



GROWING INEQUALITIES AND THEIR IMPACTS IN FRANCE

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## **Executive Summary**

### **The nature of inequality and its development over time**

Inequality has increased in France between 1980 and 2010 but the timing and magnitude are not the same across the fields we study. Income inequality has followed a U-shaped curve over the period 1980-2010. During the 1970s and the 1980s, income inequality has decreased (by 15%). Then, after a period of stability during the early 1990s, inequality has started to rise. Thus, the levels of income inequality in 1980 and in 2010 are very close. This trend is slightly different across the income definitions (before or after taxes and transfers) and across inequality indicators. Most of the recent increase comes from the top of the distribution.

Capital income tends to explain a large share of this evolution but, and this is new in France, wage inequality has also contributed to this growth. The distribution of earnings among full-time workers has remained fairly stable. However, the increase in labor income inequality is explained by the growing duality of the labor market but also by a boom in earnings at the top of the distribution.

The increase in educational attainment, especially for women, has led to a decrease in educational inequality. Nevertheless, the role of social background in educational achievement is still strong.

Private wealth has strongly grown in France during the last 30 years. Indeed, the ratio private wealth/national income has almost doubled. Wealth surveys show that the wealth distribution, much more skewed than the income distribution, has been rather stable during the 1990s but inequality has started to grow from the mid-2000s. Last but not least, the annual flow of inherited wealth (as a proportion of national income) is in 2010 equal to 15%, its highest level since World War I (WWI).

### **The social impacts of inequality**

The evolution of social outcomes over the past decades seems to be weakly correlated with inequality trends. However, we observe significant differences in the social gradients (income, education...) we have used for most outcomes.

More specifically, we can divide our results into two categories. Firstly, there is an absence of correlation for several outcomes such as crime, intergenerational mobility and, to a lesser extent, family changes. For this last field, this statement must be moderated since the growth of single-

parent families explains part of the compositional changes at the bottom of the income distribution. Moreover, 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.

Secondly, the relationship with the evolution of inequality is more marked for several outcomes. Health indicators like life expectancy or subjective assessments 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 between unskilled workers and managers seems to react to changes in inequality with a delay. Furthermore, we notice a degradation of the quality of life of unskilled people over the past decade. For well-being, people with more education seem more satisfied with their lives and the gap has slightly grown over the past decade. For housing, the recent rise in income inequality coincides with a decline in the share of owner at the bottom of the distribution as well as a rapid growth of housing costs for them. Nevertheless, for this category of outcomes the magnitude of the effect is rather limited and the transition from correlation to causality is unclear.

Two effects can explain this relative absence of link: timing and magnitude. First, contrary to many countries, the increase of inequality in France is very recent. Second, the recent upward trend of income dispersion has "just" canceled the decrease observed during the 1980s and it does not make France a very unequal country even if this growth is serious. This characteristic probably leads to an absence of power for the links that we study.

### **Political and cultural impacts**

The relationship between the evolution of economic inequality and political or cultural outcomes is complex to determine.

For the political and civic participation as well as the share of unionized workers, we observe a continuous decreasing trend between 1990 and 2010 that is probably more linked to the general economic context since the 1990s (slow economic growth, high unemployment...). The absence of clear trend for trust in institutions is quite difficult to interpret because the discouragement motive we could invoke (as a response to the growing inequalities) does not fit the results. However, for these outcomes the role of gradient is significant since rich/educated people are more active (through their vote or their participation to association) and tend to trust more institutions but also the other members of society.

The analysis of the political values leads to a similar interpretation about the weak relationship with inequality. More specifically, the vote for extremes has been rather stable since 1990. During the same period, the stance regarding immigration has improved but the satisfaction regarding the European Union (EU) has declined. Finally, the opinion relative to inequality has remained roughly similar. This sum of results indicates that political values not only depend on the level of inequality but also on where people think it comes from. Once again, social gradients like income or education play a role. The opinion regarding immigration or the level of trust in EU institutions is more positive for educated/rich people while less educated people are in favor of income equalization.

### **Effectiveness of policies in combating inequality**

Labor income is the main source of income for most households. That is why, rules affecting labor income are crucial for inequality and poverty issues. In France, the minimum wage has increased over the period 1980-2010 and has helped to decrease income inequality during the 1970s and the 1980s. During the same period, the deregulation of the labor market has led to the creation of a dual market with an increasing share of part-time jobs and/or short term contract (that mostly affects young and unskilled workers).

Taxation is probably the main economic tool to affect the income distribution. Between 1980 and 2010, the total tax receipts (in % of GDP) have risen by approximately 10 points. Piketty, Landais and Saez (2011) have shown that the French system is not progressive. More specifically, when all taxes are considered, the richest households (in the top 1% of the income distribution) pay proportionally less taxes than the poorest (below the median). Bozio *et al.* (2012) note that most of this deterioration occurred between 2002 and 2012.

Social expenditures are the counterpart of taxation. Between 1985 and 2009, this type of public expenditure has increased by 9%. Old age pensions and health care are the main drivers of this evolution. According to Cazenave *et al.* (2011), the overall progressivity of social expenditures has decreased between 1990 and 2010.

The evolutions in terms of educational policies are contrasted. The expenditures on education per student have grown since 1980 but the schooling rate has decreased among the 15-19 years and for the very young child. Moreover, the social expenditures dedicated to students (loans, social housing, fiscal deductions...) have risen by 16% between 1995 and 2008 but the share of students receiving loans or grants has remained the same since 2000. Lastly, the expenditures on professional training have grown by 25% between 1999 and 2007. However, the distribution across social position is unequal since executives benefit more frequently from training schemes than unskilled workers.

## Introduction

This chapter provides some background information on France since 1980. We specifically focus on various macroeconomic indicators but we also describe the demographic evolution and the changes on the French labor market. The results are presented in Table 1.

Like in many other developed countries, the French population is ageing but this transformation is smoother. More specifically, the overall population increased by 17% between 1980 and 2011 but the share of people over 65 grew up by 20% while the share of people below 14 decreased by 18%. After a continuous decline between 1980 and 2005, the annual growth rate of the French population recovered and reached 0.71% between 2005 and 2010. The household composition changed over the period: the share of singles (among people above 15) equals 37.2% in 2010 against 25.7% in 1980. One of the consequences is that the average number of persons per households fell by 15%.

In order to describe the evolution of the French economy, we choose some macroeconomic indicators. The French GDP (expressed in 2005 Euros) increased by 72% between 1980 and 2010 with large variations from a decade to the next. Indeed, the economy's evolution has been far from smooth: the 3% growth of the early 1990s and 2000s was followed each time by slackening periods. The GDP per capita followed a similar but smoother trend. The public debt has been multiplied by 4 in 30 years. We can distinguish two periods of strong increase: between 1990 and 1995, when the deficit of the current account was above 5%, and since 2007 because of the recession.

In order to get some insight of the evolution of inequality, we can start by analyzing the division of the gross added value by source of income. The share of wages in the overall gross added value decreased by 3 points (from 62.8 to 59.3) while the earnings before interest, taxes, depreciation and amortization (EBITDA) increased by 8 points. However, with these variations the division of the added value is back to its steady state level. The 1970s oil shocks had led to an increase in the share of wages (from 55% during the 1960s to 62% at the end of the 1970s). By going from income to wealth, two facts deserve to be emphasized. Firstly, the wealth income ratio<sup>1</sup> has almost doubled since 1980. If we consider a longer term period, we have to come back at the beginning of the XXth century to observe equivalent levels. Secondly, the saving rate of French households has been roughly stable around 15% since 1995. In terms of level, this rate is much higher in France than in many developed countries (in the USA, the UK but also in Germany or Italy).

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<sup>1</sup> Private household wealth/national income

The situation of the labor market can be described with many indicators. In this chapter we have chosen to use two types of measures: the activity and the (un)employment rates as well as some statistics about the quality of the jobs. The unemployment rate is correlated with the GDP growth but with some lags. Indeed, the unemployment rate strongly increased between 1975 and 1985 (from 3.4 to 8.9%). Then, we notice a slight decrease at the end of the 1980s. Two other periods of high unemployment have followed in the early 1990s and more recently with the economic recession. However, since 1985 the unemployment rate in France has never been lower than 7%. The share of long-term unemployed (>12 months) has fluctuated but it is in average around 40% since 1985. This rate is slightly below the EU average. The activity and the employment rate fairly follow a similar trend: an overall stability but opposite trends across genders. The duality of the labor market can be emphasized by the strong rise of the part-time jobs (+64% since 1985). A large part of this evolution occurred in the early 1980s but we do not observe any stabilization since.

**Table 1: Background information on France (1980 - 2010)**

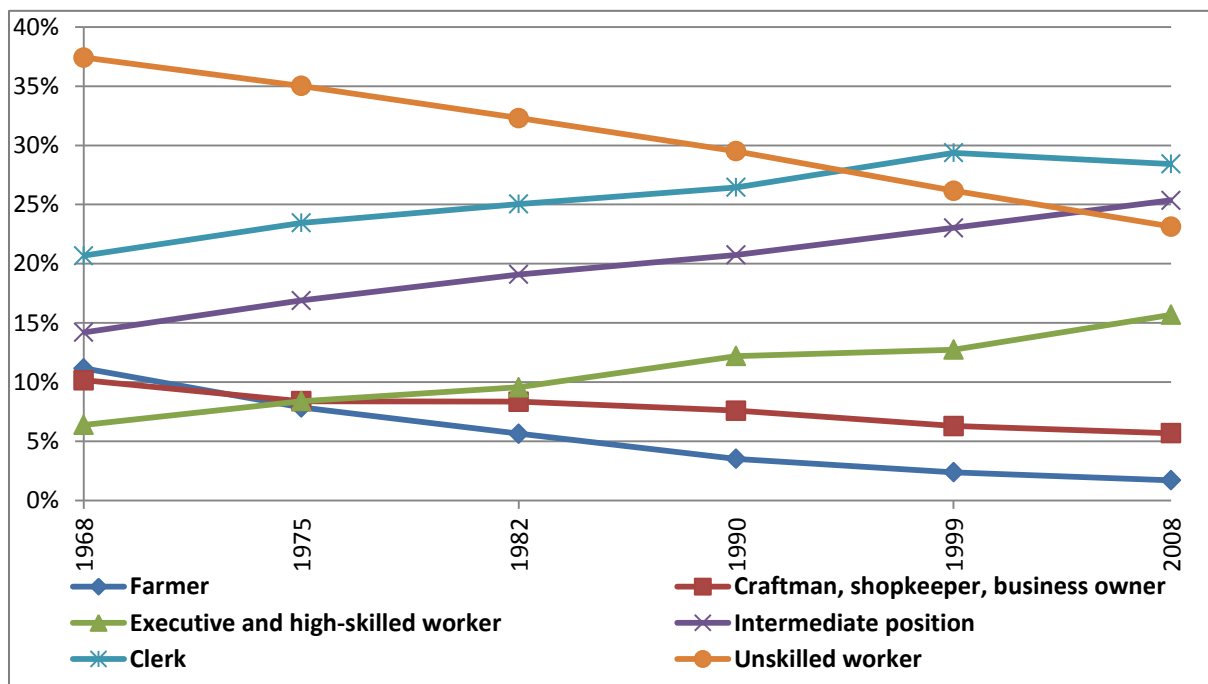
	1980	1985	1990	1995	2000	2005	2010
<b>Population</b>							
Total (in thousands)	55,512	56,445	57,996	59,281	60,508	62,731	64,648
% 0-14	22.5	21.4	20.1	19.6	18.9	18.4	18.4
% 15-64	63.5	65.9	66.0	65.3	65.1	65.1	64.8
% 65+	14.0	12.7	13.9	15.1	16.0	16.5	16.8
% foreigners	6.8	-	6.3	-	5.6	-	5.8
Singles (%)	25.7	27.8	30.7	32.3	34.1	35.7	37.2
Persons per households	2.7	-	2.6	-	2.4	-	2.3
<b>Economy</b>							
GDP (billion € 2005)	1,032	1,115	1,306	1,388	1,587	1,718	1,772
GDP per capital (€ 2005)	18,734	19,696	22,460	23,367	26,127	27,289	27,329
Public debt (% of GDP)	20.7	30.6	35.2	55.5	57.5	66.8	82.3
Current account balance (% of GDP)	-0.3	-3.1	-2.5	-5.5	-1.5	-2.9	-7.1
Wages (% of gross added value)	62.8	61.2	57.7	58.0	58.1	58.5	59.3
Private Wealth / National Income (%)	298	300	300	330	355	471	552
Household saving rate (% of gross disposable income)	18.3	14.1	12.7	15.8	14.4	14.7	16.0
Private consumption (% GDP)	49.5	50.0	48.0	46.1	43.1	43.4	44.2
Individual consumption via public administration (% GDP)	20.8	22.4	21.1	21.5	18.9	18.7	19.5
<b>Employment</b>							
Activity rate (as a % of 15-64)	70.0	67.6	67.1	67.9	69.0	69.9	70.5
Male	83.3	78.3	75.8	74.8	75.3	75.2	74.9
Female	56.8	57.0	58.5	61.1	62.9	64.7	66.1

	1980	1985	1990	1995	2000	2005	2010
Employment rate (as a % of 15-64)	-	60.6	60.8	59.6	61.7	63.7	63.9
Male	-	72.1	71.0	67.4	68.8	69.1	68.2
Female	-	49.5	50.9	52.1	54.8	58.4	59.7
Unemployment rate (as a % of 15-64)	5.3	8.9	7.9	10.0	8.5	8.9	9.4
Share of long-term unemployed > 1 year (%)	34.3	45.2	41.4	40.2	39.6	41.0	40.2
Average weekly working hours for employees	-	39.6	38.9	38.4	37.2	38.0	38.0
Part time jobs (as a % of 15-64)	-	10.7	11.8	15.5	16.8	17.1	17.6

Source: INSEE, National Accounts, Census and LFS; Eurostat, OECD

Another way to analyze the evolution of the labor market is to describe its composition in terms of occupations. Figure 1 depicts this composition for active people between 25 and 54 since 1968. Three categories have experienced a decline: farmers (-84%); craftsmen, shopkeepers and business owners (-44%) and unskilled workers (-38%). Mechanically, the shares of the three remaining categories have risen: executive and high-skilled workers (+146%), intermediate jobs (+79%) and clerks (+37%). Providing a detailed analysis of the evolution of the French society is beyond the scope of this chapter. However, we can try to describe its main determinants. The decline of the share of farmers and shopkeepers and craftsmen is mainly due to concentration in their activities as well as important productivity gains for farmers. For unskilled workers, the explanation is less straightforward. Since the 1970s, the extinction of some industries (textile, mining...) and the decline of other (steel or car industries...) have led to a continuous reduction of the workforce. The expansion of the service sector as well as the increase in the level of required professional training mainly explain the growth of the shares of clerks, intermediate jobs and high-skilled workers. However, the classification of social positions is very complex. Changes in classifications respond to changes in society and it also reflects the balance of powers between social groups.

Figure 1: Composition of the French workforce (1968 - 2008)



Source: INSEE, census

### The nature of inequality and its development over time

In this chapter we analyze the evolution of inequality in France over the past decades. This is the first step towards the study of their social, political and cultural impacts as well as the policies that have been put in place to tackle them. The first and main question we ask is: has inequality grown in France during the past decades? We focus on several dimensions: income, wealth, earnings and education. Income and wealth are evaluated at 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 (Gini coefficient, interdecile ratios, Theil, top shares...). Unfortunately, we depend largely on publications which sometimes prevent us from providing a detailed analysis. We take a long-run overview, especially for household income, by going back to the 1970s.

In the second part of this chapter, we attempt to decompose the evolutions we look at in order to examine whom it has affected. We also try to be more specific about the interdependence between the various dimensions we analyze. Finally, we provide some evidence about the reasons why inequality has fluctuated in France between 1970 and 2010.



## 1. Has Inequality Grown?

### 1.1 Household income inequality

#### The overall evolution of income inequality

The main message of this section is that the stability of income inequality between 1980 and 2010 hides an evolution in two phases. Indeed, the decline of inequality observed during the 1980s has been canceled by an increase since the end of the 1990s. The rapid growth of capital income is the main cause of this recent increase but, and this is new in France, the rise in wage inequality also explains part of the evolution. This contrasts with a century of stability of the wage hierarchy<sup>2</sup>. Nevertheless, France is still more equal than most of the OECD countries.

Income is the dimension that is the most frequently studied in literature about inequalities. Several reasons can explain this fact: first, a lot of data are available and are usually considered as reliable (more than wealth surveys); second, it is a flow and not a stock like capital (material or human) and therefore, we can capture more precise evolutions. In this section, we are attempting to provide precise evidence of the evolution of income inequality by studying different definitions of income. This will allow us to capture the effects of taxes and transfers. Besides, we will use several inequality indicators because their degree of sensitivity is different and so the assessment in terms of level or evolution. Last, several sources of data will be used for the sake of comparison.

Before analyzing the evolution of income inequality in France over the last decades, we are going to examine the decomposition of income from primary income to disposable income at the macroeconomic level (Table 2). The goal is to present not only the different transformations affecting primary income but also the evolution of these transformations over time. To do so, we use national accounts computed by INSEE.

First, in national accounts primary income is composed of several sources of income: workers compensations (wages and salaries), capital income and gross operating profit and mixed income<sup>3</sup>. The evolution is definitely not similar across sources of income: large growth from wages and salaries and capital income; decrease of gross operating profit and mixed income. To obtain primary income, private transfers have to be added to factor incomes. Then, to get gross income, we add social security allowances (contributory benefits and assistance benefits). Finally, social security

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<sup>2</sup> See Piketty (2003)

<sup>3</sup> The macroeconomic definition of household income used in national accounts is different from the "usual" micro approach used in surveys or personal income tax data. Thus, imputed rents or health insurance reimbursements are included in the national accounts definition.

contributions and direct taxes (income and wealth taxes) are taken into account to compute disposable income. Unsurprisingly, disposable income is less than primary income because negative transfers are larger than positive transfers<sup>4</sup>. The negative impact of transfers has increased from 1960 to 2000 (especially before 1980). Since 2000, we observe a decline mainly driven by an increase in social security allowances. In order to go from disposable income to standard of living, we need to take into account household composition through an equivalisation scale. However, most of the time, this step is not detailed in French data so it is difficult to analyze its impact<sup>5</sup>.

**Table 2: From primary income to disposable income (1960-2011)**

	1960	1970	1980	1985	1990	1995	2000	2005	2010	2011
Primary income (in billion euros)	34.3	92.9	340.6	561.7	753.9	888.1	1,058.3	1,266.8	1,436.5	1,484.6
Primary income (in %)	100	100	100	100	100	100	100	100	100	100
Gross operating profit and mixed income	33.7	27.6	20.9	20.3	20.3	20.2	19.8	19.6	18.9	18.8
Wages and salaries	61.2	67.1	73.3	72.5	71.2	70.6	71.5	71.7	72.5	72.6
Capital income	5.1	5.3	5.8	7.2	8.5	9.2	8.8	8.7	8.6	8.6
- Net transfers	-5.0	-8.3	-11.7	-11.4	-12.0	-11.6	-13.7	-12.5	-10.2	-10.8
Social security allowances	15.4	18.3	22.2	25.4	25.1	26.8	26.0	26.9	28.9	28.9
Social security contributions	-16.7	-21.3	-27.5	-29.7	-30.5	-30.5	-27.5	-27.9	-28.4	-28.6
Income and wealth taxes	-4.4	-5.5	-6.9	-7.8	-7.6	-8.5	-12.6	-12.1	-11.4	-11.8
Other transfers	0.7	0.2	0.5	0.8	0.9	0.5	0.4	0.6	0.7	0.6
= Disposable income	95.0	91.7	88.3	88.6	88.0	88.4	86.3	87.5	89.8	89.2
Disposable income (in billion euros)	32.6	85.2	300.6	497.5	663.2	784.8	913.3	1,108.7	1,289.9	1,323.5

Source: INSEE, National Accounts

In order to analyze the extent of income inequality, we are going to use microeconomic data (surveys or personal income tax returns) and therefore the microeconomic definition of household income<sup>6</sup>. The starting point of the analysis is the evolution of the net equivalised disposable income. In other words, we are focusing on the after tax and transfers income standardized across types of households by means of equivalisation for their composition (number of adults and children). This is

<sup>4</sup> Except if we include in-kind transfers (like education, defense...) in disposable income.

<sup>5</sup> In this report, the equivalisation scale used will always be the OECD-modified scale: 1 consumer unit to the first adult in the household, 0.5 to the persons of 14 years or older and 0.3 to children under the age of 14 years.

<sup>6</sup> From now on, we will use the microeconomic approach to define the net household income. Thus, net 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. For the 1970s, all capital income is not well taken into account in data so there is a potential underestimation of inequality.

maybe the most important definition of income because it measures the standard of living of households. Table 3 presents the evolution of inequality from 1970 to 2010. We use indices with different degrees of sensitivity: D9/D1, Gini, Theil (mean log deviation), S80/S20 and the ratio average/median are sensitive to the middle part or symmetrically sensitive to the bottom and top of the distribution; the ratio D9/D5 is sensitive to the top of the distribution while D5/D1 is sensitive to the bottom.

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. This assessment differs between the EU-SILC and the other sources of data (because of breaks in EU-SILC series) and the evolution is not the same across all indices. The interdecile ratios present differences in terms of evolution. Most of the decline happens during the 1970s but the ratio D9/D1 decreases by 30% over the period while D9/D5 and D5/D1 only decrease by around 15%. Similarly, the increase of income inequality in the early 2000s is sharper for indices sensitive to the middle of the distribution.

The case of France is particular but not unique among OECD countries. Indeed, the Gini coefficient has increased by 10% in average between 1980 and the end of the 2000s in all OECD countries. Only France, Turkey, Greece, Hungary and Belgium have experienced either no variation or a slight decrease. The difference with Anglo-Saxon countries is striking over the same period since the increase in inequality in these countries is significant. Besides, many countries historically equal (like Germany or the Nordic countries) have also experienced a growth in income inequality. France was above the average level of income inequality in OECD countries during the 1970s and the 1980s. The country is now just below the average and close to countries from continental Europe like Germany, Estonia, Poland or Switzerland. This group of countries is itself between Anglo-Saxon (US, UK, Australia, Canada) and Nordic countries.

**Table 3: Household equivalised disposable income - Inequalities (1970-2011)**

Year	GINI	Theil	Mean / Median	S80/S20	D9/D5	D9/D1	D5/D1
INSEE:							
1970	0.340	0.20	1.22	6.0	2.2	4.8	2.2
1975	0.320	0.18	1.18	5.6	2.0	4.3	2.2
1979	0.300	0.16	1.16	4.6	1.9	3.8	2.0
1984	0.290	0.14	1.15	4.3	1.9	3.5	1.9
1989	0.280	0.13	1.14	4.1	1.9	3.4	1.9
1996	0.279	0.13	1.14	4.1	1.9	3.4	1.9
1999	0.284	0.13	1.16	4.1	1.9	3.4	1.8
2000	0.286		1.16	4.1	1.9	3.4	1.8

Year	GINI	Theil	Mean / Median	S80/S20	D9/D5	D9/D1	D5/D1
2002	0.281		1.16	4.1	1.9	3.4	1.8
2005	0.286		1.15	4.2	1.9	3.4	1.8
2007	0.289		1.16	4.2	1.9	3.4	1.8
2008	0.289		1.16	4.3	1.9	3.4	1.8
2009	0.290		1.16	4.3	1.9	3.4	1.8
2010	0.299		1.17	4.5	1.9	3.5	1.9
OECD:							
1984	0.300	0.16	-	-	-	-	-
1990	0.290	0.14	-	-	-	-	-
1995	0.277	0.13	-	-	-	-	-
2000	0.287	0.14	-	-	-	-	-
2005	0.288	0.14	-	-	-	-	-
2008	0.293	0.15	-	-	-	-	-
EU-SILC:							
1995	0.290	-	1.14	4.5	-	-	-
1998	0.280	-	1.12	4.2	-	-	-
2001*	0.270	-	1.11	3.9	-	-	-
2002	0.270	-	-	3.9	-	-	-
2004	0.282	-	1.15	4.2	-	-	-
2006	0.273	-	1.13	4.0	-	-	-
2008*	0.298	-	1.19	4.4	-	-	-
2009	0.299	-	1.18	4.4	-	-	-
2010	0.298	-	1.17	4.5	-	-	-
2011	0.308	-	1.19	4.6	-	-	-

Source: INSEE (Insee-DGI, enquêtes Revenus fiscaux 1970 à 1990; Insee - DGI, enquêtes Revenus fiscaux 1996-2005 ; DGFIP ; Cnaf ; Cnav ; CCMSA, enquêtes Revenus fiscaux et sociaux 2005-2009); OECD and EU-SILC.

Note: \* = break in data series for the EU-SILC in 2001 and 2008.

In Table 4, we study household income before taxes and transfers in order to look at their effects on the level of inequality. The source of data is the same (personal income tax return statistics) but the definition of income may differ across publications. In all estimations, the definition of income that is used is the household taxable income observed in PIT returns. However, in INSEE reports between 1970 and 1996, we observe the taxable income without any capital income<sup>7</sup> while OECD and LIS reports<sup>8</sup> provide estimates of taxable income with capital income. For the various sources, the same OECD equivalence scale is applied. The differences in terms of level before and after taxes and transfers (Table 3) are large. The interdecile ratio D9/D1 increases by 50% without taxes and

<sup>7</sup> In order to harmonize historical data, the authors simply drop all capital income (from financial and non-financial assets) from their computation.

<sup>8</sup> In 1984, two data sources are used by the LIS. With fiscal data, the Gini coefficient equals 0.53 against 0.48 with the 1984 budget survey produced by INSEE.

transfers. The Gini coefficient rises by 20-25% when capital income is excluded and by more than 60% when it is included. The absence of data for capital income in INSEE calculations between 1970 and 1996 is in fact interesting because it shows the importance of this source in total income dispersion. Despite these differences in levels the same trend appears until 1990 (slight decrease in inequality) but then we observe a period of relative stability. The other inequality indices do not present significant difference in terms of trend. Once again, the decrease seems less strong for indices sensitive to the top of the distribution. Thus, primary income inequality seems to follow only partially the same pattern as disposable income. This indicates that the evolution has not been only caused by market income evolutions but also by the evolution in taxes and transfers (see section 2.4 for more details).

### **What happened at the tails of the distribution?**

In order to understand the overall evolution, it is crucial to focus on the bottom and on the top of the income distribution because the tails are the drivers of this evolution. In Figure 2, we focus on the top of the distribution in order to study in detail the evolution of the top income shares<sup>9</sup>. This analysis is based on seminal works by Piketty<sup>10</sup>. The moderate rise in income inequality since 1990 hides a boom of the top 1% income shares. In 1980, the top 10% of income distribution holds 30.7% of total income while in 2006 it holds 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 shows that most of this increase happens between 1998 and 2006. The direct consequence is a transfer from the bottom to the top given that the share of the bottom 90% of the population has decreased by 2 points since 1980. This recent increase is mainly due to the rapid growth of capital income, particularly concentrated in this part of the distribution. Besides, the increase in labor income inequality (see section 2.1.3) has also contributed to this evolution. 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.

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<sup>9</sup> Here, the definition of income is different from the disposable income described above. Piketty (2003) only consider 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.

<sup>10</sup> See Piketty (2003) for long run evolution of top income shares in France and Landais (2009) for recent series.

**Table 4: Household equivalised income before taxes and transfers - Inequalities (1970-2010)**

Year	Gini	Theil	S80/S20	D9/D5	D9/D1	D5/D1
INSEE						
1970	0.41	0.30	10.3	2.47	8.16	3.31
1975	0.39	0.27	8.8	2.26	6.80	3.00
1979	0.37	0.25	7.6	2.13	5.81	2.73
1984	0.36	0.23	7.3	2.11	5.64	2.68
1990	0.34	0.21	6.7	2.04	5.14	2.52
1996	0.34	0.20	6.6	2.05	5.31	2.59
2003	-	-	-	2.01	5.04	2.51
2004	-	-	-	1.99	4.96	2.49
2005	-	-	-	2.00	5.03	2.52
2006	-	-	-	2.01	5.04	2.50
2007	-	-	-	1.99	5.04	2.53
2008	-	-	-	2.01	5.05	2.51
2009	-	-	-	2.00	5.17	2.59
2010	-	-	-	2.01	5.38	2.68
OECD						
1995	0.47	-	-	-	-	-
2000	0.49	-	-	-	-	-
2005	0.49	-	-	-	-	-
2008	0.48	-	-	-	-	-
LIS						
1979	0.46	-	-	-	-	-
1984	0.53/0.48	-	-	-	-	-
1989	0.49	-	-	-	-	-

Source: INSEE (Insee-DGI, enquêtes Revenus fiscaux 1970 à 1990; Insee - DGI, enquêtes Revenus fiscaux 1996, Insee-DGI, enquêtes Revenus fiscaux et sociaux 2003 à 2004, Insee-DGFIP-Cnaf-Cnav-CCMSA, enquêtes Revenus fiscaux et sociaux 2005 à 2010)

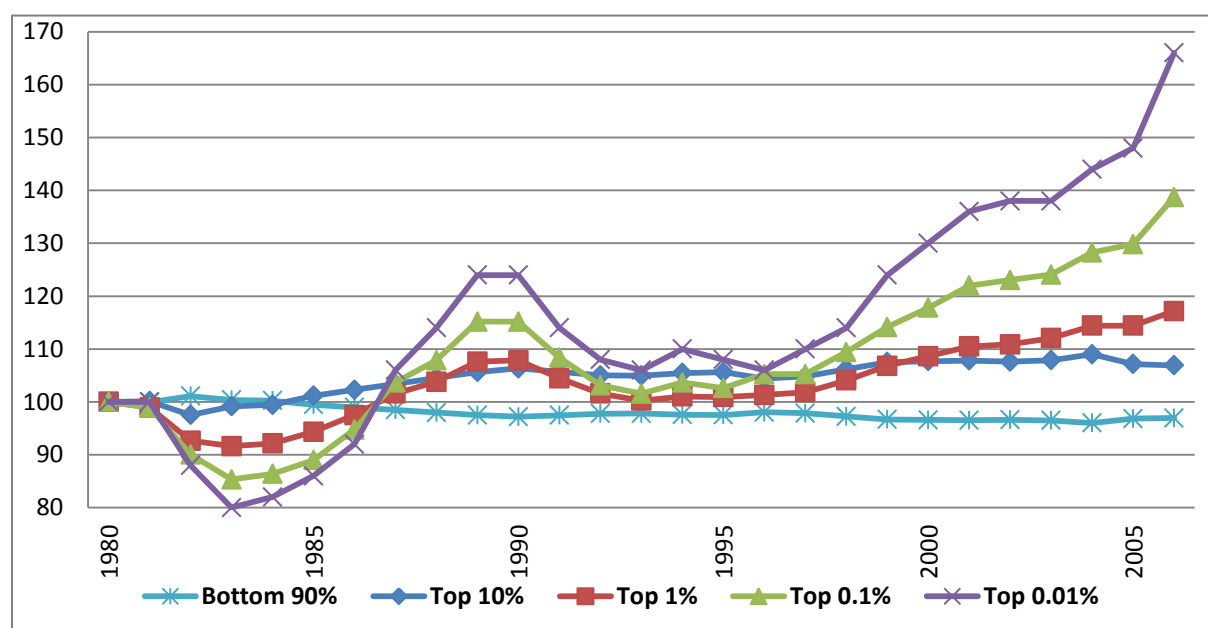
Note: capital income is excluded from INSEE data between 1970 and 1996; in 1984, two estimates are provided by the LIS: 0.53 is comes from fiscal data while 0.48 comes from the 1984 budget survey produced by INSEE.

The issue of inequality indicators needs a particular intention in this section. Alvaredo (2011) emphasizes the relationship between the most commonly used measure of inequality, the Gini coefficient, and the top incomes shares. Indeed, the Gini coefficient is more sensitive to transfers at the center of the distribution than at the tails. However, changes in the top income shares can impact overall inequality significantly. In his note, Alvaredo decomposes the Gini coefficient to analyze the impact of the top income shares. Secondly, he compares survey and tax data to provide evidence of severe under-reporting at the top of the distribution that considerably affects the true measure of inequality. Thus the dynamics of overall inequality described through survey data and inequality index insensitive to the tails can be misleading. This result is especially relevant for

countries where top income shares have significantly grown (the USA, the UK...). It is probably less the case in France even if a difference in magnitude exists between these indices.

Therefore, the increase in income inequalities starting in the late 1990s has canceled the decrease observed during the 1980s. This recent rise, especially significant for the top fractiles of the income distribution, can be explained by the combination of two phenomena: an increase in capital income and growing wage inequalities. In this section we will focus on the role of capital income. The section 2.1.3 deals with labor market inequalities and more especially wage inequality.

**Figure 2: Evolution of average real incomes by income fractiles since 1980 (basis = 1980)**



Source: World Top Incomes Database

Before turning to the role of income composition, let's look at the bottom of the income distribution. Poverty can be measured in many ways but the most usual index is the poverty rate. In developed countries, people are considered as poor if their income is below 60% (or 50%) of median disposable income (OECD definition). Table 5 shows that the poverty rate in France was very high in France in 1970. Almost 18% of the population had an income inferior to 60% of median income. This rate has declined by more than 30% between 1970 and 1985. Since, the proportion of poor households has been fairly stable. We can notice a slight increase in 1995 followed by a decrease in the 2000s. If we take the alternative definition (50% of median income), we observe the same trend. The difference in terms of levels allows a first estimate of the poverty depth. About half of the poor households have more than 50% of the median income but less than 60%. A more direct way to measure the intensity

of poverty is to use the poverty gap<sup>11</sup>. We can note that it follows the same pattern than the poverty rates. However, poverty is deeper today than it was in the 1990s. OECD estimates show an obvious (but still interesting) fact: taxes and transfers dramatically reduce poverty. Without any public intervention, the poverty rate would be 3 to 5 times superior depending on the definition. France is among the countries with the lowest level of poverty like the Nordic and continental European countries. As for income inequality, the situation in France is particular since poverty has remained stable since the 1980s while it has increased in many OECD countries (Sweden, Netherlands, Finland, New-Zealand or Japan for instance).

**Table 5: Monetary poverty (1970 - 2010)**

Monetary poverty	1970	1975	1980	1985	1990	1995	2000	2005	2009	2010
60% of median income										
Poverty rate:						40.7	38.9	37.8	37.6	
Before taxes and transfers				13.3	13.4	14.1	13.8	13.1	13.5	
After taxes and transfers	17.9	16.6	14.2	13.5	13.8	14.5	13.6	13.1	13.5	14.1
Mean poverty gap										
Before taxes and transfers						60.3	63.3	64.0	63.6	
After taxes and transfers				28.8	21.5	22.3	20.9	23.6	23.1	
Nb of households (million)	3.4	3.4	2.8	2.6	3.0	3.0	3.1	3.3	3.6	
Nb of individual (million)	8.6	8.5	7.5	7.2	7.8	8.2	7.8	7.8	8.2	8.6

Source: OECD computation for the poverty rate before taxes and transfers and the poverty gaps; INSEE for the poverty rate after taxes and transfers and for the number of poor.

In terms of absolute values, in 2010, 3.6 million of households are considered as poor in France. It represents more than 8.2 million of individuals in 2010. From this information, it seems interesting to detail the broad characteristics of this part of the population. It is possible to distinguish several patterns from Table 8. First, single households and single-parent families are overrepresented among poor people. In 2010, they represent 37% of the overall deprived households and their poverty rate is respectively 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, the one-earner couples represent 60% of deprived households.

<sup>11</sup> The mean poverty gap measures the distance below the poverty line as a proportion of the poverty line where the mean is taken over the whole population, counting the non-poor as having zero poverty gap.



