11. FRANCE: HOW TAXATION CAN INCREASE INEQUALITY

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Abstract

The evolution of inequality in France is specific compared with most OECD countries. Inequality only started to rise at the end of the 1990s after a period of decline during the 1970s and the 1980. This late increase partly explains the limited effects of inequality on social, political and cultural outcomes. However, social gradients like income or education play a considerable role for fields such as health, housing, political participation or trust in institutions. France is also particular with regard to the role of taxation. This chapter provides evidence about the absence of progressivity in the tax system. We conclude that the reforms implemented during the past decade have contributed to the increase in income inequality.

1 Introduction

In this chapter, we describe the evolution of inequality in France and its impact on social, political and cultural outcomes. Three points make France distinctive with respect to other rich countries. First, the increase in inequalities in France occurred later than in many countries. More specifically, income inequality declined during the 1980s. Then, inequality started to rise at the end of the 1990s and this offset the decrease observed at the beginning of the period. Second, this difference in terms of timing also influences the study of its effects since it may take time for changing inequalities to lead to social, political or cultural impacts. Third, the role of taxation is rather specific in France. The absence of progressivity in the tax system has contributed to the recent increase in income inequality. The content of this chapter will detail these three specificities. An in-depth analysis of the evolution of inequality, its impacts and the policies implemented to fight inequalities is however beyond the scope of this chapter, with more detail presented in the Gini project country report.

By way of introductory background it is important to know that France experienced several periods of slow growth between 1980 and 2010: between 1980 and 1985, during the mid-1990s, and since 2008. Significant changes have also affected demographics (population growth, ageing and the rise of single parent-families), labour market structure (feminization, increasing dual labour market and high unemployment rates) and also economy (with a decrease in the wage share in GDP since 1985 and increasing private wealth).

2 The evolution of inequality in France: a late increase

The starting point of the GINI project is based on the fact that inequality has gone up in many countries since 1980. Therefore, the first and main question we want to address in this chapter is: has inequality also grown in France during the past decades and, if yes, by how much? We focus on several dimensions: income, wealth, earnings and education. Income and wealth are evaluated are the household level while earnings and education are examined on an individual basis. For each field, we use several data sources (national or international surveys, tax returns, national accounts...), several definitions (primary, gross, net, equivalised...) and several inequality indicators (the Gini coefficient, interdecile ratios, Theil, top shares...). We take a long-run overview, especially for household income, by going back to the 1970s.

The main specificity of Francerelates to the timing of this evolution. Contrary to many countries, income inequality decreased in France during the 1970s and the 1980s. The rise in inequality only started in the end of the 1990s. This recent growth has cancelled the decrease observed in the 1980s. Thus, France was above the average level of income inequality in OECD countries during the 1970s and the 1980s. At the end of the 2000s the country is just below the average and close to countries from continental Europe like Germany, Estonia, Poland or Switzerland. This group of countries is itself between the Anglo-Saxon (US, UK, Australia and Canada) and Nordic countries. In order to fully describe the evolution of inequality, we will begin by a focus on income and more specifically on net equivalised disposable income. Then, we will analyse the trends during the same period for wealth, earnings and education. We will finish this section by providing evidence regarding the reasons why inequality has recently increased in France.

Income inequality

The starting point of the analysis about income is the evolution of net equivalised disposable income[1]. In other words, we are focusing on income after tax and transfers, standardised across types of households for their composition (number of adults and children) by means of equivalisation. This is maybe the most important definition of income because it measures the standard of living of households.

Figure 1 depicts the evolution of inequality from 1970 to 2010, measured by the Gini index. There is an unambiguous decline in inequality during the 1970s and 1980s, then a period of relative stability in the 1990s and an increase during the last decade of the period of observation. The 2008 recession does not modify this upward trend. In the end, the rise starting in the late 1990s cancels the decline of the 1980s. However, the evolution is not the same across all indices. More specifically, the inter decile ratios present differences in terms of evolution. Most of the decline happens during the 1970s but the ratio P90/P10[2], sensitive to changes in the middle of the distribution, decreases by 30% between 1970 and the mid 1980s while the ratios P90/P50 and P50/P10 only diminish by around

[1] Disposable income = earnings (wages, salaries and mixed income) + pensions (unemployment and retirement) + capital income (from financial and non-financial assets) + welfare payments (housing and family benefits + social assistance) + alimonies - taxes (personal income tax + housing tax). Capital gains, because they are not taxable, are excluded. In order to go from disposable income to standard of living, we take into account household composition through the OECD-modified equivalisation scale.

[2] With this ratio we compare the income of the lower limit of the top 10% with the upper limit of the bottom 10%.

15%. Similarly, the increase in income inequality during the 2000s is sharper for indices sensitive to the middle of the distribution like the Gini coefficient.

In this figure, we also present the evolution of inequality for household income before taxes and transfers[3]. We observe a slight increase during the 1980s but then a period of relative stability. Thus, primary income inequality seems to follow only partially the pattern of disposable income. More importantly, it indicates that the recent evolution has not been only caused by market income evolutions but also by taxes and transfers.

Changes in the overall distribution are mainly driven by variations at the tails. As a consequence, it is essential to look at the bottom and the top of the income distribution.. In Figure 2, we decompose the income distribution in order to study in detail the evolution of the top income shares[4]. The moderate rise in income inequality since 1990 hides a boom in the top 1% income share. In 1980, the top 10% of income distribution received 30.7% of total income while in 2006 it had 32.8% (+ 7%). During the same period, the increase is equal to 17% for the top 1%, to 39% for the top 0.1% and to 66% for the top 0.01%. The figure also shows that most of this increase happens between 1998 and 2006. In other words, there has been a transfer from the bottom to the top of the distribution, given that the share of the bottom 90% of the population has decreased by 2 percentage points since 1980. This recent increase is mainly due to the rapid growth of capital income, particularly concentrated at the top of the distribution but also to a greater dispersion of labour income inequality. From this point of view, France might be beginning to converge towards an Anglo-Saxon model with an increase in incomes captured by the top of the distribution.

Income composition is crucial to understand the evolution of economic inequalities because all types of income have not experienced the same evolution. A major stylized fact is that the share of capital income (interest, dividend, rent...) in household income is positively correlated with total income. Besides, this link is even stronger for income from financial assets. Figure 3 illustrates such evidence and indicates that the contribution of capital income to the top income shares has increased. This evolution has been caused by a fast increase in capital income over the period. Landais (2009) provides evidence of the income growth by type of income over the period 1998-2005. At the aggregate level, wages have grown by 0.7% per year, rents by 2.2% and the financial capital income (interests, dividends...) by almost 4% (+31% in 8 years). Capital income is unequally distributed and, as a consequence, its growth is even larger if we only focus on the sub-sample of households who perceives a strictly positive capital income. For them, the rise equals 53% between 1998 and 2005.

