EU Tax Observatory Working Paper No. 13

Does A Progressive Wealth Tax Reduce Top Wealth Inequality? Evidence from Switzerland

March 2023

Samira Marti
University of Zurich

Isabel Z. Martínez
ETH Zurich

Florian Scheuer
University of Zurich

This paper has been prepared for the Oxford Review of Economic Policy special issue on "Taxing the Rich (More)." For excellent research assistance, we thank Nicolas Bauer, and for helpful comments and discussions Samuel Ammann, Enea Baselgia, Marius Brülhart, Joël Bühler, Vera Frei, James Hines, Katrine Jakobsen, Niels Johannesen, Marko Köthenbürger, Wojtek Kopczuk, Simone Leibundgut, Raphael Parchet, Yasmine Perrinjaquet, Laura Salathé, Sebastian Siegloch, Joel Slemrod and Dario Tortarolo.

Does A Progressive Wealth Tax Reduce Top Wealth Inequality? Evidence From Switzerland*

Samira Marti University of Zurich

Isabel Martínez ETH Zurich

Florian Scheuer University of Zurich

March 2023

Abstract

Like in many other countries, wealth inequality has increased in Switzerland over the last fifty years. By providing new evidence on cantonal top wealth shares for each of the 26 cantons since 1969, we show that the overall trend masks striking differences across cantons, both in levels and trends. Combining this with variation in cantonal wealth taxes, we then estimate an event study model to identify the dynamic effects of reforms to top wealth tax rates on the subsequent evolution of wealth concentration. Our results imply that a reduction in the top marginal wealth tax rate by 0.1 percentage points increases the top 1% (0.1%) wealth share by 0.9 (1.2) percentage points five years after the reform. This suggests that wealth tax cuts over the last 50 years explain roughly 18% (25%) of the increase in wealth concentration among the top 1% (0.1%).

*This paper has been prepared for the *Oxford Review of Economic Policy* special issue on "Taxing the Rich (More)." For excellent research assistance, we thank Nicolas Bauer, and for helpful comments and discussions Samuel Ammann, Enea Baselgia, Marius Brülhart, Joël Bühler, Vera Frei, James Hines, Katrine Jakobsen, Niels Johannesen, Marko Köthenbürger, Wojtek Kopczuk, Simone Leibundgut, Raphael Parchet, Yasmine Perrinjaquet, Laura Salathé, Sebastian Siegloch, Joel Slemrod and Dario Tortarolo.

1 Introduction

Many advanced countries have experienced rising income and wealth inequality over the past decades. These trends have spurred discussions about potential institutional responses. In particular, the tax treatment of capital gains has been at the front and center of the policy debate across the globe in the last few years. One reason is that they make up the largest component of income at the top of the distribution, including notably the payoffs to the founders of successful businesses (Scheuer and Slemrod 2020). At the same time, capital gains are treated favorably by most countries' tax systems at the moment, mostly because of lower rates, taxation only based on realization, and various tax exemptions at death. Taken together, these two facts have been recognized as a key reason for the erosion of tax progressivity, so that the average tax rate of millionaires and billionaires can be lower than that of individuals further down the distribution (Leiserson and Yagan 2021).

To address this, the introduction of wealth taxes has been prominently discussed in several countries including the United States (Saez and Zucman 2019). This would ensure that rich households bear some tax burden even when not realizing any capital gains, which may dampen the rise in wealth inequality over time. However, we currently lack systematic evidence on how wealth taxation (and its progressivity) affects the evolution of wealth concentration. Our aim in this paper is to shed light precisely on this effect.

To do so, we exploit the decentralized structure of the Swiss wealth tax as a laboratory setting. While twelve European countries levied an annual tax on net wealth in the 1990s, by now only three—Norway, Spain, and Switzerland—still levy such a tax, and only Switzerland raises a level of government revenue comparable to recent proposals such as those put forward by Senators Bernie Sanders and Elizabeth Warren in the US (Scheuer and Slemrod 2021). The Swiss example is therefore of particular interest for the policy debate elsewhere.

Our first contribution is to construct novel time series, based on data from cantonal archives, for top wealth concentration in each of the 26 Swiss cantons since 1969. In particular, we calculate the top 10%, 5%, 1%, 0.1% and 0.01% wealth shares using data on the number of taxpayers and their total wealth in various brackets and by estimating a local Pareto distribution at the top. We find that the overall increase in wealth concentration at the national level masks striking differences across cantons, in terms of both levels and trends in within-cantonal inequality. Whereas some cantons (such as Zurich) have seen a reduction in their top 1% wealth share over the last 50 years, others (such as Schwyz) have seen theirs almost double. Since the cantons have freedom in designing their wealth tax schedules, this raises the question to what degree these diverging trends are driven by policy heterogeneity, and in particular by differences in wealth tax rates in the top bracket.

We therefore complement our information on cantonal wealth distributions with the cor-

responding panel data on top marginal wealth taxes, going back to 1964. Cantons have frequently changed their top tax rates with an overall downward trend but significant variation. For instance, the highest rate in our data is 1.34% in Glarus in 1970, and the lowest is 0.13% in Nidwalden in 2014.

Combining these data sets, we then explore the link between the two. Our event study design allows us to estimate the dynamic effect of wealth tax reforms on the subsequent evolution of top wealth shares. Focusing on large tax reforms and controlling for income and bequest taxes, we find that cuts to the top marginal wealth tax rate in a given canton increase wealth concentration in that canton over the course of the following decade, and that tax increases reduce it. The effect is strongest at the very top of the distribution. For the top 1% and 0.1%, for instance, a reduction in the top marginal wealth tax rate by 0.1 percentage points increases their wealth share by 0.9 and 1.2 percentage points, respectively, five years after the reform (compared to an average wealth share of 34% for the top 1%, and 16% for the top 0.1%). This implies that the overall reduction in the progressivity of the wealth tax in the Swiss cantons over the last decades explains roughly a fifth (a quarter) of the increase in concentration among the top 1% (0.1%) over this time horizon.

While this is a sizeable portion, it is also clear that other factors must have played a more prominent role in shaping wealth inequality in Switzerland. This is not surprising because, despite the variation across cantons, the wealth tax is not very progressive in any of them, with moderate top rates especially compared to recent proposals in the US, and relatively low exemption amounts, which imply that a large swath of the population is subject to it.

Whereas we are interested in the relationship between progressive wealth taxation and wealth inequality, the growing literature on the behavioral response of declared wealth to wealth taxes has focused on the absolute effect (see Scheuer and Slemrod 2021 for an overview).[1] Closest to our study is Brülhart et al. (2022), who also take advantage of variations in the wealth tax rate across Swiss cantons and over time using a similar event study design. Apart from the fact that we consider the distributional effects of wealth taxation rather than its effect on the total amount of reported wealth, our main contribution is that our data covers a much longer time period. Since 2003, the federal tax administration in Switzerland has published yearly wealth statistics for all cantons and Brülhart et al.'s (2022) panel analysis is based on this data. Instead, by collecting data from the cantonal archives directly, our time series go back to 1969. During the decades before 2003, there was more variation in tax rates across cantons, including notably some significant tax hikes, which became much rarer later on. Moreover, the overall level of tax rates was significantly higher in the 1970s than since the 2000s, and the degree of wealth concentration has changed sub-

[1]Recent studies include Seim (2017), Zoutman (2018), Londoño-Velez and Avila-Mahecha (2019), Durán-Cabré et al. (2019), Agrawal et al. (2020), Jakobsen et al. (2020) and Brülhart et al. (2022).

stantially since this earlier period. Thus, looking at a longer historical evolution is crucial to tackle our research question.

Our paper is organized as follows. Section 2 gives an overview of the Swiss wealth tax system. Section 3 describes our data construction, notably how we compute cantonal top wealth shares based on the archive data and using Pareto interpolations. Section 4 discusses our novel findings on inter-cantonal differences in wealth inequality since 1970. Finally, Section 5 presents the results from our cross-cantonal event study and Section 6 concludes.

2 Wealth taxation in Switzerland

The Swiss tax system is generally structured in three layers: the federal, cantonal and municipal level. There are 26 cantons and about 2,300 municipalities. The Swiss constitution gives the cantons considerable autonomy over taxation and public spending decisions. In 2018, total tax revenues at the federal level amounted to $70 billion, while all cantons and municipalities together raised another $77 billion in fiscal revenues (corresponding to 10% and 11% of GDP, respectively).

The wealth tax has a long tradition in Switzerland and in fact predates the modern income tax. The cantons have been taxing wealth since the early 18th century and this was their main source of revenue until World War I. Between 1915 and 1959, there was also a wealth tax at the federal level. Since then, there has been no federal wealth tax but all cantons must levy a comprehensive wealth tax, over which they have significant freedom in designing.[2]

In the 1990s, twelve European countries levied an annual tax on net wealth. By now, only three—Norway, Spain, and Switzerland— still levy such a tax, with Switzerland raising more than three times as much revenue as a fraction of total revenues (3.9%) as any of the other countries (Scheuer and Slemrod 2021). In 2018, 9.6% of the total tax revenues of all Swiss cantons and municipalities was raised by the wealth tax ($7.5 billion).

