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Inequality in France: 1968–2022

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1 Executive summary

Employment, wages, hours and individual earnings

Over the period from the late 1960s to mid-1990s, France has experienced declining employment rates for younger and older workers, as well as for prime working-aged (25–60-year-old) men. After that date a moderate reversal in trend is noticeable for younger and older workers. This contrasts with the sustained rise in employment rates among prime working-aged women over the last four decades, from 46% in 1968 to 78% in 2022 (Figure 1). Over the same period, the employment rate for men decreased from 94% to 83%. Employment rates of younger workers (aged 16–24) decreased from 58% in 1968 to 22% in 1997, which coincides with the large increase in educational attainment (Figure 4). It then increased up to 2002 and has since stabilised around 30% for males and 28% for females. The employment rate for older workers (aged 61–74) also decreased from 1968 to 2000 for both male and females, reaching its lowest level (3.8%) in 2001. From that low point, the employment rate of older workers started to slowly increase. This reversal in trend can largely be explained by the end in the 1990s of early retirement schemes that had been prevalent since the late 1970s, and the introduction of pension reforms (e.g., reforms occurred in 1993, 2004, 2010 and 2013) aiming to increase the retirement age. However, despite this recent increase, the employment rate of older people remains low (15% for men, 13% for women) compared to other countries (e.g., more than 40% in the UK).

Net wage inequality declined significantly in France during the early period, from 1968 to 1985, then increased slightly from 1985 up to 1994 before declining again (Figure 49). Inequality in hourly wages decreased in the 2000s (Figures 11 and 12): starting from 2.68 in 1999, the 90:10 ratio decreased to 2.40 in 2010 (see also Verdugo 2014). Inequality in gross earnings, as measured from the Gini coefficient, slightly decreased from 1996 to 2017 (Figure 20). Over the same period, the 90:10 ratio of individual earnings inequality also decreased. Decomposition by gender shows that this decrease is mainly driven by a sharp decrease in earnings inequality among women at

the end of the 1990s (Figure 21). While net wage inequality declined in France, the pretax wage (or labour cost) inequality increased from 1985 onwards (Figure 49 and Bozio, Breda & Guillot 2023).

Finally, when we consider disposable household inequality indicators, we obtain declining inequality in the 1970s, and then a relative stabilization when we look at usual indicators like gini, or 90:10 ratios. Only the top 1 percent share exhibit an increasing trend during the 1985-2000 period, after a declining period in the 1970s, if one use exploit administrative data (Figure 48).

Labour market institutions

The French minimum wage dates back to 1950. It was dramatically increased in 1968, and during the 1970s and 1980s, to reach 60% of median earnings in 1986 (Figure 27). Starting in the mid-1990s, in a context of high unemployment, policies aiming to lower the cost of the minimum wage were implemented with reductions in social security contributions (SSCs) targeted around the minimum wage (Kramarz & Philippon 2001). As a result of this policy, the labour cost of the minimum wage started to decrease as a share of the labour cost of median earners (to 45% of median earnings in 2015) while the net minimum wage remained unchanged around 60% of median earnings (Figure 27).

Union density in France is at a low level compared to other European countries. It was only 20% in the 1970s, and it declined further to 10% by the 1990s. This trend is in stark contrast to the coverage of collective bargaining agreements which has increased progressively to cover now close to 100% of workers (Figure 28).

France experienced a large decline in the share of self-employed workers during the 1968–2002 period (Figure 24). This trend was mainly driven by a decrease in the share of solo self-employed, which halved (from 12% to 6%) during the period. Since 2003, there has been a mild rise in self-employment, also driven by the solo self-employed category. Nonetheless, while the change is mainly driven by low-educated males before 2002, after 2003 it comes from middle- and

highly educated women (Figure 25).

Household incomes

Two key factors affect the way in which inequality in individual earnings translates into inequality in household disposable incomes: household structures and the tax and benefit system. In France, household structures have evolved only marginally over the period of study. There has been a decline in the proportion of individuals married or cohabiting, from 80% in 1969 to 70% in 2019. This trend has been more pronounced for low educated individuals so that now individuals with education beyond high school have now a higher probability of being married or cohabiting than the lower educated group. Contrary to other countries like the UK, we do not detect any increase in assortative matching between 1996 and 2019.

The tax and benefit system has played an important role in counteracting increasing pre-tax inequality in France, but not through the same type of policy tools as in other countries (Bozio 2023). There has been increasing benefits for the lowest income group (figure 29), but most of the redistributive action has taken place through the employer social security schedule. In the early 1980s, the SSC schedule appears relatively regressive with high average rates for income below the mean and then decreasing SSC rates. With a policy of increasing payroll tax rates for incomes above the Social Security threshold, and from the mid-1990s on-wards the introduction of reduction of employer SSCs around the minimum wage level, payroll tax rates have first increased for high skill workers, and then declined for low skill workers. This policy has led to a much more progressive payroll taxation in France. The consequence is that inequality in net earnings have declined or remained stable, even though pre-tax inequality was increasing (Bozio, Breda & Guillot 2023).

As a result, the measure of inequality in disposable household incomes has declined in France over the period spanning from the late 1960s to the mid-1980s, before stabilising at this level. The P90/P10 ratio drops from 4.8 in 1970 to 3.7 by 1984, and then from 3.7 in 1996 to 3.6 in 2019 (figure 43). The gini coefficient or the relative poverty rate present a similar evolution (figure 42).

2   Institutional background

France has a population of 68 million people in 2023, with a GDP of 2640 billion euros in 2022. Public spending is high at 58.2% of GDP in 2022 (it was 55.4% in 2019 before Covid), and the tax burden amounts to 45.4% of GDP. France is characterised by a very comprehensive welfare state developed originally along a social insurance design, following a Bismarckian model, implying high social security contributions but also benefits in proportion to pas earnings. Although France is a relatively centralised country, the Social Security system, the important role of labour unions and employers' unions in managing mandatory complementary schemes, and different layers of local authorities (communes, *départements*, regions) all play a role along side the central state.

Provisions of the welfare state

The French welfare state social protection system can be decomposed into two parts. First, the social security system, financed by contributions from workers and employers, includes insurance against the risks of unemployment, sickness, family and old age. Second, the insurance system is backed up by a solidarity component, composed of means-tested benefits and financed by taxes. While the initial social security system was mostly designed for insurance purposes, universal schemes with a solidarity objective were introduced over the years, to cope with the economic crises starting in the mid-1970s.

The amount and duration of unemployment insurance benefits depend on the duration of contributions to the scheme and the amount paid in. But unemployment insurance is also characterised by a progressive replacement rate. Indeed, while the average replacement rate was 73% in 2021, it ranged from 63% (for higher incomes) to 94% (for lower incomes). The French pension system is a public pay-as-you go system with a generous coverage and high replacement rates. Total pension expenditures are significantly higher than in most European countries, at 14% of GDP. Although the system is composed of many different schemes, it covers earnings up to very high in the earnings distribution (up to P99). The main basic scheme in the private sector

has strong elements of redistribution, but is complemented by a point-based system with strong linkages between contributions and benefits. The pension system is mostly funded through Social Security contributions, as only some specific pension benefits like minimum pension and family-related bonuses are funded by general revenues. Health care insurance in France offers an universal coverage, also with two layers, one from the main Social Security scheme, the other from voluntary complementary schemes. The public insurance covers both public hospitals and private practices equally, so the large public coverage of health care does not mean that health care is mostly publicly provided. Initially, healthcare insurance was only funded through social security contributions, but progressively it became funded through tax revenues, notably with the creation in 1991 of the *cotisation sociale généralisée*, a flat-rate income tax earmarked to Social Security expenditures.

Complementing the insurance system, there are a variety of benefits that provide social assistance. These cash transfer programmes are means-tested, not taxable and not time-limited. The amounts awarded depend on household composition with a large component in relation to the number of kids. The oldest benefit is child-benefit which is universal (i.e., all households with at least two children are eligible): its amount is a lump-sum for each kid, starting with the second child, higher for low income household, but otherwise not means-tested (i.e., higher income household receive the benefit). There are also child-care benefits which cover child-care costs, with a progressive schedule but still universal in their design with high income household receiving a substantial even if lower benefit. The other main benefit is housing benefit, for renters, which is means-tested at the household income and has some component of geographical variations. As other benefits in France, the family composition matter in defining the amount and higher benefits are available in proportion of the number of children in the household.

Since 1988, family and housing benefits have been complemented by income support called in French *revenu minimum d'insertion, RMI* and then later transformed in 2009 into *revenu de solidarité active*. These means-tested benefits provide last-resort income support for low-income households that are not eligible for other benefits. In 2001, an in-work tax credit is introduced

(*prime pour l'emploi*), later transformed into an in-work benefit (*prime d'activité*), to encourage return to work. Individuals who cannot work because of a disability have been able since 1975 to benefit from another type of income support, more generous than the standard social minimum. Depending on their age, individuals may also be eligible for the old-age minimum, created in 1956. This scheme aims to provide support for older individuals who have not made sufficient contributions to the pension system.

Provision of public services

In France, public services are provided at the national level for health care, education, police and justice system, and at a local level for child care, elderly care, social assistance, local public transportation, waste management, local police and fire services. The public health services comprised mostly emergency units and public hospitals, but through universal health care insurance, use of health care in the private sector is also covered. Most general practitioners are in a private practice, and many private hospitals contribute to the health care system while being covered in a similar way by the health care insurance. There are out-of-pocket expenses, but those remain low in international comparison, and even lower after complementary health care insurance coverage.

Education is largely provided and funded by the state, and is free for all children aged 3–18 (and mandatory up to 16). Private schools (mostly with religious orientation) cater for 20% of pupils in France and also receive public funding to cover for personnel costs, leading to relatively low private school fees. There is no academic selection for entry into secondary school (at age 11), but there is frequently academic selection into the final 3 years of secondary education. Higher-education is generally free and funded by the state. Two tracks are available to students: the first is the standard university track, with little selection into entry apart the high-school degree; the second is an elite track where students prepare for a competitive exam for entry to selective higher-education institutions called *grandes écoles*. While both tracks are publicly funded, the subsidy-to-students ratio vastly differs between the two tracks, the selective institutions being

much better-off. Regarding the rest of public services, municipalities are also responsible for providing many public services, such as .

Tax system

In 2022, tax revenue in France is second largest after Denmark was among the highest in the European Union, amounting to 45.4% of GDP.

The French tax structure can be characterised by the large share collected by the social security system (55% of tax revenue). The second main provider of tax revenue is the central state (28% of tax revenue). The tax system is indeed largely centralised, with only 14% collected by local administrations. The three main components of tax revenue come from SSCs (one-third), income tax revenues (one-third) and indirect taxes (one-sixth). The remainder of tax revenue is composed of other production, capital and inheritance taxes.

There are two components to the system of income taxes. The first is the standard progressive income tax assessed at the household level with joint taxation. The progressivity schedule applies to income shares, taking into account the number of adults and children in the tax unit. In 2023, there were five brackets, with a top marginal tax rate of 45%, and a strong phase-in mechanism. As a result, roughly half of households are liable to this income tax. The second income tax component (namely, the *cotisation sociale généralisée* plus the *contribution pour le remboursement de la dette sociale*) is a flat-rate income tax with a much broader tax base. It is proportional to labour and capital incomes with a rate of 9.2% in 2023 (since 2008).

Responses to Covid pandemic

The main economic policy response to the covid pandemic has been the use of short-term work. France had already use this scheme during the 2008 financial crisis, following Germany in that respect. The other tools used have been some reduction in employer contributions, specific packages of support to some sectors particularly affected and general use of state-sponsored lending to firms in the form of guarantees to banks.

3 Notes on measurement and definitions

Unit of analysis & sample

- Sample is individuals aged between 25 and 60 inclusive, except where otherwise indicated. For figures on wages and earnings, the sample is further restricted to individuals with strictly positive wages or earnings respectively. There are no further restrictions for the household income figures.

- Individuals are the unit of analysis throughout. E.g. for equivalised household income, each individual is allocated their respective equivalised household income, so that income is counted as many times as there are individuals aged 25 to 60 in the household.

- In the figure where we winsorize, we allocate all observations above the 99th percentile the amount equal to the 99th percentile. Otherwise, distributions are not trimmed.

Datasets

We rely on three main sources for the microdata produced by the French National Institute of Statistics (INSEE):

- **Labour force survey (Enquête Emploi, EE)**. The EE provides yearly information on the French labour market, including net wages since 1990. Although the survey became quarterly after 2002, we use the yearly version for the whole period. There are two possible levels of analysis: the individual and social household levels. The survey has been available since 1968 (although there is an earlier version starting in 1962), but includes information on earnings from 1990.

- **Fiscal survey (Enquête Revenus Fiscaux et Sociaux, ERFS)**. The ERFS relies on the EE sample, matching with information from the fiscal administration and benefits declaration. As a result, it includes detailed information on income, taxes paid and benefits received on

top of the information also available in the EE. This survey has been available in its modern form since 1996.

- **Administrative employer-employee data (Déclarations annuelles de données sociales, DADS)**. These data are available in a panel version since the late 1960s for the private sector and from 1988 for all the wage earners. They offer precise information on earnings, hours of work, occupation and firm information.

Definitions

- **Employment rate**: fraction of population that is employed according to self-reported employment status.

- **Education**. We consider three education groups based on the International Standard Classification of Education (ISCED) and defined as follows:

  - Less than high school (HS): no education, primary education or lower secondary education (ISCED 1–2)

  - High school (HS): upper secondary education and high school diploma (ISCED 3)

  - Tertiary education (ISCED 4 and above)

- **Hours worked**. We rely on information on the weekly number of hours usually worked, as declared by individuals.

- **Hourly wage**. We divide the monthly net wage, available in the EE starting in 1990, by an estimated number of monthly hours (which we get by multiplying the hours worked by $\frac{365}{7} \times \frac{1}{12}$).

- **Earnings**: gross annual real individual earnings (includes self-employed), among those who are employed and have strictly positive real earnings.

- This measure includes employee social security contributions in the case of employed workers but excludes employer social security contributions (which are included in the labour cost measure).

- Nominal earnings are converted into real terms in calendar year 2019 or financial year 2019-20 prices, using the Consumer Prices Index.

- **Disposable household income**. Disposable household income is the sum of total family income from gross labour earnings, capital income, retirement income, public transfers, and social security pensions minus family direct taxes and social security contributions. Our measure is very similar to that used in other countries.

  - The categories of income included do not differ, apart from capital incomes, which are included in our measure.

  - Income is net of direct taxes such as income taxes and the council tax but not of indirect taxes or housing cost.

  - Incomes are equivalised using the modified OECD equivalence scale, normalised to a single individual: 1 for the reference person of the household plus 0.5 for each additional household member aged 14 and over, plus 0.3 for each household member younger than 14 years.

Computation of employer and employee social security contributions

We rely on fiscal information on workers' fiscal earnings and on declared information on usual hours worked to compute employer and employee social security contributions. To do so, we first compute gross earnings by reversing the employee SSCs schedule. Second, we precisely apply the SSCs schedule for all types of contributions to gross earnings. As a result, we can compute gross earnings including employer SSCs.

4 Individual employment and earnings

4.1 Trends in employment

In this section, we present the key trends in the French labour market since the late 1960s. Figure 1 describes the employment rate by age groups and sex over the period 1968–2022 using the French labour force survey (the *Enquête Emploi*). A number of trends are clearly visible. Firstly, the increase in female labour force participation has been steady in the prime-age group with an increase from 48% to 75% in the 50 years under study. Younger age groups, on the other hand, have suffered a very significant decline in labour force participation, prompted by an increase in education attainment and lack of labour force participation for those in full-time education (Blundell et al. 2011, 2013, see also). Older people have also experienced a significant drop in employment: the male employment rate of those aged 61–74 was close to 40% in 1968 but reached 3% in 2003. The reversal in trend since is only modest, with only 16% in employment among that group in 2022 (Salem et al. 2010, see also). Figure 2 presents the same statistics over the life cycle. It highlights that the declining trends in the French labour market have happened at the beginning and end of the age distribution, while females have been a counteracting force with increased female prime-age employment. One has to note that the decrease in employment starts in France earlier than the age 60 cut-off: one can see a significant drop in employment for males as early as age 51 and with a major drop after age 56.

