

OXFORD

TOP
INCOMES
OVER THE
20TH
CENTURY

*A Contrast Between Continental European
and English-Speaking Countries*

Edited by A. B. ATKINSON & T. PIKETTY

Income and Wealth Concentration in Switzerland over the Twentieth Century¹

F. Dell, T. Piketty, and E. Saez

11.1 INTRODUCTION

The evolution of income and wealth inequality during the process of development has attracted enormous attention in the economics literature. Liberals have blamed income and wealth concentration because of concerns for equity and in particular for tilting the political process in the favour of the wealthy. They have proposed progressive taxation as an appropriate counter-force against wealth concentration. For conservatives, concentration of income and wealth is considered as a natural and necessary outcome of an environment that provides incentives for work, entrepreneurship, and wealth accumulation, key elements of macro-economic success. Progressive taxation may redistribute resources away from the rich and wealthy and reduce wealth concentration but it might also weaken those incentives and generate large efficiency costs. Therefore, it is of great importance to understand the forces driving income and wealth concentration over time and understand whether government interventions through taxation are effective and/or harmful to curb wealth inequality. This task is greatly facilitated by the availability of long and homogeneous series of income or wealth concentration.

A number of recent studies, gathered in this volume, have constructed series for shares of income accruing to upper income groups (such as the top decile, top percentile, etc.) for various countries: Piketty (2001, 2003, and Chapter 3 in this volume) for France, Atkinson (2005 and Chapter 4 in this) for the United Kingdom, Piketty and Saez (2003 and Chapter 5) for the United States and Dell (Chapter 9) for Germany. Shares of wealth accruing to top wealth groups have also been constructed for some countries: Atkinson and Harrison (1978), and Atkinson, Gordon and Harrison (1989) for the United Kingdom,² Kopczuk

¹ We thank Tony Atkinson and seminar participants at the CHANGEQUAL conference on Inequality at Nuffield College in Oxford for helpful comments and discussions. Financial support from the Sloan foundation, NSF Grant SES-0134946, and the MacArthur foundation are thankfully acknowledged.

² Lindert (2000) presents these UK wealth concentration series as well as more recent estimates prepared by the British fiscal administration.

and Saez (2004) for the United States, Piketty, Postel-Vinay, and Rosenthal (2004) for France. All these series share two important and striking characteristics. First, in all those countries, a dramatic reduction in top income and wealth shares is observed from the early part of the century to the decades following the Second World War. In virtually all cases, the share of income or wealth accruing to the top 1% has been divided by a factor two and sometimes by a much greater factor. For example, in the United Kingdom, the top 1% income share falls from almost 20% in 1918 to 6% in the 1970s (Atkinson, Chapter 4 in this volume). Second, in all those countries as well, those dramatic decreases are concentrated in the very top groups of the income or wealth distribution. There are relatively little secular changes for the bottom part of the top decile or even the bottom of the top percentile, and the majority of the decrease is actually concentrated in the top 0.1%.

In contrast, the evolution of top income shares in the recent decades has been different across countries: the United States, Canada, and the United Kingdom have experienced a large increase in top income shares while France, and the Netherlands display hardly any change in top income shares. For the United States (Piketty and Saez 2003 and Chapter 5 in this volume) and Canada (Saez and Veall 2005 and Chapter 6 in this volume), and the United Kingdom (Atkinson 2005 and Chapter 4 in this volume), this dramatic increase has been due to a dramatic increase in top wages and salaries. Kopczuk and Saez (2004) and Atkinson et al. (1989) show that in both the United States and the United Kingdom, the increase in top wealth shares has been very small and almost negligible relative to the dramatic increase in top income shares. This suggests that, although income concentration has increased sharply in the United States and the United Kingdom, it has not yet translated into a significant increase in wealth concentration.³

Following Piketty (2001, 2003), most authors have argued that the dramatic increase in tax progressivity—which took place during the First World War and the interwar period in all the countries studied and which remained in place after the Second World War period at least until the recent decades—has been the main factor preventing top income and wealth shares from coming back to the very high levels observed at the beginning of the century.⁴ Indeed, with marginal income tax rates in excess of 60%, and sometimes reaching even 90% for very high incomes, a wealthy individual has to pay in taxes a very large fraction of its returns on capital, and accumulating or sustaining a fortune requires much higher saving rates.

³ However, a spread of popular wealth could account for these flat shares, reconcentration at the top nonetheless taking place. This is for instance what happened in the UK, accentuated in the 1980s and 1990s by privatization and more recently by the house price boom.

⁴ Earlier studies of income and wealth concentration in the United States (Kuznets 1953 and Lampman 1962) also mentioned the development of progressive taxation as a factor explaining the decline of US income and wealth concentration in the first half of the twentieth century.

However, because the effects of taxes on wealth concentration are a long-term process, it is nearly impossible to provide a rigorous proof of this hypothesis. The goal of the present chapter is to provide a simple test of this hypothesis by examining the case of Switzerland, a country which did not experience the shocks of the two World Wars and never established a very progressive tax structure. For most of the century, and it is still true today, the majority of income taxes in Switzerland are levied at the local level (county (Canton) level and municipal level). These local income and wealth taxes present a relatively flat rate structure with low top marginal tax rates. Today, the combined county and municipal income tax rates are around 25% in general, and the top local wealth tax rate are in general less than 0.5% (see *Charge Fiscale en Suisse*). Switzerland has also imposed federal income and wealth taxes (starting during the First World War in 1915). However, the top marginal income tax rates have been around 10% for most of the period and the top wealth tax rates have in general been less than 0.5%, except for a very few years during the World Wars (see *Charge Fiscale en Suisse*). There is no federal inheritance and estate taxes and most counties do not levy inheritance taxes between spouses and between parents and children, or levy only a very modest tax of below 10% for bequests to children. Thus over the twentieth century, the marginal tax rate in Switzerland on capital income of the very wealthy including federal and local income, wealth, and inheritance taxes has been very low relative to other OECD countries.⁵

Therefore, if the development of progressive taxation is the main factor which drove and kept top income and wealth shares at a much lower level than in early part of century, then we should not observe such a drop in Switzerland, a country which never experienced sustained progressive taxation. In order to answer this question, the present chapter uses Swiss income and wealth tax statistics to construct homogeneous series of income and wealth shares for various upper income and wealth groups within the top decile. As personal income and wealth taxes in Switzerland are based on family income (and not individual income), our series measure inequality among families (which may be different from inequality among individuals). Our top wealth shares series start in 1913 and cover a large number of years up to year 1957, the last year a federal wealth tax was implemented. Since 1957, we have to rely on wealth surveys compiled by the federal administration from county wealth tax statistics. Unfortunately, such surveys were only made about once every ten years, and the latest year available is 1997. Our top income share series start in 1933⁶ and end in 1996, the latest year available (due to a fundamental income tax reform starting in 1997 in some counties and with a long transition period, see below). Because

⁵ This statement should be carefully evaluated by estimating the average and marginal tax rates that top income and wealth groups face in Switzerland using the detailed statistics published in *Charge Fiscale en Suisse*. We leave establishing rigorously this key first stage point for future work.

⁶ Before 1933, Switzerland imposed federal income taxes but those taxes were based on labour income only and excluded capital income. As a result, these income tax statistics cannot be compared to the tax statistics starting in 1933 where all sources of income, both labour and capital, are reported.

federal income taxes in Switzerland have been assessed every two years on the average income of the two preceding years, our top income shares series are bi-annual. In contrast to the wealth share series, the income series are quasi-continuous and cover almost all the years in the period 1933–97.

Our results strongly support the tax explanation discussed above: top wealth and income shares in Switzerland fell during the shocks of the World Wars and the Great Depression (although much less than in other countries) but, most importantly, top wealth and income shares fully recovered from those shocks in the post Second World War period. As a result, by 1969, the top wealth shares are about as high as they were before the First World War, and top income shares are higher in the early 1970s than in the pre-Second World War period. As we mentioned above, these results offer a striking contrast with the experiences of France, the United Kingdom, the United States, and Canada. Thus, although Switzerland had relatively less income and wealth concentration in the early part of the century than those countries, by the 1960s, Switzerland displays significantly more income and especially wealth concentration than other countries. Interestingly, Switzerland does display a reduction in income and wealth concentration since the 1970s, suggesting that non-tax factors such as the aging of the population and the development of pensions might have reduced wealth concentration.

Finally, we investigate the issue of tax evasion through relocation to Switzerland or through Swiss bank accounts investments. We obtain upper bounds on the fraction of income taxpayers in Switzerland with income abroad or non-resident taxpayers. Although the fraction of such taxpayers has increased in recent decades, it still remains below 20% even at the very top of the income distribution suggesting that the phenomenon of migration toward Switzerland of wealthy individuals is a very limited phenomenon relative to the number of high income individuals actually living in European high tax countries.

Similarly, we can estimate an upper bound on the total amount of capital income earned through Swiss accounts, which is never reported (either to the Swiss fiscal administration for Swiss residents or to foreign fiscal administrations in the case of non-residents). This amount is at most around \$5 billion in recent years and is negligible relative to total incomes earned by high income individuals in the United States. This amount is also relatively small relative to high incomes earned in large European countries such as France and clearly cannot account for the gap in top income shares that has taken place between continental Europe and Anglo-Saxon countries in recent decades. Clearly, Switzerland is only but one of the potential destination for investors trying to evade taxes in their home country. Trying to estimate systematically amounts of capital income earned and evaded in all tax havens would be a useful project that we leave for future work.

The paper is organized as follows. Section 11.2 describes our data sources and outlines our estimation methods. In Section 11.3, we present and analyse the trends in top income shares since 1933. Section 11.4 presents the evolution of top wealth shares since 1913. Section 11.5 discusses the evidence on capital income earned in Switzerland by non-residents. Finally, Section 11.6 offers a brief conclusion.

11.2 DATA AND METHODOLOGY

Income and Wealth Federal Taxation and Statistical Sources

Switzerland has imposed a Federal individual income tax irregularly in the first part of the twentieth century. The first two federal income taxes were the *Impôt de Guerre* (based on incomes earned from 1911 to 1914) and the *Nouvel Impôt Fédéral de Guerre Extraordinaire* (based on incomes earned in 1917 to 1928). Statistics on these income taxes were published in *Statistique du 1er impôt fédéral de guerre 1916/17* and in *Statistique concernant le nouvel impôt fédéral de guerre extraordinaire (périodes I, II, et III)*, respectively. Unfortunately, those early income taxes were based only on labour income and excluded capital income and therefore are not analysed in this study.⁷

Starting with the third federal income tax from 1933 to 1937 (*Contribution Fédérale de Crise*), the income tax was assessed on total income (both income from labour and capital). The fourth federal income tax (*Impôt Fédéral pour la Défense Nationale*) started in 1939 and has been imposed regularly ever since. This study is based on statistics by size of income published by the Swiss fiscal administration covering those two federal income taxes for the periods 1933–37 and 1939–96 (except 1941–42 for which no statistics were published).

A striking feature of the federal income tax in Switzerland is that, except for 1933, it is not imposed on annual incomes as in most other countries but on the average of two consecutive annual incomes. Column (0) in Table 11.2 shows the bi-annual periods corresponding to the federal income tax in Switzerland since 1933. For example, for the last period of analysis 1995–96, the income tax is assessed on average (nominal) income earned in 1995 and 1996. The income tax corresponding to those years is paid twice in the two following years (1997 and 1998). Therefore, there is a substantial lag between the moment when the incomes are earned and the moment when the income tax is paid. The distribution statistics have been published in *Contribution Fédérale de Crise* (for years 1933–37), *Impôt Fédéral pour la Défense Nationale* (for years 1939–80), and in *Impôt Fédéral Direct* (for years 1981–92). (For years after 1992, the paper publication is no longer available but statistics have been made available online at <http://www.estv.admin.ch>). Many of these income distributions are also been published in the annual statistical yearbook for Switzerland, *Annuaire Statistique de la Suisse*.

After 1995/96, some counties in Switzerland start to switch to a standard annual tax system instead of the bi-annual tax. By 2003, all counties have switched to the new annual system. Unfortunately, during the transition period, no uniform statistics for the full country exist and hence estimates would require merging data from different counties and different years. That is why we do not try to estimate top income shares after 1995/96, the last uniform bi-annual

⁷ Those taxes also included a wealth tax on individuals. We exploit those early wealth statistics to estimate top wealth shares early in the twentieth century (see below).

tax period. We leave for future research estimates covering the transition period and subsequent years. Such estimates are important to assess the effect on top income shares of averaging income over two years instead of considering annual incomes as in all other countries.