2.1 Tax base

The base of the Swiss wealth tax is broad: in principle, all assets, including those held abroad, are taxable. Only common household assets and foreign real estate are exempt from taxation; moreover, pension wealth such as occupational pensions (the so-called second pillar of the Swiss retirement system, which complements the national social security system)

[2]Bequests are taxed at the cantonal level, typically in the form of inheritance taxes. In the 1990s and early 2000s, however, most cantons abolished inheritance taxes for direct descendants (Brülhart and Parchet 2014). So far, all attempts to introduce an inheritance tax at the federal level have been unsuccessful.

and the balances held on some voluntary retirement savings accounts (the so-called third pillar of the retirement system) are exempt until the date of the payout.[3]

The tax liability is based on net wealth, so taxpayers can deduct mortgages and other debt. All residents aged 18 and over are legally bound to submit an annual tax filing (children's wealth must be included in the parents' tax returns). Net wealth is self-reported, which constrains tax enforcement. However, there is a 35% withholding tax on the return to domestic financial assets, which can only be claimed back when those assets are declared in the wealth tax base.

2.2 Tax schedules

Each canton designs its wealth tax schedule. Eight cantons impose flat rates (above some exemption level) and the other 18 feature progressive schedules with multiple tax rate brackets. Each municipality then chooses a multiplier that is applied proportionally to the cantonal tax rate schedule. Hence, an individual's overall tax liability depends on both the canton and municipality of residence.

Exemption levels differ by canton but are relatively low (Scheuer 2020). For instance, in 2018, it ranged from about $55,000 in the canton of Jura to $250,000 in the canton of Schwyz (for married couples).

Tax rates have declined over time. In 16 of the 26 cantonal capitals, the annual top wealth tax rate was below 0.5% in 2018. Hence, the Swiss wealth tax is targeted at a large share of the population and is only moderately progressive. Indeed, it is not intended to redistribute the stock of wealth but to be payable out of the resulting income (Schweizerische Steuerkonferenz 2021). In the next section, we provide more detailed information on the historical evolution of the wealth tax burden across cantons.

3 Data and methodology

3.1 Top wealth tax rates

Our first data set includes the cantonal wealth tax rates for all 26 Swiss cantons. Due to the highly decentralized tax system in Switzerland, it offers substantial variation in wealth tax rates since cantons have frequently changed their tax schedules over the decades. Our data includes the average and the marginal wealth tax rates for each canton and year going back to 1955 (including the municipal multiplier for the cantonal capital or main municipality).

[3] While foreign real estate is not subject to the Swiss wealth tax, it is included when determining the relevant tax bracket and thus the individual tax rate.

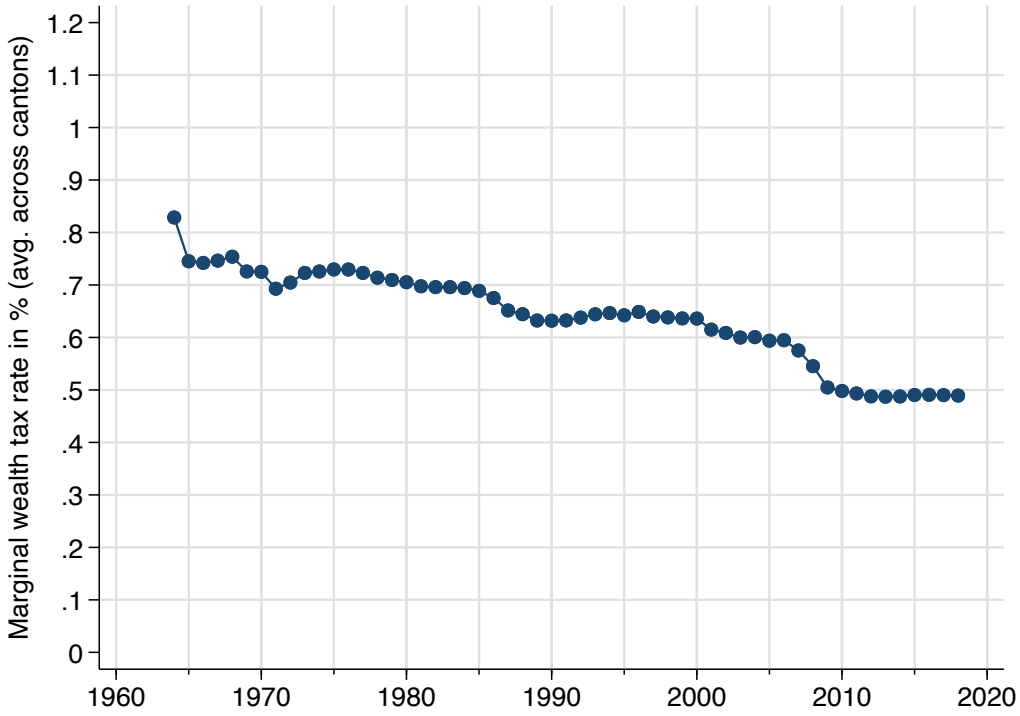


Figure 1: Top marginal wealth tax rates 1964-2018, average of cantonal rates

Since our main interest is the concentration of wealth at the top, we focus on the top marginal tax rates. Moreover, because our data on cantonal top wealth shares only begin later, we use information on top marginal wealth tax rates since 1964 for the present analysis.

In 2018, the combined cantonal and municipal marginal wealth tax rates in the top bracket ranged between 0.1% (canton of Nidwalden) and 1.1% (canton of Geneva). In 1969, three cantons imposed top marginal wealth tax rates above one percent: 1.34% in the canton of Glarus, 1.11% in Graubünden and 1.0% in Basel-Landschaft. Figure 1 shows the average of the cantonal top marginal wealth tax rates over time. While, in 1969, the average of all cantonal top marginal wealth tax rates was 0.73%, it had decreased to 0.49% in 2018.

Overall, the 26 Swiss cantons can be divided in roughly three groups according to the trends in their wealth tax rates. In the first group, top tax rates have hardly changed over the last 50 years (see Figure 2 for some examples). Cantons in the second group have gradually lowered their wealth tax rates over time (see Figure 3). Finally, the third group consists of cantons that have changed tax rates more extensively, including notably some significant tax cuts over a short period of time in the recent past (see Figure 4).

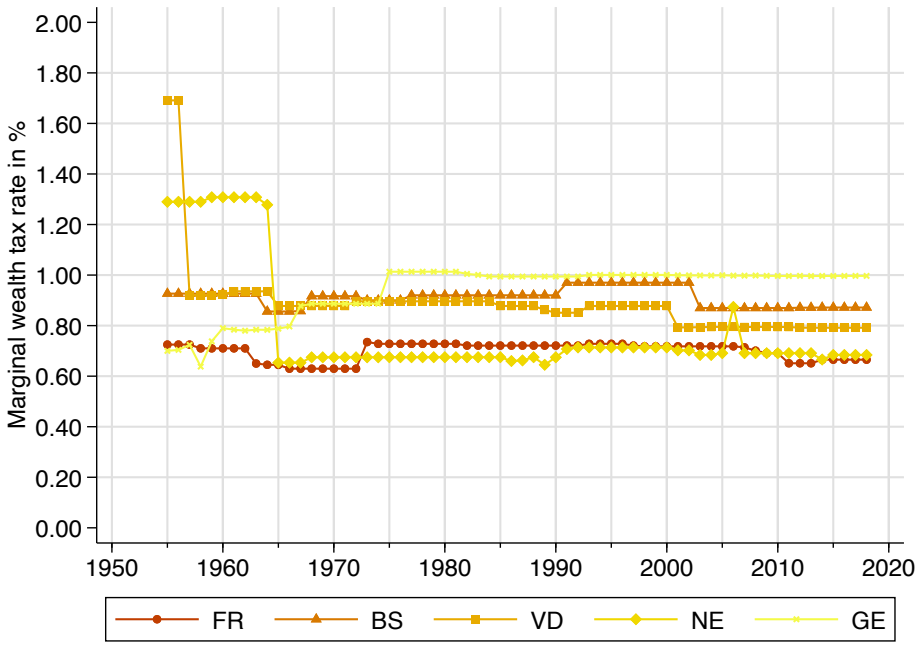


Figure 2: Top marginal wealth tax rates in Fribourg, Basel-Stadt, Vaud, Neuchâtel and Geneva