It is also interesting to do a symmetric analysis and look at the bottom of the distribution.About 3.6 million households are considered as poor[5] in France in 2010, corresponding to more than 8.2 million individuals. The poverty rate has declined by more than 30% between 1970 and 1985, from almost 18% of households to 14%. The proportion of poor households follows the evolution of unemployment. Thus, we can notice two peaks, in the mid 1990s and after 2008. Poverty gaps

[3] Until 1990 and especially during the 1970s, capital income is not well taken into account. If we drop all capital income, the same decline appears until 1990.

[4] Here, the definition of income is different from the disposable income described above. Piketty (2003) only considers taxable income. As a consequence, the welfare payments and some capital income, which do not directly appear in personal tax returns, and are not imputed by the author, are excluded.

[5] A person is a situation of monetary poverty if his/her income is below 60% of the median income.

follows the same pattern as poverty rates. What are the main characteristics of poor people in France? First, single households and single-parent families are overrepresented among poor people. In 2010, these types of household represent 37% of the overall deprived households and their poverty rate is respectively equal to 18.1 and 32.9% (according to the 60% definition). Second, among the households with only one adult, the household head is a woman three times out of four. Third, the inactivity of at least one of the two parents is positively correlated with poverty. Among the households with two parents, 60% of one-earner couples are deprived households. Even if employment is negatively correlated with poverty, it does not prevent people from being poor. The number of working poor is highly correlated with economic cycles. Workers with a low level of education and/or with a temporary contract are much more likely to be poor even though they are employed. In 2010, 10.7% of workers with primary education are poor while this share is only 2.9% for workers with tertiary education. The effect of the type of contract goes in the same direction.

The study of the tails of the income distribution presents interesting differences. The reduction of inequality between 1970 and 1990 went with a decline of poverty while the recent increase in inequality has been caused by a fast growth of the top income shares.

Wealth inequality

Before turning to individual aspects of inequality, we are going to study the long run history of wealth in France. Piketty (2011) uses national accounts to describe the evolution of household wealth. During the last 30 years, the ratio net private wealth / national income[6] has almost doubled going from 298% in 1980 to 552% in 2009. If we put into perspective this large increase we note that the levels reached in the late 2000s are similar to the values reached before World War I. A large part of this increase is due to price effects but long-run mechanisms also explain this evolution. More specifically, the returns to capital are bigger than the income growth since the beginning of the 1980s. In this context, past wealth and inheritance are bound to play a key role for aggregate wealth accumulation and the structure of lifetime inequality.

What are the consequences in terms of distribution? Has this rise benefited everybody or only a small fraction of the population? Using wealth surveys, we see that wealth is very unequally distributed, much more than income. Over the period 1992-2010 we observe an increase in wealth inequality that mostly arises between 2004 and 2010. Even if the Gini index has been stable at 0.64-0.65 over the period, the inter-decile ratios and the top shares have almost all grown. Besides, the amount of wealth held by the top 1% has increased by 36% (from 12 to 17%), and the share of the top 10% by 4.8%. The households in the top quartile are 40 times richer than the households in the bottom quartile in 2010. Cordier *et al.* (2006) decompose wealth inequality in order to identify its major determinants. Income and social positions jointly explain half of household wealth. Age also

[6] Aggregate private wealth is defined as the market value of all tangible assets (in particular real estate assets) and financial assets owned by private individuals (i.e. households), minus their financial liabilities. We use national income instead of GDP because we want to compare aggregates (wealth and income) that are both net of depreciation. The other difference between GDP and national income is about the income flow between France and the rest of the world. This difference is close to zero for France so using GDP would not significantly modify the evolution.

plays a key role in wealth accumulation. Only two factors explain a bigger share in 2004 than in 1992: inherited wealth and house ownership.

Fiscal data reveal that the level of inequality as provided by surveys is underestimated because of sampling and non-sampling errors. Piketty *et al.* (2006) use national samples of estate tax returns. They show that the wealth share held by the top 10% of the wealth distribution is equal to 60.9% in 1994 and the share held by the top 1% is superior to 21%. Furthermore, the 2011 *Global Wealth Report* produced by Crédit Suisse indicates that there are more than 2.6 million dollar millionaires living in France. This makes France the first European country of residence for millionaires. The evolution of real-estate prices, the low level of debt of French households and higher wealth inequality explain this concentration of rich households.

One very crucial dimension of wealth inequality is about the source of wealth. There are basically two ways to become rich: either through one's own work or through inheritance. Piketty (2011) demonstrates that inheritance is back in France. More specifically, this paper relies on recent evidence about the long-run evolution of inheritance as a fraction of aggregate wealth. Piketty states that “modern economic growth did not kill inheritance”. In France, the annual flow of inheritance was around 20%-25% of national income between 1820 and 1910, down to less than 5% in 1950, and back up to about 15% by 2010.[7] This result demonstrates that, in France at least, the structure of modern economic growth does not seem to lead to meritocracy but it rather favours past wealth.

Labour market inequality

So far, income and wealth were measured at the household level. We are now turning to the individual components of these two variables: labour income and education. These fields are interesting in and of themselves because they might be drivers of social and political impacts but also because they are drivers of household income inequality.

Before examining the extent of earnings inequality, we need to determine the significance of labour market earnings for household income. Though correlated negatively as a share, labour income is still very important for the top of the distribution. If we compute the share of total labour income (wages, salaries and pensions + farm, business and non-business incomes) then the importance of labour income is even more striking. It represents more than 90% of total income for the top 10% and still around 80% for the top 1%. As a consequence, the significance of labour-market earnings for household income inequality is crucial.

The evolution of inequality strongly depends on the sample that is chosen. In most studies regarding wages, only full-time wage earners are observed. In France over the period 1980 - 2009, the level of inequality among full-time wage earners has decreased during the 1980s and 1990s and is stable since. The ratio between P90/P10 was 3.3 in 1980 and is now equal to 2.9. This reduction in inequality mainly comes from the bottom of the wage distribution since the ratio P50/P10 is the only

[7] We use national income instead of GDP because we want to compare aggregates (wealth and income) that are both net of depreciation. The other difference between GDP and national income is about the income flow between France and the rest of the world. This difference is close to zero for France so using GDP would not significantly modify the evolution.

one decreasing over the period (from 1.7 to 1.5). Contrary to many OECD countries, the minimum wage is high and it has increased in France over the period. More specifically, it has grown more quickly than the mean wage between 1970 and 1985 and in the mid 2000s.

Focusing on full-time wage earners only can be misleading because it hides the increasing duality of the French labour market (and as a consequence the role of working hours) and it excludes the self-employed. In OECD (2009), the Gini coefficients for earnings are provided for different samples. In 2000, for the full-time wage earners only, the coefficient is equal to 0.30; it rises to 0.345 if the part-time workers are included. The self-employed people make this coefficient grow to 0.358. For these two extended definitions of workforce the Gini coefficient has increased by 6% between 1984 and 2000. In France, almost 50% of earnings variation is explained by variation in working hours, the other half by variation in wage rate. Last, labour market participation is decisive to have a full picture of labour market inequalities.

1930 to 0.122 for the cohort born after 1980. This evolution is representative of the general trend in developed countries (see Meschi and Scervini, 2010).