Our estimates are based on tabulation by size of income before deductions (this is called *Revenu net* or net income).⁸ The income definition is stable over time and includes employment income, business income, and capital income. It always excludes realized capital gains. Before 1971, income distributions are presented by size of income after personal exemption deductions (this is called *Revenu imposable* or taxable income). However, information on the amounts and levels of those deductions is provided and we add back those amounts in our estimation to obtain consistent series over time based on income before deductions. We can check with statistics for 1971–72 (as well as later years) presented both by size of income before deductions and income after deductions that adding back deductions does not introduce any significant error in our estimates.

Federal wealth taxes have been levied irregularly over the twentieth century in Switzerland. At the same time the federal income taxes were levied, Switzerland imposed a federal wealth tax. Those wealth taxes were based on family net worth as of 1 January 1915 (for the first federal wealth tax, *Impôt de Guerre*), as of 1 January 1921, 1925, and 1929 (for the second federal wealth tax, *Nouvel Impôt Fédéral de Guerre Extraordinaire*), and as of 1 January 1934, 1936, and 1938 (for the third federal wealth tax, *Contribution Fédérale de Crise*). Special federal wealth taxes were also levied on net worth as of 1 January of 1940 and 1945 (*Sacrifice de Guerre*). Finally, a more regular wealth tax (*Impôt Fédéral pour la Défense Nationale*) was imposed every two years from 1947 to 1957 (always based on family net worth as of 1 January of the corresponding years). After 1957, the federal wealth tax was eliminated.

All these federal wealth taxes were progressive with an exemption level (which depended on family structure). As a result, families below the exemption thresholds are not included in the statistics. For 1940, however, statistics on wealth for families below the taxable threshold were collected for the county of Thurgovia. We extrapolate the distribution of wealth in this county to Switzerland to obtain a complete wealth distribution for 1940.

In addition to federal wealth taxes, counties have levied on a regular basis (and often since the beginning of the twentieth century or even earlier) wealth and income taxes. Unfortunately, statistics on county wealth and income taxes displaying distributions of income and wealth have not been officially published, although some counties (such as the largest and wealthiest county of Zurich) have compiled such statistics for internal use.⁹ However, for a number

⁸ Note that this purely statistical nomenclature is somewhat misleading and corresponds more to a 'gross income' notion than to a 'net income' notion (as frequently stated in the Swiss statistical publications).

⁹ Income and wealth tax statistics for the county of Zurich have been made available to us for a number of years from 1934 to 1999. Such county statistics could be used to expand our series estimates. They moreover feature tabulations of the joint income/wealth distribution.

of years (1913, 1919, 1969, 1981, 1991, and 1997), Switzerland has compiled such statistics based on the wealth tax statistics of all counties to construct wealth distributions as of 1 January of those years. In contrast to the federal wealth tax statistics, those distributions cover the universe of families with positive net worth. The wealth distributions for 1913 and 1919 have been published in *Annuaire Statistique de la Suisse* (1914: 222–6 and 1921: 378, respectively). The wealth distributions for 1969, 1981 were not officially published but have been made available to us by the federal fiscal administration. The wealth distributions for 1991 and 1997 have published in *Annuaire Statistique de la Suisse* (1997 and 2003, respectively). The Swiss administration plans to construct such wealth distributions every six years and the next one should be produced for wealth held as of 1 January 2003 (but is not yet available).

The concept of wealth used for tax purposes (at the federal or county levels) is very broad and includes all assets (tangible assets such as land, buildings, residences, furniture, vehicles, jewellery, business assets, and intangible assets such as stocks, bonds, cash, and also some pension rights) net of all liabilities. Taxpayers were assessed at the same time for wealth and income taxes so a number of tables showing wealth (respectively income) by size of income (respectively wealth) are also available, although we have not used them in the present study.

As discussed in introduction, Swiss income and wealth taxes are levied both at the federal and local (county and city) levels. There is some variation in the level of local income and wealth taxes. The Swiss fiscal administration has published regularly summaries showing the level of income and wealth taxes by size of income and wealth and by locality in the publication *Charge Fiscale en Suisse*. Interestingly, this publication describes not only federal taxation but also county and local level taxation and hence can provide a very accurate picture of the fiscal environment for high income, high wealth families in Switzerland. This publication is available since the beginning of the twentieth century and could be used to estimate average income and wealth tax rates of each of our top income and wealth groups in every year. We have not yet exploited those statistics on taxation but plan to do so in the future to establish rigorously our claim that the tax burden on high income, high wealth individuals in Switzerland has been substantially lower than in other countries such as the United States or France.

Total Number of Tax Units and Total Income

The individual income and wealth taxes in Switzerland have always been assessed at the family level (married couples with children dependents if any or single taxpayers with children dependents if any). Therefore, our total number of tax units is defined as the total number of adults (aged 20 and above) less half the number of married men and women. The total number of adults in Switzerland is obtained from *Annuaire Statistique de la Suisse* (1993: 47) which reports population totals in Switzerland by age ranges for each of the decennial census from 1900 to 1990. The estimate for year 2000 is obtained from the same source (available online

at <http://www.statistik.admin.ch>). Those statistics also report for every census the total number of married individuals. We have interpolated linearly our estimates between two consecutive censuses to create an annual series for the total number of adults and total number of tax units in Switzerland. Those series are reported in columns (1) and (2) in Table 11.1.

Our total income denominator is estimated as follows. For the period 1971–96, between 75% and 95% of families are filing tax returns (see columns (3) and (4) in Table 11.1), therefore in that case, we estimate the denominator starting from total income (called *Revenu net*) reported on tax returns (before personal deductions and exemptions) and we assume that non-filers earn on average 20% of average income. Our denominator is not very sensitive to the exact assumption we are making about non-filers average income as this group is small relative to filers for the period 1971–96. For the period before 1971, the fraction of filers is smaller and therefore we rely on National Accounts to estimate our total income denominator. We simply take the denominator as 75% of National Income. National Income is defined as the sum of personal income (including government transfers) and corporate savings (after tax profits of corporations after distribution of dividends). In 1971, our method starting from total income reported from tax returns generates a total equal to 74.9% of National Income so there is no discontinuity in our denominator estimation. National Accounts are published in *Annuaire Statistique de la Suisse* (various years) and also compiled in Siegenthaler (1996). Unfortunately, the breakdown of National Income into personal income, government transfers, and corporate savings is not available for all years and therefore we decided to adopt the simple uniform 75% of National Income rule.¹⁰ Those National Income figures are available starting in 1929. For the period 1901–28 (reported on Table 11.1 but not used in our estimates which start in 1933, we have used Maddison (1995) GDP estimates which we have pasted to year 1929). Column (5) reports our denominator (in real 2000 Swiss Francs) and column (6) reports the average real income per tax unit. Our Consumer Price Index (CPI) series, reported on column (7) of Table 1 is obtained from Global Financial Data (available online at <http://www.globalfindata.com>). We estimate the CPI in any given year as the average of maximum and minimum value for the CPI reported in the corresponding year. As described above, income tax in Switzerland is based on the average of the incomes earned in two consecutive years. Therefore, we average in the same way our tax unit totals, denominator totals (for the pre-1971 period), and Consumer Price Index series. Those estimates are presented in Table 11.2.

National Accounts in Switzerland do not report personal wealth estimates. Therefore, we have estimated our total wealth denominator starting from

¹⁰ This approach assumes that there has not been any significant trend prior to the 1970s in the share of government transfers plus corporate savings within national income. We do not have data to assess this assumption. However, as far as government transfers are concerned this assumption is conservative with regard to our main findings. Indeed, one might expect the trend (if any) to be increasing over time. This would mean that our total income denominator is under-estimated at the beginning of the period, and thus that our top income share are over-estimated. The secular decline of top income shares in Switzerland would then be even smaller. For instance if the 'real' income total in 1933 were 90% of national income (small transfers, no savings during the Depression), the top 1% income share would be 8.3% and not 10%, compared with 8.0% in 1995–96.

Table 11.1 Reference totals for population, income, and inflation in Switzerland, 1901–2002

	Adult population		Tax years and tax returns		Personal income		Inflation
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Adult population (aged 20+) ('000s)	Tax units ('000s)	Tax returns ('000s)	Fraction filing (percent)	Total income (millions Fr.)	Average income per tax unit (2000 Fr.)	CPI (2000 base)
1901	1,997	1,447	—		24,214	16,732	8.848
1902	2,022	1,464	—		24,611	16,813	8.848
1903	2,047	1,481	—		24,989	16,879	8.955
1904	2,072	1,497	—		25,359	16,938	8.955
1905	2,097	1,514	—		26,134	17,264	9.061
1906	2,123	1,530	—		26,073	17,036	9.275
1907	2,148	1,547	—		26,417	17,075	9.701
1908	2,173	1,564	—		26,761	17,113	9.914
1909	2,198	1,580	—		27,091	17,142	10.021
1910	2,224	1,597	—		27,407	17,161	10.234
1911	2,242	1,611	—		27,744	17,217	10.554
1912	2,261	1,626	—		28,054	17,255	10.767
1913	2,279	1,640	—		28,344	17,280	10.660
1914	2,298	1,655	—		28,128	16,999	10.660
1915	2,317	1,669	—		28,506	17,078	11.845
1916	2,335	1,684	—		28,418	16,880	13.706
1917	2,354	1,698	—		25,278	14,887	17.091
1918	2,373	1,712	—		25,238	14,738	21.490
1919	2,391	1,727	—		26,976	15,622	23.352
1920	2,410	1,741	—		28,667	16,464	23.774
1921	2,440	1,761	—		27,960	15,876	20.872
1922	2,469	1,781	—		30,688	17,231	17.841
1923	2,499	1,801	—		32,386	17,984	17.131
1924	2,528	1,821	—		33,484	18,391	17.690
1925	2,558	1,841	—		35,802	19,452	17.580
1926	2,587	1,860	—		37,385	20,095	17.063
1927	2,616	1,880	—		39,151	20,822	16.734
1928	2,646	1,900	—		41,003	21,579	16.828
1929	2,675	1,920	—		43,121	22,459	16.812
1930	2,705	1,940	—		43,487	22,418	16.551
1931	2,730	1,955	—		42,110	21,539	15.694
1932	2,755	1,970	—		40,154	20,379	14.529
1933	2,780	1,986	272.4	13.7	42,638	21,475	13.787
1934	2,806	2,001	264.1	13.1	42,817	21,401	13.573
1935	2,831	2,016	—		42,790	21,225	13.390
1936	2,856	2,031	271.5	13.3	41,885	20,620	13.662
1937	2,881	2,046	—		44,419	21,706	14.174
1938	2,906	2,062	—		44,382	21,527	14.320
1939	2,931	2,077	677.2	32.5	44,339	21,349	14.519
1940	2,956	2,092	—		43,943	21,004	15.887
1941	2,982	2,107	no statistics		42,924	20,369	18.139
1942	3,014	2,125	—		41,465	19,517	20.161
1943	3,047	2,142	1,139.5	53.0	42,528	19,857	21.216

