

Top income shares in Greece from dictatorship to crisis: 1967-2017

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Abstract

The paper calculates the top income shares in Greece from 1967 (the seizure of power by the military dictatorship) until 2017 (the aftermath of the debt crisis). This long-run perspective allows for the examination of the relationship between inequality and institutional transformations, namely democracy, finance and crisis. We find in particular that (a) transition to democracy did not affect the income share of the top decile, whereas social democracy had a significant negative impact (b) financial development and liberalization substantially increased all top decile shares (c) debt crisis, consolidation and recession were beneficial for the upper ranks of the top decile.

JEL: D3, O15

Keywords: inequality, Greece, top incomes

1 Introduction

The political and economic determinants of income distribution are long debated issues in the political economy literature. In terms of top income shares, the influential works of Kuznets (1953) and Piketty (2001) have employed administrative tax data and Pareto distributions to estimate national time series. Building on their methodology, a number of national studies emerged, such as those included in the collective volumes of Atkinson and Piketty (2007, 2010), as well as more recent works including, among others, Foellmi and Martinez (2017) for Switzerland, Alvaredo et. al. (2018) for the Middle East region, Chancel and Piketty (2019) for India and Bartels (2019) for Germany.

Other strands of the inequality literature have examined the impact of broad historical transformations, institutional settings and economic events, such as transition to democracy, financial expansion and economic crises. Democracy is often associated with improved opportunities for upward mobility and therefore could reduce inequality. However, the surveys of Gradstein and Milanovic (2004) and Acemoglu et.al. (2015) do not confirm any empirical negative relationship between democracy and inequality. Credit constraints, on the other hand, play a critical role in theoretical models of inequality, therefore financial liberalisation could relax such constraints for the poor and provide better conditions for economic activity and success. Yet, the empirical findings of Roine et. al. (2009) and de Haan and Sturm (2017) do not verify this relationship. Finally, economic crises initially reduce the incomes of the rich through the devaluation of financial assets but the subsequent recessions disproportionately hurt the poor (Roine et. al., 2009; Atkinson and Morelli, 2011).

Our paper calculates the top income shares in Greece¹ for the period 1967-2017 using administrative tax data and national accounts . We report the income share of the top 10 percent of the population (top decile) which we decompose further to the top 10-6 percent, the top 5-2 percent, the top 1 percent (top percentile) and the top 0.1 percent. This provides an overview of the aggregate distribution of pre-tax income between the "broadly" rich and the rest of the population as well as the internal composition between high, middle and lower ranks of the rich.

¹The first series of top income shares in Greece were constructed by Chrissis et. al. (2011) and Chrissis and Livada (2014). Our series have two major methodological differences: We use the individual, instead of the household income from tax data and we include different variables from national accounts data.

This half-century-long perspective allows an examination of the extent to which broader historical developments have affected the evolution of income distribution. Indeed, during this long period, Greece has undergone substantial political and economic transformations that would presumably play critical role. In order to frame these transformations, we divide our period into six shorter ones, according to more or less discreet political and institutional arrangement. Hence we have the “Dictatorship” 1967-1974, the “Democracy” 1974-1981, the “Social Democracy” 1981-1989, the “Stabilisation/ Finance” 1989-2001, the “Eurozone” 2001-2009 and the “Crisis” 2009-2017. Evidently, this periodisation has some degree of arbitrariness and the periods overlap, but it provides adequate ground for our purposes. Moreover, the respective cut-off dates are broadly consistent with structural breaks in our income shares series.

Our main findings can be summarized as follows: The transition to democracy in 1974 did not have any significant impact on the top decile share as it broadly continued the trends that were already present in the dictatorship. However, the period of social democracy achieved a major redistribution away from the top decile leading to historical low levels. This was reversed during the economic stabilisation and financial development and liberalisation of the 1990s when the top decile fully recovered its previous losses. Finally, the debt crisis and the subsequent recession were beneficial for the top decile (especially the higher ranks) but the recovery seems to work at the opposite direction.

The next section presents the methodology for combining tax data and national accounts to construct the income shares and section 3 reports the results for each segment of the rich population throughout our period. The final section discusses the findings and offers some conclusions and directions for further research. The econometric tests for the cut-off dates are described in the appendix.

2 Methodology

2.1 Tax data

We calculate the top income shares combining administrative tax data with national accounts data². The former were published by three different au-

²The methodology described here can also be found in Chrissis and Koutentakis 2019.

thorities, depending on the period: From 1967 to 2002 we use data from the [Hellenic Statistical Authority \(ELSTAT\)](#), from 2003 to 2011 we use the tables published by the [Ministry of Finance](#) and since 2012 the tables of the [Independent Authority for Public Revenue \(AADE\)](#). In fact, the publication of tax data started as early as 1957 but we omit the first decade and begin in 1967 because from this date onwards tax data were declared (and published) on individual basis³. Beginning from this year makes our results homogeneous, or at least this is the earliest we can apply the individual income approach of this study without seriously compromising the validity of our results.

