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Adjusting the Lens: Aging and the Dynamics of Top Income Shares

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Abstract

Top income shares are widely read as measures of how economies distribute rewards. Yet they also reflect the demographic composition of the workforce. Using nationwide Swiss administrative earnings records from 1981 to 2022, we quantify the contribution of shifts in workforce age composition by holding the age distribution fixed at its 1981 level. This adjustment reduces the measured change in the long-run top 1 percent labor income share by approximately one quarter, compared with only 5 percent for a five-year income mobility adjustment. The demographic adjustment rose as baby-boom cohorts entered their peak-earning years and has exceeded the mobility adjustment since 2006. Our findings show that changes in top income shares can partly reflect shifts in workforce age composition, with implications for interpreting inequality trends over time and across countries.

Keywords: Top Income Shares, Demographic Change, Age Standardization, Income Mobility
JEL Classification: D31, J11, D63, J31

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1 Introduction

Over the past two decades, top income shares have become a central statistic in the study of inequality. Long-run series for dozens of countries (Piketty, & Saez, 2003; Atkinson et al., 2011) have shaped how economists and policymakers think about technological change, globalization, executive pay, and taxation (Smith et al., 2019; Auten, & Splinter, 2024). Changes in top shares are commonly interpreted as changes in how an economy distributes its rewards. Yet measured concentration also depends on population composition: shifts in the relative sizes of demographic groups can alter top shares.

Age is a particularly important dimension of this composition. Earnings rise steeply over the life cycle (Mincer, 1974; Lagakos et al., 2018), so workers in their late forties and fifties are disproportionately represented at the top. Since the 1980s, the baby-boom cohorts have entered the labor market, moved into their peak-earning years, and begun to retire. Yet the role of these demographic shifts in shaping top income shares has received little attention. We ask how much of the observed evolution of top labor income shares reflects changes in the age composition of the workforce.

To assess the importance of demography, we benchmark it against a well-established adjustment to annual top shares: income mobility.[1] Because individuals move into and out of the top, annual shares partly reflect temporary earnings fluctuations, and multi-year income measures generally yield lower concentration (Shorrocks, 1978; Kopczuk et al., 2010; Splinter, 2022; Splinter, & Larrimore, 2026). While income mobility captures changes in individuals' earnings over time, demographic composition captures changes in the relative weight of workers at different stages of their earnings life cycle. Both affect measured concentration, but potentially in different ways.

We use nationwide administrative earnings records from the Swiss social security sys-

[1] Income mobility for the time period 1981–2010 is preliminarily estimated in Martinez (2019).

tem, covering all employed and self-employed individuals from 1981 to 2022: 206.6 million person-years for 19.9 million individuals. The records are not top-coded, include self-employment income, and allow us to observe both earnings and age over four decades. To measure demographic effects, we reweight each year's workforce to the 1981 age distribution and recompute top income shares using weighted quantiles, following the logic of age standardization (Kitagawa, 1955). To assess the role of mobility, we follow Splinter, & Larrimore (2026) and compare the average of annual top shares over a centered five-year window with the top share of five-year average earnings.

Switzerland is an informative setting: its top income shares have remained comparatively stable (Frey, & Schaltegger, 2016; Foellmi, & Martínez, 2017), while sustained immigration has moderated population aging relative to other European countries (OECD, 2024). This setting allows us to assess the importance of demographic change for measured income concentration even where population aging has been comparatively moderate. We focus on labor income because our question concerns the labor market: how the age structure of the workforce shapes the concentration of earnings among workers. Capital income also reflects accumulated wealth and continues to accrue after workers leave the labor force. Labor earnings have driven much of the rise in income inequality in the United States and large European economies (Hoffmann et al., 2020) and remain the dominant income source across most of the Swiss distribution (Martínez, 2021).

Our study reveals three main findings. First, the demographic adjustment is close to zero until the late 1990s but increases as the baby-boom cohorts move into their peak-earning years. Since 2006, it has remained between 0.49 and 0.6 percentage points, equivalent to about 6 percent of the observed top 1 percent labor income share in 2022. Holding the workforce age distribution fixed at its 1981 level reduces the change in the top 1 percent share between 1983 and 2020 by approximately one quarter and between 1992 and 2006 by more than one third. Thus, a substantial part of the observed change in top labor income

concentration reflects changes in workforce age composition.

Second, demographic change matters more for the evolution of top shares than income mobility. The five-year mobility adjustment lowers the top 1 percent share by an average of 0.37 percentage points, but remains relatively stable over time, reducing its change between 1983 and 2020 by only 5 percent. Since 2006, the demographic adjustment has consistently exceeded the five-year mobility adjustment. Longer averaging windows increase the magnitude of the mobility adjustment.

Third, the relative importance of both adjustments increases toward the very top of the income distribution. Their timing also differs across top-income groups: for the top 10 percent, the demographic adjustment peaks in 2006 and subsequently declines as the oldest baby-boom cohorts retire, whereas for the top 1 and 0.1 percent, it peaks later, in 2017, and shows no clear decline thereafter.

We contribute to three strands of literature. First, we add to research on the measurement of top income shares (Piketty, & Saez, 2003; Atkinson et al., 2011; Auten, & Splinter, 2024; Geloso et al., 2022) by showing that population composition matters alongside income definitions and tax units. Second, we extend work on age and inequality, which has distinguished life-cycle from lifetime inequality (Paglin, 1975; Mookherjee, & Shorrocks, 1982; Deaton, & Paxson, 1994) and examined how demographic shifts affect wage dispersion and overall inequality (DiNardo et al., 1996; Lemieux, 2006; Almås et al., 2011; Dolls et al., 2019; C. H. Kim, & A. T. Kim, 2024). We bring this perspective to the upper tail of the income distribution. Third, we contribute to the literature on income mobility and top income shares (Kopczuk et al., 2010; Auten, Gee, et al., 2013; Splinter, 2022; Splinter, & Larrimore, 2026). Within this literature, Hérault et al. (2024) show that rising top-income persistence in Australia is driven primarily by increasing persistence within age groups, particularly among workers aged 55–64, rather than by changes in the age composition of top earners. We shift the focus from persistence at the top to the evolution of top

income shares themselves, showing that changes in workforce age composition contribute to observed trends in income concentration.

The remainder of the paper is organized as follows. Section 2 describes the data, and Section 3 defines our measures. Section 4 documents workforce aging and top-income persistence. Section 5 presents the main results, Section 6 reports robustness checks, and Section 7 concludes.

2 Data

Measuring how changes in workforce age composition affect top income shares requires earnings records that identify individuals' ages and capture the upper tail without top-coding. To benchmark the demographic adjustment against income mobility, the records must also follow individuals over time. Annual social security earnings records (SSER) from the Swiss Central Compensation Office (CCO) meet these requirements. They cover virtually all individuals living or working in Switzerland and report annual gross earnings from employment and self-employment between 1981 and 2022. Our main sample comprises 206.6 million person-year observations for 19.9 million individuals. Because social security contributions are levied on earnings without an upper limit, the records are not top-coded and capture income from self-employment, an important source of income volatility at the top (Splinter, & Larrimore, 2026). As the basis for old-age and survivors' insurance contributions, they provide comprehensive administrative information on labor earnings.

Following the Federal Statistical Office definition of the working-age population, we restrict the sample to individuals aged 20–65. Our income measure consists of annual labor earnings from employment and self-employment subject to social security contributions.[2]

[2]The CCO data also contain records of social security benefits subject to contributions, voluntary contributions from Swiss citizens abroad, and contributions from non-employed individuals. We exclude the latter two categories, as well as observations without a social security number. Non-pension-forming income earned in the year of retirement t_r is added to total earnings in that year. Income from self-

For multi-year averages, earnings are deflated using the Swiss consumer price index to 2023 francs. Appendix Tables B1 and B2 provide annual summary statistics for age and nominal and real labor earnings.

The data have two limitations. First, recording errors at some local social security offices resulted in missing earnings records for approximately 5–6 percent of wage earners in 1998. Figure A2 documents this discrepancy through a spike in individuals observed in 1997 and 1999 but not in 1998. Second, the introduction of a new individual identification number format in 2008 led some annual earnings records to be split across different IDs, creating fragmented earnings histories. As Figure A2 shows, this affects 2007–2009. We therefore exclude these four years from the reported results.[3]

3 Measuring Demographic Composition and Mobility

This section introduces our measures of top income concentration. We begin with the conventional annual top share, followed by the age-standardized share that captures the contribution of changes in workforce age composition. We then apply an established multi-year income adjustment to benchmark the demographic adjustment against income mobility. Finally, we show how the adjustments contribute to changes in top shares over time.