1944	3,080	2,159			43,569	20,182	21.650
1945	3,113	2,176	1,366.5	62.6	46,148	21,208	21.796
1946	3,145	2,193			50,697	23,116	21.781
1947	3,178	2,210	1,203.0	54.2	54,426	24,623	22.752
1948	3,211	2,228			54,905	24,648	23.450
1949	3,244	2,245	963.1	42.7	53,443	23,809	23.199
1950	3,277	2,262			57,108	25,248	22.819
1951	3,322	2,287	1,092.0	47.5	59,670	26,094	23.887
1952	3,367	2,312			61,672	26,678	24.489
1953	3,412	2,337	1,146.7	48.8	64,824	27,742	24.310
1954	3,457	2,362			68,499	29,006	24.539
1955	3,502	2,386	905.3	37.7	72,551	30,401	24.740
1956	3,547	2,411			76,517	31,731	25.084
1957	3,592	2,436	955.9	39.0	79,609	32,676	25.607
1958	3,637	2,461			81,591	33,150	26.044
1959	3,682	2,486	1,185.4	47.4	87,619	35,242	25.908
1960	3,727	2,511			93,289	37,151	26.223
1961	3,790	2,546	1,285.2	50.1	101,494	39,859	26.904
1962	3,852	2,582			108,828	42,156	27.864
1963	3,915	2,617	1,299.1	49.3	114,578	43,786	28.882
1964	3,977	2,652			122,438	46,169	29.742
1965	4,040	2,687	1,530.6	56.6	127,209	47,339	30.824
1966	4,102	2,722			130,534	47,948	32.357
1967	4,165	2,758	1,784.0	64.3	133,842	48,535	33.594
1968	4,228	2,793			140,118	50,170	34.516
1969	4,290	2,828	1,817.7	63.9	148,192	52,400	35.326
1970	4,353	2,863			158,323	55,294	36.734
1971	4,381	2,890	2,036.9	70.2	169,477	58,650	39.017
1972	4,409	2,916			178,891	61,348	41.656
1973	4,437	2,942	2,288.2	77.4	178,997	60,835	45.703
1974	4,465	2,969			180,570	60,825	49.816
1975	4,493	2,995	2,420.6	80.5	172,611	57,632	52.714
1976	4,521	3,021			172,890	57,222	53.798
1977	4,549	3,048	2,542.3	83.1	178,523	58,575	54.447
1978	4,577	3,074			183,150	59,579	54.974
1979	4,605	3,100	2,665.6	85.6	184,980	59,662	56.666
1980	4,633	3,127			188,947	60,428	59.341
1981	4,699	3,181	2,790.1	87.0	192,181	60,424	62.835
1982	4,766	3,234			192,601	59,550	66.574
1983	4,832	3,288	2,904.5	87.6	195,565	59,478	68.752
1984	4,899	3,342			201,526	60,306	70.676
1985	4,965	3,395	3,106.1	90.8	198,472	58,452	73.057
1986	5,032	3,449			207,395	60,129	73.593
1987	5,098	3,503	3,112.5	88.2	209,033	59,674	74.809
1988	5,164	3,557			218,325	61,385	76.120
1989	5,231	3,610	3,227.1	88.7	222,919	61,744	78.895
1990	5,297	3,664			228,669	62,408	82.978
1991	5,322	3,685	3,272.6	88.6	231,186	62,739	87.533
1992	5,346	3,706			226,798	61,202	91.088
1993	5,370	3,727	3,495.4	93.5	225,319	60,464	93.743
1994	5,394	3,747			227,158	60,619	94.899
1995	5,419	3,768	3,401.9	90.0	216,562	57,472	96.384
1996	5,443	3,789			217,253	57,339	97.465
1997	5,467	3,810			226,274	59,394	97.972
1998	5,491	3,831	Transition to annual system		232,159	60,608	98.005

(contd.)

Table 11.1 (contd.)

Adult population		Tax years and tax returns		Personal income		Inflation
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Adult population (aged 20+) ('000s)	Tax units ('000s)	Tax returns ('000s)	Fraction filing (percent)	Total income (millions Fr.)	Average income per tax unit (2000 Fr.)	CPI (2000 base)
1999	5,515	3,851		236,379	61,376	98.783
2000	5,540	3,872		247,376	63,886	100.341
2001				239,564		101.367
2002				237,895		101.951

Notes: All details in the text. Tax units defined as adult individuals (aged 20+) less half of married individuals. Population, adults, married individuals from decennial census from *Annuaire Statistique de la Suisse*, (1993: 47) and linear interpolation. Year 2000 from http://www.statistik.admin.ch/stat_ch/ber01/fufr01.htm Col. (3) reports the number of tax returns for the Federal Income Tax and column (4) the fraction of filers. Starting in 1934, each tax year corresponds to two calendar year. For tax period 1934/35, income taxation is based on average income earned in 1934 and 1935, etc. Total income computed as total income on tax returns before deductions (*Revenu Net*) plus 20% of average income imputed to non-filers for period 1971–on. From 1929 to 1970, total income defined as 75% of net National Income. Total income in 1901–20 imputed from Madison series on GDP per capita (pasted to 1929, 75% of National Income). Consumer Price Index from <http://www.globalfindata.com> (1) (average of maximum and minimum value for each year).

total wealth reported on tax returns. Fortunately, for a number of years (1913, 1919, 1940, 1969, 1981, 1991, 1997), the tabulations are based on the full population (with positive net worth) and hence the total net worth reported is equal to total personal net worth in the economy.¹¹ For the remaining years, the fraction of families covered is not complete but is over 10% (except for years 1934, 1936, 1938). As wealth is so concentrated, we estimate that the wealth of filers is over 80% of total wealth. From the wealth of filers, we estimate total wealth using the closest years with complete coverage and assuming that the non-filers in the non-complete year have the same wealth share as in the closest complete years. More precisely, for year 1915, we use 1913 as the reference. For 1921, we use 1919 as the reference. For 1925, 1929, 1932, 1934, and 1936, we use the mean of 1919 and 1940 as the reference. For years 1941, 1945, and 1947, we use 1940 as the reference. For years 1949, 1951, 1953, 1955, and 1957, we use the mean of 1940 and 1969 as the reference. Again, as wealth is very concentrated, even in the years where relatively few families are covered by the statistics, we estimate that over 60% of total wealth (and over 80% except in the 1930s) is reported in the statistics so that our top wealth shares results are not very sensitive to our denominator estimations. Our total wealth estimates are presented in Table 11.3.¹²

¹¹ We have no information on negative worth but we assume that total negative worth is negligible compared to total positive worth.

¹² The average wealth levels in the first two years 1913 and 1915 are much higher than from 1919 on. Both years 1913 and 1919 have full coverage and the inflation index more than doubles between 1913 and 1919, so nominal wealth levels actually increase by 30% from 1913 and 1919 (see *Annuaire Statistique de la Suisse* (1921: 378), which presents both wealth distributions side to side). So it might

Estimating Top Income and Wealth Shares

Top income and wealth shares are estimated using the standard Pareto interpolation method (see Appendix 5C). For recent years, the top bracket may contain more than 0.01% of tax units. In that case, we impute the very top shares assuming that the distribution has a constant Pareto parameter in the top bracket and this Pareto parameter is estimated using the ratio of average incomes in the top bracket to the top bracket threshold. Table 11.2 presents the top income shares (along with the reference totals) in Switzerland from 1933 to 1996 and Table 11.3 presents the top wealth shares (along with the reference totals) from 1913 to 1997.

Non-Residents and Capital Income earned in Switzerland

Switzerland is a renowned place for bank secrecy and therefore is believed to host large accounts on behalf of wealthy foreign individuals or businesses interested in evading taxes in their own countries. Indeed, the secrecy banking rules make it very difficult for foreign fiscal administrations to assess whether residents from their countries are evading capital income taxes through Swiss accounts. Related, because Switzerland imposes moderate tax rates on high incomes and high wealth Swiss residents, a number of celebrities such as Sport stars and other wealthy individuals, most of them Europeans, have chosen to live in Switzerland and become Swiss residents (for tax purposes) in order to flee the high tax rates from their home countries. Swiss income tax statistics can cast interesting light on both of these aspects of tax avoidance and tax evasion.

First, in contrast to the popular view that returns on wealth invested through Swiss accounts can escape completely taxation, the Swiss administration imposes a flat 35% tax at source (called advance tax or *Impôt Anticipé*) on all returns earned through Swiss accounts. The fiscal administration states clearly that this tax is very well enforced and that virtually all Swiss financial institutions comply carefully with this rule. At the same time, the fact that this tax is a flat rate tax allows Swiss financial institutions to keep the identity and levels of each individual account secret. The 35% advance tax is refunded to Swiss residents when they file their income tax (individual or corporate).¹³

For non-residents, the advance tax is refunded only if they show evidence that they have reported those incomes for tax purposes in their country of residency. The Swiss fiscal administration publishes every year in *Recettes fiscales*

be the case that the price indexes reported by Global Financial Data are narrow indices and provide a very imperfect measure of the general price increases. It seems hard to believe that wealth would increase only by 30% in nominal terms while all prices in the economy are doubling. Fortunately, wealth concentration estimates are completely independent of price indices.

¹³ Paying the advance tax does not free Swiss residents from reporting those incomes on their tax returns. This, together with the fact that combined federal and local income tax rates in Switzerland very rarely reach 35%, implies that virtually all income earned by Swiss residents and subject to the advance tax will be reported on their tax returns and hence be included in the statistics we are using.

Table 11.2 Top income shares in Switzerland, 1933-95/96

	Aggregate series			Top groups shares							Intermediate groups shares					Shares within shares				
	Consumer price index (0)	Number of tax units ('000s) (1)	Total real income (Fr.) (2)	Real income per tax unit (2000 Fr.) (3)	% Tax units covered in statistics (4)	10% (5)	5% (6)	1% (7)	0.5% (8)	0.10% (9)	0.01% (10)	10-5% (11)	5-1% (12)	1-0.5% (13)	0.5-0.1% (14)	0.1-0.1% (15)	0.01% (16)	top 1 within top 10% (17)	top 0.1 within top 1% (18)	top 1% (19)
1933	13.787	1,986	42,638	21,475	13.7	31.16	21.92	9.98	7.19	3.27	0.94	9.24	11.94	2.79	3.92	2.33	0.94	32.02	32.74	
1934-35	13.573	2,008	42,515	21,169	13.2	30.92	21.59	9.69	6.94	3.14	0.91	9.33	11.90	2.75	3.80	2.23	0.91	31.34	32.44	
1936-37	13.662	2,039	43,984	21,573	13.3	30.47	21.46	9.94	7.21	3.35	0.98	9.01	11.52	2.73	3.86	2.37	0.98	32.61	33.71	
1939-40	14.519	2,085	46,212	22,169	32.5	32.94	23.77	11.78	8.78	4.36	1.52	9.17	11.99	3.00	4.42	2.84	1.52	35.77	36.99	
1943-44	21.216	2,150	43,494	20,227	53.0	32.59	22.70	10.54	7.67	3.71	1.43	9.89	12.17	2.87	3.96	2.29	1.43	32.32	35.22	
1945-46	21.796	2,185	48,404	22,157	62.6	33.24	23.36	10.49	7.50	3.44	1.10	9.89	12.87	2.98	4.06	2.34	1.10	31.54	32.83	
1947-48	22.752	2,219	55,507	25,015	54.2	31.58	21.95	10.01	7.15	3.26	1.03	9.63	11.94	2.86	3.89	2.23	1.03	31.70	32.57	
1949-50	23.199	2,253	54,808	24,324	42.7	32.29	22.22	9.99	7.13	3.23	0.96	10.07	12.23	2.85	3.90	2.27	0.96	30.93	32.37	
1951-52	23.887	2,299	61,448	26,726	47.5	31.29	21.65	9.94	7.18	3.37	1.07	9.64	11.71	2.76	3.81	2.30	1.07	31.77	33.87	
1953-54	24.310	2,349	66,984	28,515	48.8	30.33	21.16	9.80	7.08	3.30	1.05	9.17	11.36	2.73	3.78	2.25	1.05	32.32	33.65	
1955-56	24.740	2,399	75,066	31,291	48.8	29.72	20.92	9.81	7.06	3.24	0.97	8.80	11.11	2.75	3.82	2.28	0.97	32.99	33.07	
1957-58	25.607	2,449	81,297	33,199	38.2	30.99	21.79	10.11	7.24	3.31	1.03	9.20	11.69	2.87	3.93	2.28	1.03	32.61	32.73	
1959-60	25.908	2,499	91,022	36,429	46.5	31.47	22.35	10.54	7.58	3.51	1.09	9.11	11.82	2.95	4.08	2.42	1.09	33.48	33.27	
1961-62	26.904	2,564	107,103	41,773	48.9	31.56	22.70	10.87	7.85	3.62	1.06	8.87	11.83	3.02	4.23	2.56	1.06	34.43	33.28	
1963-64	28.882	2,634	120,331	45,677	48.0	31.72	22.83	10.91	7.88	3.64	1.12	8.90	11.92	3.04	4.24	2.52	1.12	34.39	33.32	