An additional source of concern is income from financial assets, interest and dividends, that was withheld in the source and was therefore absent from tax data until 2013. This changed in 2014 generating a break in our series and a sudden jump in the shares of the higher ranks (top 1% and 0.1%). Still, this does not change much the share of the other segments of the top 10 percent. We chose to report the calculations for the period 2014-2017 to show the evolution of the top income shares in the aftermath of the crisis. However, they are not directly comparable with the series up to 2013.

2.2 Control Total for Population and Income

Converting individual incomes to income shares requires additional metrics for total population and income. Starting with population, it is evident that we cannot use the number of tax fillers since many individuals did not submit tax declarations. Therefore we use the adult population (18 or above) from Eurostat, assuming that the income of non-fillers is zero. This latter assumption does not affect the estimated shares if the non-fillers do not belong to the top income groups.

Aggregate (control) income cannot be derived from administrative data either because certain incomes are tax-exempted and not declared (such as particular transfers and incomes below some threshold) or simply because of tax evasion and fraud. Therefore we need to turn to national accounts data of the household sector (S14) and choose the relevant components in order to derive the control income (i.e. the total pre-tax income accruing to individuals and households from all sources, independently of tax treatment

³The problem with pre-1967 data is that the wife's income (above some threshold depending on the source) was added to husband's income and taxed accordingly. This practice was abolished in the first months of the dictatorship with the income tax reform 239/1967 that effectively established the individual-based income tax that is still in place.

and evasion). This is derived from Eurostat since 1995 following the ESA 2010 classification and from the Hellenic Statistical Authority for 1988-1995 with different classification. Fortunately we can map the components in the different classifications and thanks to the overlapping year 1995 we can apply backwards the growth rates and construct a single series for the control income.

The specific components of the Household sector accounts that build up the control income are the following. We begin with B2A3N "Operating surplus and mixed income, net" that includes income from individual business and self-employment. In terms of 1988-1995 accounts this is equivalent to N12 "Net operating surplus". Still, as we care about actually received income, we must subtract the component P12 "Output for own final use" since the latter refers to imputed rents, R&D, etc. that does not generate any kind of receipts. Unfortunately, 1988-1995 accounts do not report the respective component for households, therefore we approximate it applying the average ratio of P12 to Total Output (P1), which is broadly stable for the period 1995-2007.

Next we add labour income from D1 "Compensation of employees (received)". The equivalent amount in 1988-1995 accounts is R10 "Compensation of employees" which is itself the sum of three separate components (R101 "Gross wages", R102 "Actual social contributions" and R103 "Imputed Social Contributions"). Income from pensions and social benefits is given by D62 "Social benefits other than social transfers in kind" while for 1988-1995 derives from General Government sector, R64 "Social Benefits".

To remove employers' and workers' social security contributions we subtract D611 "Employers' actual social contributions", D612 "Employers' imputed social contributions" and D613 "Households' actual social contributions". For 1988-1995 we must again turn to General Government sector and use the components R62 "Actual Social security contributions" and R63 "Imputed Social security contributions".

Finally we add specific elements of D4 "Property income (received)". In particular, until 2013 we include only D45 "Rents (received)"⁴ as the other components D41 "Interest (received)", D421 "Dividends" and D422 "Withdrawals from the income of quasi-corporations" were not required in the tax declarations (taxes for interest and dividends were withheld in source). Since 2014, however, interest and dividends were also included in the tax declara-

⁴Note that pre-1995 accounts do not report rents separately, therefore we impose the average ratio of rents to property income.

tions, therefore the respective components are added in the control income aggregate. The derivation of control income is shown in Table 1 below.

Table 1 here

The main problem arises for the years 1967-1987 that we have only GDP but not detailed national accounts data. To construct the series of control income for these years we apply the average income/GDP ratio of the years 1988-2017. This linear extrapolation requires stationarity of the ratio, which is confirmed by the KPSS test with intercept only (Kwiatkowski et. al., 1992) at all significance levels with an LM statistic of 0.163 (note that the standard Augmented Dickey Fuller test rejects the unit root hypothesis at the 10% level but accepts it at the 1% and 5% levels).

The control income of the whole period is higher than declared income, even more so in the earlier years . If non-declared incomes do not belong to the top income groups, then our calculations are precise. Otherwise, our calculated income shares are underestimated.