FIGURE 1: Employment rates by age and sex (1968–2022)
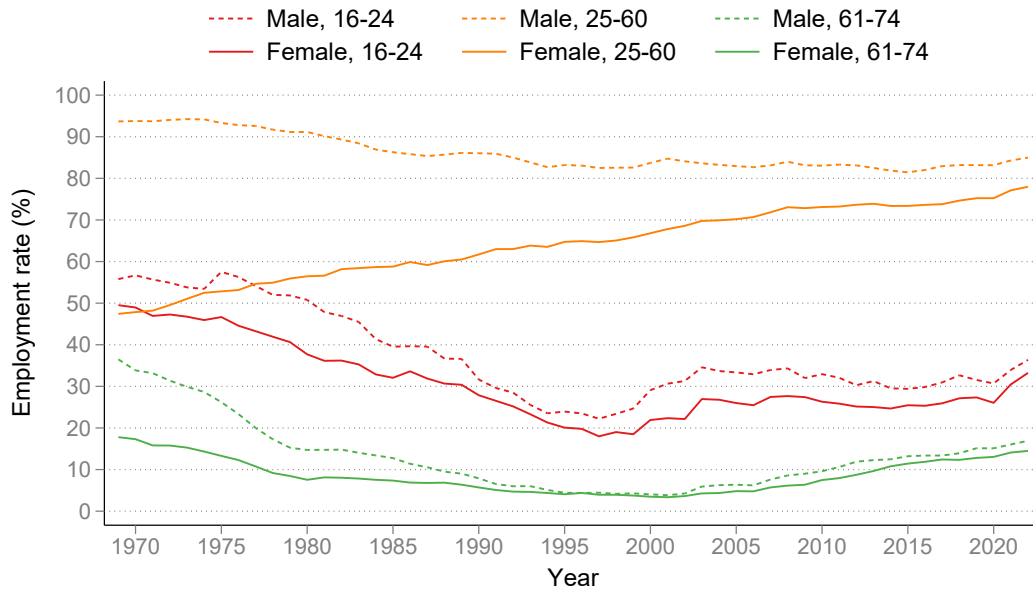
Note: Sample is individuals aged 16-74.
Source: French Labour Force Survey, *enquête emploi*, Insee.

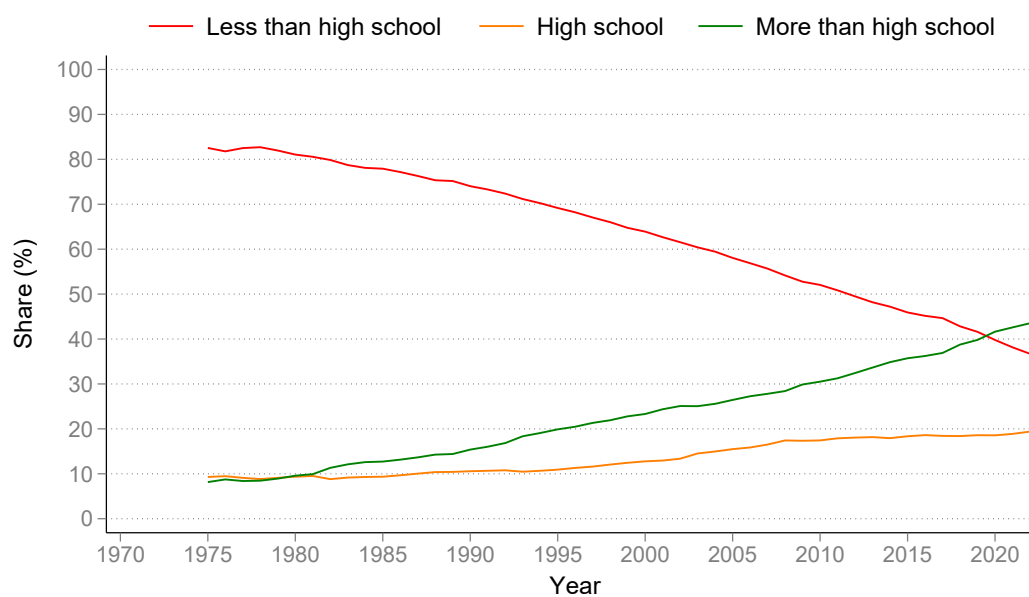**FIGURE 2:** Employment rates over life cycle by sex, selected years
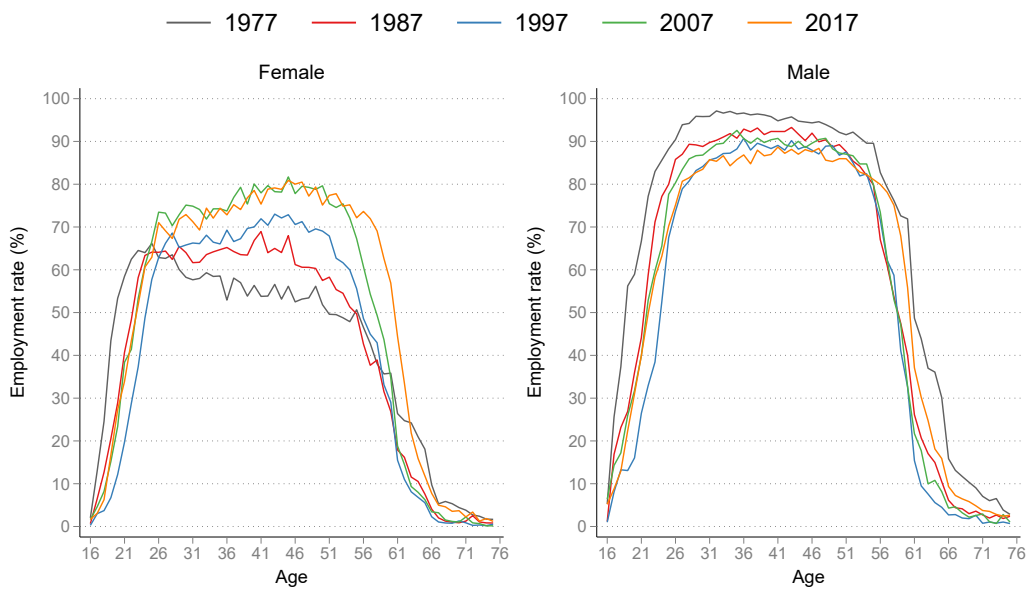
Note: Sample is individuals aged 16-74.
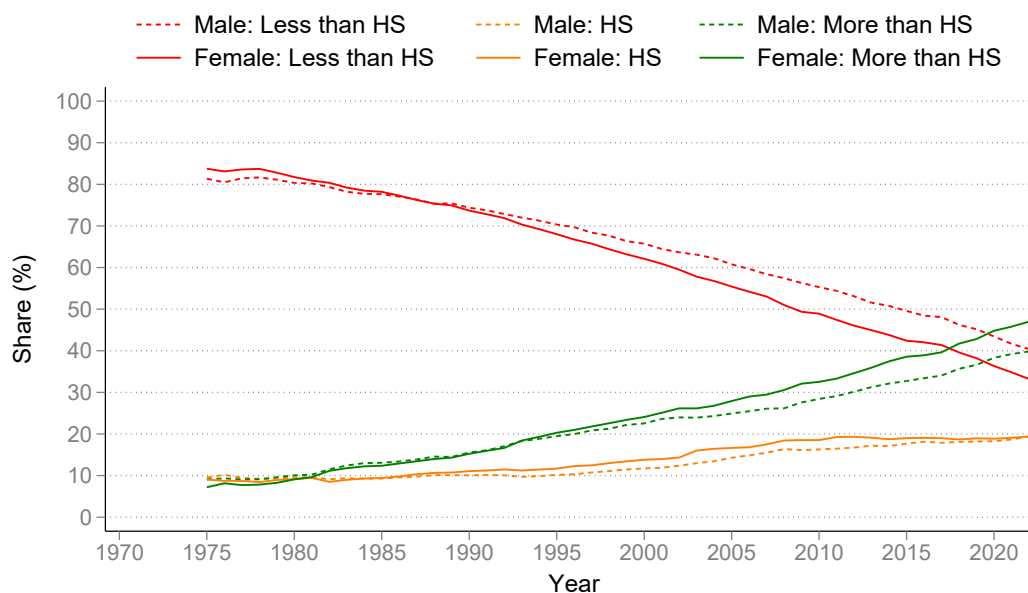*Source*: French Labour Force Survey, *enquête emploi*, Insee.

With Figures 3 and 4 we document the unequal change in the labour market according to educational attainment. Figure 3 shows the increase in education that has taken place in France since the late 1970s: the group with less than high school education represented the overwhelming majority of the French population in 1978 (more than 80%), and this share has decreased continuously since then to reach 37% in 2022. In parallel, those with more than high school education have gone from 10% to 43% at the end of the period. Figure 4 splits the sample by sex to show that a gender gap in educational attainment has appeared in favour of women, who now boast more than 46% in the more than high school category against 40% for men.

FIGURE 3: Educational attainment over time

Note: Sample is individuals aged 25-60.
Source: French Labour Force Survey, *enquête emploi*, Insee.

FIGURE 4: Educational attainment by sex, over time

Note: Sample is individuals aged 25-60.
Source: French Labour Force Survey, *enquête emploi*, Insee.

Figures 5 and 6 present the trends in employment rates over time by education and then by both sex and education. The employment rates by educational attainment are surprisingly constant over the period, with higher rates for those with higher levels of education, close to 88% for those with more than high school, 82% for those with high school level, and 70% for less than high school. In Figure 6 we also split by sex, which illustrates how the employment gap between males and females is concentrated at low education levels, although this gap has been reduced over the 40-year period.

In Figure 7, we show the course of the ILO unemployment rate. After a stable period characterised by an unemployment rate below 3% before 1975, the unemployment rate consistently increased over a period of 10 years. This increase started in the aftermath of the first oil shock, which dampened the high levels of growth and productivity that were prevalent during the period 1945–75. Indeed, the unemployment rate remained high starting in 1985, oscillating around 9%. We further split the unemployment rate according to whether the individual is long-term unemployed or not. While short-term unemployment accounts for 5–8 percentage points, long-

term unemployment accounts for 3–5. More importantly, the share of long-term unemployment increased to reach around one-third of total unemployment precisely during the period when the unemployment rate tripled (1975–85). The concomitant increase in the unemployment rate and of the long-term unemployment can be interpreted as the establishment of structural unemployment. As of 2023, France had not managed to return to a lower level of unemployment.
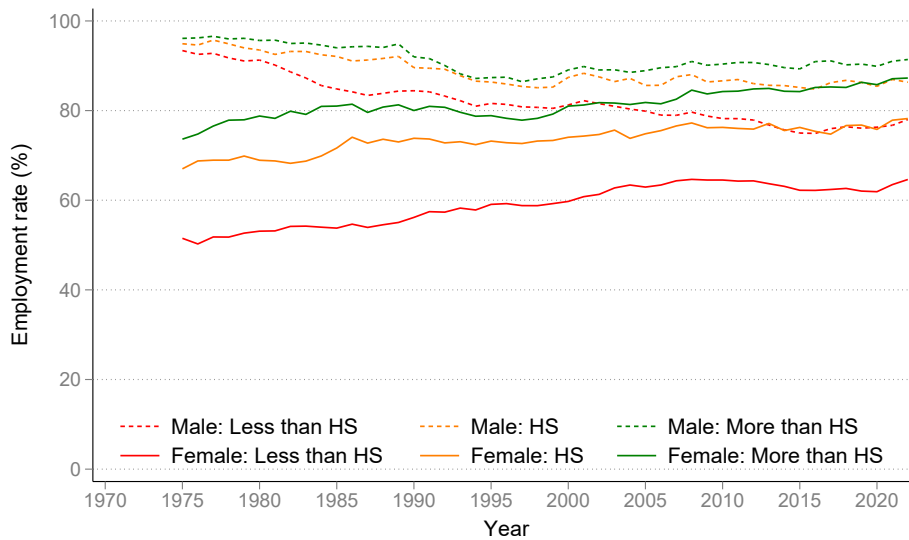
FIGURE 5: Employment rates by education (1975–2022)
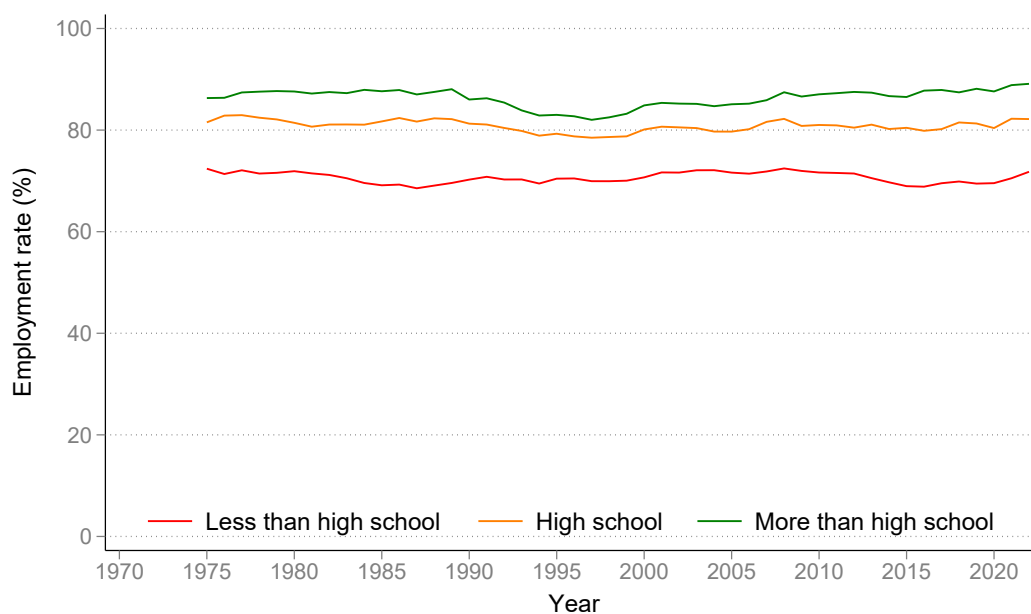
Note: Sample is individuals aged 25-60.
Source: French Labour Force Survey, *enquête emploi*, Insee.

FIGURE 6: Employment rates by sex and education (1975–2022)

Note: Sample is individuals aged 25-60.
Source: French Labour Force Survey, *enquête emploi*, Insee.

FIGURE 7: Unemployment rate by duration of unemployment (1967–2022)
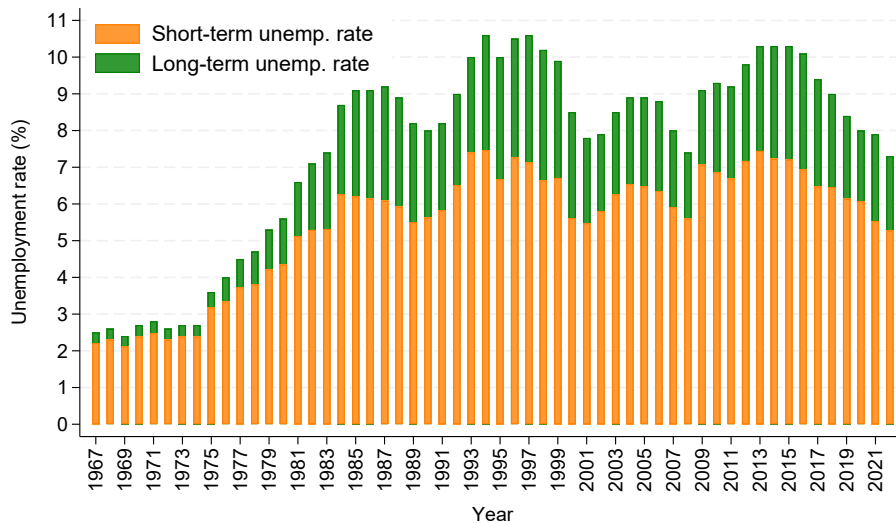
Note: The short-term (long-term) unemployment rate corresponds to unemployment lasting less than 1 year (1 year or more). The unemployment definition follows ILO guidelines. For the years 1967–74 we use the total ILO unemployment rate and apply the proportion of long-term vs. short-term observed in 1975. between short-term and long-term duration.
Source: EE 2022, séries longues sur le marché du travail.