1965-66	30,824	2,705	132,118	48,845	55.7	31.60	22.60	10.67	7.67	3.50	1.05	9.01	11.92	3.00	4.17	2.45	1.05	33.77	32.78
1967-68	33,593	2,775	138,905	50,051	63.1	32.29	23.01	10.86	7.81	3.58	1.08	9.27	12.15	3.05	4.23	2.50	1.08	33.63	32.96
1969-70	35,326	2,846	156,414	54,965	62.8	32.70	23.32	11.00	7.92	3.66	1.14	9.38	12.32	3.09	4.26	2.52	1.14	33.65	33.25
1971-72	39,017	2,903	180,234	62,089	69.0	32.49	23.03	10.81	7.79	3.62	1.14	9.47	12.22	3.02	4.16	2.48	1.14	33.26	33.51
1973-74	45,703	2,956	187,907	63,578	76.0	30.96	21.51	9.77	6.98	3.20	1.04	9.45	11.75	2.79	3.78	2.16	1.04	31.55	32.75
1975-76	52,714	3,008	174,529	58,017	78.9	30.29	20.47	8.79	6.15	2.68	0.83	9.82	11.68	2.64	3.47	1.85	0.83	29.01	30.49
1977-78	54,447	3,061	181,723	59,369	81.4	29.93	20.12	8.49	5.90	2.56	0.79	9.80	11.63	2.59	3.34	1.77	0.79	28.38	30.13
1979-80	56,666	3,114	191,423	61,479	83.6	29.89	20.06	8.40	5.82	2.51	0.76	9.83	11.66	2.58	3.31	1.75	0.76	28.09	29.88
1981-82	62,835	3,207	198,122	61,770	86.9	29.87	20.02	8.40	5.85	2.58	0.84	9.85	11.62	2.55	3.27	1.75	0.84	28.12	30.73
1983-84	68,752	3,315	201,365	60,746	87.5	29.88	20.00	8.39	5.85	2.62	0.86	9.88	11.61	2.54	3.23	1.76	0.86	28.07	31.25
1985-86	73,057	3,422	203,694	59,519	90.7	30.35	20.64	9.05	6.48	3.16	1.25	9.72	11.59	2.57	3.32	1.91	1.25	29.82	34.91
1987-88	74,809	3,530	215,591	61,078	88.1	30.78	20.93	9.07	6.41	2.94	0.96	9.85	11.86	2.67	3.47	1.97	0.96	29.47	32.39
1989-90	78,895	3,637	231,711	63,705	88.6	30.78	20.96	9.22	6.59	3.15	1.15	9.81	11.74	2.63	3.44	2.01	1.15	29.95	34.20
1991-92	87,533	3,695	233,597	63,215	86.4	29.99	20.14	8.60	6.09	2.85	1.00	9.85	11.54	2.51	3.24	1.85	1.00	28.68	33.18
1993-94	93,743	3,737	227,639	60,916	90.8	29.65	19.87	8.48	6.01	2.82	0.98	9.78	11.39	2.47	3.19	1.84	0.98	28.61	33.27
1995-96	96,384	3,779	218,126	57,728	84.0	29.22	19.27	8.03	5.67	2.67	0.87	9.95	11.24	2.36	3.00	1.80	0.87	27.47	33.23

Notes: Computations by authors based on wealth tax return statistics. See text for details. Consumer Price Index from <http://www.globalfindata.com> (mean from Table 11.1 over corresponding years). Total income based on means from Table 11.1. Percentage of tax units covered by tax statistics reported on column (5), Col. (6) to (17) display the top of total income accruing to each upper income group for corresponding years. Top 0.1% and above estimates for years 1993-94, 1995-96 not precise because top bracket contains more than 1% of tax units.

Table 11.3 Top wealth shares in Switzerland, 1913-97

Consumer Price Index (1)	Total real wealth (millions Fr.) (2)	Aggregate wealth			Top groups shares										Intermediate groups shares				
		Real wealth per family (2000 Fr.) (3)	Tax returns with positive wealth/total tax units (4)	% Wealth Covered in statistics (5)	10% (6)	5% (7)	1% (8)	0.5% (9)	0.10% (10)	0.01% (11)	10-5% (12)	5-1% (13)	1-0.5% (14)	0.5-0.1% (15)	0.1-0.01% (16)	0.01% (17)			
1913	10,660	123,457	75,264	40.72	100.0	84.81	73.57	46.65	37.15	19.13	5.43	11.24	26.92	9.50	18.03	13.70	5.43		
1915	11,845	138,587	83,028	16.57	90.6	80.46	68.62	42.25	33.56	17.68	5.50	11.84	26.37	8.69	15.89	12.18	5.50		
1919	23,351	77,263	44,743	53.84	100.0	76.25	62.29	36.42	28.33	14.25	4.12	13.96	25.88	8.08	14.09	10.13	4.12		
1921	22,538	90,548	51,415	16.59	85.8	77.02	63.98	38.05	29.44	14.56	4.26	13.04	25.93	8.61	14.88	10.29	4.26		
1925	17,732	116,670	63,388	16.07	87.3	75.83	64.55	40.68	32.48	16.49	5.09	11.28	23.87	8.19	15.99	11.41	5.09		
1929	16,854	133,760	69,667	15.07	88.3	76.71	66.50	41.95	32.93	17.14	5.96	10.20	24.56	9.02	15.79	11.18	5.96		
1934	13,698	147,470	73,707	3.85	62.7	—	67.96	40.43	31.16	15.49	4.57	—	27.53	9.27	15.67	10.92	4.57		
1936	13,552	142,804	70,305	3.67	61.8	—	68.14	40.10	30.81	15.24	4.42	—	28.04	9.29	15.56	10.82	4.42		
1938	14,399	136,655	66,284	3.79	62.4	—	73.30	44.43	34.57	17.54	5.20	—	28.87	9.86	17.02	12.35	5.20		
1940	15,067	156,472	74,791	42.05	100.0	80.84	67.58	40.39	31.20	15.73	4.82	13.26	27.19	9.19	15.47	10.91	4.82		
1941	17,021	130,795	62,066	15.92	89.3	81.91	69.31	41.45	31.85	15.90	5.22	12.61	27.85	9.61	15.95	10.68	5.22		
1945	21,786	145,357	66,800	22.43	93.3	78.25	64.31	37.14	28.40	14.35	4.92	13.94	27.17	8.74	14.05	9.44	4.92		
1947	22,183	153,294	69,353	22.74	93.5	79.04	65.38	38.30	29.47	15.08	5.49	13.66	27.08	8.83	14.39	9.59	5.49		
1949	23,378	155,046	69,072	23.66	94.0	78.77	65.06	37.82	29.10	14.99	5.22	13.71	27.23	8.73	14.11	9.77	5.22		
1951	23,263	157,976	69,082	10.59	80.9	79.89	66.22	38.97	30.16	15.65	5.47	13.67	27.25	8.80	14.52	10.18	5.47		
1953	24,353	164,779	70,520	10.89	81.4	79.85	66.63	39.99	31.23	16.46	5.78	13.22	26.64	8.76	14.77	10.68	5.78		
1955	24,711	182,995	76,680	11.37	82.2	79.94	67.32	41.50	32.67	17.50	6.16	12.62	25.82	8.83	15.17	11.33	6.16		
1957	25,385	202,305	83,037	12.46	83.8	79.90	67.35	41.85	33.05	17.89	6.36	12.55	25.50	8.80	15.16	11.52	6.36		
1969	35,002	389,835	137,844	54.45	100.0	78.91	66.71	41.56	32.79	17.92	6.66	12.21	25.15	8.77	14.87	11.26	6.66		
1981	61,142	508,318	159,822	66.99	100.0	69.58	56.63	33.04	25.56	13.45	5.18	12.96	23.59	7.48	12.11	8.27	5.18		
1991	85,553	619,626	168,153	68.72	100.0	69.94	56.58	33.57	26.51	14.93	6.48	13.36	23.01	7.05	11.58	8.46	6.48		
1997	97,980	765,423	200,913	70.23	100.0	71.31	57.98	34.80	27.64	15.98	7.29	13.33	23.19	7.16	11.66	8.69	7.29		

Notes: Computations by authors based on wealth tax return statistics. See text for details. Number of tax units define families same as in Table 11.1. Wealth tax assessed on total family net worth (wealth - liabilities) as of January 1st of each tax year. Consumer Price Index from globalfindex.com (as of 1 January of corresponding years). Total real wealth extrapolated using years with complete coverage. Col. (4) reports the ratio of the number of tax returns with positive wealth to the total number of tax units (including non-filers). The percentage of total personal net worth in the economy covered by tax statistics reported on column (5) (estimated using years with 100% wealth coverage). Col. (6) to (17) display the top of total net-worth accruing to each upper wealth group on 1 January of each year. Top 0.01% estimates for years 1981, 1991, and 1997 not precise because top bracket contains more than 0.1% of tax units.

de la Confédération the total amount of advance tax paid, and the amounts refunded broken down by categories such as Swiss individual residents (personnes physiques), Swiss corporations (personnes morales), and non-residents (individuals or corporations). The difference between payments and refunds corresponds to capital income earned through Swiss accounts by non-residents and presumably never reported for tax purposes. Thus, we can use those statistics to estimate how much capital income is earned by non-residents, what fraction is reported in their countries and what fraction is never reported in their countries. We also estimate by how much top income shares in France would be increased if we added back to the French top income groups all the capital income evaded through Swiss accounts. In reality, the French are not the only foreigners to use Swiss accounts and there are many other tax haven jurisdictions which are actively used to evade taxes on capital income (such as Luxembourg, Monaco, Andorra, and Monte-Carlo, to name a few along the French border). However, our estimates are still instructive to get a sense of the magnitudes and dissipate the myth that the sums earned through those secret Swiss accounts are gigantic.

Second, the tabulations by size of income we use also provide a breakdown of taxpayers that allows us to estimate an upper bound on the number of non-residents filing income taxes in Switzerland or the number of Swiss residents getting income from abroad. Presumably, all the wealthy foreigners relocating in Switzerland for fiscal reasons will fall into those categories. More precisely, the Swiss income tax statistics divide taxpayers into normal cases and special cases. Special cases are: (1) those taxpayers who did not have regular incomes over the two year period taken into account for tax purposes (and which are subject to different rules to compute average income for tax purposes); or (2) taxpayers who are non-residents or residents with income from abroad. This second category is called special cases (others) (*cas spéciaux, autres*) and is the category of interest for us. From 1957 to 1992, this category is tabulated by size of income, allowing us to compute the fraction of taxpayers (income weighted) in each top income group, which falls in this special cases (others) category. For years 1949 to 1956, only the total number of special cases (others) is reported with no breakdown by size of income.

11.3 TOP INCOME SHARES

Figure 11.1 displays the average real income per tax unit (from our denominator measure) and the Consumer Price Index in Switzerland from 1901 to 2000. Figure 11.1 shows that real incomes grew slowly before the Second World War, rapidly from the Second World War to the early 1970s, and have stagnated since then. This broad pattern is quite similar to the French experience (see Piketty in Chapter 3 of this volume). Since the beginning of the century, Switzerland has always been among the very richest countries in the World. It should be noted that the business cycles and in particular the Great Depression have been mild in Switzerland. Price inflation has been moderate over the century, with sustained

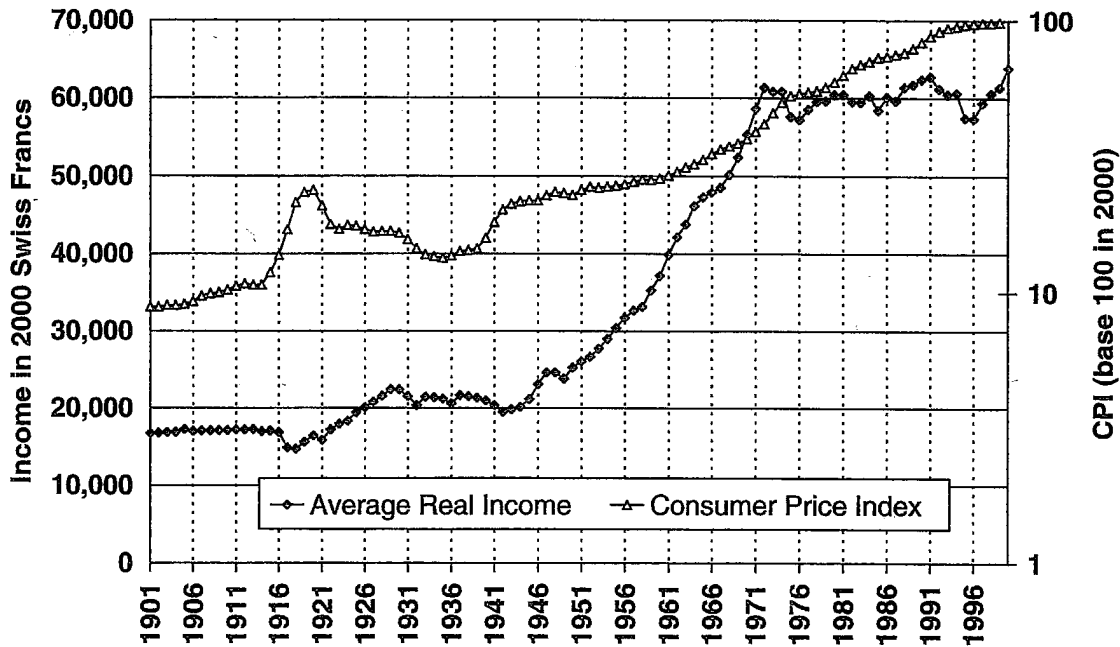


Figure 11.1 Average real income and consumer price index in Switzerland, 1901–2000

Source: Table 11.1, col. (6) and (7).

inflation only during the First World War and to a lesser extent during the Second World War and the 1970s.