Overall, our data series is far from perfect and due to underestimation biases they should be better viewed as lower bounds of the respective shares. We believe this is the best that administrative and national accounts data have to offer. At any rate, our major concern is the direction of change of the top income shares following major political/institutional arrangements, rather than their exact level for each individual year.

2.3 Pareto approximation

Income brackets vary considerably between years and do not generally coincide with the percentiles we are trying to estimate. We apply the standard Kuznets-Piketty approach assuming that top incomes are well described by the Pareto distribution.

In brief, given a population with incomes above some threshold k , the Pareto distribution defines a cumulative distribution function $F(y)$ that gives the share of population with income below y :

$$F(y) = 1 - \left(\frac{k}{y}\right)^a, \quad k > 0, \quad a > 1$$

where a is the parameter that determines the shape of the distribution.

Differentiating $F(y)$ with respect to y we obtain the density function $f(y)$ of the distribution, i.e. the share of population with income exactly y

$$f(y) = \frac{ak^a}{y^{1+a}}$$

The average income $E(y)$ of individuals with income greater than k is given by:

$$E(y) = \int_k^\infty yf(y) = \frac{a}{a-1}k \equiv bk$$

According to the above equation, the ratio $E(y)/k$ is equal to a constant $b \equiv a/(a-1)$. Therefore, by setting any arbitrary k we can directly observe $E(y)$ from tax data, calculate the parameter b (or a) and derive the relevant income shares.

3 Results

3.1 The top decile

The evolution of the top decile income share is shown in Figure 1. In the early years of the dictatorship their share was close to 29 percent of total income but fell to about 27 percent in the last two years of the regime (1972-73). Interestingly, this drop did not continue after the restoration of democracy (1974) and the top decile share fluctuated around this level until the early 1980s. Democracy did not trigger any radical redistribution, at least in the aggregate share of the top decile.

Redistribution did happen only after the social democratic government took office in 1981 and generated a major and consistent decline of the top decile share. The share of the top decile fell to 23 percent by 1989, which was the historical low of the whole period.

Figure 1 here

However this was reversed in the next decade that was particularly beneficial for the top 10 percent: during the stabilization policies of the early 1990s and the subsequent financial expansion, they fully recovered their previous

losses and their income share reached about 29 percent at the turn of the century.

This did not last long, as the early years of the formal accession into the Eurozone resulted in a drop of the top decile share to about 26 percent, something uncommon to the European experience. The share stabilized around this level until the eruption of the debt crisis in 2009-10.

Following the official bailout and a series of aggressive fiscal consolidation and labour market deregulation policies the share of the top decile jumped above 28 percent in 2010 and remained around this level before falling again with the recovery in 2016.

The changes in the evolution of the top decile share are confirmed by the Bai-Perron test that identifies breaks both in 1981 and 1990 but not in 1974. The same test also finds breaks in 2003 and 2010 capturing the end of the rising shares during the Eurozone period. Similarly, Markov regime switching identifies the period 1984-1995 as the “low” regime of the top decile share, broadly corresponding to the decline during Social democracy.

3.2 Inside the top decile

The aggregate picture we described in the previous section hides a lot of internal redistributions among the different ranks of the top decile. Figure 2 presents these differences separating the top decile to the bottom half (i.e. the top 10-6 percent), the middle 5-2 percent and the top 1 percent.

As we can see, during the dictatorship, it was the upper half (5-2 percent and 1 percent) of the top decile that suffered the major income losses, while the bottom half (10-6 percent) made substantial gains, especially in the earlier years. The restoration of democracy continued a similar trend, with the exception of the share of the “middle” rich (5-2 percent) that was stabilised.

It is evident that during the dictatorship and the restoration of democracy (1967-1981), changes in the income distribution inside the top decile were much more intense than changes in the aggregate share of the top decile. In quantitative terms, the upper rich (top 1 percent) lost about four percentage points and the middle rich (top 5-2 percent) lost about half point of national income. Of these, about three-and-half points went to the lower rich (top 10-6 percent) and the remaining one point to the 90 percent.

Figure 2 here

As we already saw in the previous section, the aggregate share of the top 10 percent declined substantially during the social democratic period. In the early (more radical) years the major losses were concentrated in the upper half of the top decile (5-2 percent and 1 percent) leaving the bottom half stable. This changed in the later years of Social democracy when the bottom half began to decline too, while the top 1 percent stabilized its share. Throughout the social democratic period 1981-1989 the top decile reduced its share by almost five percentage points, half of which were lost by the middle rich (top 5-2 percent) whereas the lower rich (10-6 percent) and the upper rich (top 1 percent) lost around one point each.

