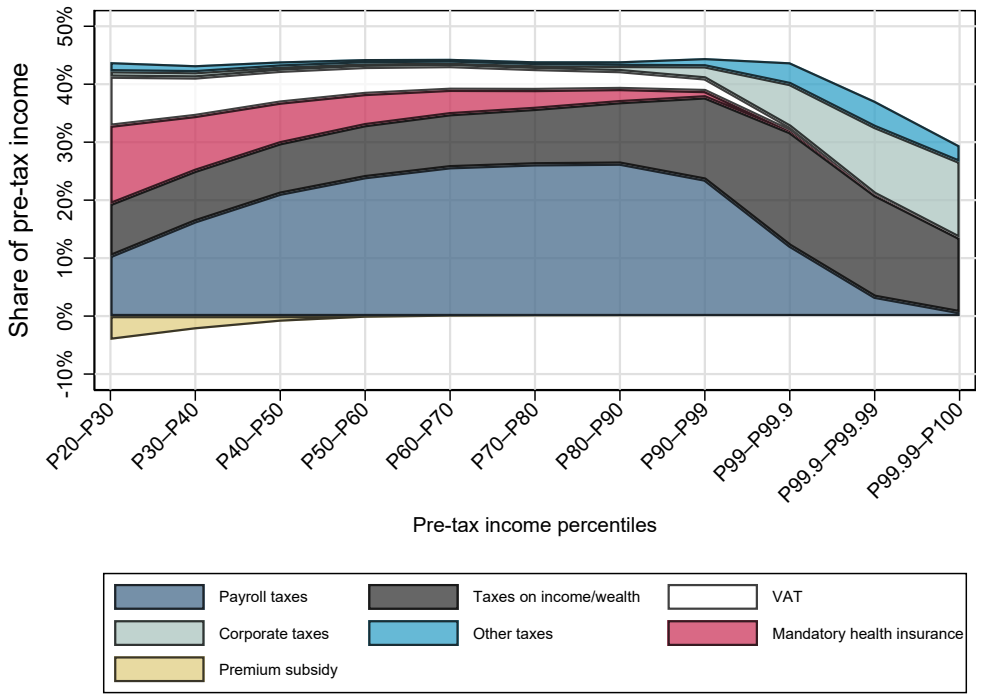
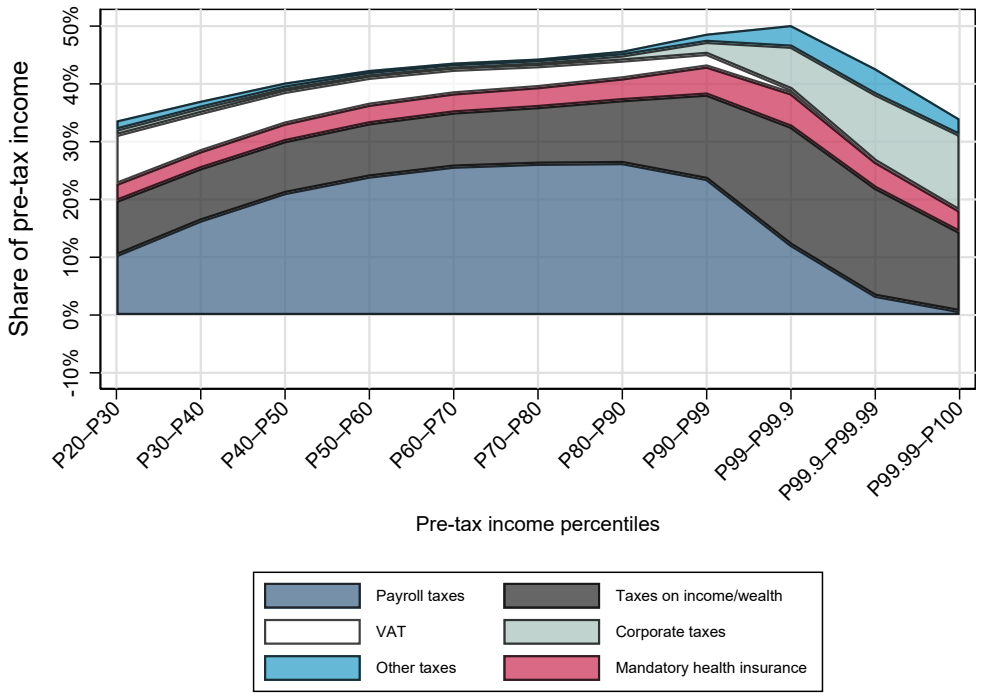