Figure 11.2 displays the top 10% and top 5% income shares in Switzerland from 1933 to 1996. Those top income shares are very stable over the period, with the top 10% share varying between 30% and 33% and the top 5% share between 20% and 24%. Figure 11.3 decomposes the top 10% into three groups: the top 1%, the next 4% (top 5–1%), and the second vintile (top 10–5%). The two bottom groups are remarkably stable over the period. The top 1% income share experiences somewhat

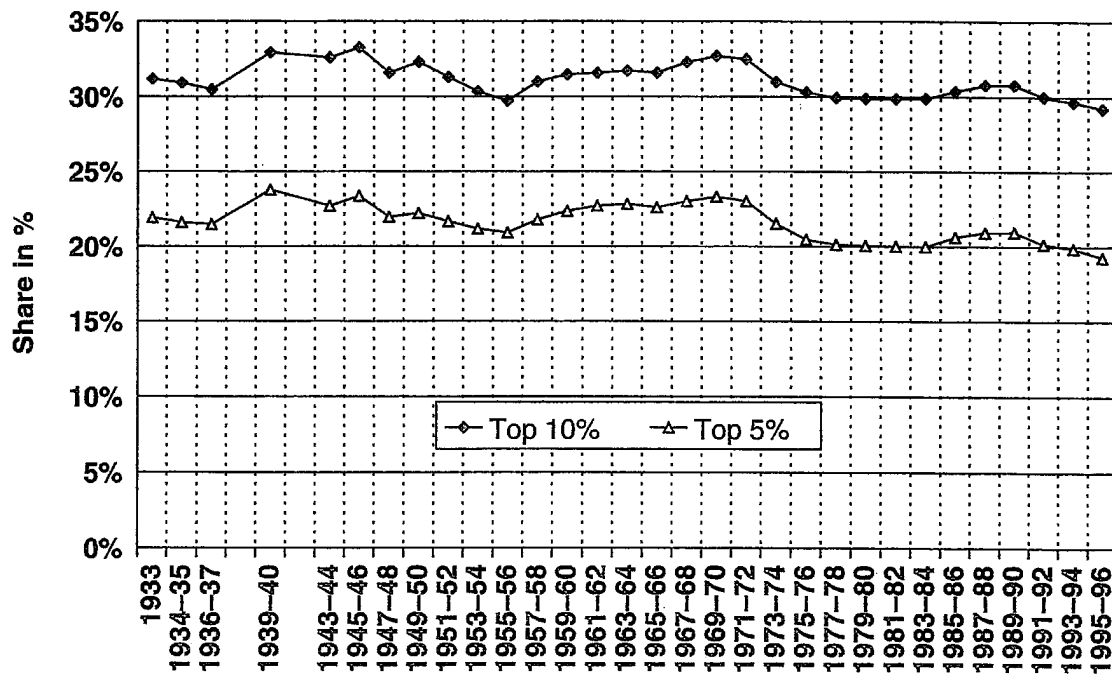


Figure 11.2 Top 10% and top 5% income shares in Switzerland, 1933–96

Source: Table 11.2: col. top 10% and top 5%.

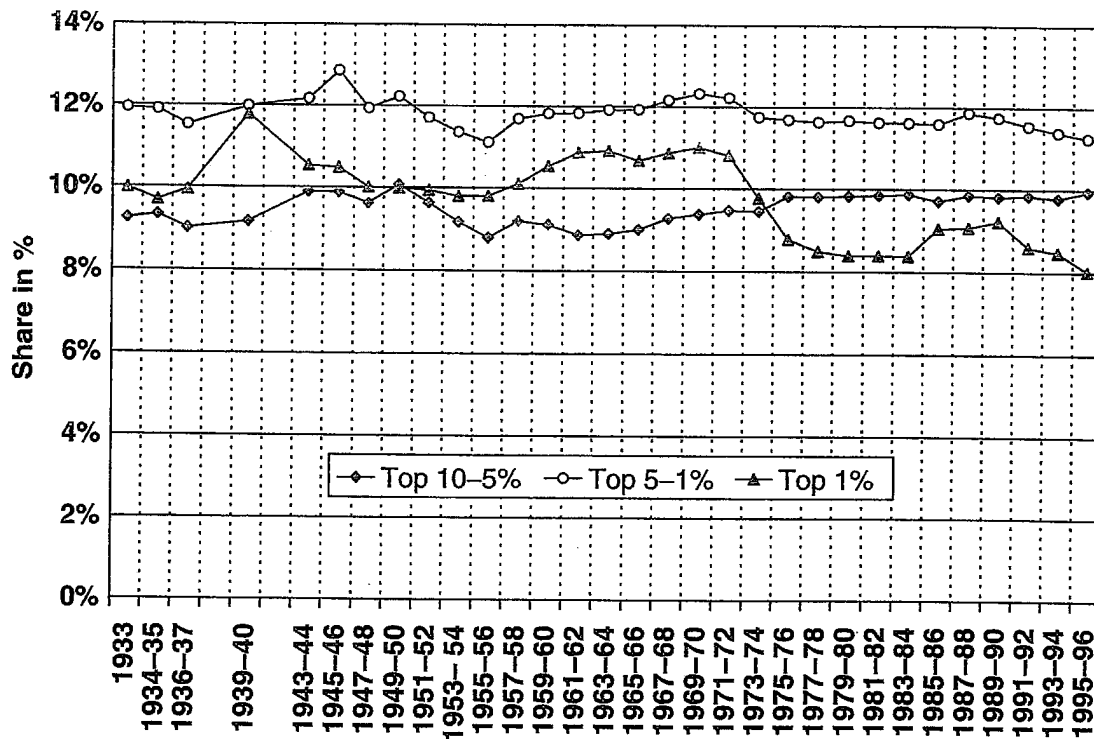


Figure 11.3 Top 1%, top 5-1%, and top 10-5% income shares in Switzerland, 1933-96

Source: Table 11.2: col. top 1%, 5-1% and top 10-5%.

larger fluctuations but never falls below 8% or goes above 12%. Three elements should be noted. First, there is spike in top 1% income share (but not in the other two groups) for years 1939-40, just at the eve of the Second World War. It is conceivable that such a spike is due to an influx of wealthy immigrants fleeing from the Nazis. Second, the top 1% income share does not fall during the Second World War or in the decades following the war. Quite to the contrary, the top 1% income share in the 1960s is actually slightly higher than in the 1930s. Finally, the top 1% income share falls in the early 1970s and again in the 1990s, so that it is at its lowest point in 1995-96, the last year we construct those estimates.

Figure 11.4 decomposes the top 1% group into three groups: the bottom half to the top percentile (top 1-0.5%), the next 0.4% percent (top 0.5-0.1%), and the top 1%. The figure shows that even the top 0.1% income share did not experience large fluctuations over the century (except for a temporary spike in 1939-40). Figure 11.5 shows the evolution of shares within shares, namely the share of the top percentile within the top decile, and the share of the top 0.1% within the top percentile. Shares within shares only rely on income tax data and are thus immune against any biases in income control totals. The two series exhibit a striking stability and similarity throughout the century fluctuating between 30% and 35% almost over the entire period confirming the pattern observed with simple income shares.

Figure 11.6 contrasts the experience of the top 0.1% income group in Switzerland with the French (Piketty, Chapter 3 in this volume) and the American (Piketty and Saez, Chapter 5 in this volume) experiences. In contrast to France and the United States, there is no decline in the top income share from the pre-war period to the decades following the Second World War. As a result, although the top 0.1%

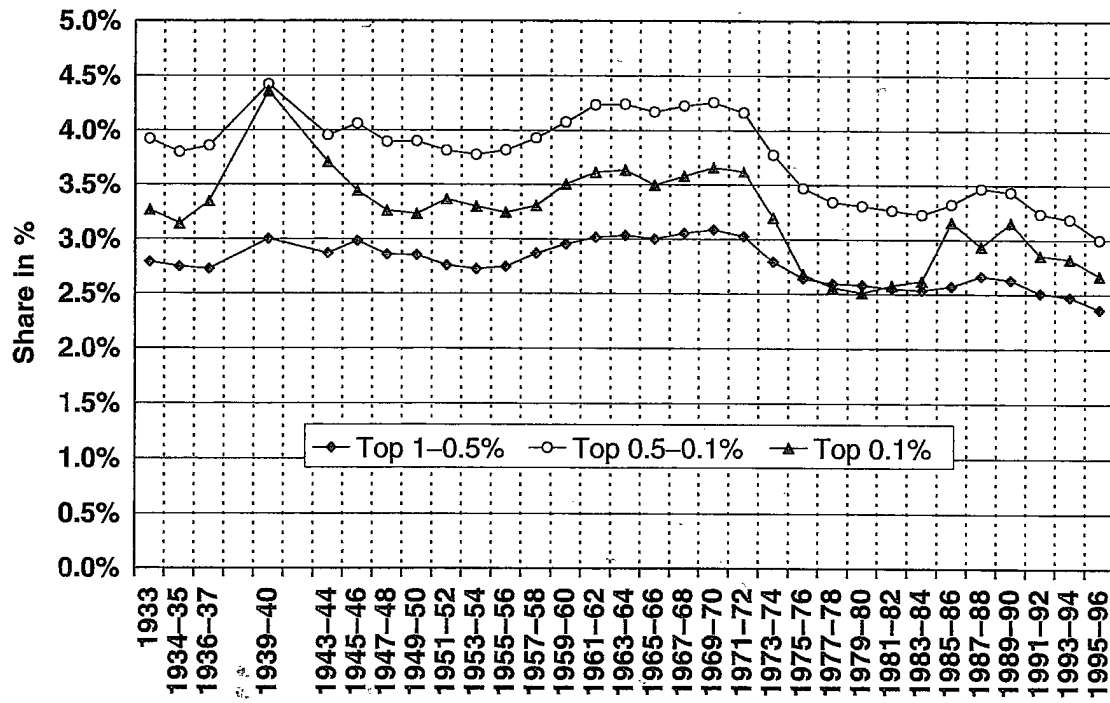


Figure 11.4 Top 0.1%, top 0.5–0.1%, and top 1–0.5% income shares in Switzerland, 1933–96

Sources: Table 11.2: col. top 0.1%, top 0.5–0.1%, and top 1–0.5%.