Changes in the internal distributions of the top decile income came to an end by the late 1980s. The substantial increase since the 1990s was more or less similar among the different ranks of top incomes. Specifically, by 2001 the top decile had gained five-and-a-half points of national income. Each of the middle and upper rich received more than two percentage points whereas the lower rich received more than one percentage point.

Since the debt crisis we observe an initial increase of the top decile share that seems to disappear as the recession moves forward. More specifically, the top 10-6 and 5-2 percent shares started falling around 2012-13 and stabilised after the recovery in 2016. The top 1 was proven more resilient and kept rising until 2015, to decline afterwards⁵.

Consistent to our visual observations, the Bai-Perron test finds structural breaks for the top 5-2 and 1 percent during the democracy period, 1977 and 1975 respectively, capturing the stabilised share of the former and the deceleration of the declining share of the latter. For the top 10-6 percent the first structural break arises during social democracy, in 1982, reflecting the stabilisation of the previously increasing share. The recovery of the income shares is captured as early as 1989 for the top 1 percent followed by 1993 for the top 10-6 percent and 1994 for the top 5-2 percent. According to Bai-Perron test the recovery ends in 2003 for the top 10-6 and 5-2 percent and in 2004 for the top 1 percent, however it is clear from the graph that this end arrived by 2000. Additional breaks are identified in 2010 for the top 10-6 and 5-2 percent. Note also that the Bai-Perron test finds a break in 1986 for the top 5-2 percent, probably due to the sudden drop.

Markov regime switching marks as “low” regime (i.e. low average share)

⁵Note that the jump of the top 1 percent share in 2014 is due to the break in our series as the incomes from interest and dividends were included. See the methodology section for details.

the period 1967-1976 (mostly the Dictatorship years) for the top 10-6 share, reflecting the increasing share afterwards largely attributed to internal redistributions among the top decile. For the top 5-2 share the “low” regime covers the years 1986-1994 that is broadly similar to the Social Democracy period. Finally, the “low” regime for the top 1 percent is the whole post-Dictatorship period 1974-2017.

3.3 The “ultra-rich”

As we can see in figure 3, the share of the top thousandth (0.1 percent) of the population evolved similarly to the top percentile. In the beginning of our period, it stood at around 2.5 percent of total income. This dropped consistently throughout the dictatorship and continued to do so during the restoration of democracy and the first years of social democracy, evidently at a slower pace. It remained constant around 1 percent for almost a decade and rose to 1.5 percent during the financial expansion of the 1990s. It stabilised around this area during the Eurozone period and rose further during the crisis.

Again, the jump in 2014 is explained by the break in our series (see previous footnote) and the inclusion of income from financial assets (interest and dividends). Apparently these are significant income sources for the ultra rich and we can safely assume that their exclusion before 2014 results in a substantial underestimation of their income share.

The structural breaks identified by the Bai-Perron test are 1975, reflecting the deceleration of the declining trend, 1987, capturing the stabilisation and subsequent recovery and 1999 that was the end of the recovery. The test also identifies 2011 as a structural break, capturing the positive effects of the crisis on the income share of the top ranks of the rich. A similar picture emerges from the Markov regime switching that finds the “low” regime in the period 1975-2012.

Figure 3 here

4 Discussion and Conclusion

The paper examined the evolution of the top income shares in Greece in light of substantial historical transformations that took place in a period of half-century, mainly the restoration of democracy, the financial expansion

and the crisis. We found that major events had substantial impact on the income share of the rich. Below we put our findings in context and suggest possible directions for further research.

During most of the Dictatorship period, the top decile share was constant at relatively high levels and begun falling only in the last couple of years. What is more striking though is the internal distribution among the top decile with the bottom half (top 10-6 percent) making significant gains, mostly at the expense of the top 1 percent that was losing ground throughout the dictatorship. Interestingly, the share of the bottom half reduced pace in the last couple of years of the dictatorship resulting in the fall of the aggregate top decile share. This may reflect the liberalisation attempt of the regime or the different redistributive mechanisms employed by dictatorships such as cash transfers as opposed to public goods provisions that are more common under democracies (Kammas and Sarantides, 2019).

The latter explanation is supported by the fact that similar trends continued during the Democracy period, but the aggregate top decile share remained constant. Democratic institutions, market openness and – most importantly – substantial increases of the minimum wage (well above inflation) did not seem to pay-off for the bottom 90 percent during the early years of Democracy. There is no straightforward explanation for the failure of democracy to deliver on income redistribution grounds, though potential answers may consider the persistence of de facto political power as described in the concept of captured democracy (Acemoglu and Robinson, 2008).