However, this overall increase in educational attainment must be put into perspective with the role of social background. Albouy and Wanecq (2003) study how the probability of graduating from tertiary education, and more especially from French elite schools, depends on social background. For university (short or long degree course), the authors establish a reduction in the gap between men with opposite social origins. However, for the elite schools, we note a sharp decline of this gap for men born in the 1920s and 1930s but an increase in the role of social background for younger cohorts. As a consequence, the democratization of French system is partial.

A last aspect we can look at is the link between education and employability. The effect of education on the access to jobs is large: the employment rate of men with tertiary education is in average 30 percentage points higher than that of men with primary education. There is no convergence or divergence over the period (1983-2010). However, the recent recession has led to a decrease by 3 percentage points of the low-skilled employment rate. For women, the overall employment rate has grown by 10 percentage points since 1983 (from 50 to 60%). The gap between low-skilled and high-skilled women is slightly larger than that of men but we notice a divergence. The better educated women have seen their employment chances increase while these chances for low-skilled women have remained flat. This contrasts with men who witnessed a decline for the low skilled and a stable rate for the tertiary educated.

After this description of the evolution of inequality for income, wealth, earnings and education, it is important to understand the mechanisms behind this evolution in France since 1980. We have seen that the apparent stability of income inequality at the two endpoints of the period hided a decrease in inequality during the 1980s followed by an increase since the end of the 1990s. Several factors can explain this evolution.

First, examining the evolution of labour market earnings is important because it is the major source of income for a large majority of the population. Between 1980 and 2010, women's labour market participation has increased. Moreover, the growth of the minimum wage has been superior to the growth of the mean wage. We can also mention the decrease of the capital share in GDP from between 1974 and 1985 as a factor of income equalisation. The combination of these effects has contributed to reduce the level of income inequality during the first half of this period (especially in the bottom of the distribution) and it partly explains why the inequality growth started later in France. However, the increase in wage inequality since 1998 tends to indicate that these factors were not sufficiently strong to counter the growing income dispersion. Most classical explanations like skill-biased technological change or international trade do not fit with a boom in the top 1% of the earnings distribution. As other explanatory factors, we may propose a change in social norms concerning the definition and the setting of top wages (higher shares of bonuses and profit-sharing) and also higher tolerance regarding inequalities. Another potential cause relates to Gabaix and Landier's interpretation about the compensation of top CEOs (superstars model[10]). Godechot (2012) by contrast emphasizes the role of finance at the very top (0.1%) of the wage distribution.

[10] In a context of strong competition between firms, these are ready to offer high compensations to attract the best CEOs because of their positive impact on the firm' results.

However, we have seen that the evolution of wage inequality was smoother compared with that of total income. The role of capital income is crucial in this evolution and enables us to explain this gap. The unequal distribution of capital and its growth with respect to the other sources of income helps to understand the upward trend in income inequalities observed since the end of the 1990s. As explained *supra*, wages have grown by 0.7% per year, rents by 2.2% and capital income by almost 4%.

The conclusion of this chapter could be that the non-meritocratic aspects of income, wealth or even education - with the role of social background - drive inequality. More importantly, they play a stronger role today and can explain part of the recent increase in inequality. Before going on to an in-depth analysis of the effect of the French tax system on the evolution of inequality, we review the impact of inequality on social, political and cultural outcomes.

3 The impact of inequality on social, political and cultural outcomes

The effect of the evolution of inequalities on social, political and cultural outcomes is a key issue orf this chapter. The case of France is interesting because of the timing of inequality growth. The increase in income inequality only started at the end of the 1990s. Therefore, the potential impact on these outcomes could only be observed recently. Besides, the reduction of inequality observed during the 1970s and the 1980s, while the trend was upward in many countries, makes the study of its impact even more interesting.

The analysis of social outcomes in developed countries cannot be reduced to a few items. Many fields must be taken into account and among them different indicators and dimensions must be considered. Thus, nine fields are studied in the Gini report: material deprivation, cumulative disadvantage of poverty, social isolation, family, health, housing crime, well-being and intergenerational mobility. The core result relates to the link between the evolution of these outcomes and the evolution of inequality. But, the role of social gradients (education or income) at any time as well as the identification of the channels through which inequality could affect these outcomes matter as well.

We can divide our results into two categories. Firstly, there is an absence of correlation for several social outcomes. Crime, intergenerational mobility and, to a lesser extent material deprivation and family changes, seem to be rather uncorrelated to changes in inequality. The crime rate in France has slightly increased over the period since it was around 50 (per 1,000 inhabitants) in 1980 and it equals 60 in 2010. But this increase hides a sort of cyclical evolution with a peak every ten years. If we only focus on some types of crimes (property crime for instance) or if we use subjective indicators (feeling of safety), the correlation with the evolution of inequality does not become clearer. There are several socioeconomic approaches to estimate intergenerational mobility: comparison of parents' and children's occupations, income or wealth elasticity between parents and children… In France, economic and social mobility seem to be rather stable over the past decades while income and wealth inequalities have fluctuated. Poverty is multidimensional and can be measured on a monetary basis (see section 1) or on a more materialistic approach. Thus, it emerges that material deprivation seems less correlated with inequality than monetary poverty. During the 1970s and the 1980s, both income inequality and poverty have decreased. Since 1985, the poverty rate has remained stable and material deprivation has declined - while income inequality has started to rise since the end of the 1990s. For the outcomes regarding family, the statement regarding the absence of correlation must be moderated. Indeed, the reduction of marriage and fertility rates since 1980 are continuous but the growth of single-parent families (from 720,000 in 1968 to 1.76 million in 2005) explains part of the compositional changes at the bottom of the income distribution. Indeed, the working and living conditions of single-parent families are less stable and more difficult. More specifically, 13.9% of single parent families are considered as poor in 2006 while this share equals 6.2% for the other couples with children.

Secondly, several outcomes like health, well-being, or housing seem to be slightly more correlated. Health indicators like life expectancy or self-reported state of health are subjected to a continuous improvement over the period 1980-2010 but they are very sensitive to social gradients. However, the gap in life expectancy across categories of workers seems to react to changes in inequality with a delay (Table 1). The growing gap in life expectancy between unskilled and high-skilled workers during the 1990s (when income inequality was stable) may be seen as the consequence of the high level of inequality in the 1970s and the 1980s. Symmetrically, the current deterioration of the quality of life of unskilled workers, partly caused by economic factors, could affect life expectancy in the coming years. For well-being, people with more education report a higher degree of satisfaction with their lives and the gap with respect to the bottom of the distribution has slightly grown over the past decade. Other indicators of well-being like the suicide rate or the alcohol consumption indicate an improvement over the past decades but we cannot cross these evolutions with social gradients. For housing, the mechanisms are complex. The share of owners in the overall population has increased by 5 points between 1985 and 2008 (from 52.9% to 57.8%) but it has declined by 12 points for the bottom quartile of the income distribution partly because of a change in the composition of this population. Moreover, since 1996, the housing expenses have increased for all the households but more rapidly for the low-income households. This may negatively affect the other items of their budget: travel, leisure but also health and education. Nevertheless, even for this category of outcomes the magnitude of the effect is rather limited and the transition from correlation to causality is unclear.