3.1 Annual top shares

Let $y_{i,t}$ denote nominal annual labor earnings of individual i in year t, and let $q_{p,t}$ denote the pth percentile of the annual earnings distribution. The annual income share of earners

employed farming, including capital gains, is included. Negative cancellations are excluded. Care credits, child-raising credits, and splitting amounts are also excluded because they do not represent direct earnings from employment.

[3]Figure A2 also reveals a discrepancy in 1989 and 1990. Despite written consultation with the CCO, its cause remains unclear. Results for these years should therefore be interpreted with caution.

above this threshold (e.g., $p = 0.90$ for the top 10 percent) is

$$S_{p,t}^{\text{ann}} = \frac{\sum_{i:\, y_{i,t} \geq q_{p,t}} y_{i,t}}{\sum_i y_{i,t}}. \tag{1}$$

This conventional measure serves as the benchmark for the adjustments that follow.

3.2 Aging: Age-standardized top shares

The aggregate earnings distribution is a weighted mixture of age-specific earnings distributions, where the weights reflect each age group's share of the workforce. Because earnings generally rise over much of the working life, individuals in their late forties and fifties are disproportionately represented among top earners. Changes in workforce age composition can therefore affect both the level and evolution of top income shares.

To quantify this composition effect, we standardize the workforce age distribution to its 1981 structure. Let $s_{a,t}$ denote the share of workers aged a in year t. Each individual receives the weight

$$r_{i,t} = \frac{s_{a_{i,t},1981}}{s_{a_{i,t},t}}, \tag{2}$$

where $a_{i,t}$ denotes individual i's age in year t. This weighting restores the 1981 age distribution in each year: age groups that have become relatively more numerous receive weights below one, while those that have become less numerous receive weights above one.

The age-standardized top share is calculated using the weighted earnings percentile $q_{p,t}^r$ (Akinshin, 2023) and weighted income sums:

$$S_{p,t}^{\text{age}} = \frac{\sum_{i:\, y_{i,t} \geq q_{p,t}^r} r_{i,t}\, y_{i,t}}{\sum_i r_{i,t}\, y_{i,t}}. \tag{3}$$

Individuals remain ranked by their observed earnings; the weights change only their relative

representation in the distribution. The age-composition gap is defined as

$$V_{p,t}^{\text{age}} = S_{p,t}^{\text{ann}} - S_{p,t}^{\text{age}}. \tag{4}$$

By construction, $V_{p,1981}^{\text{age}} = 0$. A positive gap indicates that the workforce age composition in year t raises the observed top share relative to the counterfactual with the 1981 age distribution. The procedure is analogous to age standardization in demography (Kitagawa, 1955) and follows the logic of reweighting decompositions (DiNardo et al., 1996; Fortin et al., 2011).

3.3 Mobility: Multi-year top shares

To assess the relative importance of demographic composition, we compare its contribution with an established adjustment for income mobility. Annual earnings contain both persistent and transitory components. Temporary positive earnings shocks can move individuals into the top of the distribution, while negative shocks can move them out. Averaging earnings over several years reduces the influence of these fluctuations and generally produces lower top income shares (Shorrocks, 1978).

Following Splinter, & Larrimore (2026), we use a centered five-year window ($T = 5$) around year t. We first calculate the average of the annual top shares over this window:

$$\overline{S}_{p,t}^{\text{ann}} = \frac{1}{T} \sum_{u=t-2}^{t+2} S_{p,u}^{\text{ann}}. \tag{5}$$

We then calculate the top share based on individuals' five-year average earnings, $\bar{y}_{i,t} = \frac{1}{T} \sum_{u=t-2}^{t+2} y_{i,u}$:[4]

$$S_{p,t}^{\text{multi}} = \frac{\sum_{i:\, \bar{y}_{i,t} \geq \bar{q}_{p,t}} \bar{y}_{i,t}}{\sum_i \bar{y}_{i,t}}, \tag{6}$$

[4]Annual shares for the years excluded in Section 2 cannot be computed. When a five-year window includes such a year, we replace it by the nearest available years outside the window.

where $\bar{q}_{p,t}$ denotes the pth percentile of the distribution of five-year average earnings. The mobility adjustment is defined as

$$V_{p,t}^{\text{mob}} = \overline{S}_{p,t}^{\text{ann}} - S_{p,t}^{\text{multi}}. \tag{7}$$

Comparing the top share of multi-year earnings with the *average* of annual top shares over the same window, rather than with the annual share in the central year, limits the influence of changes in income concentration within the window (Splinter, & Larrimore, 2026). The adjustment captures the reduction in measured concentration associated with averaging individual earnings over time. Its contribution to long-run changes in top shares depends on how this reduction evolves.

3.4 Contributions to changes over time

Finally, we examine how the adjustments contribute to changes in top income shares between two years s and t. By construction,

$$\Delta S_p^{\text{ann}} = \Delta S_p^{\text{age}} + \Delta V_p^{\text{age}}, \qquad \Delta \overline{S}_p^{\text{ann}} = \Delta S_p^{\text{multi}} + \Delta V_p^{\text{mob}}. \tag{8}$$

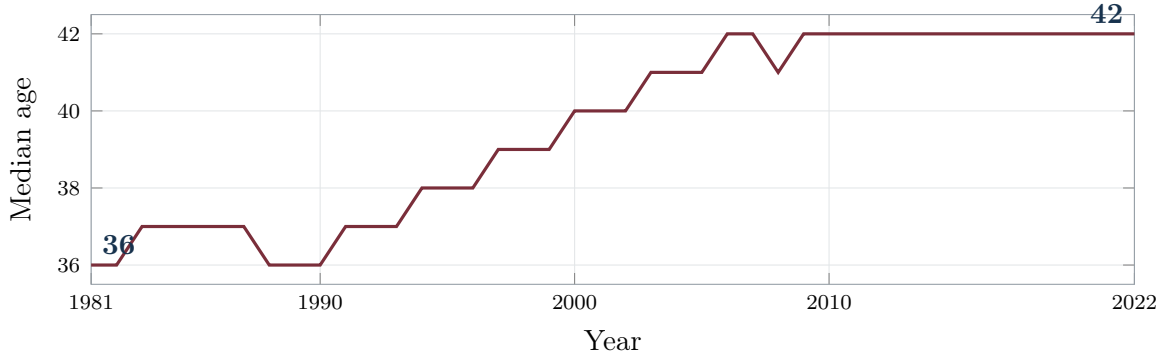
We express the contribution of each adjustment as a fraction of the corresponding change in the observed share: $\Delta V_p^{\text{age}}/\Delta S_p^{\text{ann}}$ for demographic composition and $\Delta V_p^{\text{mob}}/\Delta \overline{S}_p^{\text{ann}}$ for mobility. These accounting contributions are reported in Section 5. They describe how the respective adjustments alter measured trends.

4 Workforce Aging and Top-Income Mobility

Before presenting the adjusted top income shares, we document two features relevant to our analysis: the substantial aging of the Swiss workforce and the persistence of earnings positions at the top, which provides context for the mobility benchmark.

The Swiss workforce aged substantially between 1981 and 2022 (Figure 1). The median age of earners was 36–37 during the 1980s, when the baby-boom cohorts (born approximately between 1946 and 1964) occupied younger and prime working ages. It rose to 42 by 2006 and has remained near that level since. Over the full period, the first and third quartiles increased from 28 to 32 and from 48 to 53, respectively (Appendix Table B1). These shifts are also apparent in the age-specific workforce shares (Appendix Figure A1). The share of workers aged 20–24 fell from 15.8 to 8.5 percent, while the share aged 60–64 rose from 5.2 to 9.5 percent. These patterns reflect the progression of the baby-boom cohorts through the working-age population.