**Table 6: Poverty and types of household (2009)**

Type of household	Total number of individuals (in thousands)	Total number of poor individuals (in thousands)	Poverty rate (in %)
Individuals belonging to a household with a household head below 65 y.o.	49,404	7,007	14.2%
Singles individuals	5,420	978	18.1%
Inactive men	571	196	34.3%
Active men	2,383	345	14.5%
Inactive women	672	204	30.4%
Active women	1,794	233	13.0%
Single-parent families	4,971	1,636	32.9%
Fathers	755	140	18.5%
Inactive mothers	905	545	60.3%
Active mothers	3,311	951	28.7%
Couples	37,385	4,028	10.8%
Inactive couples	2,716	543	20.0%
Active men - inactive women	2,130	280	13.1%
Active men - inactive women (no child)	1,166	170	14.6%
Active men - inactive women (1 child)	1,221	205	16.8%
Active men - inactive women (2 children)	1,864	410	22.0%
Active men - inactive women (3 children or more)	2,444	841	34.4%
Active couple (no child)	4,865	231	4.8%
Active couple (1 child)	6,443	299	4.6%
Active couple (2 children)	9,942	564	5.7%
Active couple (3 children or more)	4,594	485	10.5%
Complex households	1,628	365	2.4%
Individuals belonging to a household with a household head above 65 y.o.	11,075	1,166	10.5%
Singles individuals	3,512	555	15.8%
Couples	6,600	502	7.6%
Other	963	109	11.4%
All	60,479	8,173	13.5%

Source: Insee-DGFiP-Cnaf-Cnav-CCMSA, enquête Revenus fiscaux et sociaux 2009.

Definition: complex household = household composed of several families or single individuals.

Poverty is strongly correlated with employment simply because labor income is the major component of household income. However, working may not prevent people from being poor. The number of working poor is highly correlated with economic cycles: figures in 1998 and 2009 are similar (around 1.9 million) but we note a decline to a minimum of 1.77 million in 2003 and a peak at 2 million in 2007 (source: INSEE). Table 7 describes the evolution of the working poor depending on education and job contracts (rolling or temporary) from 2004 to 2010. As expected, 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. For these two dimensions, there is a constant increase from 2004 to 2009 mainly concentrated on workers with primary education (+48%) and/or with a temporary contract (+39%). The decrease between 2009 and 2010 should not be interpreted as a trend reversal but as a consequence of the reference population. Indeed, we compute a ratio "working poor / occupied workers" and the increase in unemployment rate between 2009 and 2010 has mostly affected this 'population at risk'.

**Table 7: Share of working poor (2004 - 2010)**

Working poor	2004	2005	2006	2007	2008	2009	2010
All	5.5%	6.1%	6.1%	6.5%	6.7%	6.6%	6.2%
Primary education	8.7%	10.0%	9.9%	10.7%	11.7%	12.9%	10.7%
Secondary education	5.2%	6.2%	6.2%	6.8%	6.7%	6.6%	6.7%
Tertiary education	2.6%	2.3%	2.5%	2.8%	3.3%	2.4%	2.9%
Temporary contract	9.1%	9.9%	10.2%	11.2%	14.4%	12.6%	10.4%
Permanent contract	3.5%	3.6%	3.6%	3.8%	4.1%	4.3%	4.1%

Source: EU-SILC

Universe: the reference population is the occupied population.

Definition: poverty threshold = 60% of median income.

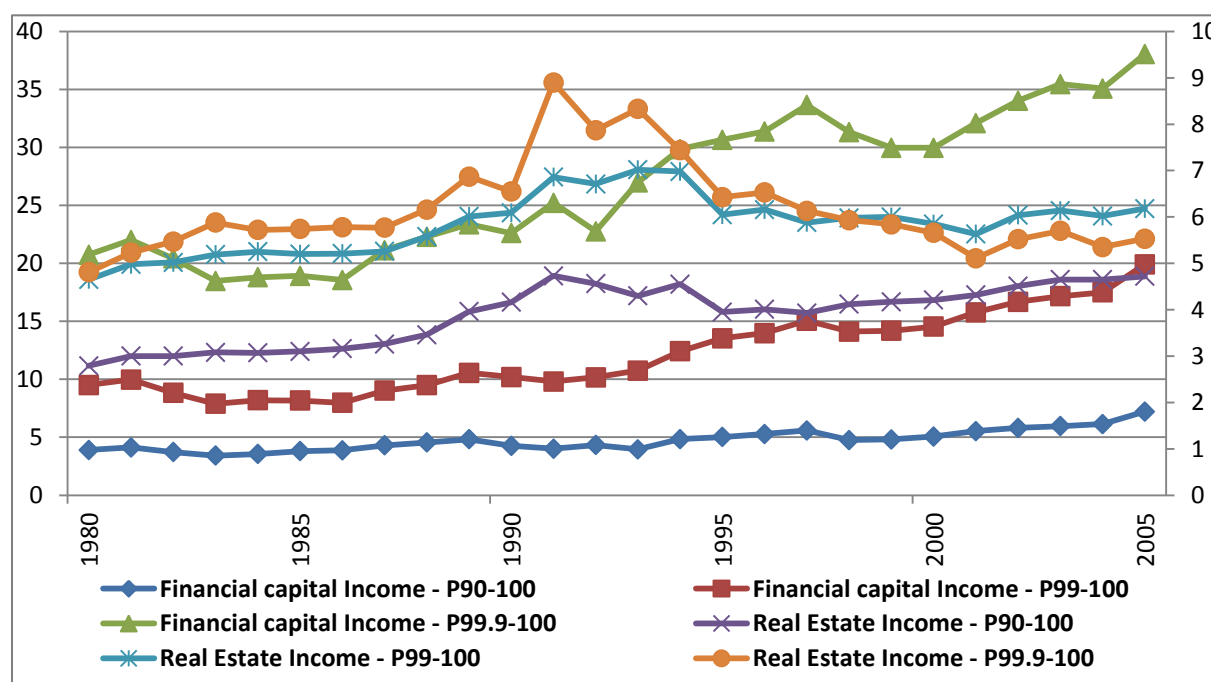
### The role of income composition

Income composition is crucial to understand the evolution of inequalities because all types of income do not experience the same evolution. A major stylized fact is that the share of capital income (interest, dividend, rent...) is positively correlated with total income. Besides, the correlation is even higher for income from financial assets. Figure 3 describes these two stylized facts and the evolution of the respective financial and non-financial income shares in the top fractiles of the income distribution. First, we see that the two stylized facts described above are verified. The most important comment to be done here is about their evolution. The share of rents<sup>12</sup> in total income is rather low (5-6%). It has increased quickly for the lower fractiles but it is more volatile for the highest

<sup>12</sup> Only real (i.e. non-imputed) rents are considered in the definition of fiscal income for this study. Indeed, even if imputed rents are taken into account in the definition of disposable income in national accounts, they do not appear in personal income tax returns.

fractiles. On the other hand, the evolution of incomes from financial assets is much larger especially for households above the top 1% of the income distribution. Moreover, the difference in terms of level is beyond comparison. In 2005, for the top 0.1%, the share of capital income is almost 40% while the share of rents is around 5.5%.

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



Source: World Top Incomes Database; property income (rents) on right axis

The growing share of capital income in total income is caused by a fast increase in capital income over the period. Landais (2009) provides evidence of 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 who perceives a strictly positive capital income. For them, the rise equals 53% between 1998 and 2005.

### The evolution of consumption inequality

Consumption inequality seems rather stable: between 1985 and 2006, the households belonging to the top quintile of the equivalised disposable income distribution consume twice more than the households from the bottom quintile. However, the overall expenditure does not tell much about its composition. During the same period, the budget structure has evolved differently along the income distribution. The difference in the weight of some items in the overall budget between the top and

the bottom decile of the equivalised disposable income is described in Table 8. More specifically, the gap in terms of food expenses has been reduced from 12 to 5 points. This decrease comes from a decline of the food expenses for all the households but more significant for the bottom 10%. Inversely, the housing expenses, rather equal in 1985, have grown more quickly for the bottom households mainly because of the increase in rents and of the decrease in the share of tenants at the top of the distribution (see section 3.7 for more details). For the other items, the evolution is small even if the differences between deciles can be significant. This is the case for transportation, for leisure or for the budget dedicated to restaurants and hotels.

**Table 8: Consumption structure across the income distribution (1985 - 2006)**

	1985	2001	2006
Food and non-alcoholic beverages	- 11,5 %	- 6,6 %	- 5,1 %
Alcohol and tobacco	- 0,4 %	- 0,9 %	- 1,1 %
Clothes and shoes	1.1%	1.5%	0.6%
Housing, water, electricity, gas and other fuels (excl. Imputed rent)	- 2,4 %	- 9,8 %	- 13,7 %
Furniture and housing maintenance	3.1%	3.3%	4.1%
Health	- 1,9%	0.3%	0.9%
Transportation	5.0%	4.0%	5.4%
Communication	- 0,1 %	- 1,4 %	- 1,8%
Leisure and culture	2.4%	2.1%	2.6%
Education	0.0%	0.1%	0.1%
Hotels and restaurant	3.4%	5.9%	7.4%
Other	1.6%	1.4%	0.6%

Source: Household Budget Survey

Interpretation: in 1985, the weight of the food and non-alcoholic beverages expenditures was 11.5% higher in the households belonging to the bottom decile (of the equivalised disposable income) than in the households belonging to the top decile. In 2006, this gap was 5.1 points.

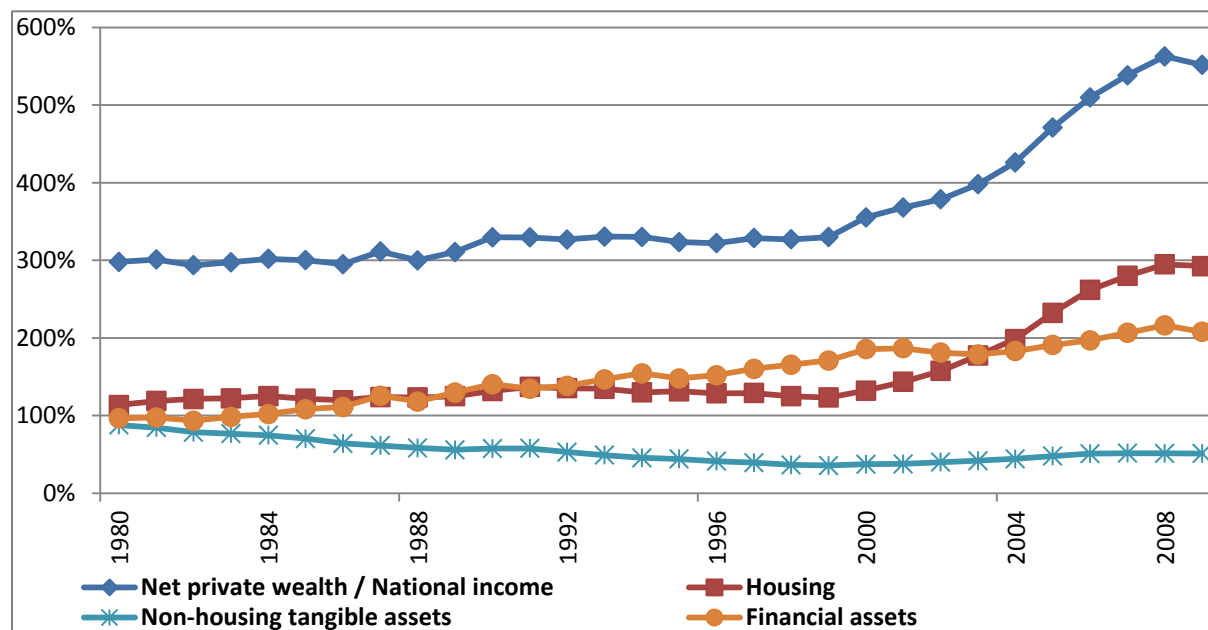
## 1.2 Wealth and debt inequality

The long run history of wealth in France is crucial to understand the recent evolution of its levels and distribution. Piketty (2011) uses national accounts to describe the evolution of household wealth. During the last 30 years, the ratio net private wealth<sup>13</sup> / national income has almost doubled going from 298% in 1980 to 552% in 2009 (Figure 4). If we put into perspective this huge 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

<sup>13</sup> 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.

specifically, the returns to capital are bigger than the income growth since the beginning of the 1980s and it favors capital accumulation. This figure also reveals that most of the increase is due to real estate; financial assets play a minor but more continuous role in this upward trend. In 2009, tangible assets, most of which are dwellings, constitute almost two thirds of total household wealth.

**Figure 4: Net private wealth / national income (1980 - 2010)**



Source: National accounts - Computation by Piketty (2011)

Definition: Net Private Wealth = Tangible Assets (housing and non-housing) + Financial Assets - Financial Liabilities

What are the consequences in terms of distribution? Has this rise benefited to everybody or only to a small fraction of the population? Piketty *et al.* (2006) highlight that wealth inequalities have grown until 1914 and declined after but Landais (2009) demonstrates that most of the recent growth in income inequalities has been caused by capital income. Does it mean that wealth inequalities have followed the same pattern?

The main difficulty for the study of wealth inequality is to obtain data that accurately capture the top of the distribution. Two possible sources are available: the wealth surveys with classical sampling and non-sampling errors (self-reported amounts + difficulties to capture the top of the distribution) or fiscal sources (more restrictive definition of wealth or focus on specific sample).

Using surveys, we see that wealth is very unequally distributed, much more than income (Gini index generally twice as big and 50% of the population holds more than 90% of total private wealth i.e.

50% of the population has close to 0 net wealth). Two studies<sup>14</sup> using the French wealth surveys describe the evolution of wealth inequality at the household level over the period 1992-2010. Here we only consider the material wealth (financial, non-financial and professional). Pension wealth and human capital are excluded. Finally, debts are included in the definition: here wealth is gross and not net. Over the period 1992-2010 we observe an increase in wealth inequality that mostly arises between 2004 and 2010 (Table 9). Whereas the Gini index is stable at 0.64-0.65 over the period, the interdecile ratios and the top shares have almost all grown. For instance, the amount of wealth held by the top centile has increased by 36%, the share of the top decile by 4.8%. Whereas the ratios D9/D5 has decreased by 10%, the ratio between the third and the first quartile has almost doubled. The households of the top quartile are, in 2010, 40 times richer than the households of the bottom quartile. The top shares and the interquartile ratios indicate that rich households get richer and also that the poor are getting poorer.

Cordier *et al.* (2006) decompose wealth inequality in order to identify its major determinants. The factors that explain these inequalities do not change much between 1992 and 2004. Income and social positions jointly explain half of household wealth; education and household structure (matrimonial status, presence of children...) explain all around 10%. Age also plays a key role in this evolution since the median wealth of people above 50 has increased while the trend is negative for people below 30. Only two factors explain a bigger share in 2004 than in 1992: inherited wealth and housing tenure (tenant or owner).

**Table 9: Household wealth inequality (1992 - 2010)**

	1992	1998	2004	2010
GINI	0.64	0.64	0.64	0.65
Average / Median	1.7	1.7	1.7	1.7
D9/D5	4.1	4.0	3.9	3.7
Q3/Q1	20.4	22.8	26.9	39.5
Top wealth shares (in %)				
P50	92	92	93	93
P90	46	46	46	48
P99	12	12	13	17

Source: INSEE, French Wealth Surveys (1992, 1998, 2004 and 2010).

Definition: hh wealth = gross financial, non-financial and professional wealth

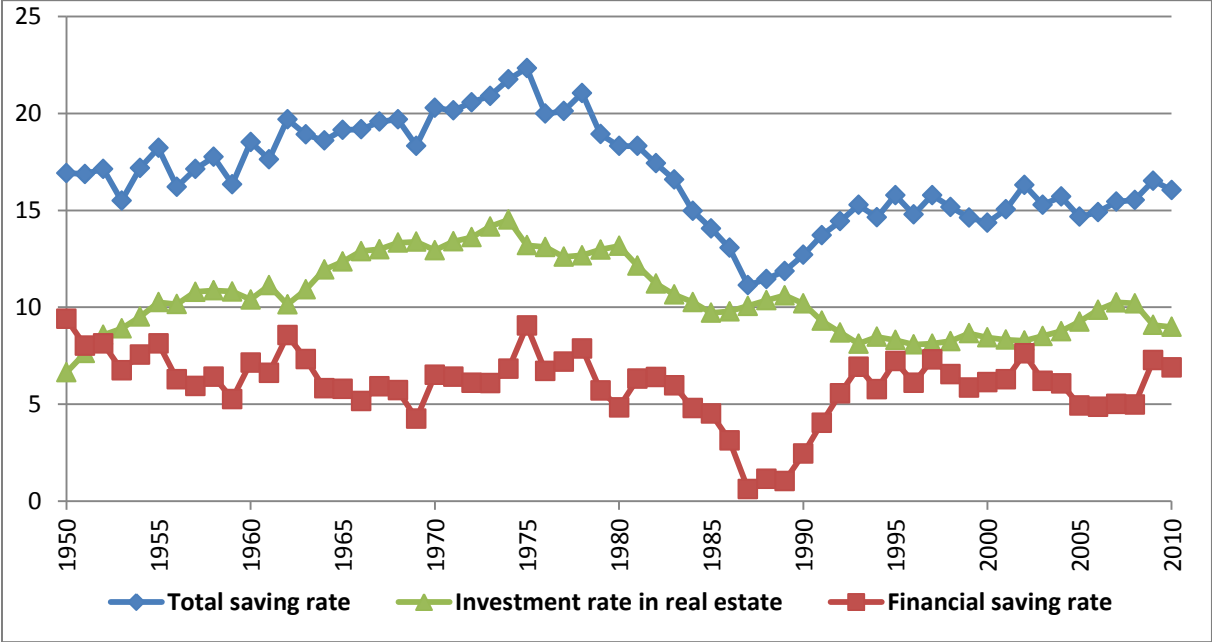
<sup>14</sup> Cordier *et al.* (2006) and Chaput *et al.* (2011)

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 released by the French Finance Ministry (DMTG sample). They show that the wealth share held by the top decile of the wealth distribution is equal to 60.9% in 1994 and the share held by the top centile is superior to 21%. GINI index is around 0.75. Furthermore, the 2010 *Global Wealth Report* produced by Crédit Suisse indicates that there are more than 2.2 million dollar millionaires living in France. This represents 9% of the total number of dollar millionaires in the world and makes France the first European country of residence for millionaires. Unfortunately, the lack of historical data prevents us from providing more precise trend.

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 about 20%-25% of national income between 1820 and 1910, down to less than 5% in 1950, and back up to about 15% by 2010. This result demonstrates that, in France at least, the structure of modern economic growth does not seem to lead to meritocracy.

Let's now look at other dimensions of household wealth: saving rates and liabilities. Figure 5 presents the evolution of saving rate from 1950 to 2010. The overall saving rate has been and is still high in France (above 15% of household disposable income except in the early 1980s). We decompose this rate in two components: the financial saving rate and the investment rate in real estate. The latter is less volatile than financial saving. Moreover, these two components seem rather substitutable especially during financial crisis (late 1980s and late 2000s). Fesseau *et al.* (2009) estimate that the savings of the top 20% of the disposable income distribution represents 80% of the overall household saving. The saving rate of the poorest is close to 0 or even negative (depending on the methodology). In terms of level, France saves much more than most OECD countries. For instance in 2010, the saving rate in France was equal to 16%, vs. 13% in Spain, 11% in Germany and only 5-6% in the US, the UK and Italy.

Figure 5: Household saving rate since 1980 (in % of disposable income)

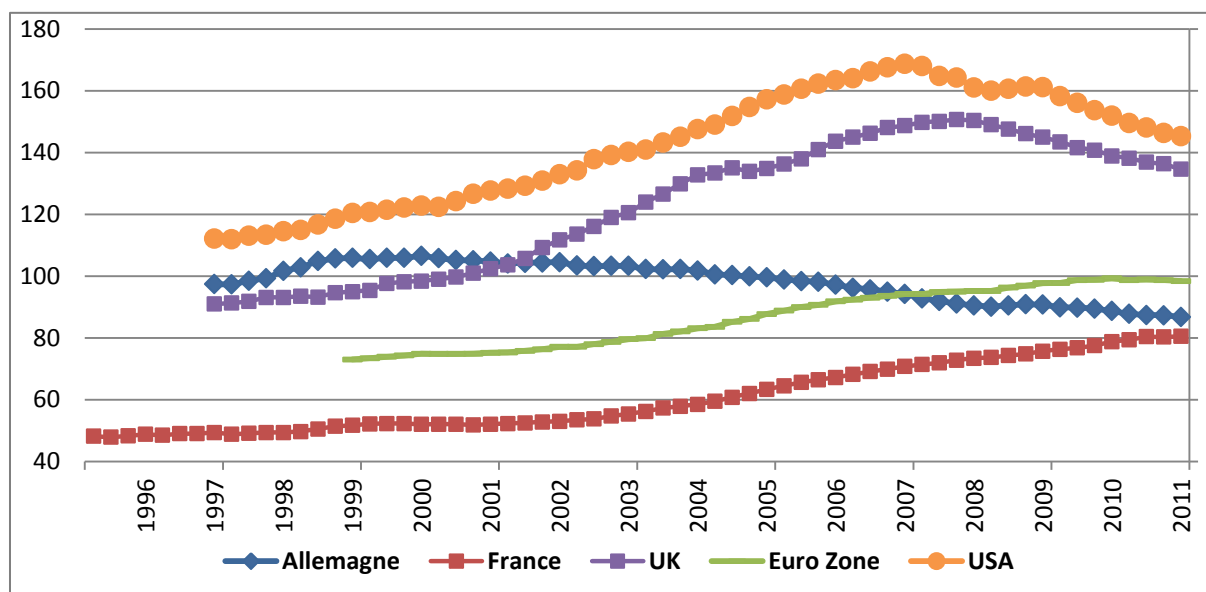


Source: INSEE - National accounts  
 Definition: saving rate = household savings / disposable income

Households' liabilities have increased in France during the 2000s but remain much lower than in most OECD countries and more especially the UK, the US, Japan or Canada. In 1996, French households' liabilities represented 48% of disposable income; in 2011, this ratio is superior to 80%. The downward trend observed in the UK and the US (and also in Japan and Spain) since the economic recession does not seem to take shape in France. Houdré (2007) describes the composition of private debt. In 2004, 46.8% of French households have liabilities. The share of households holding mortgage or consumption loans is similar (29.7% and 27.7%, respectively) and around 10% have liabilities for both motives. However, the value of the investments in real estate represents more than 70% of total household debt. Consumption motive is more predominant for young generations. The level of inequality for liabilities is close to wealth inequality since the Gini equals 0.6. Both the share of indebted households and the level of liabilities increase with income (especially for real estate) but the debt weight is greater for low income households.



Figure 6: Private debt (in % of disposable income)



Source : French Central Bank

Definition : private debt is the sum of household's and non-profit organizations' debts (in % of disposable income)

### 1.3 Labor market inequality

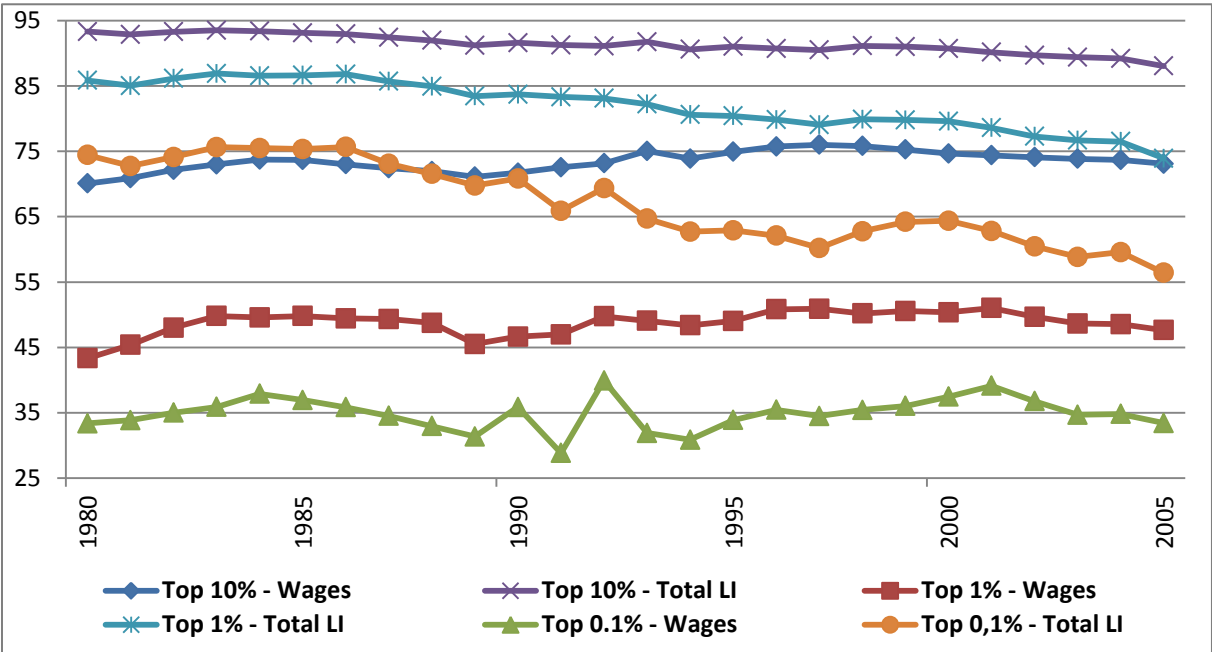
So far, income and wealth were measured at the household level. We are now turning to the individual components of these two variables: labor income and education. These variables are interesting in and of themselves because they might be drivers of social and political impacts, as we will see in chapters 3 and 4, but also because they are drivers of household income inequality. Access to labor market and earnings determine a large part of household income and educational inequality determines in part earnings inequality. This last dimension will be discussed in section 2.1.4.

Before examining the extent of earnings inequality, we need to determine the significance of labor market earnings for household income. This information is crucial to understand the origin of inequality. Figure 7 describes the share of wages, salaries and pensions in total income for the top of the income distribution. The share of labor income is negatively correlated with the position in the distribution. More specifically, wages are the major source of income for the bottom 99% of the income distribution. If we compute the share of total labor income (wages, salaries and pensions + farm, business and non-business income) then the importance of labor income is even more striking. It represents more than 90% of total income for the top decile and still around 80% for the top centile. Capital income becomes predominant only within the top 0.1%. Over the period, we can see that the share of wages is fairly stable but that the share of farm, business and non-business income decreases especially for the top 0.1% since this category of income represented 40% of total income

in 1980 but only 20% in 2005. As a consequence, the significance of labor-market earnings for household income inequality is crucial.

Another (less direct) way to link individual earnings to household income is to look at the number of earners by household (see Table B3 in appendix). In 2011, the share of two-earner households among the active population (households composed of students or inactive above 65 are excluded) equals 57.2%, including 72.5% of them working full-time. In one household out of five there is no earner. The time period for which we have this information is short (2005 - 2011) but we do not notice much variation of these shares (source: EU-SILC).

Figure 7: Share of labor income for top fractiles (1980 -2005)



Source: World Top Incomes Database

Note: "wages" = wages, salaries and pensions; "total LI" = wages, salaries and pensions + business, non-business and farming income.

Inequality indicators strongly depend on the sample that is chosen. In most studies regarding wages, only full-time wage earners are observed. Table 10 describes the level of yearly wage inequality for this sample<sup>15</sup>. 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 D9/D1 was 3.3 in 1980 and is now equal to 2.9. By decomposing this ratio into two parts D9/D5 and D5/D1 we can see that the evolution is different across these measures. The reduction in inequality mainly

<sup>15</sup> The notion of hourly wage is not the best approach for studying inequality at the top of the wage distribution, since we find jobs in consultancy or the leisure industry where people earn high wages for a very limited set of hours.

comes from the bottom of the wage distribution since the ratio D5/D1 is the only one decreasing over the period (from 1.7 to 1.5). Contrary to many OECD countries, the minimum wage 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 (see Figure 23 in Chapter 5). Moreover, the growth of women's labor market participation (Table 1) partly explains the trend described above.

**Table 10: Wage inequality (1980 - 2009)**

	1980	1985	1990	1995	2000	2005	2009
A) Full-time wage earners only:							
D9/D1	3.3	3.1	3.3	3.3	3.1	2.9	2.9
D9/D5	1.7	1.6	1.6	1.7	1.6	1.5	1.5
D5/D1	1.9	2.0	2.0	2.0	1.9	2.0	2.0
	2002	2004	2005	2006	2007	2008	2009
B) All workers and unemployed:							
D9/D1	7.4	7.4	7.4	7.5	7.1	6.9	7.5
D9/D5	2.0	2.0	2.0	2.0	2.0	2.0	2.0
D5/D1	3.6	3.7	3.7	3.7	3.6	3.5	3.8

Source: INSEE, DADS.

Definition: earnings are net of employee and employers social security contributions and of direct taxes (CSG and CRDS). They are computed on an annual basis.

Universe: France, full-time wage earners only (public and private sectors) for panel A; all workers and unemployed for panel B.

Focusing on full-time wage earners only can be misleading because it hides the increasing duality of the labor market (and as a consequence the role of working hours) and it excludes the self-employed. Indeed, Aeberhard *et al.* (2007) have shown that the share of non-full-time workers has increased by 50% in France between 1978 and 2005<sup>16</sup>. Panel B of Table 5 provides evidence. If unemployed and part-time workers are added to the sample, the interdecile ratios significantly grow. More specifically, the ratio D9/D1 equals 7.5 against 2.9 for full-time wage earners only in 2009. Over the period, we see a decrease in the D9/D1 ratio in 2007-2008 that is canceled by a rise in 2009.

These issues have also been tackled by several publications. In OECD (2009), Gini coefficients for earnings are provided for different samples. In 2000, for full-time wage earners only, the Gini is equal to 0.30; it rises to 0.345 if part-time workers are included. Self-employed people make this coefficient grow to 0.358. For these two extended definitions of workforce there has been an increase by 6% between 1984 and 2000. Moreover, this report estimates the respective roles of working hours and hourly wage in the overall wage inequality. In 2000, almost 50% of earnings

<sup>16</sup> More figures about the composition of the labor force are presented in Chapter 5.

variation is explained by variation in working hours, the other half by variation in wage rate. In most countries, except Ireland and Australia, the role of wage rate is much more marked. Marc *et al.* (2011) complete these findings by indicating that the role of variance in working hours has been roughly stable between 1995 and 2009. The role of working hours is also more significant for unskilled workers than for managers and business owners<sup>17</sup>. As a conclusion, the stability of the wage hierarchy among full-time wage earners hides rising inequality in the overall working population during the past decades.

Like for income, the analysis of top wage shares is important because it allows us to focus on specific parts of the sample that are crucial to understanding the dynamics of inequalities over time. The slow growth of mean wage<sup>18</sup> hides important disparities across the distribution. Results from Piketty (2003), Landais (2009) and Godechot (2012) demonstrate that the top wage shares have increased over the period especially between 1998 and 2007 (Figure 7). Like for income, there is a transfer of 2 points from the bottom 90% of the wage distribution to the top 10%. Within the top centile, wages are booming: +21% for the top 1% but +335% for the top 0.01%. This result is a major novelty in France because it puts an end to a century of relative stability of the wage hierarchy.

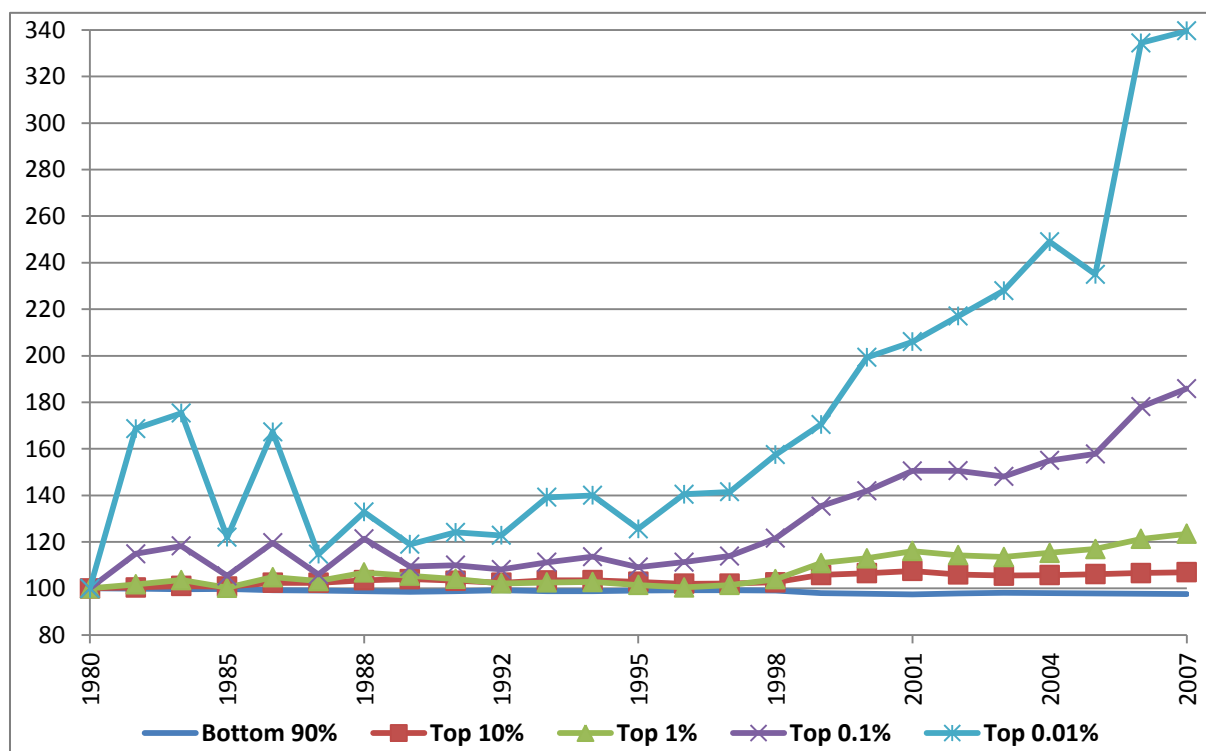
During the same period labor incomes of the self-employed have also grown unequally. The self-employed people of the bottom of the distribution have experienced a decrease in earnings (-30% for the first quartile). The main explanation to this decline is the Dutreil law<sup>19</sup> which makes easier the creation of individual and small businesses (with low income). On the other hand, labor income for the top decile goes up by 10% and even by more than 20% for the top centile. As a consequence the inequality among self-employed has strongly risen since 1998.

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<sup>17</sup> See also Table B1 in appendix

<sup>18</sup> Between 2000 and 2009, the annual growth rate of net wages for full-time workers equals 0.49% (source: INSEE).

<sup>19</sup> This law (passed in 2003) simplifies the administrative process of firm creation and provides financial incentives to entrepreneur (tax cuts, loans...).

**Figure 8: Evolution of average real wages by wage fractiles since 1980 (basis = 1980)**

Source: INSEE - DADS extracted from Godechot (2012)

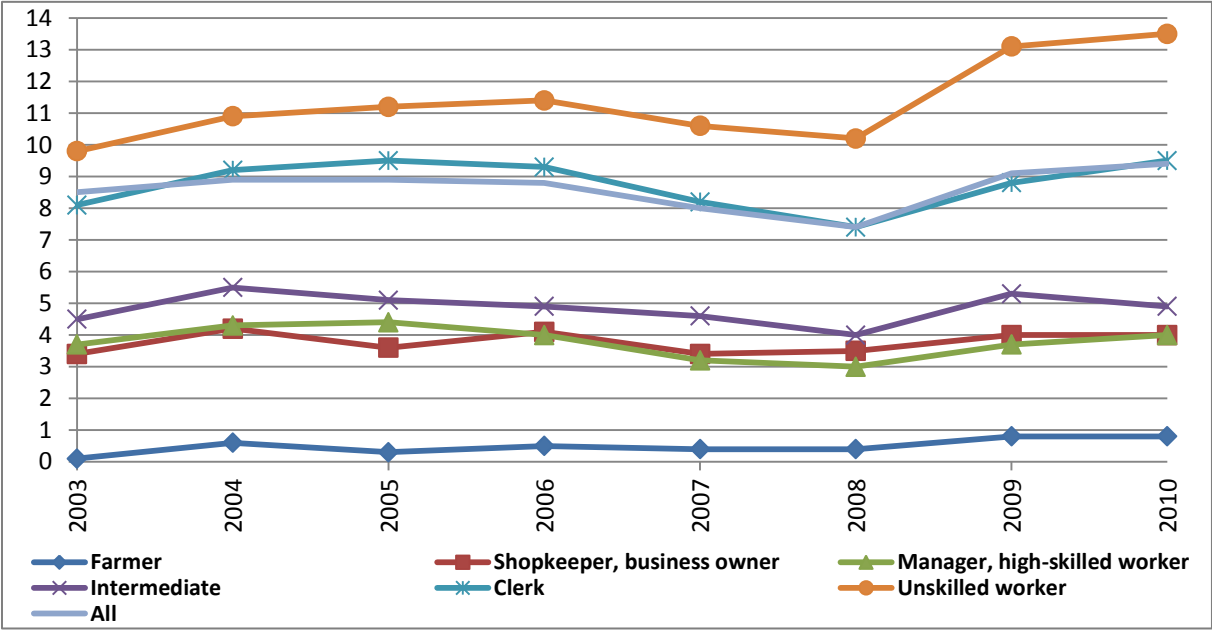
Definition: annual sum of gross wages (incl. employee SSC) by individuals that are over half the minimum wage (capital gains and stock options are excluded)

Until now, we have discussed earnings inequality but labor market participation is determinant to have a full picture of labor market inequalities<sup>20</sup>. Figure 9 presents the unemployment rates across social positions<sup>21</sup>. There is a clear and strong correlation between workers' social positions and unemployment rate. Over the period 2003 - 2010, France has experienced a reduction in unemployment rate from almost 9% in 2004-2005 to 7.4% in 2008. Because of the economic recession, this rate is equal to 9.4% in 2010. In terms of level, unskilled workers and clerks are much more affected by unemployment than people in intermediate or managerial positions. The ratio between managers and unskilled workers is between 2.5 and 3.5. The other key information in this figure is about the consequence of a recession, concerning unemployment, across categories. Unskilled workers and, to a lesser extent, clerks are immediately affected. As a consequence, the ratio of unemployment rates between executives and unskilled workers goes up to 3.4 in 2010.

