

Top Incomes in France: booming inequalities?

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Abstract

I study the evolution of top incomes in France, using income tax tabulations, and confronting them with data from a large sample of households with exhaustive sampling at the upper end of the income distribution, issued by the French tax administration. Results exhibit a strong increase in market income inequalities measured by top income shares since the late 1990s. The surge in top wages at the top 1% and top 0.1% of the wage distribution is predominantly responsible for the explosion of top income shares, and puts an end to 30 years of stability of the French wage hierarchy. I show that top income and top wage mobility is low, stable, and comparable to that in Canada (where income concentration is 2 times higher) and cannot be responsible for this surge in top income and top wage shares. Neither can the decline of top marginal income tax rates fully explain this evolution through effects on reported incomes. However, in a context of strengthened European tax competition and increased high-skilled labor mobility, my results suggest that France, along with other European countries may be on its way to bridging part of its “top income gap” with English-speaking countries.

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Introduction

This paper uses exhaustive fiscal data edited every year by French fiscal administration to study the evolution of income inequalities in France in the latest years (1998-2006).

These data enable us to examine very precisely top income households while usual households surveys have the greatest difficulty to witness the upper-end of the income distribution since they are sampled with respect to socio-demographic variables that do not include income.

Only fiscal data can give us a precise knowledge of the evolution of top incomes since it is the only source of data with exhaustive information at the upper-end of the income distribution. The relevance of fiscal data has also been assessed to compare the evolution of inequalities among countries, since they represent historical homogeneous sources on incomes. Piketty & Atkinson (2007) have recently gathered an important series of studies on top incomes in several countries. Their main conclusion is that a substantial gap had emerged between continental Europe and English-speaking countries, the latter being much more unequal, with a share of top incomes in total incomes two to three times larger on average than in continental Europe. But the studies in Piketty & Atkinson have top income series that stop in the 1990s for the most part². And few is known of the evolution of top incomes in European countries for the most recent years while booming top CEOs compensations have attracted a lot of attention in public debate. Are top incomes in France and in Europe catching-up their US counterparts? Since 1998, important tax reforms have been implemented in France and in other European countries, with a substantial decline of the upper marginal rates of Income Tax schemes. Have these important drops in income tax rates had an effect on the income distribution?

I use income tax returns data and extend Piketty's long-term series to the 1998-2006 period. These are income tax tabulations produced every year by French Income Tax administration. I also use an exceptionally large sample of households issued by the French tax administration with exhaustive sampling at the upper-end of the distribution. My results reveal a surge in income concentration due to a surge in top income shares since the late 1990s in France. These fiscal data moreover enable us to investigate how this surge is comparable to the surge experienced by English-speaking countries since the 1980s.

First, I take advantage of the opportunity to disentangle wages between the spouses of the household in micro-files to study the evolution of the distribution of

²In France, Piketty's seminal work has shed light on top incomes over the XX-th century. But his series stop in 1998.

wage income. I show that the surge of top income is largely due to booming wage inequalities, suggesting that top compensated employees play a larger role within top income groups. This surge in top wages in France seems not easily attributable to “skill-biased technological change” or other existing theories of top CEO compensations (Gabaix & Landier (2007)) and reinforces the need for credible alternative explanations of the changing distribution of earnings among developed countries.

Second, I take advantage of exhaustive sampling in micro-files, and study mobility for top incomes, revealing that mobility is low among top incomes and among top wage earners, and that it has remained stable in a context of increasing income concentration. Moreover, mobility at the upper-end of the income distribution is surprisingly very comparable in France and in Canada, suggesting that top income mobility is not so much related to the level of income concentration.

I also investigate the role of taxation, which does not appear as the driving force in this surge in top incomes. I eventually display international comparisons showing that recent trends in other European countries may suggest that France along with other EMU countries experience a fanning-out of its income distribution, and may be rapidly bridging part of its “top income gap” with English-speaking countries.

The paper is organized as follows. Section 1 describes the data and outlines the estimation methods. In section 2, I present the evolution of top incomes, of top income shares, and of the composition of top incomes. Section 3 studies the unprecedented increase of wage inequalities and analyzes the mobility patterns of top incomes and of top wage groups. Section 4 presents international comparisons and analyses whether taxation plays a leading role in the evolution in top income shares across Europe. All series and technical considerations are displayed in the appendix of our working paper version (Landais (2007)).

1 Data & Methodology

Estimates displayed in this paper are from personal income tax return statistics (“Etats 1921”) compiled annually by the French tax administration (*Direction Générale des impôts*). I combine these statistics with information from large micro-files of tax returns with exhaustive sampling at the upper-end of the income distribution³.

³These micro-files are of two kinds: a smaller sample from 1990 to 1997 with 50,000 taxpayers every year (“Echantillon Léger”), and a larger one, also known as the “Echantillon Lourd”, with 500,000 taxpayers every year from 1997 to 2006. These two datasets are oversampled for high levels of income, with exhaustive sampling above an income threshold.

“Etats 1921” consist of tables of the number of tax returns, the amounts reported, and the income composition for a large number of taxable income brackets. The top tail of the income distribution is well approximated by Pareto distributions, so that income tax return tables can be used to estimate the distribution of taxable income. Fractiles are defined relative to the total number of tax units. We use parametric interpolation methods to estimate the thresholds and average taxable income levels for each fractile of top incomes. Since micro-data is available, we check that the errors of the Pareto interpolation technique are second-order.

Income is defined as gross income, before personal income tax and before all deductions, and including all income items reported on personal tax returns⁴: wages and salaries, self-employment and small business net incomes, dividends, interest, rents and other capital incomes. Realized capital gains are excluded from our baseline series because their realization is volatile and infrequent⁵. Because income tax return tables are displayed by taxable income brackets only, micro-data are used to estimate ratios of gross income to taxable income for each fractile and produce series of the thresholds and average gross income levels for each fractile of top incomes. Micro-data are also used to produce series of income composition, and to microsimulate average and marginal tax rates, net of exemptions and itemized deductions.

Top wage series are produced at the individual level taking advantage of the fact that wages of each member of the household are reported separately in tax returns micro-files. In this case, fractiles are defined relative to the total number of individuals reporting positive wages. Wage income includes salaries but excludes realized capital gains from exercised stock-options⁶.

Sampling is exhaustive in micro-files for households with income above a fixed taxable income threshold ($\approx 200,000$ euros). Because micro-files contain information on taxable income of year $n - 1$, on the number of individuals in the household and on the date of birth of each individual in the household, taxpayers with taxable income above the threshold for consecutive years can therefore be identified and matched in order to construct an exhaustive panel of taxpayers belonging to the P99.9-P100 fractile, and also an exhaustive panel of top wage earners. These panel data are used to study top income and top wage mobility.

Long term series use figures from Piketty (Piketty (2003)) for years before 1996⁷.

⁴Note that reported items are after personal and employers’ payroll taxes in France.

⁵Series fully including capital gains are displayed in Landaï (2007) and are very similar to the series excluding capital gains.

⁶Realized capital gains from exercised stock-options are subject to the same tax treatment as capital gains. They are reported in the same category and cannot be separated.

⁷All long term series are available and can be downloaded at:
<http://www.jourdan.ens.fr/~clandaï/index-en.htm>.

Note that the tax treatment of dividends has changed in 2005. This has affected the taxable fraction of dividend incomes⁸, so that a slight treatment was necessary to make the estimates fully comparable with figures from Piketty (2003). This point is developed in Appendix A.

All figures are in constant 2006 euros using INSEE consumer price index.

⁸And this change has also considerably lowered the marginal tax rate on dividends.