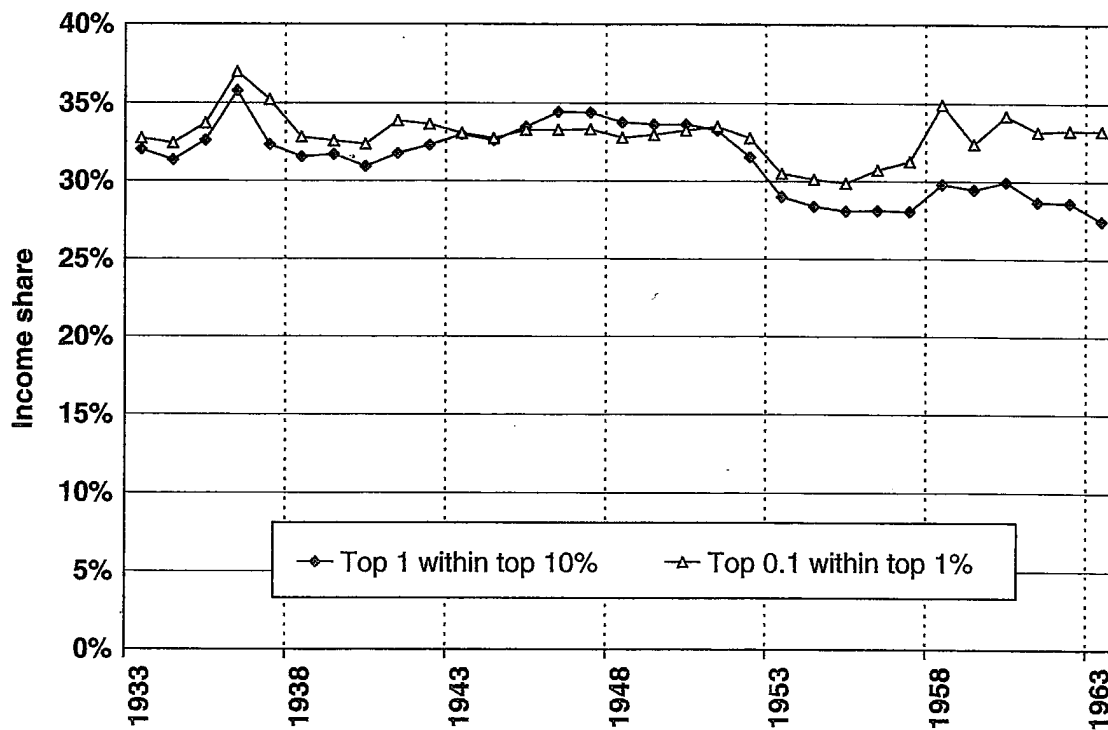


Figure 11.5 Shares within shares in Switzerland, 1933–63

Sources: Table 11.2: col. 18 and 19.

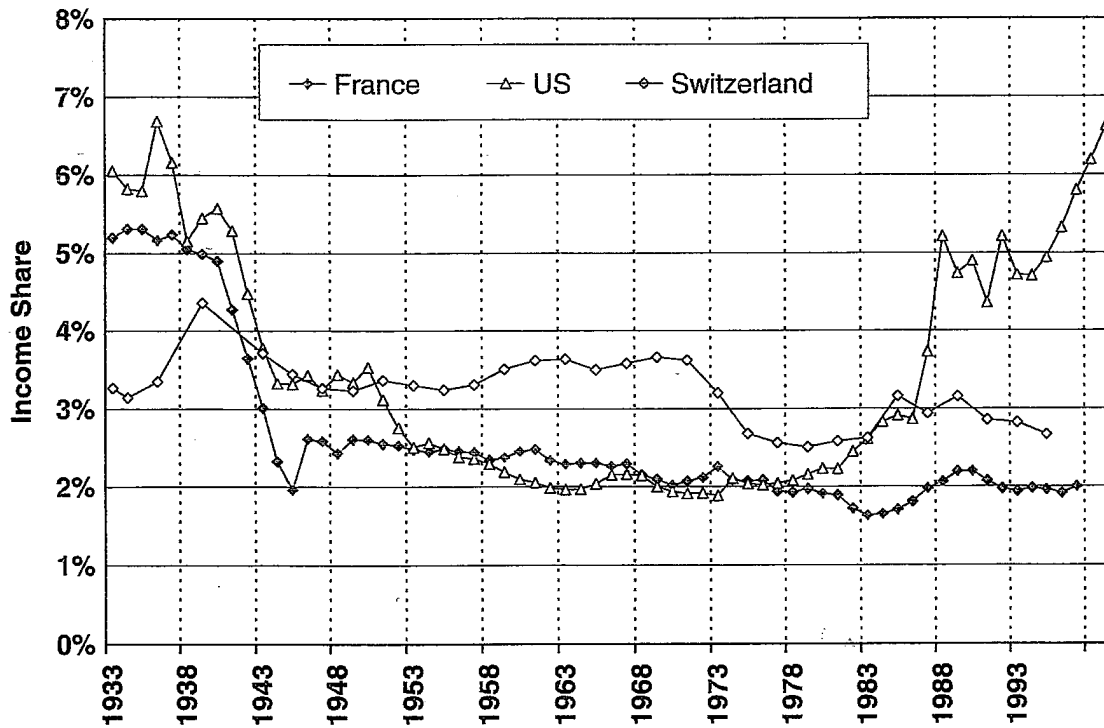


Figure 11.6 The top 0.1% income share in France, the US, and Switzerland 1933–97

Sources: US: Piketty and Saez (Chapter 5, this volume): table A1, col. top 0.1%; France: Piketty (2003, and Chapter 3, this volume); Switzerland: Table 11.2, column Top 0.1% income share.

income share in Switzerland was lower (around 3–4%) than in France or US (5–6%) in the 1930s, the top 0.1% income share was substantially higher in Switzerland in the 1960s (around 3.5%) than in the France and the United States (2–2.5%).

Therefore, the Swiss income share results show clearly that the large decline in very top income shares from the pre-war period to the post-war decades that has been found in all other countries studied in this volume did not take place in Switzerland. There are two limitations in those income concentration estimates for Switzerland. First, they start only in 1933, at a time where top income shares in other countries (such as France, the United States, or the United Kingdom) had already fallen significantly relative to their pre-First World War levels, therefore it would important to know whether Switzerland experienced substantial wealth and income de-concentration in the early part of the twentieth century. Second, the dramatic fall in very top income shares in other countries was primarily a capital income phenomenon due to a drastic fall in top fortunes. However, the Swiss income tax statistics do not provide information on the composition of top incomes and therefore do not allow us to look separately at the capital and labour income components.

Therefore, in order to overcome those two limitations, we now turn to wealth statistics which are available since 1913 and allow us to focus directly on the capital component of inequality.

11.4 TOP WEALTH SHARES

Table 11.3 presents our top wealth shares estimates for Switzerland. Figure 11.7 displays the wealth shares of the top 1%, the next 4% (top 5–1%), and the second

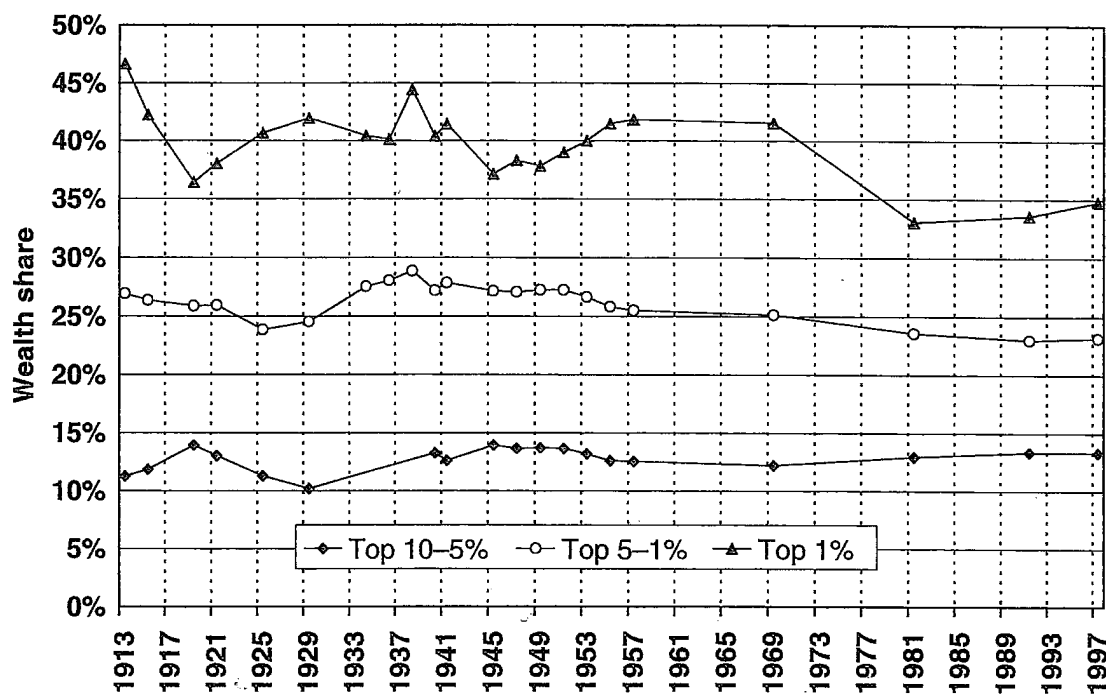


Figure 11.7 Top 10–5%, top 5–1%, and top 1% wealth shares in Switzerland, 1913–97

Source: Table 11.3, col. top 10–5%, top 5–1% and top 1%.

vintile (top 10–5%). Those groups are defined relative to all families in Switzerland (as for income shares) ranked according to net worth (gross wealth minus liabilities). Figure 11.7 shows that top wealth shares have also been remarkably stable over the full twentieth century in Switzerland. In particular, the top 1% income share is about the same in 1969 and in 1915 (around 42%). Thus, although the levels of income concentration were relatively low in Switzerland, this evidence shows that wealth in Switzerland is actually quite concentrated. It is notable that there was some reduction in wealth concentration from 1969 to 1981 with the top 1% wealth share falling from 42% to 33%.

Figure 11.8 decomposes the top percentile of wealth holders into the top 0.1%, the next 0.4% (top 0.5–0.1%), and the bottom half of the top percentile (top 1–0.5%). The figure shows that even very top wealth holders groups do not experience a secular decline, at least not before the 1970s. The top 0.1% wealth share stands at about 17% both in 1915 and in the 1960s.

Figure 11.9 compares Switzerland with the United States by displaying the top 1% wealth share series in both countries since 1915. The estimates for the United States are from Kopczuk and Saez (2004) and are estimated from estate tax statistics using the estate multiplier technique (and hence are based on individual wealth as opposed to family wealth in Switzerland). The figure shows that wealth concentration was similar in the United States and Switzerland at the beginning of the century, with the top 1% holding about 40% of total wealth. However, wealth concentration declined drastically in the United States to about 25% by the 1960s while it remained above 40% in Switzerland as late as 1969.

This evidence, together with our previous results on top income shares, shows that the reduction in income and wealth concentration documented for most

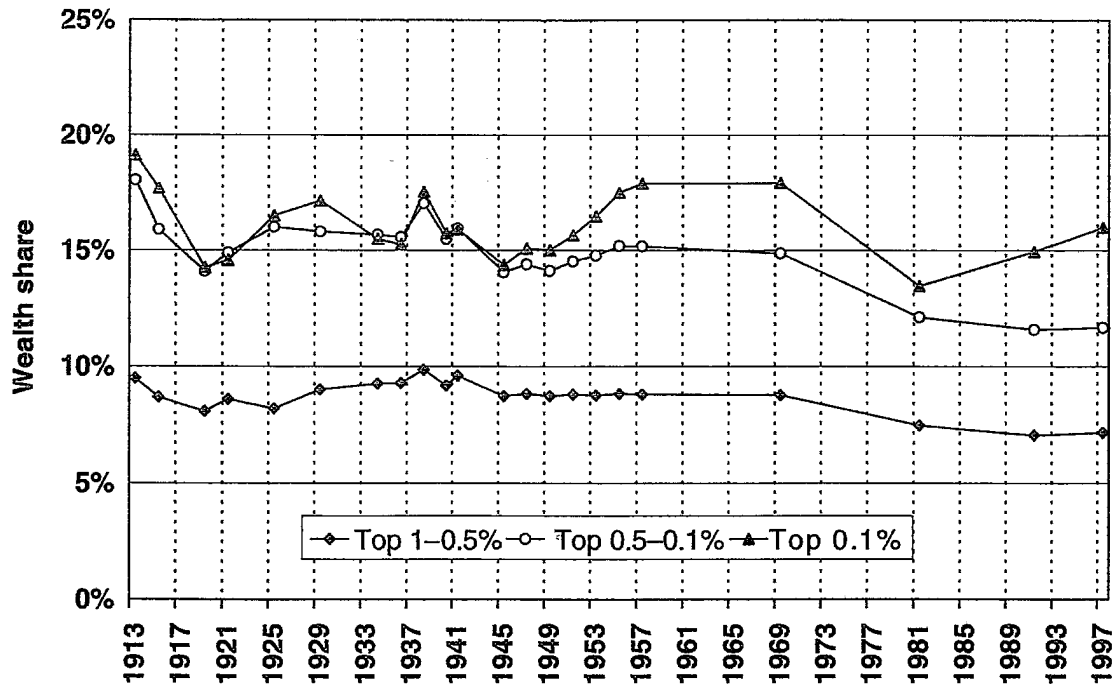


Figure 11.8 Top 1-0.5%, top 0.5-0.1%, and top 0.1% wealth shares in Switzerland, 1913-97