Things changed in the Social Democracy period, when the decline of the top 10 percent share is quite evident. So why did Social Democracy succeed where initial Democracy failed? After all, the socialist government faced similar adverse economic conditions (stagflation after the second oil crisis) and made extensive use of the same re-distributional device of the minimum wage. The main difference is that the socialist government introduced many liberal reforms in the civil rights, free unionism, wage indexation and massive hiring in the public sector. All these combined could have shifted the balance of de facto political power and made a difference in terms of income distribution.

The next decade witnessed an impressive recovery of the top decile share across all its ranks. The 1990s begun with “traditional” recessionary stabilization policies (monetary and fiscal contraction) but were soon replaced by the rather “unconventional” exchange-rate-based-stabilization policy which implies fixing the exchange rate, bringing down imported inflation and allowing lower interest rates by removing currency uncertainty (Detragiache and Hamann, 1997). Consistent to that, the period was also characterized

by increased financialization, as exposure to international capital markets fuelled domestic credit expansion (and current account deficits). Our findings suggest that improved financial conditions did not support the upward mobility of the poor through the relaxation of income-related credit constraints. On the contrary, it was the rich population that benefited the most from the financial conditions of the period. This is in line with de Haan and Sturm (2017) who find that financial development and liberalization increase inequality, especially under weak political institutions.

The increase of the top decile share during the Crisis and its decline since the recovery were rather expected. A direct outcome of fiscal consolidation was cuts in transfers that hurt mostly low income earners. In addition to that, an “internal devaluation” policy was pursued targeting nominal wage decreases as a means for decreasing prices and the real exchange rate (since participation in the Eurozone did not allow for currency devaluation). This was achieved through labour market deregulation and reduction of the minimum wage that reinforced income inequality. In light of the above, the increase of the top income shares seems rather moderate. What we miss here is income from financial assets (interest and dividends) that would presumably decline at the first stages of the financial crisis and could have an equalising effect. Unfortunately, income from these sources was not reported before 2014.

5 Tables and Figures

Table 1: Mapping of accounts and derivation of control income

National accounts 1988-1995		National accounts 1995-2017
N12 - Net operating surplus	plus	B2A3N - Operating surplus and mixed income, net
P14 - Output of non-market services*	minus	P12 - Output for own final use - R
R10 - Compensation of employees	plus	D1 - Compensation of employees - R
sum of:		
R101 - Gross wages - R		
R102 - Actual social contributions - R		
R103 - Imputed social contributions - R		
General Government - R64 - Social Benefits	plus	D62 - Social benefits other than social transfers in kind
General Government - R62+R63 Social security contributions	minus	Social security contributions
		sum of:
		D611 - Employers' actual social contributions
		D612 - Employers' imputed social contributions
		D613 - Households' actual social contributions
Rents*	plus	D45 - Rents - R
Control Income 1988-1994		Control Income 1995-2013
	plus	D41 - Interest - R
	plus	D421 - Dividends - R
		Control Income 2014-2017

Table 2: Bai-Perron structural break dates

Top 10 share	1981, 1990, 2003, 2010
F-stat=9.28, Scaled F-stat=18.57, Critical value=14.85	
Top 10-6 share	1982, 1993, 2003, 2010
F-stat=15.66, Scaled F-stat=31.32, Critical value=14.85	
Top 5-2 share	1977, 1986, 1994, 2003, 2010
F-stat=15.23, Scaled F-stat=30.45, Critical value=15.29	
Top 1 share	1975, 1989, 2004
F-stat=20.36, Scaled F-stat=40.71, Critical value=14.03	
Top 0.1 share	1975, 1987, 1999, 2011
F-stat=26.70, Scaled F-stat=53.40, Critical value=14.85	

Table 3: Stationarity of the income shares

	LM-statistic
Top 10 share	0.201174
Top 10-6 share	0.582992
Top 5-2 share	0.218071
Top 1 share	0.235416
Top 0.1 share	0.241372
Asymptotic critical values:	
1% level	0.739000
5% level	0.463000
10% level	0.347000

Table 4: Markov regime switching

	Regime 1 (high)	Regime 2 (low)
Top 10 share	1967-1983 and 1996-2017 $c=0.273$ (0.002120)	1984-1995 $c=0.243$ (0.004270)
Top 10-6 share	1977-2017 $c=0.095$ (0.000896)	1967-1976 $c=0.078$ (0.001843)
Top 5-2 share	1967-1985 and 1995-2017 $c=0.114$ (0.000828)	1986-1994 $c=0.098$ (0.002022)
Top 1 share	1967-1973 $c=0.090$ (0.003301)	1974-2017 $c=0.058$ (0.001252)
Top 0.1 share	1967-1974 and 2013-2017 $c=0.021$ (0.000830)	1975-2012 $c=0.013$ (0.000367)