2 The recent surge of top incomes

2.1 The fanning-out of the income distribution in France

Empirical evidence suggests that the recent upturn in income inequalities in English speaking countries is mainly driven by an unprecedented surge of top income shares (Saez & Veall (2005), Piketty & Saez (2006)), creating a fanning-out of the income distribution (Atkinson (2007)). Until now, no such fanning-out had been witnessed in continental European countries, suggesting a gap between the distribution of income in these countries and in English-speaking countries (Atkinson & Piketty (2007)).

The first empirical finding of this study is that the evolution of the income distribution in France in recent years exhibits a divergence between 90% of the population and high-income groups, with a surge of top incomes. Figure 1 shows that since 1998, total real income reported in income tax files has increased of 25.8%. In the meantime, the number of households has increased, from 32 millions to 35.6 millions. Average income has therefore increased moderately among all households, from 22,481 to 25,347 euros⁹.

By contrast with the stagnation of average and median incomes, top incomes have experienced a steep increase between 1998 and 2006. Figure 2 displays the evolution of average income for several income fractiles. The average income of the P0-90 group has stagnated while the average income for the top percentile has increased by 26.9%. The average income of the top .01% of the richest households has increased by 63.7%. The surge is therefore concentrated within a very small fraction of the income distribution. The evolution of the lower-half of the top decile of income (P90-P95 income group) is in fact much more comparable to the evolution of the P0-P90 income group. It is only among the top percentile that the outburst of top incomes is well pronounced.

Household survey data, with no oversampling at the upper-end of the income distribution have missed this striking evolution of top incomes. P90/P10 ratios of the income distribution computed annually by the French National Institute of Public Statistics (INSEE) reveal no deepening of income inequalities in France since the beginning of the 1990s.

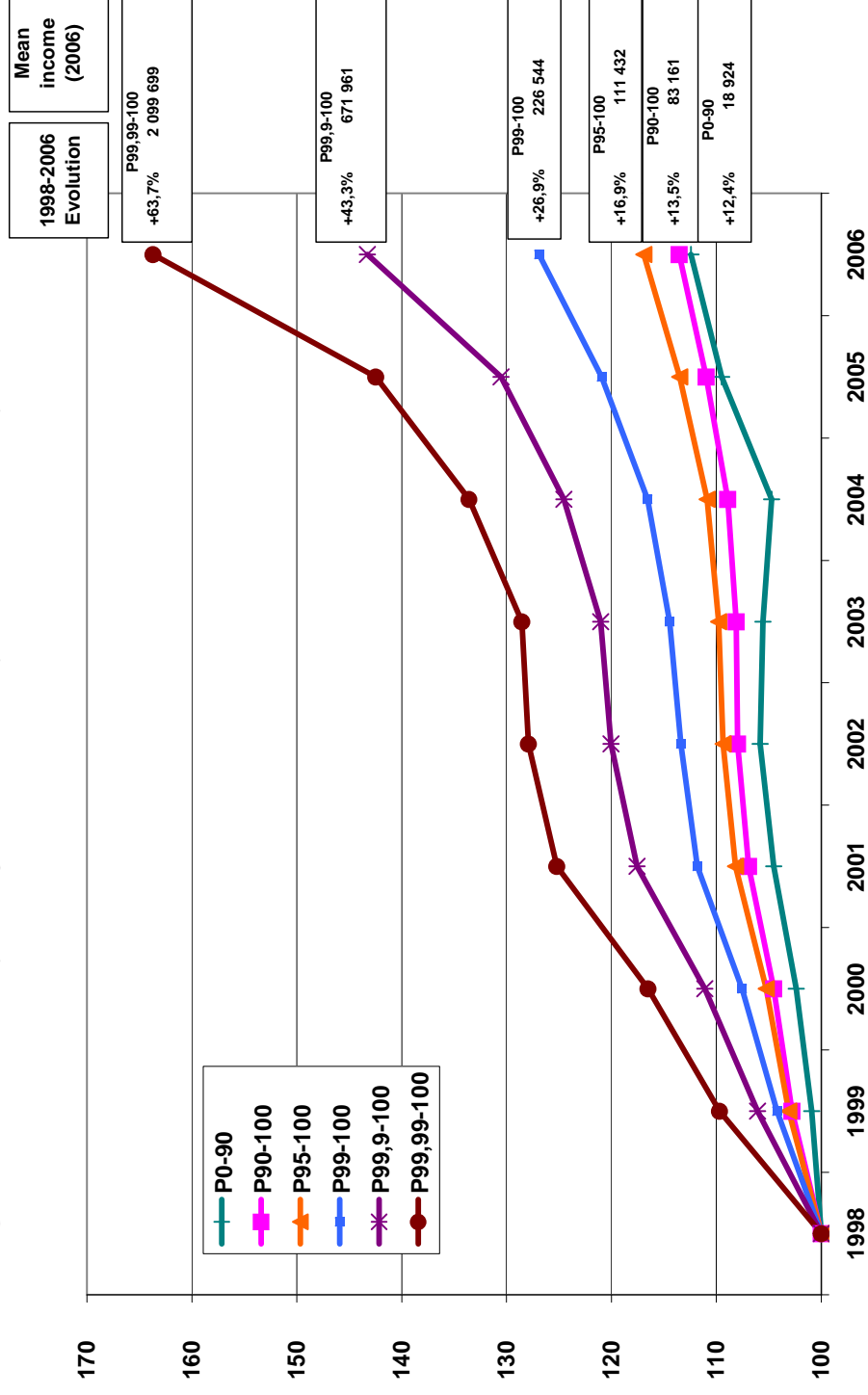
⁹All figures are expressed in 2006 euros. Note that these results are in line with the evolution of average household incomes that we can get from other statistical sources, like household survey data from INSEE or national accounting. All sources converge in stating that average and median incomes have experienced a relatively modest growth since the late 1990s in France.

Figure 1: *Total income, total number of tax units and average income in France (1998-2006) (2006 euros)*

<i>year</i>	Total Incomes (2006 Bn euros)	Nb. tax units	Average Income (2005 euros)
<i>1998</i>	717,9	31 932	22 481
<i>1999</i>	740,2	32 434	22 822
<i>2000</i>	763,0	32 923	23 174
<i>2001</i>	789,9	33 364	23 675
<i>2002</i>	812,3	33 896	23 964
<i>2003</i>	823,2	34 420	23 916
<i>2004</i>	834,8	34 991	23 858
<i>2005</i>	879,2	35 572	24 715
<i>2006</i>	903,2	35 633	25 347
1998-2006 Evolution	25.8%	11.6%	12.7 %
Average annual rate of growth	2.9%	1.4%	1.5%

SOURCE: Etats 1921, exhaustive tabulations of income tax returns. Definition of income is all market incomes including capital gains.