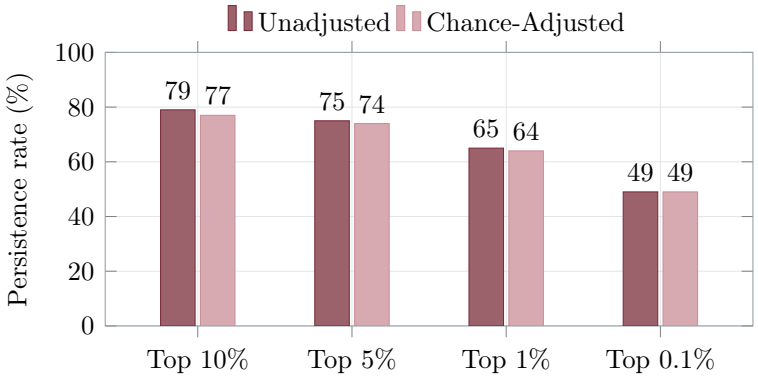
Figure 1: Median age of earners, 1981–2022



Note: The figure depicts the median age of the main sample (individuals age 20–65) for each year of observation.

While these demographic shifts motivate our age-standardization analysis, we use income mobility as a benchmark for assessing their importance. To illustrate the extent of mobility at the top, we examine the persistence of earnings positions over five years.

Figure 2: Five-year persistence in top earnings groups, 2017–2022



Note: Persistence is measured among individuals observed in both 2017 and 2022. Chance-adjusted persistence is defined as $(P - p)/(1 - p)$, where P is the share of individuals in the top group in period t who remain there in $t + 5$ and p is the group's population share (the persistence expected under random mobility).

Among individuals observed in both 2017 and 2022, 79 percent of those initially in the top decile remained there five years later. Persistence declines further up the distribution, with corresponding rates of 65 percent for the top 1 percent and 49 percent for the top 0.1 percent (Figure 2). The reported persistence rates are very similar in magnitude to previous estimates based on United States earnings data, which report a top 1 percent persistence rate of 63.6 percent after five years (Kopczuk et al., 2010). Adjusting for differences in group size yields similar rates of 77, 74, 64, and 49 percent, respectively. Such substantial turnover at the top offers a useful benchmark for judging how much of the change in top income shares demographic shifts alone can explain.

5 Results

This section first examines how workforce age composition affects the evolution of the top 1 percent labor income share, using income mobility as a benchmark. We then quantify the contributions of both adjustments to changes over time and extend the analysis to other top-income groups.

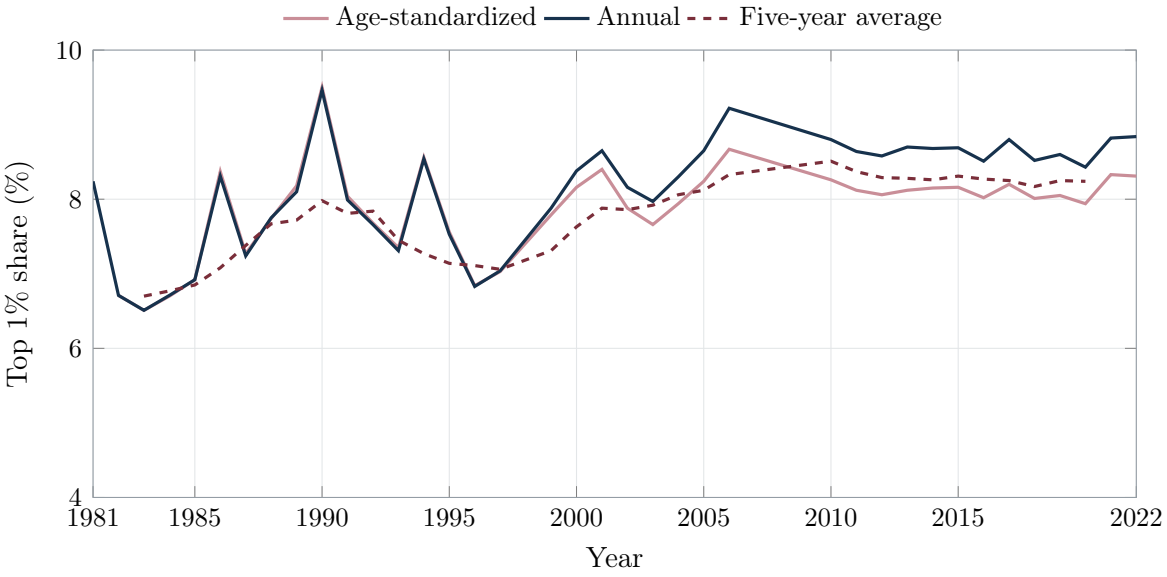
5.1 Workforce aging and the top 1 percent share

Over the observation period, top labor income concentration in Switzerland remained comparatively stable, consistent with evidence from tax data (Foellmi, & Martínez, 2017; Frey, & Schaltegger, 2016) and in contrast to the marked increases observed in English-speaking countries (Atkinson et al., 2011). The top 1 percent share rose from 6.5 percent in 1983 to 9.2 percent in 2006 before declining to 8.8 percent in 2022.

Age standardization reveals a different evolution of income concentration (Figure 3). Until the late 1990s, the age-standardized share closely tracks the observed share. Thereafter, it increasingly falls below the observed series, suggesting that shifts in the age composition of the workforce account for a growing part of measured income concentration. By comparison, the five-year mobility adjustment primarily shifts the level of the top share downward, and the mobility gap remains relatively stable over time.

Figure 4 illustrates these differences more directly. The age-composition gap is close to zero or slightly negative until the late 1990s. It turns persistently positive from 1997, reaches 0.55 percentage points in 2006, and remains between 0.49 and 0.60 percentage points thereafter, peaking in 2017. By 2022, the gap amounts to 0.53 percentage points, equivalent to approximately 6 percent of the observed top 1 percent share. The mobility gap, by contrast, averages 0.37 percentage points between 1983 and 2020 and changes relatively little over time. From 2006 onward, the age-composition gap exceeds the mobility

Figure 3: Top 1 percent labor income share: annual, age-standardized, and five-year

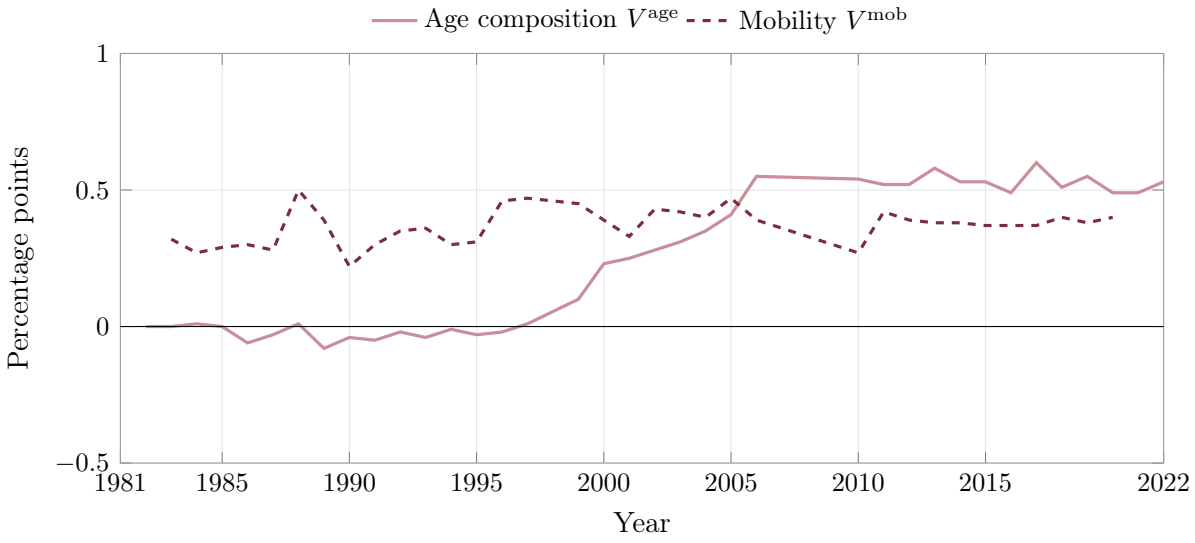


Note: Annual: Eq. (1). Age-standardized: Eq. (3), using 1981 age weights. Five-year average: Eq. (6), centered window, plotted at the window center.

gap in every observed year. For comparison, Splinter, & Larrimore (2026) find that five-year income averaging lowers U.S. top 1 percent fiscal income shares by approximately 1.0 percentage point on average. Differences in income concepts and populations limit direct comparability, but both estimates illustrate how multi-year averaging reduces measured top income concentration.