4.2   Trends in hourly wages (employees only)

In this section we present the evidence for inequality trends in net hourly wages, focusing on individuals aged 25–60. Figure 8 shows that the median hourly wage has increased by 25% in real terms from €8.8 in 1982 to €11 in 2022. Figure 9 splits the sample by educational attainment, and we can hardly see any movement, apart from the fact that an increasing educational level has reduced the selection from the more than high school educated, who experience a drop in median real hourly wage along with their expansion within the population.

Figure 10 details the median real hourly wage by age and sex at different periods in time and by educational attainment. Interestingly, the figure shows that the higher the level of education, the steeper the wage increase over the life cycle. Moreover, for all educational groups, the steepness clearly decreased from 1992–96 to 2015–19, and differences between men and women only appear over the course of the life cycle.

Figure 11 shows inequality in hourly wages as measured by the Gini coefficient. It shows a large decrease from 1995 to 2010, with a Gini coefficient going from 0.25 to 0.21. Both men and women are affected by this decrease. A decrease in inequality is also observed from the 90:10 ratio, which decreased from 2.9 in 1990 to 2.4 in 2010 as shown by Figure 12. More than half of the ratio is explained by the 50:10 ratio, but the decrease was mainly driven by the 90:50 ratio. These two figures rely on the Labour Force survey which has wage information only starting from 1990 onwards. When using administrative data from Social Security (DADS data), we can get a fuller picture going back to 1967. In Appendix Figure 49 we present 90:10 wage ratios for the entire period. We can see that the period 1967-1985 is a period of strongly declining net wage inequality in France. There was then a short period of increasing wage inequality between 1985 to 1990, before the further decline observed also in the Labour Force survey data. In the earlier period, one can attribute for of the decline in wage inequality to the very large increase in the national minimum wage, visible both in pretax and net wage inequality. From 1985 onwards, pretax inequality is strongly increasing while the net wage is decreasing, which can be attributed

to the policy of payroll tax reduction around the minimum wage Bozio, Breda & Guillot (2023).

Finally, Figure 13 shows hourly wage growth at different levels of the wage distribution. The first panel shows the evolution from 1982 to 1994 when wage growth was particularly concentrated among higher-income individuals. For the bottom 25% of the income distribution, wage growth was around zero and even negative for the male population. The second panel shows that between 1994 and 2007, most of the wage growth was driven by the bottom of the distribution: The first percentiles of the distribution increased by more than 15% for men and 20% for women. In contrast, wage growth at the top of the distribution did not exceed 5%. This large increase at the bottom of the distribution is likely to be driven by the important increase in the minimum wage at the end of the 1990s and at the beginning of the 2000s. The third panel shows that this large increase is no longer present from 2007 to 2019, except at the very bottom of the distribution for women. Overall, the increase in hourly wages was fairly homogeneous at around 0.5% throughout the distribution. However, we note a slightly positive slope for men and a negative slope for women. Although we see a reduction in the gender wage gap in the 1980s and 1990s, the recent period shows no sign of further improvements. Recent research on the gender wage gap highlights that it is now mostly related to the wage penalty of motherhood (Meurs & Pora 2019).

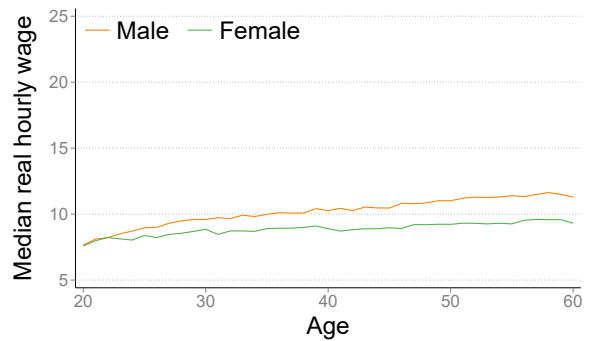**FIGURE 8:** Median real hourly wage among employees, overall and by sex (1982–2022)
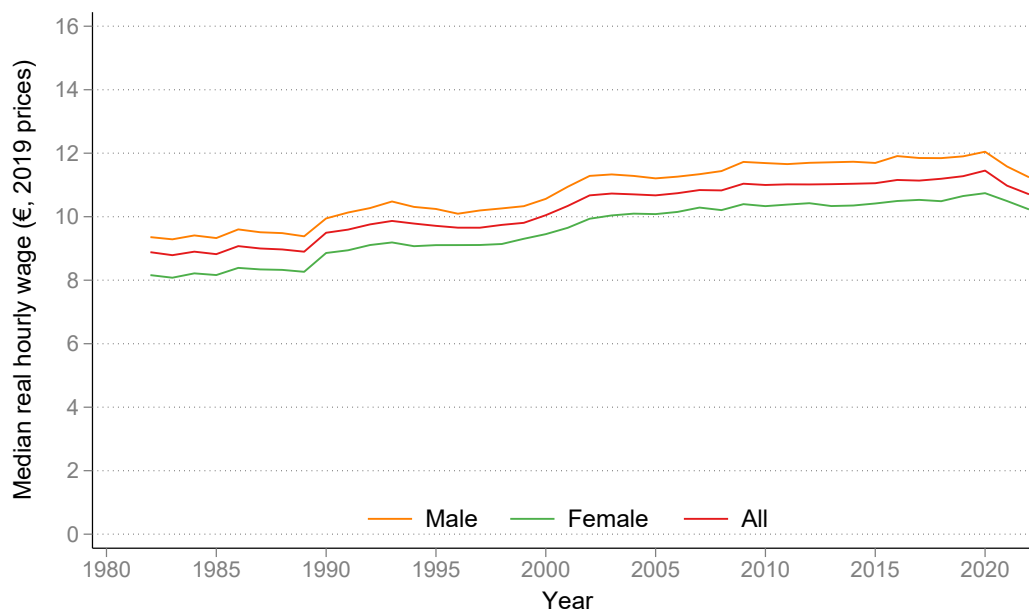
Note: Sample is employees aged 25-60 with strictly positive wages. Wages are in 2019 prices.
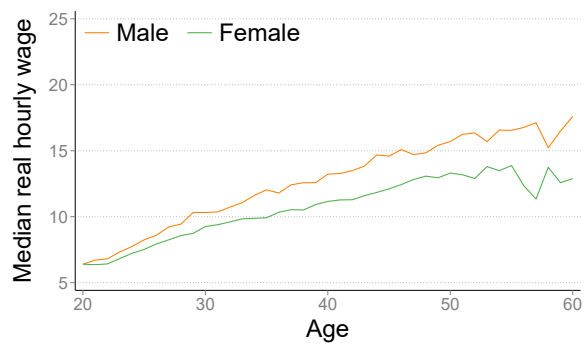*Source*: French Labour Force Survey, *enquête emploi*, Insee.

FIGURE 9: Median real hourly wage among employees, by sex and education (1982–2022)
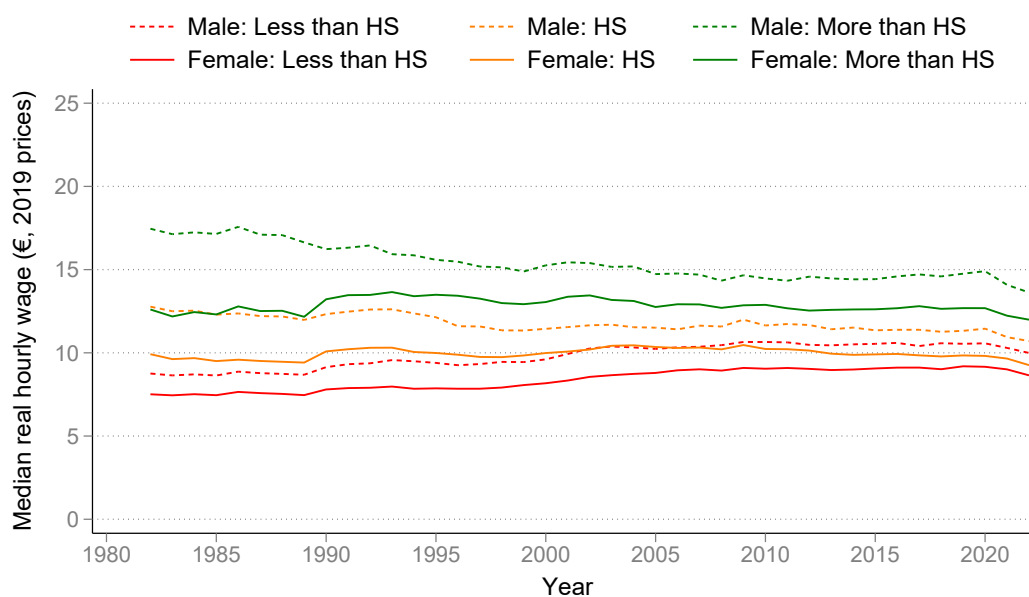
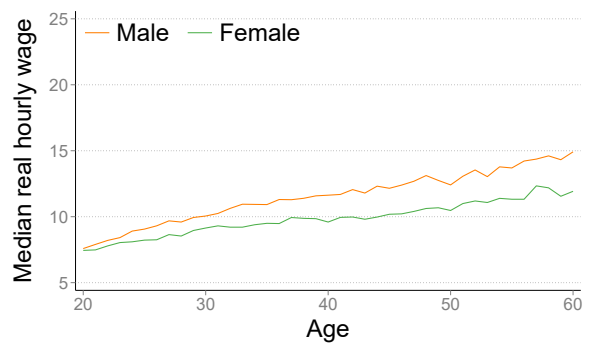*Note*: Sample is employees aged 25-60 with strictly positive wages. Wages are in 2019 prices.
Source: French Labour Force Survey, *enquête emploi*, Insee.

FIGURE 10: Median real hourly wage (€) among employees over the life cycle, by sex and education
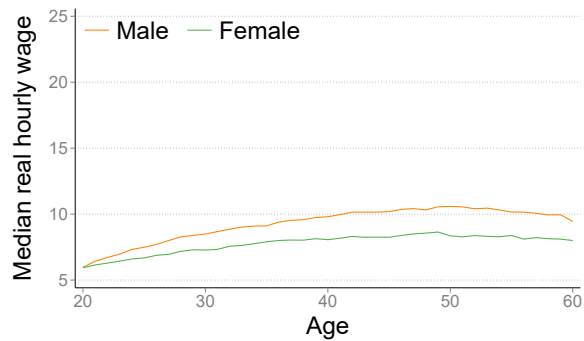
(A) 1992–96, Less than high school

(B) 2015–19, Less than high school

(C) 1992–96, high school

(D) 2015–19, high school
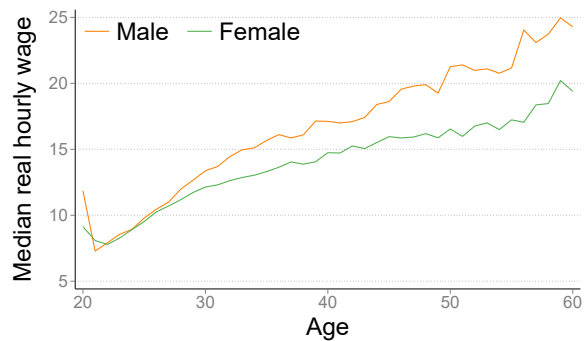
(E) 1992–96, More than high school
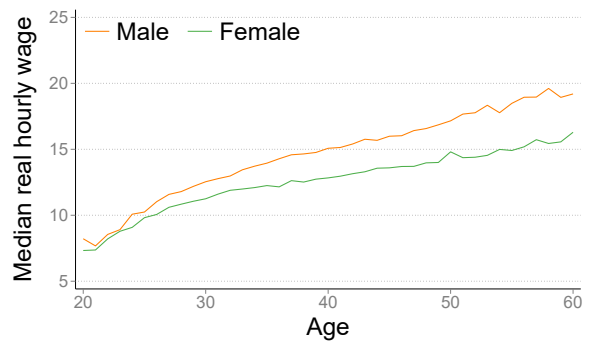
(F) 2015–19, More than high school

Note: Sample is individuals with strictly positive wages. Wages are shown in 2019 constant-wage terms.
Source: French Labour Force Survey, *enquête emploi*, Insee.

FIGURE 11: Gini coefficient of hourly wages among employees, overall and by sex, over time
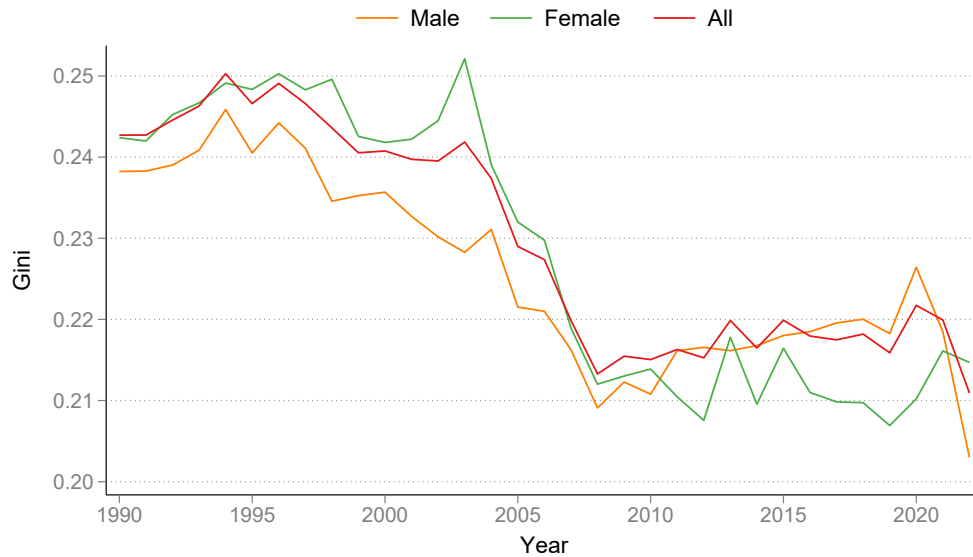
Note: Sample is employees aged 25-60 with strictly positive hourly wages. Trimmed at the top and bottom 1% of the gender-specific hourly wage distribution.
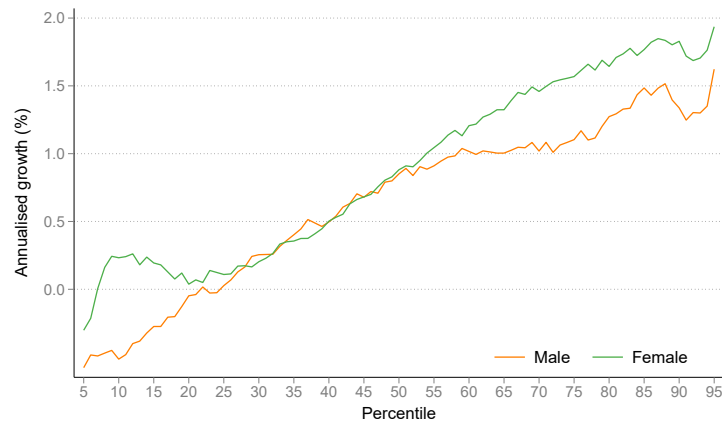*Source*: French Labour Force Survey, *enquête emploi*, Insee.