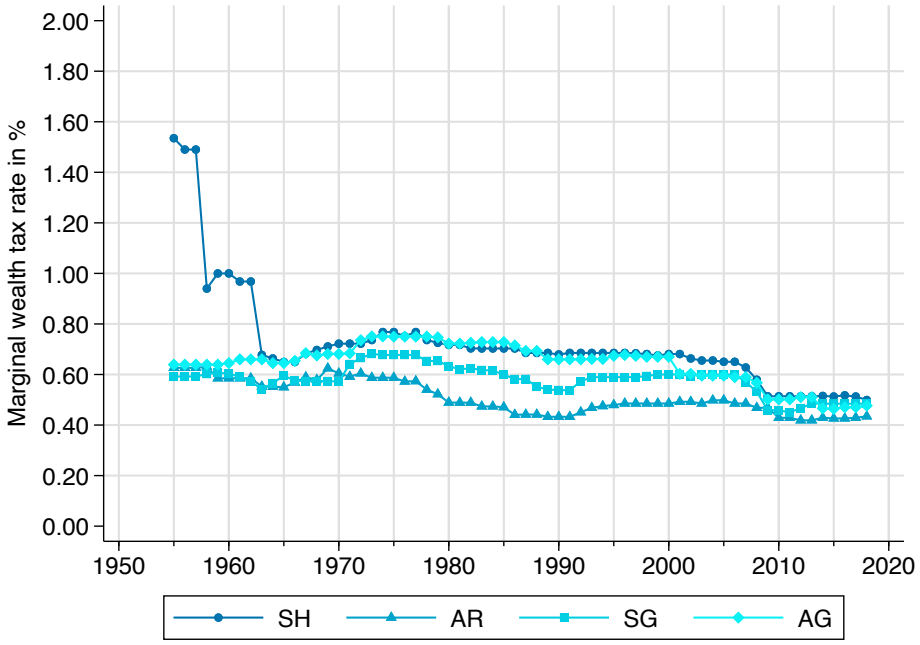


Figure 3: Top marginal wealth tax rates in Nidwalden, Schaffhausen, Appenzell Ausserrhoden, St. Gallen and Aargau

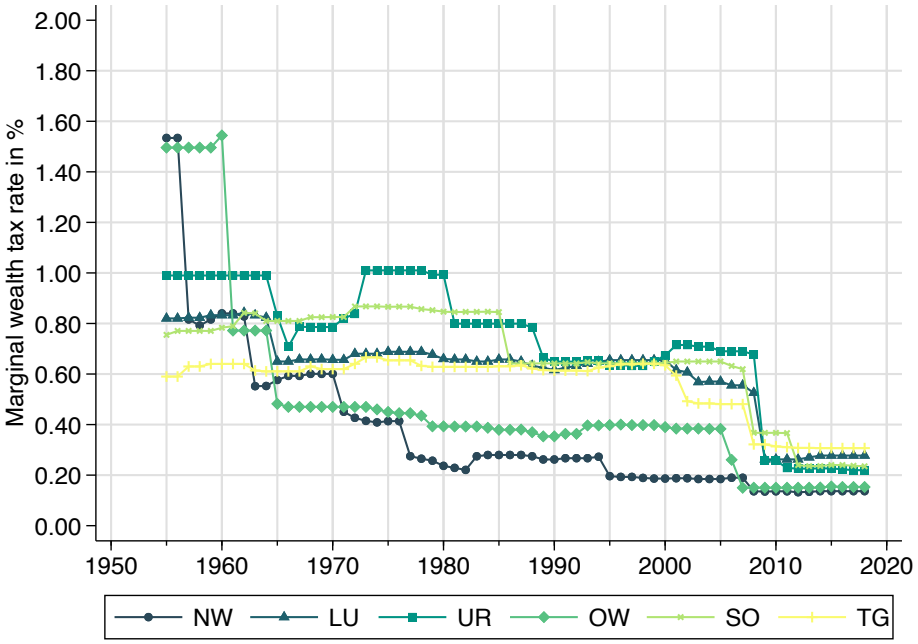


Figure 4: Top marginal wealth tax rates in Lucerne, Uri, Obwalden, Solothurn and Thurgau

3.2 Top wealth holdings

Our second data set collects information on reported wealth holdings from 1969 to 2018. Since 2003, the federal tax administration (Eidgenössische Steuerverwaltung, ESTV) has published yearly net wealth statistics for all cantons. For the prior years, we have collected data directly from the cantonal archives, and combined it with irregularly reported tabulations by the ESTV. All statistics report the number of taxpayers in different wealth brackets and the corresponding sum of total wealth. The brackets mostly range from a bracket for zero net wealth to one for a net wealth of more than $1 million.

Not all cantonal time series are recorded identically; notably, the bracket thresholds differ across cantons and change over time. Most importantly, some cantonal sources exclude taxpayers with (nearly) no wealth (less than $1000). Before 1969, only 3 out of the 26 cantonal archives provided information about this lowest wealth bracket. Therefore, the available data for this period is insufficient to plausibly approximate the missing wealth at the bottom of the distribution. As a result, we confine our analysis to the years since 1969.

Some cantonal statistics report taxable wealth instead of net wealth. Taxable wealth is defined as net wealth minus the tax exemption amount. The taxable wealth statistics indicate a considerably more pronounced wealth concentration than those based on net wealth. There are two reasons: first, the exemption level matters relatively less for top wealth holders; and second, the statistics based on taxable wealth include a larger share of taxpayers with no

wealth at all. Both effects increase the top wealth shares and thus lead to an overestimate of wealth inequality. To correct this break in the series, we rescale taxable wealth to match net wealth where both are available. We then apply the same scaling factor to the years where only taxable wealth is available.[4] The statistics published by the ESTV since 2003 are based on net wealth, so this issue only concerns the earlier years.

While the wealth statistics based on tax returns are the best available data to study the long-run evolution of wealth inequality in Switzerland, it is important to keep in mind some caveats. First, because net wealth is self-reported, and despite the withholding tax, misreporting and tax evasion cannot be excluded, especially for the wealthiest households. Indeed, Brülhart et al. (2022) argue that misreporting is the most important component to the overall behavioral response of reported wealth to changes in taxes. A second issue concerns the number of taxpayers. All adult residents have to submit a tax return each year. However, married and officially registered same-sex couples (since 2007) are jointly tax liable and show up as only one tax unit in the tax statistics. To make sure our time series are consistent across time and cantons, we calculate the total number of tax units using register data (adult population minus one half of the married adult population).

3.3 Pareto interpolation of top wealth shares

Our data sources report net wealth as well as the number of taxpayers in absolute brackets, defined between thresholds in Swiss Francs. Instead, our object of interest are the wealth shares of the various top quantiles of the wealth distribution. To estimate the wealth of a given percentile, we make use of the fact that wealth holdings at the top of the distribution approximately follow a Pareto distribution. The cumulative distribution function is given by

$$F(x) = 1 - \left(\frac{k}{x}\right)^{\alpha}, \quad k > 0, \alpha > 1, x \geq k,$$

where the parameters α and k need to be estimated. The probability density function takes the form

$$f(x) = \alpha k^{\alpha} / x^{\alpha+1}.$$

Since $f(z|z \geq x) = f(z)/(1 - F(x))$, the average wealth $\bar{w}(x)$ of tax units with wealth larger than or equal to x is given by

$$\bar{w}(x) = \int_x^{\infty} z f(z|z \geq x) dz = \alpha x^{\alpha} \int_x^{\infty} z^{-\alpha} dz = \frac{\alpha}{\alpha - 1} x.$$

[4] Alternatively, we could add the exemption levels to taxable wealth. However, this would introduce measurement error because exemption amounts depend on marital status and the number of dependents of each taxpayer, and we do not have information on the composition of these characteristics by wealth bracket.

Hence, mean wealth above a given threshold x is given by the constant factor $\beta \equiv \alpha/(\alpha-1)$ independent of the threshold x. Conversely, we can estimate the local Pareto parameter at any given threshold x from the equation

$$\beta = \frac{\bar{w}(x)}{x}.$$

Using these estimates, we then calculate the respective wealth shares of each of the top percentiles of interest.

4 Wealth inequality in Switzerland

Dell et al. (2007) provided first estimates of the wealth distribution in Switzerland during the last century. For the years 1915 to 1957, they were based on the federal wealth tax, which (as described in Section 2) was levied irregularly as a war tax and eliminated after 1959. For 1940, Dell et al. (2007) extrapolated data from the canton of Thurgau. For some other years (1913, 1919, 1969, 1981, 1991 and 1997), they relied on wealth statistics published by the federal administration. Föllmi and Martínez (2017) updated these national top wealth share series using the wealth tax statistics published annually by the ESTV since 2003.

Based on our data collected from the cantonal archives, we are able to paint both a more fine-grained and comprehensive picture of the evolution of wealth inequality in Switzerland over the past five decades. More importantly, rather than constructing only the national wealth distribution, we provide new evidence on inequality trends at the cantonal level. This variation across cantons will be crucial for analyzing the effect of wealth taxes on inequality.