The evolution of the age-composition gap is consistent with the progression of the baby-boom cohorts through the life-cycle earnings profile. During the 1980s and early 1990s, these cohorts occupied younger and prime working ages, while older, high-earning age groups were comparatively small. As the baby boomers reached their forties and fifties, their growing representation among higher-earning workers increased the demographic contribution to top income shares. Although the oldest cohorts subsequently began retiring, the age-composition gap for the top 1 percent has not yet shown a sustained decline.

Figure 4: Age-composition gap and mobility gap, top 1 percent



Note: V^{age}: observed minus age-standardized annual share (Eq. 4); zero in 1981 by construction. V^{mob}: average of annual shares over a centered five-year window minus the share of five-year average earnings (Eq. 7).

5.2 Time trend comparisons

Table 1 quantifies the different trajectories of the two adjustments. It decomposes changes in the top 1 percent share into the contributions of workforce age composition and income mobility over selected periods.

Table 1: Contributions of demography and mobility to changes in the top 1 percent share

	Age composition (annual shares)				Mobility (five-year windows)			
Period	ΔS^{ann}	ΔS^{age}	ΔV^{age}	Share	$\Delta \overline{S}^{ann}$	ΔS^{multi}	ΔV^{mob}	Share
1983–1992	+1.15	+1.17	−0.02	−2%	+1.17	+1.14	+0.03	3%
1992–2006	+1.56	+0.99	+0.57	37%	+0.53	+0.49	+0.04	8%
2006–2020	−0.79	−0.73	−0.06	8%	−0.08	−0.09	+0.01	–
1983–2020	+1.92	+1.43	+0.49	25%	+1.62	+1.54	+0.08	5%

Notes: $\Delta V^{age} = \Delta S^{ann} - \Delta S^{age}$ and $\Delta V^{mob} = \Delta \overline{S}^{ann} - \Delta S^{multi}$. Share denotes the adjustment term as a percentage of the corresponding total change; it is not reported (–) when the total change is close to zero. All changes are in percentage points.

Over the full period, the top 1 percent share increased by 1.92 percentage points,

compared with 1.43 percentage points when the workforce is standardized to its 1981 age distribution. The resulting difference of 0.49 percentage points accounts for roughly one quarter of the observed change. By comparison, the five-year mobility adjustment corresponds to only 5 percent of the change in the average annual top share between 1983 and 2020. This contrast reflects the different evolution of the two adjustments: while the age-composition gap is close to zero until the late 1990s and turns positive only thereafter, the mobility gap is present throughout and remains broadly stable. A breakdown by subperiod shows that the contribution of workforce aging was particularly pronounced between 1992 and 2006, when the rise in V^{age} amounted to 37 percent of the change in the top 1 percent share.

5.3 Comparison to other top groups

We next examine whether the importance of workforce age composition differs across the upper tail of the earnings distribution. Table 2 reports the demographic and mobility adjustments for the top 10, 5, 1, and 0.1 percent in 2020.

Table 2: Adjustment gaps by top group, 2020

	Top 1%	Top 10%	Top 5%	Top 0.1%
Annual share (%)	8.43	30.93	20.57	2.57
Age-composition gap (pp)	0.49	0.63	0.67	0.22
Mobility gap (pp)	0.40	0.79	0.62	0.24
Mean V^{mob}, 1983–2020 (pp)	0.37	0.79	0.62	0.19
Peak V^{age} (pp, year)	0.60 (2017)	0.95 (2006)	0.85 (2006)	0.31 (2017)

Notes: The table reports, for each top income group, the 2020 annual income share (Eq. 1), the age-composition gap (Eq. 4) and the mobility gap (Eq. 7) as a benchmark. The bottom panel reports the mean of the mobility component, V^{mob}, over 1983–2020 and the peak value of the age-composition component, V^{age}, with the year in which it occurs in parentheses. All gaps are in percentage points (pp).

The relative importance of demographic composition increases toward the very top of the distribution. In 2020, the age-composition gap amounts to approximately 2 percent of the observed top 10 percent share, 3 percent of the top 5 percent share, 6 percent of the

top 1 percent share, and 9 percent of the top 0.1 percent share. The mobility adjustment also becomes larger relative to the observed share for more selective top-income groups.

The timing of the demographic adjustment differs across groups. For the top 10 and top 5 percent, the age-composition gap peaks in 2006 and subsequently declines, consistent with the gradual retirement of the oldest baby-boom cohorts. For the top 1 and top 0.1 percent, the gap peaks later, in 2017, and shows no clear subsequent decline. From 2006 onward, the demographic adjustment exceeds the mobility adjustment for the top 5 and top 1 percent in every observed year, whereas the two adjustments are of similar magnitude for the top 10 and top 0.1 percent (Appendix Tables B3–B6).

6 Robustness

We assess the sensitivity of our findings to three measurement choices: the reference age distribution used for standardization, the age range defining the workforce, and the length of the income-averaging window. The first two concern the demographic adjustment, while the third examines the mobility benchmark. Figure 5 presents the corresponding results for the top 1 percent labor income share.

6.1 Reference age distribution

Our baseline standardization uses the 1981 workforce age distribution. Panel (a) of Figure 5 instead uses the 1982 distribution. The resulting age-composition gaps are virtually identical throughout the observation period. In 2022, both specifications yield an age-standardized top 1 percent share of 8.31 percent, compared with the observed share of 8.84 percent, implying a gap of 0.53 percentage points. Because the standardization weights depend only on age shares, the unusually high top income share in 1981 (Appendix Table B5) does not affect their construction.

6.2 Working-age population

Our baseline sample includes individuals aged 20–65. We examine two alternative upper age limits to assess the sensitivity of the demographic adjustment to the definition of the working-age population. Restricting the sample to ages 20–62 excludes earnings beyond the statutory retirement age of women prevailing until 2000 as well as potential early retirements. Extending the sample to age 70 additionally captures earnings beyond the conventional working-age range.

Restricting the sample to ages 20–62 leaves the main findings largely unchanged (panel (b)). In 2020, the age-composition gap is 0.40 percentage points, compared with 0.49 points in the baseline specification. The corresponding annual and age-standardized top 1 percent shares are 8.29 and 7.89 percent. Thus, the demographic adjustment remains substantial even when excluding older workers close to retirement.