<sup>20</sup> Evolution of part-time jobs and temporary contracts as well as underemployment are described in Chapter 5

<sup>21</sup> In appendix, we replicate the same operation for education.

Figure 9: Unemployment rates across social positions (2003 - 2010)



Source: INSEE, Labor Force Survey

The results described in this section show that changes in wage inequality during the last decade lead to a major break in France. Indeed, the relative stability of the wage hierarchy over the XXth century has been replaced by an increase in inequality through a transfer to the very top of the distribution. This rise is more modest compared with the evolution in Anglo-Saxon countries<sup>22</sup> but it has contributed to the rise in inequality since the late 1990s.

**1.4 Educational inequality**

Like in many other countries, the educational attainment of French people has rapidly increased over recent decades. Specifically, in 2010, among the 25-34 the proportion of tertiary educated men is equal to 38.3% as compared to 18.7% for men aged between 55 and 64. The rise for women is even more dramatic since these proportions are equal to 47.2% and 17.8%, respectively. Human capital is probably the main factor explaining the differences of incomes between individuals. As a consequence, whereas this increase of educational attainment has benefited to everyone is a key question to understand the mechanisms behind economic inequalities as presented in the previous sections. We will begin by explaining in more details the evolution of educational attainment in France over a recent period. Then, we will focus on causes and consequences of this increase by

<sup>22</sup> See Piketty and Saez (2003).

looking at educational inequality and on the link between employment chances and educational attainment.

### Changes in educational attainment

Figures 10 and 11 depict the evolution of educational attainment for the adult population by cohort in 2010. We present four categories of ages (25-34, 35-44, 45-54 and 55-64) and men and women separately (in order to emphasize the differential evolution between genders). Whatever the gender we observe the same trends: a sharp decline of the share of people with no diploma (even primary) and a huge increase of the share of individuals with high school diploma or more. These evolutions have been fairly continuous. However, there is a difference between men and women. The distribution of diploma across gender was very similar for the oldest cohort but women have widened the gap over the period: the share of women between 25 and 34 with at least high school diploma equals 70% while it is almost 10 points lower for men. How was this expansion of schooling related to its distribution? We measure the Gini index for the inequality of years of education by cohort (by using the 2008 wave of the European Social Survey). We observe a continuous decline of the level of inequality across cohorts: from 0.23 for the cohort born before 1930 to 0.122 for the cohort born after 1980. This trend is representative of the general trend in developed countries (see Meschi and Scervini, 2010).

**Figure 10: Educational attainment by cohort for women (2010)**

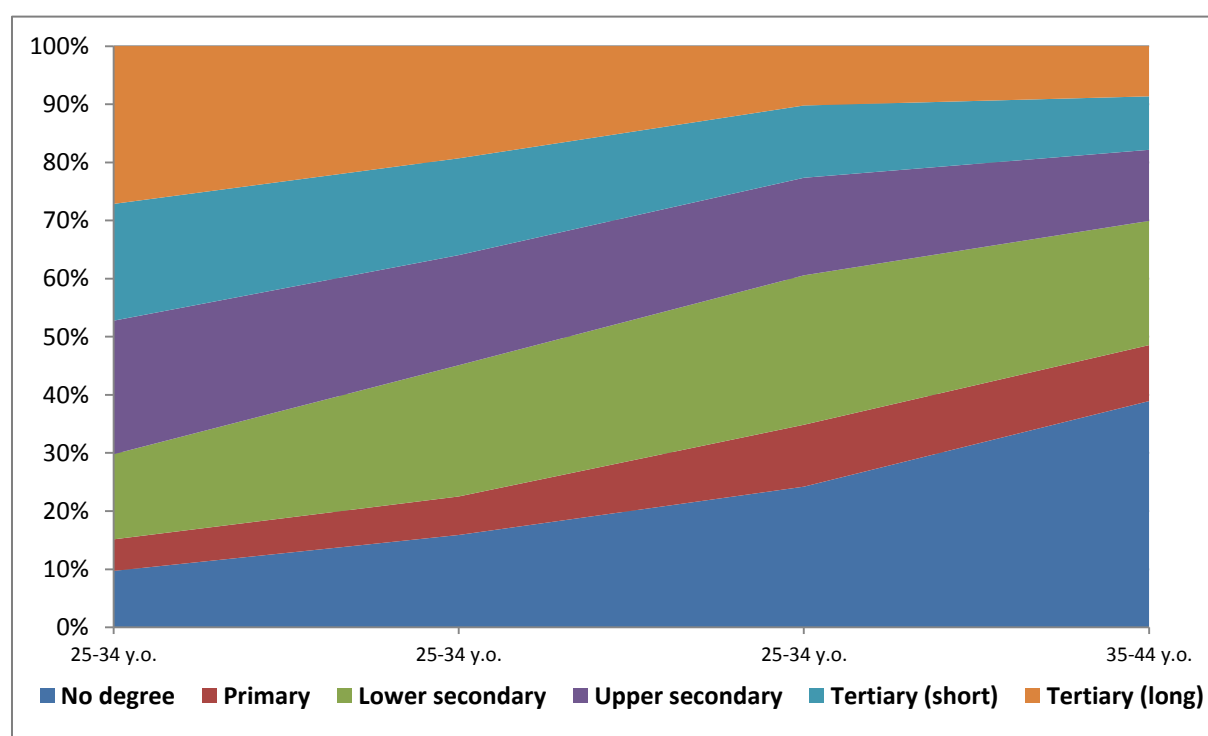
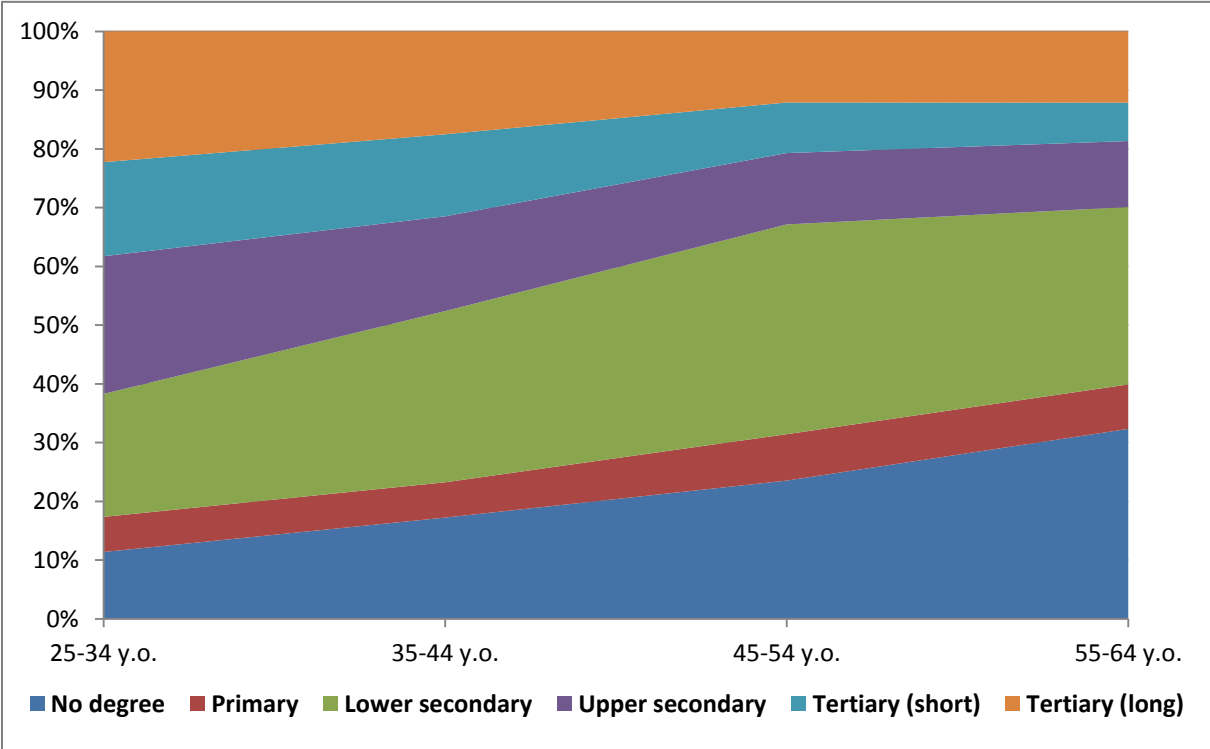


Figure 11: Educational attainment by cohort for men (2010)



Source: INSEE, Labor Force Survey

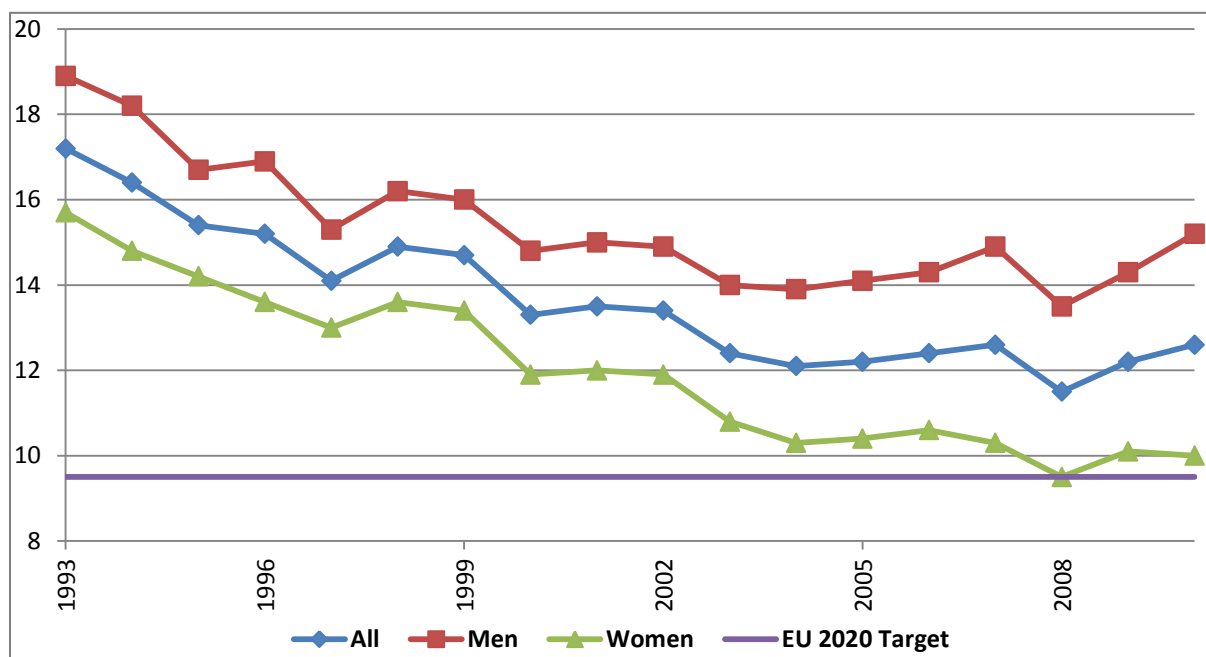
Other indicators can be used to describe the evolution of educational attainment in France over recent decades. For example, the number of students enrolled in tertiary education has increased by 35% between 1990 and 2010 (source: DEPP). Public and private schools or universities do not have experienced similar evolution. More specifically, the number of students has increased by 24% in public universities, by 112% in engineering schools and by 161% in business or management schools.

Last, the evolution of dropout<sup>23</sup> helps us to shed another light on the French educational system. This dimension is especially relevant since it is one of the objective of the "EU 2020". Indeed, according to the EU 2020 goals, the share of dropout will have to be inferior to 10% and at least 40% of the 30-34 years old. will have to have completed tertiary education. Figure 12 presents the evolution of dropout in France since 1993 with a decomposition by gender. First, we see that the share of dropout has continuously decreased from 1993 to 2002 but this share is quite stable around 12% since with a slight increase between 2008 and 2010. The second part of the period of observation casts serious doubts on the probability of reaching the EU 2020 target. Second, we observe a large difference between genders. Whereas we notice a continuous downward trend for women over the period, the decline of dropout for men stops in 2003 and increases after.

<sup>23</sup> The share of dropout is defined as the share of people aged between 18 and 24 who is currently not at school and who have a level of education inferior to the secondary



Figure 12: Dropout (1993 - 2010)



Source: Eurostat

### The role of social background in educational attainment

The French tertiary educational system is known to be dual. On the one hand, there are public universities and on the other hand some elite schools (the *Grandes Ecoles*) that can be either private or public. A paper by Albouy and Wanecq (2003) studies how the probabilities of graduating from tertiary education, and more especially of French elite schools, depend on social background. Table 11 presents the main result of the article. We observe very large differences of success depending on social origins. More specifically, for men born between 1959 and 1968, the probability of being a student of the top elite schools is 40 times superior for men with high social background compared with men from low social background<sup>24</sup>. An interesting information is about the evolution of these ratios. 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 see a sharp decline for men born in the 1920s and 1930s but an increase in inequality for younger cohorts. As a consequence, the democratization of French system is partial. Social background is still a strong determinant for the access to the elite schools that "feed" the intellectual and economic elite.

<sup>24</sup> High social background = father being a business owner or a high-skilled worker (manager, engineer...); low social background = father being an unskilled worker.

**Table 11: Ratios of probabilities of educational attainment between students with low or high social backgrounds**

	Cohort born between				
	1919-1928	1929-1938	1939-1948	1949-1958	1959-1968
No diploma from tertiary education	0.03 [0,027;0,034]	0.04 [0,032;0,038]	0.05 [0,051;0,058]	0.06 [0,059;0,066]	0.07 [0,068;0,078]
University (short cursus)	11.6 [9,8;13,4]	10.7 [9,4;12]	5.9 [5,4;6,3]	5.8 [5,4;6,2]	5.7 [5,2;6,1]
University (long cursus)	37.0 [28,5;45,5]	27.2 [22,3;32]	18.9 [16,6;21,3]	16.7 [15,0;18,5]	12.0 [10,2;13,7]
Elite schools and top elite schools	33.5 [28;39]	26.8 [23,2;30,3]	18.0 [16;20]	16.9 [15,1;18,6]	19.8 [17,2;22,3]
Incl. elite schools only	24.2 [19,6;28,8]	22.5 [19,1;25,9]	15.0 [13,2;16,9]	14.2 [12,6;15,9]	16.6 [14,3;19]
Incl. top elite schools only	52.0 [35,4;69,6]	29.5 [22,1;36,9]	23.7 [18,1;29,3]	25.2 [19;31,4]	39.9 [24,0;55,9]

Source: INSEE, Labor Force Surveys (1984, 1987, 1990, 1993, 1996, 1999, 2002). Table extracted from Albouy and Wanecq (2003).

Interpretation: figures at the top of each cell are the ratio of probability of reaching a given educational level between men from high social background and men from low social background. When the ratio is inferior (superior) to 1 it means that people from low social background are more (less) likely to reach this position. 95% confidence intervals between brackets.

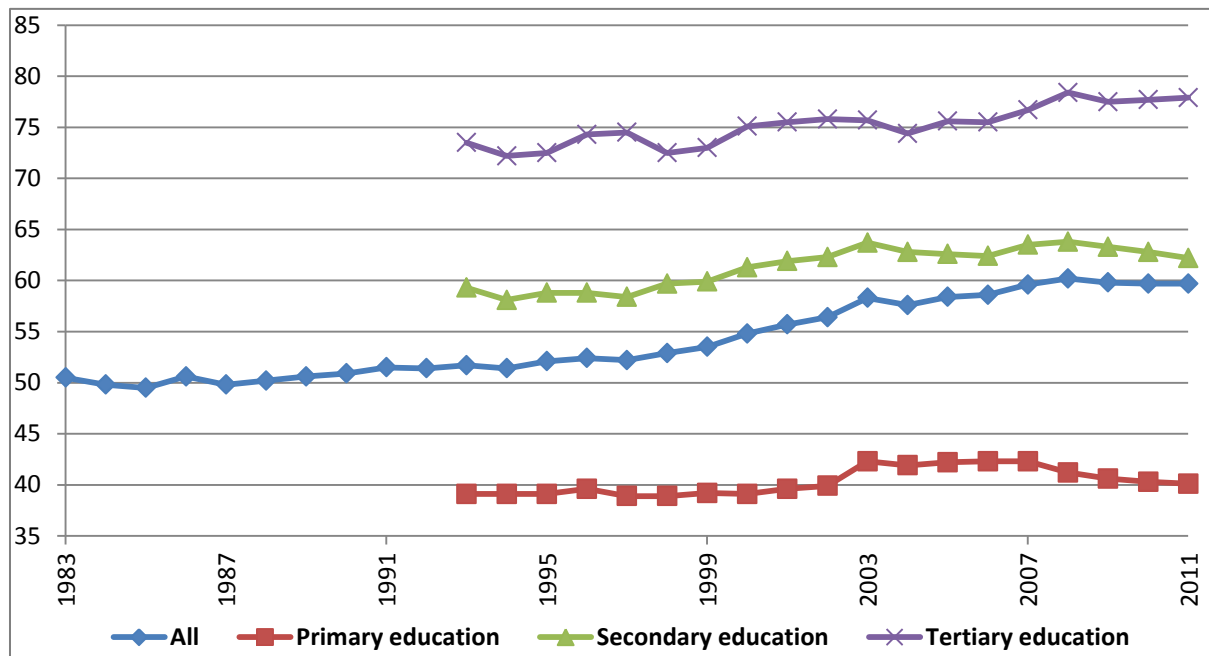
### Education, employability and returns

For most households, we have seen that labor income is the main source of income far before capital income. As a consequence it is crucial to analyze the role played by education in earnings. At least two ways exist to address this issue: access to jobs and returns to education.

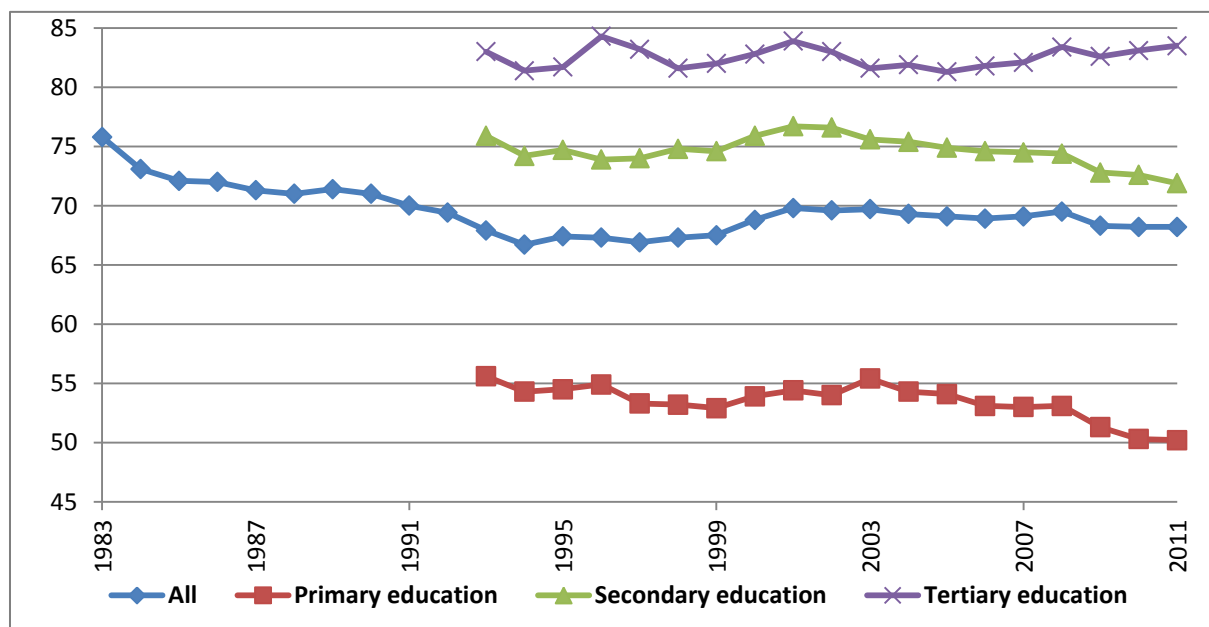
Figures 13 and 14 describe the employment rate by level of education between 1983 and 2010 for men and women, respectively. The decomposition by educational level is only available for the period 1993-2010. For men, we observe a downward trend of the overall employment rate during the 1980s and then a period of stability. The effect of education on the access to jobs is large: the employment of men with tertiary education is in average 30 points higher than men with primary education. There is no converge or divergence in these shares over the period. However, the recent recession has led to a decrease by 3 points of the low-skilled employment rate. For women, the overall employment rate has grown by 10 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. In appendix, we also provide evidence of the evolution of unemployment rate by education. The figures show large differences of employability depending on

educational attainment. The ratios of unemployment rate between primary and tertiary educated people are equal to 3.9 on average with much more volatility for low-skilled workers.

**Figure 13: Employment rate - Women (1983 - 2011)**



**Figure 14: Employment rate - Men (1983 - 2011)**



Source: EU-SILC

Note: adult population (15-64)

Educational attainment determines not only people's employability (and their risk of unemployment) but also the level of earnings once people have a job. It can be measured through the returns to education. Selz-Launière and Thélot (2004) study its evolution since the 1960s. Their model is applied to several waves of the French Labor Force Surveys from 1964 to 1998 on full-time wage earners. The model reveals a marginal rate of return to education lower in 1998 than in 1964. Concretely, at the average point, the marginal rate stood at 11.1% of additional earnings for an extra year of schooling in the mid-1960s and 8.8% in 1998. This evolution is not continuous since most of the decline happened before 1980. Moreover, the decrease in the returns to education is most marked for men and for workers of the private sector. These results are consistent with those for overall earnings inequality. Indeed, the aim of reducing income dispersion necessarily results in lower returns to education. However the impossibility to study returns after 1998 prevents us from estimating their role in the increasing income inequality.

### 1.5 Whom has it affected?

In order to see whom the evolution of inequality has affected, we decompose the inequality measures (Gini, interdecile ratios...) across different sub-samples: by income sources, age and types of household. Table 12 describes the results for 2008. We can notice that the level of inequality strongly differs across the income sources. Logically, labor income inequality is close to disposable income inequality because, as we have seen, labor income is the main source of income for most households. However, the dispersion of capital and business income is much larger. The inequality within age groups is much weaker. The level of dispersion is low for people below 40 but it increases before retirement. Last, income inequality does not differ a lot across the type of households. Inequality among single-parent households is comparable to that of couples with children. Therefore, except for the source of income, we can see that the within-group income inequality is comparable to the overall level of inequality in the population. The lack of historical data prevents us from analyzing the evolution of inequality. Fortunately, several papers have tackled this issue.

**Table 12: Decomposition of income inequality (2008)**

Source of income:	GINI	D9/D1	D9/D5	D5/D1	P75/P25
Labor income (wages, salaries and pensions (unemp and retirement))	0.36	5.5	2.2	2.5	2.4
Capital Income (from financial and non-financial assets)	0.81	124.4	10.6	11.8	11.8
Rents only	0.62	31.2	4.7	6.6	4.6
Capital income only	0.79	94.7	7.8	12.2	9.7

Source of income:	GINI	D9/D1	D9/D5	D5/D1	P75/P25
Farming income	0.63	84.1	4.8	17.5	10.5
Business income (industry commerce)	0.53	25.1	3.8	6.5	4.4
Non-commercial business income	0.58	37.6	4.7	8.1	5.7
Total taxable income	0.35	4.9	2.1	2.3	2.4
Age (household head):					
Under 30	0.24	3.2	1.6	2.0	1.8
30-40	0.25	3.1	1.7	1.8	1.7
40-50	0.29	3.4	1.8	1.8	1.8
50-60	0.33	3.8	1.9	2.0	1.9
60-70	0.31	3.5	2.0	1.7	1.8
Above 70	0.29	3.2	2.0	1.6	1.8
All	0.29	3.4	1.9	1.8	1.8
Type of household:					
Single	0.29	3.4	1.9	1.8	1.8
Lone-parent	0.27	3.2	1.8	1.8	1.7
Couple w/o children	0.29	3.2	1.9	1.7	1.8
Couple w/ children	0.27	3.1	1.8	1.8	1.7
Other	0.30	4.0	1.9	2.1	1.9
All	0.29	3.4	1.9	1.8	1.8

Source: INSEE, ERFS 2008

Note: for the source of income we use taxable income as a reference; household equivalised disposable income for age and type of household.

Bourguignon and Morrisson (1985) demonstrate that the wage gaps between social categories explain part of the overall inequality but not all of it. According to their estimates, the income dispersion between social categories explains around 40% of the overall income inequality. The contribution of age and gender is rather weak. However, the part explained by the within-groups difference is as large as the between-groups dispersion. The decrease in inequality during the 1960s and the 1970s results mostly from a change in the structure of the active population: expansion of the service sector, decline of the share of farmers... (See Figure 1).

Koubi *et al.* (2005) focus on the wage hierarchy<sup>25</sup> and study the role of gender, age and socio-professional categories. Thus, between 1976 and 2000, they show that the within-group inequality has decreased. More specifically, the annual female wages have grown unequally while the wage dispersion among men decreased. Besides, the wage inequality within socio-professional categories has decreased by 40% in average. The results for the between-group comparison are more complex. Indeed, the wage gap between men and women has been reduced as well as inequality between age

<sup>25</sup> For full-time workers only.

groups. However, between 1976 and 2000, the differences in wages across socio-professional categories have risen by 30%. Therefore, the labor market generate a polarization of inequality where there is a reduction of the wage dispersion among the poorest (the unskilled workers) and greater disparities among the richest (the high-skilled workers).

## 1.6 Interdependence between the above inequalities over time

The interdependence between income, labor market, wealth and educational inequality is complex to determine but we can attempt to explain how they have been linked in France during the past decades.

The push toward schooling, especially significant for women, over the recent decades went along with a reduction of the returns to education over the period. Moreover, the role of social background in the educational achievement, especially in the access to elite school, and also in the occupational status (see section 3.10) is still present in France. The impact of educational changes on the labor market is twofold. First, employment has increased, especially for skilled women. Secondly, structural changes of the French labor force (decline of some industries and expansion of the service sector) required more skilled workers. However, the impact of all these changes at the individual level in the overall inequality has been limited since the wage hierarchy has been stable in France over the whole XXth century.

Indeed, the role of wage inequality in explaining the evolution of income inequality has been limited until recently. Since the end of the 1990s, the boom in top earnings as well as the increasing duality of the labor market (growing share of temporary employment and part-time jobs) have explained part of the growing income inequality. However, capital income still explains the major part of inequality for two reasons. First, the distribution of capital income is more skewed than labor income (Figure 2). Second, the growth of capital income has been much quicker than labor income (and more especially wages) over the last decade (Landais, 2009).

The link between income and wealth inequality is pretty straightforward. The simplest way to consider this link is to see wealth inequality as the consequence of cumulative income inequality. Nevertheless, we must distinguish two dimensions of wealth inequality: accumulation and inheritance. First, the household saving rate is higher in France than in many developed countries. The combination of this characteristic with a slow growth of national income and relatively high returns to capital leads to a growing (private) wealth-income ratio. However, the propensity to save is strongly correlated with the level of income and increasing income dispersion lead to a wider gap

between households. The second dimension is intergenerational. Wealth accumulation is not the only way to become rich, inheritance can also be useful. Piketty (2011) demonstrates that inherited wealth is back in France and its importance is likely to increase.

The interdependence between the different dimensions of inequality is not sufficient to explain the full variation of inequality and its consequence. Indeed, income inequality has decreased during the 1970s and the 1980s. Then, it has remained stable during the 1990s before a continuous increase during the 2000s. Table 3 also shows that primary income inequality has been more stable than disposable income during the period 1980-2010. It emphasizes the fact that this evolution has been driven by taxes and transfers as well as labor market regulation (see Chapter 5).

### 1.7 Why has inequality grown?

The level of income inequality in France in 2010 is roughly similar to its level in 1980. However, this apparent stability hides 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 labor market earnings is important because it is the major source of income for a large majority of the population (Figure 7). Between 1980 and 2010, women's labor market participation has increased. Moreover, the growth of the minimum wage has been superior to the growth of the mean wage. The combination of these two effects has contributed to reduce the level of income inequality during the first half of this period (especially in the bottom of the distribution). However, the increase in wage inequality from 1998 tends to indicate that these factors were not sufficiently strong to counter the growing wage dispersion. Most classical explanations like skill-biased technological change or international trade do not fit with a boom in the top centile of the earnings distribution. As other explanatory factors, we may evoke 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. A last range of explanation relates to Gabaix and Landier's interpretation about the compensation of top CEOs (superstars model<sup>26</sup>). Godechot (2012) competes this interpretation by emphasizing the role of finance at the very top (0.1%) of the wage distribution.

However, we have seen that the evolution of wage inequality was smoother compared with total income. The role of capital income is crucial in this evolution and enables us to explain this gap. The

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<sup>26</sup> In a context of high competition between firms, the latter are ready to offer high compensations to attract the best CEOs because of their positive impact on the firm' results.

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 in section 2.1.1, wages have grown by 0.7% per year, rents by 2.2% and capital income by almost 4% (+31% in 8 years).

Last but not least, changes in factors correcting inequalities also provide explanations to this recent evolution. Evidence regarding the regressivity of French fiscal system has been provided by Piketty, Landais and Saez (2011). To sum up their findings, when all direct and indirect taxes are considered, the average tax rate paid by the very top of income distribution (above the 95th percentile) is lower than the average tax rate of the bottom. Cazenave *et al.* (2011) and Bozio *et al.* (2012) have pointed out that this regressivity has increased during the past decade. Wealth taxes and especially inheritance tax have also been cut during this period.

### 1.8 Conclusion

In this chapter, we have seen that income inequality has followed a U-shaped curve over the period 1980-2010. During the 1970s and the 1980s, income inequality has decreased (by 15%). Then, after a period of stability during the early 1990s, inequality has started to rise. Thus, the levels of income inequality in 1980 and in 2010 are very close. This trend is slightly different across the income definitions (before or after taxes and transfers) and across inequality indicators. However, in order to understand better this recent evolution the analysis of the top income shares is crucial. In the end, the situation in France is particular for two reasons: the timing of inequality is rather different from the other OECD countries and the recent increase is smoother.

Private wealth has strongly grown in France during the last 30 years. Indeed, the ratio private wealth / national income has almost doubled going from 298% in 1980 to 552% in 2009. A large part of this increase is due to price effect but long-run mechanisms also explain this trend. Wealth surveys show that the wealth distribution, much more skewed than the income distribution, has been rather stable during the 1990s but inequality has started to grow from the mid-2000s. According to other data focusing only on rich households (Crédit Suisse Global Wealth Report), France is the first European country of residence for millionaires in 2010. Last but not least, the annual flow of inherited wealth (as a proportion of national income) is in 2010 equal to 15%, its higher level since WWI.

Wage inequality does not follow the same trend as income inequality. Indeed, after a century of stability of the wage hierarchy, inequality has risen during the 2000s. The minimum wage has limited this increase but the top wage shares, especially the top centile, have experienced a large growth



between 2000 and 2010. Contrary to many countries, wage inequality is primarily explained by the variance in working hours (more than by differences in wage rates).

The increase in educational attainment, especially for women, is a common characteristic of many developed countries over the recent decades. Educational inequality has been almost divided by two but the role of social background in educational achievement is still strong in France. Moreover, the access to jobs differs along the distribution of education.

## 2. The social impacts of inequality

This chapter attempts to estimate the social impacts of inequalities in France for the past decades. We focus on several social outcomes: material deprivation and cumulative disadvantage, family formation, social isolation, health, housing tenure, crime, well-being, and intergenerational mobility. The goal of this chapter is to link trends in inequality to these various dimensions. In Chapter 2, we have already seen that the evolution of income inequality in France could be divided in three periods. Indeed, after a decrease during the 1970s and the 1980s, income inequality has been stable during the 1990. Over the last decade, inequality has started to rise. Thus, the levels of income inequality in 1980 and in 2010 are very close.

In order to link inequality to these social outcomes we will use several gradients (mainly educational attainment, income or social position). The databases used are both national (INSEE) and international (Eurostat, European Social Survey...). Nevertheless, we have to remain cautious in the interpretation of figures. More specifically, we are fully aware that descriptive statistics as presented in this chapter oblige us to differentiate correlation and causality and to complete our analysis by related literature.

### 2.1 Material deprivation

INSEE has built a multidimensional index of material deprivation. The idea is to complete the apprehension of poverty, when defined in relative and monetary terms (see section 2.1.1), by choosing an absolute and material approach. The indicator is based on four dimensions and for each one several primary needs are listed: consumption (to have new clothes, to leave on vacation for at least one week, to be able to receive parents or friends...), budgetary difficulties (impossibility to save money, frequent overdraft...), arrears of payment (impossibility to pay electricity/phone bills or rent on time...) and housing issues (noise, humidity, absence of bathroom, hot water or heating...). In the end, a household is considered as materially deprived if it experiences at least 8 restrictions over the 27 that are presented. The period of analysis is from 1997 to 2010 but there is an important change of definition in 2004<sup>27</sup>. Since 2004, the indicator measures the percentage of the population

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<sup>27</sup> EPCV survey between 1997 and 2004; Insee-SILC since 2004

that cannot afford at least three of the following nine items: to pay their rent, mortgage or utility bills; to keep their home adequately warm; to face unexpected expenses; to eat meat or proteins regularly; to go on holiday; a TV; a washing machine; a car; a telephone. So we have two continuous time periods: 1997-2004 and 2004-2010.

The poverty rate obtained via this index indicates a reduction of material deprivation from 1997 to 2004 (Table 13). Indeed, the poverty rate goes from 13.1% of households to 10.6% in 2004. During the second part of the period, we observe a decrease followed by an increase since the poverty rates in 2005 and 2010 are equal. There are some differences across dimensions. Consumption and budgetary difficulties affect a larger share of households (around 13%) than housing issues or arrears of payment. Moreover, the pure monetary indicators (lack of resources) and, to a lesser extent, arrears of payment seem to fluctuate more than the other dimensions. For example, between 2007 and 2010, the growth in poverty in living conditions has been driven by these two dimensions only. During the same period, the share of households facing consumption restrictions or housing difficulties has declined.

According to INSEE, material deprivation mostly affects single-parent families (28.7%); young households (14.3% when the household head is below 25) and unskilled people (19.6%). Unemployment also dramatically increases the risk of material deprivation since half of unemployed people are deprived.