FIGURE 12: 90:10 and 50:10 ratios of hourly wages among employees, overall and by sex, over time
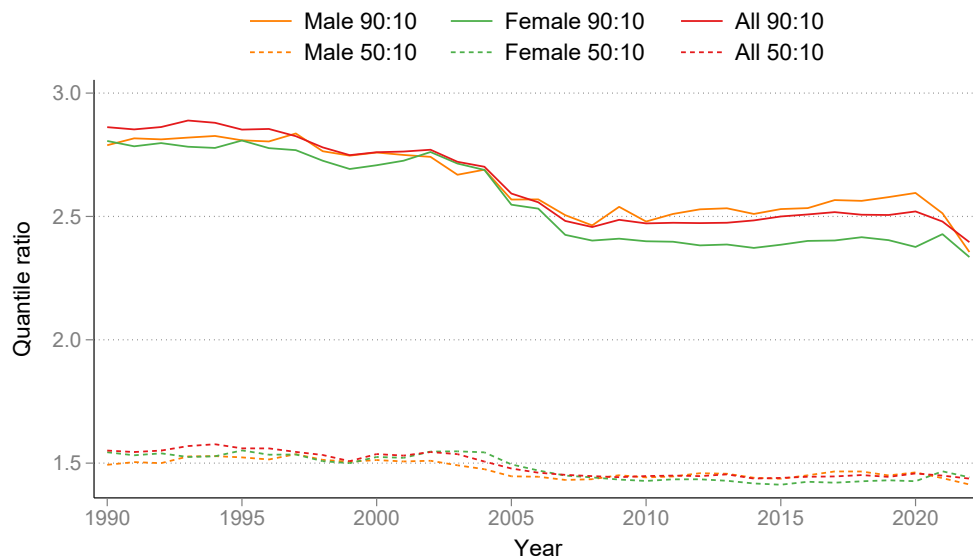
Note: Sample is employees aged 25-60 with strictly positive hourly wages.
Source: French Labour Force Survey, *enquête emploi*, Insee.

FIGURE 13: Annualised growth in hourly wages among employees by wage percentile, overall and by sex, selected periods

(A) 1982–94

(B) 1994–2007

(C) 2007–19

Note: Sample is employees aged 25-60 with strictly positive hourly wages.
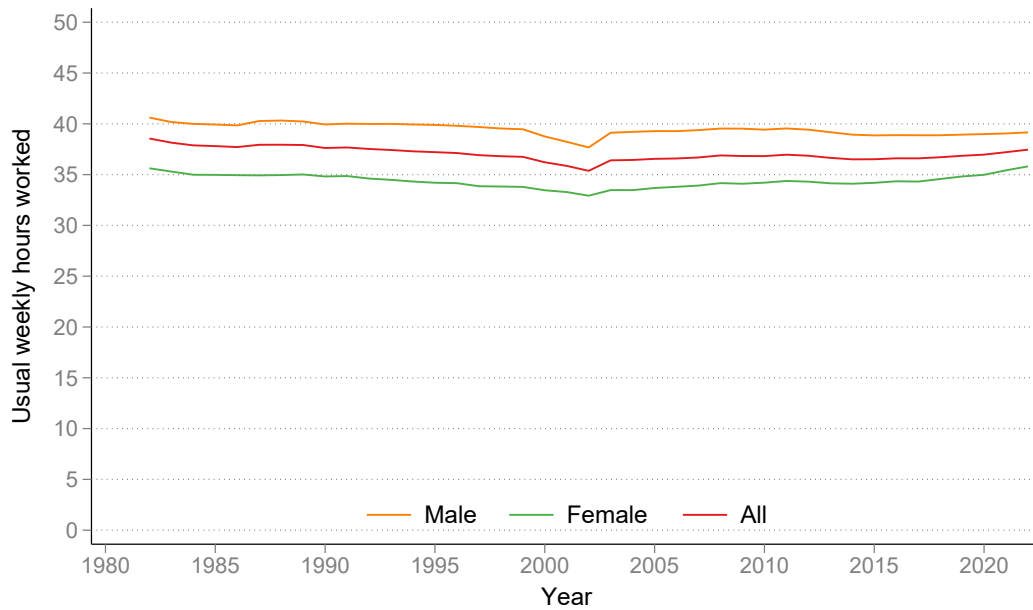*Source*: French Labour Force Survey, *enquête emploi*, Insee.

4.3 Trends in hours worked (employees only)

Trends in hours worked should be analysed jointly with trends in wages to better understand changes in the labour earnings of employees. Figure 14 shows the evolution of the average hours worked from 1982 to 2022, which slightly decreased from 38.6 to 36.9 hours a week. The figure shows a large drop between 1999 and 2001 that corresponds to the introduction of the 35-hour working week in 1998. The effect of this policy quickly faded, probably due to increased flexibility in the use of overtime, which is reflected by the sharp increase between 2002 and 2003.[1]

This global trend in hours hides very different situations by level of education. As shown by Figure 15, while low-educated and high-school-educated men and women decreased their number of hours, highly educated workers increased their number of hours. These trends by level of education are partly reflected in Figure 16. From 1982–84 to 1994–96, higher-income individuals had a higher growth in working hours, and from 1994–96 to 2005–07, changes in hours were U-shaped: the bottom and top ventiles of hourly wages increased their hours, while the middle of the distribution decreased their number of hours. In the more recent years, changes in hours increased with earnings. Interestingly, women increased their hours more than men during this period.

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[1]Note that the observed increase may also be partly explained by a methodological change in the EE. Before 2002, the EE was carried out on an annual basis. From 2002, INSEE chose to change to a quarterly basis. See `https://www.persee.fr/doc/estat_0336-1454_2003_num_362_1_7344`
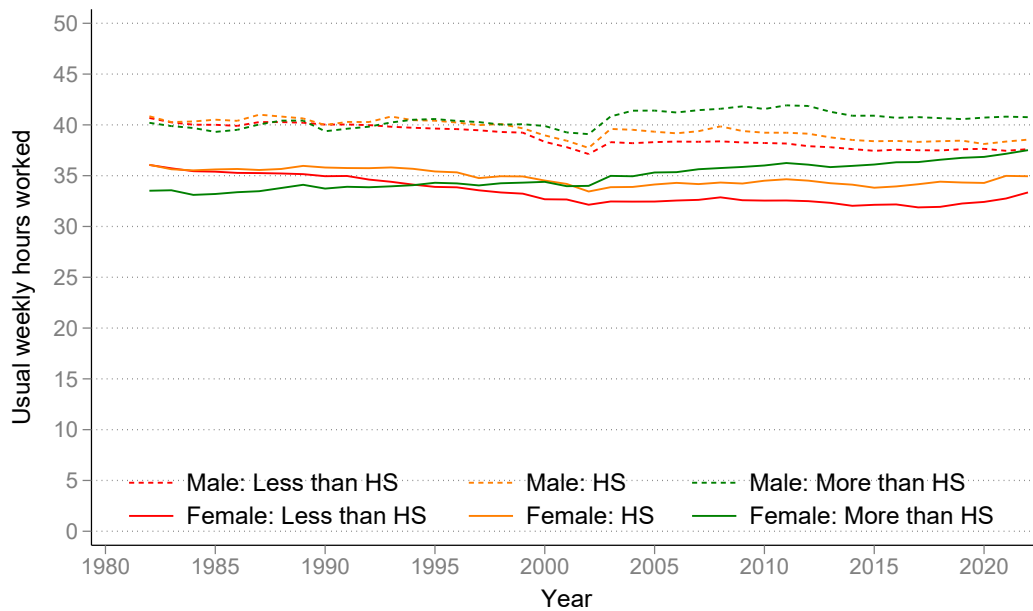
FIGURE 14: Mean hours worked among employees, overall and by sex (1982–2022)

Note: Sample is employees aged 25-60.
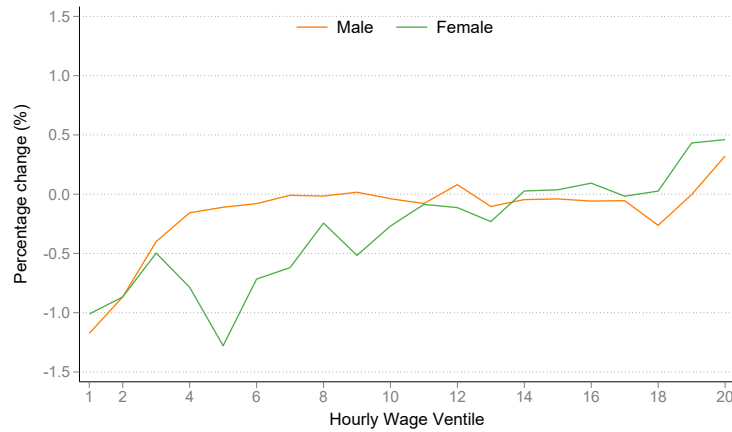*Source*: French Labour Force Survey, *enquête emploi*, Insee.

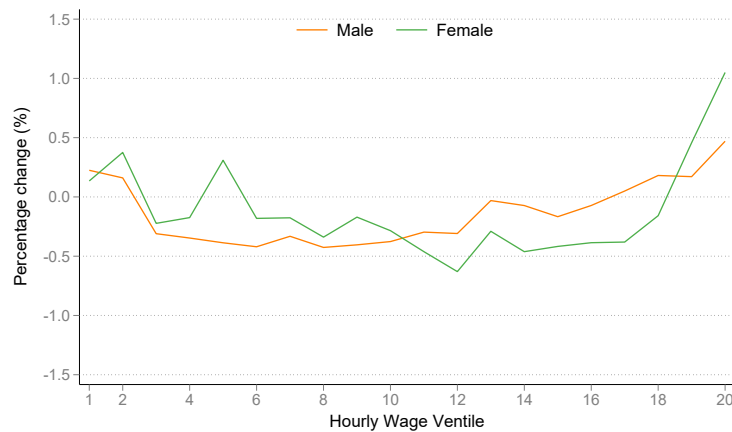**FIGURE 15:** Mean hours worked among employees, by sex and education (1982–2022)

Note: Sample is employees aged 25-60.
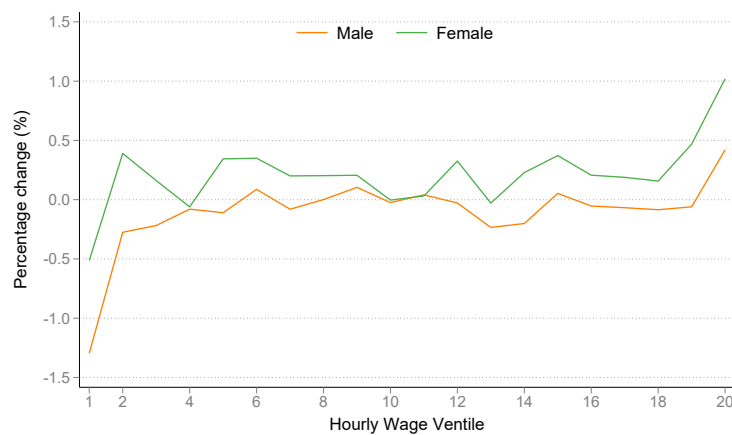*Source*: French Labour Force Survey, *enquête emploi*, Insee.

FIGURE 16: Growth in mean hours worked among employees by wage percentile, overall and by sex, selected years

(A) 1982–84 to 1994–96

(B) 1994–96 to 2005–07

(C) 2005–07 to 2017–19

*Note*: Sample is employees aged 25-60.
Source: French Labour Force Survey, *enquête emploi*, Insee.

4.4 Inequality in individual earnings among those in work (employees and self-employed)

Figure 17 shows that overall, gross median individual earnings increased from €23,000 to €28,300 per year (at 2019 prices) from 1979 to 2019, and the increase was sharper for women than for men, probably reflecting the change in the situation of women on the labour market over the period. Figure 18 splits the sample by educational attainment and shows that earnings slightly decreased for men with more than high school education, and increased for all other groups of the population. The sharper increase can be attributed to low-educated women.

Inequality in the growth of individual earnings has remained quite stable over the period at around 0.31 in terms of the Gini, as can be seen in Figure 19. By contrast, inequality in employer cost increased, as shown by Figure 20. This fact is likely due to the combination of increases in the minimum wage and large cuts in SSCs at the bottom of the distribution. This is partly illustrated by Figure 21, which shows that most of the decrease in inequality is driven by the 50:10 ratio for women. Figure 22 also shows that the increase in gross earnings has been much larger at the bottom of the distribution than at the top and that much of the increase occurred during the period 1996–2007. From 2007 to 2017, however, we see a reversal of this trend and even a decline in gross earnings for the bottom percentiles. Figure 23 again highlights the importance of SSC reforms and shows that the increase in employer cost was even lower than the change in individual earnings in the lower half of the distribution between 1996 and 2007.

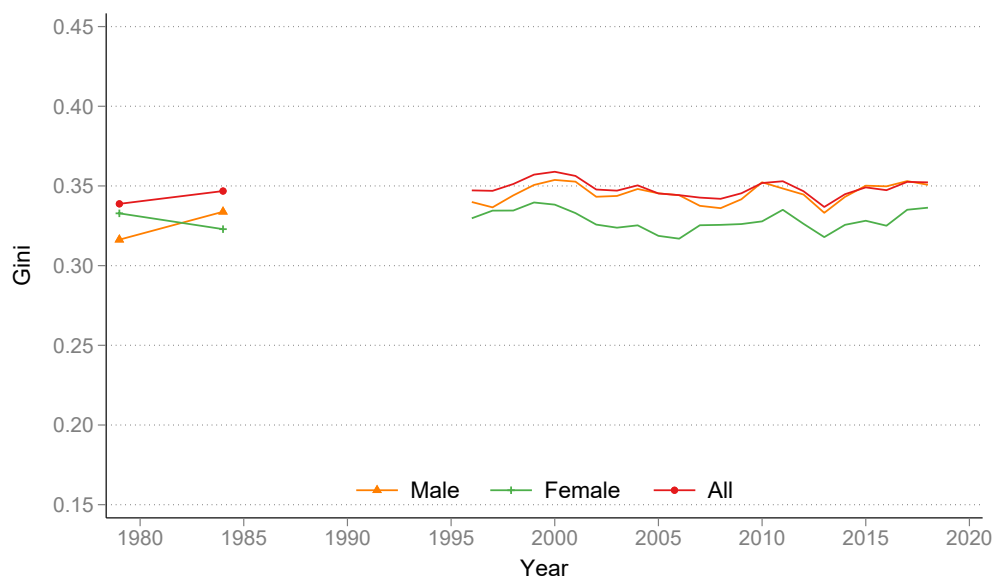**FIGURE 17:** Median real gross individual earnings, overall and by sex (1979–2019)
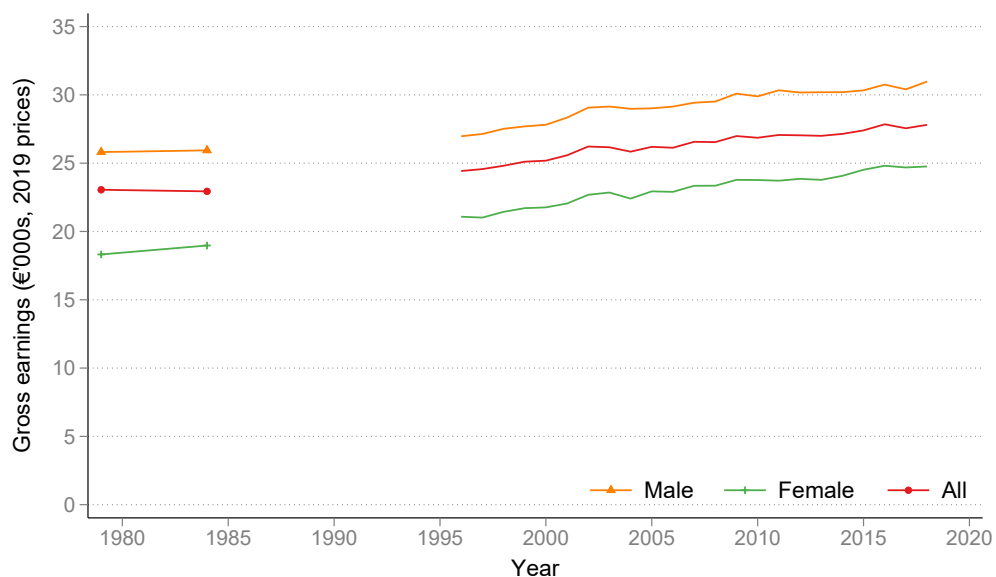
Note: individuals in work aged 25-60 with strictly positive earnings. Gross earnings are in 2019 prices.
Source: ERFS, Insee.