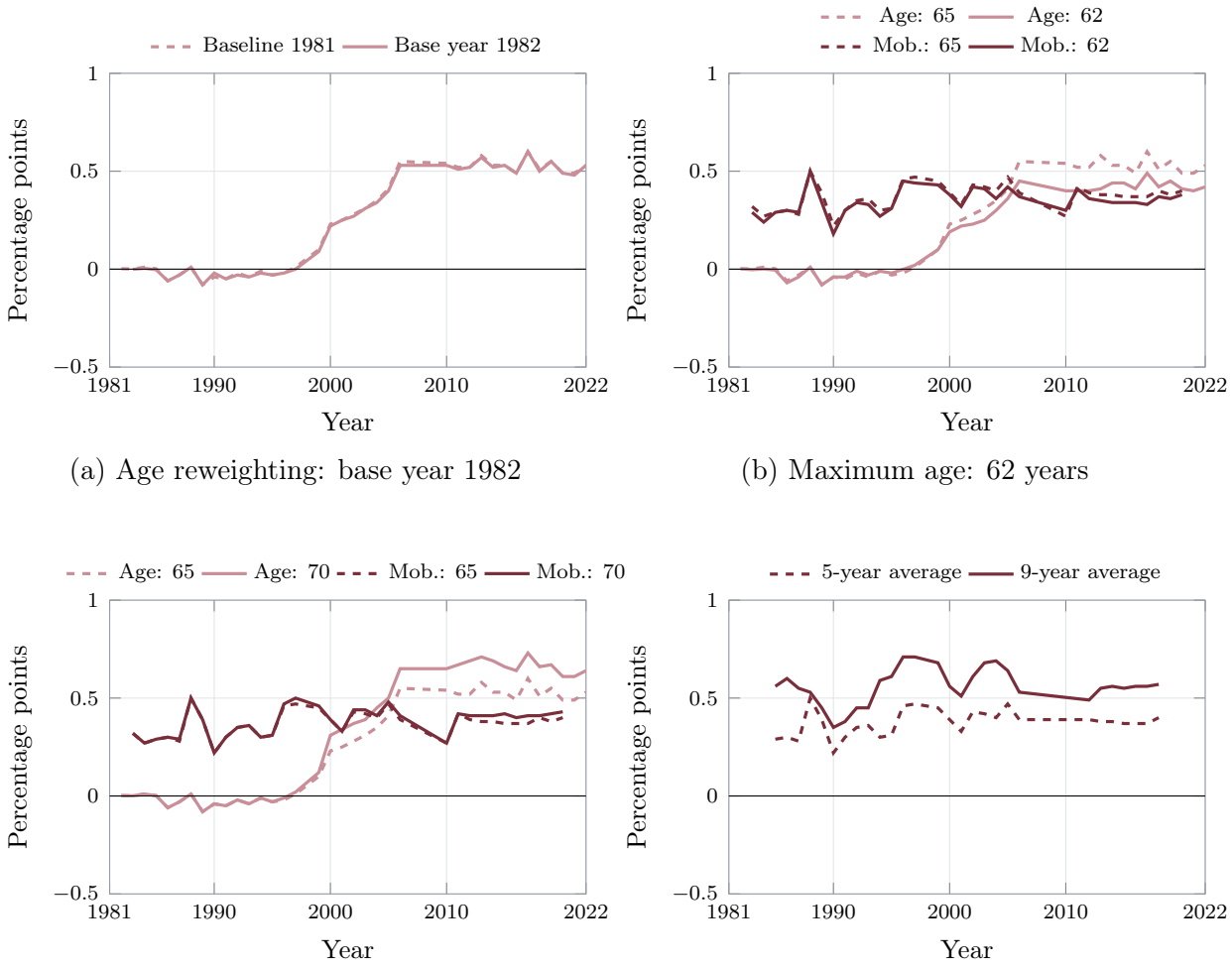
Extending the sample to age 70 increases the age-composition gap (panel (c)). In 2020, the annual top 1 percent share is 8.55 percent, compared with an age-standardized share of 7.94 percent, implying a gap of 0.61 percentage points. This larger adjustment is consistent with the relatively high representation of early baby-boom cohorts at ages 66–70 in 2020 compared with 1981. Overall, the demographic adjustment remains positive and substantial under both alternative age restrictions.

6.3 Length of the averaging window

Finally, we examine the sensitivity of the mobility benchmark to the income-averaging horizon. Panel (d) replaces the centered five-year window with a nine-year window, reducing the observation period to 1985–2018. In 2018, the average annual top 1 percent share over the nine-year window is 8.66 percent, compared with 8.08 percent when individual earnings are averaged over nine years. The resulting mobility gap of 0.57 percentage points is ap-

proximately 40 percent larger than the corresponding five-year gap of 0.40 points. This is consistent with longer averaging windows attenuating more transitory income fluctuations (Shorrocks, 1978).

Figure 5: Robustness checks: Alternative specifications of top 1 percent labor-income gaps



(a) Age reweighting: base year 1982

(b) Maximum age: 62 years

(c) Maximum age: 70 years

(d) Income averaging: nine-year window

Note: The figure compares the age-composition and mobility gaps in the top 1 percent labor income share under the baseline and alternative specifications. Gaps are in percentage points. Dashed lines show the baseline specification (1981 reference age distribution, ages 20–65, five-year averaging window); solid lines show the alternative specification. Rose lines refer to the age-composition gap, burgundy lines to the mobility gap. In panel (d), the nine-year window restricts the series to 1985–2018.

7 Conclusion

Top income shares summarize how the rewards of economic activity are distributed, and changes in them are routinely read as evidence about the forces that shape those rewards. This paper shows that such changes also carry a population's demographic history. Using four decades of nationwide Swiss administrative earnings records, we examine how changes in workforce age composition affect top labor income shares, using the established adjustment for income mobility as a benchmark.

Our findings show that demographic change plays an important role in the evolution of top income shares. The age-composition adjustment is close to zero until the late 1990s but rises as the baby-boom cohorts move into their peak-earning years. Holding the workforce age distribution fixed at its 1981 level reduces the change in the top 1 percent share between 1983 and 2020 by approximately one quarter. By comparison, the five-year income mobility adjustment reduces the long-run change by only 5 percent and primarily lowers the level of the top share by a relatively stable amount, averaging 0.37 percentage points. Since 2006, the demographic adjustment has exceeded the five-year mobility adjustment. Relative to the size of the share, both adjustments become more important toward the very top of the income distribution.

Our findings should be interpreted as accounting adjustments rather than causal estimates. Age standardization holds observed age-specific earnings distributions fixed when changing the relative weights of age groups (DiNardo et al., 1996; Fortin et al., 2011). In practice, demographic change may also affect earnings within age groups if workers of different ages are imperfect substitutes. Large cohorts may depress their own earnings (Welch, 1979; Berger, 1985), while an abundance of experienced workers may also reduce the returns to experience (Card, & Lemieux, 2001; Jeong et al., 2015). Such responses are reflected in the observed age-specific earnings distributions and are therefore not cap-

tured by the age-composition adjustment. Our estimates should thus be interpreted as the direct composition effect of demographic change, rather than its total effect on income concentration.

Age standardization provides a straightforward way to assess the contribution of workforce age composition to observed trends in top income shares, requiring only information on workers' ages in addition to their earnings. We therefore suggest reporting age-standardized top shares alongside conventional annual and multi-year measures. Switzerland provides an informative setting in which immigration has moderated population aging, but applying the same approach to countries with larger baby booms and faster aging would be a valuable extension. As demographic structures continue to evolve, accounting for workforce age composition can provide a more informative picture of long-run trends in income concentration.

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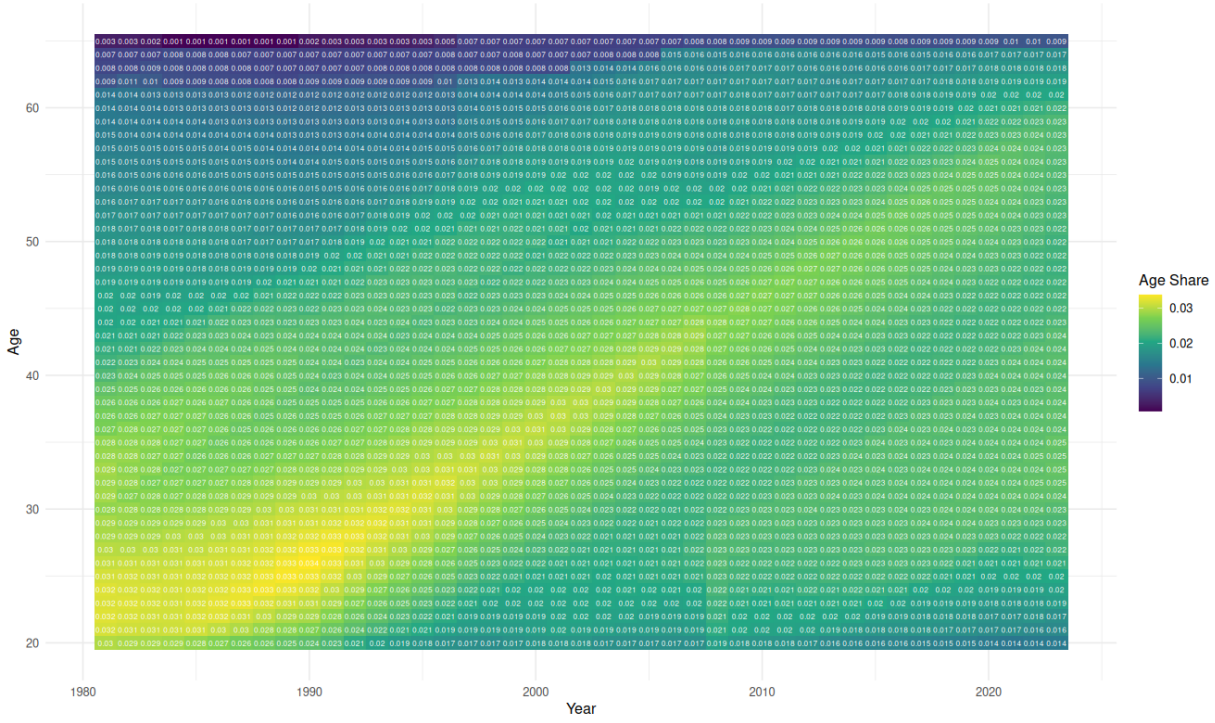
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Appendix