The end result of our data construction is a panel data set including the wealth shares of various top percentiles (10%, 5%, 1%, 0.1% and 0.01%) of the adult population in each canton between 1969 and 2018. When some cantonal archives are missing information for some years, we linearly interpolate the top wealth shares between the years for which we have information for the corresponding canton.[5]

4.1 Historical evolution at the national level

Figure 5 shows the (wealth-weighted) average of the cantonal top wealth shares for the top 1%, 0.1% and 0.1-1%.[6] It indicates increasing wealth concentration in Switzerland since the mid 1970s: the average wealth share of the top 1% across cantons has risen from 30% to 42%

[5]This only affects some years prior to 2003. Since then, the ESTV provides yearly wealth distribution statistics for each canton. See Table 1 in the Appendix for a detailed list of sources from which we have collected cantonal wealth statistics.

[6]The population-weighted averages across cantons feature similar levels and trends.

most recently. The increase has been even more pronounced for the top 0.1%: their average wealth share has more than doubled over the course of the same time period from 11% to 23%. This suggests that the rising upward trend in wealth inequality is mainly rooted in the steep wealth growth at the very top of the wealth distribution. Indeed, the average share of the top 0.01% more than tripled from less than 4% to 12.5%, whereas the average top 10% share has increased more moderately from 65% to 75%.

It is important to keep in mind that pension accounts are tax exempt and therefore not included in the wealth statistics nor in our analysis. The mandatory wage deduction for savings in occupational retirement accounts, as well as the caps for voluntary savings in private retirement accounts, have constantly grown over the last fifty years. Since our calculations ignore these trends, we tend to over-estimate the increase in wealth inequality. Föllmi and Martínez (2017) provide approximate adjustments taking into account pension wealth for the national wealth distribution. While these corrections decrease the wealth share of the top 10%, the difference is much smaller for the top 1% and negligible for the top 0.1%.[7]

Another caveat is that some cantons offer foreigners who live but do not work in Switzerland an exemption from regular taxation, subjecting them instead to a flat-rate tax based on their living expenses. Hence, the wealth held by these foreign nationals is not included in our data either. The rules for this alternative tax regime have been tightened recently, and it currently affects fewer than 5,000 individuals (Scheuer and Slemrod 2021). For Switzerland as a whole, Baselgia and Martínez (2022) estimate, based on data from the Swiss rich lists published by the business magazine BILANZ, that the top 0.01% wealth share is 16% instead of 12%. They caution, however, that the wealth reported by BILANZ may be systematically too high. Moreover, the bias from ignoring the wealth of foreigners subject to expenditure-based taxation varies by canton. For instance, most of those individuals live in the canton of Vaud, whereas several other cantons (such as Zurich, Schaffhausen, Basel-Landschaft and Basel-Stadt) have completely abolished the flat-rate tax regime.

4.2 Cantonal differences

Our data uncovers remarkable differences across the Swiss cantons in top wealth inequality and its evolution over the last 50 years. For illustrative purposes, we focus on the top 1%. Figure 6 presents the corresponding wealth shares for the six cantons Zürich, Nidwalden, Solothurn, Basel-Landschaft, Aargau and Schwyz. We pick these cantons because their time series are relatively complete and because they provide a good overview of the different inequality trends over time.

[7] Accounting for pension wealth in our cantonal wealth statistics is beyond the scope of this paper, but an important task for future research.

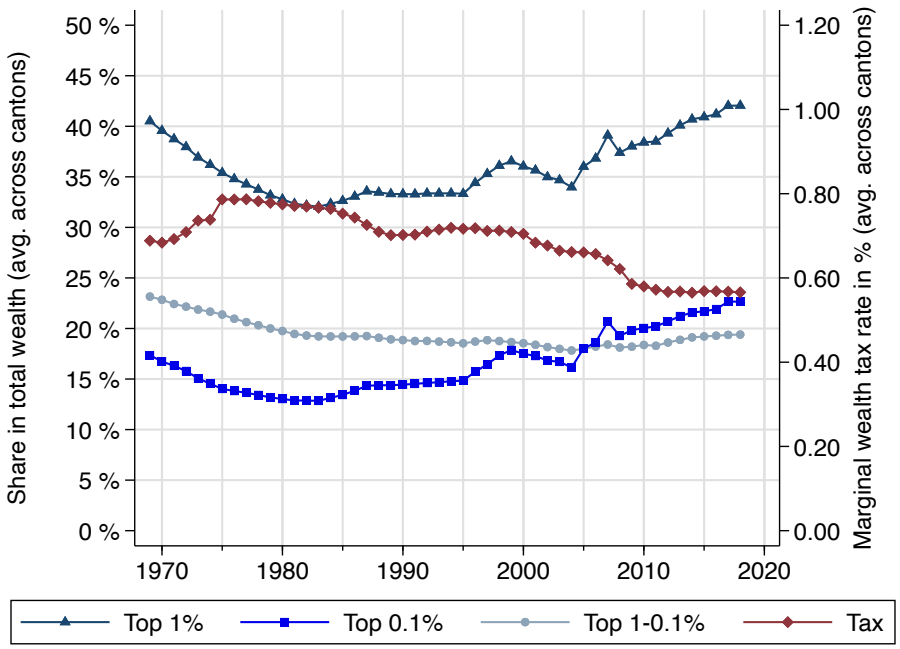


Figure 5: Top 1%, 0.1% and 1-0.1% wealth shares and top marginal wealth tax rates 1969-2018 (wealth-weighted averages across cantons)

It is immediately apparent that the top 1% wealth share in Nidwalden is of a different magnitude than in the other cantons. After falling over the course of the 1970s and then remaining constant until the end of the 1990s at the (already high) level of nearly 50%, it increased sharply to almost 70% most recently. This is the highest value across all cantons and years. Recall that Nidwalden is also the canton with the lowest top wealth tax rate for most of our study period.

Although starting out from a much lower level, the canton of Schwyz has experienced, in relative terms, an even more striking rise in wealth concentration. While its top 1% wealth share was 32% in 1969 and remained between 30 and 40% until the late 1990s, it has almost doubled since then and has now reached 60%.

By contrast, in the canton of Zürich, the top 1% share fell between 1969 and 1975 and has since then remained strikingly constant over time, always at a level slightly below 40% including most recently. We find similarly flat overall trends for the cantons of Bern, Graubünden, St. Gallen and Uri, although they have gone through larger fluctuations in between.

The most complete data series is available for the canton of Basel-Landschaft, with information for each year since 1969. Its top 1% wealth share has followed a pronounced U-shaped pattern over time: from 50% in 1969 to less than 30% in the 1990s and back to 44% in 2018. The canton of Solothurn has followed a similar trajectory over time.

Finally, the canton of Aargau has featured relatively low levels of concentration (around

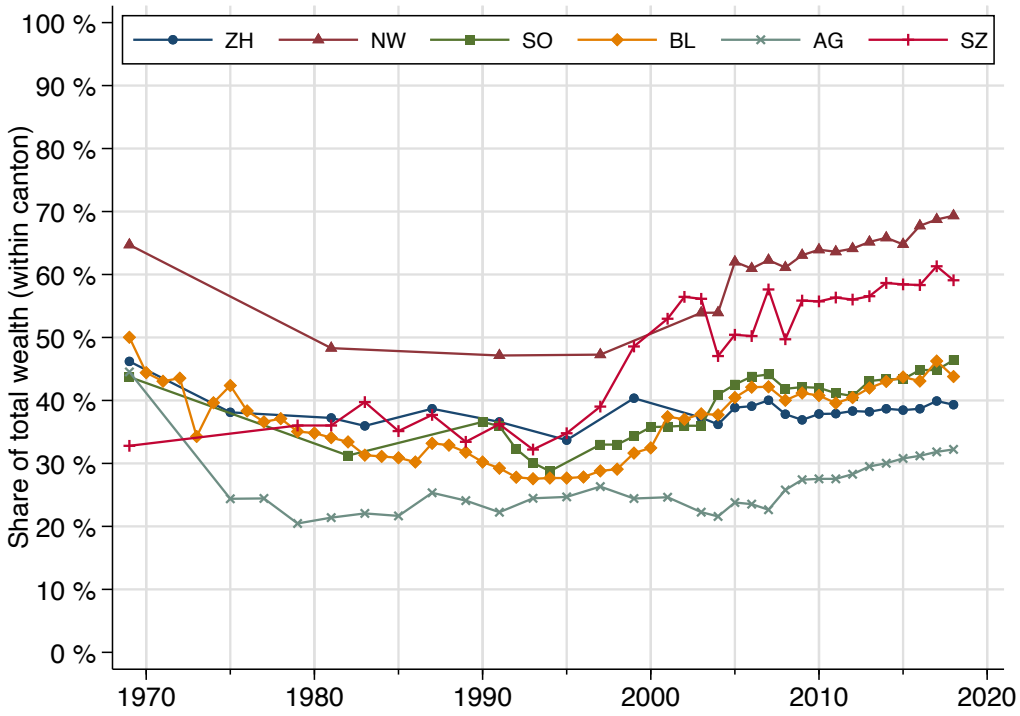


Figure 6: Top 1% wealth shares of the cantons Zurich, Nidwalden, Solothurn, Basel-Landschaft, Aargau and Schwyz 1969-2018

20%) well into the 2000s, when it started climbing like in the other cantons. More generally, many cantons experienced slight reductions or a constant evolution of wealth concentration until the late 1990s and a more prominent increase afterwards. This pattern is even more pronounced for the top 0.1% wealth shares.