Figure 2: Evolution of average real incomes for several income fractiles, basis=1998

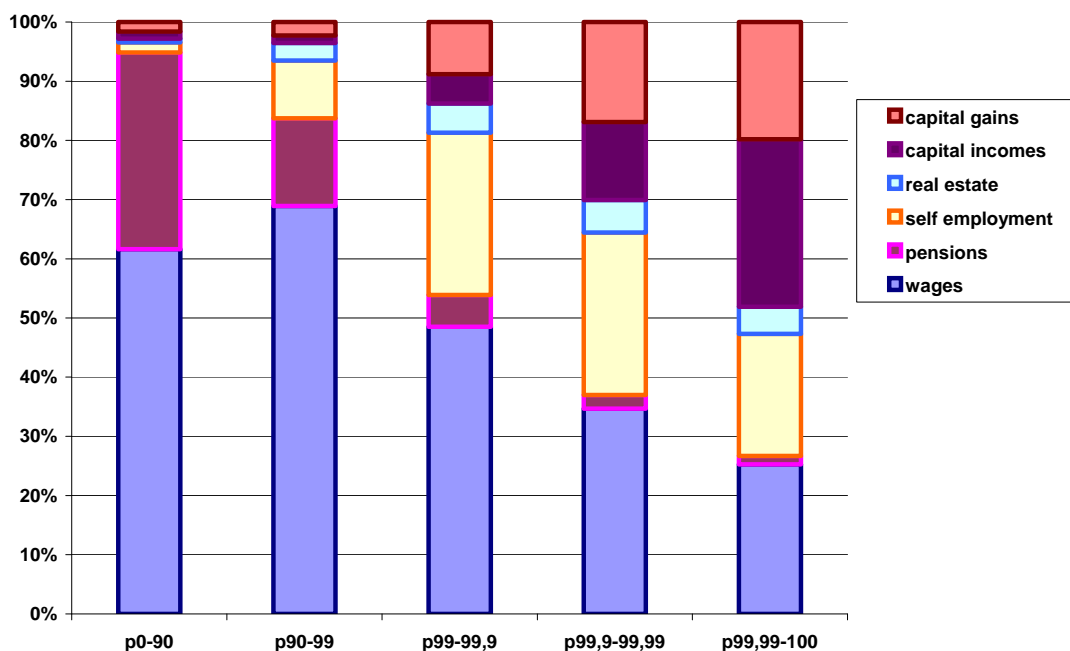


SOURCE: Exhaustive tabulations (Etats 1921) and sample of income tax returns. Definition of income excludes realized capital gains.

2.2 The composition of top incomes

Has the surge in top incomes been accompanied by a substantial transformation of the composition of top incomes? This subsection investigates this issue. The composition of top incomes in France shows that top income groups are composed primarily of capital income earners. Figure 3 displays the composition of income for different fractiles of income in 1998. The share of income that is capital (dividends, interest, rents and realized capital gains) is 53% for the top .01% of households while it is less than 5% for 90% of French households. Even when excluding realized capital gains, the share of individual income that is capital remains positively related to individual income.

Figure 3: *Income composition of different income groups, France, 1998*



SOURCE: Author's computations after exhaustive tabulations and sample of income tax returns. Income includes realized capital gains.

Two important aspects are to be noted concerning the composition of top incomes in France. First, the fact that top incomes are composed primarily of capital incomes partly explains the increase of top incomes in recent years, because capital incomes have experienced on average a larger growth than wages and salaries. According to exhaustive income tax return statistics, average capital incomes have increased by 30.7% between 1998 and 2005 in constant euros, and real estate incomes have increased by 16.2%, while wages have increased by only 5.3%. This important increase of capital incomes and in particular of dividends is comparable to trends

observed in English-speaking countries (Gordon & Dietz (2006)), and may be due to signalling or principal-agent effects related to a strengthening of the power of shareholders within firms.

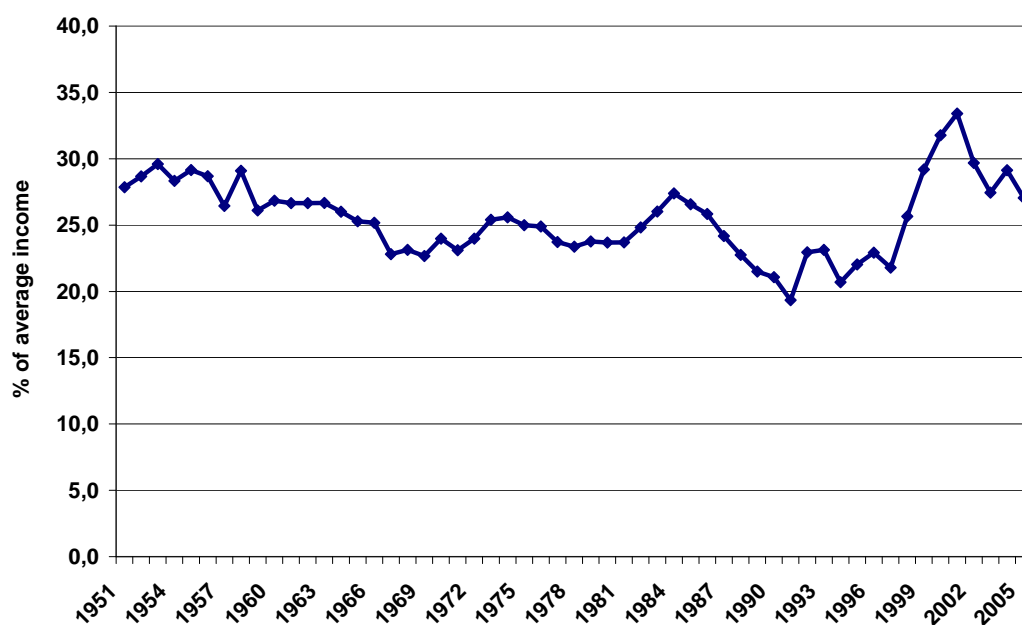
Second, the wage income share has increased steadily in recent years in France, suggesting that top compensated employees play a larger role in top income groups. Figure 4 shows the evolution of the share of the income of the top 0.01% (P99.99-100) that is wages. It has declined constantly from around 28% in the 1950s to around 20% in the 1990s, and has sharply increased since then. It stands around 30% for recent years. And it stands around 50% in the US¹⁰. Even though the fraction of wage income remains lower in France than the fraction of wage income for top income groups in English-speaking countries, it is worth noting that wage income in France does not include exercised stock-options nor the present value of stock-options granted to top managers. Stock-options for top compensated employee are included in capital gains when they are exercised. If it was possible to separate them from other capital gains and include them in top managers pays, it seems that the share of wage income would be significantly larger and would not be very different from wage income shares in English-speaking countries. This suggests that the composition of top incomes in France has in fact clearly converged to the composition of top incomes of English-speaking countries.

2.3 Top income shares

Consequently to this surge of top income levels since the late 1990s in France, top income shares have increased, demonstrating a deepening of income inequalities at the upper-end of the income distribution. The evolution of top income shares since the end of World War II in France are displayed in figure 5. The lower-end of the top decile appears quite stable since 1945 ((panel A in figure 5). To the contrary, the top tail of the income distribution (panel B in figure 5) has experienced a constant decline between 1945 and the beginning of the 1990s, and then a sharp increase. This reinforces the empirical finding that the distribution of income in France has fanned-out in recent years.