Figure D32: Pre-tax vs. post-tax income growth, 2003–2022

Note: The figure shows real average growth rates of pre-tax income and post-tax national income across the distribution over the period 2003–2022. The horizontal line denotes the overall average growth rate (which is the same for pre-tax income and post-tax national income).



(a) Observed tax rates



(b) Under alternative health insurance policy

Figure D33: Comparison of the observed DINA tax progressivity with the distribution of taxes over income groups under with progressively funded health insurance.

Note: Panel (a) displays the observed tax progressivity measured and described in the main text. In panel (b), we distribute the cost of mandatory health insurance with the same progressivity as the income tax rather than in the per-capita as is the current policy. Panel (b) also removes healthcare premium subsidies and instead distributes this component as a level shifter to post tax disposable income.

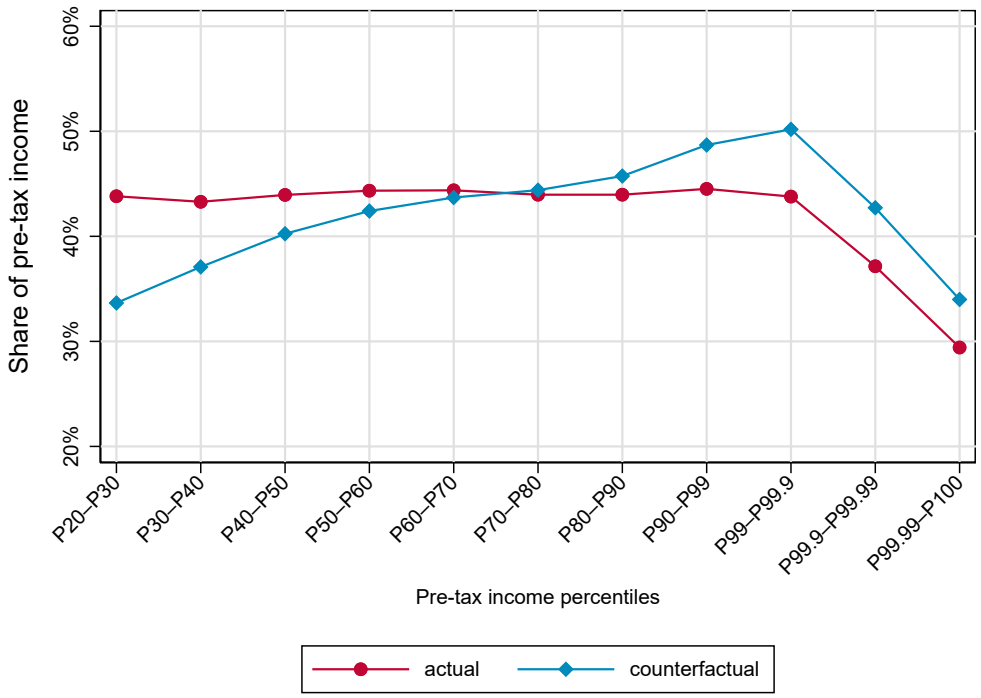
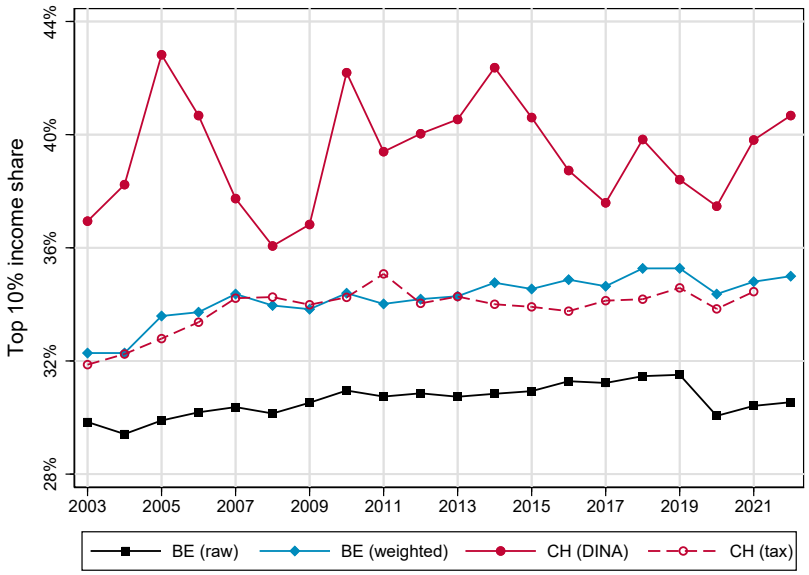
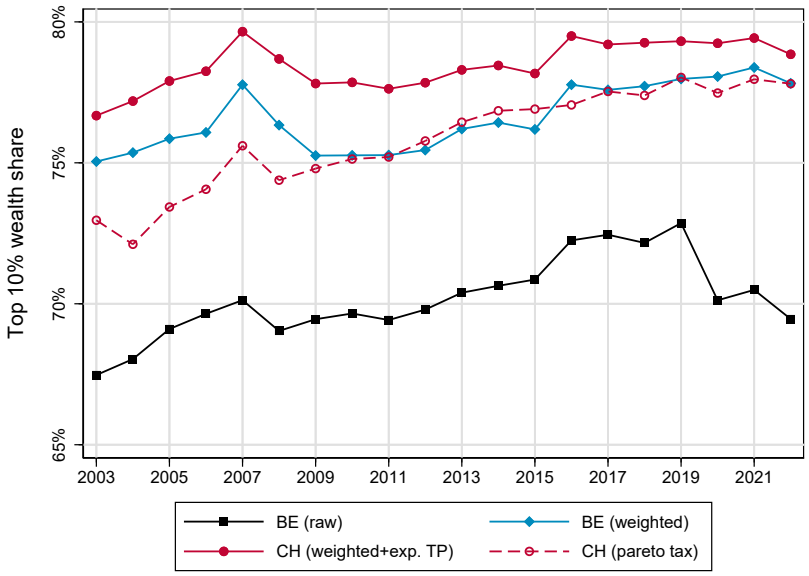


Figure D34: Per-capita vs. income-dependent health care financing

Note: This figure displays the overall average tax rate across the distribution both before and after the change in health insurance financing in one graph. The red line corresponds to the tax burden in Panel (a) of Figure D33 and the blue line to Panel (b).



(a) Income



(b) Wealth

Figure D1: Robustness of the weighting procedure, top 10%

Note: The figures compare top 10% income (D1a) and wealth (D1b) shares in Bern (BE) and Switzerland (CH) under different weighting schemes. "BE (raw)" denotes unweighted Bern microdata, while "BE (weighted)" applies the IPF-based reweighting to match national marginals. Swiss aggregates are shown for comparison using DINA estimates and tax-based measures; in the wealth panel, "CH (weighted–exp. TP)" includes expenditure-based taxpayers and "CH (pareto tax)" applies a Pareto adjustment to the upper tail. The figure assesses whether the weighting procedure brings the Bern distribution closer to national benchmarks and evaluates the sensitivity of top shares to alternative macro-consistent adjustments.

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