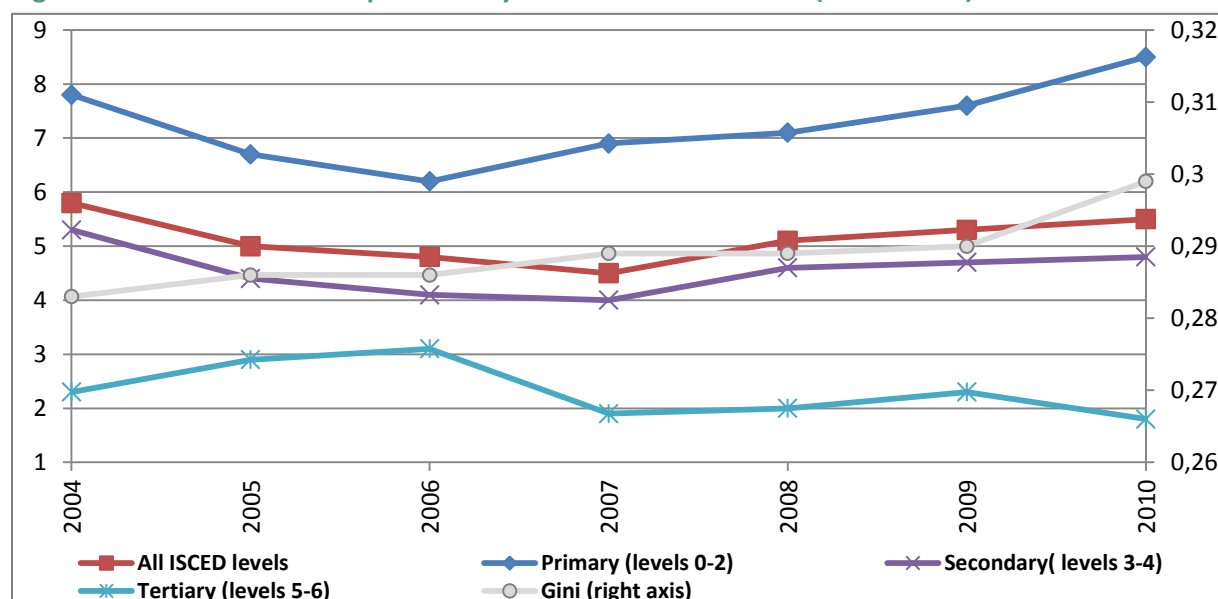
**Table 13: Material deprivation (1997 - 2010)**

Poverty in living conditions	1997	2000	2004	2007	2010
Deprivation rate	13.1	12.1	10.6		
			14.6	12.4	13.3
By categories:					
Lack of resources	11.4	13.0	11.9		
			14.0	13.6	15.0
Consumption restrictions	12.9	10.8	9.5		
			14.2	12.2	12.7
Arrears of payment	8.1	7.0	6.8		
			11.5	9.2	9.2
Housing difficulties	12.5	12.0	10.1		
			10.2	9.1	7.5

Source: INSEE (SRCV system since 2004, EPCV survey)

Definition: This indicator gives the proportion of households experiencing at least 8 restrictions over the 27 listed restrictions (merged into 4 dimensions: lack of resources, consumption restrictions, arrears of payment, housing difficulties).

Like for monetary poverty, we can measure the depth of material deprivation by modifying the definitions. Thus, severe material deprivation is defined as the inability to afford at least four of the nine items presented above (EU-SILC definition). Figure 15 depicts its evolution between 2004 and 2010. Around 40% of deprived households are severely deprived. After a decline from 5.8% to 4.5% between 2004 and 2007 the share of severely deprived household has increased. Education is strongly correlated with severe deprivation since individuals with primary education are 3.3 times more likely to be in this situation than tertiary education people.

**Figure 15: Severe material deprivation by educational attainment (2004 - 2010)**

Source: EU-SILC

Note: the sample is restricted to the adult population (above 18) for educational attainment.

The link between inequality and material deprivation and poverty in general, is a priori straightforward. An increase in income inequality means a rise in the (relative or absolute) gap between rich and poor. This does not automatically imply an increase in poverty if the growth of income or wealth of the richest does not "come from" a decrease for the poorest. However, a rise in poverty leads to an increase in inequality. Furthermore, the way inequality and poverty are measured directly affects the strength of this link. During the 1970s and the 1980s, both income inequality and poverty have decreased. Since 1985, the poverty rate has remained stable in France while income inequality has started to rise since the end of the 1990s. If we look closer to the different inequality indices, we can see that the indices that are sensitive to the bottom of the distribution (ratio D5/D1) are much more correlated to poverty than other indices like top income shares for instance. Thus, since the end of the 1990s the income growth is positive along the whole distribution but it is much quicker at the top. Thus the two peaks of (material and monetary) poverty in the mid-1990s and in 2010 are mainly due to high unemployment rates. The link between unemployment and material deprivation is probably even stronger.

## 2.2 Cumulative disadvantage and multidimensional measures of poverty and social exclusion

The indicator presented in Table 14 estimates the number of individuals who are affected by several risks: risk-of-poverty and/or materially deprived and/or living in households with very low work

intensity. A person is considered as being at risk-of-poverty if his/her equivalised disposable income is inferior to the poverty threshold (60% of the national median eq. disp. income). For material deprivation, Eurostat covers indicators related to economic strain, durable goods, housing and environment of the dwelling (see section 3.1). People living in households with very low work intensity are people aged 0-59 living in households where the adults work less than 20 per cent of their total work potential during the past year. Table 14 presents the evolution of this indicator over the period 2004 - 2010 by levels of education. The break in series in 2008 makes the interpretation difficult but we observe a decrease between 2004 and 2005 and then a period of stability. The most interesting information comes from the comparison of these cumulative disadvantages across educational levels. People with primary education have 2.5 more chances to be in this situation than people with tertiary education.

**Table 14: At risk-of-poverty or social exclusion (2004 - 2010)**

	2004	2005	2006	2007	2008*	2009	2010
All ISCED levels	19.8	18.7	18.8	18.4	17.7	17.6	18.0
Primary education (levels 0-2)	26.5	25.5	25.4	25.7	24.8	25.2	25.2
Secondary education (levels 3-4)	17.4	16.1	16.4	17.0	16.2	16.0	16.9
Tertiary education (levels 5-6)	10.6	10.2	11.4	10.7	8.9	9.5	9.2

Source: EU-SILC

Interpretation: in 2004, 19.8% of the overall population is considered at risk of poverty or social exclusion.

Note: the sample is restricted to the adult population (above 18) for educational attainment. Break in data series in 2008.

Another way to estimate the cumulative aspect of poverty is to look at its persistence in time. Indeed, monetary poverty can be the consequence of a negative but temporary shock on income caused by a transition from employment to unemployment for instance. However, the degradation of the economic resources of a household can be more permanent. To study this issue, we need panel data following the same household over a given period of time. In Table 15, we describe the share of households in a situation of persistent monetary poverty i.e. households considered as poor (below 60% of median income) at least three years out of four between 2003 and 2006. Overall, 7.9% of the population is affected by a persistent poverty but this share varies a lot across social positions. For high-skilled workers and intermediate jobs the rate of persistent poverty only equals 0.7% and 2.2%, respectively. This means that these categories are mostly affected by temporary income shocks. For the other categories, this rate is much higher especially for unskilled workers and farmers with levels close to 20%. Therefore, the nature of poverty affecting households is different across social positions. Underemployment and low-earnings are causes of permanent poverty for unskilled

workers and farmers. On this topic, Maurin and Chambaz (1996) explain that persistent poverty is strongly linked to the general economic situation of a country. During recession period, inequality between poor and non-poor households becomes more persistent.

**Table 15: Persistence of poverty across social positions (in 2006)**

	Percentage of individuals in persistent poverty
All	7.9%
Farmers	20.8%
Shopkeeper, craftsman, business owner	11.7%
Executive	0.7%
Intermediate job	2.2%
Employees	8.7%
Workers	10.9%
Incl. Skilled	8.0%
Incl. Unskilled	18.8%
Ratio worker / executive	16.5
Ratio unskilled worker / executive	28.5

Source: INSEE, SRCV-SILC

Interpretation: among the individuals living in a household headed by farmers, 20.8% were poor at least three years out of four between 2003 and 2006.

The channels through which inequality can affect these cumulative disadvantages are close to those described in section 3.1 about material deprivation. The "unique" difference is about the cumulative or persistent aspect of the effect. The recent increase in income inequality in France mainly comes from the top of the distribution. The constant decrease of material deprivation and of cumulative disadvantages reinforces this interpretation. However, we also shown that this situation was much more prevalent for households with low educational attainment or low social background.

### 2.3 Social connectedness

In this section, we are discussing some indicators of social connectedness. Civic and political participation that are somehow proxy for social connectedness will be analyzed in Chapter 4.

Social isolation can be defined in many ways. In Pan Ké Shon (2001), a person is considered as isolated if she/he has less than 4 contacts with different persons (de visu or by phone) during a week. With this definition, 16.5% of the French population can be considered as isolated in 2001 and the probability of being isolated is positively correlated with age. Individuals above 70 are five times

more isolated than young people (25% against 5%, respectively). It can be interpreted as a lifecycle effect. Moreover, being a low-income earner, having no diploma and living in suburbs predict a higher risk of isolation. It also affects more strongly single households and single-parent families, individuals with handicaps or foreign people. Social isolation directly impacts well-being since isolated people are more prone to boredom and loneliness.

The share of isolated people in France is one of the highest in Europe. In Eurostat (2010) social isolation is defined as the inability to ask any relative, friend or neighbor for help. With this definition, around 11% of French people regard themselves as isolated while the EU average is 7%. This share is far above Denmark or Netherlands where social isolation only affects 2% of the overall population.

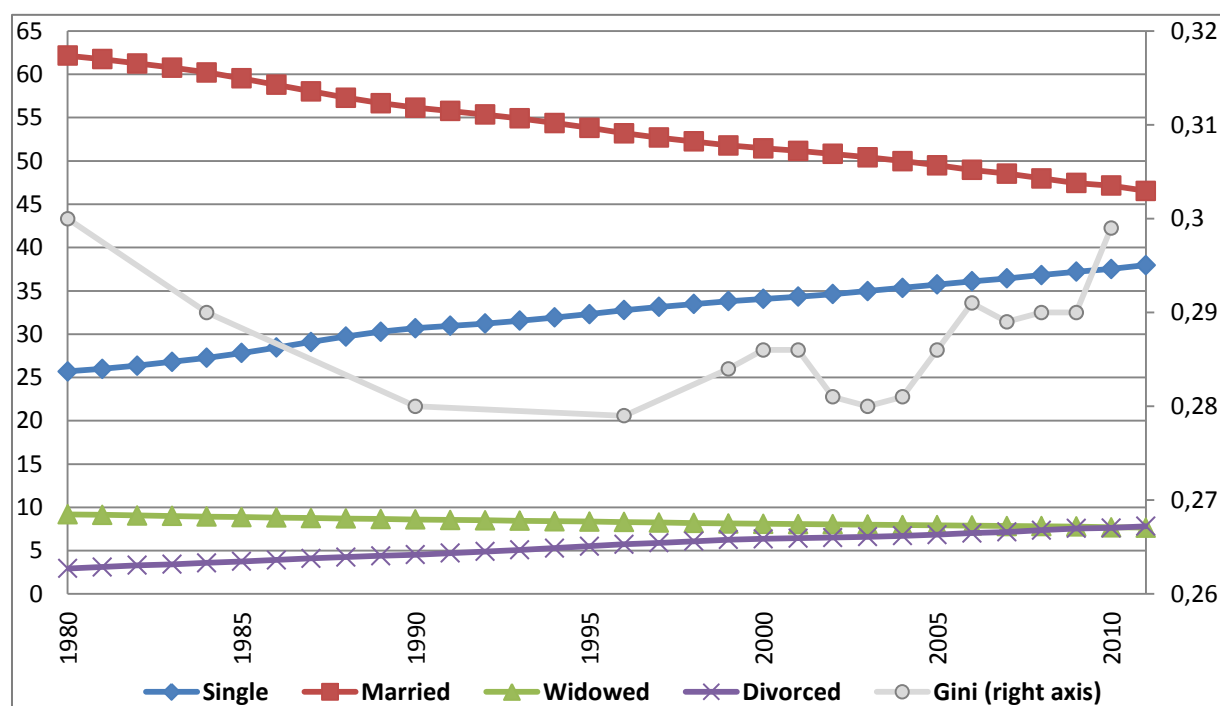
Even if the lack of historical data prevents us from presenting a trend for social connectedness, it is still interesting to understand the economic mechanisms behind this phenomenon. The main economic driver of social isolation is probably the situation on the job market more than the position in the income distribution. Being unemployed increases the risk of poverty but, more importantly, deprives someone of social contacts with others (co-workers, clients...). However, social isolation is a complex phenomenon and many other factors help to explain it: family status, urban policies or culture (through the role of associations for instance) among other factors.

## **2.4 Family formation and breakdown, lone parenthood, fertility**

Family is a key institution in intergenerational mobility but it also explains a large part of household inequality. In this section, we will analyze the evolution of family formation since 1980. The decomposition of the adult population by matrimonial status (Figure 16) shows that France is not an exception. From 1980 to 2011, the share of singles and divorced people have increased, by 48% and 166% respectively, while the share of married people has significantly declined (-25%). We do not observe any discontinuity in these evolutions. The fertility rate has slightly decreased during the same period but remains high compared with other OECD countries (2 children per women in France against 1.75 among OECD countries). More interestingly is the evolution of the share of children born outside marriage. In 1980, they represented only 11.4% of the total births; in 2011, 54.9% of births are due to non-married couples. The average mothers' age at birth is 30 years (compared with 28.8 in 1994).



Figure 16: Marital status of adult population (1980 - 2009)



Source: INSEE, census

Note: Marital status on the left axis; GINI coefficient for equivalised disposable income on the right axis

In 2005 there are 1.76 million single-parent families in France. 85% of them are composed of a mother and her children. This type of family is 2.5 times more numerous today than 40 years ago. It represents almost 20% of families with dependent children in 2005 compared with 9.4% in 1968. The causes of lone parenthood have changed dramatically. In 1968, only 45% of single parents were divorced (or separated); today, they are almost 90%.

Table 16: Number of single-parent families (1968 - 2005)

	1968	1975	1982	1990	1999	2005
Number (in thousands)	720	776	887	1175	1495	1760
Share of single-parent families among the total number of families with dependent children under 25 y.o.	9.4%	9.3%	10.2%	13.2%	17.4%	19.8%
Annual growth rate	1.0%	1.0%	1.9%	3.6%	2.7%	2.8%

Source: INSEE, census.

Table 13 describes the characteristics of these families compared with the couples with children. Single-parent families have in average less children (1.6 against 1.9), the latter are in average older. The working and living conditions are less stable and more difficult for these families. They live more frequently with other people or in social housing. Besides, 20% of single-parent families are in

situation of overpopulation (describing the necessity of extra rooms in the housing) whereas this proportion only equals 8% for the couples with children. In average, lone parents are less graduated than bi-parental families. Only one third of them have tertiary education against 40% for couples. The situation of lone mothers in labor market is very fragile. Indeed, they have to get through the confines of each parent without the economic support of a spouse. The proportion of lone mothers having a job is slightly inferior to mothers in couple (68 against 72%) and when they are without a job, they are unemployed in 54% of the time against 31% for mothers in couple. Last, the proportion of women in full-time jobs is not higher for lone mothers. As a consequence, the poverty rate before transfers in single-parent families is superior to 40% whereas this rate is around 18% for couples with children. Social transfers only partially correct this problem: the proportion of poor single-parent families is still superior to the average.

**Table 17: Characteristics of single-parent families**

	Single-parent families			Couples with children
	Single mother	Single father	All	
Number (in thousands)	1486	272	1758	
Average number of children	1.6	1.5	1.6	1.9
Distribution by nb of children (%):				
1 child	55	63	56	39
2 children	31	28	30	41
3 children	10	7	10	15
4 children or more	4	2	4	5
Share of families living in...				
... in a housing own by themselves (or someone else)	28	48	31	63
... a house	36	54	39	68
... with other people	9	17	10	3
... in social housing	38	24	36	14
Overpopulation rate	20	18	20	8
Tertiary education	-	-	32	40
Secondary education	-	-	42	40
Primary education	-	-	26	20
Poverty rate:				
Before transfers	-	-	41.7	17.9
After transfers	-	-	13.9	6.2

Source: INSEE, census (2004-2007) / Labor Force Survey (2002) for education / Survey ERSF (2001) for poverty issues

Definition: Overpopulation rate = number of rooms needed / effective number of rooms

Family can affect inequality in many ways: as key institution in the transmission of capital (economic, social or human), because of assortative mating but also because it determines the household composition. Here, we are focusing on the second aspect only. In a world where all households are composed of one man and one woman and have the same income, there is by definition no inequality. Now, if all these couples divorce and men get seven and women three, inequality booms. Here, we do not see any correlation between the continuous demographic trends described above and the variation of income inequality. However, the increase in divorce and as a consequence in single-parent families, combined with an unequal intra-household allocation has led to a change in the income distribution. The fact that the poverty rate of single-parent families is twice larger than couples with children is a good illustration.

## 2.5 Health inequalities

Since the 1980s, the state of health of the French population has improved whatever the way to measure it (objectively or subjectively) but the difference between social categories persists. In this paragraph we consider two types of measures: life expectancy and subjective measures of the state of health.

Since 1980, life expectancy has increased by 8 years for men and by 6.5 years for women. In 2011, French men live in average 78.2 years and women 84.8 (source: INSEE). Table 18 presents the evolution of life expectancy by social category<sup>28</sup> (Blanpain, 2011). We observe that all social categories have been affected by this progress but that the differential between low-skilled and high-skilled men grew up during the 1990s before declining since between 1999 and 2008. Specifically, the difference of life expectancy between blue-collars and white-collars is around 6 years for men and 3 years for women in 2008. Therefore, social inequalities play a bigger role for men. We have to note that the non-working but not retired people have been affected by a lower increase in their life expectancy (+ 2.7 years instead of + 5 years in average). Women live longer than men whatever the social category and women from working class still live longer than men in managerial positions. The standardized mortality index<sup>29</sup> confirms these results. For men, the probability of dying between 35 and 80 years old is 1.2 bigger for blue-collars than for the average whereas this same measure is only equal to 0.6 for white-collars (Blanpain, 2011). For women it is equal to 1.1 and 0.7, respectively. These ratios are stable since the 1980s.

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<sup>28</sup> The author estimates the life expectancy at 35 as a result of a probability model. Blanpain applies death probability to fictitious generations of people still alive at 35.

<sup>29</sup> This index is defined as the ratio of the number of deaths for a given group to the hypothetical number of deaths if this group had been affected by the mortality conditions of the overall population.

**Table 18: Life expectancy at 35 y.o. by gender and social category**

	High-skilled, [1]	Intermediate job	Farmer	Craftman, shopkeeper, business owner	Clerk	Worker [2]	Inactive	All	Gap [1 - 2]
Men									
1984	41.7	40.5	40.3	39.6	37.2	35.7	27.7	37.8	6.0
1991	43.7	41.6	41.7	41.0	38.6	37.3	27.5	39.2	6.4
1999	45.8	43.0	43.6	43.1	40.1	38.8	28.4	40.8	7.0
2008	47.2	45.1	44.6	44.8	42.3	40.9	30.4	42.8	6.3
2008-1984	5.5	4.6	4.3	5.2	5.1	5.2	2.7	5.0	
Women									
1984	47.5	46.4	45.7	46.0	45.6	44.4	44.3	45.0	3.1
1991	49.7	48.1	46.8	47.4	47.4	46.3	45.4	46.4	3.4
1999	49.8	49.5	48.8	48.8	48.7	47.2	47.1	48.0	2.6
2008	51.7	51.2	49.6	50.3	49.9	48.7	47.0	49.4	3.0
2008-1984	4.2	4.8	3.9	4.3	4.3	4.3	2.7	4.4	

Source: Permanent demographic sample (INSEE), extracted from Blanpain (2011)

The subjective measures of the state of health follow the same pattern (Table 19). People perceive their state of health as better now than 30 years ago. However, we still observe a difference in this perception depending on respondents' position in the distribution of education. Here, we use the European Values Study (EVS) to analyze this fact. We cut the sample by quartile of educational attainment (measured by the total number of years of education). Specifically, the proportion of respondents declaring that their state of health is very good is about 20% in 1980 and rise up to 29% in 2008. This proportion goes only from 14 to 19% for low income category and is almost the double for high income category (going from 23 to 36%).

**Table 19: Subjective state of health by education (1981-2008)**

	All			Distribution of years of education												
				Q1			Q2			Q3			Q4			
	1981	1990	2008	1981	1990	2008	1981	1990	2008	1981	1990	2008	1981	1990	2008	
All in all, how would you describe your state of health these days?																
Very good	18.7	19.9	28.5	7.8	10.0	14.9	17.2	12.2	22.3	23.0	20.4	37.3	26.5	30.9	39.5	
Good	39.9	46.4	41.4	29.8	39.1	38.9	40.5	52.2	42.1	41.7	49.8	42.2	47.8	45.7	42.3	
Fair	29.3	27.3	22.4	44.1	34.8	33.7	27.3	30.4	26.6	25.5	26.8	16.6	20.3	20.4	12.9	
Poor	10.0	6.0	6.4	15.1	15.2	10.0	13.4	5.2	8.6	7.1	2.2	3.1	4.5	3.0	4.2	
Very poor	2.1	0.4	1.2	3.2	0.9	2.6	1.6	0.0	0.5	2.6	0.9	0.7	0.9	0.0	1.1	

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

However, the progress in terms of life expectancy has to be moderated. Indeed, blue collars are not only disadvantaged from the point of view of life expectancy but also of the quality of life. Even if the life expectancy of the whole population is longer now than in the 1980s the extra years that have been saved are different in terms of quality. Cambois, Laborde and Robine (2008) note that blue collars are much more affected by handicap and disability. Around 60% of blue collars suffer from disability of different types. Therefore, if we measure the gain in life expectancy by considering only the extra years without disability the progress is less important than it seems. More generally it is crucial to consider the quality of life and not only the quantity through life expectancy. Sieurin, Cambois and Robine (2011) examine the life expectancy in good health for people between 50 and 65 years old. For a large part of the population, they notice a decrease in functional limitations especially regarding cognitive skills (memory, understanding, behavior...). This finding is crucial if we consider the current trend in policy about the participation to labor market (increase in the retirement age especially). According to the authors, with such deterioration, it seems difficult to fulfill two goals at the same time: a rise in participation to labor market for elderly and an improvement in the quality of life.

How can education and social category play a role in both objective and subjective measures? Two channels are at stake here: material conditions and the exposure to risks. First, a low level of income may reduce the access to health services because the household budget is not sufficient to offer all the services. We provide evidence to illustrate this channel. Table 20 describes the share of population declaring not having undergone a treatment or not having done a checkup ordered by a doctor (source: EU-SILC). Households of the bottom quintile of the income distribution are more frequently in this situation than rich households (5% against 0.5%). Since 2004, the share of poor households in this situation has increased by 36%. The reasons evoked by household include problem of access (insufficient budget, waiting list...) or other problems (fear, lack of time...). Furthermore, there may exist a selection, correlated with income, among the population who decides to get a prescription from a doctor. Given that health may not be considered as a primary need (like food, housing and clothes), it is likely that the access to health services is weaker for low income households.

**Table 20: Non-satisfied health needs (2004-2010)**

Quintiles of disposable income	2004	2005	2006	2007	2008	2009	2010
1	3.6	3.6	4.0	3.2	4.2	4.2	4.9
2	1.8	1.7	1.3	1.5	2.3	2.0	1.9
3	1.1	1.1	1.0	0.6	1.3	0.8	1.1
4	0.7	0.3	0.2	0.5	0.6	0.7	0.4
5	0.4	0.2	0.3	0.1	0.1	0.3	0.3

Source: EU-SILC

Note: in 2004, 3.6% of people of the first quintile suffers from unsatisfied health needs.

Second, the exposure to health risks (accidents, diseases...), especially at work, is stronger for some social categories like the unskilled workers. Specifically, in 2007, we count 24.3 industrial accidents per million of hours worked among French wage earners (source: Dares). The number of accidents is 3.2 for executives and CEOs while it equals 20.6 for clerks and 48.2 for unskilled workers. We also denote an age and a gender gap since these accidents mostly involve men and young persons. Diseases and handicaps caused by work conditions are also unequally distributed in the population.

The effect of timing is extremely important to study the link between inequality and state of health. An increase in the gap between rich and poor does not have immediate effects on health inequality. The different mechanisms described above (access to health services, work conditions...) take time to affect people's state of health. Therefore, the growing gap in life expectancy between unskilled workers and executives during the 1990s (when inequality was stable) can be seen as the consequence of the high level of inequality in the 1970s. 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. As a consequence, a potential causality is difficult to determine for this particular social outcome.

In this section, we mainly focused on the link between income and health state in one direction by studying (or interpreting) the effect of income on health state through the access to health services or the exposure to risk across social positions. However, health state can affect income not only because of discrimination that may prevent people from accessing some jobs but also because diseases or handicap may prevent people from working. Part of this second channel could be corrected by an improvement of the access to employment.

## 2.6 Housing tenure

The main residence is generally an important part of households' wealth when they are owners (cf section 2.1.2) and constitutes a large part of their budget when they are tenants. According to INSEE, in 2008 more than 20% of households' disposable income is dedicated to housing expenses. It represents twice as much as the food or transportation expenses. Therefore, analyzing the housing tenure patterns and trends is a good proxy for the general evolution of wealth as well as the composition of consumption.

The first indicator we can analyze is the evolution of the respective shares of tenants and owners of their main residence. In 1985, 52.9% of the overall population owned its main residence. This proportion is equal to 57.8% in 2008. Two periods of acceleration can be emphasized: a first between 1980 and 1985 and then between 2000 and 2005. Within this share of owners, there are two kinds of situations. Either the household is home-buyer (i.e. still reimbursing loans) or, by opposition, non-home buyer. The share of non-home buyers has increased over the period and represents two thirds of owners in 2008. Within the declining share of tenants we can also distinguish two categories. First, the households who rent their main residence from the private sector and second the households who are benefiting from the public or social housing. Like for the owners, the evolution strongly differs from a category to another. Whereas the number of housing has remaining fairly stable in the private sector, the public and social sectors have grown by more than 1.5 million housing. Tenants in public or social housing represent 44% of the overall tenants in 2008. This is an increase by almost 10 points since 1985.

**Table 21: Occupancy status of households' main residence (1985-2008)**

	1985	1990	1995	2000	2005	2008
Number (in thousands of housing)						
Owners	11015	12098	12835	13822	15106	16000
Incl. home-buyers	5116	5513	5260	5248	5219	5184
Incl. non home-buyers	5899	6585	7575	8574	9886	10816
Tenants	9822	9944	10549	10979	11402	11663
Incl. private sector	6454	6042	6050	6236	6446	6566
Incl. social and public sector	3368	3902	4499	4743	4956	5097
Share(%)						
Owners	52.9	54.9	54.9	55.7	57.0	57.8
Incl. home-buyers	24.6	25.0	22.5	21.2	19.7	18.7
Incl. non home-buyers	28.3	29.9	32.4	34.5	37.3	39.1
Tenants	47.1	45.1	45.1	44.3	43.0	42.2
Incl. private sector	31.0	27.4	25.9	25.1	24.3	23.7
Incl. social and public sector	16.1	17.7	19.2	19.2	18.7	18.5

Source: INSEE; SOeS, housing account 2008.



The evolution of these tenure patterns for low income households is more interesting for the purpose of this report. In Table 22, we reproduce the analysis described above by cutting out the population in three categories: the "very low-income households" (belonging to the first quartile of the standard of living distribution); the "low-income households" (between the 25th and the 30th percentile) and the remaining part of the population (above the 30th percentile). Between 1988 and 2002, the share of owners among the very low-income households has decreased by 12 points, has been stable for the low-income households and has increased by 6 points for the rest of the population. The most important part of the decline for the very low-income households is imputable to a change in the composition of this population. This category is more urban and younger in 2002 than in 1988, the single-parent families are also over-represented. These households are now tenant in the majority, mainly in the private sector.

**Table 22: Tenure patterns by household standard of living (1988-2002)**

	1988				2002			
	Very low income	Low income	Other	All	Very low income	Low income	Other	All
Owners	47.4	46.7	57.3	54.2	35.1	48.5	63.3	57.3
Incl. home-buyers	11.6	18.3	30.9	26.4	7.2	13.5	25.9	21.5
Incl. non home-buyers	35.8	28.4	26.4	27.8	27.9	35.0	37.4	35.8
Tenants	38.6	41.8	35.6	37.1	56.4	44.3	32.3	37.3
Incl. private sector	19.5	18.8	20.3	20.0	24.3	19.6	19.1	19.8
Incl. social and public sector	19.1	23.0	15.3	17.1	32.1	24.7	13.2	17.5
Other status (sub-tenant, freely housed...)	14.0	11.5	7.1	8.7	8.5	7.2	4.4	5.4
Total	100	100	100	100	100	100	100	100

Source: Insee, Housing survey 1988 and 2002.

Definition: a household is considered as a "very low-income household" if it belongs to the first quartile of the standard of living distribution; low income households are between the 25th and the 30th percentiles.

Furthermore, according to Briant (2010), since 1996, the housing expenses have increased for all the households but more rapidly for the low-income households<sup>30</sup> whatever their status (tenants or owners). The housing expenses represent 37% of the total household budget of the low-income home-buyers in 2006. Most of the increase arises in the early 2000s and is caused by the boom in housing prices. The share of the housing expenses is equal to 39% for low-income tenants in 2006 in the private sector (against 34% in 1996); this share is around 27% for social housing. The combination of two effects explains this evolution: a compositional effect for social housing (households in social

<sup>30</sup> Households belonging to the bottom 30% of the income distribution

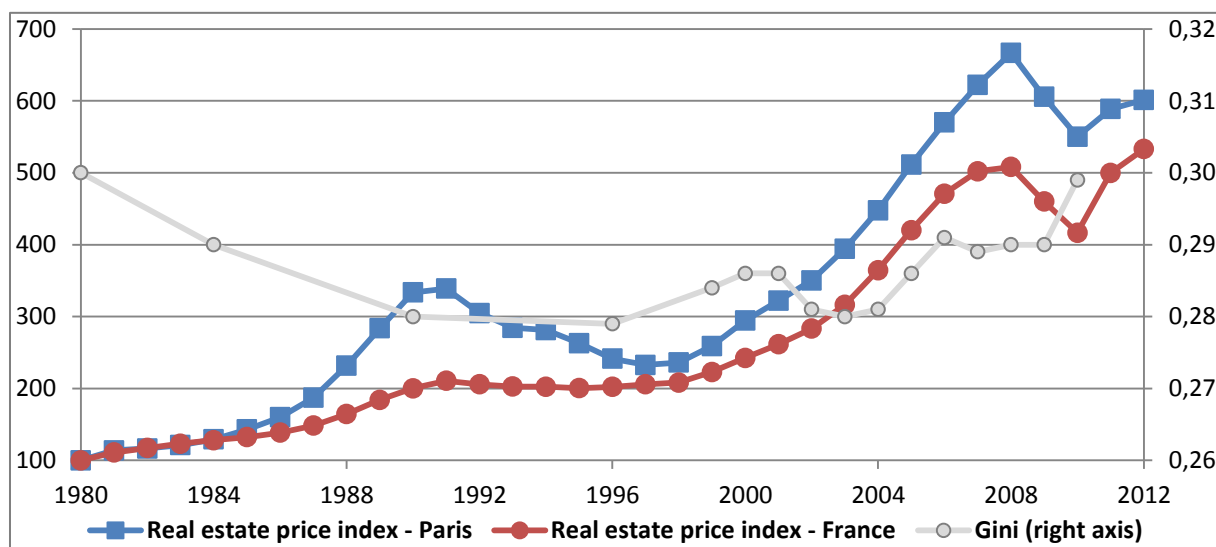
housing are poorer today partly because of a target of very poor households) and the rise in rent for private housing.

Beyond the issue of access, quality is another crucial dimension for housing. The overpopulation rate<sup>31</sup> is strongly correlated with household income. In 2006, the average share of households in a situation of overpopulation is equal to 9% but with a huge heterogeneity across the income distribution. This share is around 23% for households from the first decile of the income distribution whereas it is inferior to 2% for households in the top decile. From 2002 to 2006, we observe a decline in overpopulation rate since the share of households in this situation goes from 10.6% to 9%. This decline affects the whole distribution and as a consequence the gap between top and bottom remains roughly the same (source: Housing survey, INSEE).

Figure 17 depicts the evolution of housing prices in France and in Paris. We have already shown that the share of real estate in household wealth has increased a lot during the last decades (see section 2.1.2). This figure provides empirical evidence about the price effect explaining this evolution. The price index (normalized to 100 in 1980) was around 200-250 in 1996. Between 1996 and 2008, it has increased continuously and reached 667 for Paris and 508 for France. During this period the trend is similar in the whole country and Paris (if we except the increase in Parisian prices in the early 1990s) but the fluctuations are more marked in Paris. This comparison in terms of evolution hides differences in levels across cities. In 2011, the average price of a square meter in Paris equal 8,300 Euros while this is 3,200 in Lyon or 2,450 in Marseille for instance (source: Notaires de France).

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<sup>31</sup> Basically, this is the ratio of the number of rooms needed to the actual number of rooms.

**Figure 17: Housing prices in France and Paris (1996 - 2012)**

Source: Indices Insee - Notary public (basis = 100 at the first quarter of 1980)

Note: Housing price index on the left axis; GINI coefficient for equivalised disposable income on the right axis

Housing is a primary need and is also the main component of households' budget and/or wealth (see section 2.1.2). As a consequence, when housing expenses or prices varies, it strongly impacts households. Thus, households who were owners before the 2000s housing bubble are now considerably richer than households who were tenants during the same period because of the capital gains they make. For owners the combination of two effects should be emphasized: their share has increased (except for low-income households) as well as the share of tangible assets in households' total wealth. Moreover, housing expenses for all the households have increased 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.

## 2.7 Crime and punishment

The distinction between the respective roles of society and individuals in crime is difficult to determine. However, a rise in inequality, in the different dimensions studied in the chapter 2, may be invoked as an activator of crime. Studying the general tendency in crime rate but also the decomposition by type of crime may help to provide some evidence to this question. One has to be very cautious in the interpretation of the evolution in the crime rate because it is a reflection of several effects. An increase in the crime rate may be caused by changes in behaviors (people commit more crimes) but also changes in policies (increase in strictness of legal system, focus on some types of crimes like reckless driving for example...). Simple descriptive statistics do not make it possible to distinguish the respective explanatory powers of each cause. We will focus on three measures in this

section. First, we will comment the general evolution of the crime rate, then the decomposition by type of crime with a focus on crime of violence. Finally, we will emphasize the situation in the French prisons.

Figure 18 describes the trend in the crime rate in France over the period 1980-2009. The crime rate is defined as the number of crimes (as counted by the police services) compared to the population. We observe a slight increase over the period since the crime rate was around 50 (per 1,000 inhabitants) in 1980 and is now almost at 60. But this increase hides a sort of cyclical evolution with a peak every ten years. Therefore, from this point of view, the link between the rise in inequality and crime is not straightforward.

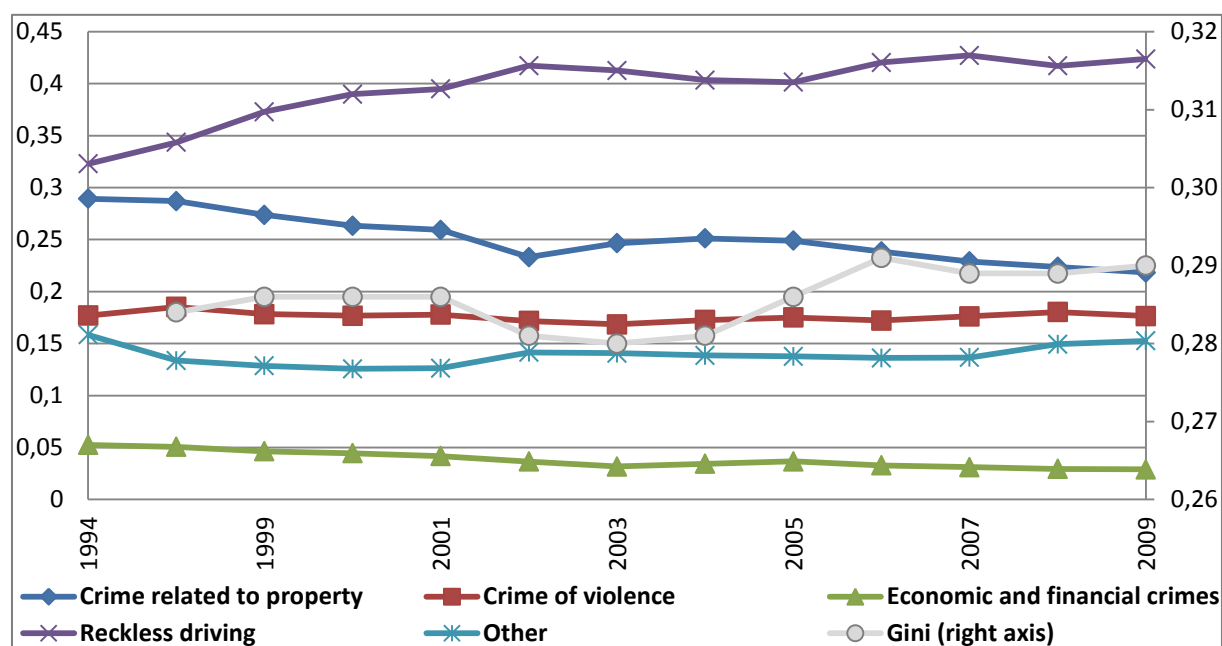
Figure 18: Trend in crime rate (1980 - 2009)



Source: Ministère de l'intérieur

Note: Crime rate on the left axis; GINI coefficient for equivalised disposable income on the right axis

Figure 19: Sentence by type of infraction (1994 - 2009)



Source: Ministère de l'intérieur

Note: Type of infraction (%) on the left axis; GINI coefficient for equivalised disposable income on the right axis

Studying the evolution of the sentences by type of infraction is the goal of the second figure. Over the period 1994-2008 only two types of crime experience a significant variation. First, the share of crime related to property (theft, destruction...) has declined. It represents around 20% of crimes today against almost 30% in 1980. However the number of this type of infraction has remained fairly stable over the period. The fluctuation is mainly due to the infractions for reckless driving. Their number has rocketed by 70% over the period and they represent almost 45% of the overall infractions in 2008.