It is also useful to put these numbers in international comparison, such as relative to measures of wealth inequality in the United States. Compared to the U.S. top 1% wealth share of 35% in 2018 (World Inequality Database), 19 of the 26 Swiss cantons feature higher degrees of concentration, with Nidwalden (69%), Schwyz (60%), Basel-Stadt (57%), Obwalden (56%), Geneva (55%), and Zug (51%) coming out on top of the list. In view of the fact that the U.S. exhibits a higher degree of wealth concentration than many other advanced countries, we conclude that, from an international perspective, wealth inequality is relatively high in most Swiss cantons.

5 Wealth taxation and top wealth inequality

In this section, we combine our panel data on top wealth tax rates and top wealth shares to shed light on the relationship between the two: Do changes in the progressivity of the

wealth tax affect the concentration of wealth down the road? For this purpose, we exploit the variation in the timing of wealth tax reforms across cantons.

5.1 Cross-canton event study model

We estimate an event study model of the following form (Schmidheiny and Siegloch 2020):

$$W_{i,t} = \sum_{k=1}^{K} \sum_{j=-4}^{12} \beta_j^k D_{i,t-j}^k + \sum_{j=-4}^{12} \gamma_j X_{i,t-j} + \theta_t + \omega_i + \mu_i t + \varepsilon_{i,t}$$

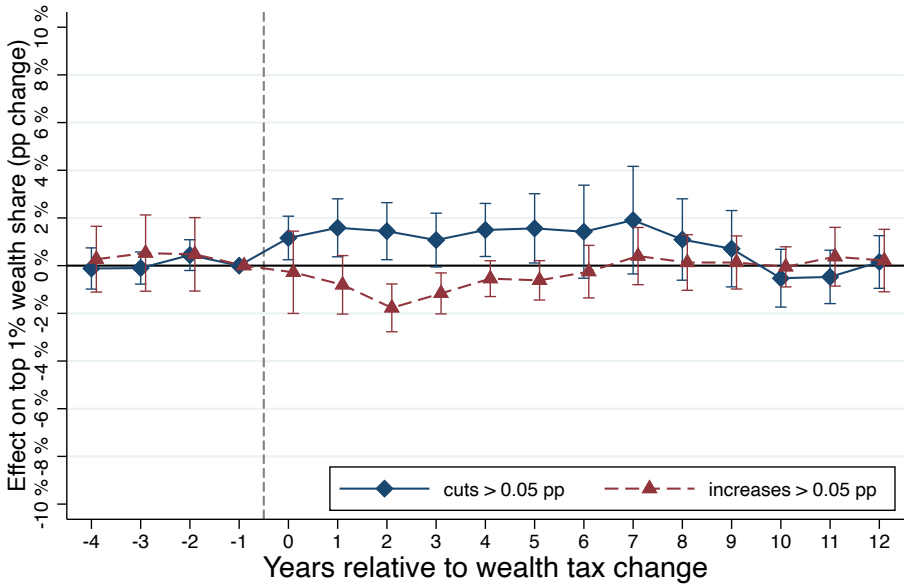
where $W_{i,t}$ is the top wealth share in canton i and year t, $D_{i,t}^k$ an event indicator for a wealth tax reform of type k in canton i and year t, $X_{i,t}$ a set of controls, θ_t a time fixed effect, ω_i a canton fixed effect, and μ_i a canton-specific time trend. Since we aim at isolating the effect of wealth tax reforms on wealth concentration, the controls $X_{i,t}$ include both the top marginal income and the average estate net-of-tax rate in canton i and year t.[8]

We distinguish $K = 4$ types of reform events to allow for potentially heterogeneous effects: tax cuts and hikes, as well as small and large tax changes, defined as smaller or larger than a cutoff of 0.05 percentage points in absolute value. The estimators β_j^k capture the dynamic effects of the events of interest—namely, small and large wealth tax cuts and hikes—on top wealth shares j years after the reform. We set $\beta_{-1}^k = 0$ for all k to express the dynamic effects relative to the year prior to the reform. Moreover, we specify the effect window up to twelve years after the event and considering pre-trends up to four years prior to the event. This also corresponds to the leads and lags of the included controls.

Figure 7 displays the coefficients β_j^k for the top 1% wealth share as a dependent variable and for large reforms. The results suggest that cantonal tax cuts increase the cantonal top 1% wealth share up to 7 years after the reform, whereas tax hikes reduce it. The point estimates indicate an effect of a change in the top 1% wealth share between one and two percentage points (in either direction) but the statistical significance is only marginal (the effect of small reforms is insignificant). This needs to be compared to an average top 1% wealth share of roughly 34% in our estimation sample.

Figure 8 shows the corresponding results for the top 0.1% wealth share. In this case, the effects of wealth tax reforms display the same sign but are slightly bigger, notably when put in relation to the average top 0.1% wealth share of 16% across time and cantons. This suggests that the effect of wealth taxation on wealth inequality is concentrated at the very

[8] Apart from wealth taxes, both bequest and income taxes at the cantonal level are potential drivers of wealth accumulation, and the corresponding rates have changed multiple times during our sample period. For instance, the average top marginal income tax rate across cantons rates rose from 20.5% in 1970 to 25.7% in 1982 and then decreased to 21.2% in 2018. In turn, the average inheritance tax rate across cantons first fluctuated between 1.5% and 2.5% and, since 2000, has decreased to 0.2% in 2018.



small cuts = 294, # small hikes = 175, # large cuts = 34, # large hikes = 6, N = 1020, cantons: 26, years: 1976 - 2015.
Model includes canton and time FE, canton-specific trends, lags and leads of log top net-of-inheritance-tax and top net-of-income-tax rates.
90% confidence intervals, SEs clustered at canton level. Dependent variable: top 1% wealth share; average in estimation sample: 33.9%.

Figure 7: Cross-canton event study, top 1% wealth share

top of the distribution. Indeed, our estimated coefficients for the top 0.01% (not shown) are of a similar absolute magniture (and thus twice as large relative to the baseline wealth share of that group of 8%), whereas the event study model with the top 10% wealth share as the dependent variable produces insignificant results.[9]

Of course, these results cannot necessarily be given a causal interpretation since tax policy decisions at the cantonal level could in principle have been anticipatory in nature or part of broader tax reforms. However, the insignificant pre-trends up to 4 years prior to a wealth tax reform reduce such potential endogeneity concerns. Tables 2 and 3 in the Appendix contain the regression coefficients and standard errors (for the event study models with the top 1% and top 0.1% wealth share as the dependent variable, respectively), including γ_j corresponding to the control variables $X_{i,t-j}$, namely the top marginal income and the average estate net-of-tax rates.

5.2 Interpreting the magnitudes

To put these findings into perspective, it is useful to relate them to the magnitude of the typical wealth tax reforms in our data. Figure 9 shows the histogram of tax rate changes (in percentage points) in our sample period. Overall, there were 714 tax reforms (with more tax

[9]We obtain similar results when using the local Pareto parameter of the wealth distribution instead of top wealth shares as the dependent variable.

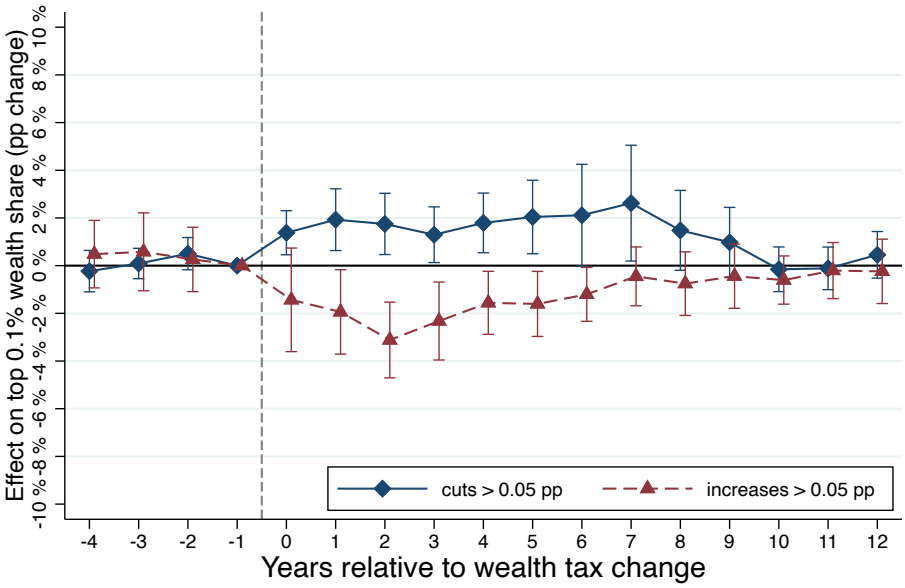


Figure 8: Cross-canton event study, top 0.1% wealth share

cuts than hikes) and most of them reduced the top marginal tax wealth rate by less than 0.1 percentage points.