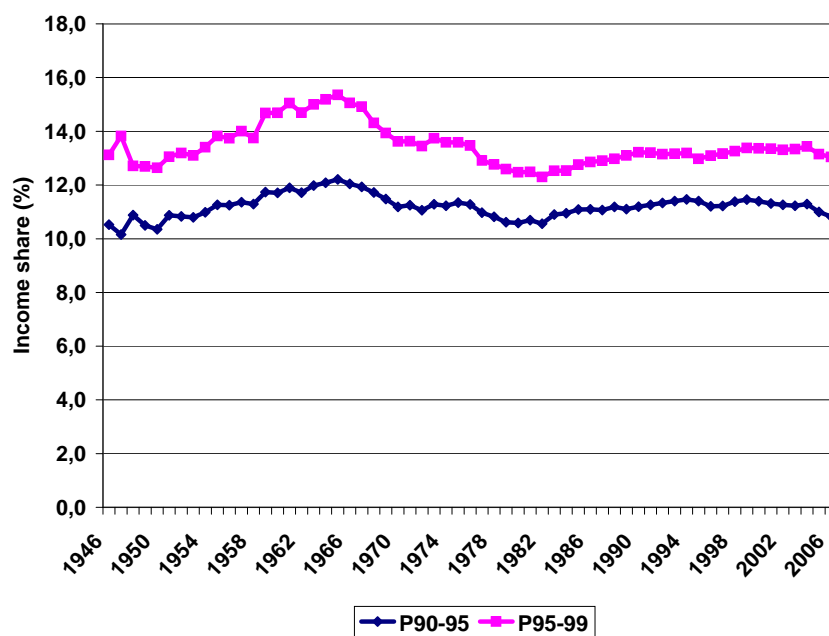
¹⁰Source: Piketty & Saez (2006)

Figure 4: *Evolution of the share of wage income in the average income of the top 0.01% group (P99.99-100), France, 1950-2005*

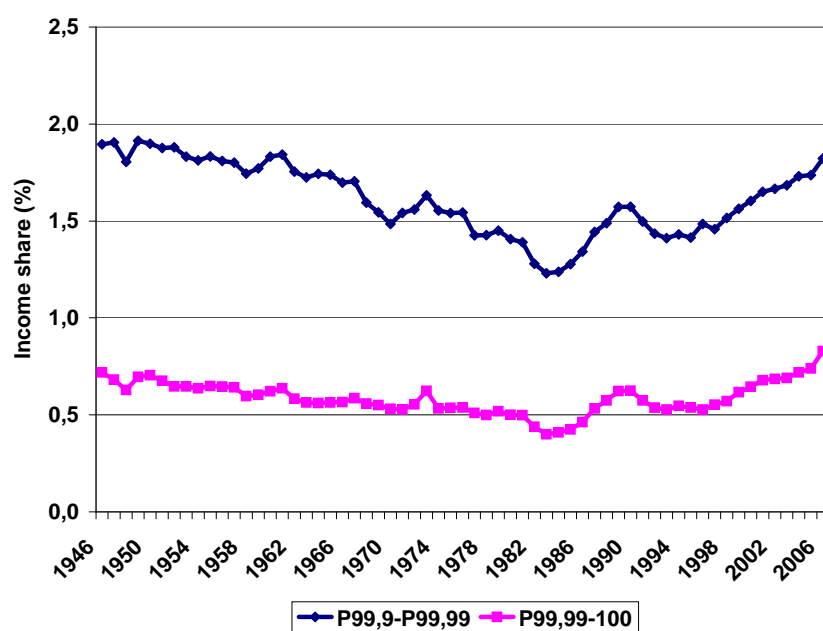


SOURCE: Piketty (2003) and author's computations after exhaustive tabulations and sample of income tax returns. Income is defined excluding realized capital gains. Wage income is defined as the sum of wages, salaries and pensions.

Figure 5: *Evolution of top income shares in France (1945-2005)*
A. P90-95 and P95-99 income shares



B. P99.9-99.99 and P99.99-100 income shares



3 Top wage incomes

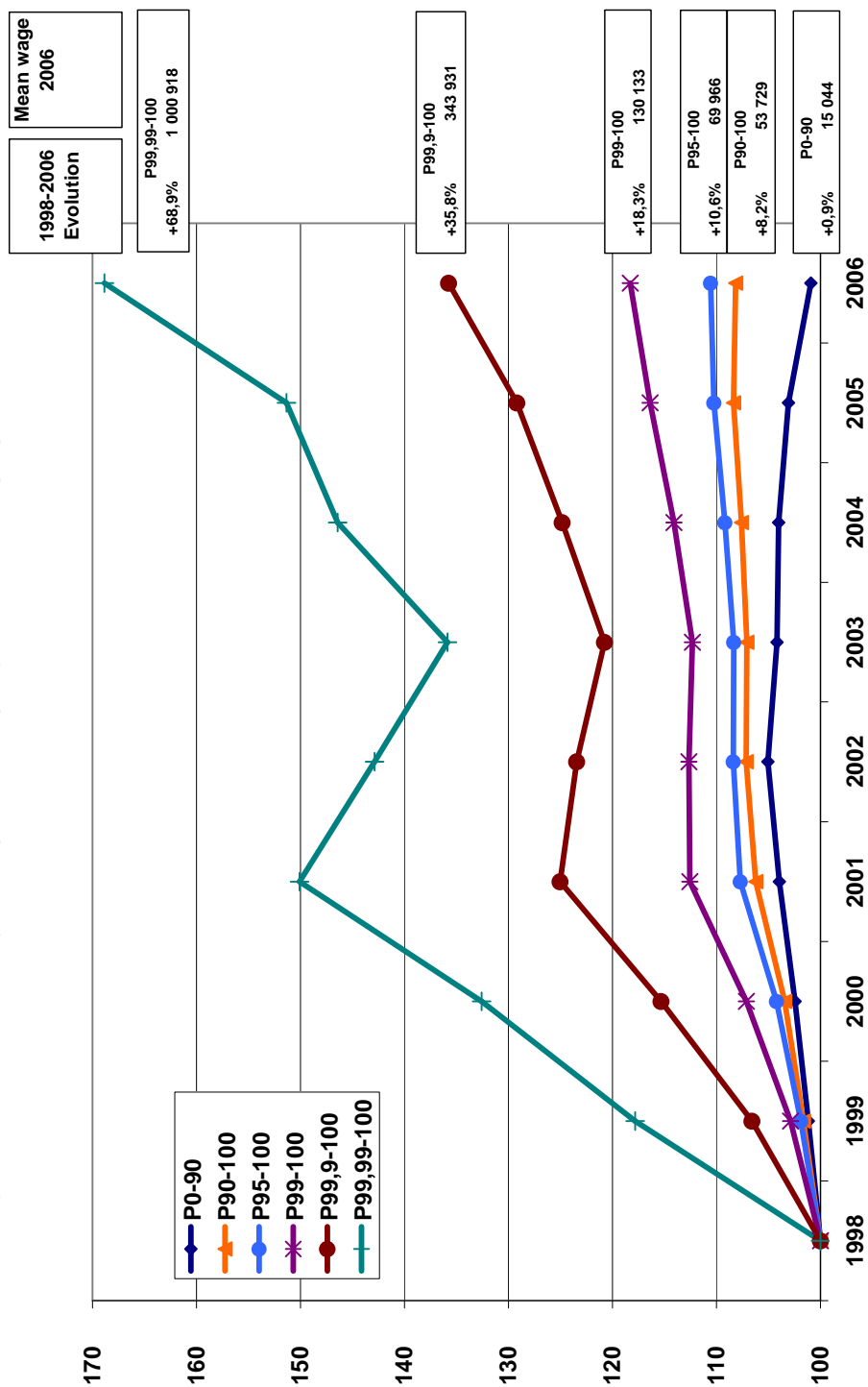
3.1 The unprecedented increase of wage inequalities

Our previous evidence suggests that transformations of top wage incomes may partly explain the upturn in top income shares in France in the recent years. This implies that the distribution of wages has recently experienced some important mutations. Indeed, countries that have seen top income shares increase rapidly since the 1980s have all experienced a fanning-out of the wage distribution as well. We use income tax returns micro-files to investigate this question. Because in micro-files, wages are reported separately for all members of the household, it is possible from our data to estimate every year the distribution of wages. Figure 6 displays the evolution of the average wage of several wage groups in constant euros. The average wage of the top .01% of wage earners has grown by more than 68.9% between 1998 and 2006, while the average wage of the P0-90 wage group (90% of wage earners) has increased of only .9%.