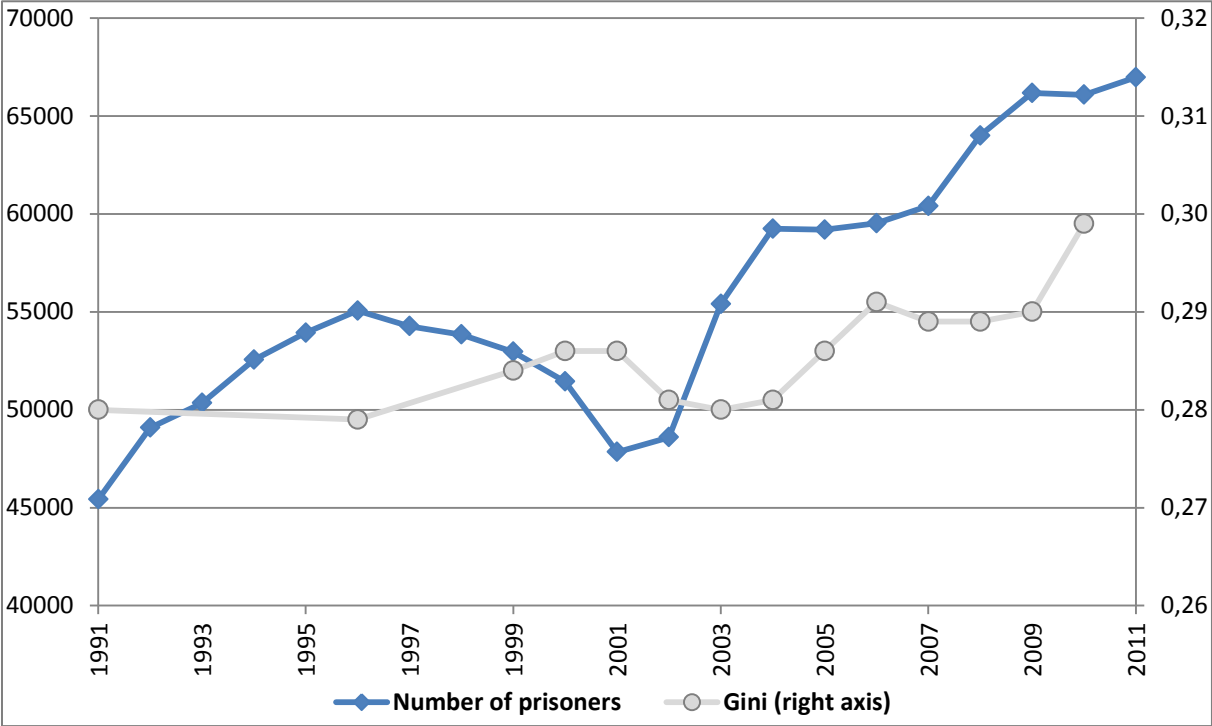
The number of crimes of violence has increased by 30% over the period but it is mainly due to deliberate violence. It represents almost two thirds of this type of crime in 2008. The other categories of crime have either remained stable or declined (e.g. involuntary homicides and wounds).

Subjective measures about crime seem to reinforce the absence of correlation. Indeed, by using the European Social Survey, we observe that the feeling of safety when walking alone in local area after dark has slightly increased over the last decade. In 2008, more than three out of four people feel safe or very safe (against 70% in 2002).

A last measure about the issue of crime and punishment is the imprisonment rate. Figure 20 depicts the number of prisoners in France from 1991 to 2011. It has increased by 47% during the last 20 years from 45,420 in 1991 to 66,975 in 2011. There are significant variations during the period. Indeed, we observe an increase from 45,000 to 55,000 between 1991 and 1996, then a decline until

48,000 prisoners in 2001. Since 2001, the number of prisoners has continuously grown. However, the number of prison cells is insufficient in France. In 2011, only 57,213 cells are available for almost 67,000 prisoners. The overpopulation rate in prisons has been close to 120% for several years. The main cause of this overpopulation comes from the increase in the length of the prison terms<sup>32</sup>.

Figure 20: Number of prisoners (1991 - 2011)



Source: Ministry of Justice

Note: Number of prisoners on the left axis; GINI coefficient for equalised disposable income on the right axis

Contrary to many other social outcomes, the causality between inequalities and crime is (probably more) one-way. Greater inequalities, especially if they create greater deprivation, can lead to frustration. People can feel abandoned by public authorities and as a consequence people may want to correct themselves what they find unfair by breaking the law. In practice, between 1980 and 2010, inequalities and crime does not seem to be correlated even if we only focus on some types of crimes (property crime for instance) or if we use subjective indicators.

<sup>32</sup> The average length was 4.3 months in 1975 and 8.3 months in 1999 (cf Parliamentary Report number 2521 on prisons: [http://www.assemblee-nationale.fr/11/rap-enq/r2521-1.asp\#P471\\_51360\\$](http://www.assemblee-nationale.fr/11/rap-enq/r2521-1.asp\#P471_51360$))

## 2.8 Subjective measure of well-being, satisfaction, "happiness"

The degree of happiness or well-being of a population is difficult to measure and is sensitive to national culture. However, the subjective opinion expressed is the reflection of how these people judge their own situation relatively to the other members of the society.

The European Values Study covers a thirty years time-period (1981-2008) and addresses the issue of well-being as follows: "How are you satisfied with your life?". People answer by ranking themselves on a scale going from 1 (dissatisfied) to 10 (satisfied). The average rank for the entire sample is inferior to 7 and tends to slightly increase over the period. A very small part of the sample is very dissatisfied: less than 15% of the population is ranked between 0 and 4. Therefore almost 85% of the population is ranked between 5 and 10 with a peak at 8.

For the purpose of this report it is essential to relate this measure of happiness to an outcome such as education. To do so we compare the measure described above by quartiles of the distribution of education (by years of education). There is almost no difference of satisfaction between the top and the bottom quartile in 1981 but a small gap seems to appear over time. When we relate these outcomes to the income level we also notice a difference in the degree of satisfaction. Individuals with high income are 1 point more satisfied with their lives than individuals with low income (see Table B5 in appendix). However, the increase of satisfaction is similar across income categories. Around half of the low-income population is ranked between 7 and 10 while this proportion is equal to 65% in 1981 and goes up to 80% in 2008.

**Table 23: Subjective well-being by education (1981 - 2008)**

	All				Distribution of years of education																
					Q1				Q2				Q3				Q4				
	1981	1990	1999	2008	1981	1990	1999	2008	1981	1990	1999	2008	1981	1990	1999	2008	1981	1990	1999	2008	
Life satisfaction?																					
Dissatisfied	1.9	1.4	2.1	2.2	2.3	2.6	2.0	4.7	2.5	2.6	3.2	1.9	2.3	0.0	2.0	2.1	0.5	0.9	0.9	0.3	
2	2.3	1.4	1.2	1.4	2.2	2.6	1.3	2.5	2.2	1.8	1.5	0.8	2.0	1.3	0.6	0.9	2.6	0.4	1.4	1.4	
3	4.3	3.1	3.1	3.3	5.0	4.4	3.1	3.7	5.4	3.1	2.5	5.2	4.8	2.6	3.3	2.6	1.9	2.6	3.4	1.7	
4	6.0	4.1	4.8	4.4	6.9	5.3	3.2	4.9	5.6	6.2	6.7	5.6	4.6	2.2	4.8	3.5	6.8	2.2	4.3	3.6	
5	15.6	17.7	12.4	10.7	18.9	19.8	15.7	16.7	13.8	18.9	15.8	10.6	16.4	17.3	12.9	10.3	13.7	14.9	6.8	5.5	
6	11.9	13.4	10.7	9.1	10.5	9.3	10.9	8.1	12.9	14.1	8.9	9.5	12.5	15.6	12.7	8.5	11.9	13.5	9.8	10.0	
7	17.0	18.2	21.5	17.1	13.8	14.1	18.9	11.5	17.3	19.4	24.2	17.4	16.2	20.4	20.4	20.4	20.6	19.2	23.0	19.1	
8	23.7	21.6	24.3	28.6	20.7	17.6	20.5	23.4	20.9	18.1	19.9	26.7	27.5	22.9	27.2	29.7	25.5	28.0	29.0	34.6	
9	8.9	11.1	10.5	12.7	7.2	11.5	10.8	10.3	7.8	9.7	9.3	11.1	9.0	9.1	7.6	11.5	11.7	12.7	13.7	17.9	
Satisfied	8.5	8.0	9.6	10.5	12.5	12.8	13.5	14.1	11.8	6.2	8.9	11.3	4.8	8.7	8.5	10.6	4.8	5.7	7.7	6.0	
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Average	6.7	6.8	6.9	7.1	6.6	6.7	7.0	6.7	6.7	6.5	6.7	7.0	6.6	6.9	6.9	7.2	6.8	7.0	7.2	7.4	

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



Other indicators of well-being can be used. We have decided to study the evolution of two other proxies: the suicide rate and the consumption of alcohol (Figures B4 and B5 in appendix). From 1994 to 2010, the suicide rate has decreased in France from 19.5 for 100,000 people to 14.7. This decline mainly comes from men for whom we observe a decrease from 30.6 to 22.8. The number of suicides has also decreased for women but they started from a lower level. The alcohol consumption can also be considered as a proxy for well-being. Figure B4 presents the evolution of the grams of alcohol consumed per day per adult. From 1970 to 2008, this consumption has been reduced by almost 70%. Most of the evolution occurred during the 1980s and continued during the 1990s. Unfortunately, for these two proxies we cannot cross the evolutions with social gradients.

People say that "money can't buy happiness" but in this section we can see that education and income seem to be positively correlated with happiness. Money allows people to satisfy needs but their relative position in the socioeconomic hierarchy also influences their satisfaction. Many other factors (socioeconomic or cultural) affect well-being. The level of happiness in France, measured by self-declared scales, has slightly increased over the period 1980-2010. The increase of inequalities since 2000 seems to be correlated with a faster growth of well-being for more educated people but the gap between the bottom and the top of the distribution remains weak. However, other measures of well-being like the suicide rate or the consumption of alcohol experience decreasing trends over the last decade(s) but we cannot link these results with social gradients.

## 2.9 Intergenerational mobility (education and occupation)

There are several ways to analyze intergenerational mobility. In economics, most of the studies give an estimate of the intergenerational elasticity of income or wealth between parents and children. In sociology, it is more common to compare the social positions of fathers and sons. Mobility in France has been studied in both ways and the results tend to indicate that it has been rather stable over the last decades.

Vallet (1999) studies social mobility in France from 1953 to 1993 through occupations. The inequality of opportunities seems to slowly but continuously decline over time. According to Vallet, in 1993 around 4% of individuals aged between 35 and 59 have occupations that should not have been theirs in the absence of social fluidity during the past 40 years. However he does not disentangle the different causes explaining this trend.

Lefranc and Trannoy (2005) examine the extent and evolution of the intergenerational earnings mobility in France. They find that "the elasticity of son's (respectively daughter's) long-run income with respect to father's long run income is around 0.4 (resp. 0.3) with no significant change over the period under scrutiny". This result also suggests that France is more mobile than the US but less than Scandinavian countries. Arrondel (2008) gives an estimate of the intergenerational wealth elasticity and also finds that the degree of mobility is greater in France than in the US (0.22 against 0.35-0.40).

In a more sociological approach, Dupays (2006) finds a similar result about the stability of social mobility in France between 1977 and 2003. More specifically, according to the author, most of the mobility can be explained by structural transformations of the labor market. Indeed, the expansion of the service sector has led to the creation of managerial positions and high-skilled activities. These transformations are independent of any upward or downward trend of the degree of meritocracy in France. Thus, 40% of the overall mobility is considered as structural in 2003. When we consider the net social mobility, once these transformations are controlled for, we observe that social mobility slightly declines over the period as well as the equality of access to the best positions.

If we average the results we can conclude that the socioeconomic mobility in France has been rather stable over the last decades. In terms of levels, France is in between Scandinavian and Anglo-Saxon countries (more especially the US).

The link between household inequalities and intergenerational mobility can be less straightforward than it seems *prima facie*. In theory, a high level of inequalities can coexist with a high economic mobility if there is an equality of opportunities. But this mainly depends on institutions like education and taxation (esp. inheritance taxation). In real life, the degree of inequalities seems to be rather positively correlated with the economic mobility across countries even if it is not perfect<sup>33</sup>. Over time, the correlation is weaker mainly because it takes time for inequalities to be persistent across generations. Thus in France, economic and social mobility seem to be rather stable over the last decades while household income and wealth inequalities have fluctuated. Once again we can invoke the effect of timing but also the size of the fluctuations.

## 2.10 Conclusions

The main conclusion of this chapter is that the evolution of social outcomes seems to be weakly correlated with inequality trends. However, we notice significant differences across the social gradients we have used for most outcomes.

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<sup>33</sup> See Smeeding *et al.* (2011)

More specifically, 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 family changes, seem to be rather uncorrelated to changes in inequality. For the outcomes regarding families, this statement must be moderated since the growth of single-parent families explains part of the compositional changes at the bottom of the income distribution. 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.

Secondly, several outcomes seem to be slightly more correlated. Health indicators like life expectancy or subjective assessments 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 between unskilled workers and managers seems to react to changes in inequality with a delay. Furthermore, we observe a degradation of the quality of life of unskilled people over the past decade. For well-being, people with more education seem more satisfied with their lives and the gap has slightly grown over the past decade. For housing, the mechanisms are complex but we can see that the recent rise in income inequality coincides with a decline in the share of owner at the bottom of the distribution as well as a rapid growth of housing costs for them. Nevertheless, for this category of outcomes the magnitude of the effect is rather limited and the transition from correlation to causality is unclear.

Two effects can explain this absence of link: timing and magnitude. First, contrary to many countries, the increase of 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 dimensions like health or family. The second explanation is about the magnitude of inequality. The recent upward trend of income dispersion has "just" canceled the decrease observed during the 1980s and it does not make France a very unequal country even if this growth is serious. This characteristic probably leads to an absence of power for the links we try to study.



### 3. Political and cultural impacts

Inequality can affect political and cultural outcomes through many channels. In this chapter we will focus on several indicators to study the interdependence between these two dimensions. We will begin by analyzing the evolution of the political and civic participation before observing the evolution of trust in political institutions. Then, we will look at political values by describing not only direct political opinion but also more general views about issues regarding the extent of inequality or the causes of poverty. Like for Chapter 3, one key issue in this chapter will be the link between these outcomes and social gradients. We also repeat the same remark regarding the interpretation of the results and more especially the link between correlation and causality.

#### 3.1 Political and civic participation

During the last 20 years, the electorate turn up has evolved differently depending on the type of elections. Table 24 tends to show that there is no overall clear trend. In the general elections the turn up has been stable around 70-80% and has reached a peak for the 2007 presidential election. For local elections there is a downward trend for the cantons and regions (especially in 2010 and 2011) but stability for municipal elections. Lastly, the vote to elect the European parliamentary attracts less the voters. The turnout was 52.7% for the 1994 vote and decreased to only 40.6% in 2009. In terms of levels, presidential elections are far above the other types of elections.

Political science has extensively studied the electorate turn out because it is a proxy for the participation in the social and political life of the society. If people feel somehow excluded, the political participation is directly affected. Inequality can play this role because people may experience a sort of split between themselves and the political elite. Therefore, social factors explain the vote but also and primarily the decision of voting. Empirical studies on this issue prove such evidence: the absence of education takes people away from voting. More specifically, if we focus on 2002 when parliamentary and presidential elections take place, Clanché (2002) shows that the average turnout was equal to 62% for people with no education but close to 80% for college graduated people (after controlling for age). More interestingly, systematic abstention to every election (the two rounds of both presidential and parliamentary elections) was 4 times higher for people with no education

compared with graduated people. Moreover, being a homeowner and having a stable job increase the probability of voting.

**Table 24: Electoral turn up since 1992**

Electoral turn up (%)	General				Local						
	Presidential		Parliament		Municipalities		Cantons		Regions		European
	1 <sup>st</sup> round	2 <sup>nd</sup> round	1 <sup>st</sup> round	2 <sup>nd</sup> round	1 <sup>st</sup> round	2 <sup>nd</sup> round	1 <sup>st</sup> round	2 <sup>nd</sup> round	1 <sup>st</sup> round	2 <sup>nd</sup> round	
1992							70.0	61.7	68.5		
1993			68.9	67.5							
1994							60.4	58.7			52.7
1995	78.4	79.7			69.4	68.0					
1996											
1997			67.9	71.0							
1998							60.3	54.9	58.0		
1999											46.8
2000											
2001						67.4	66.1	65.5	56.3		
2002	70.6	79.7	64.4	60.3							
2003											
2004							63.9	66.5	60.8	65.7	42.8
2005											
2006											
2007	83.8	84.0	60.4	60.0							
2008						66.5	65.2	64.9	55.5		
2009											40.6
2010									46.3	51.2	
2011							44.3	44.8			
2012	79.5	80.4	57.2	55.4							

Source: Ministère de l'intérieur

Definition: Electorate turn up = numbers of effective voters / number of registered voters

Another way to take part in the social life of a country is to be a member of a union in order to defend the workers' rights and to represent them. The share of workers that are member of a union is very low in France compared with other European countries. It is measured as the number of unionized salary workers over the total number of salary workers. This share was equal to 9.9% in 1990. It has decreased since and it equals to 7.6% in 2008 (source: OECD). Among OECD countries France is at the bottom of the distribution with Estonia and Turkey while this share is above 65% in Nordic countries and equal to 18% in average in OECD countries. However, the collective agreements cover almost 100% of workers (see section 5.1.1)

**Table 25: Participation rate to association across social positions (2010)**

	All	All (w/o sport)	Social, NGO	Sport	Cultural	Leisure	Protection of common interest	Union*
Farmer	42	42	n.s	n.s	n.s	n.s	n.s	17
Tradesman, shopkeeper, business owner	29	29	n.s	14	n.s	n.s	n.s	n.s
High-skilled worker	50	30	7	20	12	4	5	13
Intermediate	44	24	6	20	8	6	4	12
Clerk	30	18	3	12	4	2	4	12
Unskilled worker	26	14	n.s	12	3	4	n.s	9
Retired	36	26	6	10	9	9	2	2
Other inactive	28	16	4	13	5	4	2	1
All	34	21	4	13	7	6	3	7

Source: INSEE, SRCV-SILC survey 2010.

Universe: adult population only (16 y.o. or more).

Interpretation: (first line) 42% of farmers are member of at least one association in 2010; \* employed people only; n.s = not significant.

Civic organizations are also a way to actively exercise citizenship. Apart from the professional associations and unions, the participation to associations is rather stable in France since the 1990s. Table 25 describes this participation not only by type of organizations but also across social positions in 2010. Overall, sport is the main motive of participation to an association. Now if we focus on civic associations only we can see that 6-7% of French population is involved in associations about culture or leisure. Professional issues are a motive for 7% of the population and organizations which can have political aims (like NGOs) gather 3 to 4%. The participation and the distribution across the different types of associations vary across social positions. It is much more common to be involved in an association for managers, intermediate positions and retirees. Besides, cultural, social and humanitarian organizations are mainly composed of these categories.

Explaining the mechanisms linking inequality and cultural and political outcomes is very complex given the crucial roles played by culture and institutions. It is even more difficult to identify the direction of the causality. The political and civic participation are the main peaceful ways to express opinions and to act in a democratic society. Inequality can affect the political and civic participation in two ways: by discouraging and... by encouraging citizens. Indeed, even if the first channel seems more plausible (high inequality may make people believe that politicians cannot help them), inequality can also lead to political actions (not necessarily peaceful) when it reaches an unacceptable level. Political participation has continuously decreased in France during the last 20 years (if we except the 2007 general election) and we have not observed any "transfers" from the political to the civic participation. There is clear evidence that education is positively correlated with

the political and civic participation. But, the fluctuations of inequality do not seem to coincide with this continuous decline. The relative stagnation of the French economy (high level of unemployment, slow growth of income...) fits maybe more with this "discouragement" channel. But once again the economic situation of a country only explains part of political outcomes. Culture and institutions are at least as determinant. The reverse causality (participation → inequality) depends on political values described in sections 4.3 and 4.4.

### 3.2 Trust in others and in institutions

A recent field in economics and political science studies the notion of trust and its importance as a central mechanism in societies. According to this literature<sup>34</sup>, trust in the other members of society or in the institutions regulating it is crucial because it can explain an importance share of economic differences between countries.

In the European Values Study, several questions try to measure the level of trust people have in democratic institutions (government, legal system...) but also the confidence with the other members of society. The survey covers the time period 1981-2008. The democratic institutions that are evaluated are the parliament, the government (only in 2008), the political parties (only in 2008) and the justice system. People have to answer the following question: "How much confidence have you in..." and four options are possible: "complete trust", "quite a lot", "not very much" or "none at all". Respondents are also asked to evaluate their trust in others. Here there are only two ways to answer: "most people can be trusted" or "can't be too careful".

The first column of table 26 presents the results for the whole sample. The parliament and the justice system are the institutions for which people are the more confident in. Around half of the sample trusts this institution but we observe a decrease of the confidence in 1999. The level of confidence in the government and the political parties is much lower. Only one third of the respondents trust the government and this proportion falls to 15% for the political parties. The level of trust in the other members of society is in between: around 25% of the sample declares that most of people can be trusted. For each variable, the evolution is the same: the level of confidence follows a sort of U-shaped curve over the period.

Like for the other items, an interesting analysis consists in evaluating how vary the answers depending on the respondents' education. The most striking observation is that education is positively correlated with the level of trust whatever the institutions. In average, the level of trust of

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<sup>34</sup> See Algan and Cahuc (2010) for example



highly educated individuals is 10 points higher compared with individuals. The justice system is less affected by education. The evolution of trust is rather similar along the distribution of education but for the trust in parliament we notice opposite trends: an increase by 10 points (between 1981 and 2008) for the top quartile and a decrease by more than 15 points for the bottom quartile. The same exercise with respondents' income shows rather similar results<sup>35</sup>. However, the gap between low income and high income individuals is smaller and the trends are less marked.

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<sup>35</sup> See Table B6 in appendix B

**Table 26: Trust in other and in institutions by education (1981 - 2008)**

	All				Distribution of years of education															
					Q1				Q2				Q3				Q4			
	1981	1990	1999	2008	1981	1990	1999	2008	1981	1990	1999	2008	1981	1990	1999	2008	1981	1990	1999	2008
Parliament:																				
Trust	56.2	48.2	40.6	51.3	61.3	45.3	39.4	43.5	59.8	40.4	37.1	48.9	54.2	48.6	37.1	51.9	50.6	55.0	49.3	60.6
Distrust	43.8	51.8	59.4	48.7	39.2	54.7	60.6	56.5	40.2	59.6	56.9	51.1	45.8	51.4	62.9	48.1	49.4	45.0	50.7	39.4
Government:																				
Trust	-	-	-	34.1	-	-	-	35.5	-	-	-	31.2	-	-	-	33.1	-	-	-	36.7
Distrust	-	-	-	65.9	-	-	-	64.5	-	-	-	68.8	-	-	-	66.9	-	-	-	63.3
Political Parties:																				
Trust	-	-	-	16.3	-	-	-	19.6	-	-	-	14.3	-	-	-	13.4	-	-	-	18.0
Distrust	-	-	-	83.7	-	-	-	80.6	-	-	-	85.7	-	-	-	86.7	-	-	-	82.0
Justice system:																				
Trust	56.3	57.5	45.8	55.6	52.9	56.5	46.3	54.2	61.8	51.1	39.2	51.8	56.2	54.3	45.9	54.7	54.1	67.3	52.3	61.6
Distrust	43.7	42.5	54.2	44.4	45.1	43.5	53.7	45.8	38.2	48.9	60.8	48.2	43.8	50.5	60.9	48.2	45.9	32.7	47.7	38.4
Others:																				
Trust	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
Distrust	76.0	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 : For all dimensions (except "Others"), there are four possible answers about the degree of trust: 1 = "complete trust", 2 = "quite a lot", 3 = "not very much", 4 = "none at all". For the sake of clarity, we merge answers 1 and 2. Same thing for answers 3 and 4.

Trust in political institutions may be considered as a proxy for the political participation. Therefore, inequality can affect trust through the same channels are similar: too much inequality discourages people and lead to a decline of trust in institutions which regulate society. In section 4.2 we do observe that education is strongly and positively correlated with trust in political institutions but also with trust in others. However, the trends do not fit with a "discouragement" channel since it declined during the 1980s and has increased since 2000. Therefore, the impact of inequality on trust seems rather limited in France. One explanation could be that the degree of inequality is not sufficiently intolerable to strongly affect trust. Another could be that inequality is only one factor among many others influencing the level of trust. For example, the political color of the ruling party may strongly bias how people judge this particular institution.

### 3.3 Political values and legitimacy

The electoral turn out, the enrollment in associations or even the trust in democratic institutions do not really reveal the opinions of French people but rather the way they express it. The analysis of their vote and the results of polls about political or social issues are necessary to go deeper. The aim of this part is to document the country's political values especially for topics like immigration and adhesion to extreme political parties' views.

#### **Vote for extreme**

Table 27 describes the evolution of the vote for the extreme left and right parties<sup>36</sup> during the last 20 years. We gather all levels of elections: local, general or European. The main information about this table is not the levels per se but the difference between local and general elections (especially presidential).

The votes for extreme right and left parties follow the same patterns even if the levels are different. Indeed, extreme right parties benefit from more vote than extreme left parties over the period. For presidential elections for instance, in average 5 to 10% of French registered voters vote for extreme left parties whereas this proportion is around 15-20% for extreme right. This gap is even bigger for parliamentary elections. Even if their scores can be relatively high, these extreme parties rarely win the election in the end mainly because all the elections (except EP elections) are not proportional but are built on a two rounds basis. Since 1992, only two deputies belonging to the major extreme right

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<sup>36</sup> We decided to exclude the communist party from the extreme left parties. So we have extreme left = LCR/NPA, LO + other extreme left parties; extreme right = FN + other extreme right parties

party, the "Front National", have been elected (all in 2012). Moreover, the Front National also succeeded in winning several elections at the municipality level (Orange, Marignane and Toulon in 1995; Vitrolles in 1997).

**Table 27: Vote for extreme since 1992 (score in %)**

	General		Local						European			
	Presidential		Parliament		Municipalities		Cantons		Regions			
	EL	ER	EL	ER	EL	ER	EL	ER	EL	ER		
1992							0.9	12.5	1.3	13.9		
1993			1.8	12.7								
1994							0.6	10			2.3	10.5
1995	5.3	19.7			...	...						
1996												
1997			2.5	15.0								
1998							0.6	13.7	4.4	15.2		
1999											5.2	9.0
2000												
2001					2.0	2.0	0.7	9.9				
2002	10.0	19.2	2.7	13.2								
2003												
2004							3.0	12.5	5.0	16.1	3.3	9.6
2005												
2006												
2007	5.4	12.7	3.4	5.9								
2008					1.8	1.1	0.4	5.0				
2009											6.1	6.9
2010									3.5	12.3		
2011							0.6	15.2				
2012	1.7	17.9	1.0	13.8								

Source: Ministère de l'Intérieur

Definitions: Score = numbers of effective votes / total number of expressed votes (first round only). EL = extreme left parties; ER = extreme right parties. Extreme left parties do not include communist party; "..." = national score unavailable

The evolution of their scores is not linear. They have experienced a peak in their results in the mid-2000s and then a decrease. Since the 1990s, the extreme right parties have always gathered more than 10% of registered voters in presidential elections. Their biggest success happened in 2002 when the extreme right candidate, Jean-Marie Le Pen, beats the socialist candidate Lionel Jospin and went to the second round against Jacques Chirac. Moreover, during this election extreme left parties did

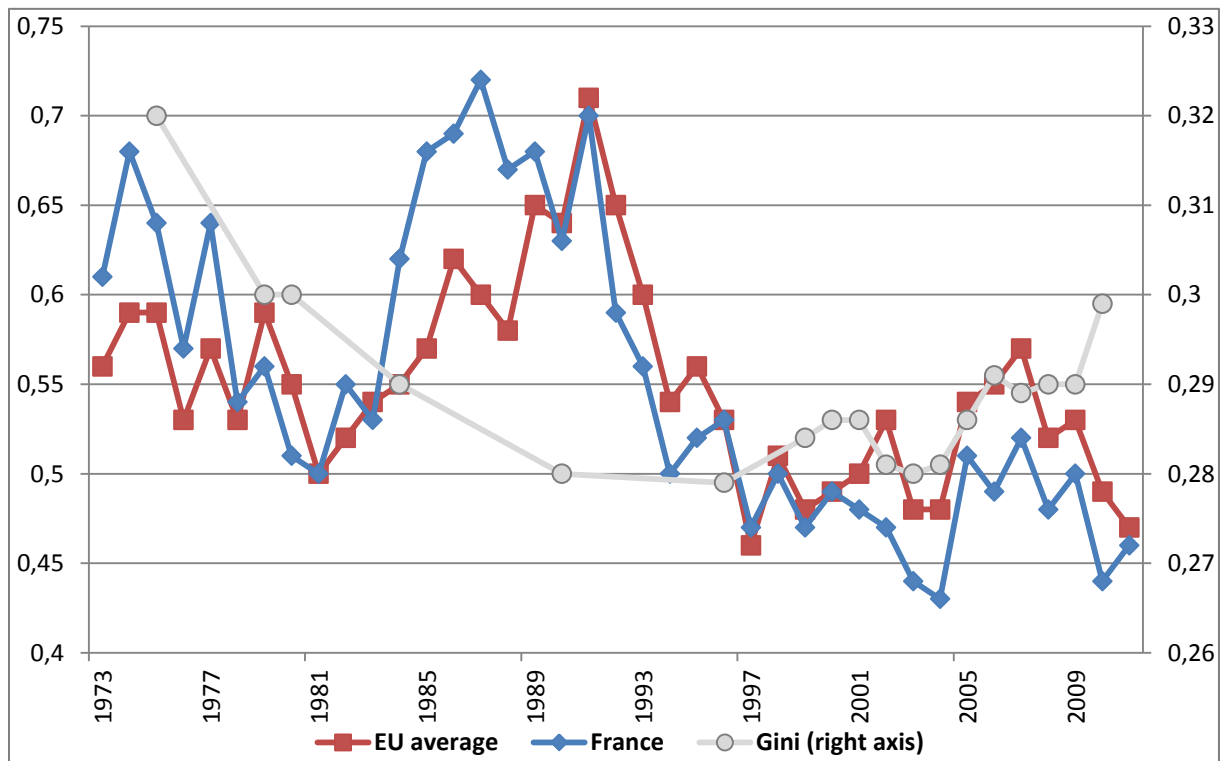
their best scores ever by gathering almost 10% of the overall voters. Since, the two extremes wings have been affected by a decline in their scores whatever the type of elections.

### **EU membership approval**

The positive stance of French opinion with regards the European Union has followed a continuous decline interrupted by a peak of positive opinion between 1985 and 1991. According to the Eurobarometer index, more than 60% of French people considered the European Union as a "good thing" in 1973 (Figure 21). This share decreased until 1981 where it reached only 50%. The end of the 1990s coincided with a peak at 72% in 1987. However, since 1997 less than half of the population has a good opinion of the EU. Compared with the EU countries, France is representative concerning the overall trend but less regarding the levels. During the 1970s and the 1980s the level of satisfaction in France was higher than the EU average but since 2000 the share of positive opinion is 5 points inferior.

Another way to measure the opinion regarding the EU is to consider the trust in the EU institutions. Figure 22 depicts the evolution of the trust in the EU parliament. The time period is shorter (1993 - 2012) but we can observe a decline in the level of trust especially since 2007. Thus, in 2012, around 45% of the French respondents tend to trust the European Parliament. Like for satisfaction, the trend coincides with the EU average. If we draw the same graph for the European Commission the picture is very similar (with a lower level of trust).

Figure 21: Satisfaction regarding European Union since 1973

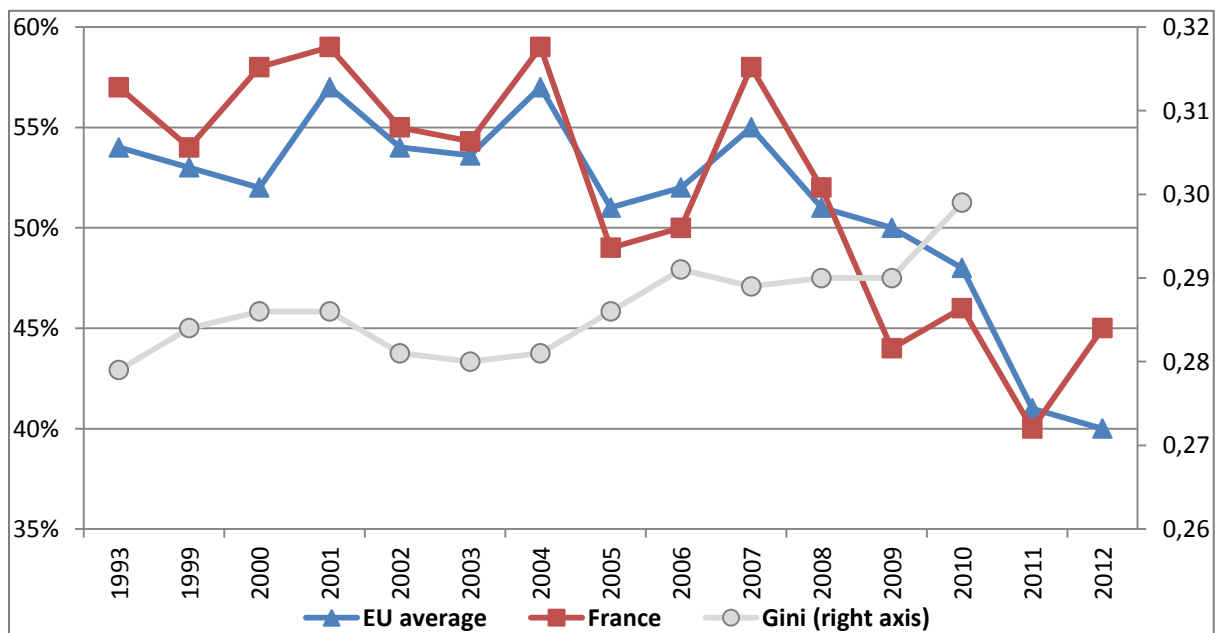


Source : Eurobarometer

Note : The exact question is: "Generally speaking, do you think that (your country's) membership of the European Community (Common Market) is" ...?"

Level of satisfaction on the left axis; GINI coefficient for equivalised disposable income on the right axis.

Figure 22: Trust in EU parliament since 1993



Source: Eurobarometer

Note: Level of trust (share of people who tend to trust the EP) on the left axis; GINI coefficient for equivalised disposable income on the right axis.

Drawing a parallel between the Eurobarometer index and the results of the European treaties referendums is an interesting exercise. In France during the last 20 years, two referendums have been organized to let the citizens to agree or not to European treaties. The referendum for the Maastricht treaty occurred in September 1992. The turnout was around 70% and the treaty was accepted by 51.04% of voters. The second referendum was about the European Treaty and was organized in May 2005. The turnout was again around 70% but the treaty was rejected by 54.67% of French voters. Thus, there exists a gap between the general opinion about the EU and the results of European treaties referendum. By considering only electoral indicators the global attachment of French people to the EU is underestimated. These scores reflect more the rejection of an EU project than the existence of the EU per se.