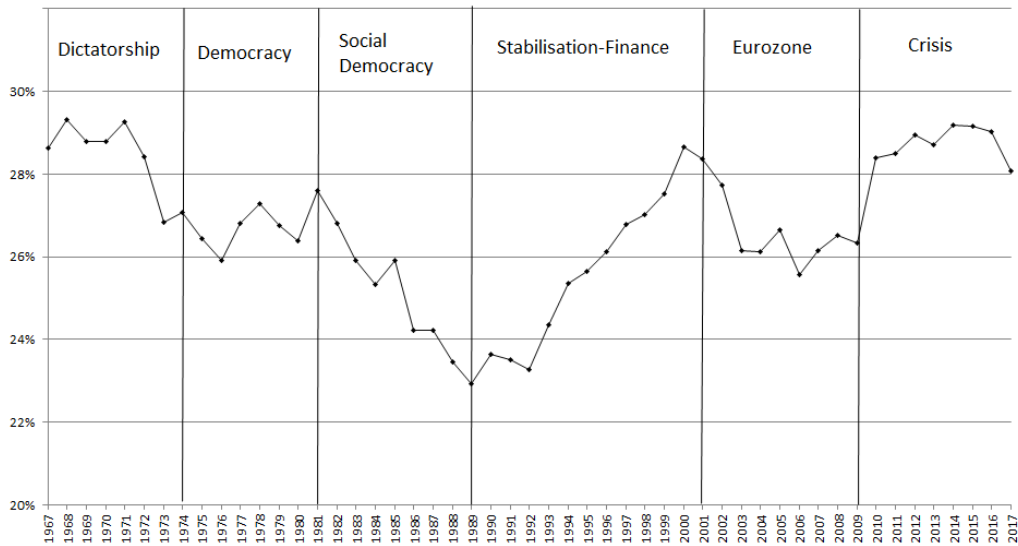


Figure 1: The top decile

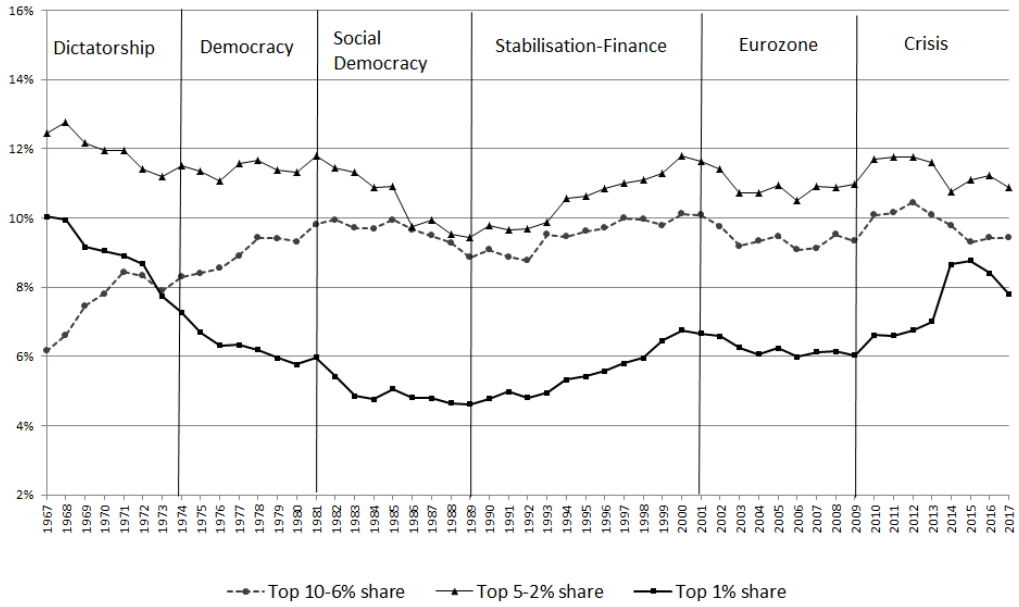


Figure 2: Composition of the top decile

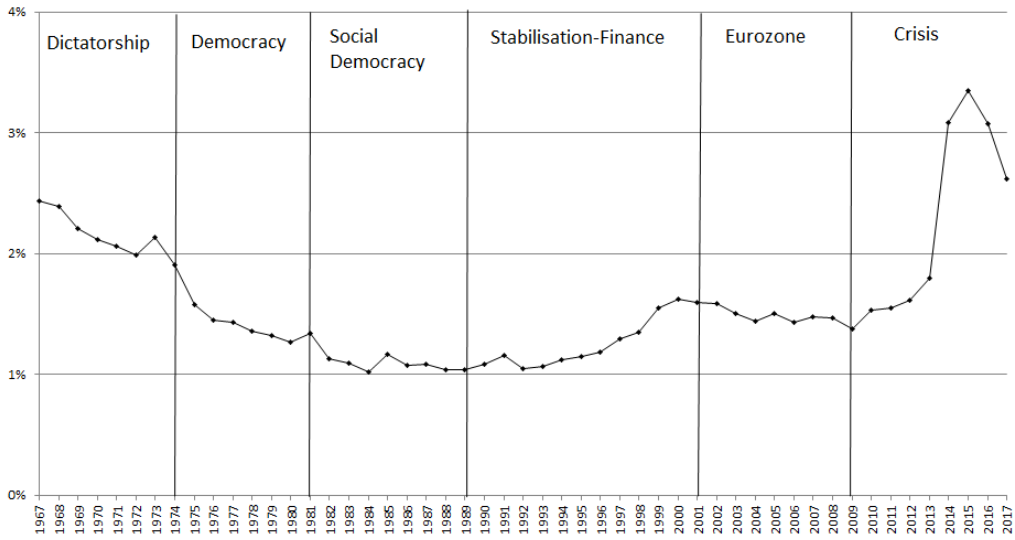


Figure 3: Top 0.1% share

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Appendix A

A.1 Multiple breakpoints

The selection of the cut-off dates and the respective periods was based on major events that frame discreet political arrangements. In order to examine the statistical validity of these cut-off dates we run the Bai-Perron (2003) test with maximum 5 breaks and allowing for heterogeneous error distributions across breaks. The resulting dates at 0.05 significance level are shown in the table below.

Table 2 here

The results suggest that the transition to Democracy (1974) did not have any impact on the aggregate 10 percent share and its lower half (top 10-6 percent) but affected only the top ranks (top 1 and 0.1 percent) and likely the top 5-2 percent. A similar but reversed distinction applies for Social Democracy (1981) that affected the aggregate top 10 and 10-6 percent but not the upper half. Both are supportive to our claim that the transition to Democracy triggered an internal redistribution between the top decile whereas social democracy reduced the aggregate share of the top decile. The stabilization of the upper half shares during the later years of Social Democracy corresponds to the break dates of 1986, 1989 and 1987 for the top 5-2, top 1 and top 0.1 percent respectively. This is likely mixed with the effect of the subsequent Financialization (1993) that appears as breaks for all income shares around this date, as well as the accession into the Eurozone in 2002. Finally, the debt crisis of 2010 generates structural breaks for all top income shares with the exception of the top 1 percent.

A.2 Stationarity

Here we confirm that our series are stationary with the KPSS test with intercept without trend and report the associated LM-statistics and the critical values in the table below (Kwiatkowski et. al., 1992, Table 1)

Table 3 here

All shares are stationary with the exception of the 10-6 share that stationarity is rejected at 5% and 10% levels.