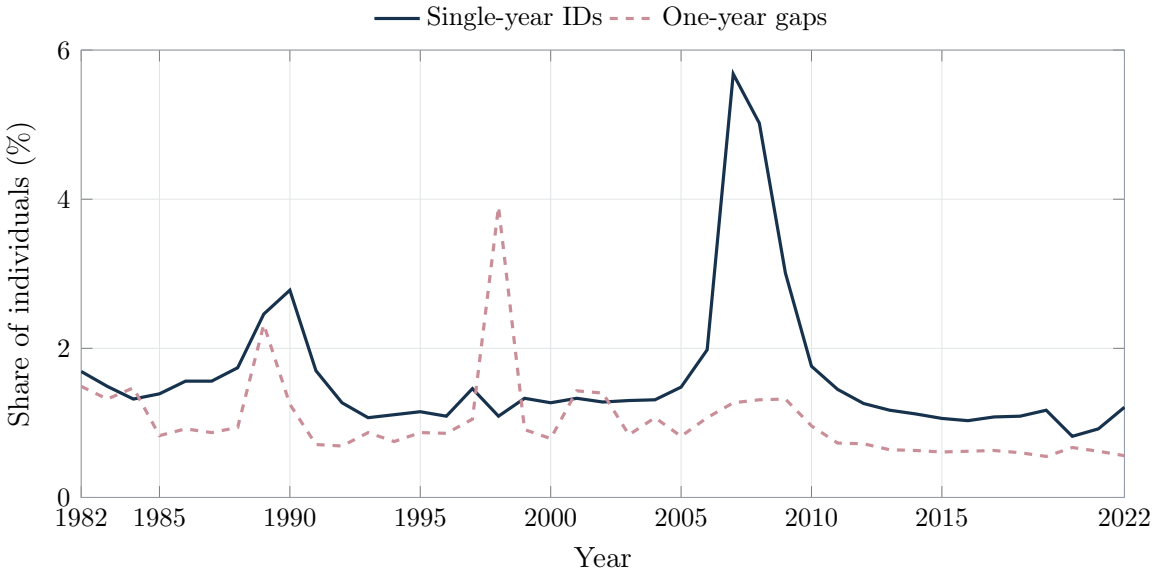
A Additional Figures

Figure A1: Share of age a in year t



Note: This figure shows the share of individuals with age a in year t of the total population. Brighter colors indicate larger age shares.

Figure A2: Single-year IDs and one-year gaps as share of individuals



Note: Single-year IDs: IDs observed in year t but neither in $t-1$ nor in $t+1$. One-year gaps: IDs observed in $t-1$ and $t+1$ but not in t. Both shares relative to the number of individuals in t.

B Additional Tables

Table B1: Summary statistics for age, 1981–2022

year	min.	q1	median	mean	q3	max.
1981	20.00	28.00	36.00	38.02	48.00	65.00
1982	20.00	28.00	36.00	38.08	48.00	65.00
1983	20.00	28.00	37.00	38.12	48.00	65.00
1984	20.00	28.00	37.00	38.05	47.00	65.00
1985	20.00	28.00	37.00	37.99	47.00	65.00
1986	20.00	28.00	37.00	37.94	47.00	65.00
1987	20.00	28.00	37.00	37.92	47.00	65.00
1988	20.00	28.00	36.00	37.89	47.00	65.00
1989	20.00	28.00	36.00	37.85	47.00	65.00
1990	20.00	28.00	36.00	37.92	47.00	65.00
1991	20.00	28.00	37.00	38.13	47.00	65.00
1992	20.00	28.00	37.00	38.41	47.00	65.00
1993	20.00	29.00	37.00	38.69	48.00	65.00
1994	20.00	29.00	38.00	38.92	48.00	65.00
1995	20.00	29.00	38.00	39.14	48.00	65.00
1996	20.00	30.00	38.00	39.46	49.00	65.00
1997	20.00	30.00	39.00	39.98	49.00	65.00
1998	20.00	31.00	39.00	40.21	50.00	65.00
1999	20.00	31.00	39.00	40.35	50.00	65.00
2000	20.00	31.00	40.00	40.50	50.00	65.00
2001	20.00	31.00	40.00	40.61	50.00	65.00
2002	20.00	31.00	40.00	40.86	50.00	65.00
2003	20.00	32.00	41.00	41.10	51.00	65.00
2004	20.00	32.00	41.00	41.26	51.00	65.00
2005	20.00	32.00	41.00	41.40	51.00	65.00
2006	20.00	32.00	42.00	41.65	51.00	65.00
2007	20.00	32.00	42.00	41.68	51.00	65.00
2008	20.00	31.00	41.00	41.32	51.00	65.00
2009	20.00	31.00	42.00	41.58	51.00	65.00
2010	20.00	31.00	42.00	41.70	52.00	65.00
2011	20.00	31.00	42.00	41.73	52.00	65.00
2012	20.00	31.00	42.00	41.77	52.00	65.00
2013	20.00	31.00	42.00	41.81	52.00	65.00
2014	20.00	31.00	42.00	41.87	52.00	65.00
2015	20.00	31.00	42.00	41.95	52.00	65.00
2016	20.00	31.00	42.00	42.04	52.00	65.00
2017	20.00	31.00	42.00	42.13	53.00	65.00
2018	20.00	31.00	42.00	42.21	53.00	65.00
2019	20.00	32.00	42.00	42.29	53.00	65.00
2020	20.00	32.00	42.00	42.47	53.00	65.00
2021	20.00	32.00	42.00	42.52	53.00	65.00
2022	20.00	32.00	42.00	42.46	53.00	65.00

Note: The table reports the age distribution of the Swiss workforce (individuals aged 20–65) in each year.

Table B2: Summary statistics for nominal and real individual labor income, 1981–2022