This surge of top wages is very concentrated among a small fraction of top compensated employees, and seems to correspond to the fanning-out of the wage distribution that a certain number of English-speaking countries have experienced during the late 1980s and 1990s. Note that if profits from stock-options exercises were fully traceable and included in top wages, the surge of the average wage of top wage earners visible in figure 6 would be even more pronounced.

The increased concentration of wage income in France brings new evidence on the issue of the changing distribution of earnings in developed countries (Atkinson (2007)). As shown by Atkinson, taking simple dynamics and skill formation into account, “skill-biased technological change” can still explain situations where the wage differential between skilled and unskilled labor, after an initial shift, remains constant, even if the demand curve for skilled labor continues to shift. This undermines the Card and DiNardo critique (Card & DiNardo (2002)) and reinforces the “skill-biased technological change” explanation of the changing distribution of earnings. But this does not explain rising earning shares at the top. The surge in top wage shares in France, similar to the experience of other English-speaking countries, seems to demonstrate that the changing distribution of wage incomes in developed countries is in fact essentially driven by a greater concentration of wages at the very top tail of the distribution, that is difficult to reconcile with the “skill-biased technological change” literature. To obtain an explanation for this, a further mechanism needs to be introduced, generating greater dispersion *within the skilled group*.

Figure 6: Evolution of average real wages for several wage groups, basis=1998



SOURCE: Sample of income tax files. Definition of wage excludes realized capital gains of stock-options.

Gabaix and Landier's interpretation of the surge in the pay of top compensated employees (Gabaix & Landier (2007)) may appear more straightforward to explain the French evolution of top wages. In a simple competitive model of CEO pay, in which CEOs have observable managerial talent and are matched to assets in a competitive assignment model, the best CEOs go to the bigger firms. Assuming a Pareto firm size distribution, the model predicts a cross-sectional constant-elasticity relation between pay and firm size. And it also predicts that the level of CEO compensation should increase one for one with the average market capitalization of large firms in the economy. This model has the advantage of providing with a straightforward test of the validity of its predictions. Indeed, market capitalization has increased steadily in France since the 1980s and this could explain why top wage incomes have increased so much in France too. But a closer enquiry demonstrates that the growth in market capitalization has been exactly the same in France and in the US since the beginning of the 1980s¹¹. Total market capitalization represented 50% of GDP in the US and 25% of GDP in France in 1980. In 2000, it represented 150% of GDP in the US and 125% of GDP in France. It is then difficult to understand why top wages have increased six-fold in the US and surged as soon as the mid-1980s while they began to increase in France only around 1998. This casts doubt on the one for one elasticity of CEO compensation with respect to the average market capitalization and confirms Frydman & Saks (2007) who also find on US data that the long-term elasticity of CEO compensation with respect to market capitalization is clearly inferior to one.

Even though part of the rise in CEO compensation in developed economies may be explained, as Gabaix and Landier suggest, without assuming managerial entrenchment, mishandling of options, or theft, simple matching models of compensation associated with a steep rise of market capitalization cannot provide with a final explanation of the surge in top wages. Some other tentative explanations of the timing and the intensity of this surge across countries are needed. "Superstars" theories (Rosen (1981)) could for instance be invoked to explain the greater concentration of income among skilled workers. According to superstar theories, the increase in superstars' compensation is related to the widening of their access to the market. In such a framework, increased labor market competition among top wage earners, and increased top-skilled labor mobility across Europe due to important modifications of labor market regulations may well have triggered this surge in top wages among Europe. This may also partly explain why English-speaking countries have experienced a sooner increase in top earnings dispersion, because market access for superstars and labor market regulations has changed sooner and faster in the US or in Canada than in European countries or in Japan.

¹¹See for instance, Rajan R.G. et Zingales L. (2001), *The Great Reversals : The Politics of Financial Development in the 20th Century*, NBER Working Paper n°8178 (mars 2001), and Bozio A., "La capitalisation boursière en France au XXème siècle", mimeo PSE, 2002.

Eventually, as suggested by Atkinson (2007), pay norms, institutional arrangements and managers' control over compensation policies may also be useful to understand variations in the surge in top wage shares across time and countries. Taxation is also an alternative explanation, and we investigate its role in section 4.2.

3.2 Income and wage mobility

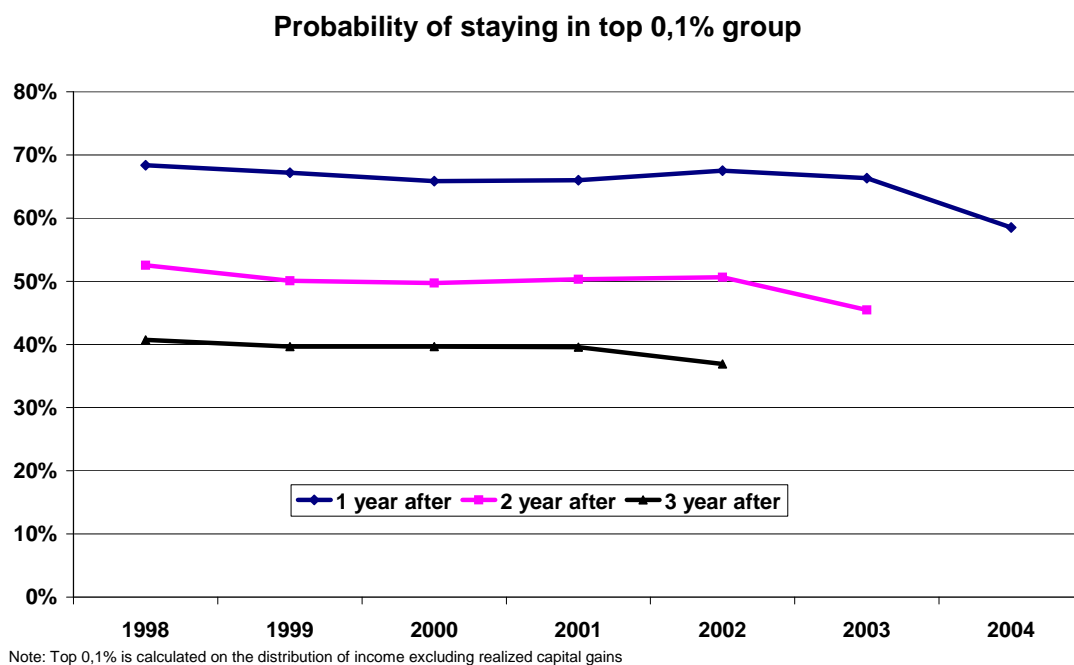
The upturn of income inequality and wage inequality raises the question of mobility. Has the surge in top incomes been accompanied by an increase in mobility for high-income groups? Has the surge in top wages fostered mobility across the wage distribution? Is the increase in income and wage concentration transitory, or is it associated with an increase in longer-term income concentration? We investigate these questions taking advantage of the exhaustive sampling of income tax returns micro-files above a fixed income threshold. We compute the probability of staying in the top .1% group of income and in the top .1% group of wage earners. These drop-out rates are displayed in figure 7. Three empirical conclusions can be drawn from this figure.

First, the surge of top incomes and of top wages has not been accompanied by a significant increase in income mobility nor by an increase in wage mobility. The probability of remaining in the top .1% group of income after 3 years has been very stable around 40% in this period of fast increase of income concentration at the top tail of the income distribution.