### **Immigration**

The opinion about immigrants can be analyzed from several questions in the European Social Survey and in the European Values Study. The topic is treated differently from a survey to another that is why we use both surveys.

In the ESS, respondents are asked to give their opinion about the impact of immigration on the economy and also more generally on the country: "do the immigrants make the country/economy better or worse?" Respondents use a scale graduated from 0 to 10 to express their view. To clarify the results we have reduced the size of the scale and we present the results with only three modalities: positive effect of immigration (score superior to 6), neutrality (equal to 5) or negative effect (score inferior to 4).

**European Social Survey (ESS):****Table 28: Opinion about immigration (ESS)**

	Distribution of years of education															
	All				Less than lower secondary education				Secondary education				Tertiary education			
	2002	2004	2006	2008	2002	2004	2006	2008	2002	2004	2006	2008	2002	2004	2006	2008
Immigrants bad or good for economy?																
Good	37.1	32.9	34.8	35.4	21.1	22.3	19.5	19.9	33.7	27.7	28.5	29.8	57.1	53.0	58.3	53.0
Neutral	34.6	39.0	37.3	29.2	32.5	25.3	25.9	22.1	35.7	30.2	29.3	30.2	33.9	29.7	24.1	31.1
Bad	28.3	38.1	37.8	35.4	46.4	52.3	54.6	58.1	30.6	42.1	42.3	40.0	9.0	17.3	17.5	15.9
Immigrants make country worse or better?																
Better	22.2	22.9	25.6	28.0	13.0	13.9	15.1	14.7	20.0	20.6	23.9	24.2	34.0	35.0	35.9	41.5
Neutral	40.4	36.9	34.1	37.5	33.5	28.3	25.1	30.2	39.9	36.5	33.9	39.0	47.2	44.5	40.2	38.8
Worse	37.4	40.2	40.3	34.4	53.5	57.8	59.8	55.1	40.1	42.8	42.2	36.8	18.8	20.5	23.8	19.7

Source: ESS1-4, European Social Survey Cumulative File Rounds 1-4 (2000-2008).



Regarding the impact on the economy, there is no clear answer. The share of respondents perceiving immigrants as a burden for the economy is compensated by the same proportion believing that the contrary is true. The impact of immigration on the country leads to more clear-cut opinion. Around 40% of respondents think that immigrants make France worse. This proportion decreases in 2008 but there are still more people who have a bad opinion of immigration. There is a slight upward trend about the effect on economy ``compensated" by a downward trend about the effect on the country.

Education strongly modifies the opinion about immigration. Barely 20% of low educated people have a positive opinion about the impact of immigrants on the economy whereas this proportion is greater than 50% among the respondents with tertiary education. The observation is the same for the effect of immigration on the country in general: less than 15% of low educated people perceive immigration as a source of improvement for the country while this share is around 35% for high-educated people. The slight trend described above does not differ across educational levels.

European Values Study (EVS):

**Table 29: Opinion about immigration (EVS)**

	Distribution of years of education														
	All			Q1			Q2			Q3			Q4		
	1990	1999	2008	1990	1999	2008	1990	1999	2008	1990	1999	2008	1990	1999	2008
Priority to native in case of job scarce (%)															
Agree	63.0	54.1	39.4	82.1	73.2	56.2	68.4	61.5	40.4	62.8	49.0	36.0	46.4	33.7	25.2
Disagree	31.2	36.1	56.2	14.3	20.4	39.0	26.7	29.3	53.2	30.5	38.1	60.1	47.3	56.3	72.4
Neither	5.8	9.9	4.4	3.6	6.5	4.8	4.9	9.2	6.4	6.7	12.9	3.8	6.3	10.0	2.4
Immigrant policy (%)															
Let anyone come	...	5.6	7.5	...	2.3	4.8	...	3.9	5.3	...	6.1	7.1	...	9.1	13.0
As long as jobs are available	...	33.7	44.6	...	25.9	31.8	...	32.8	41.8	...	35.9	47.8	...	39.9	56.9
Strict limits	...	50.3	42.1	...	57.9	49.6	...	48.4	47.0	...	49.0	42.3	...	46.9	29.2
Prohibit people from coming	...	10.4	5.9	...	14.0	13.9	...	14.9	5.9	...	8.9	2.9	...	4.1	0.9

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

**Table 30: Opinion relative to income inequality**

Income inequalities	Distribution of years of education														
	All			Q1			Q2			Q3			Q4		
	1990	1999	2008	1990	1999	2008	1990	1999	2008	1990	1999	2008	1990	1999	2008
Incomes should be made equal	40.3	46.6	40.5	50.0	52.5	47.1	42.2	47.4	41.8	40.2	45.3	39.3	34.2	41.7	33.9
Neutrality	14.2	15.5	15.1	14.7	13.9	15.1	13.0	14.9	13.1	13.5	16.5	14.0	14.9	16.5	18.2
We need larger income	45.5	37.9	44.3	35.3	33.7	37.8	44.8	37.7	45.1	46.3	38.2	46.7	50.9	41.8	47.9

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

In the EVS the question about immigration is more policy oriented: "should the government give the priority to native in case of job scarce?" and "how should be defined the immigration policy?" The proportion of people thinking that native should have priority in terms of access to jobs was very high in the 1990 (63%) but declined in 2008 and is now in minority. The position in the distribution of education affects the levels but not the downward trend. The proportion of positive answer is 30 points superior for the less educated respondents.

Similarly, more and more respondents think that the government should let immigrants come as long as jobs are available. Education affects much less the opinion compared to the ESS but still, the less educated people are, the stricter should be the policy related to immigration.

A description of the mechanisms linking inequalities and political values is detailed at the end of the section 4.4.

### 3.4 Values about social policy and welfare state

The opportunity to study directly the opinion of a representative sample of French people about the social policy and the welfare state is central for our analysis. It is a much more direct way to measure the feelings and the representations about inequalities and the way French government should deal with it. Two questions are addressed in the European Values Study: the opinion about the extent of income inequality and the causes of poverty.

The question addressed in the survey deals with the fight against income inequality. Respondents have to range their opinion on a 1 to 10 scale (with 1 = "Incomes should be made equal" and 10 = "We need larger incomes"). Once again we have reduced the size of the scale for the sake of clarity. Concretely, we have merged the answers 1 to 4 and 6 to 10 to only keep three categories. The results are presented in Table 30.

Firstly, around 40% of the whole sample thinks that incomes should be made more equal than they are; one respondent over six is in favor of a perfect equalization of incomes. The share of opponents to inequality increases in 1999 but decreases for the last wave and comes back at its 1990s level. It is difficult to know if the second round (1999) demonstrates a change of opinion or if there is a difference in sampling. Secondly, the position in the distribution of education strongly affects the opinion about income inequality. We divide the sample by quartile of years of education. The lower people are in the distribution, the more they are in favor of equalization. Concretely, the share of people in favor of income equalization is 10 to 15 points higher for the bottom quartile compared with the top quartile. Like for the whole sample, there is no clear trend in the evolution of opinions

across categories. Interestingly, the correlation between income and education about the opinion regarding inequality is not perfect. For instance, in 2008, 53% of high income people are in favor of a larger dispersion of income while this share for low income people is 20 points lower.

The second question of the EVS that can be used as a proxy for the values about social policy and welfare state relates to the causes of poverty. Concretely, the respondents give their opinion about the main drivers of poverty between five propositions: "bad luck", "laziness", "injustice in society", "poverty is part of modern progress" or none of these. Respondents have to give the two main patterns.

More than 40% of the sample believes that injustice in society is the main driver of poverty. Bad luck, laziness and modern progress are chosen by 15 to 20% of the sample. From 1990 to 2008, the role of bad luck decreases by 5 points in favor of a poverty caused by the modern progress (+ 4.5 points). Again, the most interesting information comes from the comparison of opinion between individuals with low or high levels of education. Thus, the role of injustice in society is strongly preferred by each quartile and it increases with education. On the contrary, the role of laziness is much lower for highly educated categories (around 11%). Once again, drawing a parallel between education and income in this question is an interesting exercise. Differences in opinions are thinner across the income distribution. Injustice and modern progress are the two main causes of poverty and, contrary to education, the latter is more prevalent in low income categories. Over the period, for the whole sample injustice and modern progress are more and more invoked as drivers of poverty.

**Table 31: Why are there people living in need?**

	All			Distribution of years of education											
				Q1			Q2			Q3			Q4		
	1990	1999	2008	1990	1999	2008	1990	1999	2008	1990	1999	2008	1990	1999	2008
First reason															
Unlucky	18.3	14.4	13.0	21.4	17.2	15.3	20.8	16.7	13.2	14.2	12.6	12.6	16.7	11.5	10.8
Laziness	15.4	11.4	16.4	20.9	14.4	23.3	15.5	12.4	17.7	16.9	11.1	13.7	11.9	7.6	11.2
Injustice	42.1	44.3	43.8	40.9	44.6	38.7	42.0	39.4	41.1	43.1	44.6	45.0	42.7	47.9	50.4
Modern progress	21.0	26.9	25.4	14.9	21.4	20.8	17.7	28.0	27.3	21.8	29.1	27.7	26.9	29.9	25.8
None of these	3.2	2.9	1.4	2.3	2.4	1.9	4.0	3.6	0.8	4.0	2.6	1.0	1.8	3.2	1.8
Second reason															
Unlucky	21.6	21.0	19.8	23.4	23.8	20.9	21.8	20.6	19.7	20.1	20.4	18.3	20.3	20.2	20.1
Laziness	17.8	16.6	16.9	18.7	17.9	16.7	17.1	17.0	19.1	17.8	14.8	17.1	15.7	16.9	14.8
Injustice	26.7	26.2	25.2	30.1	24.9	23.5	28.9	27.4	25.9	23.4	25.7	26.6	26.3	26.7	24.6
Modern progress	39.6	32.7	34.4	25.8	30.9	35.3	28.9	31.9	30.9	32.2	36.5	35.3	32.3	30.2	36.4
None of these	4.3	3.5	3.7	1.9	2.4	3.6	3.3	3.1	4.3	6.5	2.6	2.6	5.5	6.0	4.1

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

Note: among five propositions, respondents have to choose the two main.

A strong limitation to these two questions is about the political answers that are behind these opinions. A similar opinion can lead to many political solutions. For example, it is not obvious that people who think that injustice in society is the main driver of poverty recommend more redistribution. Discrimination can also be a motive behind this notion of injustice. Therefore, the recommendations following from these results are not easy to draw.

Political values as described in section 4.3 and 4.4 not only depend on the level of inequality but also on where people think it comes from. For example, people with low educational level think that incomes should be made equal (Table 30) but they also think that laziness is the second main cause (after injustice in society) explaining why are there people living in need (Table 31). These opinions about social policy and welfare state can help to understand the vote for extremes. Indeed, the extreme parties offer opposite solutions to economic problems but they attract similar voters (blue collars, young...). A similar conclusion can be drawn about the stance with regards to the European Union or to immigration. People with similar objective economic situation and/or exposition to globalization can have opposite opinion depending on their perception. That is why the causality between inequality and political opinions is very complex to determine. During the last 20 years, we have seen a decline of the satisfaction regarding the EU, an increase in the positive stance about immigration, a relative stability of the vote for extreme political parties. The evolution of these three measures of the political values in France illustrates how complex it is to identify a precise effect of the economic context.

### 3.5 Conclusions

The relationship between the evolution of economic inequality and political or cultural outcomes is complex to determine. On top of the timing and magnitude effects already described in the conclusion of Chapter 3, we can add the role of institutions as another difficulty for interpreting the results we obtained.

For the political and civic participation as well as the share of unionized workers, we observe a decreasing trend over the period that is probably more linked to the general economic context since the 1990s (slow economic growth, high unemployment...). The trend for trust in institutions is quite difficult to interpret because the discouragement motive we could invoke does not fit the results. However, for these outcomes the role of gradient is significant since rich/educated people are more active (through their vote or their participation to association) and tend to trust more institutions but also the other members of society.

The analysis of the political values leads to a similar interpretation about the weak relationship between the evolution of inequality and the different outcomes that are studied. More specifically, the vote for extremes has been rather stable since 1990. During the same period, the stance regarding immigration has improved but the satisfaction regarding the EU has declined. Finally, the opinion relative to inequality has remained roughly similar. This sum of results indicates that political values not only depend on the level of inequality but also on where people think it comes from. Once again, social gradients like income or education play a role. The opinion regarding immigration or the level of trust in EU institutions is more positive for educated/rich people while less educated people are in favor of income equalization.





## 4. Effectiveness of policies in combating inequality

The previous chapters of this report have documented the evolution of inequality in France (Chapter 2) and its impact on social (Chapter 3) and political and cultural outcomes (Chapter 4). The goal of this chapter is to study the effectiveness of policies regarding inequalities. More specifically, we attempt to answer the question whether these policies can explain the recent evolution of inequality. To do so, we present time series on policy variables directly or indirectly affecting inequality. First, we will examine policies affecting labor income and more generally labor market: wage-setting mechanisms, regulations and, more briefly, active labor market policies. In section 5.2 and 5.3, we present and analyze the redistributive aspects of taxation and social expenditures, respectively. Section 5.4 pays attention to policies regarding education, loans for students and professional training.

### 4.1 Labor income

As we have seen in section 2.1.3, labor income is the main source of income for most households. Even at the top of the distribution incomes related to labor (wages, salaries or pensions) represent a high share of total income (see Figure 7). As a consequence, the labor market regulation is crucial for inequality and also poverty issues by affecting levels and revaluations at the bottom and the top of the labor income distribution. A full description of the evolution of the labor market regulation is beyond the scope of this report. In this section, we are going to focus on two types of public policies. First, we will study the rules affecting labor income directly through the minimum wage but also through the mechanisms of wage bargaining. Then, we will focus on employment protection by analyzing the evolution of flexible contracts (temporary employment, part-time jobs...). We will briefly describe the main active labor market policies put in place during the past decades.

#### **The minimum wage and the wage bargaining process**

The debate about the role of the minimum wage is especially hot and recurrent in France given the level of this wage. To be (very) short, pros claim that the minimum wage is a barrier against poverty while cons claim that it is a barrier against employment because it leads to a high labor cost. In France, the minimum wage has been created in 1950 but its actual form dates from 1970. This

minimum hourly wage is fixed at the national level. It is revaluated each year once (in July until 2009, in January since 2010) depending on the evolution of the Consumer Price Index (CPI) plus half of the growth of purchasing power of the wage, measured by the hourly workers' wage. The minimum wage is also revaluated each time the CPI increases by more than 2% (excluding tobacco prices). The government can also choose to add an extra increase to this yearly automatic revaluation.

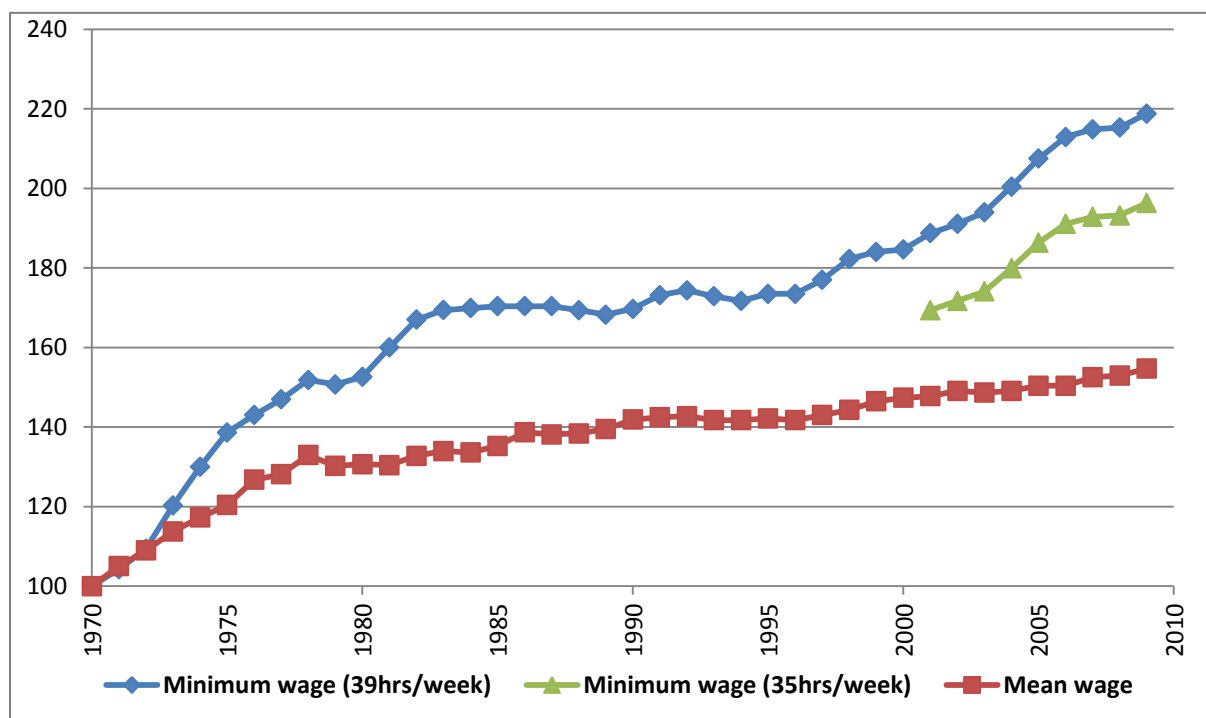
Figure 23 describes the evolution of the net monthly minimum wage from 1970 to 2009. We compare it with the evolution of the average wage over the same period. For this comparison, we only consider the case of full-time workers. We can clearly distinguish three periods. From 1970 to 1983, the minimum wage increased by 70% while the average wage only grew by 35%. Then, we notice a period of stagnation until 1996, more marked for the minimum wage. Since 1997 and especially during the mid-2000s, there is a new acceleration of the minimum wage.

For the purpose of this report, an interesting way to analyze the minimum wage is to look at its effect on poverty. In 2010, the hourly minimum wage rate equals 9.40 Euros. This corresponds to a gross monthly wage of 1425 Euros for a full-time wage earner. Once the Social Security Contribution and the Personal Income Taxes are paid, the disposable income of a minimum wage-earner is around 1100 Euros per month. In 2010, the monthly poverty threshold for a single person (60% of the median equivalised disposable income) was equal to 954 Euros (source: INSEE). However, with this back-of-the-envelope calculation, we do not take into account the household composition and the number of hours worked. According to Cahuc, Cette and Zylberberg (2008), the impact of the minimum wage as a barrier against poverty and inequalities is limited. In spite of an increase in the level of the minimum wage between 1970 and 2002 the poverty rate has decreased (from 18% to 13.5%<sup>37</sup>) but the number of working poor has increased from 3.4% to 5.7%. Regarding inequalities, the authors argue that the minimum wage is not the main tool to fight inequalities. It can be efficient when people work full-time but it is less the case when they are underemployed. As a consequence, we will complete our analysis by studying the quantity of jobs and their intensity (part-time and temporary jobs) in section 5.1.2.

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<sup>37</sup> See Table 5 on monetary poverty

Figure 23: Evolution of legal minimum wage since 1970



Source : INSEE, Labor Force Surveys

Who are the workers receiving this wage? In 2011, 10.6% of wage earners receive this minimum wage. This share has experienced significant variations during the last 25 years. The proportion of minimum wage earners was equal to 11% in 1987, fell to 8% in 1994, went up and reached 16% in 2005 and decreases continuously since (DARES, Acemo survey). The proportion of minimum wage earners is highly correlated with unemployment since these workers, mostly unskilled, are generally in the firing line in case of economic downturn. In 2011, they represent 25.2% of part time workers. They are overrepresented in catering services (35.1% of total workers), car industries (15.4%) and more generally in services (health and social services notably). The minimum wage is also widespread in small firms. Indeed, in firms with less than 9 employees, almost 25% of workers is concerned by minimum wage.

We have just seen that a very large part of the distribution is not affected by revaluations of the minimum wage. Then, how wage evolutions are determined for the remaining 90% of the wage earners? In France, there are three levels of wage bargaining: at the national level (for the minimum wage), at the branch level and at the firm level. Like in many European countries, branch has been the most common level for wage bargaining (Du Caju *et al.*, 2008) but during the last 20 years there has been a trend towards a decentralization of bargaining at the firm level. Indeed, two laws introduced in 1982 and 2004 obliged firms to bargain on some issues (including workers

compensations) even if it is not compulsory to find an agreement. These laws also allow firms to derogate from branch agreements. Moreover, firms can also benefit from fiscal incentives to bargain. As mentioned in section 4.1, less than 8% of wage-earners are unionized but almost 100% are covered by collective agreements. Several factors help to explain this weak correlation: possibility of extension of branch agreements to other firms, application to all workers (unionized or not)... The impact of agreements on workers compensations depends on inflation, on sales and on the proportion of workers at the minimum wage. For civil servants, compensations are set up at the national level and mainly depend on sectors (education, justice, health...) and workers' seniority.

### **The labor market regulation**

We have described the extensive aspects of labor market (access to jobs and compensations in sections 2.1.3 and 5.1.1). Let's turn to the intensive aspect: underemployment and atypical contracts. Criticisms regarding a strict employment protection are about the cost of layoff that would discourage employers to hire people and prevent firms from adapting to a changing environment. Conversely, employment protection is a way to oblige firms to internalize the human and social costs of unemployment. Some models point the fact that employment protection could increase inequality between workers (insiders vs. outsiders<sup>38</sup>). Today, in France, there are four main patterns in employment protection (Blanchard and Tirole, 2003): the necessity to explicitly justify layoffs, limited direct costs of layoff<sup>39</sup>, long proceedings and a significant difference between rolling and short-term contracts.

The general evolution of the labor market tends to indicate that employment protection has decreased over the past decades. In the late 1980s, some policies have plummeted the rigidities of labor market by favoring part-time jobs, short-term contracts and temporary jobs<sup>40</sup>. Therefore, the French labor market has become more and more dual with a large share of protected jobs (85%) and a minority of flexible jobs<sup>41</sup>.

Several indicators can be used in order to estimate the evolution of the French labor market over the recent decades. Firstly, we use underemployment as a first indicator of the intensive aspect of jobs. Underemployment is defined as a situation in which people who are currently working (according to

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<sup>38</sup> See Saint-Paul (2000) and Boeri et al. (2003)

<sup>39</sup> Indeed, the unemployment benefits are financed by SSC. The average direct costs are equal to 5-7 months of average wage.

<sup>40</sup> Several laws passed in 1986 make easier for firms the use of part-time jobs, temporary jobs and short-term contracts. Recent reforms have extended the conditions upon which firms can employ people via short-term contracts and have slightly modified the conditions of layoffs

<sup>41</sup> For a more general overview regarding the evolution of employment protection in France, see Maurin (2009)

the ILO definition) would like to work more (in terms of hours). Figure 24 describes the evolution of underemployment by gender since 1990 and for employees since 2003. We observe that the share of workers in this situation has increased between 1990 and 1995. Female workers are more affected than men and within each gender, the underemployment rate is higher for employees. Underemployment is by definition involuntary. Therefore, the role of labor market policies is important to explain its evolution.

**Figure 24: Underemployment by gender and social category since 1990**

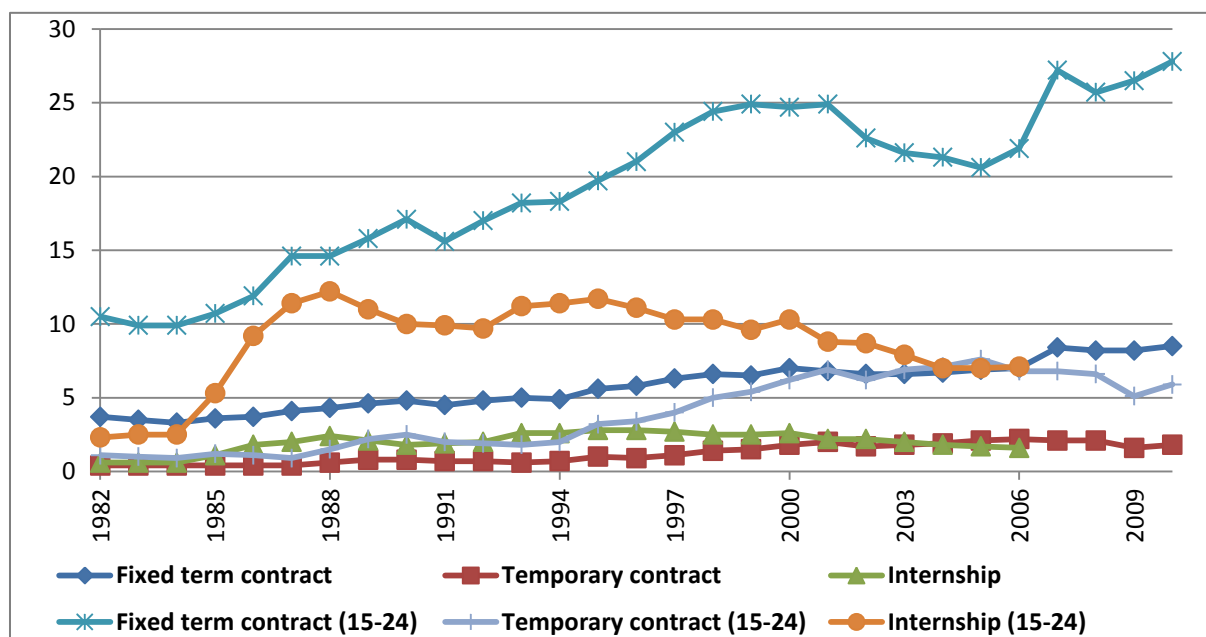


Source: INSEE, Labor Force Surveys

A more direct indicator we can look at is the distribution of workers across flexible contracts (Figure 25). We split the working population in three possible contracts: short-term contracts, temporary contracts and internships. Between 1982 and 2006 the share of these contracts in total employment has increased by 130%, from 4.7% to 10.8%. The workers with these types of contract are still a minority if we look at the overall working population but the growth is continuous over the period of observation. If we restrict our sample to the 15-24 years old workers the picture is different: the increase is stronger (+158%) and, more importantly, in 2006 the share of flexible contracts in total employment is as important<sup>42</sup> as the share of permanent contracts (rolling contracts and self-employment).

<sup>42</sup> If we add apprenticeship to the flexible contracts.

Figure 25: Type of contract in total employment (1982-2010)



Source: INSEE, Labor Force Surveys

Note: France, people above 15 y.o.

Finally, the causes of unemployment also provide information about the level of protection. Table 32 shows that the main cause of a job loss is the end of a short-term contract. Layoff is only the second reason (26.9% in 2010) and dismissal the third (9.0%). Thus, the most common way to reduce the number of workers for a firm is by not renewing contracts. The period of time for which we have the information is short but we see the growing importance of the end of short-term contracts as a cause of unemployment. The effect of the recent recession is limited since this motive was already the first in 2005, by far.

Table 32: Causes of unemployment (2003 - 2010)

Cases	2003	2004	2005	2006	2007	2008	2009	2010
Never had a job	5.7	6.0	6.1	6.0	6.2	5.9	6.2	6.2
End to temporary contract	37.5	41.3	43.0	42.7	42.6	45.5	44.7	43.3
Dismissal	11.4	11.8	11.7	11.3	12.1	12.0	9.5	9.0
Illness or disability	3.4	3.5	3.6	4.6	4.0	3.6	3.2	3.3
Layoff	30.0	31.5	30.5	28.9	29.1	26.5	27.2	26.9
Other	3.8	3.7	3.4	4.6	4.1	4.3	6.0	8.1
Unknown	8.3	2.3	1.8	1.9	1.9	2.1	3.1	3.1
All	100	100	100	100	100	100	100	100
Unemployment (%)	8.5	8.9	8.9	8.8	8.0	7.4	9.1	9.4

Note: unemployment is measured according to the ILO definition among the active population (people above 15).

Other policies have affected the French labor market over the last decades. A detailed analysis of these policies is beyond the scope of this section but we can attempt to describe the philosophy and the effect of these policies<sup>43</sup>. During the last 20 years, the main goal of the labor market policies in France was to enrich "the labor content of growth". In the 1990s, the policy makers tried to fulfill this aim through tax cuts (mainly SSC) for low-wage workers (300,000 jobs<sup>44</sup> for around 7-8 billion Euros), for personal workers (100,000 jobs) or for part-time jobs (no evaluations). At the end of the 1990s, the socialist government in place decided to enrich the job content of growth through sharing labor and through public jobs. Firstly, they created 200,000 public short-term contracts (5 years) to increase youth employment. Secondly, they reduced the number of hours worked per week from 39 to 35. Gubian *et al.* (2004) estimate that 350,000 jobs were created with this policy<sup>45</sup>. Another consequence of this policy was to reduce the use of part-time working schemes. As a consequence, 1998, 1999 and 2000 were the first, second and fourth best years for jobs creations during the century in France. During the 2000s, the niche job markets became the main target. Thus, the government created tax cuts for personal workers (no detailed evaluation), for firms in special urban areas (10,000 jobs created but high unit cost), short-term contracts for workers above 55 (no impact), tax cuts for extra-hours or new status for self-employed ("auto-entrepreneurs"). These policies have led to a rapid decrease of unemployment (from 8.9% in 2004 to 7.4 in 2008) but these solutions have been inefficient to fight unemployment during the economic crisis.

## 4.2 Taxation

Taxation is the main political and economic tool to fight inequality by affecting considerably disposable income. The levels and types of taxes but also the deductions and subsidies must be considered in order to evaluate the redistributive effect of a country's tax system. In this section, we will begin by decomposing the recent evolution of tax receipts in France. Furthermore, we will document the redistributive characteristics of French tax system by providing precise figures of the tax pressure along the income distribution.

Figure 26 describes the evolution of the total tax receipts in France since 1965. We see that most of the increase occurs during 1975 and 1985. During this decade, the total tax receipts have grown by

<sup>43</sup> See Askenazy (2011) for an exhaustive analysis

<sup>44</sup> The estimates of the overall number of job creations vary a lot from 100,000 to 600,000. The consensus of administrations was around 300,000. For a synthesis of the estimations (in French) see:

[http://www.minefe.gouv.fr/directions\\_services/sircom/emploi/conf071023/allegement\\_cotis\\_sociales.pdf](http://www.minefe.gouv.fr/directions_services/sircom/emploi/conf071023/allegement_cotis_sociales.pdf)

<sup>45</sup> See also Askenazy, Bloch-London and Roger (2005)

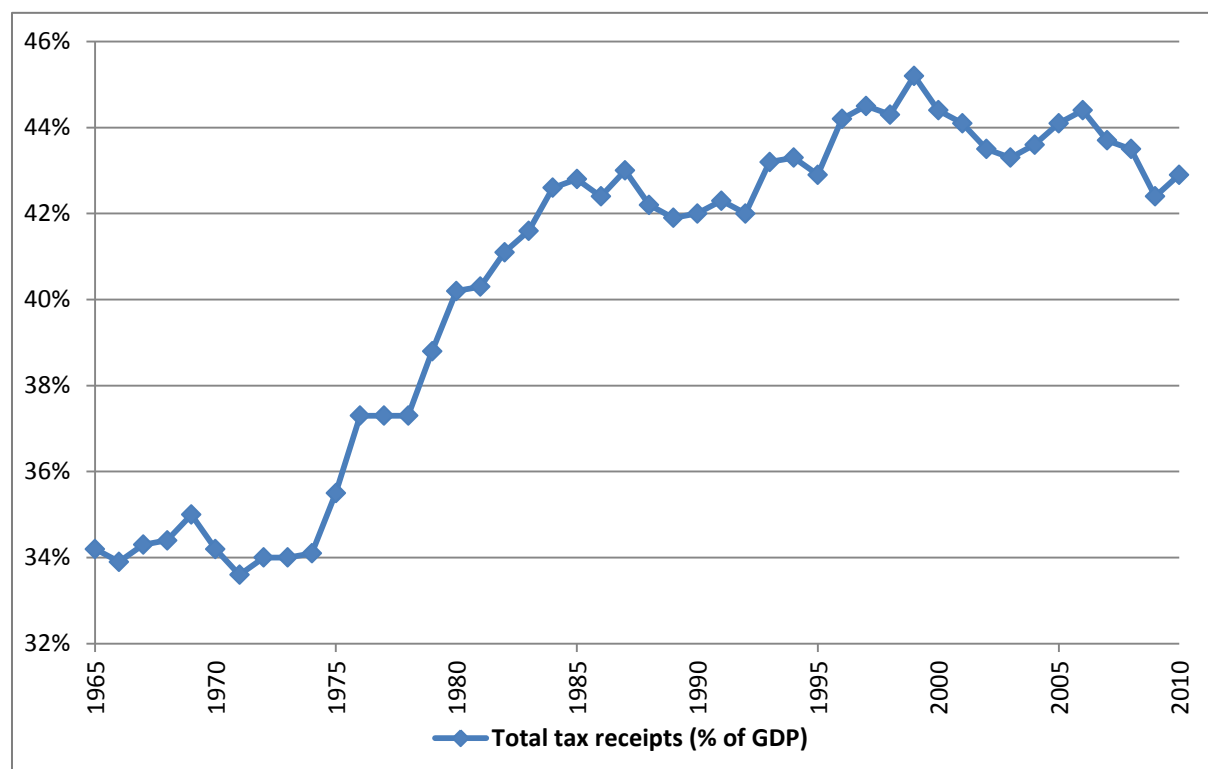
almost ten percentage points. Since 1985, we observe a relative stability: the slight rise by three points between 1985 and 2000 has been compensated by a decline by two points during the past decade. The level of taxes in France is among the highest in the OECD countries. It is close to Nordic countries and also to Belgium and Austria (source: OECD tax database).

The decomposition of revenues by origin enables us to have a better idea of the redistributive characteristics of the French tax system. Indeed, all types of taxes do not have the same effect on the income redistribution and as a consequence the weight of each type of taxes is a first indicator of the degree of progressivity. According to the OECD tax database, as presented in Figure 27, 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 occurs 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"<sup>46</sup>, a proportional income tax created in 1990, in order to decrease SSC. We can also emphasize other variations like the continuous rise of taxes on property and the recent decrease of income tax receipts. If we compare France with the OECD countries we remark the large weight of SSC (the highest among the OECD countries) in the overall tax receipts.

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<sup>46</sup> 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%).

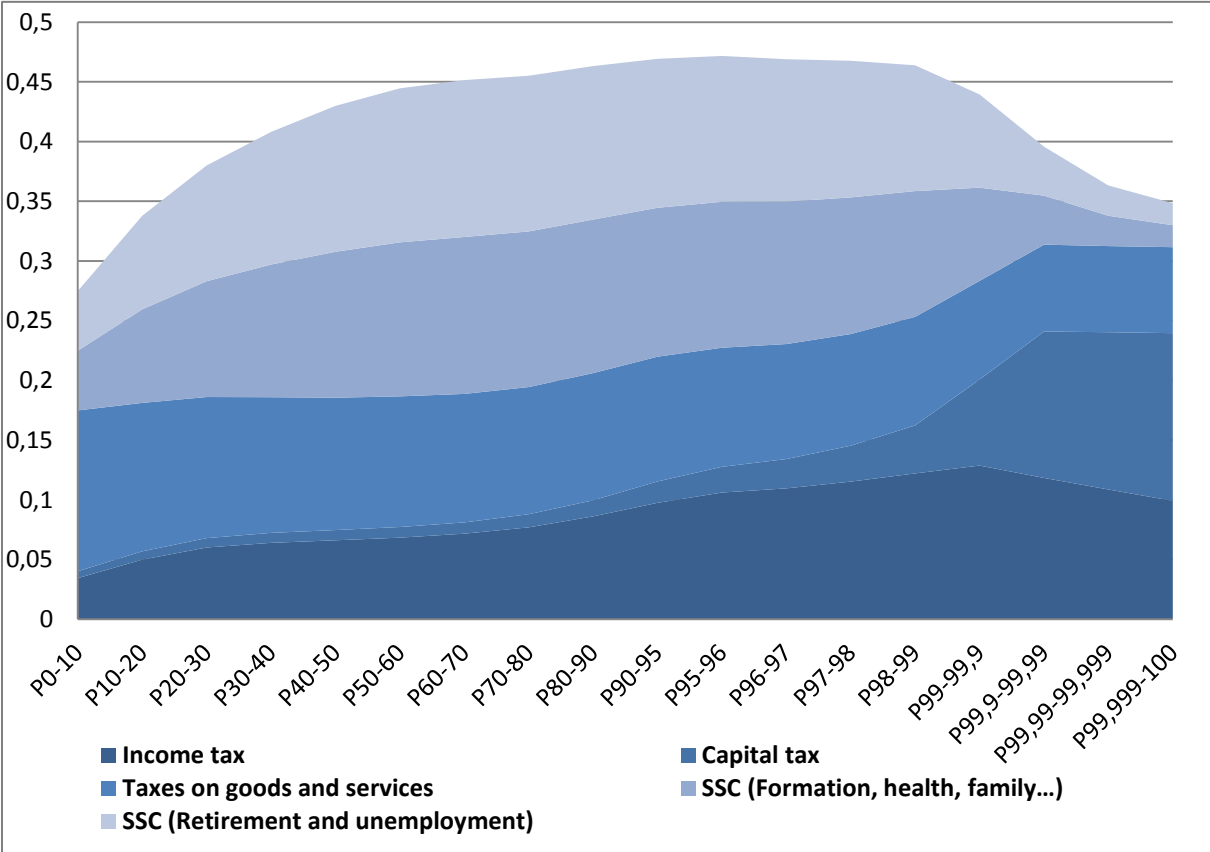


**Figure 26: Total tax receipts (% of GDP)**

Source: OECD SOCX Database

The progressivity of the French tax system has been extensively studied by Landais, Piketty and Saez in a recent book (*Pour une révolution fiscale*, 2011). The objective of this analysis is to consider all types of taxes in France and to estimate the tax rate for different levels of income. Figure 28 depicts their main finding: the French tax system is not progressive. More specifically, when we consider SSC, income and capital taxes and also taxes on goods and services, the average tax rate (as expressed in % of national income) is equal 49%. The poorest categories (P0-P50) of the population experience an average tax rate of 45%. For the middle class (P50-P90), this rate is between 48% and 50%. Then the tax rate declines and falls to only 35% for the 0.1% of the distribution.