The weak correlation in time should not be interpreted as a total absence of impact of inequality on these social outcomes. For all the outcomes, social gradients do play a role. People at the top of the income distribution or with a high level of education are healthier, happier and live in high quality housing. They are also less at risk of poverty and less affected by social isolation. However, this study shows that the existing gap in 1980 has not significantly evolved during the past decades.

Two effects can explain this relative absence of correlation: timing and magnitude. First, contrary to many countries, the increase in inequality in France is very recent. Indeed, income inequality has started to grow in the late 1990s while it happened during the 1980s in countries like the United States or Netherlands. The problem for our analysis is that it takes time for inequality to have an effect on social outcomes especially on on country even if this growth is substantial. This characteristic probably leads to an absence of power for the links we try to identify.

4 - Political and cultural outcomes

The relationship between inequality and political or cultural outcomes is probably even more complex to determine. On top of the timing and magnitude effects already described for social outcomes we can add the role of institutions as another difficulty in interpreting the results we obtained. The political indicators we look at are political and civic participation, the share of unionized workers and trust in institutions. To describe the values of French people, we use the vote for extreme parties, the opinion regarding immigration and inequalities as proxies.

For political participation, we note a decreasing trend for local elections but a relative stability for general elections. More specifically, for general elections the turn-out has been stable around 70-80% and it reached a peak for the 2007 presidential elections. For local polls, there is a downward trend for the cantons and regions (especially in 2010 and 2011) but stability for municipal elections. Another way to express political opinions is to be member of a union. The share of unionized workers, low in France, has continuously decreased over the past decades and it has reached 7.6% in 2008. Trust in institutions (Table 2) is complementary of political and social participations because it measures how much people believe in the institutions that are supposed to

Once again, social gradients like income or education play a role since rich/educated people are more politically active (through their vote or their participation to associations) and tend to trust more institutions but also the other members of society. Moreover, the opinion regarding immigration or the level of trust in EU institutions is more positive for educated/rich people while less educated people are more frequently in favour of income equalizatio

The general conclusion of these sections is that the impact of the evolution of inequality on social, political and cultural outcomes in France has been rather limited. Some outcomes are more affected than others but for all of them social gradients matter. The timing but also the magnitude of this increasein inequality may explain the weak correlation we obse

The historical importance of taxation in France probably makes the study of its tax system and of its redistributive aspects more relevant than in many other countries. More specifically, the ratio “tax revenue / GDP” equals 44.2% in France in 2011[11]. France is the third-ranked OECD country in terms of the importance of tax revenue, ahead of Finland and Belgium but behind Sweden and Denmark. Since 1965, the amount of tax revenue (expressed as a % of GDP) has considerably increased. Most of this evolution occurred between 1975 and 1985. During this decade, the total tax receipts have grown by 8 percentage points from 35 to 43%. Since 1985, we observe a relative stability: the slight rise by 3 points between 1985 and 2000 has been compensated by a decline by 2 points during the past decade.

The decomposition of tax revenues by origin enables us to have a first intuition of the redistributive characteristics of the French tax system. Indeed, all types of taxes do not have same the effect on the income redistribution and as a consequence the weight of each type of taxes is an indicator of the degree of progressivity. According to the OECD tax database, employers’ and employees’ social security contributions (SSC) account for 40% of the overall tax receipts; taxes on goods and services for 26% and taxes on income, profits and capital gains for 20%. The remaining 15% are explained by taxes on property; payroll and workforce and other taxes. The structure of the French tax system has been fairly stable over the last three decades. One important change occurred in 1997 when part of the SSC (financing health and family benefits notably) was replaced by personal income taxes. Concretely, the government increased by 4 points the “Contribution Sociale Généralisée[12]” (CSG), a proportional income tax created in 1990, in order to reduce SSC. Therefore, a specificity of the French tax system is that the income tax is actually composed of two taxes: the “original” progressive tax (created in 1914) and a proportional tax (created in 1990). One of the differences between these two taxes regards the tax base (much larger for the proportional tax). As a consequence, in 2010, the revenues of the latter are twice bigger - with a flat rate of 8% - than the progressive tax - with a top marginal rate of 41%. Actually, we could even divide the progressive tax into 4 or 5 types of taxes given the difference of rules applied to each type of income (earnings, capital gains, dividends, interests…).

If we compare France with the OECD countries we note the large weight of SSC in the overall tax receipts, the highest among the OECD countries. The revenues coming from indirect taxes are also more important than the average while the direct taxes (personal and corporate taxes) are lower than the average. More specifically, in many countries, the tax revenues coming from the personal income tax are two to three times bigger than in France. A last specificity of the French tax system is about the implicit tax rate on labour income, one of the highest in the European Union (Eurostat, 2011).

The progressivity of the French tax system has been extensively studied by Landais, Piketty and Saez (2011). The objective of this analysis is to consider all types of taxes in France and to estimate the effective tax rate for different levels of income. A parliamentary report estimates that the average rate of income taxation is below 20% for the top 1% of the income distribution. However, this is the

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[11] OECD tax database

[12] This income tax is proportional and affects all sources of income: earnings (7.5%), unemployment and social security benefits (6.2%), retirement and invalidity pensions (6.6%) capital income (8.5%) and lottery/winnings (9.5%).

first study that tackles this issue by considering all types of taxes and all tax deductions and exemptions.

Figure 4 depicts the main result: the French tax system is not progressive. More specifically, when we consider SSC, income and capital taxes and also indirect taxes like the taxes on goods and services and local taxes, the average tax rate (as expressed in % of national income) is equal 49%. More precisely, if we consider the total income before taxes and if we rank the French population[13] from the poorest individual to the richest we note that for the bottom 50% of the distribution (with a gross monthly income inferior to 2,200 Euros) the effective tax rate goes from 41 to 48% and is in average 45%. The following 40% of the distribution experience a tax rate between 48 and 50%. Actually, for a large middle class with a gross monthly income ranging from 1,700 to 6,900 Euros, the tax rate is stable. Then, within the top 5% and even more within the top 1% of the income distribution, the effective tax rate sharply declines and falls to 35% for the top 0.1% (50,000 individuals over 50 millions).

In this figure we can also denote the role played by each tax. Taxes on goods and services are regressive since the proportion paid by the poorest categories is higher (15% for P0-P90 against 5% for P99-P100). The result is similar for the SSC (25% against 5%) and this is explained by the larger share of self-employed at the top of the distribution. Nevertheless, the case of SSC is particular because some of these contributions finance social benefits received by workers (retirement or unemployment pensions). The fact that only labour income contributes to this spending may make sense because workers only can benefit from these transfers[14]. However, SSC also finance universal benefits (like family or health allowance) that are open to all French residents. *A priori*, there is no reason for this last category of allowances to be financed only by labour income.

The regressivity of these taxes should be compensated by the progressivity of taxes on income and capital. We do observe a progressivity of taxes on capital[15] (corporate, real-estate, wealth and inheritance taxes). However, this is not the case for income, mainly because of the accumulation of fiscal deductions and exemptions. More specifically, a large part of capital income is not included in the progressive schedule of the income taxation. Most capital income is subject to proportional tax rate. Thus, individuals receiving the same income can pay a different amount of tax because the nature of income differs. As a consequence, the tax system, that is the main tool to fight socioeconomic inequality, does not even reach its minimum objective of proportionality in France.