Recall that Figures 7 and 8 display the coefficients for reforms associated with a change in the tax rate of at least 0.05 percentage points, which effectively isolates approximately the largest 10% of all reforms.[10] The mean tax cut (hike) among this subset of reforms is a reduction (increase) in the top rate by 0.17 (0.1) percentage points. Taken together with the point estimates from our event study model, the implied magnitude of the effect on top wealth shares is therefore quite sizeable. For instance, it predicts that a 0.1 percentage points reduction in the top wealth tax rate would increase the top 1% wealth share by 0.9 percentage points five years after the reform, and the top 0.1% wealth share by 1.2 percentage points.

Indeed, the average top marginal wealth tax rate decreased from 0.73% in the mid-1970s to 0.49% in 2018. At the same time, the wealth share of the top 1% increased on average from 30% to 42%, and the top 0.1% wealth share more than doubled on average from 11% to 23%. Hence, this back-of-the-envelope calculation suggests that historical wealth tax cuts explain roughly 18% of the increase in wealth concentration among the top 1% over this time horizon, and 25% of the increase in wealth concentration among the top 0.1%. While

[10]When using smaller cutoffs (such as 0.03 or 0.01 percentage points) to define large reforms, the point estimates decrease in magnitude, and the standard errors decrease at the same time due to the increasing sample size. As a result, our estimates remain statistically significant under these alternative definitions of large reforms.

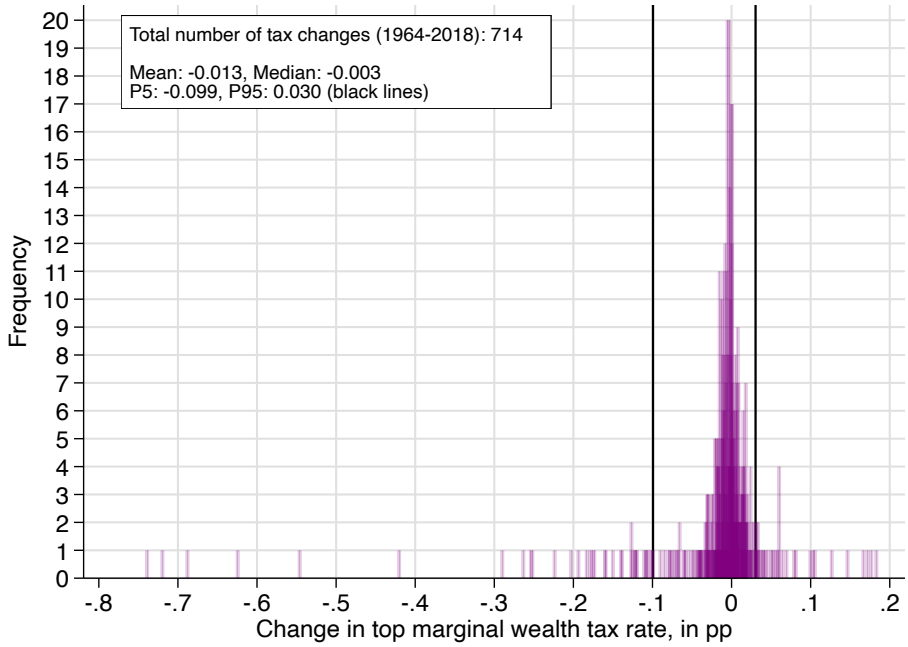


Figure 9: Cantonal wealth tax changes 1964-2018

this is a substantial portion, especially in view of the limited progressivity of the wealth tax in Switzerland, it means that other factors must have been more important in shaping the evolution of wealth inequality over the past few decades.

A potential concern with this interpretation is that reforms to the top marginal wealth tax rate may be correlated with simultaneous reforms to features of the tax schedule further down the distribution, notably the exemption amounts below which no wealth tax is due. For example, if cantonal policy makers aim for largely revenue-neutral reforms, they might lower the exemption amounts whenever they cut the top tax rate. In this case, our results might be driven by both components of the reforms rather than only by changes to the marginal wealth tax: If households further down the distribution who become subject to the wealth tax as a result of the reform (due to the lowered exemption amount) respond by accumulating less wealth, this would further (indirectly) increase concentration at the top. To address this, Figure 10 shows a scatter plot of the change to the top wealth tax (on the horizontal axis) and the change to the exemption amount (on the vertical axis) associated with each of the cantonal tax reforms in our sample. It reveals no systematic relationship between the two dimensions. In fact, exemption amounts were mostly increased over time (in real terms) and hardly ever reduced, despite considerable reductions in the top wealth tax rates. Thus, our results are likely due to changes in the progressivity of the wealth tax at the top rather than at the bottom of the distribution.

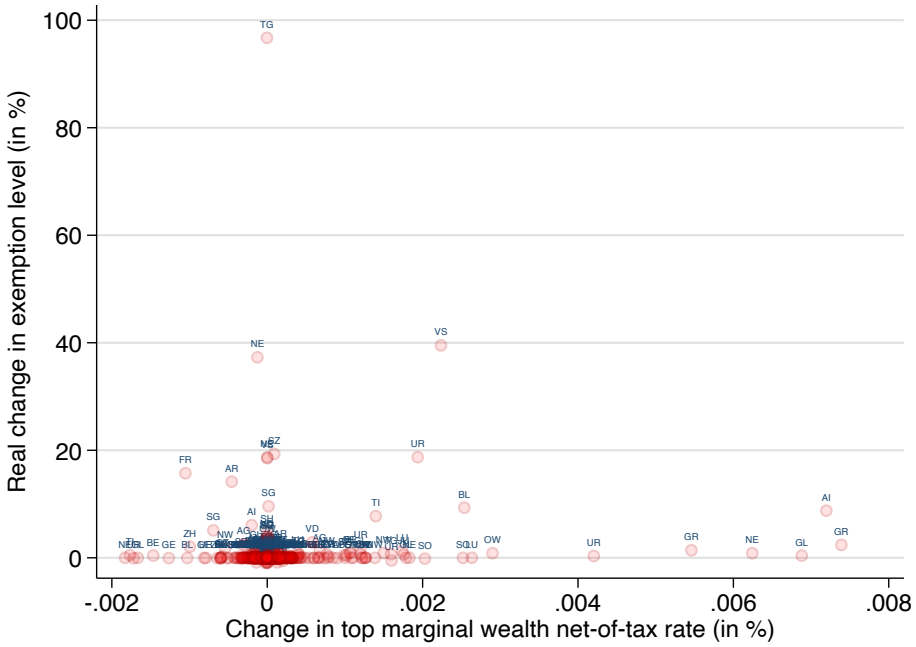


Figure 10: Cantonal changes to the top wealth tax and the exemption amount 1969-2018

6 Conclusion

In this paper, we first present novel evidence on wealth inequality in the 26 Swiss cantons since 1969. We find that the overall increase in wealth concentration at the national level masks striking differences across cantons, in terms of both levels and trends of within-cantonal inequality. Our second contribution is to explore the effect of wealth taxation on wealth inequality exploiting policy heterogeneity across cantons over the last fifty years. Our event study design, based on large tax reforms and controlling for income and bequest taxes, shows that cuts to the top marginal wealth tax in a given canton increase wealth concentration in that canton over the course of the following decade, and that tax increases reduce it.

The effect is strongest at the very top of the distribution. For the top 0.1%, for instance, a reduction in the top marginal wealth tax rate by 0.1 percentage points increases their wealth share by 1.2 percentage points seven years after the reform. This implies that the overall reduction in the progressivity of the wealth tax over the last decades explains roughly a quarter of the increase in concentration among the top 0.1% over this time horizon. Note that, in 2018, this group only included roughly 5000 tax units. Thus, it is an impressively small number of the wealthiest households who benefited most from reduced wealth tax rates at the top.

Since our analysis is based on aggregate data at the cantonal level, it remains silent on

the economic mechanisms underlying this effect. Uncovering the anatomy of the response of wealth inequality to wealth taxation—in terms of its mechanical, real savings, inter-cantonal mobility, misreporting, and asset pricing components, for example—would require more detailed micro data and is therefore beyond the scope of this paper. In their analysis of how declared wealth responds to changes in wealth taxes, Brülhart et al. (2022) make use of precisely such data for the cantons of Bern and Luzern. They find that about a quarter of the total response is due to mobility, a fifth due to house price capitalization, and the rest likely due to misreporting. Whether a similar decomposition holds for the response of top wealth concentration, rather than absolute wealth levels, is an interesting question for future research.