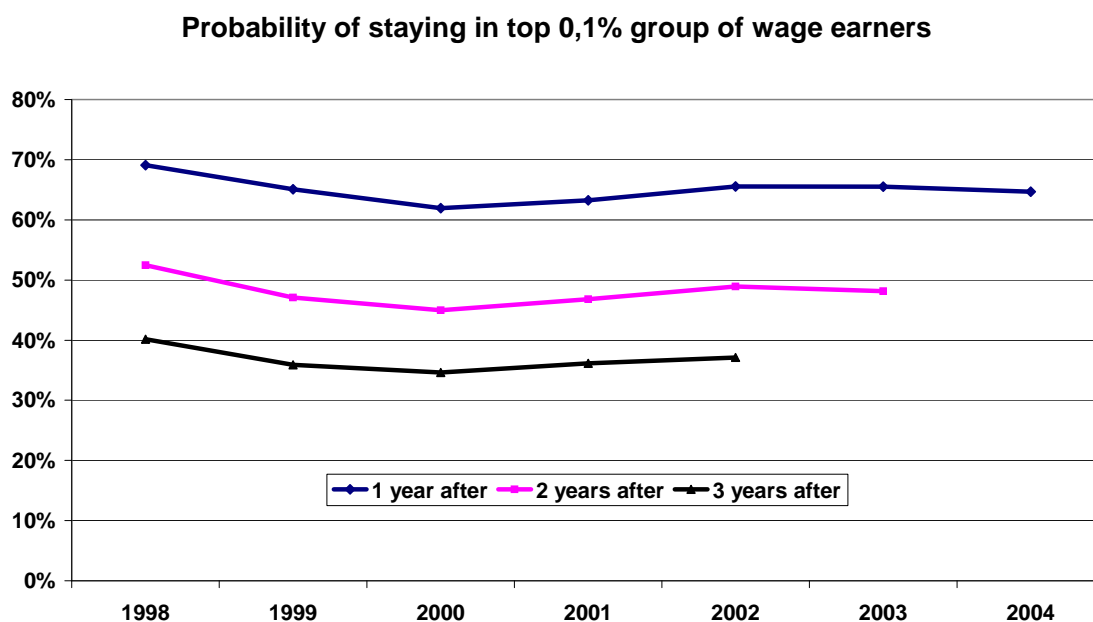
Second, one would have expected top wage mobility to be greater than top income mobility, because capital income concentration is associated with longer-term estate concentration. Surprisingly, top wage mobility seems very comparable to income mobility at the upper-end of the distribution. The probability of staying in the top .1% of wage earners is approximately 40% after 3 years and has remained stable during the 1998-2005 period. This suggests that wage mobility at the top is truly modest. This also reinforces evidence that top compensated employees play a greater role in high-income groups. But the surge of the share of wage income in high-income groups has not modified income mobility. This strongly supports the idea that the increase in annual income concentration that we have documented is not purely transitory, and may be related to a trend of longer-term wealth concentration.

Third, from the Canadian Saez & Veall (2005) and French income tax returns micro-files, it appears that top income mobility is strikingly very comparable in these two countries, even though these countries experience very different levels of top income shares. In Canada, the probability of staying in the top .1% group is 60

Figure 7: *Evolution of income and wage mobility in France (1998-2005)*
A. Income mobility among the P99.9-P100 income group



B. Wage mobility among the P99.9-P100 wage group



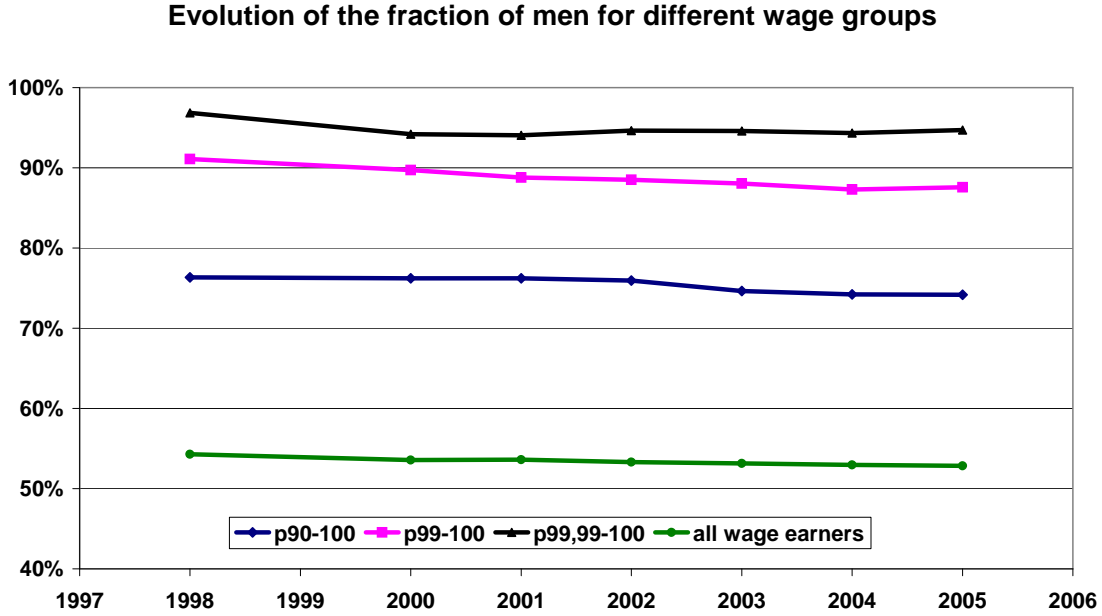
percent one year later, 50 percent two years later, and around 40 % three years later and has also been very stable since the beginning of the 1980s, although top income shares were surging. Top income mobility seems uncorrelated to the level of income concentration at the upper-end of the distribution. This reinforces the finding that the surge in top incomes in English-speaking countries or in France is clearly not primarily due to increased mobility. It is also worth noting that the average mobility of earnings and top income mobility are two very different concepts. While the estimated average mobility of earnings in France is greater than in English-speaking countries ¹², it seems that top income mobility is fairly comparable.

Eventually, micro-files give the possibility to investigate the gender composition of top wage earners. Figure 8 shows the fraction of men for different wage groups. Women appear to be very few among top wage categories. In 2005, less than 5% of the top .01% of wage earners were women, while they represented on average more than 45% of the labor force. The gender composition among top wage earners has moreover remained very stable since the 1990s. This figure is of course no demonstration and nothing but a hint of the existence of a “glass-ceiling”.

It is also possible to compute top wage shares at the individual and the family level to investigate whether the surge in top income shares is indeed related to a change in the correlation of earnings among spouses. We find that the level and the pattern of wage shares at the individual and the family level are identical. Moreover, when we compute the correlation of earnings among spouses, we find that the correlation has remained very stable, from .141 in 1998 to .134 in 2006. The stability of this correlation rules out the idea that the surge in top earnings is a consequence of an increase in assortative mating. Given this evidence, it seems likely that the recent increase in top incomes and top wages is not primarily due to changes in income composition within the family but to an increase in individual income concentration.

¹²See, for France, Lefranc A. & Trannoy A., “Intergenerational Earnings Mobility in France: is France more mobile than the US”, IDEP working paper, n°0401, 2004. And for the US, see, Kopczuk W., Saez E. et Song J. (2007), “Uncovering the American Dream: Inequality and Mobility in Social Security Earnings Data since 1937”, NBER Working Paper n° 13345.