Bozio *et al.* (2012) extends this analysis by studying the evolution of progressivity over the last fifteen years. The French tax system was already regressive in 1997 especially because of the weakness of the progressive income tax in the entire tax system and because of the importance of indirect taxes and SSC. However, the authors demonstrate that the tax reforms introduced between 1997 and 2012, and especially between 2002 and 2007, have led to reinforce the lack of progressivity. During

[13] More precisely, for married couples, the individual capital income is equal to half of the household capital income. The results presented in this chapter relates to the population aged between 18 and 65, working at least 80% of the full time standards. This sample is the most relevant to estimate permanent income inequality and also the progressivity of the tax system. Estimates on different samples provide similar results (see appendix to chapter 1 at www.revolution-fiscale.fr).

[14] However, the retirement contributions of low-wage workers subsidy the retirement pensions of high-skilled workers because of the gap in life expectancy across workers.

[15] Even if since 2007 both wealth and estate tax have been cut.

this period, the overall tax rate, expressed in % of national income, decreased by 0.6 point while the decline equaled 3.6 points for the top 1% of income distribution. The consequences in terms of inequality are of course very serious but it can also lead to defiance towards taxes. This study clearly shows that the rise in disposable income inequality since the end of the 1990s is not only due to a greater dispersion in market incomes but also to a failure of the French tax system.

More precisely, we can decompose the period 1997 – 2012 in three sub-periods (following the changes of governments): 1997-2002, 2002-2007 and 2007-2012. Between 1997 and 2002, several major changes of the tax system have been implemented: the reduction of the weekly working hours to 35, the decrease in social security contributions for low-paid jobs, the switch of part of SSC to income tax, the reduction in VAT and several modifications of the income tax. During this period, the overall tax rate has decreased from 47.7% to 46.3%, partially driven by the rapid economic growth. This decline has been more significant at the bottom of the distribution mainly because of the reduction of SSC for low-paid jobs. However, the impact of this policy on the workers' purchasing power has been limited since the decline in SSC went together with the reduction of working hours and therewith earnings. At the top of the distribution, the slight growth of the tax rate is essentially due to the increasing receipts of the corporate tax driven by the cyclical rise in profits.

The second five-year period almost explains all the general increase in regressivity of the French tax system over the period 1997-2012 and yet, there have been much less reforms than between 1997 and 2002. The average tax rate (on primary income) has been stable. However, the implementation of a tax shield[16] (a maximum tax rate) and the decrease in the income tax have benefited the top of the distribution. Thus, all the population above the median of the primary income distribution has experienced a reduction in tax rate but the decline has been much more significant for the top 1% (superior to 2 points).

From 2007 to 2012, a multitude of tax reforms has been implemented but part of them has been cancelled during this period or compensated by other reforms. More specifically, the fiscal shield has been reinforced (to 50% instead of 60%) but then cancelled; idem for the tax deductibility for mortgage interest payments. The proportional income tax (CSG) has been increased and a tax on high incomes has been created, tax cuts have been implemented for the extra working hours and in the restaurant industry... All these reforms have cancelled each other and the authors do not detect any effect on the redistributive aspect of the tax system when they compare the endpoints of the period. However, this apparent stability hides opposite evolution depending on the source of income: capital or earnings. Indeed, the massive cuts on wealth tax have been partially compensated by rises of taxes affecting the top of the income distribution. In the end, the households at the top of the distribution in terms of wealth but not in terms of earnings are the main winners of these reforms whereas the households with high earnings but no wealth are the main losers. However, the timing of the implementation of these reforms matters. It would be misleading not to take into account the length during which these policies were in place. Indeed, all

Therefore, the tax cuts have been in place over almost all the five-year period.

[16] The amount of taxes paid by a taxpayer cannot be superior to 60% of his/her income in taxes.

A project of the new elected government was to increase the marginal tax rate for individuals earning more than 1 million Euros to 75%. This bill has been considered as unconstitutional and a new law should be proposed in 2013. Anyway, this new tax bracket is not likely to change the lack of progressivity of the tax system. Indeed, most capital income (dividends, interests, capital gains...) is exempted from this tax and this tax will be computed at the individual and not at the household level. The government estimates that this tax will only affect 1,500 people for an overall tax receipt of 210 million Euros per year. More generally, the new socialist government cancelled part of the fiscal policies implemented by the former government, especially the cuts on wealth and inheritance taxes. Without recent data it is difficult to know precisely if the tax system has become more progressive. However, the income tax has not been deeply modified and the tax base has remained the same.

The failure of the tax system has important consequences on inequalities since taxation increases market income dispersion. More importantly it can also lead to distrust in the system of taxes and transfers and more generally in the political institutions, especially in France where the tolerance regarding inequality is low.

Do social expenditures compensate the failure of the French tax system regarding its redistributive effect? Social expenditures are the other side of transfers and they may play a key role in the fight against inequalities and poverty by targeting population at-risk and/or providing highly redistributive goods or services. Even if the overall expenditure does not enable us to capture the aims of the social policies, it is a rather good indicator of the government's willingness for redistribution. The impact of social expenditures on inequality depends on two factors: its progressivity (a transfer is progressive if it proportionally decreases when income increases) and its weight in the overall household income. Thus, every social expenditures, means-tested or not, reduces inequality.

Total expenditures have increased by 9% between 1980 and 2010, going from 26% of GDP in 1985 to 28.4% in 2010. Most of the increase is imputable to the old age pensions (+46%) and health care (+34%). By contrast, the share of unemployment benefits and social welfare, disability benefits and survivor pensions has decreased over the period. The causes of increases or decreases vary a lot from an item to another. For old age pensions, health care, as well as survivor pensions, the changes are mainly due to demographic forces. The up-and-down of the economic growth mainly explains the variations of unemployment benefits.

All social expenditures are not means-tested in France. For instance, family benefits, health care or survivors pensions – around 40% of total social spending - do not depend on household's or individual's income. On the contrary, social assistance, housing benefits and disability benefits are means-tested. Last, in order to be eligible for unemployment or old-age pensions, people must have contributed for a certain period of time. The main reforms affecting social expenditures since 1980 relate to unemployment and old-age pensions[17]. For these two fields the balance between rights and duties has changed in order to reduce budget deficits. More specifically, the recent reforms of the unemployment insurance have reduced the length and the amount of the benefits. Moreover, the unemployed duties have been increased. Since 1990, the pension system has been affected by

[17] Describing all reforms related to social policies is beyond the scope of this chapter. The country report provides more detailed information.

similar reforms since the successive governments have especially modified two parameters: the minimum contribution period (from 150 quarters for the 1934 cohort to 164 for the 1952 cohort) and the normal pension age (from 60 to 62 when the retiree reaches the full condition). Other modifications have been introduced like a reduction in the pension rate in case of missing quarter, the lengthening of the reference period for the benefit calculation (from 10 to 25 years in the private sector) or a greater connection between the pensions of the civil servants and the workers of the private sector.