A.3 Markov regime switch

Having tested for stationarity we employ a simple Markov regime switching model (Hamilton, 1994) to further characterize the stochastic evolution of top income shares. Let S_t denote an income share series and assume that is governed by a 2-regime (r_1, r_2) Markov process with constant transition probabilities p according to

$$S_t = c(r) + u_t$$

where $c(r)$ is the regime-varying mean top income share, and u_t is the innovation process, with $u_t \text{NID}(0, 1)$. In other words, the mean top income share (c) is assumed to be characterized by 2 regimes, regime 1 (high average value) and regime 2 (low average value). It may switch from one regime to the other on the basis of a constant transition probability p .

Maximum likelihood estimation yields the mean top income share for regime 1, $c(r_t = 1)$, and regime 2 $c(r_t = 2)$. Each year is assigned to the regime 1 if the obtained smoothed probability (i.e. using information for the whole sample, T) at year t is higher than 0.5, $Pr(r_t = 1|S_T) > 0.5$, and to regime 2 if otherwise.

Finally, a dummy is employed as a non-switching regressor with the value of unity for 2014-2017 and zero for 1967-2013 in order to capture the inclusion of interest and dividends since 2014. The results are reported in the table below with the average share denoted by c (standard errors in parentheses)

Table 4 here

The aggregate top 10 percent and the top 5-2 percent follow similar patterns, taking low average values in the 1984-1995 and 1986-1994, i.e. during most of the Social Democracy period and the first years of Financialisation. In contrast, the share of the top 10-6 percent takes the low average value during the Dictatorship. The highest ranks, i.e. the top 1 and 0.1 percent were at their high regime during the Dictatorship and the low regime afterwards. This seems to suggest that the restoration of democracy did have an equalizing effect but, as we have already discussed, this was limited from the upper to the lower ranks of the top decile. Finally, there is a rebound of the top 0.1 share since 2013, supporting our finding that the Crisis has been proven beneficial for the highest ranks of the rich.