Source: Table 11.3, col. top 1-0.5%, top 0.5-0.1% and top 0.1%

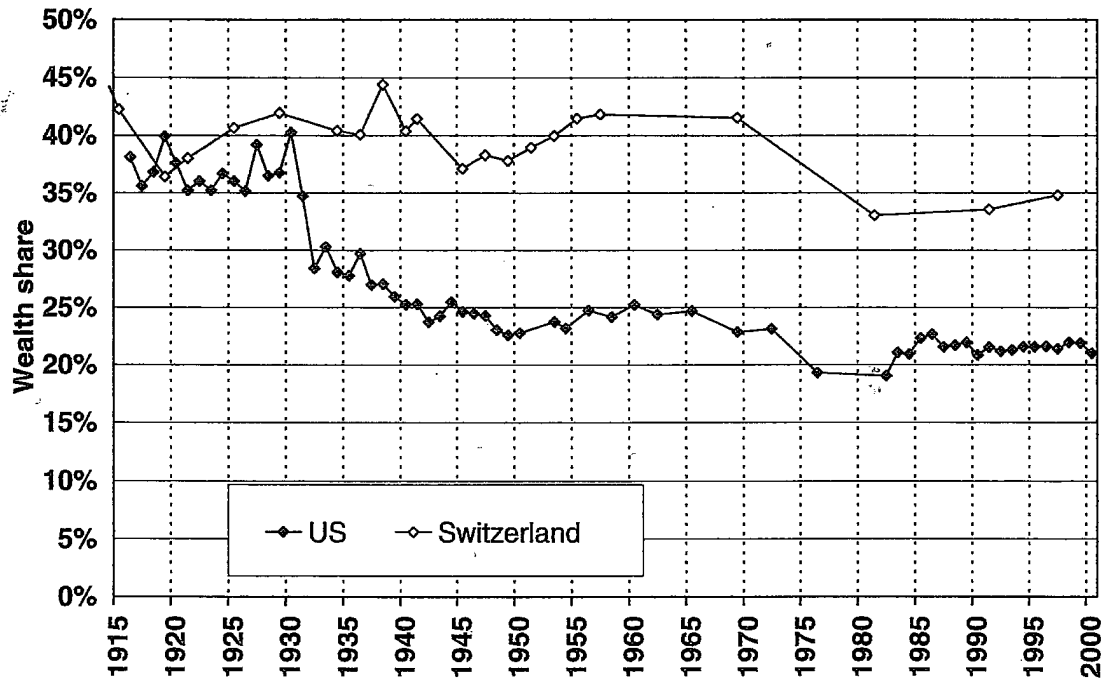


Figure 11.9 The top 1% wealth share in the US and Switzerland, 1915-2000

Note: US wealth shares are based on individual adults while Swiss shares are based on the family level.

Sources: US: Kopczuk and Saez (2004): table B1, col. top 1%; Switzerland: Table 11.3, top 1% wealth share.

countries did not happen in Switzerland and hence is not a necessary outcome of the development process of economically advanced countries. As we discussed in the introduction, the finding that wealth concentration did not decrease in Switzerland, a country which never imposed very high tax rates on top income earners and top wealth holders, is consistent with the explanation that progressive taxation is the main reason which prevented large fortunes from recovering to the pre-First World War levels in other countries in the second part of the twentieth century.

11.5 FOREIGN CAPITAL INCOME AND FOREIGNERS IN SWITZERLAND

Table 11.4 presents the fraction of special cases (others) which contains all non-resident taxpayers filing income taxes in Switzerland as well as all Swiss residents with income abroad among our top income groups. Figure 11.10 depicts those fractions for three tax periods, 1957–58, 1973–74, and 1991–92. First, the fraction of such returns increases sharply as we move up the income distribution, starting from negligible levels in the second vintile to significant fractions at the very top. Second, those fractions increase substantially over time. By 1991–92, at the very top 0.01% group, such taxpayers represent 20% of taxpayers while they were only 8% of taxpayers in 1957–58. This suggests that the number of wealthy foreigners living in Switzerland has probably increased sharply since the 1950s. However, the important point to note is that they remain a minority even in recent years and at the very top. Switzerland is a small country with moderate income concentration in recent decades. As a result, the view that a very large fraction of the wealthy in Europe and around the world relocate to Switzerland to escape high taxation in their countries is clearly contradicted by the tax statistics. Obviously, one would need to produce the same statistics for all potential tax havens and not only Switzerland, to assess to what extent wealthy individuals in high tax countries relocate to lower tax countries.

Table 11.5 displays the results obtained from the aggregate statistics on the 35% flat advance tax withheld at source on all capital income earned through Swiss financial institutions. Those statistics are averaged by decades. They show that the fraction of total capital income earned through Swiss financial institutions by non-residents but reported to the fiscal administration in their country of residency (and hence refunded by the Swiss fiscal administration) has indeed increased substantially since the 1950s from 1% to about 20% in recent years. The fraction of capital income whose advance tax is never refunded is an upper bound on capital earned by non-residents and never reported for tax purposes in their home countries (and hence presumably evaded). Table 11.5 shows that this upper bound is relatively modest and is lower than 10% of total capital income earned in Switzerland in recent decades. It stands at around SF7.25 billion (around US\$5

Table 11.4 Fraction of non-residents and residents with income abroad in top income groups in Switzerland, 1949/50-1991/92

	Aggregate series		Fraction special in top groups																Fraction special in intermediate groups															
	Number of special taxpayers (1)	Fraction special (percent) (2)	10% (5)	5% (6)	1% (7)	0.5% (8)	0.10% (9)	0.01% (10)	10-5% (11)	5-1% (12)	1-0.5% (13)	0.5-0.1% (14)	0.1-0.01% (15)	0.01% (16)	10-5% (11)	5-1% (12)	1-0.5% (13)	0.5-0.1% (14)	0.1-0.01% (15)	0.01% (16)														
1949-50	4,644	0.21	2.34	3.01	4.61	5.26	6.41	8.11	0.64	1.54	2.93	4.27	5.64	8.11	2.34	3.01	4.61	5.26	6.41	8.11	0.64	1.54	2.93	4.27	5.64	8.11								
1951-52	5,234	0.23	2.42	3.08	4.7	5.23	6.52	9.65	0.69	1.56	3.31	4.1	5.11	9.65	2.42	3.08	4.7	5.23	6.52	9.65	0.69	1.56	3.31	4.1	5.11	9.65								
1953-54	6,427	0.27	2.54	3.18	4.61	4.97	5.79	8.06	0.8	1.81	3.65	4.26	4.85	8.06	2.54	3.18	4.61	4.97	5.79	8.06	0.8	1.81	3.65	4.26	4.85	8.06								
1955-56	6,964	0.29	2.91	3.61	5.21	5.54	6.63	9.38	0.98	2.06	4.33	4.59	5.4	9.38	2.91	3.61	5.21	5.54	6.63	9.38	0.98	2.06	4.33	4.59	5.4	9.38								
1957-58	8,187	0.33	3.28	4.08	5.93	6.36	7.66	8.85	1.14	2.34	4.81	5.25	7.15	8.85	3.28	4.08	5.93	6.36	7.66	8.85	1.14	2.34	4.81	5.25	7.15	8.85								
1959-60	10,231	0.41	3.73	4.56	6.28	6.6	8.3	11.5	1.55	2.95	5.45	5.14	6.91	11.5	3.73	4.56	6.28	6.6	8.3	11.5	1.55	2.95	5.45	5.14	6.91	11.5								
1961-62	13,235	0.52	4.44	5.43	7.47	8.08	10.32	12.78	1.86	3.54	5.88	6.13	9.2	12.78	4.44	5.43	7.47	8.08	10.32	12.78	1.86	3.54	5.88	6.13	9.2	12.78								
1963-64	15,569	0.59	4.85	5.94	8.13	8.94	11.95	14.19	2.2	4.00	6.04	6.32	10.92	14.19	4.85	5.94	8.13	8.94	11.95	14.19	2.2	4.00	6.04	6.32	10.92	14.19								
1965-66	20,722	0.77	5.23	6.49	9.21	10.28	13.25	15.64	2.36	4.23	6.54	7.76	12.09	15.64	5.23	6.49	9.21	10.28	13.25	15.64	2.36	4.23	6.54	7.76	12.09	15.64								
1967-68	25,630	0.92	5.4	6.86	10.19	11.41	15.15	20.38	2.36	4.36	7.35	8.52	12.81	20.38	5.4	6.86	10.19	11.41	15.15	20.38	2.36	4.36	7.35	8.52	12.81	20.38								
1969-70	33,679	1.18	5.18	6.59	9.85	11.1	14.51	19.52	2.29	4.21	7.01	8.49	12.28	19.52	5.18	6.59	9.85	11.1	14.51	19.52	2.29	4.21	7.01	8.49	12.28	19.52								
1971-72	44,359	1.53	5.57	7.08	10.58	12.08	16.42	22.03	2.49	4.56	7.2	8.79	13.98	22.03	5.57	7.08	10.58	12.08	16.42	22.03	2.49	4.56	7.2	8.79	13.98	22.03								
1973-74	55,235	1.87	5.86	7.5	11.18	12.69	16.58	19.8	2.53	4.84	7.72	9.62	15.04	19.8	5.86	7.5	11.18	12.69	16.58	19.8	2.53	4.84	7.72	9.62	15.04	19.8								
1975-76	64,950	2.16	5.56	7.08	10.89	12.55	16.46	20.1	2.48	4.33	7.06	9.38	14.69	20.1	5.56	7.08	10.89	12.55	16.46	20.1	2.48	4.33	7.06	9.38	14.69	20.1								
1977-78	70,449	2.30	5.89	7.48	11.45	13.21	17.13	19.9	2.51	4.38	7.01	9.48	15.31	19.9	5.89	7.48	11.45	13.21	17.13	19.9	2.51	4.38	7.01	9.48	15.31	19.9								
1979-80	81,731	2.62	5.57	7.08	10.58	12.08	16.42	22.03	2.49	4.56	7.2	8.79	13.98	22.03	5.57	7.08	10.58	12.08	16.42	22.03	2.49	4.56	7.2	8.79	13.98	22.03								
1981-82	94,279	2.94	5.86	7.5	11.18	12.69	16.58	19.8	2.53	4.84	7.72	9.62	15.04	19.8	5.86	7.5	11.18	12.69	16.58	19.8	2.53	4.84	7.72	9.62	15.04	19.8								
1983-84	94,615	2.85	5.56	7.08	10.89	12.55	16.46	20.1	2.48	4.33	7.06	9.38	14.69	20.1	5.56	7.08	10.89	12.55	16.46	20.1	2.48	4.33	7.06	9.38	14.69	20.1								
1985-86	93,517	2.73	5.89	7.48	11.45	13.21	17.13	19.9	2.51	4.38	7.01	9.48	15.31	19.9	5.89	7.48	11.45	13.21	17.13	19.9	2.51	4.38	7.01	9.48	15.31	19.9								
1987-88	71,160	2.02	4.1	5.33	8.46	9.84	12.86	14.41	1.49	2.94	5.14	7.28	12.1	14.41	4.1	5.33	8.46	9.84	12.86	14.41	1.49	2.94	5.14	7.28	12.1	14.41								
1989-90	81,983	2.25	5.99	7.69	11.75	13.48	16.9	18.39	2.36	4.5	7.41	10.34	16.05	18.39	5.99	7.69	11.75	13.48	16.9	18.39	2.36	4.5	7.41	10.34	16.05	18.39								
1991-92	88,072	2.38	6.35	8.18	12.35	14.11	18.06	20.07	2.61	5.07	8.08	10.63	16.98	20.07	6.35	8.18	12.35	14.11	18.06	20.07	2.61	5.07	8.08	10.63	16.98	20.07								

Notes: Computations by authors based on wealth tax return statistics. See text for details. Table displays the fraction of taxpayers residents with income abroad and non-residents with income in Switzerland (called special cases; others in statistics). Col. (1) report the total number of special cases (others) and column (2) the fraction of special cases (others) (relative to all tax units, col. (2) in Table 2). Col. (3) to (13) report the fraction of special cases (others) (income weighted) in all top income groups. Information not available after 1991/92.