Cazenave *et al.* (2011) show that social spending[18] explains in overall 66% of the reduction of income inequality in 2010 (against 34% for taxation). Family benefits represent 26% of this diminution, housing benefits 19% and the different components of social assistance (minimum income - RSA, minimum pension for elderly and disabled...) 17%. The authors also demonstrate that the progressivity of social expenditures has decreased between 1990 and 2010. Most of this evolution has been caused by the way the transfers have evolved each year. Indeed, most of them follow inflation but over the period incomes have grown faster than inflation. As a consequence, even if the purchasing power of the beneficiaries has not decreased, the gap with respect to the average income has grown. The evolution of social policies seems to go hand in hand with that of taxation since its overall progressivity has declined during the past decades.

6 Conclusions

In this chapter, we have seen that France was distinctive for several reasons. First, the timing of inequality growth in France has been different from many countries since income inequality has started to rise only at the end of the 1990s. One of the consequences is that the effect on social, political and cultural outcomes has been more recent and rather limited. The magnitude of the change in inequality may also contribute to the weak correlations we observe. Last, but not least, the role of taxation of France is noteworthy. The importance of tax revenue is very large, but more importantly, the overall tax system is not progressive since people at the top of the distribution pay (proportionally) less taxes than people at the bottom. This feature, that has been reinforced during the 2000s, partly explains the rise in inequality and especially the growth of top income shares.

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[18] The definition of social expenditures is different from the OECD classification. In Cazenave *et al.* (2011), social spending based on an insurance mechanism (old-age pensions, health and unemployment) are accounted for beforehand with the other sources of income (labour and capital). Here, we focus “only” on social expenditures with the aim of reducing inequality: housing, family, social assistance...

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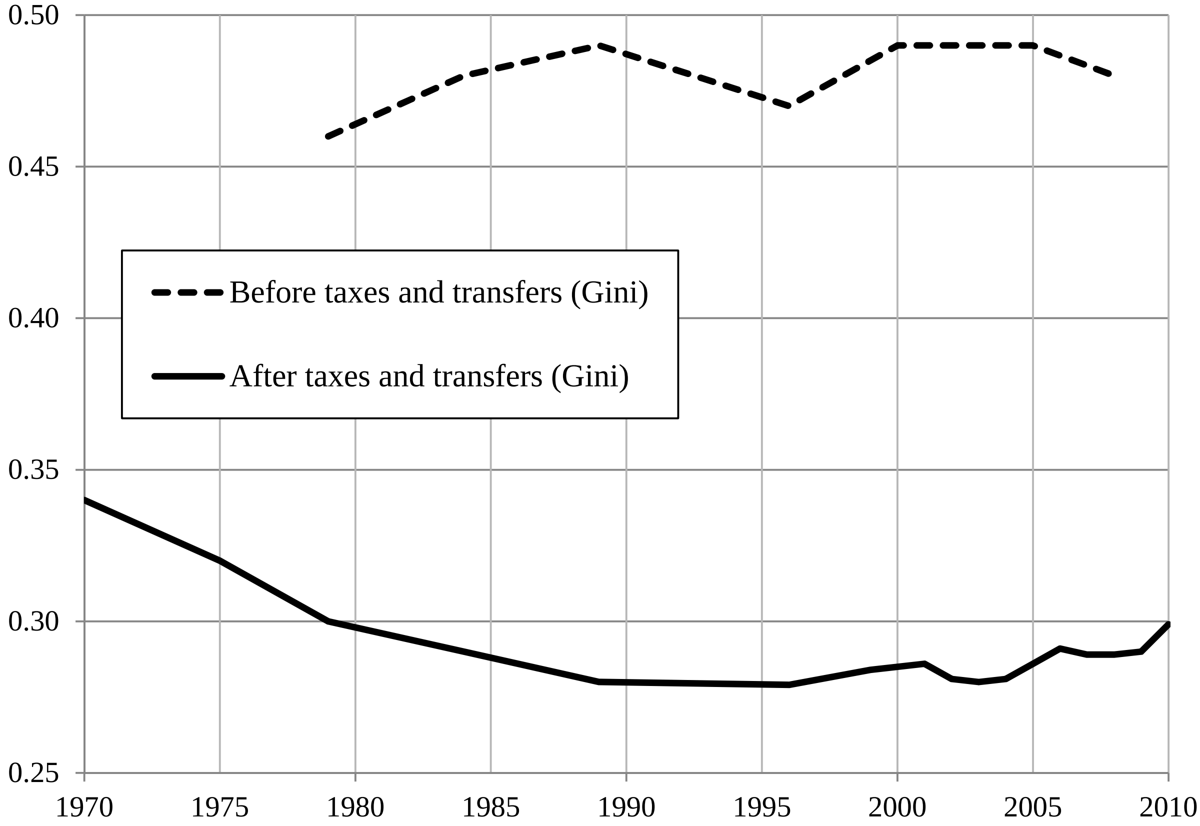
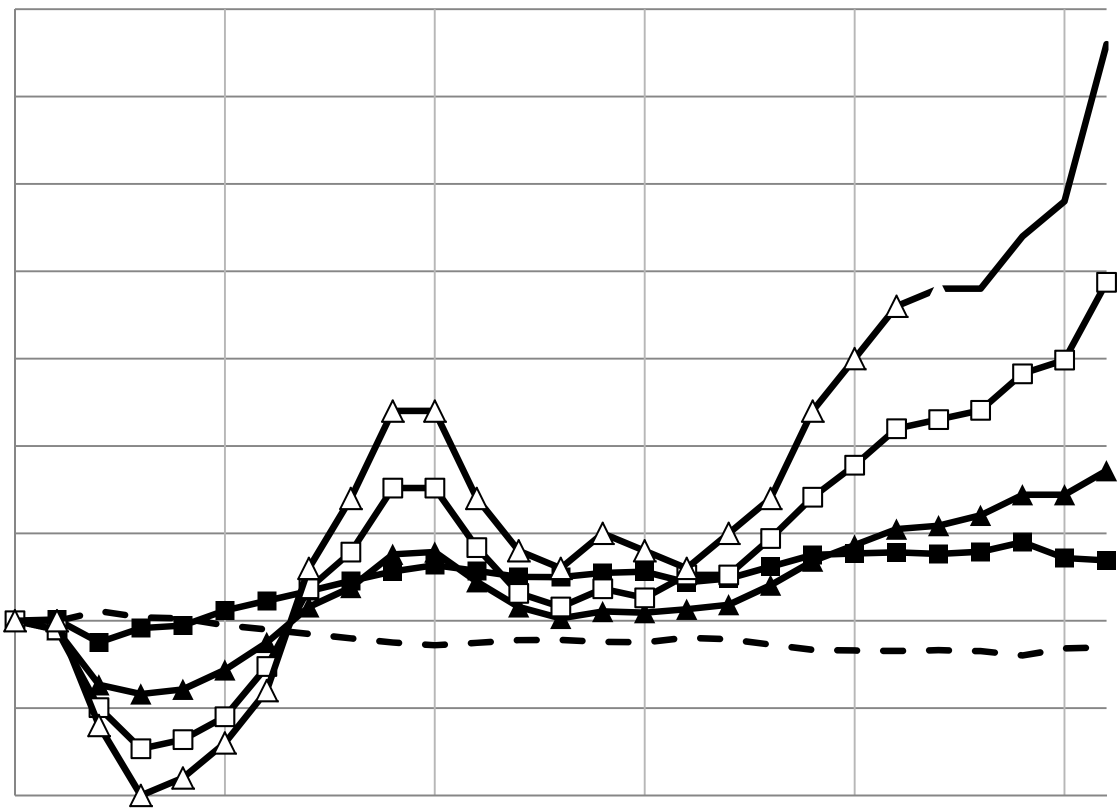
Figure 1 – Household equivalised income inequality (1970 – 2010)