Figure 28: Tax rate (in % of gross income) per income fractiles



Source : Piketty, Landais and Saez (2011)

In this figure we can 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 the same for the SSC (25% against 5%) and this is explained by the larger share of self-employed at the top of the distribution. SSC are particular because they not only finance social benefits received by workers (retirement or unemployment pensions) but also universal benefits (like family or health allowance). A priori, there is no reason for this last category of allowances to be financed only by labor income. The regressivity of these taxes should be compensated by the progressivity of taxes on income and capital. We do observe a net progressivity of taxes on capital<sup>47</sup> but this is not the case for income. The accumulation of fiscal deductions and the fact that capital income is barely taxed explain the failure of the tax system. As a consequence, the tax system, that is the main tool to fight socioeconomic inequality, does not even reach its minimum objective of proportionality.

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

<sup>47</sup> Even if since 2007 both wealth and estate tax have been cut.

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 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 has mainly financed the reduction of working hours. 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<sup>48</sup> (a maximum tax rate) and the decrease in the income tax have benefited to 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

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<sup>48</sup> The amount of taxes paid by a taxpayer cannot be superior to 60% of his/her income in taxes.

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 tax reforms affecting negatively the top of the distribution have been implemented during the last months of this five-year period (essentially in 2011 and 2012). Therefore, the tax cuts have been in place over almost all the five-year period.

A project of the new elected government was to increase the marginal tax rate for individuals earning more than 1 million Euros to 75%. However, 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, people will be allowed to deduct the amount of tax they already pay with the other proportional income tax, the "Contribution Sociale Généralisée", 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. Therefore, the overall effect on the structure of the tax system will be limited. More generally, the new socialist government (elected in May 2012) 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.

## 4.2 Social expenditures

### **Total expenditure**

Social expenditures are the other side of transfers. 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. To document the evolution of total social expenditures since 1980, we use the so-called SOCX-database built by the OECD. Even if the overall expenditures do 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 definition of "social" rests on two criteria. First, the benefits have to target one or several social risks: old age, invalidity, widows/widowers and orphans, health, unemployment, family, housing or labor market. Second, the programs regulating the provision of benefits have to involve either a) interpersonal redistribution or b) compulsory participation. "Public" social expenditure is social spending with financial flows controlled by General Government (different levels of government and social security funds), as social insurance and social assistance payments.

Figure 29 describes the evolution of public social expenditures as a fraction of GDP since 1980 in France<sup>49</sup>. In this figure, we consider expenditures in cash and in kind. We see that total expenditures have increased by 9% over the period (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. In terms of level, three types of risks centralize almost 80% of total spending in 2010: old-age pensions (11.1% of GDP), health care (7.5%) and family benefits (3%).

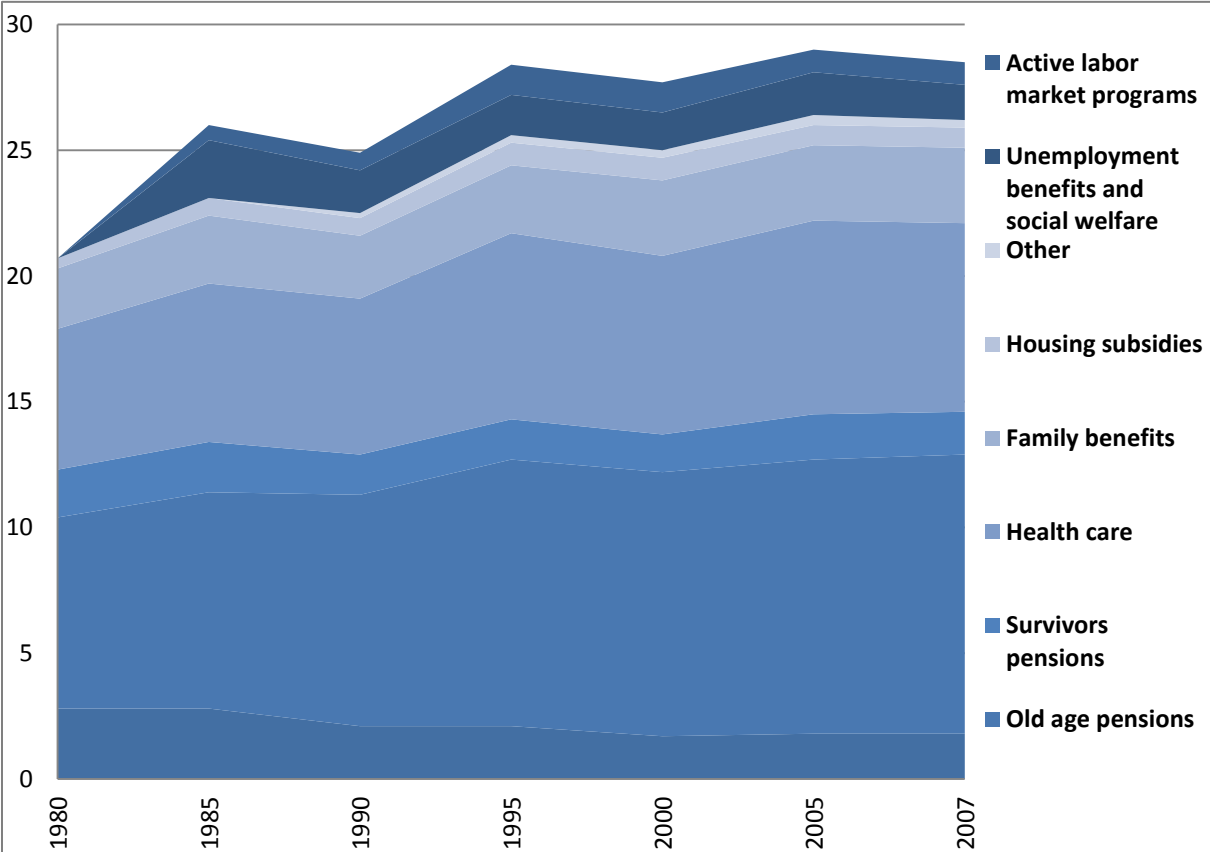
Table 33 depicts the evolution by types of risk covered and by natures of expenses. First we note that the share of in-kind transfers has increased slightly quicker than the cash benefits over the period mainly because of the increase of health care expenses. The share of in-kind benefits among family benefits has dramatically risen, going from 13% to 57%.

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. Lastly, for the other items the evolution may be explained by changes in policies (see from section 5.3.2 to 5.3.8 for more details).

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<sup>49</sup> Values are missing in 1980 for unemployment benefits and social welfare and active labor market policies

Figure 29: Public social expenditures by expenses category (1980 - 2007)



Source: OECD SOCX Database

Note: Social expenditures are expressed as a % of GDP

**Table 33: Evolution of social public spending since 1980**

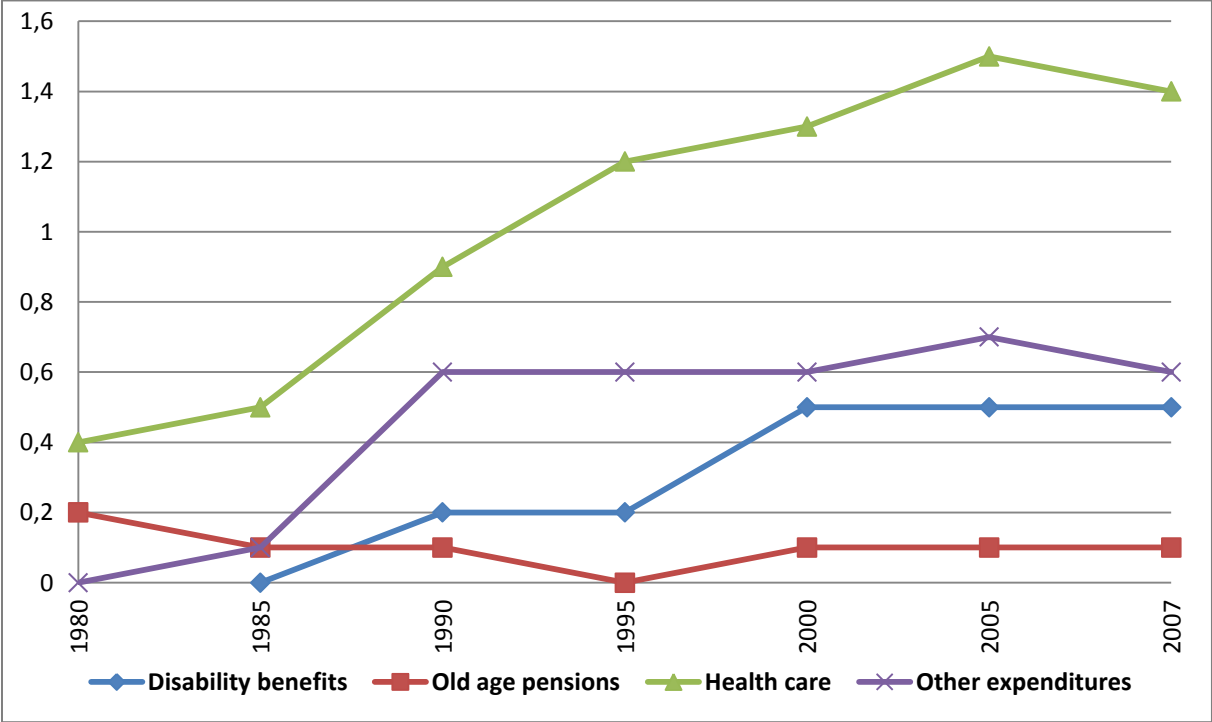
	1980	1985	1990	1995	2000	2005	2007	Evolution 1985-2007
Total social expenditures								
In billions (current prices)	92.4	193.4	256.9	340.4	399.5	499.9	538.2	+178%
% of GDP	20.8	26.0	24.9	28.5	27.7	29.0	28.4	+9%
in % of total government expenditures	45.4	50.2	50.3	52.4	53.7	54.3	54.3	+8%
Incl. Cash	30.3	33.7	31.5	31.4	32.1	32.6	32.6	-3%
Incl. in-kind	15.1	15.3	17.3	18.7	19.2	20.0	19.9	+30%
By type of expenditures (in % of GDP):								
Unemployment benefits and social welfare	...	2.3	1.7	1.6	1.5	1.7	1.4	-39%
Cash benefits (%)	...	100	100	100	100	100	100	
In-kind benefits (%)	...	0	0	0	0	0	0	
Active labor market programs		0.6	0.7	1.2	1.2	0.9	0.9	+50%
Cash benefits (%)	...	...	...	...	...	...	...	
In-kind benefits (%)	...	...	...	...	...	...	...	
Disability benefits	2.8	2.8	2.1	2.1	1.7	1.8	1.8	-36%
Cash benefits (%)	82	82	81	81	94	94	89	
In-kind benefits (%)	18	18	19	19	12	11	11	
Old age pensions	7.6	8.6	9.2	10.6	10.5	10.9	11.1	+46%
Cash benefits (%)	99	99	98	98	98	96	96	
In-kind benefits (%)	1	1	2	2	2	3	3	
Survivor pensions	1.9	2.0	1.6	1.6	1.5	1.8	1.7	-11%
Cash benefits (%)	100	100	100	100	100	100	100	
In-kind benefits (%)	0	0	0	0	0	0	0	
Health care	5.6	6.3	6.2	7.4	7.1	7.7	7.4	+34%
Cash benefits (%)	0	0	0	0	0	0	0	
In-kind benefits (%)	100	100	100	100	100	100	100	
Family benefits	2.4	2.7	2.5	2.7	3.0	3.0	3.0	+25%
Cash benefits (%)	92	85	60	56	50	47	43	
In-kind benefits (%)	13	15	40	44	50	53	57	
Housing subsidies	0.4	0.7	0.7	0.9	0.9	0.8	0.8	+100%
Cash benefits (%)	0	0	0	0	0	0	0	
In-kind benefits (%)	100	100	100	100	100	100	100	
Other expenditures	0.0	0.0	0.2	0.3	0.3	0.4	0.3	
Cash benefits (%)	...	...	100	100	100	100	100	
In-kind benefits (%)	...	...	0	0	0	0	0	

Source: OECD

Note: Data for "unemployment benefits and social welfare" and "active labor market programs" are not available in 1980. Same remark for "other expenditures" in 1980 and 1985.

Information about the voluntary private social expenditures allows us to complete the picture. The OECD defines it as "benefits accruing from privately operated programmes that involve the redistribution of resources across households and include benefits provided by NGOs, and benefit accruing from tax advantaged individual plans and collective (often employment-related) support arrangements, such as for example, pensions, childcare support, and, in the US, employment-related health plans". Like in most OECD countries, these expenditures have increased in France: 0.6% of GDP in 1980 against 2.6% in 2007. Most of the increase happened during the late 1980s and more than half of these expenses relates to the health sector. These expenses are negatively correlated with the level of social public spending across countries. Unsurprisingly, these levels are very low in France compared with the other OECD countries. The USA takes first place with a level of voluntary private social spending equal to 10.2% in 2007.

**Figure 30: Voluntary private social expenditures by expenses category (1980 - 2007)**



Source: OECD SOCX Database

The impact of social expenditures on inequality depends on two factors: their 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



(more than taxation). Cazenave *et al.* (2011) show that social spending<sup>50</sup> explains 66% of the reduction of income inequality in 2010 (against 34% for taxation). Family benefits represent 26%, housing benefits 19% and the different components of social assistance (RSA, minimum pension for elderly and disabled...) 17%. This paper also demonstrates 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. 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 does not decrease, the gap with respect to the average income has grown.

### **Unemployment benefits and social assistance**

In order to be eligible for unemployment benefits, a person must have worked at least 122 days or 610 hours during the 28 months preceding the end of his/her contract. For workers above 50, this period equals 36 months. The length of time during which unemployment benefits are received is equal to the length of time during which the claimer has worked (during the reference period - 28 or 36 months) with a lower bound of 122 days and an upper bound of 730 days. For unemployed above 50, this length can be put at a maximum of 1095 days. Besides, other conditions are required. The claimer must: not have dismissed; be able to work<sup>51</sup>; be registered as a job-seeker or follow a chartered training; be permanently and actively looking for a job; not have reached the legal retirement age.

The amount of the benefit depends on the gross earnings (wages, fringe benefits...) computed on a daily basis. Thus, the gross unemployment benefit is equal to the maximum of one of these two options: 57.4% of the daily gross earnings (DGE) or 40.4% of DGE + 11.34 Euros per day. Nevertheless, the benefit cannot be inferior to 27.66 Euros per day and cannot be superior to 75% of DGE. In July 2011, less than half of the unemployed people receives benefits (source: Dares).

The recent reforms of the unemployment insurance have reduced the length<sup>52</sup> and the amount of the benefits. Moreover, the unemployed duties have been increased. For example, since 2008 in order to perceive the benefits, an unemployed person cannot refuse more than two "reasonable" job offers or a professional training. Moreover, in 2008, the two administrations of the public

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<sup>50</sup> Here 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 (labor and capital). Here, we focus "only" on social expenditures with the aim of reducing inequality: housing, family, social assistance...

<sup>51</sup> In case of disease, unemployment benefits are replaced by health benefits.

<sup>52</sup> From up to 60 months in the 1980s to 23 today (36 for people above 50).

unemployment insurance (*ANPE* and *Assédic*) have been merged into a unique institution (*Pôle Emploi*) in order to improve the quality and the efficiency of the service.

The French system of social assistance has been simplified in 2009<sup>53</sup>. The "Revenu de Solidarité Active" (RSA) is dedicated to guarantee a minimum income to individual living with no or insufficient means of support. There is no time limitation as long as the claimer fulfills the conditions. These conditions are the following: the claimer must be French resident and older than 25 years<sup>54</sup>. Students or persons currently in vacation cannot be eligible. The households' resources (labor income, capital income, pensions, unemployment benefits, alimonies, some of the family benefits...) are taken into account. Like for most social spending, the household composition is considered to compute the benefits to be received.

The principle of the RSA is simple: a minimum income is guarantee. Thus, the amount received depends on the household resources: if the household does not have any resources then the RSA is a lump-sum transfer<sup>55</sup> (called "RSA socle"); if the household earnings are positive (but below a certain threshold), then the RSA acts as a complement (called "RSA activité"). The amount received in this case is the result of the following equation:  $RSA = (\text{Lump-sum amount} + 62\% * \text{household labor income}) - (\text{Total household earnings} - \text{housing benefits})$ <sup>56</sup>.

In June 2011, two years after the launch of the RSA, 1.9 million households were receiving this benefit: 1.4 million were receiving the "RSA socle" and 0.5 million the "RSA activité". Moreover, among the beneficiaries, 235,000 households were receiving the benefit for isolated parent. The effect of RSA on poverty and employment has been evaluated in a randomized control trial (RCT) in 2011<sup>57</sup>. In the treatment group<sup>58</sup>, the annual median income has increased by 7%. The poverty rate has decreased by 0.2 point (-150,000 persons) because of the RSA. If all the eligible beneficiaries had claimed for the RSA, 400,000 people would have crossed the poverty threshold. However, the results in terms of employment, the key goal of the RSA, are disappointing. The rate of return to work was 9% higher in the treatment group but the standard error was large and the difference between the treatment and the control groups was not significant. The period of evaluation but also the weak

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<sup>53</sup> The RSA is the merge of the Minimum Income for Insertion (RMI) created in 1988 and the benefit for isolated parent (API)

<sup>54</sup> People less than 25 can benefit from the RSA is they are considered as an isolated parent or if they have worked at least 2 years during the last three years

<sup>55</sup> If there is no child in the household, the benefit is equal to 474.9 Euros per month for a single person, and 712.4 Euro for a couple.

<sup>56</sup> Here, the housing benefits are different from the classical ones (cf section 5.3.8). It is lump-sum benefits: 56.99 Euros per month for a single person, 113.98 Euros for two persons, 141.06 Euros for three or more.

<sup>57</sup> See Bourguignon *et al.* (2011)

<sup>58</sup> The households who have received the RSA at least one month during the year

monetary incentive (w.r.t the former system) can explain this failure. Even if the RSA has simplified the assistance benefits, two systems still coexist: on the one hand, the RSA affecting the part-time workers and working as a minimum income and, on the other hand, the *Prime Pour l'Emploi* (PPE) affecting the full-time workers and working as a tax credit. The rules and also the periodicity (quarterly vs. annually) of the two systems are different. A real simplification of these schemes through a new tax credit (?) could affect more strongly employment and poverty.

### **Disability benefits**

The Handicapped Adult Benefits were created in 1975. The goal is to help the handicapped adults to get out of (social) exclusion with monetary benefits. Since 2005, the objective of the general law about handicap is to guarantee "equal rights and opportunities, the participation and the citizenship of disabled persons".

This benefit is dedicated to French resident between 20 and 60 years old. People can receive this benefit if they cannot work because of their handicap or their chronic disease. To be considered as handicapped, people must suffer from a degree of inability defined by the commission dedicated to the rights and the autonomy of handicapped persons (CDAPH). The duration of the benefits depends on the degree of inability and the amount received depends on the household taxable income (less than 9,300 Euros for a single person in 2010; 18,600 for a couple; and a deduction of 4,700 Euros per child).

The number of beneficiaries has strongly increased during the 1980s and the 2000s going from 243,000 in 1978 to 900,000 in 2011 for a total amount of 6.8 bn Euros. The maximum amount received is equal to 776 Euros per month in 2011, against 545 in 2000. This benefit can be cumulated with other benefits dedicated to disabled people. If we consider all benefits, the average amount received is around 630 Euros per month (source: Drees).

When people are above 60, the benefit described above is replaced by an old-age pension. The type of benefit received depends on the degree of inability of the claimer.

### **Old-age pensions**

The French pension system is mainly a pay-as-you-go system<sup>59</sup>. There are more than 600 main schemes and more than 6,000 complementary schemes<sup>60</sup>. We can distinguish three main categories:

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<sup>59</sup> Workers' social contributions pay retirement pensions

the private sector schemes, the self-employed schemes and the public sector scheme. For the public scheme, there are also three main schemes depending on the type of employers: 1) local or hospital, 2) central state or 3) the "special" schemes (essentially in public firms in the transportation or the energy sector). The rules vary a lot across regimes but the qualifying conditions are the same:

- The minimum contribution period to reach a full pension is 41.5 years in 2012
- Normal pension age for the earnings related public pension is gradually increasing and will reach 62 in 2017.
- When the retiree reaches the full contribution condition or is aged 65 and over (67 in 2017) then the minimum contributory pension is paid.

There are two components in the benefit calculation: the main pension (or earnings related) and the complementary pension (or mandatory occupational). The amount received through the main pension scheme is quite complex to determine. The earnings measure is based on a number of best years of earnings (valorized in line with price inflation). Since 2008, the number of these best years is 25 in the private sector. Then, the replacement rate is equal to 50% after a full career. For each missing quarter, the pension rate is reduced by 1.25%. The complementary pension calculation is different since it is based on a point system. The value of each point depends on the scheme. In the end, at retirement the total number of points is converted into a pension benefit.

According to OECD (2011), the public pension spending represents 12.5% of GDP in 2011. The average earnings of retired equal 32,700 Euros (against 27,800 in the OECD area) and the gross replacement rate is around 50% (slightly below the OECD average). In terms of inequality, the progressivity index (designed to summarize the relationship between pension in retirement and earnings when working in a single number<sup>61</sup>) is equal to 29.3 in France.

Since the 1990s, the main goal of the pension system reforms is to reduce its budget deficit. Indeed, the ratio between workers and retirees has continuously decreased from 3.14 in 1975 to 1.42 in 2010 (source: INSEE). 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

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<sup>60</sup> One individual can perceive a pension coming from several regimes. Thus, in 2008, each retired person receives 2.3 pensions in average (30 million pensions for 13 million beneficiaries) (Bozio and Piketty, 2008)

<sup>61</sup> The index is designed so that pure-basic systems score 100 and pure-insurance schemes, 0.

greater connection between the pensions of the civil servants and the workers of the private sector. However, the budget of the public pension system is still unbalanced (- 6 billion Euros in 2011).

### **Survivors' pensions**

The status of survivor is a legal status recognized by army and by civil authorities. It gives access to some advantages including a survivor pension. In order to obtain this status, several conditions have to be fulfilled: the claimer must have been a member of a combat unit for at least 90 days, or he/she must have been subjected to a long period of captivity, or he/she must have been infected by a disease or wounded during an operation, or he/she must have been decorated.

Once someone has this status, he or she can receive a pension equal to 665.76 Euros per year (in 2011) from 65 years old. Under some conditions, it is possible to receive this pension from the age of 60. The share of social spending dedicated to the survivors' pensions is 1.7% of GDP in 2007 (against 2% in 1985).

### **Health care**

Health care is the main branch of the Social Security because it represents 49% of the overall expenditures in 2010<sup>62</sup>. Like for the other branches, health care is based on the principle of "compulsory membership". Everyone, whatever his situation or his state of health, has access to health care because every resident contributes to its financing. It is managed at parity by representatives of employers and representatives of employees. There are three main regimes: the general regime (covering 89% of the overall population), the regime for farmers and the regime for self-employed. Other "special" regimes exist for some professions (public transportation, the French Central Bank, ministers and MP...). In this section, we will only focus on the general regime.

The general regime protects its beneficiaries from five types of risks: disease, maternity, disability, death, professional accidents or disease. The free health care for people with low income was created in 1999. It covers people with low income and who are not covered by a compulsory regime. In 2010, 49% of the general regime is financed by social security contributions, 35% by one of the two French income taxes (CSG), 11% by other types of taxes (tobacco, alcohol...). In 2010, the Health Insurance financed 75.8% of the overall health expenses of households. The remaining part was financed by the households (9.4%), the additional private insurance (13.5%) and by the CMU (1.2%).

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<sup>62</sup> The three other branches old-age, family and professional accidents or diseases represent 32%, 16% and 3%, respectively (source: Direction de la Sécurité Sociale, 2010).

The share of expenses covered by the Health Insurance has decreased by almost 2 points since 1995. The share paid by the private insurance companies and the households have increased by just as much (source: Drees). This trend can be explained by a continuous decrease of the share of health expenses (drug, hospitalization costs...) reimbursed by the Social Security.

The health expenses in France were in 2009 equal to 223 bn Euros i.e. 11.8% of GDP. Among the OECD countries, France is below the USA (17.4% of GDP), close to Germany (11.6%) and above Sweden (10%) and the UK (9.8%). In France, like in these countries, we observe a upward trend since the 1990s.

### **Family benefits**

In France, households can receive family benefits if they permanently take charge of at least two children under 20. These benefits are not means-tested i.e. all households receive the same amount whatever their earnings.

In 2011, the family benefits for two children are equal to 125.78 Euros per month, 286.94 Euros for three children and 161.17 Euros for each supplementary child. The benefits increase by 62.9 Euros per month per children when children are above 14.

In 2011, family benefits affect 4.5 million of households and represent almost 11.5 bn Euros. We can also add to this main social spending benefits for newborns (12 bn), for handicapped children (0.6 bn), for the start of the new school year (1.3 bn).

Moreover, households can also benefit from, under some conditions, fiscal deductions. With the "Quotient Familial" (QF) the tax system take into account the household composition. The household taxable income is divided by the number of tax units<sup>63</sup>. Then the income tax per QF is computed and multiplied by the QF to obtain the total income tax.

### **Housing benefits**

Figure 26 shows that housing expenses represent 0.8% of GDP (i.e. 14.4 bn Euros) in 2007. This category of benefits was marginal in the aggregate social expenditures until the 1977 reform that created the Housing Personal Assistance (HPA). This is a means-tested cash transfer granted to tenants and owners to cover their housing costs. Owners are eligible if they have received some

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<sup>63</sup> 1 tax unit for a single person, + 1 for his/her spouse, + 0.5 per child under 20, + 1 for each child from the third child.

social loans in order to buy or improve their housing. The housing benefits received by tenants depend on four parameters: their earnings, the geographical location, the household composition and the rent. Many students benefit from the HPA. Most of them receive between 60 and 200 Euros per month.

Another type of housing benefits exists: the Family Housing Benefits (FHB). It targets families and young couples under one of these conditions: people have to be married for less than five years; if they are responsible for an ascendant older than 65; if they already receive family benefits; if they have at least one dependent child. As for the HPA, these benefits depend on the household earnings, the household composition and the rent (or the loan).

The last category of housing benefits is the Social Housing Benefits (SHB). It is dedicated to individuals who cannot benefit from the other housing benefits. It mostly targets young, students, households without children, elderly or handicapped. These benefits also depend on the household earnings, the geographical location, the household composition and the rent (or the loan).

In 2011, the total number of beneficiaries was around 6 million for an aggregate amount of 15.5 bn Euros. The HPA represents 44% of the aggregate amount (2671 Euros per person per year), the SHB 30% (2116 Euros per person per year) and the FHB 26% (3120 Euros per person per year). Between 2003 and 2011, the number of beneficiaries has remained stable (source: CNAV-DSER).

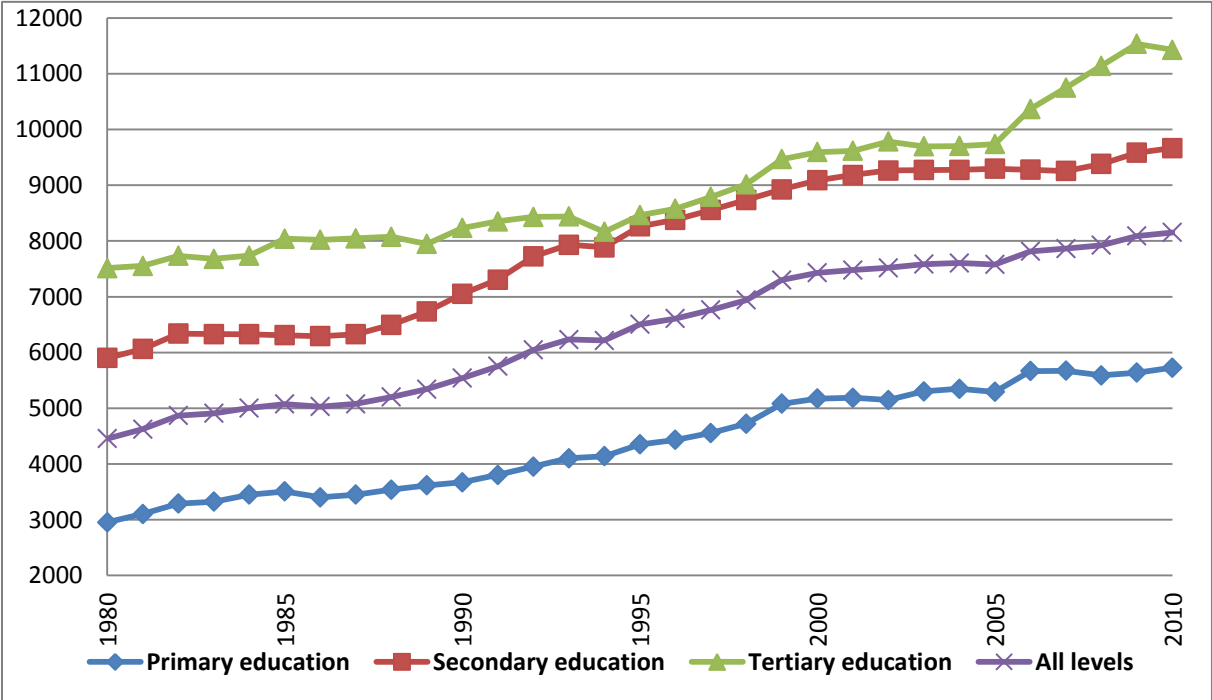
### 4.3 Education

Human capital is a key determinant of individual earnings. That is why educational policies through direct expenditures or financial assistance to students are important for the purpose of this report.

#### **Expenditures on education**

In Figure 31, we describe the evolution of expenditures on education per student from 1980 to 2010. We divide the educative system into three categories: primary, secondary and tertiary education. There is a general increase by 83% since 1980 but the evolution by levels points some discrepancies: + 94% for primary but + 52% for tertiary. The timing of the increase is also different from a level to another. For the primary and secondary levels, most of the increase occurs during the 1990s while for the tertiary level we observe two short accelerations between 1995 and 2000 and since 2005. Overall, the growth of expenditures during the 2000s is much lower: the average annual growth rate is equal to 1% against 3.2% during the 1990s and 2% during the 1980s.

Figure 31: Expenditures on education per student (Euros of 2010)



Source: INSEE-Depp

Beyond the overall expenditures, it is crucial to look at the way they are spent. One indicator that can be studied is the enrolment rate. OECD (2012) shows that the share of students among the 15-19 years old has decreased from 89 to 84% between 1995 and 2010. The share of student is higher in France than in the OECD countries but this downward trend is unique. Table 34 describes this trend by age category over the last decade. Firstly, the decreasing trend also affects the age groups for whom education is compulsory (between 6 and 16 in France). Secondly, the enrolment rate has especially declined for children below 3. However, Maurin and Goux (2010) notice that early education is very positive for children but also for the return to work of parents (especially mothers).



**Table 34: Schooling rate by age (2000 - 2010)**

	2000-2001	2005-2006	2007-2008	2008-2009	2009-2010	Evolution
2 y.o	34.6	24.5	20.9	18.1	15.2	-56.1%
3-12 y.o	100.0	100.0	100.0	100.0	100.0	0.0%
13 y.o	100.0	100.0	100.0	98.6	98.4	-1.6%
14 y.o	99.3	99.6	100.0	98.3	98.0	-1.3%
15 y.o	98.4	97.5	99.2	97.9	97.7	-0.7%
16 y.o	96.5	96.6	95.8	94.2	94.5	-2.1%
17 y.o	91.6	92.0	91.3	90.4	90.1	-1.6%
18 y.o	79.6	78.8	78.0	76.5	79.2	-0.5%
19 y.o	65.7	65.0	64.7	62.6	65.1	-0.9%
20 y.o	51.4	51.9	51.0	49.9	52.2	+1.6%
21 y.o	40.5	40.6	39.5	39.1	41.7	+3.0%
22 y.o	33.3	32.8	31.4	30.6	33.5	+0.6%
23 y.o	24.7	23.5	22.6	22.4	24.6	-0.4%
24 y.o	17.2	15.8	15.7	15.6	17.0	-1.2%
25 y.o	11.4	11.1	9.9	10.1	11.1	-2.6%

Source: DEPP; INSEE

Note: France, public and private schools

### Loans for students

First of all, the cost of education for students mainly depends on fees. The French educative system is almost entirely free from the primary education to the tertiary. The very low tuition fees<sup>64</sup> in the public tertiary system are a specificity compared with most OECD countries. It can be considered as the main way to encourage investment in human capital for French students. In private schools (mostly business and engineering schools) the fees set, by the schools themselves, are between 4,000 and 8,000 Euros per year. However, the low fees in the public education sector do not prevent the French system to be unequal (see Albouy and Wanecq (2003) in section 2.1.4).

Public financial assistance to students can take several forms: budgetary, fiscal or through other channels (mainly health insurance for students). Table 35 describes the evolution of public financial assistance between 1995 and 2008. Overall the total amount of expenditures dedicated to students has increased (in constant Euros) by 16.1% between 1995 and 2008. In terms of levels these expenditures were around 3.5 billion Euros in 1995 and are slightly superior to 5 billion in 2008. The variation is not the same across the different channels. The budgetary assistance represents 60% of the overall expenses and it has increased by 22.1%. The main components of these financial transfers

<sup>64</sup> In 2012, the fees for a bachelor degree in a French university are 177 Euros. This amount is equal to 245 Euros for a master and 372 Euros for a PhD (Source: *Ministère de l'Enseignement Supérieur et de la Recherche*). Students also have to pay around 200 Euros for social security.

are loans and grants for students and also housing subsidies. We can note that the housing personal assistance is the only budget item to decrease while it does not depend on parental resources but only on student resources and household composition. Expenditures through the fiscal channel have risen less quickly (+5.5%). It takes the shape of fiscal deductions or reductions for parents of students in order to take into account the cost of studying.

**Table 35: Expenditures on financial assistance to students (1995 - 2008)**

Type of assistance	Expenditures (in million)		2008/1995 In constant €
Budgetary [1]	2,062.4	3,137.1	+22.1%
Direct	1,787.8	2,724.1	+22.3%
incl. loans and grants	927.7	1,449.9	+25.5%
incl. social housing benefits	672.6	1,080.2	+28.9%
incl. housing personal assistance	187.5	194.0	-16,9%
Indirect	274.6	413.0	+20.7%
incl. student associations	266.2	364.0	+15.5%
incl. scholarship exemptions	8.4	49.0	+368.3%
Fiscal [2]	1,067.1	1,402.0	+5.5%
incl. reduction for parents of students	942.1	1,217.0	+3.7%
incl. reduction for scholarship of students	125.0	185.0	+18.8%
Total public assistance [1+2]	3,129.5	4,539.1	+16.4%
Other [3]	381.2	538.8	+13.5%
Total [1+2+3]	3,510.7	5,077.9	+16.1%

Source : Ministry of Higher Education and Research

However, this table does not tell much about the variation within the period of observations. To do so, we can examine the share of students benefiting from direct budgetary assistance (grants or scholarship exemptions). In 1990, 19.7% of students in higher education benefited from this kind of assistance; in 2008, they were 32.7%. Nevertheless most of this increase happened during the 1990s. Between 2001 and 2007, this share has remained the same around 30%.