FIGURE 18: Median real gross individual earnings, by sex and education (1996–2019)
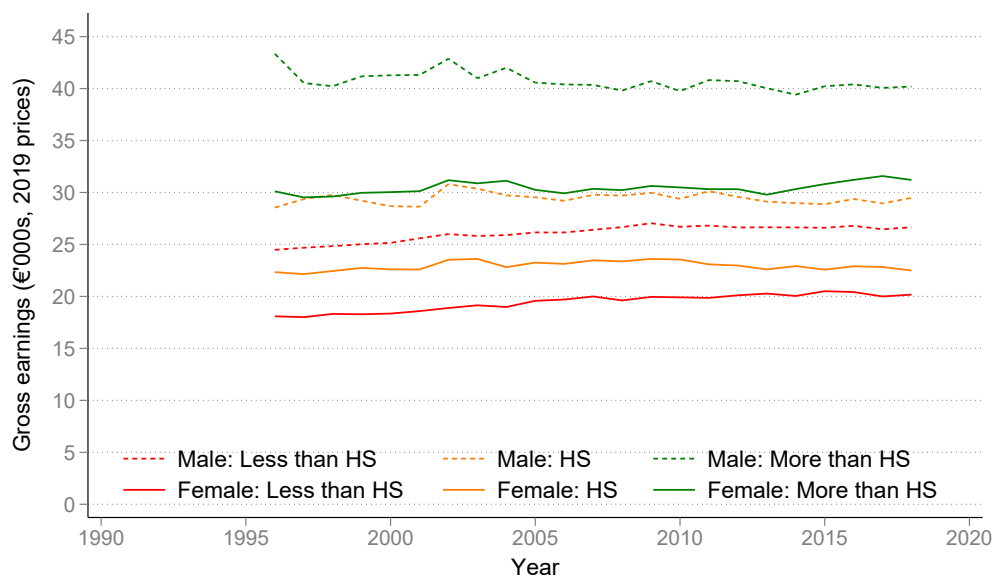
Note: individuals in work aged 25-60 with strictly positive earnings. Gross earnings are in 2019 prices.
Source: ERFS, Insee.

Figure 19: Gini coefficient of gross individual earnings, overall and by sex (1979–2019)

Note: individuals in work aged 25-60 with strictly positive earnings.
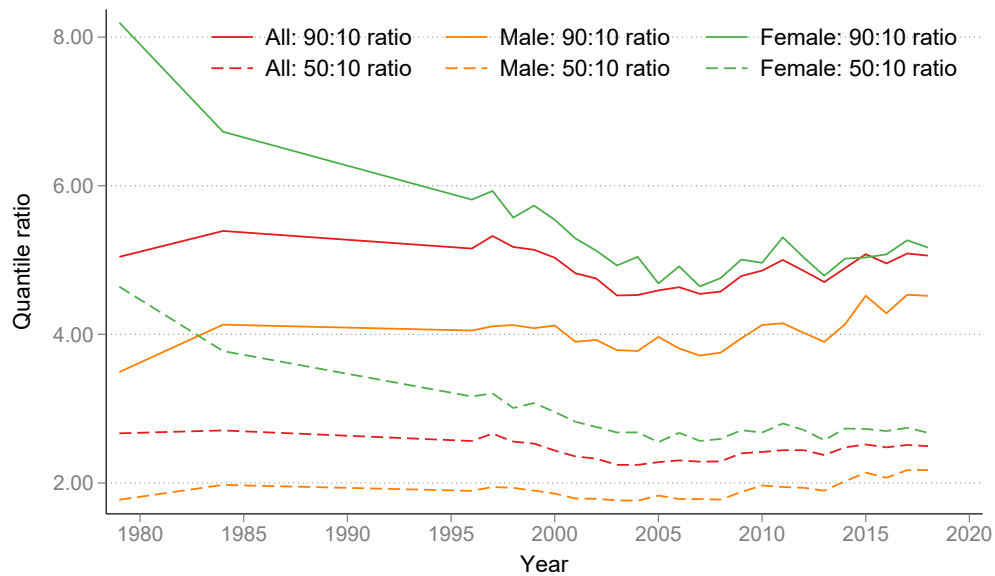*Source*: ERFS, Insee.

Figure 20: Gini coefficient of gross individual earnings and total employer cost (1979–2019)

Note: Sample is individuals in work aged 25-60 with strictly positive earnings. The "Employer cost" series includes
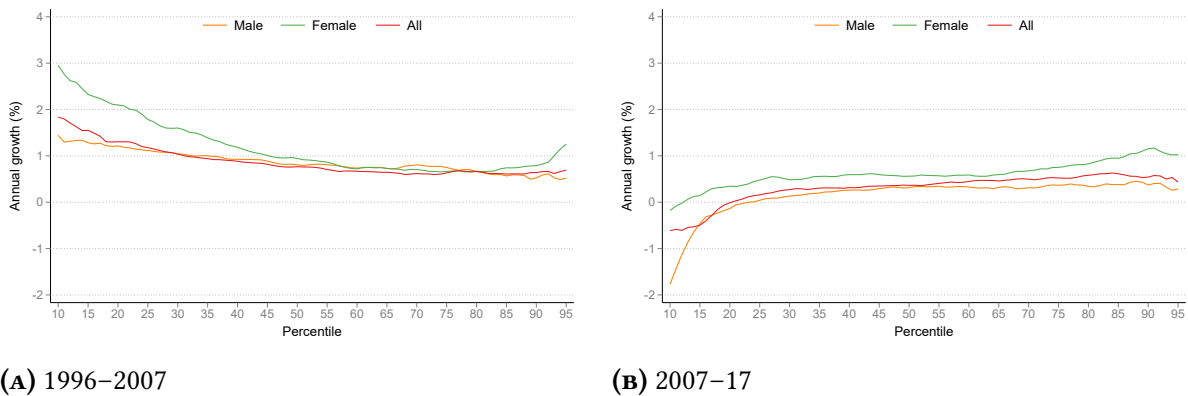Employer Social Security Contributions.
Source: ERFS, Insee.

FIGURE 21: 90:10 and 50:10 ratios of gross individual earnings, overall and by sex (1979–2019)
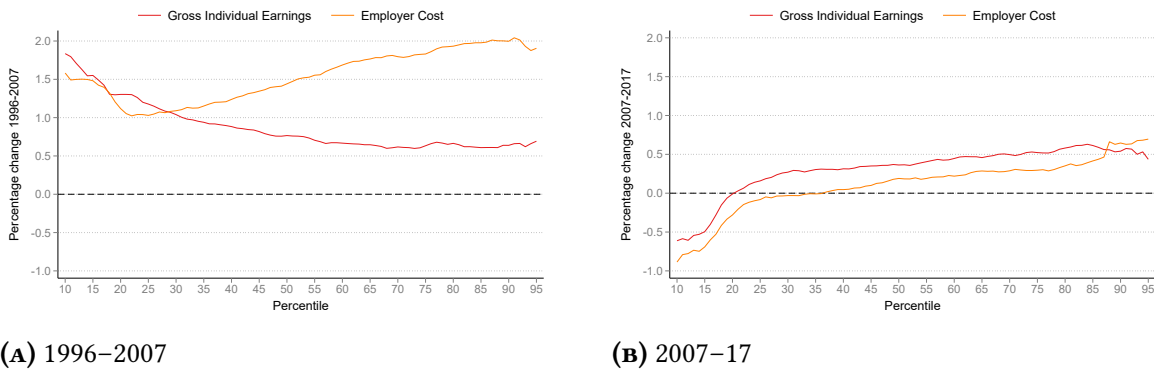

Note: Sample is individuals in work aged 25-60 with strictly positive earnings.
Source: ERFS, Insee.

FIGURE 22: Annual growth in gross earnings by earnings percentile, overall and sex, selected periods

(A) 1996–2007

(B) 2007–17

Note: Sample is individuals in work aged 25-60 with strictly positive earnings.
Source: ERFS, Insee.

FIGURE 23: Growth in gross earnings and employer cost by earnings percentile, selected periods

(A) 1996−2007

(B) 2007−17

Note: Sample is individuals in work aged 25-60 with strictly positive earnings.
Source: ERFS, Insee.

4.5   Self-employment

Overall, the share of self-employed among all working individuals has decreased over time. Figure 24 shows how their share decreased steadily from around 24% in the late 1960s and bottoms out at around 12% from 2000 onward. This decline in self-employment is entirely driven by the solo self-employed – other forms of self-employment have remained largely stable over the past 50 years. Further investigating the heterogeneity in self-employment, we find differential trends for men and women in Figure 25. While both groups faced a decline in the relative importance of self-employment, that of women is much more dramatic: Almost 30% of all employed women were self-employed in 1968, a share that would fall to less than 10% by the turn of the millennium. Over the same period, men's share has dropped from just over 20% to around 15%, a much smaller decline. Educational background seems to have played a larger role historically when individuals without high school education were more likely to be self-employed. Over time, these shares converged, and for women, the difference actually reversed, while there is no discernible difference for men. Figure 26 shows another dimension of heterogeneity in self-employment, that it is largely concentrated among individuals at the top of the earnings distribution, and to a lesser extent at the bottom, with fewer self-employed in the middle. This trend has not changed much

over the three years depicted in the graph. If anything, one can see a slight decrease in the share of the top earnings percentiles for the latest curve in 2017, which is matched by a slight increase in the very bottom, but the overall distribution has remained the same.

**FIGURE 24:** Share of employees and self-employed workers (1968–2022)
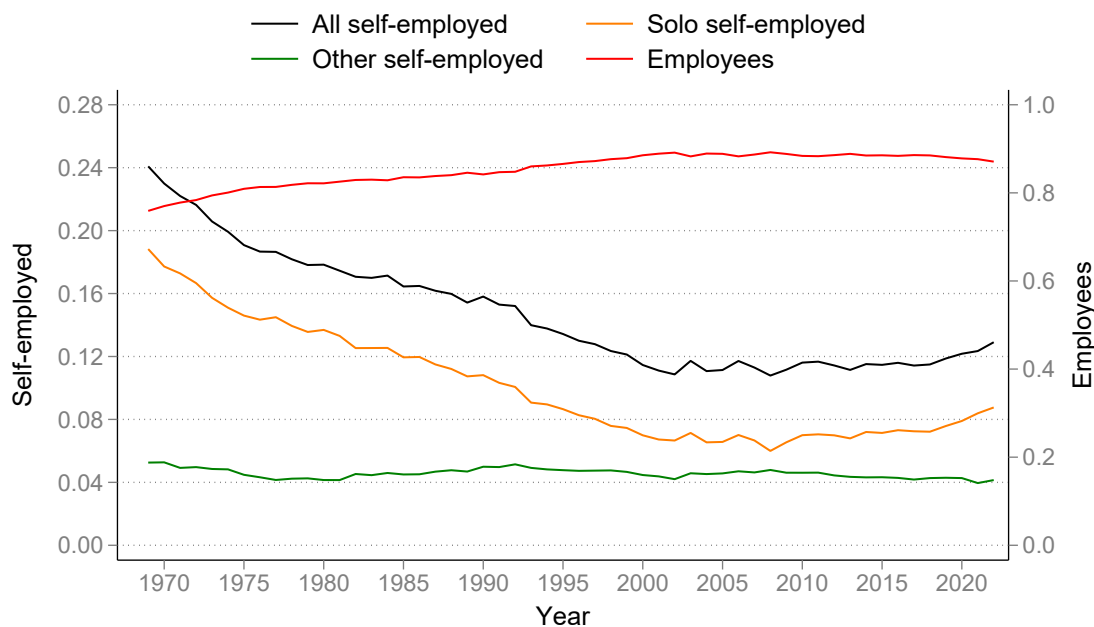
Note: Individuals age 25-60 years of age. 'Solo self-employed' are self-employed without employees, 'Other self-employed' includes self-employed with employees and family workers. *Source*: French Labour Force Survey, *enquête emploi*, Insee.

FIGURE 25: Share self-employed by sex and education (1968–2022)
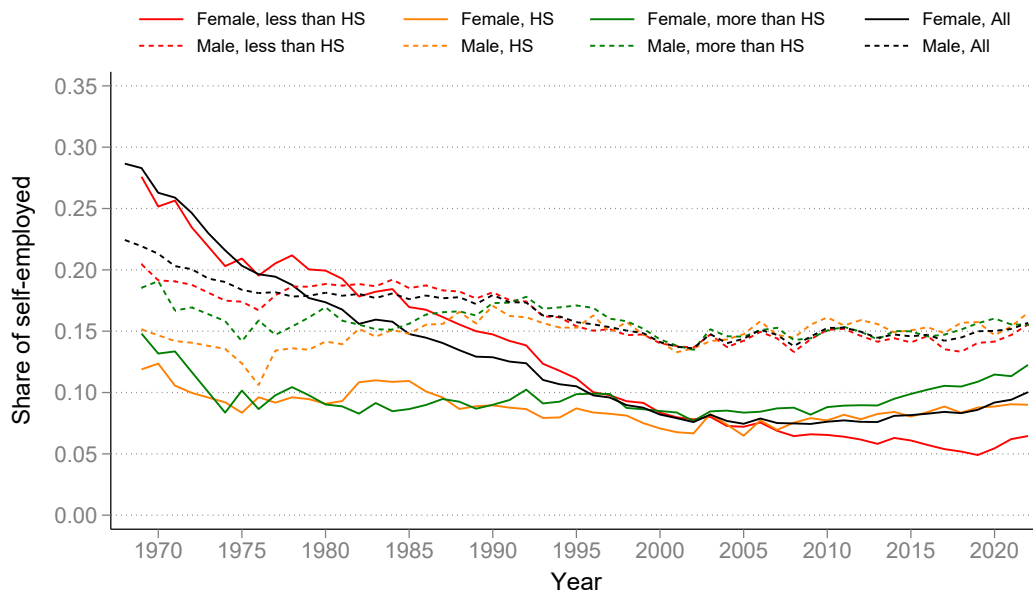
Note: Individuals age 25-60 years of age. 'Solo self-employed' are self-employed without employees, 'Other self-employed' includes self-employed with employees and family workers. *Source*: French Labour Force Survey, *enquête emploi*, Insee.