Figure 8: *Evolution of gender composition among top wage groups*



4 Continental Europe bridging its gap?

4.1 Recent trends in top income shares in Europe

Most Western countries publish annual tax statistics comparable to the statistics published by French tax administration. A collective research project on the dynamics of income and wealth distribution has been able to construct a high-quality, long run, international data base on income and wealth concentration using historical tax statistics (Atkinson & Piketty (2007)). The resulting database now includes annual series covering most of the 20th century for a number of (mostly Western) countries. Even though these top income series are constructed from income tax statistics on income reported for tax purposes in countries where income taxation may be very different, they are nevertheless fairly homogenous across countries, and are reliable to compare trends and top income evolutions¹³.

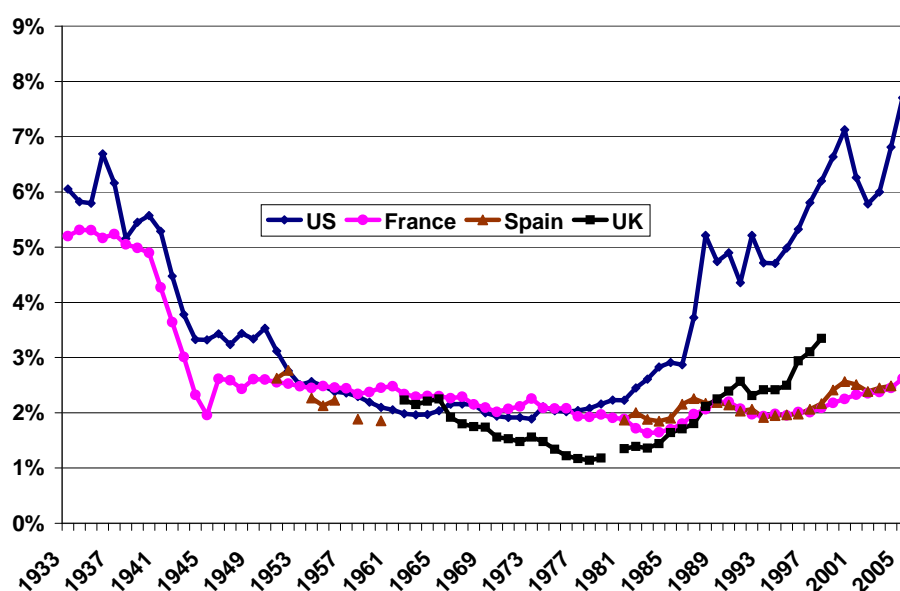
Most of the top income series presented in Atkinson & Piketty (2007) ended in the mid-1990s. The authors concluded that a sharp contrast in terms of income con-

¹³For a complete discussion of the main assets and liabilities of income tax statistics to analyze the evolution of income concentration across countries, see Atkinson A., “Measuring top incomes, methodological issues”, in Atkinson & Piketty (2007)

centration had emerged between English-speaking countries and continental Europe. But, top incomes have risen sharply in recent years in France: have other European countries experienced the same evolution, or is France a special case within continental Europe? Evidence from Spain (Alvaredo & Saez (2008)), Sweden (Roine & Waldenström (2006)) or Germany (Bach et al. (2007)) suggest that other European countries have also seen upturns in top income shares since the late 1990s. Figure 9 displays the evolution of top 0.1% income shares in the long term in France, US, UK and Spain. France and Spain exhibit a very similar pattern of income concentration. These two countries have a top .1% income share about three times smaller than the corresponding P99.9-100 income share in the US, but the rise in income concentration that they experience since the late 1990s is not truly different from the rise in English-speaking countries like the UK in the late 1980s.

To understand if it is likely that European countries bridge their “top income gap” with the US or the UK in the coming years, we investigate in the next section the role of taxation, and see whether it may explain why income tax returns statistics display important differences in terms of timing in the surge of top incomes in different countries.

Figure 9: *Evolution of top 0.1% income shares in the long term (France, US, UK, Spain)*



SOURCE: Saez (2007) for the US, Atkinson & Piketty (2007) for the UK, Alvaredo & Saez (2008) for Spain, Piketty (2003) and author’s computation for France. Income share are calculated excluding realized capital gains.

4.2 The role of taxation

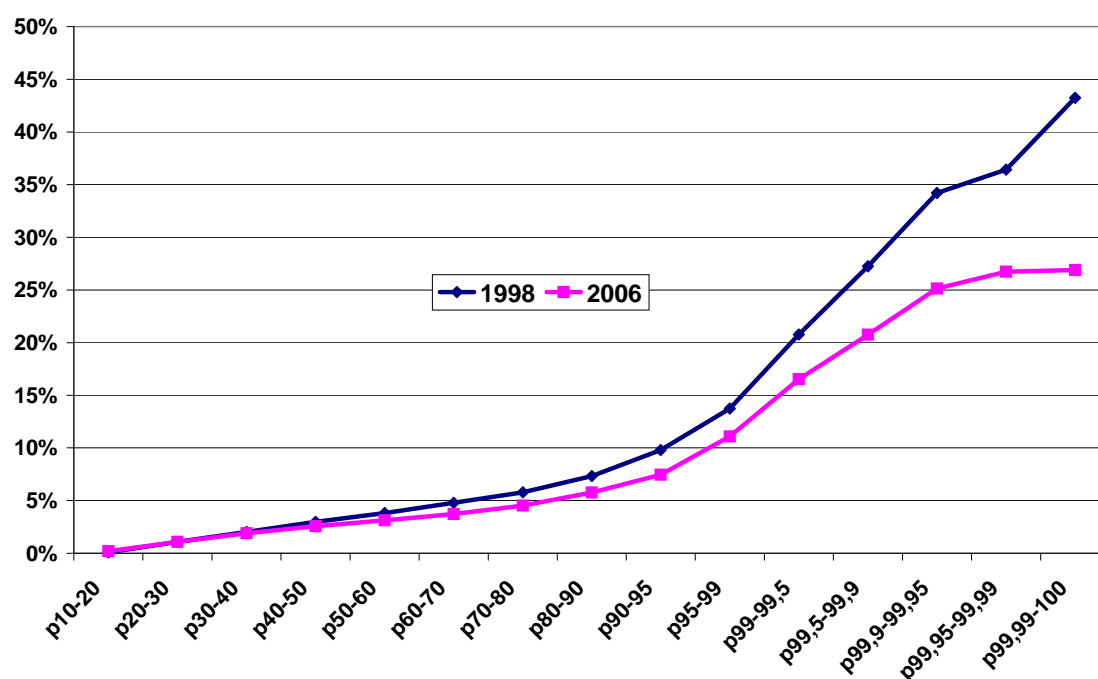
There is at least two reasons why taxation may matter to understand the different patterns of top income shares evolution across countries. First, high marginal income tax rates may act as a disincentive for top income earners to work and earn more: if the elasticity of gross income with respect to taxation is large, then small marginal tax rate differentials may trigger very different evolutions of top income shares across countries. Second, the structure of taxation may alter the way people report their income: income shifting, tax avoidance and tax evasion are also possible alternative explanations of the very different timing in the surge in top incomes between continental Europe and English-speaking countries.

In order to examine this issue, we computed from micro-files marginal and average income tax rates for all top income groups. Micro-data enable us to take every deduction into account and to compute income tax really paid and net tax rates, as net tax divided by total gross income. Results for average income tax rates are displayed in figure 10. It appears from figure 10 that the income tax system in France is fairly progressive but that its progressivity has strongly declined between 1998 and 2006. In particular, the average income tax rate for the top .01% group has fallen from 44% to 27% in 2006, due to several tax reforms that have lowered top marginal income tax rates between 2001 and 2006 and due also to an important revision of the tax treatment of dividends in 2006.