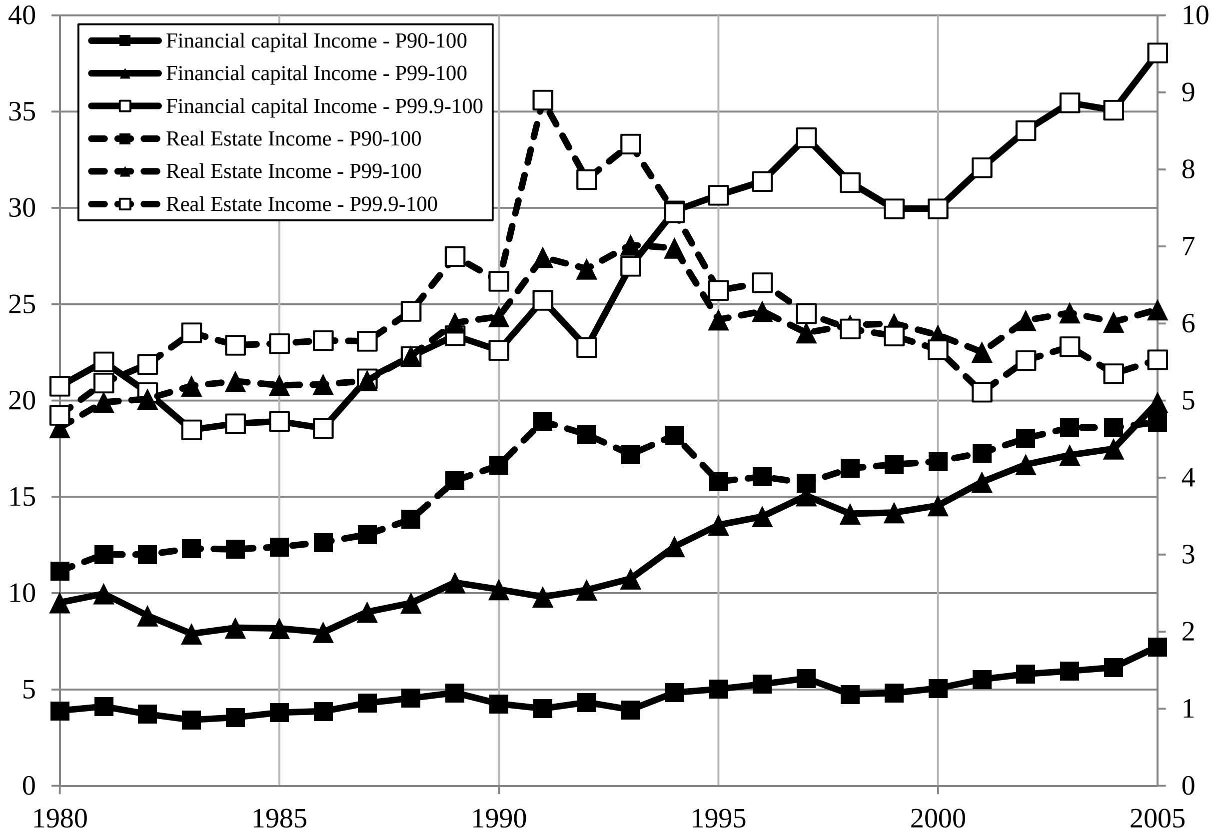
Source: INSEE (Insee-DGI, enquêtes Revenus fiscaux 1970-1990; Insee-DGI, enquêtes Revenus fiscaux 1996-2005; DGFiP; Cnaf; Cnav; CCMSA, enquêtes Revenus fiscaux et sociaux 2005-2010)
Note: the inequality index we use here is the Gini coefficient

Figure 2 - Top income shares (1980 - 2006)



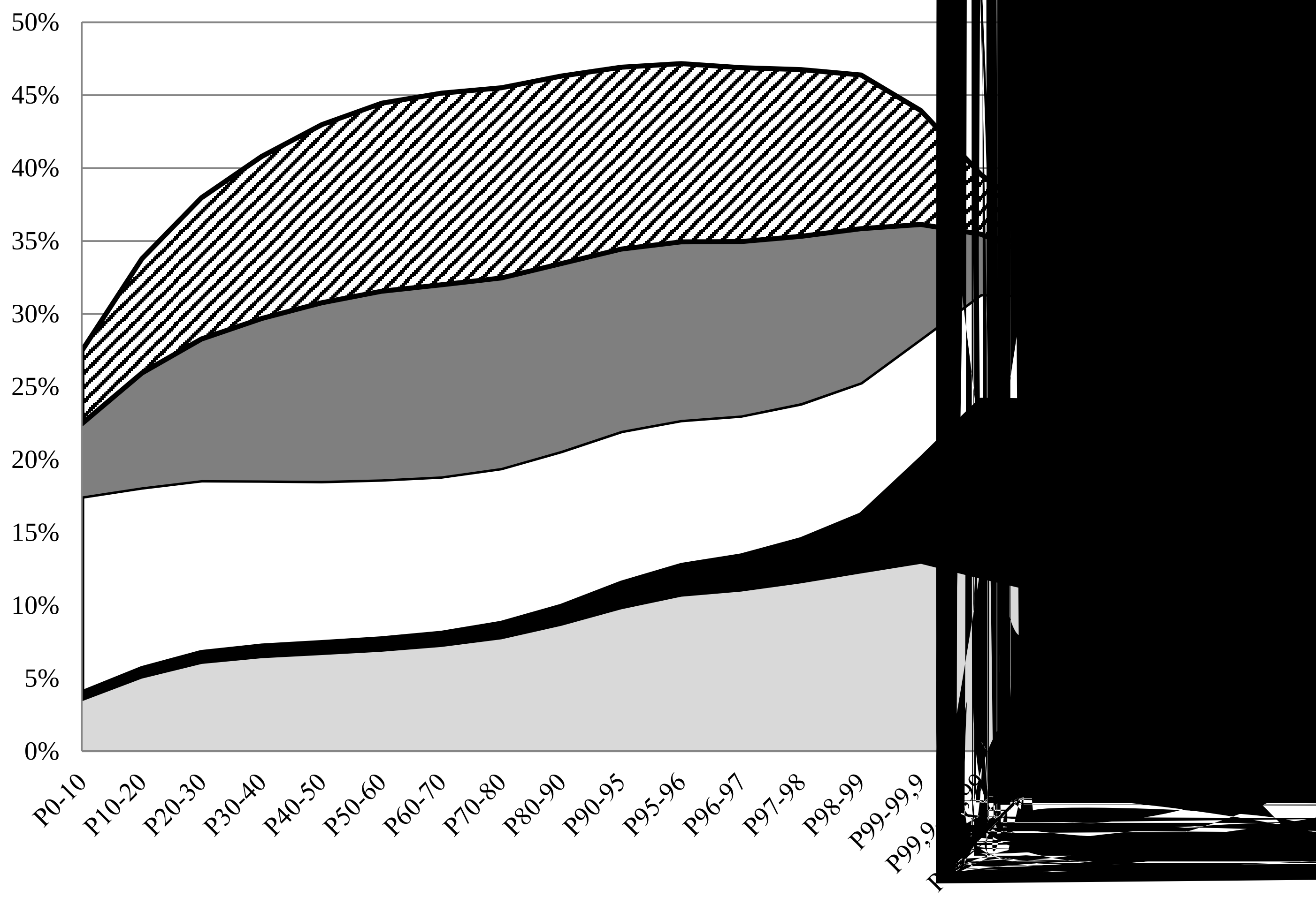
Source: World Top Income Database (index = 100 in 1980)