FIGURE 26: Share self-employed by percentile of individual earnings, selected years
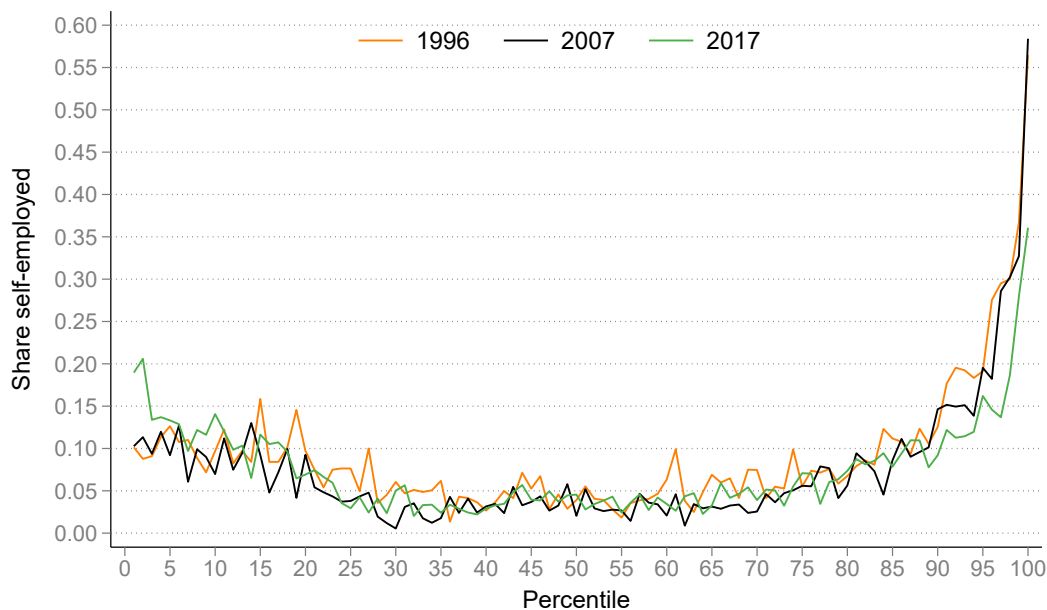
Note: Individuals 25–60 years of age. The definition of self-employed individuals differs from that used in other figures. We consider here workers with strictly positive self-employment earnings.
Source: ERFS, Insee.

5   Labour market institutions

5.1   Minimum wage and unions

For the past 40 years, the net minimum wage in France has remained stable at around 60% of the median net wage. But as Figure 27 shows, this has not always been the case. From the mid-1960s to the mid-1980s it saw a strong rise, jumping from less than 40% to almost 60% in just two decades. Comparing this development to the same ratio for total labour cost to firms reveals a diverging trend that started in the mid-1990s. While both ratios were intimately linked until this point, the ratio in terms of labour cost plummeted right after due to reforms of SSCs.

**FIGURE 27:** Bite of the minimum wage (1967–2019)

Note: Sample is individuals aged 25-60. It shows the ratio of the minimum wage to the median wage for the net wage (green) and the labour cost (red).
Source: DADS, Insee.

Another diverging trend can be observed in Figure 28. Unions, historically covering about 20% of all workers in France, saw this share decreasing to 10% between 1975 and 1990. At the same time, the importance of collective bargaining increased: from 1975 onward, when they covered

around 70% of workers, collective contracts gained more and more traction and now cover close to 100% of workers.

FIGURE 28: Union density and fraction of workers covered by collective bargaining agreements, over time
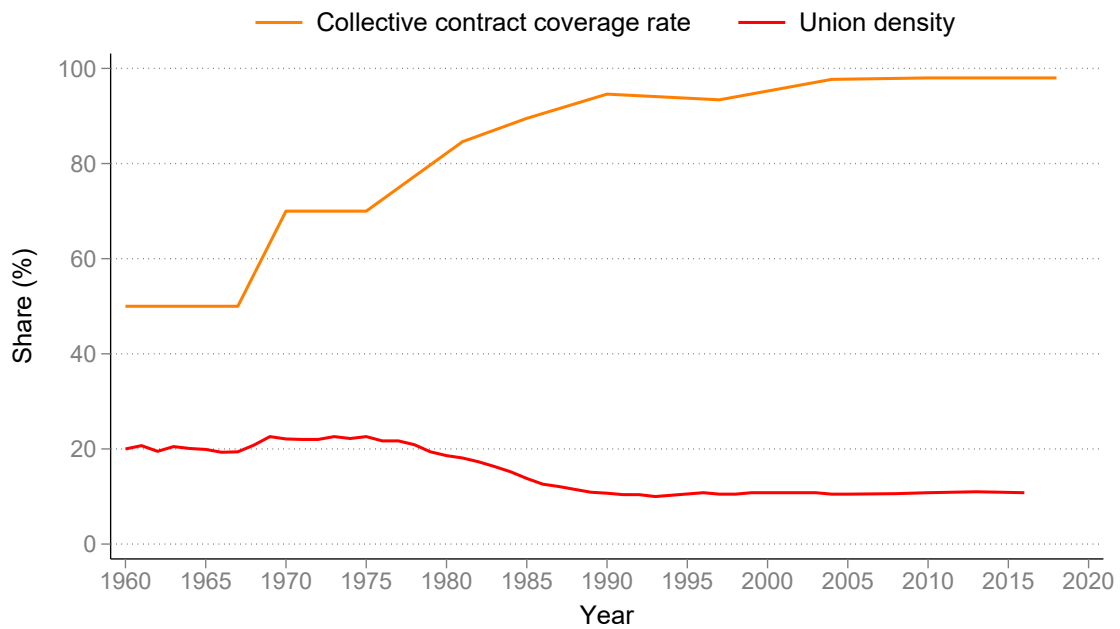

Note: sample is all employees.
Source: OECD.

5.2 Role of direct taxes and benefits (financial transfers from the state)

Figure 29 shows the proportion of benefits in gross income by net disposable income quartile. First and foremost, one can observe that benefits play an important role in France, as these shares are relatively high. The graph also shows the progressive nature of these benefits, since the benefit share decreases further up in the income distribution. By far the highest share of benefits pertains to the lowest income quartile, and it has increased from just over 30% in 1996 to around 35% by 2019. The other quartiles exhibit stable or slightly decreasing shares of around 15% for the second quartile, 10% for the third quartile, and 5% for the fourth quartile.
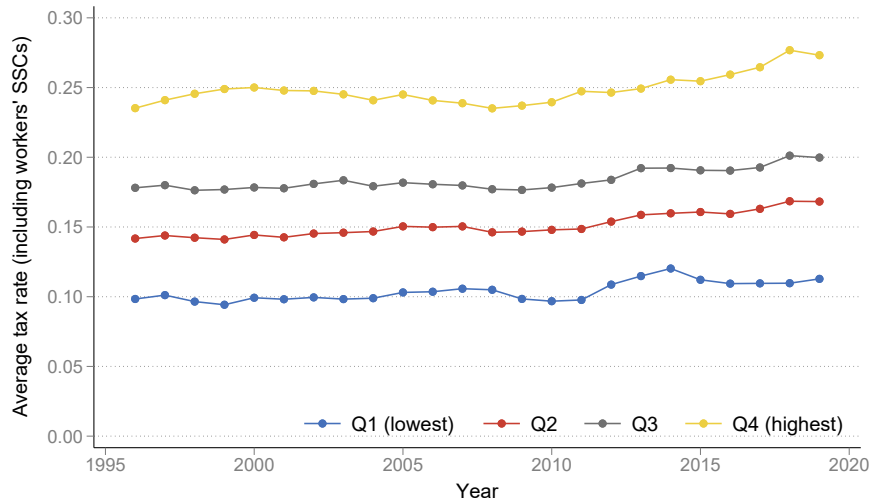
FIGURE 29: Benefits as a proportion of gross income, by quartiles of the equivalised disposable (net) income distribution
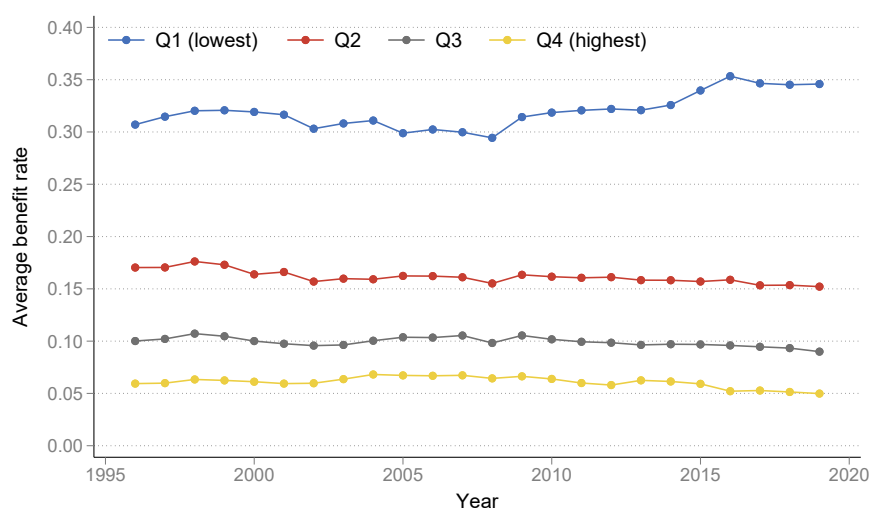
Note: Sample is individuals aged 25-60. All incomes have been equivalised using the OECD equivalence scale.
Source: ERFS, Insee.

Figure 30 is another graph depicting the progressivity of the French tax and benefit system. It shows the average tax rate inclusive of SSCs paid by the worker over time and by net disposable income quartile. These average tax rates, which have been slightly increasing for all income quartiles, range from just over 10% for the lowest income quartile to 27% for the top income quartile in 2019.
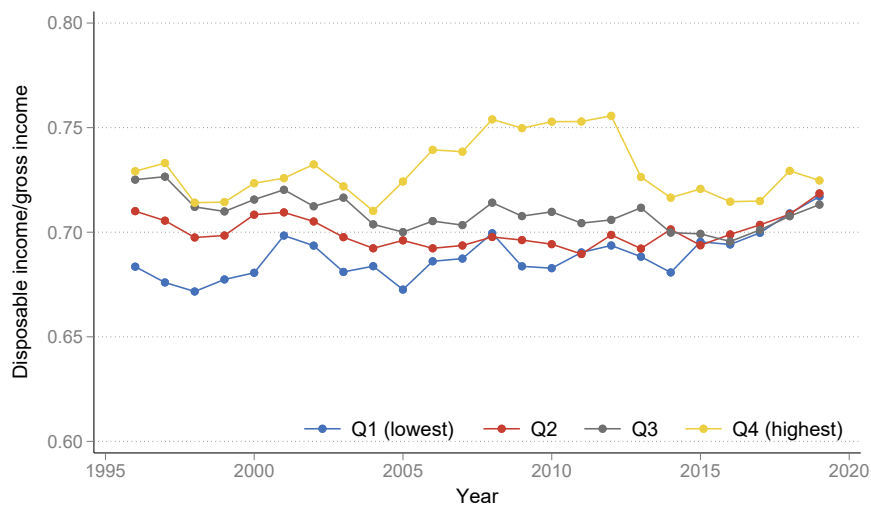
FIGURE 30: Direct taxes (including employee SSCs) as a proportion of gross income, by quartiles of the equivalised disposable (net) income distribution

Note: Sample is individuals aged 25-60. All incomes have been equivalised using the OECD equivalence scale.
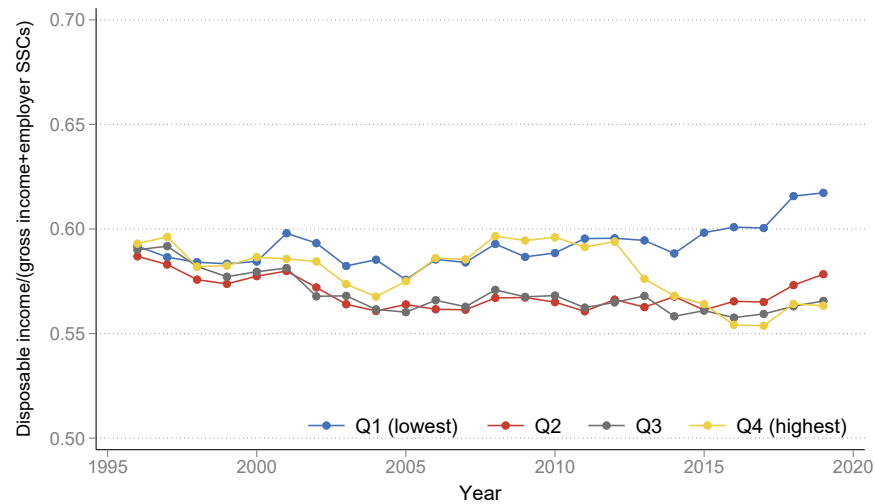*Source*: ERFS, Insee.

Figures 31 and 32 relate disposable income to gross income, and show the share of the former in terms of the latter over time and by income quartile.

FIGURE 31: Disposable income as a proportion of gross income, by quartiles of the equivalised disposable (net) income distribution

Note: Sample is individuals aged 25-60. All incomes have been equivalised using the OECD equivalence scale.
Source: ERFS, Insee.

FIGURE 32: Disposable income as a proportion of gross income (including employer SSCs), by quartiles of the equivalised disposable (net) income distribution
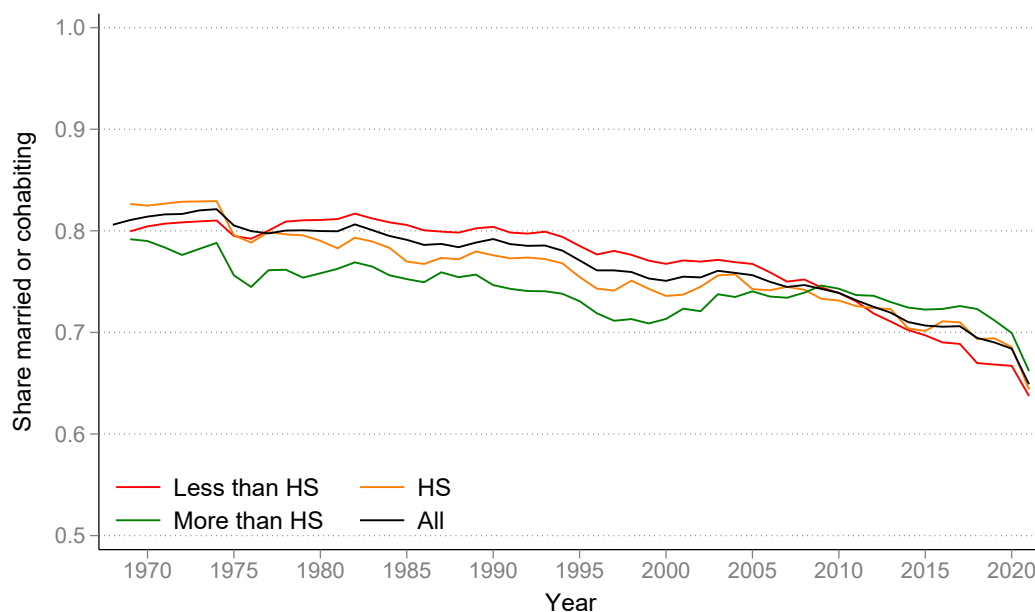

Note: Sample is individuals aged 25-60. All incomes have been equivalised using the OECD equivalence scale.
Source: ERFS, Insee.

6 Household incomes

6.1 Trends in household composition

Figure 33 shows the share of individuals married or cohabiting with another person by educational attainment over time. Overall, this share decreased from around 80% in 1969 to less than 70% in 2021, marking a steady decline in the importance of marriage and cohabitation. This decrease can mainly be attributed to the population with lower educational attainment. In fact, it can be observed that individuals with education beyond high school now have a higher probability of being married or cohabiting than the population at large, which constitutes a reversal of the historic situation, when highly educated individuals had the lowest share in the population.

FIGURE 33: Share married/cohabiting, overall and by education (1968–2022)

Note: Sample is individuals aged 25-60. *Source*: French Labour Force Survey, *enquête emploi*, Insee.