If a sizeable fraction of the effect arises from taxpayer mobility, then this also raises a conceptual question: At which level of geographical aggregation should we measure inequality? Suppose, for instance, that canton A lowers its top wealth tax rate, thereby inducing some wealthy households in another canton B to move to canton A. This would increase the top wealth share in canton A and reduce it in canton B without any change in the national top wealth share. This example illustrates that aggregating our estimates based on comparisons across cantons is not straightforward. Indeed, in the presence of a significant mobility response, our estimates would need to be scaled down correspondingly when used to predict the effect of a simultaneous reduction in wealth taxation in all cantons on wealth concentration at the national level.

Relatedly, it also raises the question whether we should care at all about inequality at the cantonal level, or rather only at the federal level. In fact, one may argue that there is no reason to stop at the level of an individual country, and that, ultimately, world-wide inequality is all that matters from a normative standpoint. Still, there is significant interest in within-country inequality. One reason is that many political decisions, not least about tax policy and redistribution, are taken at the country level, and that there may be a feedback loop between within-country inequality and political decision making. By the same argument, since the Swiss cantons have a large degree of political autonomy, studying the evolution and determinants of wealth inequality at the sub-national level is equally important. Our paper takes a first step in this direction.

Our results also make clear that changes to wealth taxation are not the most important driver of the recent rise in wealth inequality in Switzerland. Indeed, the Swiss wealth tax was never intended to achieve a major redistribution of wealth, but rather to generate stable revenues for the cantons and municipalities. This is evident in the moderate tax rates, which even at the top are likely smaller than the rates of return to the wealth of the very rich, and the fact that a large portion of the population is subject to the wealth tax.

Other changes to the Swiss tax system over the last 50 years could have played a role. In

particular, most cantons have abolished bequest taxes for direct descendants (Brülhart and Parchet 2014) and there is no bequest tax at the federal level. At the same time, bequests account for a considerable part of the wealth of the superrich in Switzerland. For instance, Baselgia and Martínez (2022) show that, most recently, 75% of the 300 richest individuals in Switzerland have been heirs. This is extremely high compared to the Forbes 400, the corresponding list for the United States. In 2018, 69% of the wealthiest Americans were self-made founders of their own businesses (Scheuer and Slemrod 2020). Quantifying the degree to which the erosion of the cantonal bequest taxes has contributed to long-run wealth inequality in Switzerland would be an interesting topic for further investigation.

References

Agrawal, D., D. Foremny and C. Martínez-Toledano (2020), "Wealth tax mobility and tax coordination," Mimeo.

Baselgia, E. and Martínez, I. (2022), "Behavioral Responses to Special Tax Regimes for the Super-Rich: Insights from Swiss Rich Lists," CESifo Working Paper 9778.

Brülhart, M., Gruber, J., Krapf, M., and Schmidheiny, K. (2022), "Behavioral responses to wealth taxes: evidence from Switzerland," *American Economic Journal: Economic Policy* 14, 111-150.

Brülhart, M. and Parchet, R. (2014), "Alleged tax competition: the mysterious death of bequest taxes in Switzerland," *Journal of Public Economics* 111, 63-78.

Dell, F., Piketty, T., and Saez, E. (2007), "Income and wealth concentration in Switzerland over the 20th century," Chapter 11 in "Top incomes over the 20th century: a contrast between continental European and English-speaking countries," eds. A. Atkinson and T. Piketty, *Oxford University Press* 472-500.

Duran-Cabré, J., A. Esteller-Moré, and M. Mas-Montserrat (2019), "Behavioural Responses to the (Re-)Introduction of Wealth Taxes. Evidence From Spain," IEB Working Paper.

Föllmi, R. and Martínez, I. (2017), "Volatile top income shares in Switzerland? Reassessing the evolution between 1981 and 2010," *Review of Economics and Statistics* 99, 783–809.

Jakobsen, K., Jakobsen, K., Kleven, H., and Zucman, G. (2020), "Wealth taxation and wealth accumulation: Theory and evidence from Denmark," *Quarterly Journal of Economics* 135, 329–388.

Leiserson, G. and D. Yagan (2021), "What is the Average Federal Individual Income Tax Rate on the Wealthiest Americans?" White House Report.

Londoño-Velez, J. and J. Ávila-Mahecha (2019), "Can Wealth Taxation Work in Developing Countries? Quasi-Experimental Evidence from Colombia," Mimeo.

OECD (2018), "The Role and Design of Net Wealth Taxes in the OECD," *OECD Tax Policy Studies* 26.

Saez, E. and Zucman, G. (2019), "Progressive Wealth Taxation," *Brookings Papers on Economic Activity* Fall 2019, 437-511.

Scheuer, F. (2020), "Taxing the superrich—challenges of a fair tax system," *UBS Center Public Paper* 9.

Scheuer, F. and Slemrod, J. (2020), "Taxation and the superrich," *Annual Review of Economics* 12, 189-211.

Scheuer, F. and Slemrod, J. (2021), "Taxing our wealth," *Journal of Economic Perspectives* 35, 207-230.

Seim, D. (2017), "Behavioral responses to wealth taxes: Evidence from Sweden," *American Economic Journal: Economic Policy* 9, 395–421.

Schmidheiny, K. and Siegloch, S. (2020), "On event studies and distributed-lags in two-way fixed effects models: identification, equivalence, and generalization," *CEPR Discussion Paper* 13477.

Schweizerische Steuerkonferenz (2021), "Vermögenssteuer natürlicher Personen," Dokumentation und Steuerinformation, Eidgenössische Steuerverwaltung.

World Inequality Database, https://wid.world/

Zoutman, F. (2018), "The Elasticity of Taxable Wealth: Evidence from the Netherlands," Working Paper, Norwegian School of Economics.

Appendix

Canton(s)	Year(s)	Source
All cantons[1]	1969, 1981, 1991, 1997, Yearly 2003 - 2018	Schweizerische Steuerkonferenz "Vermögenssteuer natürlicher Personen," Dokumentation und Steuer-information, Eidgenössische Steuerverwaltung.
AG	Biannual 1975 - 2001	BFS-Archiv (Signatur: 10101 01 31 040000 0000 0), Steuerstatistik Natürliche Personen, Heft 25, 38, 46, 55, 64, 74, 86, 94, 106, 118, 133, 138, 150, 170.
BE	1977	BFS-Archiv (Signatur: 10106 01 31 020000 0015), Staatssteuerstatistik 1977/78. I. Natürliche Personen, Reihe B; Heft 14.
BE	1969	BFS-Archiv (Signatur: 10106 01 31 020000 0008), Staatssteuerstatistik, Reihe B; Heft 8.
BL	2001, 2002	Statistisches Amt Basel-Landschaft: Steuerstatistik, Steuerpflichtige nach Einkommens- und Vermögensstufe & Steuerbares Vermögen nach Vermögensstufe, 2001-2012.
BL	Yearly 1969 - 2000	Statistisches Amt des Kantons Basel-Landschaft: Statistisches Jahrbuch, Steuerertrag der natürlichen Personen nach Vermögensstufe.
BS	Yearly 1991 – 2003, 2015	Statistisches Amt des Kantons Basel-Stadt: Steuerstatistik des Kanton Basel-Stadt (Spezialauswertung).
FR	1995, 1997, 1999, 2001, 2002	Kantonale Steuerverwaltung Kanton Freiburg: Steuerstatistik, Kantonssteuern auf dem Einkommen und Vermögen der natürlichen Personen.
GR	1971, 1979	Kantonale Steuerverwaltung Graubünden: Kantonale Steuerstatistik, Natürliche Personen.
LU	1973, 1983, 1993, 1995, 1997, 1999	Amt für Statistik Luzern: Einkommens- und Vermögensstrukturen: Natürliche Personen: Staatssteuerstatistik 1973/1974, 1983/1984, 1993/1994, 1995/1996, 1997/1998, 1999/2000.
SH	Yearly 2000 - 2002	Kanton Schaffhausen: Steuerstatistik.
SO	Yearly 1998 - 2002	Amt für Finanzen - Statistikdienst Solothurn: Steuerbares Vermögen Natürliche Personen 1998-2015.
SO	Yearly 1990 - 1994	BFS-Archiv (Signatur: 10101 01 31 040000 0000 0), Steuerstatistik Kanton Solothurn, Heft 12-16.
SZ	1997, 1999, 2001 2002	Kantonale Steuerverwaltung Schwyz: Steuerstatistik natürliche Personen 1997/1998, 1999/2000, 2002/2001.
SZ	Biannual 1981 - 1995	NB (Signatur: OPq 4001, Oq 13775, Oq 12727), Statistik über die Steuerveranlagung 1981/1982, 1983/1984, 1985/1986, 1987/1988, 1989/1990, 1991/1992, 1993/1994, 1995/1996.
TG	Biannual 1975 - 1997	NB (Signatur: OPq 2939), Steuerstatistik Kanton Thurgau.
ZG	1993	Steuerstatistik 1993
ZH	1999, 1995	Statistisches Amt des Kantons Zürich, Staatssteuerstatistik.
ZH	1969, 1975, 1983, 1987, 1991	NB (Signatur: OPq 4090), Zürcher Staatssteuerstatistik, Heft 71, 93, 113, 122, 137.