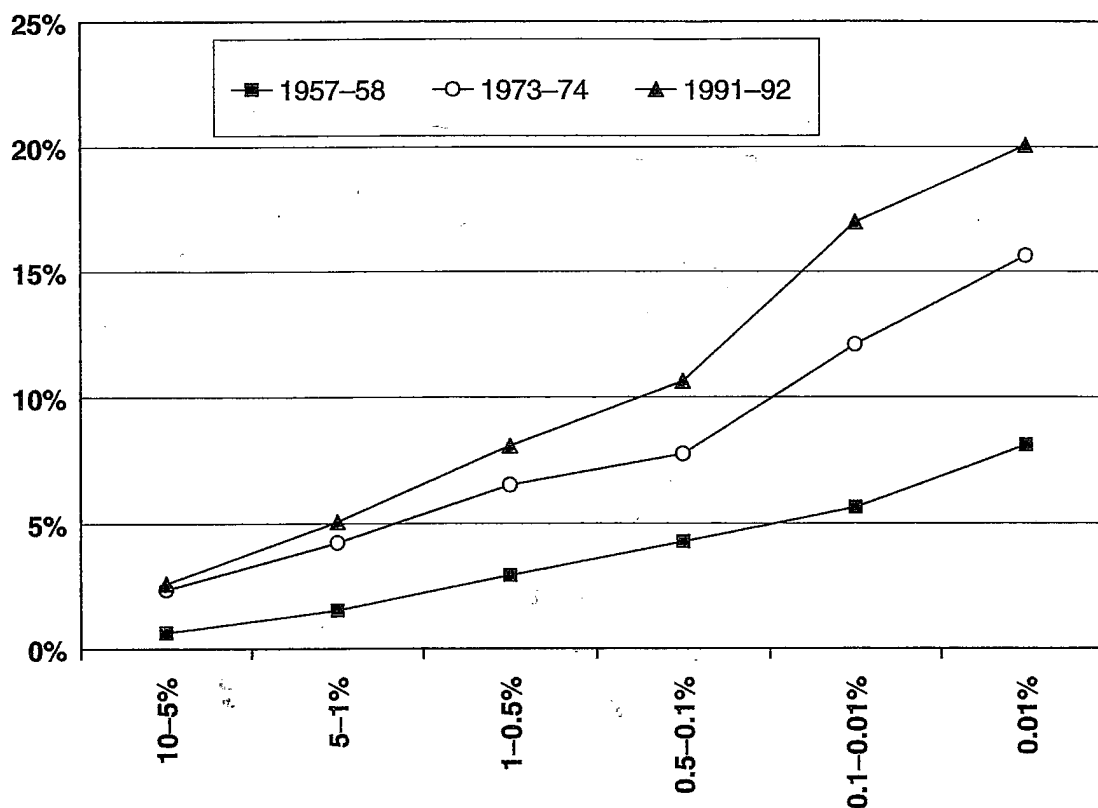


Figure 11.10 The fraction of foreign income earners and non-residents in top income groups Switzerland, 1957-91

Notes: The figure displays for three tax years the fraction of special cases (others) defined as tax returns filed by non-residents (with income in Switzerland) or tax returns filed by Swiss residents with income from foreign (non Swiss) sources.

Sources: Table 11.4.

billion) per year in recent years. This is extremely small relative to total incomes reported by very top groups in the United States.¹⁴

Table 11.5 shows how this upper bound on capital income evaded through Swiss accounts compares with total income reported in top income groups in France. The table shows that those numbers are small relative to the top 1% (around 7% in recent decades) or even the top 0.1% (around 30%), although they are comparable in magnitude to total incomes reported by the top 0.01% taxpayers (the top 2000 French taxpayers). Therefore, if all this capital income were added back to the top 0.01% French incomes, the top 0.01% French income share would at most double from 0.5% to about 1% of total French income. That would still be a modest level of top income concentration relative to the almost 3% share of total income earned by the top 0.01% income earners in the United States in 2000.

¹⁴ For example, as noted in Chapter 5, Bill Gates, the richest person in the United States, will earn almost US\$4 billion in 2004 due to extraordinary dividends from Microsoft. The top 0.01% US taxpayers (about 13,400 taxpayers) in 2000, earned in total about US\$175 billion even excluding realized capital gains (see Piketty and Saez, Chapter 5 this volume). Those amounts clearly dwarf the at most US\$5 billion in capital income earned through Swiss accounts by wealthy foreigners who evade taxes in their country.

Table 11.5 Capital Income earned through Swiss accounts and tax evasion, 1950-2002

Period	Capital income											
	Based on advance tax refunds						Percent of capital income accruing to					
Total in (millions of (2000 CH Fr.) (1)	As a % of total personal income (from Table 1) (2)	Swiss corporations (3)	Swiss individual residents (4)	Foreigners (5)	Advance tax never refunded (6)	Total capital income with no advance tax refund (m 2000 CH Fr.) (9)	As a percent of top income groups in France					
							top 1% (10)	top 0.1% (11)	top 0.01% (12)			
1950-59	6,516	9.18	40.40	38.11	1.11	20.37	4.1	15.1	57.8			
1960-69	13,347	10.94	41.61	36.89	2.66	18.83	4.3	17.4	68.9			
1970-79	28,070	15.96	43.07	35.58	4.80	16.55	7.1	28.8	110.2			
1980-89	40,464	19.96	50.12	29.17	8.55	12.16	7.3	29.8	114.6			
1990-98	66,588	29.50	53.47	25.72	12.02	8.80	7.7	30.0	108.8			
1999-02	85,826	35.72	57.40	13.62	20.53	8.46						

Notes: Col. (1) displays the average annual real value of capital income earned through Swiss financial institutions (all subject to 35% withholding advance tax, except minor exemptions). Col. (2) shows the amount as a percentage of personal income in Switzerland from Table 11.1, col. (5). Col. (3)-(5) show the fraction of capital income earned by Swiss corporations (personnes morales), Swiss individual residents (personnes physiques), and non-residents based on refunds of the advance tax. Col. (6) displays the fraction of capital income whose advance tax is never refunded and hence presumably evaded. Col. (7) shows the average annual real amount of capital income (in 2000 million of Swiss Francs) whose tax is not refunded (col. (6) times col. (1)). This is an upper bound of capital income evaded by non-residents through Swiss accounts. Col. (7)-(9) show by what percentage would the top 1%, 0.1%, and 0.01% income shares in France would be increased if all the capital income whose advance tax is never refunded was allocated fully to those top income groups.

Source: *Recettes fiscales de la Confédération 2002 (Administration fédérale des contributions, Division Statistique fiscale et documentation, Berne, avril 2003).*

Therefore, evasion through secret Swiss accounts can clearly not account for the gap in top income shares documented in this volume between continental European countries and Anglo-Saxon countries. However, as we mentioned above, it would be extremely useful to try to compile similar estimates of total capital income evaded not only through Switzerland but through all other potential tax havens.

11.6 CONCLUSION

This chapter has shown that in contrast to other countries studied in the volume, Switzerland did not experience a reduction in income and wealth concentration from the pre-First World War period to the decades following the Second World War. We have tentatively argued that the absence of progressive income and wealth taxation in Switzerland is the main factor explaining the discrepancy of the Swiss experience, although more work is clearly needed to establish to what extent taxation of top income and top wealth holders was lower in Switzerland than in other countries. Interestingly, the pattern of economic growth in Switzerland is very close to the French or American experience, albeit less tumultuous. This suggests that the high concentration of wealth and low levels of top tax rates that Switzerland experienced in the post-Second World War period did not provide a boost to its economic performance relative to other countries such as France or the United States (which also grew very quickly after the Second World War). It also suggests that the high wealth concentration levels were not an impairment to achieve high growth in the period after the Second World War.¹⁵

APPENDIX 11: REFERENCES ON DATA SOURCES FOR SWITZERLAND

Virtually all statistical publications in Switzerland are bilingual, published in French and German (we give both titles wherever possible)

General Statistics about Switzerland

Siegenthaler, H. (1996). *Statistique Historique de la Suisse/Historische Statistik der Schweiz*. Zurich: Chronos.

¹⁵ The experience from Latin America suggests that high wealth concentration might impair growth through political instability and subsequent poor government management of the economy. The high wealth concentration levels in Switzerland obviously did not generate political instability in that country.

Statistical Yearbook (1891–2004). *Annuaire Statistique de la Suisse/Statistisches Jahrbuch der Schweiz*. Zurich. Verlag des Art.

Tax Burden Statistics

Statistisches Bureau (1919–1929) 'Les Impôts sur le Produit du travail et le capital dans les principales communes de la Suisse', *Bulletin de Statistique Suisse*. Bern: Eidgenössisches Statistisches Amt.

Statistisches Bureau (1929–2004) *Charge Fiscale en Suisse/Steuerbelastung in der Schweiz*. Bern: Eidgenössisches Statistisches Amt (published in the series *Statistiques de la Suisse/Statistische Quellenwerke der Schweiz* up to 1960).

Income and Wealth Tax Statistics (by Size of Income and Wealth)

Administration fédérale des contributions (1920) *Statistique du 1er Impôt Fédéral de Guerre 1916/1917*. Bern: Eidgenössisches Steuerverwaltung.

Administration fédérale des contributions (1926, 1930, 1934) *Statistique Concernant le Nouvel Impôt Fédéral de Guerre Extraordinaire/Statistik der Neuen Ausserordentlichen Eidgenössischen Kriegssteuer* volumes I, II, and III. Bern: Eidgenössisches Steuerverwaltung.

— (1937, 1939, 1941) *Contribution Fédérale de Crise/Eidgenössische Krisenabgabe* (Periods I, II, and III published in series *Statistiques de la Suisse/Statistische Quellenwerke der Schweiz*). Bern: Eidgenössisches Steuerverwaltung.

— (every two years 1941–80) *Impôt Fédéral pour la Défense Nationale/Eidgenössische Wehrsteuer: Statistik*, periods I to XX. Bern: Eidgenössisches Steuerverwaltung (published in the series *Statistiques de la Suisse/Statistische Quellenwerke der Schweiz*).

— (biannual 1982–95) *Impôt Fédéral Direct. Statistique de la Période de Taxation/Direkte Bundessteuer. Statistik der Veranlagungsperiode*. Bern: Eidgenössisches Steuerverwaltung.

For years after 1992, the paper publication is no longer available but statistics have been made available online at <http://www.estv.admin.ch>

Statistics on advanced flat tax on capital income (Impôt Anticipé)

Administration fédérale des contributions (Division Statistique fiscale et documentation) (2003). *Recettes fiscales de la Confédération 2002*. Berne: Administration fédérale des contributions.

REFERENCES

- Atkinson, A. B. (2005). 'Top incomes in the UK over the 20th century', *Journal of the Royal Statistical Society*, 168(2): 325–43.
- Harrison, A. J. (1978). *Distribution of Personal Wealth in Britain*. Cambridge: Cambridge University Press.
- Gordon, J. P. F., and Harrison, A. J. (1989). 'Trends in the Shares of Top Wealth-Holders in Britain, 1923–81', *Oxford Bulletin of Economics and Statistics*, 51: 315–32.
- Kopczuk, W. and Saez, E. (2004). 'Top Wealth Shares in the United States, 1916–2000: Evidence from Estate Tax Returns', *National Tax Journal*, 57: 445–87.
- Kuznets, S. (1953). *Shares of Upper Income Groups in Income and Savings*. New York: National Bureau of Economic Research.
- Lampman, R. J. (1962). *The Share of Top Wealth-Holders in National Wealth, 1922–1956*. New Jersey: Princeton University Press, Princeton.
- Lindert, P. (2000). 'Three Centuries of Inequality in Britain and America', in A. B. Atkinson and F. Bourguignon (eds.) *Handbook of Income Distribution*. Amsterdam: Elsevier Science, pp. 167–216.
- Maddison, A. (1975). *Monitoring the World Economy*. Paris: OECD.
- Piketty, T. (2001). *Les hauts revenus en France au 20eme siècle—Inégalités et redistributions, 1901–1998*. Paris: Editions Grasset.
- (2003). 'Income Inequality in France, 1901–1998', *Journal of Political Economy*, 111: 1004–42.
- Saez, E. (2003). 'Income Inequality in the United States, 1913–1998', *Quarterly Journal of Economics*, 118: 1–39.
- Postel-Vinay, G. and Rosenthal, J-L. (2004). 'Wealth Concentration in a Developing Economy: Paris and France, 1807–1994'. Mimeo EHESS and UCLA.