year	min.	min. (real)	q1	q1 (real)	median	median (real)	mean	mean (real)	q3	q3 (real)	max.	max (real)
1981	0.00	0.00	12'200.00	22'055.58	28'500.00	51'523.29	31'719.18	57'343.04	42'025.00	75'974.26	439'411'411.00	794'383'245.65
1982	0.00	0.00	12'908.00	22'086.52	30'254.00	51'766.77	33'233.78	56'865.39	44'867.00	76'770.67	112'837'104.00	193'072'403.69
1983	0.00	0.00	13'200.00	21'938.99	31'200.00	51'855.81	34'192.73	56'829.86	46'305.00	76'961.00	137'285'973.00	228'175'470.34
1984	0.00	0.00	13'796.00	22'276.55	32'213.00	52'014.67	35'530.53	57'371.52	47'868.00	77'292.96	11'265'372.00	18'190'314.45
1985	0.00	0.00	14'272.00	22'279.75	33'065.00	51'617.15	36'827.43	57'490.61	49'376.00	77'079.94	190'651'411.00	297'622'319.92
1986	0.00	0.00	14'629.00	22'666.98	34'109.00	52'850.37	38'564.70	59'754.28	51'035.00	79'076.46	789'612'953.00	1'223'470'063.82
1987	0.00	0.00	14'770.00	22'560.51	34'634.00	52'901.88	38'715.38	59'136.01	51'836.75	79'178.31	346'364'303.00	529'055'935.59
1988	0.00	0.00	14'975.00	22'453.21	35'888.00	53'809.74	40'430.71	60'620.99	53'831.00	80'713.11	644'484'563.00	966'327'088.35
1989	0.00	0.00	14'476.00	21'041.12	36'417.00	52'932.74	41'401.65	60'178.01	55'329.00	80'421.66	760'829'991.00	1'105'879'580.08
1990	0.00	0.00	16'811.00	23'182.32	39'366.00	54'285.59	45'470.59	62'703.80	59'215.00	81'657.30	957'010'140.00	1'319'714'021.37
1991	0.00	0.00	18'277.00	23'808.83	42'192.00	54'962.08	47'741.13	62'190.75	63'167.00	82'285.50	540'026'000.00	703'473'474.72
1992	0.00	0.00	19'335.75	24'210.63	44'632.00	55'884.51	50'102.39	62'734.08	66'454.00	83'208.22	95'577'343.00	119'674'070.59
1993	0.00	0.00	19'699.00	23'879.21	45'500.00	55'155.29	50'687.43	61'443.52	67'754.00	82'131.69	88'732'538.00	107'561'961.39
1994	0.00	0.00	19'544.00	23'491.15	45'980.00	55'266.22	52'152.03	62'684.77	68'904.00	82'820.00	110'377'362.00	132'669'410.85
1995	0.00	0.00	19'500.00	23'023.87	46'380.00	54'761.39	52'070.06	61'479.71	69'753.00	82'358.16	178'620'865.00	210'899'687.00
1996	0.00	0.00	19'500.00	22'838.51	46'680.00	54'671.87	51'959.66	60'855.43	70'298.00	82'333.40	23'445'052.00	27'458'973.19
1997	0.00	0.00	18'639.00	21'717.12	46'221.00	53'854.13	52'033.96	60'627.06	70'500.00	82'142.66	23'443'500.00	27'315'055.61
1998	0.00	0.00	16'000.00	18'638.96	44'900.00	52'305.59	51'329.74	59'795.82	70'139.00	81'707.38	25'688'864.00	29'925'859.99
1999	0.00	0.00	17'427.00	20'138.92	46'212.00	53'403.31	52'846.96	61'070.78	71'420.00	82'534.08	657'654'031.00	759'995'340.98
2000	0.00	0.00	15'688.00	17'851.09	45'939.00	52'273.14	53'223.20	60'561.70	72'111.00	82'053.77	43'283'100.00	49'251'039.24
2001	0.00	0.00	15'760.00	17'757.39	46'800.00	52'731.33	54'489.47	61'395.35	73'400.00	82'702.56	61'300'000.00	69'069'029.89
2002	0.00	0.00	16'192.00	18'127.63	47'729.00	53'434.64	55'106.99	61'694.62	74'790.00	83'730.58	25'165'193.00	28'173'500.99
2003	0.00	0.00	15'966.25	17'761.53	47'801.00	53'175.84	55'006.71	61'191.77	75'035.00	83'472.09	50'253'765.00	55'904'398.88
2004	0.00	0.00	15'400.00	16'995.15	47'520.00	52'442.18	55'272.54	60'997.74	75'397.00	83'206.72	47'052'313.00	51'926'050.42
2005	0.00	0.00	15'544.00	16'955.36	47'986.00	52'343.01	56'159.97	61'259.16	76'036.00	82'939.89	85'012'628.00	92'731'570.78
2006	0.00	0.00	14'729.00	15'897.92	47'597.00	51'374.38	56'516.95	61'002.23	76'300.00	82'355.30	94'958'453.00	102'494'513.95
2007	0.00	0.00	13'581.00	14'552.24	47'280.00	50'661.20	57'026.56	61'104.78	76'960.00	82'463.75	194'142'148.00	208'026'111.65
2008	0.00	0.00	12'666.00	13'250.34	44'856.00	46'925.42	56'102.33	58'690.60	76'398.00	79'922.60	204'225'618.00	213'647'518.43
2009	0.00	0.00	19'828.00	20'842.91	52'903.00	55'610.87	62'217.13	65'401.74	82'036.00	86'235.06	58'949'974.00	61'967'359.03
2010	0.00	0.00	22'098.00	23'070.32	54'259.00	56'646.41	63'996.26	66'812.12	83'226.00	86'887.97	63'848'834.00	66'658'202.17
2011	0.00	0.00	23'198.00	24'162.82	55'336.00	57'637.46	65'106.93	67'814.76	84'395.00	87'905.04	98'854'168.00	102'965'571.52
2012	0.00	0.00	23'774.00	24'935.47	55'900.00	58'630.96	65'519.39	68'720.31	84'840.00	88'984.81	40'903'795.00	42'902'127.66
2013	0.00	0.00	24'200.00	25'437.56	56'223.00	59'098.18	65'919.32	69'290.35	85'080.00	89'430.89	449'627'037.00	472'620'435.02
2014	0.00	0.00	24'698.00	25'964.45	56'700.00	59'607.44	66'394.19	69'798.72	85'548.00	89'934.70	58'511'895.00	61'512'245.69
2015	0.00	0.00	25'000.00	26'586.06	56'999.00	60'615.16	66'658.64	70'887.63	85'802.00	91'245.49	213'578'600.00	227'128'545.33
2016	0.00	0.00	25'200.00	26'915.73	57'120.00	61'008.99	66'718.11	71'260.58	86'015.00	91'871.29	38'305'794.00	40'913'825.77
2017	0.00	0.00	25'349.00	26'931.12	57'245.00	60'817.86	67'151.45	71'342.60	86'271.75	91'656.27	168'839'703.00	179'377'578.19
2018	0.00	0.00	25'966.00	27'330.72	57'855.00	60'895.74	67'583.82	71'135.89	86'912.00	91'479.92	70'004'900.00	73'684'218.69
2019	0.00	0.00	26'666.00	27'966.03	58'556.00	61'410.74	68'463.32	71'801.06	87'798.00	92'078.35	112'033'170.00	117'495'037.94
2020	0.00	0.00	28'600.00	30'213.63	60'000.00	63'385.23	69'837.41	73'777.67	89'125.00	94'153.48	51'738'323.00	54'657'426.67
2021	0.00	0.00	29'238.00	30'708.95	60'370.00	63'407.20	70'892.27	74'458.84	89'806.00	94'324.11	91'263'481.00	95'854'917.60
2022	0.00	0.00	28'973.00	29'591.69	60'651.00	61'946.14	71'350.93	72'874.56	90'333.00	92'261.97	184'034'431.00	187'964'303.86

Note: The table reports the annual gross labor income distribution of individuals aged 20–65 in each year: minimum, first quartile (Q1), median, mean, third quartile (Q3), and maximum, in CHF in nominal terms and in real terms (prices of 2023, deflated by the CPI).

Table B3: Top 10 percent labor income shares and gaps, 1981–2022 (percent / percentage points)

Year	Annual	Age-std.	Five-year	V^{age}	V^{mob}
1981	29.55	–	–	–	–
1982	28.38	28.37	–	0.01	–
1983	28.28	28.26	28.00	0.01	0.76
1984	28.60	28.57	28.20	0.02	0.66
1985	29.01	29.01	28.36	0.00	0.68
1986	30.01	30.06	28.66	-0.04	0.70
1987	29.29	29.33	28.98	-0.04	0.73
1988	29.88	29.90	29.25	-0.02	0.88
1989	30.35	30.47	29.33	-0.11	0.77
1990	31.14	31.24	29.52	-0.10	0.63
1991	29.83	29.95	29.28	-0.12	0.72
1992	29.54	29.66	29.20	-0.11	0.78
1993	29.12	29.25	28.83	-0.13	0.83
1994	30.26	30.39	28.73	-0.13	0.76
1995	29.56	29.71	28.72	-0.15	0.77
1996	28.96	29.10	28.74	-0.14	1.06
1997	29.54	29.63	28.91	-0.09	1.17
1998	–	–	–	–	–
1999	30.67	30.58	29.51	0.08	1.08
2000	31.64	31.30	30.26	0.35	0.83
2001	32.09	31.65	30.71	0.45	0.74
2002	31.50	30.98	30.77	0.52	0.90
2003	31.31	30.72	30.91	0.59	0.89
2004	31.81	31.15	31.14	0.65	0.84
2005	32.28	31.54	31.05	0.74	1.01
2006	33.01	32.07	31.43	0.95	0.71
2007	–	–	–	–	–
2008	–	–	–	–	–
2009	–	–	–	–	–
2010	31.90	31.06	31.40	0.84	0.68
2011	31.69	30.87	31.02	0.82	0.91
2012	31.52	30.71	30.87	0.81	0.76
2013	31.53	30.70	30.81	0.83	0.73
2014	31.50	30.72	30.75	0.77	0.72
2015	31.47	30.74	30.77	0.73	0.71
2016	31.34	30.66	30.72	0.68	0.71
2017	31.56	30.82	30.68	0.74	0.70
2018	31.29	30.64	30.57	0.65	0.70
2019	31.27	30.60	30.59	0.67	0.67
2020	30.93	30.30	30.44	0.63	0.79
2021	31.25	30.63	–	0.62	–
2022	31.39	30.77	–	0.62	–

Note: Five-year measures refer to the centered window and are unavailable for the first two years and the final two years. V^{mob} is computed against the five-year average of annual shares (Eq. 7) and therefore differs from the difference between the "Annual" and "Five-year" columns.