A.4 Income shares

Table 5: Income Shares

Year	Top 10% share	Top 10-6% share	Top 5% share	Top 5-2% share	Top 1% share	Top 0.1% share
1967	28.6%	6.2%	22.5%	12.4%	10.0%	2.4%
1968	29.3%	6.6%	22.7%	12.8%	9.9%	2.4%
1969	28.8%	7.5%	21.3%	12.2%	9.2%	2.2%
1970	28.8%	7.8%	21.0%	11.9%	9.1%	2.1%
1971	29.3%	8.4%	20.8%	11.9%	8.9%	2.1%
1972	28.4%	8.3%	20.1%	11.4%	8.7%	2.0%
1973	26.8%	7.9%	18.9%	11.2%	7.7%	2.1%
1974	27.1%	8.3%	18.8%	11.5%	7.3%	1.9%
1975	26.5%	8.4%	18.0%	11.3%	6.7%	1.6%
1976	25.9%	8.5%	17.4%	11.1%	6.3%	1.4%
1977	26.8%	8.9%	17.9%	11.6%	6.3%	1.4%
1978	27.3%	9.4%	17.9%	11.7%	6.2%	1.4%
1979	26.7%	9.4%	17.3%	11.4%	6.0%	1.3%
1980	26.4%	9.3%	17.1%	11.3%	5.8%	1.3%
1981	27.6%	9.8%	17.8%	11.8%	6.0%	1.3%
1982	26.8%	9.9%	16.9%	11.4%	5.4%	1.1%
1983	25.9%	9.7%	16.2%	11.3%	4.9%	1.1%
1984	25.3%	9.7%	15.6%	10.9%	4.8%	1.0%
1985	25.9%	9.9%	16.0%	10.9%	5.1%	1.2%
1986	24.2%	9.7%	14.6%	9.7%	4.8%	1.1%
1987	24.2%	9.5%	14.7%	9.9%	4.8%	1.1%
1988	23.5%	9.3%	14.2%	9.5%	4.7%	1.0%
1989	22.9%	8.9%	14.1%	9.4%	4.6%	1.0%
1990	23.6%	9.1%	14.6%	9.8%	4.8%	1.1%
1991	23.5%	8.9%	14.6%	9.7%	5.0%	1.2%
1992	23.3%	8.8%	14.5%	9.7%	4.8%	1.1%
1993	24.4%	9.5%	14.8%	9.9%	5.0%	1.1%
1994	25.4%	9.5%	15.9%	10.6%	5.3%	1.1%
1995	25.7%	9.6%	16.0%	10.6%	5.4%	1.1%
1996	26.1%	9.7%	16.4%	10.8%	5.6%	1.2%
1997	26.8%	10.0%	16.8%	11.0%	5.8%	1.3%
1998	27.0%	10.0%	17.1%	11.1%	6.0%	1.3%
1999	27.5%	9.8%	17.7%	11.3%	6.5%	1.6%
2000	28.7%	10.1%	18.5%	11.8%	6.8%	1.6%
2001	28.4%	10.1%	18.3%	11.6%	6.7%	1.6%
2002	27.7%	9.8%	18.0%	11.4%	6.6%	1.6%
2003	26.2%	9.2%	17.0%	10.7%	6.3%	1.5%
2004	26.1%	9.3%	16.8%	10.7%	6.1%	1.4%
2005	26.6%	9.5%	17.2%	10.9%	6.2%	1.5%
2006	25.6%	9.1%	16.5%	10.5%	6.0%	1.4%
2007	26.2%	9.1%	17.0%	10.9%	6.1%	1.5%
2008	26.5%	9.5%	17.0%	10.9%	6.1%	1.5%
2009	26.3%	9.3%	17.0%	11.0%	6.0%	1.4%
2010	28.4%	10.1%	18.3%	11.7%	6.6%	1.5%
2011	28.5%	10.1%	18.4%	11.8%	6.6%	1.5%
2012	28.9%	10.5%	18.5%	11.7%	6.7%	1.6%
2013	28.7%	10.1%	18.6%	11.6%	7.0%	1.8%
2014*	29.2%	9.8%	19.4%	10.8%	8.7%	3.1%
2015	29.2%	9.3%	19.9%	11.1%	8.8%	3.3%
2016	29.0%	9.4%	19.6%	11.2%	8.4%	3.1%
2017	28.1%	9.4%	18.7%	10.9%	7.8%	2.6%

*Break in series