Marriage and cohabitation vary not only over time and by education but also by income and sex. Figure 34 depicts the relationship between an individual's earnings and being married or cohabiting and having a working partner. There are four panels, for males and females, and for

the years 1994 and 2019. For men, we can observe that both measures of partnership tend to be higher further up the income distribution, with the exception of having a working partner in 1994, which is increasing in the low- and middle-income region, but exhibits a sharp drop among higher incomes. For women, these measures do not vary systematically with their position in the income distribution in both years; if anything one can observe a slow increase in the probability of having a working partner in 2019.

FIGURE 34: Share married/cohabiting and share with working partner, by sex and individual gross earnings percentile, selected years

(A) Male, 1994

**(B)** Female, 1994

(c) Male, 2019

(D) Female, 2019

Note: Sample is individuals aged 25-60. Married/ cohabitating also includes civil partnerships. The proportion with a working partner is conditional on being married/cohabiting. *Source*: French Labour Force Survey, *enquête emploi*, Insee.

While the results for being married to and cohabiting with a working or non-working partner differ by sex and the relative position in the income distribution, the relation between an individual's income and their partner's income is more homogeneous. Individuals ranking higher in the income distribution tend to have partners who also rank higher in the income distribution

on average, as can be seen in Figure 35. This trend is similar for men and women and the two years 1996 and 2019 considered in the graph, and indicates that there has been no increase in assortative matching during the observed time period.

FIGURE 35: Mean gross earnings percentile of partner/spouse by individual's gross earnings percentile, selected years


(A) Female

(B) Male
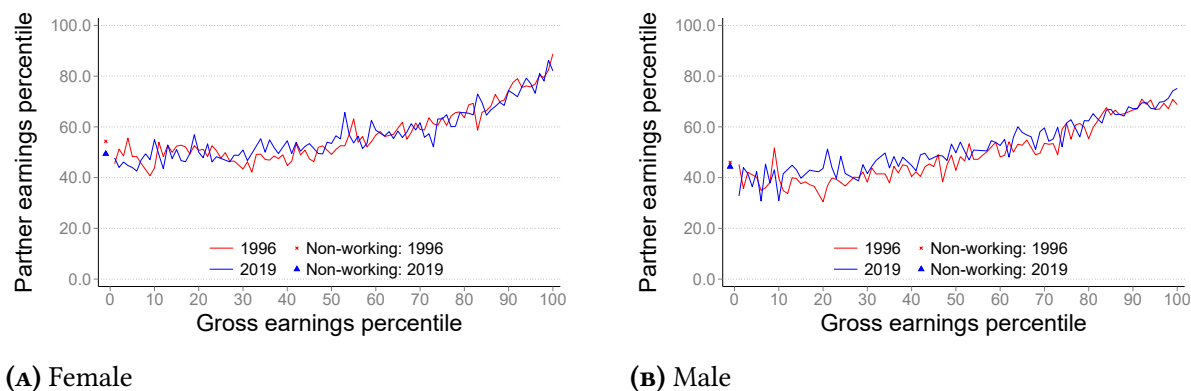
Note: Sample is individuals aged 25-60 (with strictly positive earnings for defining earnings percentiles). Married/cohabitating also includes civil partnerships.
Source: French Labour Force Survey, *enquête emploi*, Insee.

Figures 36 and 37 provide more detail on how the composition of households has changed over time. Figure 36 shows the overall development for the entire population. The share of couples has slowly decreased over time, in particular those with children, while the share of singles has increased. Figure 37 goes on to show this decomposition by sex and educational attainment. The trend towards more individuals living in single households holds for all groups in the analysis, with the exception of highly educated women. Another interesting observation is that women form the vast majority of single households with children.
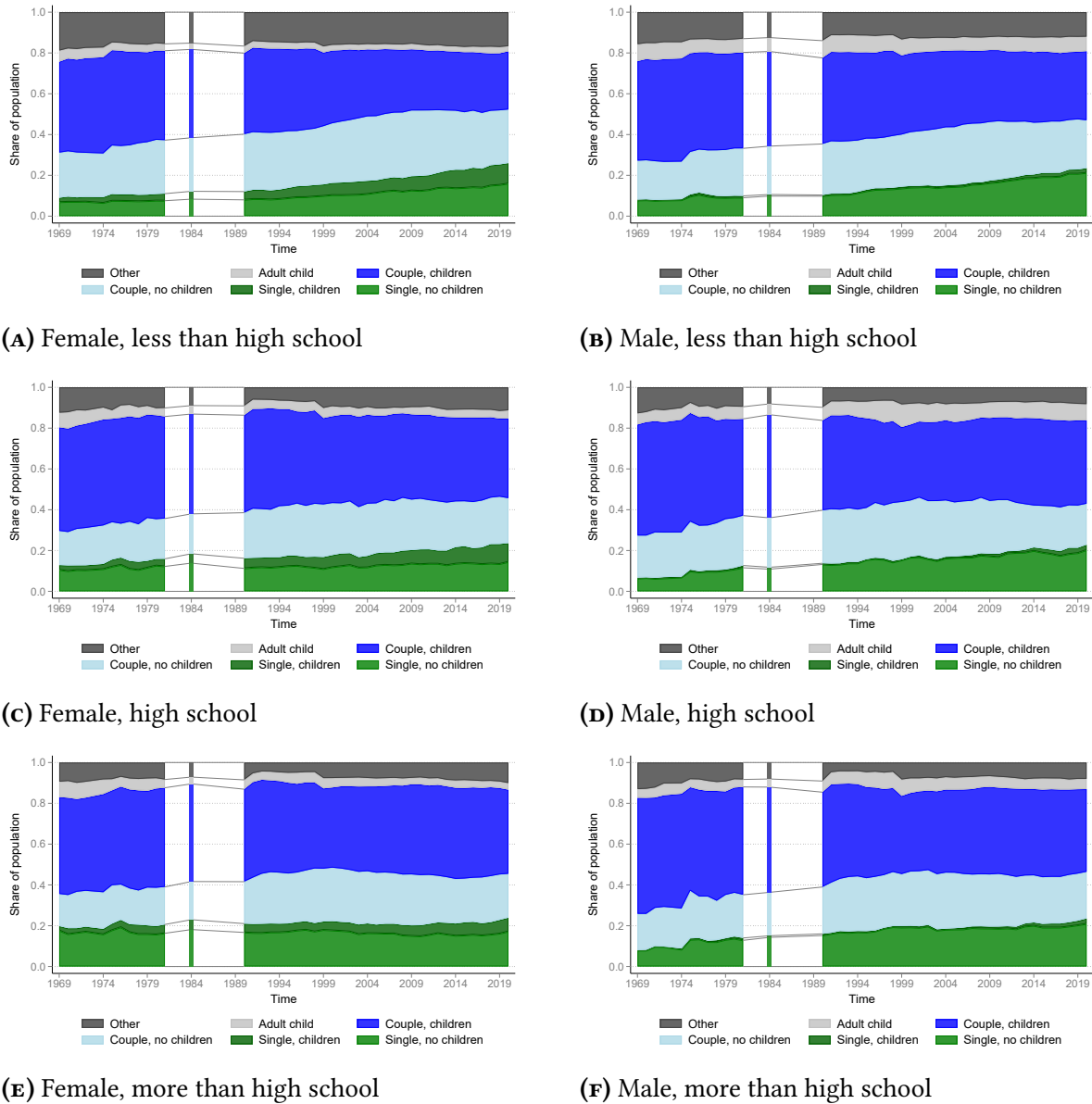
FIGURE 36: Share of individuals by position in the household, over time
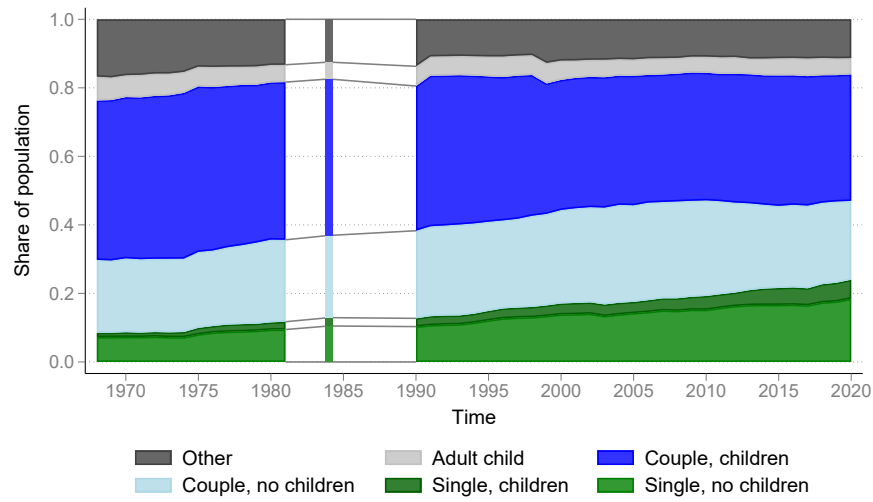
Note: Sample is individuals aged 25-60. "Single, children" and "Couple, children" refer to children aged 0-18. Parents of adult children are categorized as "Other". "Adult child" refers only to adults living in a household whose head is their parent.
Source: French Labour Force Survey, *enquête emploi*, Insee.

Figure 37: Share of individuals by position in the household, by sex and education, over time


(A) Female, less than high school

(B) Male, less than high school

(C) Female, high school

(D) Male, high school

(E) Female, more than high school

(F) Male, more than high school

Note: Sample is individuals aged 25-60. "Single, children" and "Couple, children" refer to children aged 0-18. Parents of adult children are categorized as "Other". "Adult child" refers only to adults living in a household whose head is their parent.
Source: French Labour Force Survey, *enquête emploi*, Insee.

6.2   Earnings and incomes among working households

The share of individuals who live in a household where at least one member is working has declined over time and varies starkly across levels of education. Figure 38 shows that the overall share of the population living in a household where at least one individual is working has dropped markedly in the late 1970s and 1980s, and then again in the early 2000s when it bottomed out over the rest of the decade before slowly increasing again around 2010. This development strongly differs by education: while all three groups were close to or above 95% in 1996, individuals with higher education remained relatively stable at around 97.5%, individuals with high school education saw their share decrease slightly to 95%, and individuals without a high school diploma faced the strongest decline, to less than 90%.

FIGURE 38: Share of individuals in a working household, overall and by education, over time
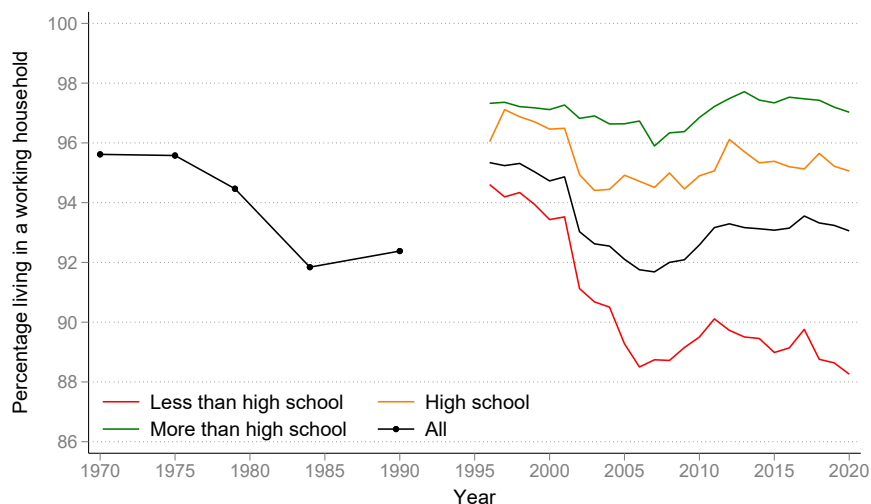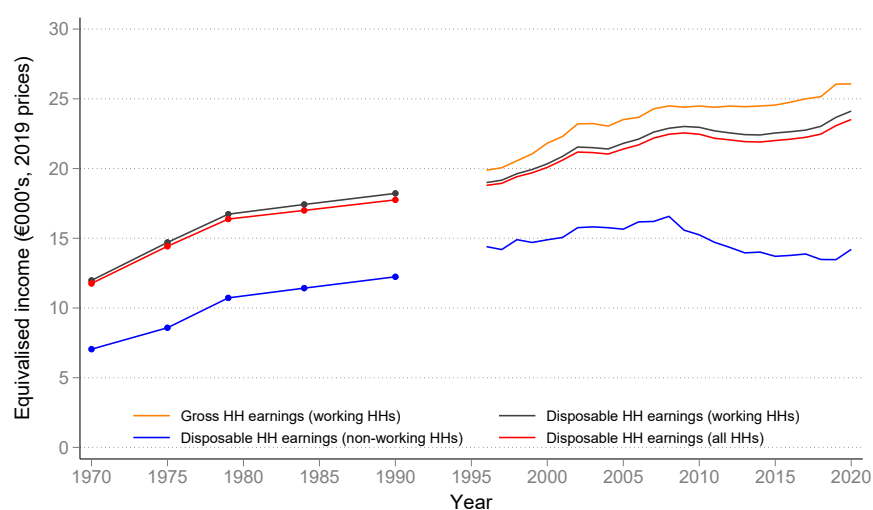

Note: Sample is individuals aged 25-60. A working household is defined as a household in which at least one adult is in with positive household labour earnings.
Source: ERFS, Insee.

Figure 39 shows median gross and disposable household incomes over time. The numbers have been equivalised by household composition in order to enable the comparison between different household constellations. Overall, median disposable household income increased over time from around €12,000 to €22,500 per part from 1970 to 2017, although the increase is much

less pronounced in the later quarter of the observed period. Disposable incomes for non-working households evolved in a similar fashion, but at a much lower level, until 2008. From this period onward, these households saw a decline in their disposable income that persisted until the end of the series, while no such trend can be observed for working households, where income stagnated during this period.

FIGURE 39: Median real gross household earnings and disposable household income among working households, over time
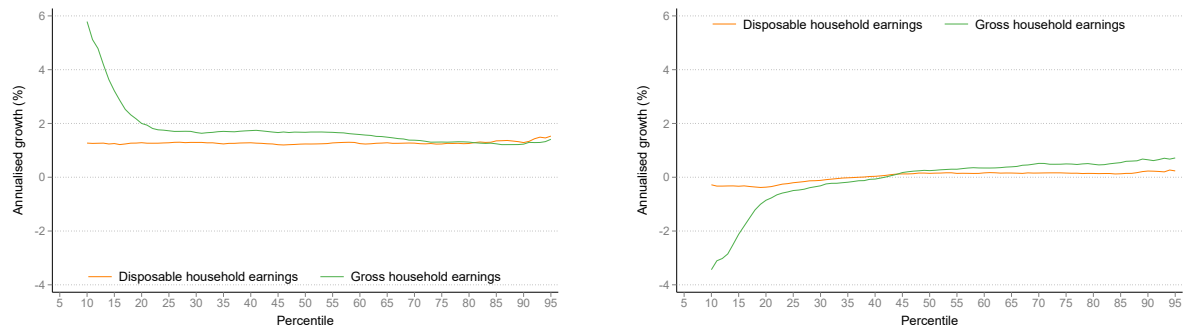

Note: Sample is individuals aged 25-60. A working household is defined as a household in which at least one adult is in with positive household labour earnings. All incomes have been equivalised using the OECD equivalence scale. *Source*: ERFS, Insee.

Figure 40 exhibits how gross and disposable household earnings of working households changed from 1994 to 2007 and from 2007 to 2017. For the earlier period, there was an almost uniform increase by 1.3–1.5% in disposable household earnings across the income distribution, while gross earnings increased much more at the lower end, reaching an annual growth rate of almost 6%. During the later period, the results point in the opposite direction. First of all, the overall growth rate was much lower than in the previous period, and the bottom 40% even experienced a decline in both their gross and disposable earnings on average. Furthermore, individuals at the lower end of the distribution saw a particularly sharp decline in their gross household earnings. Figure 41 portrays the change in incomes from a different point of view by looking at the evolution of me-

dian real disposable household income by level of education. Unsurprisingly, higher educational attainment is linked to a higher income at any point in time. Overall, there was a slow and steady increase until around 2008 and stagnation thereafter. Incomes have largely evolved in parallel across groups defined by education, but the differences in levels are large and persistent.