Notes:
1 – 1969 without the canton of Jura
BFS – Bundesamt für Statistik
NB – Schweizerische Nationalbibliothek

Table 1: Data sources for cantonal top wealth shares 1969-2018

Year relative to wealth tax change	Small cut	Small hike	Large cut	Large hike	log top net-of-estate-tax rates	log top net-of-income-tax rates
-4	0.0022976	-0.0031858	-0.001189	0.00271	0.1889398	0.1096511
	(0.0020295)	(0.0038144)	(0.0050576)	(0.0083876)	(0.0891568)	(0.103685)
-3	0.0027329	-0.0016244	-0.0010082	0.0052672	0.053156	0.0253212
	(0.0021233)	(0.003756)	(0.0039427)	(0.009724)	(0.0634622)	(0.0637724)
-2	0.0020839	-0.0017135	0.0044265	0.0047558	0.064948	-0.1142434
	(0.0020935)	(0.0031495)	(0.0037763)	(0.0093627)	(0.0617059)	(0.0832014)
0	0.0010645	-0.00262	0.0116087	-0.0027763	0.0154428	-0.0171117
	(0.0023383)	(0.0036396)	(0.0053442)	(0.0104915)	(0.0506904)	(0.0533242)
1	0.0020149	-0.0041061	0.0158724	-0.0080446	-0.0166484	-0.019266
	(0.0024915)	(0.003564)	(0.0071165)	(0.0074566)	(0.0814433)	(0.0630007)
2	0.003395	-0.0045465	0.0144571	-0.0177016	0.0263441	-0.0479522
	(0.002812)	(0.0034218)	(0.0070065)	(0.006087)	(0.0640897)	(0.0375767)
3	0.0045326	-0.0035743	0.0107281	-0.0116437	0.009336	-0.0199642
	(0.0026801)	(0.0040457)	(0.0066075)	(0.0052283)	(0.062072)	(0.0304443)
4	0.0039425	-0.0026286	0.014968	-0.0054516	0.0390477	-0.0032574
	(0.0026098)	(0.0030684)	(0.0065124)	(0.0045683)	(0.0549504)	(0.0241641)
5	0.0022235	-0.002887	0.0156372	-0.0061575	-0.0134754	-0.0038553
	(0.0025769)	(0.0029955)	(0.0085046)	(0.0050247)	(0.0475782)	(0.038835)
6	0.0025558	-0.0023962	0.0142353	-0.0025123	0.0632166	0.0167414
	(0.0024987)	(0.0030709)	(0.0114197)	(0.0067028)	(0.0720875)	(0.0229728)
7	0.0016832	-0.0029766	0.01908	0.0040213	0.2333809	-0.0141396
	(0.002224)	(0.0032538)	(0.0132075)	(0.007296)	(0.0792453)	(0.0350742)
8	0.001469	-0.001831	0.0109595	0.0013128	0.1514018	0.0302078
	(0.0025894)	(0.0029395)	(0.0099914)	(0.0070839)	(0.0723615)	(0.0242661)
9	0.0008653	-0.0004304	0.0070992	0.0013345	0.1061328	-0.0044352
	(0.0026548)	(0.0030323)	(0.0093716)	(0.0067707)	(0.0853943)	(0.0151072)
10	0.0001582	-0.0023406	-0.005262	-0.0005021	0.0892894	0.0475557
	(0.0023999)	(0.0034623)	(0.0070931)	(0.0051138)	(0.065598)	(0.0409621)
11	-0.0007746	-0.0024195	-0.0047227	0.0037486	0.0295935	-0.0232601
	(0.0025855)	(0.0036668)	(0.0065559)	(0.007485)	(0.0682379)	(0.0164015)
12	-0.0009869	-0.0006997	0.0015392	0.0021267	0.1090395	0.0408898
	(0.0023105)	(0.0033076)	(0.0064668)	(0.0079657)	(0.0645107)	(0.0550869)
Constant	0.992283					
	1.189494					
N Groups	26	R^2 within	0.7727			
N Observations	1002	R^2 between	0.4699			
		R^2 overall	0.2653			

Note: Model includes canton and time FE as well as canton-specific trends, SEs clustered at canton level. Dependent variable: top 1% wealth share.

Table 2: Cross-canton event study model for the top 1% wealth share

Year relative to wealth tax change	Small cut	Small hike	Large cut	Large hike	log top net-of-estate-tax rates	log top net-of-income-tax rates
-4	0.001881	-0.0022456	-0.0022969	0.00483	0.1429525	0.160743
	(0.0019647)	(0.0039929)	(0.0050858)	(0.0086046)	(0.0904797)	(0.093234)
-3	0.002222	0.0001204	0.0009048	0.0058096	0.0501811	0.0216165
	(0.0021907)	(0.0038691)	(0.0037324)	(0.0099277)	(0.061513)	(0.0529901)
-2	0.0019531	-0.0003361	0.0050203	0.0026091	0.0982664	-0.0893154
	(0.0021851)	(0.0032527)	(0.0039572)	(0.0082074)	(0.0600775)	(0.0652993)
0	0.0013246	-0.0006556	0.0137974	-0.0143376	0.0491401	-0.0074544
	(0.0021654)	(0.0043348)	(0.0054106)	(0.013202)	(0.0347417)	(0.0512172)
1	0.002462	-0.0021194	0.0192765	-0.0194086	0.0207446	0.0161065
	(0.0022067)	(0.0041318)	(0.0075811)	(0.0107536)	(0.0839255)	(0.070348)
2	0.0031735	-0.0031897	0.0174902	-0.031182	0.0487051	-0.0473359
	(0.0024697)	(0.0036029)	(0.0075215)	(0.0096587)	(0.0686057)	(0.0361945)
3	0.0043674	-0.0024796	0.0129753	-0.0232158	0.0188918	-0.0671123
	(0.002497)	(0.004441)	(0.0068345)	(0.0099439)	(0.0505065)	(0.0361399)
4	0.0046294	-0.0016716	0.017926	-0.0155879	0.013602	0.021173
	(0.0023955)	(0.0030902)	(0.0073241)	(0.0080322)	(0.0483108)	(0.0243231)
5	0.0026645	-0.0021085	0.0204186	-0.0160419	-0.0655603	0.0046424
	(0.002486)	(0.0026502)	(0.0090204)	(0.008296)	(0.047687)	(0.0490397)
6	0.0032979	-0.0010331	0.0211501	-0.0120412	0.0035395	0.0053703
	(0.0027402)	(0.0028592)	(0.0124937)	(0.0068713)	(0.0621205)	(0.0260203)
7	0.0023027	-0.0010761	0.026211	-0.004494	0.1527247	0.0035248
	(0.0024359)	(0.0034237)	(0.0142148)	(0.0074954)	(0.0717843)	(0.0371136)
8	0.0021861	-0.0005634	0.0147989	-0.0075425	0.1000737	0.0200387
	(0.0027077)	(0.0031605)	(0.0098094)	(0.0081067)	(0.0696155)	(0.0301853)
9	0.00224	0.001157	0.009812	-0.0044303	0.143336	0.0011738
	(0.002756)	(0.0032542)	(0.0085551)	(0.0081934)	(0.0795746)	(0.0154614)
10	0.001999	-0.0003187	-0.0015225	-0.0060394	0.1389383	0.0664139
	(0.0024002)	(0.0038338)	(0.0054889)	(0.0061475)	(0.066082)	(0.0502499)
11	0.0013585	-0.0004508	-0.0011343	-0.0020627	0.0405962	-0.0213298
	(0.0025442)	(0.0041113)	(0.005228)	(0.0071496)	(0.0641367)	(0.0170583)
12	0.0011842	0.0007849	0.0045363	-0.0023967	0.0369275	0.0382706
	(0.002033)	(0.0032469)	(0.0057216)	(0.0082058)	(0.0727604)	(0.0570599)
Constant	-2.223493					
	(1.322405)					
N Groups	26	R^2 within	0.7659			
N Observations	1002	R^2 between	0.4699			
		R^2 overall	0.3158			

Note: Model includes canton and time FE as well as canton-specific trends, SEs clustered at canton level. Dependent variable: top 0.1% wealth share.

Table 3: Cross-canton event study model for the top 0.1% wealth share