Figure 3 – Share of income from financial and non-financial assets for top fractiles (1980 – 2005)



Source: World Top Income Database

Figure 4 - Effective tax rate (in % of gross income) per income fract



Source: Landais, Piketty and Saez (2011)

Table 1 – Life expectancy at 35 by sex and social category

	High-skilled, Executive [1]	Intermediate job	Farmer	Tradesman, shopkeeper and business owner	Clerk	Unskilled worker [2]	Out of LF (excl. retired)	**All**	Gap [1 - 2]
Men									
1976 - 1984	41,7	40,5	40,3	39,6	37,2	35,7	27,7	**37,8**	6,0
1983 - 1991	43,7	41,6	41,7	41,0	38,6	37,3	27,5	**39,2**	6,4
1991 - 1999	45,8	43,0	43,6	43,1	40,1	38,8	28,4	**40,8**	7,0
2000 - 2008	47,2	45,1	44,6	44,8	42,3	40,9	30,4	**42,8**	6,3
[2000-2008]-[1976-1984]	5,5	4,6	4,3	5,2	5,1	5,2	2,7	**5,0**	
Women									
1976 - 1984	47,5	46,4	45,7	46,0	45,6	44,4	44,3	**45,0**	3,1
1983 - 1991	49,7	48,1	46,8	47,4	47,4	46,3	45,4	**46,4**	3,4
1991 - 1999	49,8	49,5	48,8	48,8	48,7	47,2	47,1	**48,0**	2,6
2000 - 2008	51,7	51,2	49,6	50,3	49,9	48,7	47,0	**49,4**	3,0
[2000-2008]-[1976-1984]	4,2	4,8	3,9	4,3	4,3	4,3	2,7	**4,4**	

<u>Source:</u> Permanent demographic sample (INSEE), extracted from Blanpain (2011)

Table 2 - Trust in other and in institutions by education (1981 - 2008)

					Distribution of years of education															
	All				Q1				Q2				Q3				Q4			
Trust in institutions	**1981**	**1990**	**1999**	**2008**	**1981**	**1990**	**1999**	**2008**	**1981**	**1990**	**1999**	**2008**	**1981**	**1990**	**1999**	**2008**	**1981**	**1990**	**1999**	**2008**
Parliament																				
Complete trust	6,7	4,8	2,8	3,9	9,1	9,4	2,4	3,2	7,2	0,5	3,7	3,0	7,1	1,4	2,3	2,3	3,8	8,6	3,2	6,8
Quite a lot	49,5	43,5	37,7	47,5	52,2	35,9	37,0	40,2	52,6	39,9	33,4	45,9	47,1	47,1	34,8	49,6	46,8	46,4	46,1	53,8
Not very much	30,8	34,5	36,1	36,3	27,8	29,2	33,5	40,9	25,3	38,0	30,1	36,0	33,4	39,1	37,6	39,6	36,2	33,2	36,9	29,5
None at all	13,0	17,3	23,4	12,3	11,4	25,5	27,1	15,6	14,9	21,6	26,8	15,1	12,4	12,4	25,3	8,5	13,2	11,8	13,9	9,9
Government:																				
Complete trust	-	-	-	2,1	-	-	-	2,9	-	-	-	2,1	-	-	-	0,9	-	-	-	2,5
Quite a lot	-	-	-	32,0	-	-	-	32,7	-	-	-	29,1	-	-	-	32,2	-	-	-	34,2
Not very much	-	-	-	38,8	-	-	-	33,8	-	-	-	38,7	-	-	-	41,9	-	-	-	40,6
None at all	-	-	-	27,1	-	-	-	30,7	-	-	-	30,1	-	-	-	25,1	-	-	-	22,7
Political Parties:																				
Complete trust	-	-	-	0,8	-	-	-	0,8	-	-	-	0,7	-	-	-	0,5	-	-	-	1,3
Quite a lot	-	-	-	15,4	-	-	-	18,8	-	-	-	13,5	-	-	-	12,9	-	-	-	16,8
Not very much	-	-	-	52,8	-	-	-	38,9	-	-	-	53,7	-	-	-	59,9	-	-	-	58,2
None at all	-	-	-	31,0	-	-	-	41,8	-	-	-	32,1	-	-	-	26,7	-	-	-	23,7
Justice system:																				
Complete trust	8,4	7,4	5,3	7,1	8,3	13,6	7,2	8,6	12,2	5,8	4,2	4,6	7,0	3,0	6,7	7,3	6,1	8,0	3,6	8,1
Quite a lot	48,0	50,1	40,5	48,5	44,6	43,0	39,1	45,6	49,6	45,3	35,0	47,2	49,2	51,3	39,2	47,4	48,1	59,3	48,7	53,5
Not very much	34,2	31,6	34,7	35,5	37,7	27,1	32,4	32,5	28,6	35,6	37,3	37,3	35,1	36,7	35,8	39,1	35,8	26,6	33,0	33,2
None at all	9,5	10,9	19,5	8,9	7,4	16,4	21,3	13,3	9,6	13,3	23,6	10,9	8,8	13,8	25,1	9,1	10,1	6,2	14,7	5,2
Others:																				
Most people can be trusted	24,0	22,8	22,2	27,2	13,2	10,6	12,7	13,0	20,0	18,0	19,3	24,6	24,1	25,1	21,7	30,7	38,9	36,1	35,2	39,8
Can't be too careful	76,1	77,2	77,8	72,8	86,8	89,4	87,3	87,0	80,0	82,0	80,8	75,4	75,9	74,9	78,3	69,3	61,1	63,9	64,8	60,2

Source: European Values Study 1981-2008 Longitudinal Data File. GESIS Data Archive

Note: the population is ranked by quartiles of years of education with Q1 the lowest quartile