Besides, another important finding is that, even though income taxation of top incomes in France was superior to that of English-speaking countries in the 1980s and 1990s, it is now not different from that in the US, in Canada, or in the UK (Saez & Veall (2005), Piketty & Saez (2006)). The top marginal tax rate is 40% in France (where there is no state or local income tax), and 35% in the US for the federal income tax, 29% in 2008 in Canada at the federal level. If State income tax is included, marginal tax rates appear fairly similar in France or in English-speaking countries.

Can income tax rate differentials in the 1980s and 1990s explain why top incomes in France have not surged earlier? As highlighted by Goolsbee (2000), or Gruber & Saez (2002) for the US, the elasticity of taxable income with respect to income tax rate is about .4 on average and is larger among top incomes. But the longer-term elasticity of real income not including tax preferences is much lower. Even among top incomes, it is itemization that plays the central role in determining the elasticity of taxable income, but real income is not very responsive to taxation. Moreover, in France, estimates made by Piketty (1998) suggest that the elasticity of taxable income with respect to taxation is even lower than in the US. It seems then difficult to attribute entirely the surge of real incomes within top income groups to incentive effects of lower marginal tax rates. But the recent context of large marginal tax rate

Figure 10: *Average income tax rate by income group, France 1998 & 2006*

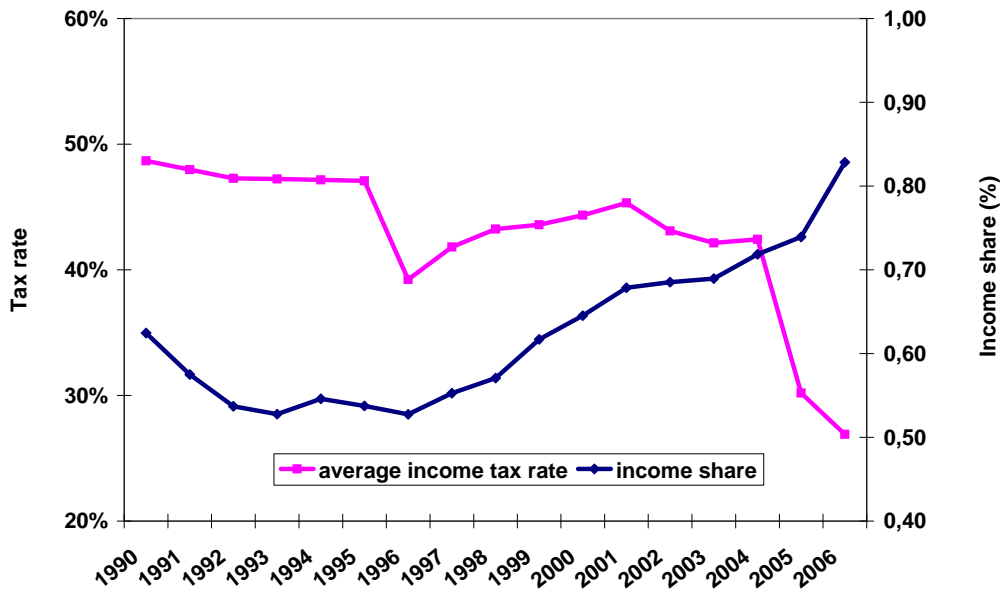


SOURCE: Average tax rate is calculated as net tax (excluding tax credits and excluding flat tax on realized capital gains) divided by reported income (also excluding capital gains).

cuts in France may undeniably foster the boom in top income shares for the years to come.

Besides, taxation can induce a short-term response in top income shares in case of important income shifting from corporate taxation to personal income taxation. This income shifting effect has been clearly identified in the US for the 1986 TRA. Figure 11 gives evidence of a slight short term response of top income shares to cuts in tax rates after 1997 and 2005-2006, as in the United States or in Canada. But contrary to the United States there is no income share spike, or any evidence of important tax shifting. One reason is that corporate taxation has remained very stable in France since the beginning of the 1990s and in any case was offset until 2005 in the personal income tax by a dividend tax credit which reduced the double taxation of dividends. It seems thus that the increase in top income shares in France that we have documented is not the result of reported income shifting from corporate taxation to personal income taxation.

Figure 11: *Evolution of top 0.01% income shares and average tax rate in France*



SOURCE: Average tax rate is calculated as tax (excluding tax credits) divided by taxable income (therefore excluding capital gains taxation).

Taxation may nevertheless be responsible for a very different timing of the surge in top incomes in case of important tax evasion or tax avoidance. High top marginal tax rates can induce tax evasion and tax avoidance, thus lowering reported real in-

comes, especially for top incomes facing high marginal tax rates. Little evidence exists on tax avoidance, but some statistics exist on tax evasion in France since 1997¹⁴. Since 1997, the annual number of taxpayers leaving France has been very stable, and the destination countries are much more related to the structure of French international trade than to tax rate differentials. There is therefore little evidence that the surge of top incomes may be linked to a significant decrease in tax avoidance or in tax evasion. In any case, even in the absence of effective tax evasion, brain drain threats may have operated as a motivation for the important decline of marginal income tax rates and estate tax rates in European countries in recent years. Such an increase in high-skilled workers mobility and in tax competition may partly explain why top income shares seem to surge similarly in different continental European countries in recent years.

Conclusions

This paper has used personal income tax data to assess a surge in income concentration at the upper-end of the income distribution in France since the late 1990s. This surge is partly due to booming wage inequalities, suggesting that top compensated employees play a larger role within top income groups.

Taking advantage of exhaustive sampling in micro-files, we computed mobility statistics for top incomes revealing that mobility is low among top incomes and among top wage earners, and that it has remained stable in a context of increasing income concentration. Moreover, mobility at the upper-end of the income distribution is surprisingly very comparable in France and in Canada, suggesting that top income mobility is not so much related to the level of income concentration.

Recent trends in other European countries suggest that France along with other EMU countries experiences a fanning-out of its income distribution, and may be rapidly bridging part of its “top income gap” with English-speaking countries. Taxation does not appear as the driving force in this surge in top incomes across Europe, but the context of tax competition and of increased mobility of high-skilled workers in EMU countries may considerably reinforce the upward trend of top income shares in the years to come.

¹⁴*La concurrence fiscale*, Rapport annuel du Conseil des Impôts, 2004, La documentation française, Paris.

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Appendix A

4.3 Tax treatment for dividends

The tax treatment of dividends has changed in 2005. This change has not only considerably lowered the marginal tax rate on dividends, it has also affected the taxable fraction of dividend incomes, so that a slight treatment is necessary to make our estimates fully comparable with Piketty's.

Before the reform, taxpayers reporting dividends received from the fiscal administration a transfer (“avoir fiscal”) equal to 50% of their dividends in order to offset the effects of corporate tax on profits (and therefore to avoid a double taxation of profits that were not reinvested). And the income tax they paid was then calculated on the basis of a taxable income including this “avoir fiscal”. This system has disappeared in 2005, and “avoir fiscal” no longer exists¹⁵. The end of the “avoir” system does not change anything to the distribution of earnings, neither does it change anything for the evolution of inequalities among top incomes as long as one adopts a constant definition of gross income excluding “avoir fiscal”. But it may affect the comparability of our estimated levels of top incomes with Piketty's time series (1900-1998) since Piketty always included in gross income the amount of the “avoir”.

Series displayed in this paper take “avoir fiscal” into account, and for years 2005-2006, do as if “avoir fiscal” still existed so that taxpayers have a gross income increased by an amount equal to 50% of their dividends.

¹⁵It has been replaced by a 40% deduction of dividends from taxable income.