Table B4: Top 5 percent labor income shares and gaps, 1981–2022 (percent / percentage points)

Year	Annual	Age-std.	Five-year	V^{age}	V^{mob}
1981	19.49	–	–	–	–
1982	18.13	18.12	–	0.01	–
1983	17.96	17.95	17.93	0.01	0.58
1984	18.28	18.26	18.07	0.02	0.50
1985	18.67	18.66	18.21	0.01	0.52
1986	19.81	19.86	18.51	-0.05	0.54
1987	18.95	18.99	18.82	-0.04	0.56
1988	19.52	19.53	19.11	-0.01	0.73
1989	19.95	20.05	19.16	-0.10	0.62
1990	20.99	21.06	19.37	-0.07	0.48
1991	19.54	19.62	19.14	-0.09	0.56
1992	19.23	19.30	19.11	-0.07	0.61
1993	18.80	18.89	18.71	-0.09	0.64
1994	20.02	20.09	18.57	-0.07	0.57
1995	19.16	19.26	18.50	-0.10	0.59
1996	18.50	18.58	18.51	-0.08	0.82
1997	18.96	18.99	18.62	-0.03	0.88
1998	–	–	–	–	–
1999	20.02	19.90	19.10	0.11	0.83
2000	20.86	20.52	19.70	0.34	0.67
2001	21.31	20.89	20.10	0.42	0.56
2002	20.66	20.20	20.11	0.47	0.72
2003	20.43	19.91	20.22	0.52	0.71
2004	20.88	20.30	20.41	0.58	0.67
2005	21.35	20.69	20.40	0.66	0.80
2006	22.06	21.20	20.74	0.85	0.59
2007	–	–	–	–	–
2008	–	–	–	–	–
2009	–	–	–	–	–
2010	21.27	20.48	20.87	0.80	0.48
2011	21.09	20.31	20.60	0.78	0.68
2012	20.96	20.17	20.47	0.78	0.59
2013	21.01	20.20	20.43	0.82	0.58
2014	21.00	20.23	20.39	0.77	0.57
2015	21.00	20.24	20.43	0.76	0.56
2016	20.83	20.13	20.38	0.70	0.56
2017	21.10	20.31	20.36	0.79	0.56
2018	20.81	20.12	20.26	0.69	0.57
2019	20.84	20.11	20.31	0.72	0.55
2020	20.57	19.90	20.23	0.67	0.62
2021	20.96	20.29	–	0.67	–
2022	21.06	20.37	–	0.68	–

Note: Five-year measures refer to the centered window and are unavailable for the first two years and the final two years. V^{mob} is computed against the five-year average of annual shares (Eq. 7) and therefore differs from the difference between the "Annual" and "Five-year" columns.

Table B5: Top 1 percent labor income shares and gaps, 1981–2022 (percent / percentage points)

Year	Annual	Age-std.	Five-year	V^{age}	V^{mob}
1981	8.24	–	–	–	–
1982	6.71	6.71	–	0.00	–
1983	6.51	6.51	6.70	0.00	0.32
1984	6.71	6.70	6.77	0.01	0.27
1985	6.92	6.92	6.85	0.00	0.29
1986	8.31	8.37	7.08	-0.06	0.30
1987	7.24	7.27	7.38	-0.03	0.28
1988	7.75	7.74	7.67	0.01	0.50
1989	8.10	8.18	7.72	-0.08	0.39
1990	9.46	9.50	7.98	-0.04	0.22
1991	7.99	8.04	7.81	-0.05	0.30
1992	7.66	7.68	7.84	-0.02	0.35
1993	7.31	7.35	7.45	-0.04	0.36
1994	8.54	8.56	7.27	-0.01	0.30
1995	7.53	7.56	7.14	-0.03	0.31
1996	6.83	6.84	7.11	-0.02	0.46
1997	7.04	7.03	7.06	0.01	0.47
1998	–	–	–	–	–
1999	7.88	7.79	7.31	0.10	0.45
2000	8.38	8.16	7.63	0.23	0.39
2001	8.65	8.40	7.88	0.25	0.33
2002	8.16	7.88	7.86	0.28	0.43
2003	7.97	7.66	7.92	0.31	0.42
2004	8.30	7.94	8.06	0.35	0.40
2005	8.65	8.24	8.12	0.41	0.47
2006	9.22	8.67	8.33	0.55	0.39
2007	–	–	–	–	–
2008	–	–	–	–	–
2009	–	–	–	–	–
2010	8.80	8.26	8.51	0.54	0.27
2011	8.64	8.12	8.37	0.52	0.42
2012	8.58	8.06	8.29	0.52	0.39
2013	8.70	8.12	8.28	0.58	0.38
2014	8.68	8.15	8.26	0.53	0.38
2015	8.69	8.16	8.31	0.53	0.37
2016	8.51	8.02	8.27	0.49	0.37
2017	8.80	8.20	8.25	0.60	0.37
2018	8.52	8.01	8.17	0.51	0.40
2019	8.60	8.05	8.25	0.55	0.38
2020	8.43	7.94	8.24	0.49	0.40
2021	8.82	8.33	–	0.49	–
2022	8.84	8.31	–	0.53	–

Note: Five-year measures refer to the centered window and are unavailable for the first two years and the final two years. V^{mob} is computed against the five-year average of annual shares (Eq. 7) and therefore differs from the difference between the "Annual" and "Five-year" columns.

Table B6: Top 0.1 percent labor income shares and gaps, 1981–2022 (percent / percentage points)

Year	Annual	Age-std.	Five-year	V^{age}	V^{mob}
1981	3.36	–	–	–	–
1982	1.82	1.82	–	0.00	–
1983	1.66	1.67	1.89	0.00	0.18
1984	1.68	1.67	1.95	0.01	0.10
1985	1.86	1.86	2.00	0.00	0.12
1986	3.25	3.31	2.16	-0.06	0.12
1987	2.11	2.13	2.43	-0.03	0.08
1988	2.51	2.49	2.69	0.02	0.32
1989	2.83	2.89	2.73	-0.06	0.22
1990	4.31	4.33	3.02	-0.01	0.04
1991	3.00	3.02	2.91	-0.02	0.12
1992	2.65	2.65	2.97	0.00	0.19
1993	2.36	2.37	2.60	-0.02	0.20
1994	3.48	3.48	2.41	0.00	0.13
1995	2.50	2.51	2.23	-0.01	0.15
1996	1.74	1.74	2.15	-0.01	0.23
1997	1.83	1.82	1.97	0.01	0.21
1998	–	–	–	–	–
1999	2.36	2.31	2.01	0.05	0.19
2000	2.49	2.39	2.13	0.10	0.19
2001	2.59	2.48	2.22	0.11	0.16
2002	2.29	2.19	2.17	0.10	0.22
2003	2.20	2.08	2.20	0.12	0.20
2004	2.38	2.25	2.29	0.13	0.19
2005	2.57	2.41	2.35	0.16	0.22
2006	2.95	2.71	2.45	0.24	0.20
2007	–	–	–	–	–
2008	–	–	–	–	–
2009	–	–	–	–	–
2010	2.72	2.48	2.57	0.24	0.13
2011	2.62	2.40	2.50	0.22	0.22
2012	2.62	2.40	2.44	0.22	0.22
2013	2.72	2.44	2.44	0.27	0.21
2014	2.66	2.43	2.41	0.22	0.22
2015	2.65	2.43	2.45	0.22	0.21
2016	2.51	2.31	2.40	0.20	0.23
2017	2.77	2.46	2.40	0.31	0.23
2018	2.56	2.34	2.36	0.22	0.25
2019	2.67	2.40	2.44	0.27	0.24
2020	2.57	2.36	2.45	0.22	0.24
2021	2.83	2.62	–	0.21	–
2022	2.84	2.58	–	0.26	–

Note: Five-year measures refer to the centered window and are unavailable for the first two years and the final two years. V^{mob} is computed against the five-year average of annual shares (Eq. 7) and therefore differs from the difference between the "Annual" and "Five-year" columns.