### Adult education

Professional training is a right for all workers in France but its specificities depend on the professional activity. In every firm, employees can do some training during their professional life. It can take three main forms. First, employers can choose to form their employees. In this case, the employee is in "training mission" and is directly paid by the firm. Second possibility, as part of the "individual right for training", each employee can capitalize 20 hours of training per year, potentially cumulated during 6 years. The employer can accept the training and the employee receives a grant (equal to

half of his/her wage) if the training does not occur during working time or his/her current wage if it is. Last possibility, training leaves exist and their forms depend on the type of training. Like for the "individual right for training", employers can accept or refuse. Civil servants have training opportunities rather similar to those of private workers. For self-employed, the principle is different because they directly pay their training to public organisms.

Unemployed people have access to professional training schemes in order to increase their employability. The type of training changes depending on people's age. If individuals are between 16 and 25, they can access "work-study" schemes<sup>65</sup> or classical professional training. For people above 25, it depends more on their initial formation. These schemes can be financed by governments (central or local) or directly by unemployment insurance.

Professional training is funded by the government (central and local) and by firms. For "large firms" (10 employees or more), the minimum contribution is equal to 1.6% of the overall wages paid by these firms. Some of them pay more because the average is around 3%. For "small firms" (less than 10 employees), the minimum amount is equal to 0.55% of the overall wages paid by these firms.

Table 36 describes the evolution of the expenses on professional training between 1999 and 2007 by type of beneficiaries. Except for the unemployed, the expenses have increased for all categories of individuals during the period. The main beneficiaries are the private workers (43% of total expenses) followed by the youth (25%) and civil servants (19%).

**Table 36: Expenditures on professional training (1999 - 2007)**

Expenditures (in billion)	1999	2007	Structure in 2007	Evolution
Youth	5.6	7.1	25%	+28%
Unemployed	3.7	3.4	12%	-9%
Civil servants	4.3	5.4	19%	+26%
Private sector	8.8	12.1	43%	+38%
Investment	0.3	0.4	1%	+16%
All	22.7	28.4	100.0	+25%

Source : DEPP

A crucial question to be addressed is about the distribution of these training schemes. Indeed, the general increase we observe does not tell much about its beneficiaries. Table 37 presents the proportion of individuals who did training depending on their social position from 2003 to 2010. We see that the probability of assisting training is strongly correlated with the workers' social position. In 2010, 13.5% of executives had the opportunity to do training while only 5.4% of unskilled workers

<sup>65</sup> Courses during which the student studies part-time and works part-time

did. The ratio between executives and unskilled workers decreases over the period (from 3 in 2003 to 2.5 in 2010) but the gap remains significant. However, the quantity of training received is perhaps not a good proxy for the quality and it is likely that the gap between skilled and unskilled workers is underestimated by such measure. This result can also partly explain the strong correlation between unemployment and education. Firms are probably more reluctant to fire workers with a high level of firm specific training. So specific training received by high-skilled workers may protect them from unemployment.

**Table 37: Access to professional training by social category (2003 - 2010)**

Share of individuals having followed a training during the past 3 months (%)	2003	2004	2005	2006	2007	2008	2009	2010
Farmer	2.7	2.9	4.0	3.7	3.2	3.3	3.7	3.9
Shopkeeper, craftman, business owner	3.8	3.7	3.6	3.5	3.9	3.8	4.1	3.5
Manager, executive (1)	16.1	15.3	15.0	16.6	15.7	15.0	14.3	13.5
Intermediary job	14.8	14.7	13.7	14.8	14.9	14.0	13.9	12.4
Clerk	9.0	8.7	8.7	9.7	9.2	9.3	8.6	8.1
Worker (2)	5.4	5.5	5.8	5.9	5.6	5.9	6.0	5.4
Ratio (1) / (2)	3.0	2.8	2.6	2.8	2.8	2.6	2.4	2.5

Source : INSEE, Labor Force Survey

#### 4.4 Conclusions

Public policies can affect inequalities especially through taxation and social expenditures. In this section, we have attempted to describe and summarize 30 years of public intervention and its impacts on inequalities.

Labor income is the main source of income for most households. That is why, rules affecting labor income are crucial for inequality and poverty issues. In France, the minimum wage has increased over the period 1980-2010 and has helped to decrease income inequality during the 1970s and the 1980s. During the same period, the deregulation of the labor market has led to the creation of a dual market with an increasing share of part-time jobs and/or short term-contract (that mostly affects young and unskilled workers).

Taxation is probably the main economic tool to affect the income distribution. Between 1980 and 2010, the total tax receipts (in % of GDP) have risen by approximately 10 points. The social security contributions represent 40% of the overall receipts, the taxes on goods and services 25%, the taxes on income, profits and capital gains for 20%. Piketty, Landais and Saez (2011) have shown that the

French system is not progressive. More specifically, when all taxes are considered, the richest households (in the top centile of the income distribution) pay proportionally less taxes than the poorest (below the median). Bozio *et al.* (2012) note that most of this deterioration occurred between 2002 and 2012.

Social expenditures are the counterpart of taxation. Its redistributive impact depends on two factors: their progressivity and the weight in the total household income. Between 1985 and 2009, this type of public expenditure has increased by 9%. Old age pensions and health care are the main drivers of this evolution. We also observe a faster growth of in-kind transfers than cash transfers (especially for family benefits). According to Cazenave *et al.* (2011), the overall progressivity of social expenditures has decreased between 1990 and 2010.

Education is another crucial channel of public intervention. The evolutions are contrasted. The expenditures on education per student have grown by 83% since 1980 but the schooling rate has decreased among the 15-19 years and for the very young child. Moreover, the social expenditures dedicated to students (loans, social housing, fiscal deductions...) have risen by 16% between 1995 and 2008 (from 3.5 bn to 5 bn Euros) but the share of students receiving loans or grants has remained the same (around 30%) since 2000. Lastly, the expenditures on professional training have grown by 25% between 1999 and 2007. However, the distribution across social position is unequal since executives benefit more frequently from training schemes than unskilled workers.

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## Appendices

### 1 Sources

#### 1.1 Websites

EU-SILC

Eurobarometer surveys

French Central Bank

ILO

INSEE

Institut des Politiques Publiques (IPP)

OECD

The World Top Incomes Database

#### 1.2 Data

INSEE

Surveys: Wealth, Labor Force, Household Budget

Census

National Accounts

#### World Top Incomes Database

There has been a marked revival of interest in the study of the distribution of top incomes using tax data. Beginning with the research by Thomas Piketty (2001, 2003) of the long-run distribution of top incomes in France, a succession of studies has constructed top income share time series over the long-run for more than twenty countries to date. These projects have generated a large volume of data, which are intended as a research resource for further analysis.

The world top incomes database aims to providing convenient on line access to all the existent series. This is an ongoing endeavour, and the authors will progressively update the base with new

observations, as authors extend the series forwards and backwards. Despite the database's name, the authors will also add information on the distribution of earnings and the distribution of wealth.

Information for France are available from 1900 to 2006. The top income shares but also its composition are described in this database.

### **European Social Survey**

“The European Social Survey (the ESS) is an academically-driven social survey designed to chart and explain the interaction between Europe's changing institutions and the attitudes, beliefs and behavior patterns of its diverse populations. The ESS was established in 2001, and was led by its founder and coordinator Roger Jowell until his death in December 2011.

Currently gearing up for its sixth round, this biennial cross-sectional survey covers more than thirty nations and employs the most rigorous methodologies. The ESS information brochure outlines the origins and development of the project. In addition two collections of findings are available: one summarizes key findings from the first three rounds of the survey; the other focuses on “topline” results relating to Trust in Justice data collected in round five”.

France has been a participating country for the 4 waves from 2002 to 2008. This survey has been used for Tables 19 (subjective well-being - section 3.9), 24 (trust - section 4.2) and 27 (opinion about immigration – section 4.3.3).

### **European Values Study**

“The European Values Study is a large-scale, cross-national, and longitudinal survey research program on basic human values. It provides insights into the ideas, beliefs, preferences, attitudes, values and opinions of citizens all over Europe. It is a unique research project on how Europeans think about life, family, work, religion, politics and society.

The European Values Study started in 1981, when a thousand citizens in the European Member States of that time were interviewed using standardized questionnaires. Every nine years, the survey is repeated in an increasing number of countries. The fourth wave in 2008 covers no less than 47 European countries/regions, from Iceland to Azerbaijan and from Portugal to Norway. In total, about 70,000 people in Europe are interviewed.

A rich academic literature has been created around the original and consecutive surveys and numerous other works have made use of the findings. In-depth analyzes of the 1981, 1990 and 1999

findings with regard to Western and Central Europe, and North America reinforced the impression that a profound transformation of modern culture is taking place, although not at the same speed in all countries. Cultural and social changes appear dependent upon the stage of socioeconomic development and historical factors specific to a given nation. The new 2008 wave provides further insights in this matter".

France has been a participating country for the 4 waves from 1981 to 2008. This survey has been used for Tables 15 (subjective state of health - section 3.5), 20 (subjective well-being - section 3.9), 23 (trust - section 4.2), 26 (opinion about immigration - section 4.3.3), 27 and 28 (values about social policies and welfare state - section 4.4).

## 2 Supplementary results

**Table B1: Wage decomposition (2009)**

	Total earnings	Daily wage	Number of working days
All	19,270	63	306
Men	21,870	71	308
Women	16,430	54	303
Less than 25 y.o.	6,990	35	199
From 25 to 39 y.o.	18,020	58	312
From 40 to 49 y.o.	22,820	69	332
From 50 to 54 y.o.	24,430	72	337
More than 55 y.o.	24,450	77	319
High-skilled workers	38,430	115	335
Intermediate jobs	21,450	66	327
Clerks	13,050	45	290
Workers	14,320	49	293
Full-time	23,130	72	322
Part-time	9,620	36	265
Private sector	18,740	63	300
Civil servant	24,320	73	333

Source: INSEE, DADS 2009.

Universe: France, all wage earners from private and public sector (incl. salaried business owner)

**Table B2: Income shares by income fractiles (1980 - 2006)**

Year	P0-90	P90-100	P95-100	P99-100	P99.9-100	P99.99-100
1980	69.31	30.69	20.11	7.63	1.91	0.5
1981	69.27	30.73	20.04	7.55	1.89	0.5
1982	70.07	29.93	19.37	7.07	1.72	0.44
1983	69.57	30.43	19.53	6.99	1.63	0.4
1984	69.48	30.52	19.57	7.03	1.65	0.41
1985	68.95	31.05	19.96	7.2	1.7	0.43
1986	68.61	31.39	20.3	7.44	1.81	0.46
1987	68.27	31.73	20.66	7.75	1.98	0.53
1988	67.91	32.09	20.9	7.92	2.06	0.57
1989	67.58	32.42	21.31	8.21	2.2	0.62
1990	67.36	32.64	21.45	8.23	2.2	0.62
1991	67.56	32.44	21.18	7.97	2.07	0.57
1992	67.77	32.23	20.9	7.75	1.97	0.54
1993	67.78	32.22	20.81	7.65	1.94	0.53
1994	67.63	32.37	20.9	7.71	1.98	0.55
1995	67.59	32.41	20.93	7.7	1.96	0.54
1996	67.96	32.04	20.83	7.73	2.01	0.53
1997	67.83	32.17	20.94	7.77	2.01	0.55
1998	67.41	32.59	21.21	7.94	2.09	0.57
1999	67	33	21.54	8.15	2.18	0.62
2000	66.95	33.05	21.65	8.29	2.25	0.65
2001	66.91	33.09	21.78	8.43	2.33	0.68
2002	66.97	33.03	21.77	8.46	2.35	0.69
2003	66.89	33.11	21.88	8.55	2.37	0.69
2004	66.55	33.45	22.16	8.73	2.45	0.72
2005	67.11	32.89	21.88	8.73	2.48	0.74
2006	67.19	32.81	21.98	8.94	2.65	0.83

Source: World Top Incomes Database

**Table B3: Households professional status (2005 - 2011)**

	2005	2006	2007	2008	2009	2010	2011
Both earner	44.00%	43.40%	45.00%	45.40%	43.90%	44.30%	44.20%
incl. both full-time	31.60%	31.20%	32.50%	33.00%	31.50%	32.00%	32.00%
incl. one full-time, one part-time	12.40%	12.10%	12.50%	12.50%	12.30%	12.30%	12.20%
One non-earner	18.40%	18.80%	17.90%	17.20%	17.60%	17.40%	17.30%
Both non-earner	37.60%	37.80%	37.10%	37.30%	38.50%	38.40%	38.50%
Both non-earner (excl. hh uniquely composed of students)	36.30%	36.40%	35.80%	35.80%	37.00%	37.10%	37.20%
Both non-earner (excl. hh uniquely composed of students or inactive above 65)	14.50%	15.00%	14.70%	14.90%	15.80%	15.80%	15.80%

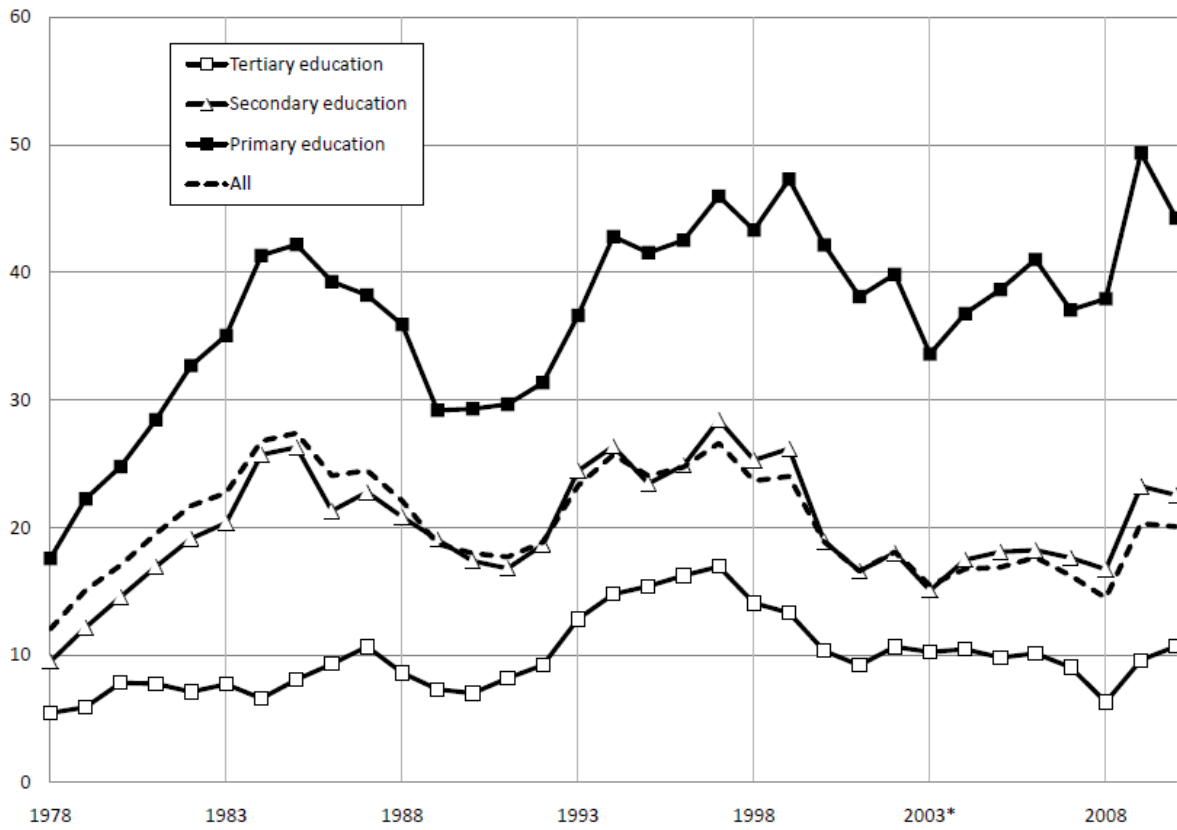
Source: EU-SILC (population of adults above 15 y.o.)

**Table B4: Wage shares by wage fractiles (1980 - 2007)**

Year	P0-90	P90-100	P95-100	P99-100	P99.9-100	P99.99-100
1980	74.08	25.92	16.72	5.72	1.08	0.19
1982	73.97	26.03	16.81	5.82	1.24	0.32
1984	73.82	26.18	16.96	5.92	1.28	0.34
1985	73.87	26.13	16.83	5.73	1.14	0.23
1986	73.45	26.55	17.2	5.99	1.29	0.32
1987	73.44	26.56	17.16	5.9	1.15	0.22
1988	73.17	26.83	17.39	6.11	1.31	0.25
1989	73.04	26.96	17.46	6.03	1.18	0.23
1991	73.22	26.78	17.28	5.95	1.19	0.24
1992	73.45	26.55	17.07	5.84	1.17	0.24
1993	73.19	26.81	17.22	5.86	1.2	0.27
1994	73.17	26.83	17.2	5.88	1.23	0.27
1995	73.35	26.65	17.07	5.8	1.18	0.24
1996	73.55	26.45	16.92	5.74	1.2	0.27
1997	73.53	26.47	16.96	5.8	1.23	0.27
1998	73.4	26.6	17.11	5.94	1.31	0.3
1999	72.57	27.43	17.78	6.34	1.46	0.33
2000	72.39	27.61	17.95	6.46	1.53	0.38
2001	72.13	27.87	18.19	6.64	1.63	0.4
2002	72.52	27.48	17.89	6.53	1.63	0.42
2003	72.65	27.35	17.79	6.49	1.6	0.44
2004	72.6	27.4	17.87	6.59	1.68	0.48
2005	72.49	27.51	17.99	6.69	1.71	0.45
2006	72.37	27.63	18.17	6.94	1.93	0.64
2007	72.27	27.73	18.3	7.06	2.01	0.65

Source: INSEE - DADS extracted from Godechot (2012)

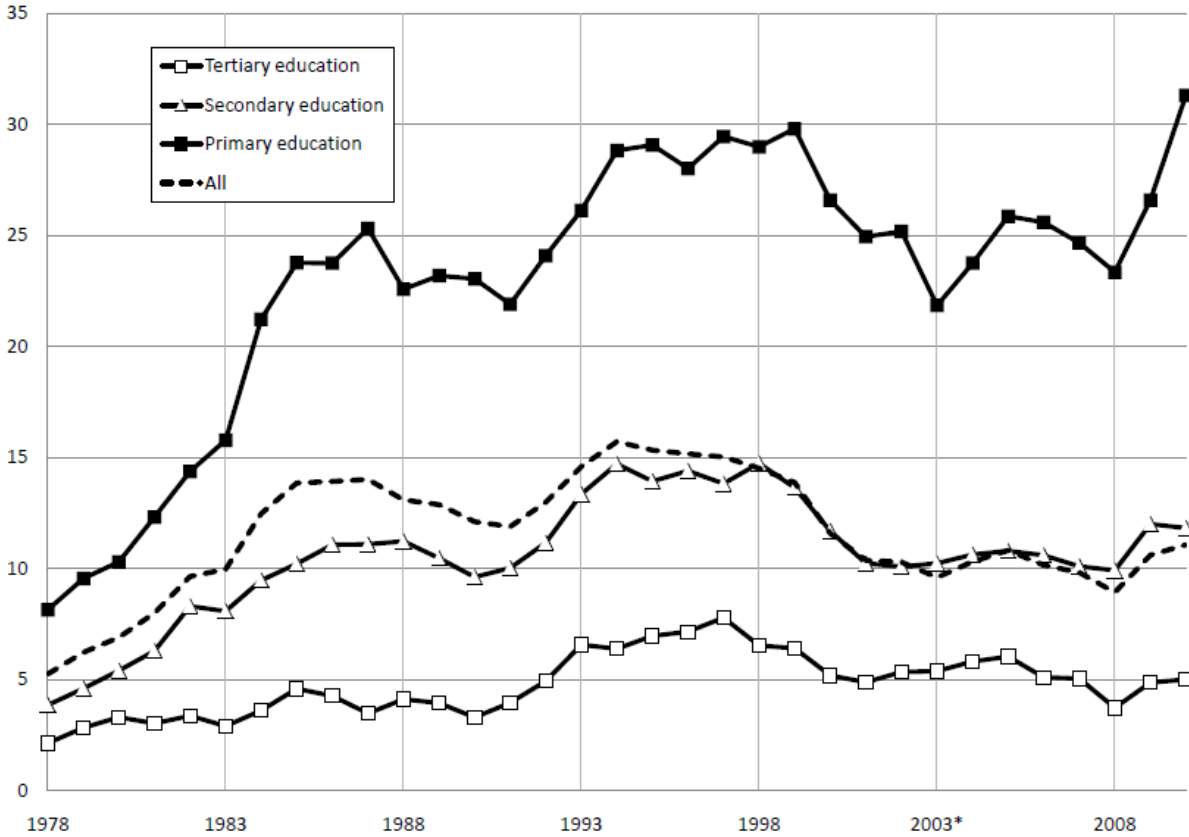
Definition: annual sum of gross wages (incl. employee SSC) by individuals that are over half the minimum wage (capital gains and stock options are excluded)

**Figure B1: Unemployment rate by level of education (1978 - 2010)**

Source: INSEE, Labor Force Survey

Note: unemployment rates for people having graduated 1 to 4 years ago.

Figure B2: Unemployment rate by level of education (2)

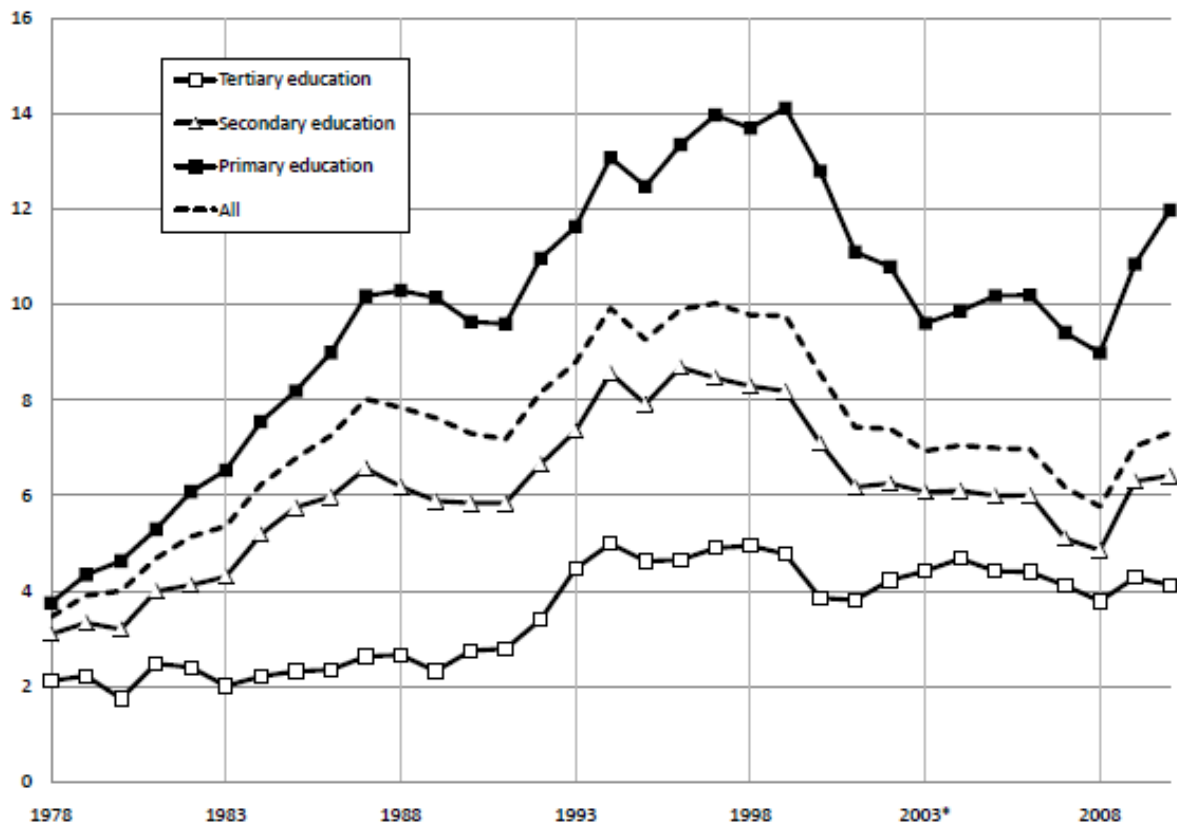


Source: INSEE, Labor Force Surveys

Note: unemployment rates for people having graduated 5 to 10 years ago.



Figure B3: Unemployment rate by level of education (3)



Source: INSEE, Labor Force Surveys

Note: unemployment rates for people having graduated more than 11 years ago.

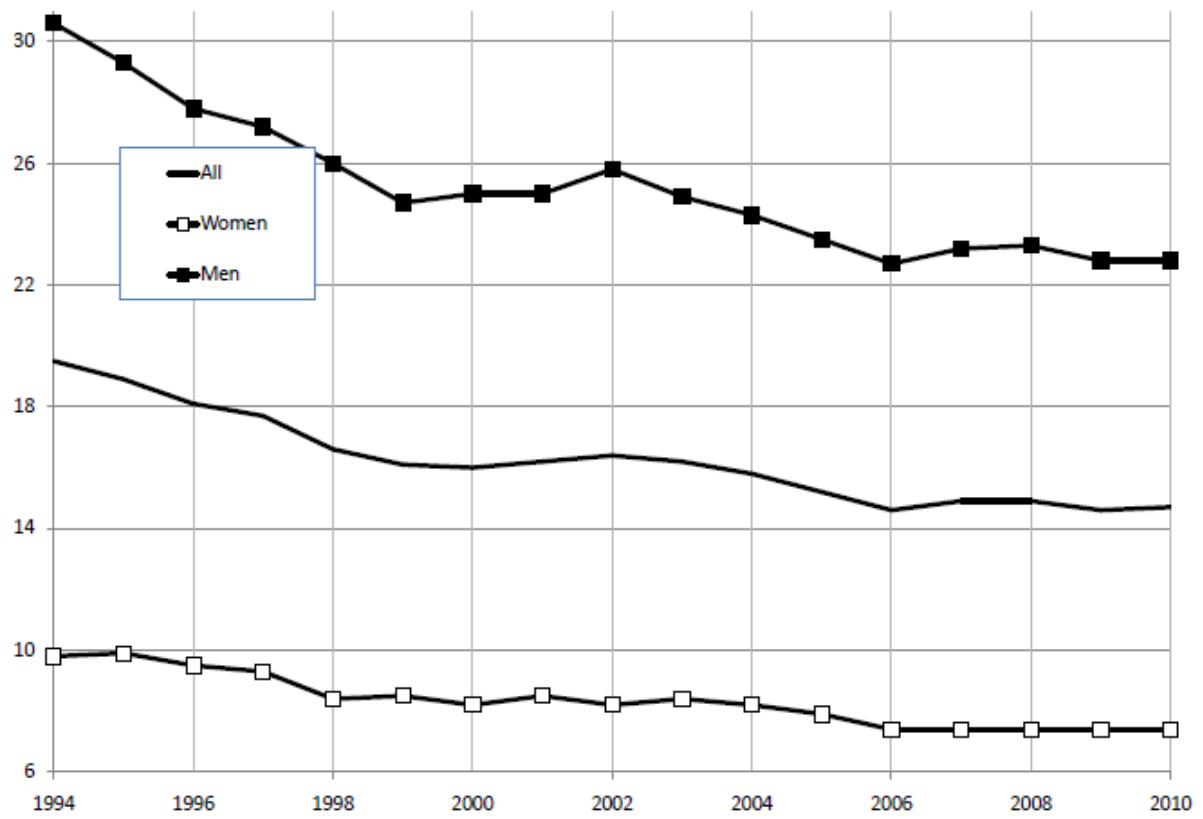
**Table B5: Subjective well-being by income (1981-2008)**

	All				Income distribution							
	1981	1990	1999	2008	Low income				High income			
	1981	1990	1999	2008	1981	1990	1999	2008	1981	1990	1999	2008
Life satisfaction?												
Dissatisfied	1.9	1.4	2.1	2.2	3	3.1	3.3	4.7	0.9	0.4	0.9	1.1
2	2.3	1.4	1.2	1.4	2.4	2.5	1.3	2.8	1.1	1.7	0.4	1.5
3	4.3	3.1	3.1	3.3	6.7	5.2	5.9	3.9	1.8	0.4	2.5	2.3
4	6	4.1	4.8	4.4	8.2	4.9	7.8	5.4	6.2	2.1	2.5	3.1
5	15.6	17.7	12.4	10.7	19.3	20.8	15.9	15.4	13	15.3	6.9	5.7
6	11.9	13.4	10.7	9.1	11.6	15.3	14.4	13	10.8	11.1	10.2	5.7
7	17	18.2	21.5	17.1	14.9	12.8	16.6	14.8	16.4	24.7	24.2	18.5
8	23.7	21.6	24.3	28.6	20.6	18.7	17.3	20.2	31.4	23.8	30.2	35
9	8.9	11.1	10.5	12.7	7.3	9.8	8.3	10.1	11.4	12.3	13.4	15.8
Satisfied	8.5	8	9.6	10.5	6.1	7	9.2	9.7	7.1	8.1	8.7	11.5
Total	100	100	100	100	100	100	100	100	100	100	100	100
Average	6.7	6.8	6.9	7.1	6.2	6.4	6.4	6.5	7	7.1	7.3	7.5

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

Definition: in the survey, the income distribution is divided into three parts. The high income households belong to the top 33% and the low income households belong to the bottom 33%. This measure was the only one available for all the waves.

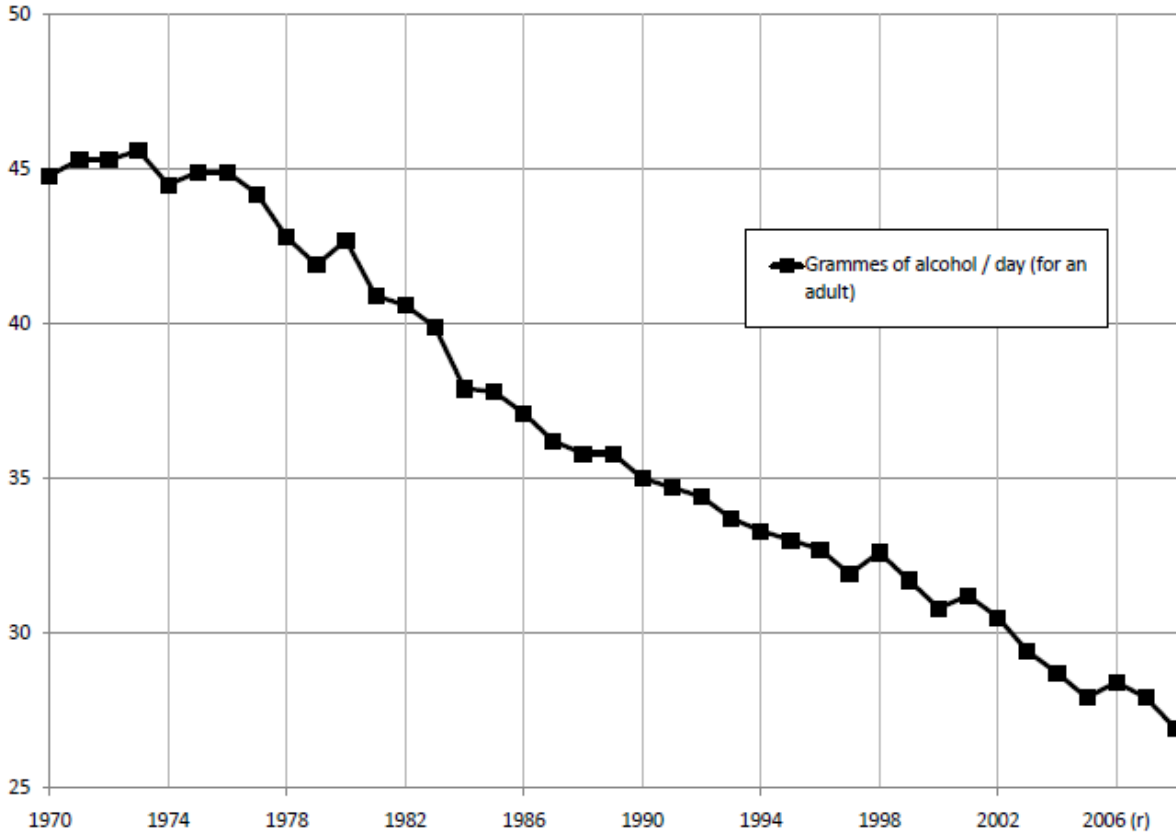
Figure B4: Suicide rate (per 100,000 people) from 1994 to 2010



Source: EU-SILC

Definition: suicide = death caused by intentional self-harm

Figure B5: Consumption of alcohol (1970 - 2010)



Source: INSEE

Definition: consumption = grammes of alcohol per day per adult (people over 15)

**Table B6: Trust in other and in institutions by income**

	All				Income distribution							
	1981	1990	1999	2008	Low income				High income			
	1981	1990	1999	2008	1981	1990	1999	2008	1981	1990	1999	2008
Parliament												
Trust	56.2	48.2	40.6	51.3	57.2	46.7	34.5	47	58.7	48	47.1	57
Distrust	43.8	51.8	59.4	48.7	42.9	53.3	65.5	53	41.3	52	52.9	43
Government												
Trust	-	-	-	34.1	-	-	-	28.7	-	-	-	39.6
Distrust	-	-	-	65.9	-	-	-	71.3	-	-	-	60.4
Political parties												
Trust	-	-	-	16.3	-	-	-	15.9	-	-	-	18.2
Distrust	-	-	-	83.7	-	-	-	84.1	-	-	-	81.8
Justice system												
Trust	56.3	57.5	45.8	55.6	54.1	58	42.9	54.8	59.7	60.4	47	57.7
Distrust	43.7	42.5	54.2	44.4	45.9	42	57.1	45.2	40.3	39.7	53	42.3
Others												
Trust	24	22.8	22.2	27.2	17.4	15.8	18	21.1	32	35.6	35	34.4
Distrust	76	77.2	77.8	72.8	82.6	84.2	82	78.9	68	64.4	65	65.6

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

Definition: in the survey, the income distribution is divided into three parts. The high income households belong to the top 33% and the low income households belong to the bottom 33%. This measure was the only one available for all the waves.

Table B7: Log table

	1980 - 1990	1990 - 2000	2000 - 2010	1980 - 2010	Reference
<b>Inequality:</b>					
Equivalised disposable income	-	0	+	0	T3
Real income	-	0	+	0	T4
Top income shares	0	0	++	++	F2
Wealth	n.i	0	+	+	T9
Wage (full-time only)	0	0	0	0	T10
Wage (all workers)	0	+	+	+	T10
Education	-	-	-	-	Section 2.1.4
<b>Social outcomes:</b>					
Material deprivation	n.i	-	0	-	T13
Monetary poverty	-	0	0	-	T5
Marriage	-	-	-	-	F16
Fertility	-	-	-	-	Section 3.4
Single-parent families	+	+	+	+	T16
Life expectancy	+	+	+	+	T18
Subjective state of health	+	+	++	+	T19
Share of owners (housing)	+	0	+	+	T21
Housing prices	+	0	++	++	F17
Crime rate	+	0	-	0	F18
Prison population	n.i	+	++	++	F20
Well-being	0	+	+	+	T23
<b>Political/cultural outcomes:</b>					
Electorate turn out	-	-	{	-	T24
Unionization	-	-	-	-	Section 4.1
Trust	0	-	+	0	T26
Vote for extremes	n.i	+	0	0	T27
Satisfaction regarding the EU	+	-	0	-	F21
Positive opinion about immigration	n.i	+	+	+	T28-T29
Income should be made equal	n.i	+	-	0	T30

Note: n.i = no information; ++ (-) = significant increase (decrease); 0 = stability