FIGURE 40: Annualised growth in real gross household earnings and household disposable income for working households, by percentile, selected years


(A) 1994–2007

(B) 2007–17

Note: Sample is individuals aged 25-60. A working household is defined as a household in which at least one adult is in with positive household labour earnings. All incomes have been equivalised using the OECD equivalence scale.
Source: ERFS, Insee.

FIGURE 41: Median real disposable household income for all households (in thousands of Euros), overall and by education, over time
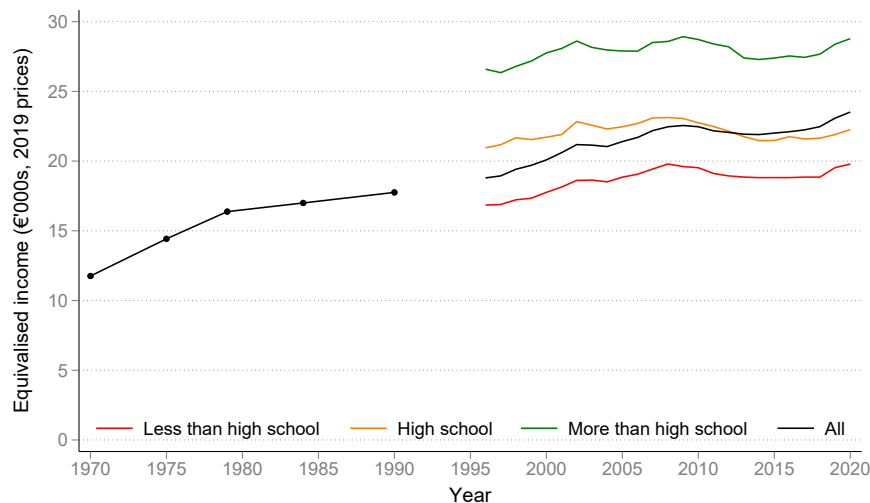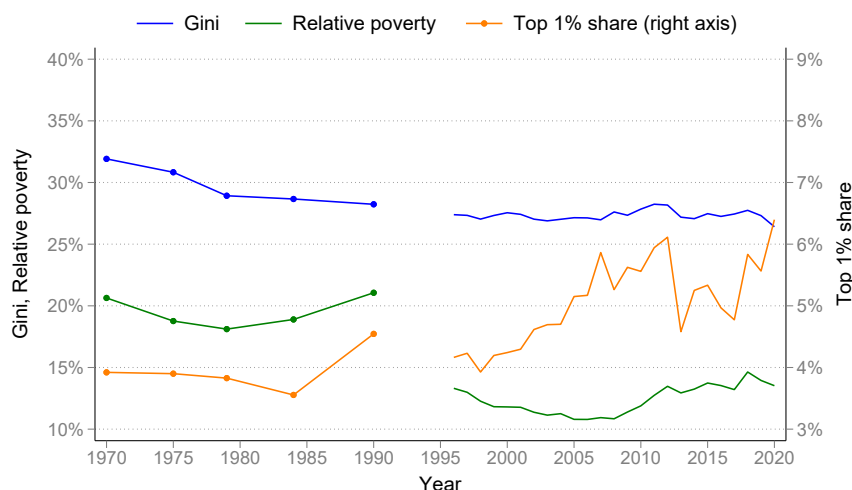

Note: Sample is individuals aged 25-60. Incomes are in 2019 prices. All incomes have been equivalised using the OECD equivalence scale.
Source: ERFS, Insee.

6.3   Inequality in incomes among all households

The Figures 42 and 43 show that measures of inequality in disposable income -– including the Gini coefficient and the 90:10 ratio — somewhat decreased in the 1970s and 1980s before stabilising in the mid 1990s, for our main sample of individuals aged 25 to 60. The evolution of the top 1% share offers a contrasted picture, with stable inequality in the 1970s and 1980s, which started to increase in the late 1980s and stabilised at a high level around 2007 (see Appendix Figure 48 for an alternative figure, where the top 1% share is defined based on pretax income and comes from Bozio, Garbainti, Goupille, Guillot & Piketty (2023)). Note also that the large swing in the top 1% share in the 2013-2018 period could come from capital income taxation that has led to massive responses in the forms of reduction in dividend income in 2013, followed by a reversal in 2018 (Bach et al. 2023). The same figure also shows how relative poverty has evolved, and by contrast, there has been a slight decrease in the early 2000s before peaking and stabilising in 2010 and onward. However, levels of relative poverty are notably lower than were been up until 1990. The relatively stable inequality of incomes in Figure 42 can also be seen in Figure 43, which shows percentile ratios of disposable household incomes. All three ratios, 90:10, 50:10, and 90:50, decline from 1970 to 1990, and then remain stable over the observed time period.

FIGURE 42: Gini, relative poverty and top 1% share of net household income for all households, over time

Note: Sample is individuals aged 25-60. The inequality measures are based on incomes measured net of taxes and benefits but before housing costs have been deducted. The relative poverty rate is defined as the proportion of people living in households with less than 60% of contemporaneous median income before the deduction of housing costs. Incomes below 0 are winsorized to 0. Winsorized Gini series is also winsorized at 99th percentile. *Source*: ERFS, Insee.

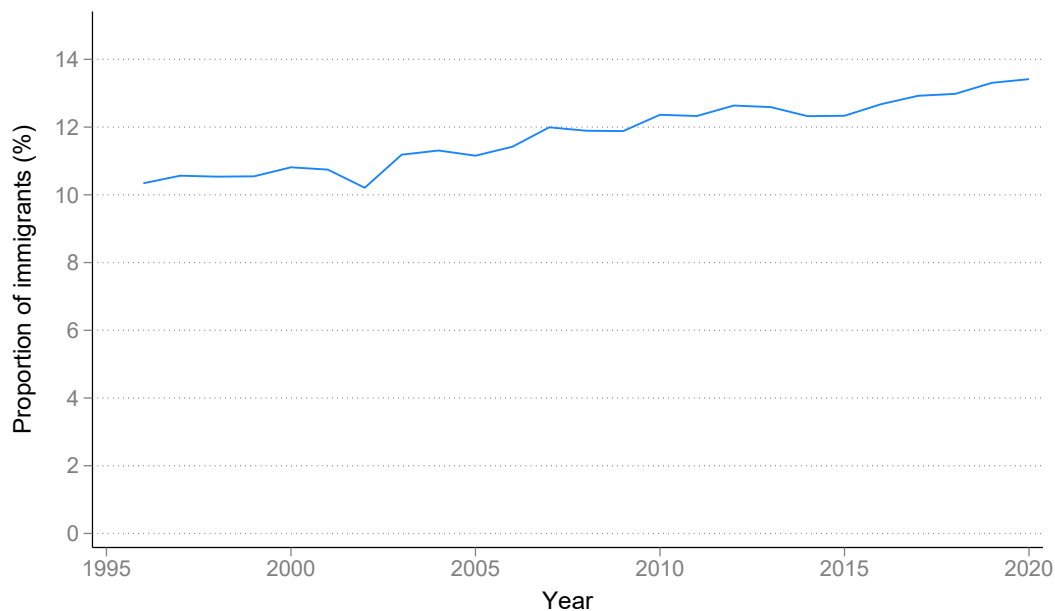**FIGURE 43:** Percentile ratios of disposable household incomes for all households, over time
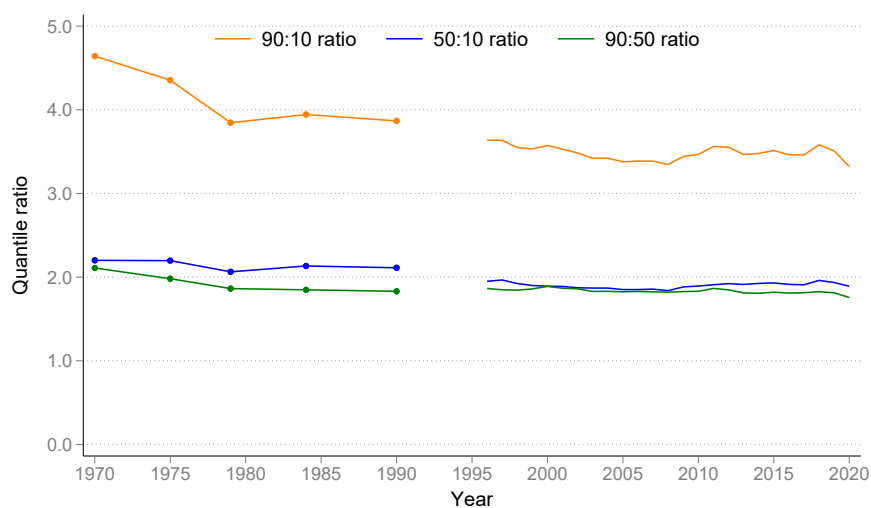
Note: Sample is individuals aged 25-60. The inequality measures are based on incomes measured net of taxes and benefits but before housing costs have been deducted. All incomes have been equivalised using the OECD equivalence scale. *Source*: ERFS.

7   Inequality between migrants and natives

Figures 44–46 explore the situation of immigrants, comparing them to the native population. In France, it is unlawful for surveys to ask about ethnicity, so research on discrimination and minorities rely often on the migrant status, or the information about the place of birth of parents (Aeberhardt et al. 2010). Figure 44 depicts the evolution of the share of immigrants in the 25–60-year-old population, which has steadily increased from around 10% in 1996 to over 13% in 2019. More than 48% of immigrants in France come from Africa, one-third come from Europe, and 13.5% come from Asia[2]. More precisely, a large majority of African immigrants (about 30% of all immigrants) come from North Africa.

FIGURE 44: Share of immigrants in the population 25–60 years of age, 1996–2020

Note: Sample is individuals aged 25-60. The inequality measures are based on incomes measured net of taxes and benefits but before housing costs have been deducted. All incomes have been equivalised using the OECD equivalence scale.
*Source*: ERFS, Insee.

Immigrants are mainly be found in the lower end of the income distribution as can be seen in Figure 45, which shows the share of immigrants by decile of equivalised disposable household

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[2]See for instance Insee, *L'essentiel sur... les immigrés et les étrangers*, July 2023.

income. However, there is a small upward trend in the share at the very top of the income distribution. Over time, the share of immigrants has increased primarily at the lower end of the income distribution, while their share among top income earners has remained stable over time. More broadly, the relative position of immigrants versus the native population is worse and has deteriorated over time. Figure 46 shows more evidence of this trend. For both men and women, immigrants in 2019 scored worse in terms of educational attainment, employment rate, hours worked, earnings, and disposable income than in 1996, when compared to natives.

FIGURE 45: Share of immigrants in the population, across the disposable income distribution, 26–60 years of age, 1996, 2008 and 2019
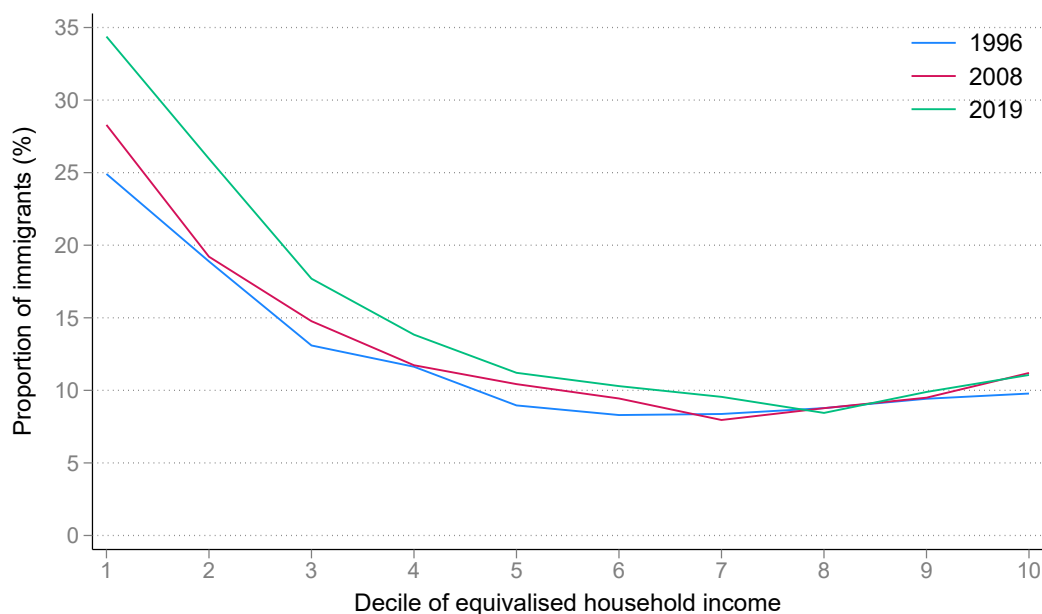
Note: Sample is individuals aged 25-60. The inequality measures are based on incomes measured net of taxes and benefits but before housing costs have been deducted. All incomes have been equivalised using the OECD equivalence scale.
Source: ERFS, Insee.

FIGURE 46: Outcomes of immigrants relative to natives, ages 25–60, 1996, 2007, 2019
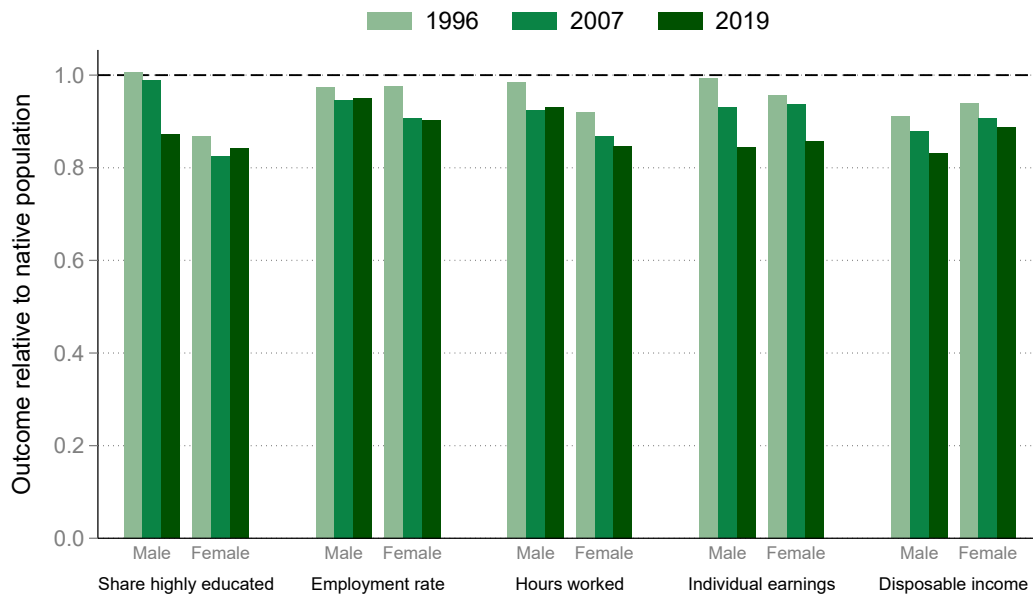
Note: Sample is individuals aged 25-60. The inequality measures are based on incomes measured net of taxes and benefits but before housing costs have been deducted. All incomes have been equivalised using the OECD equivalence scale.
*Source*: ERFS, Insee.

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Appendix: additional charts

Figure 47 shows the decomposition of disposable income for each decile. The taxes include income and council taxes. The net earnings category includes in-work earnings of employees and the self-employed. Housing, family, and social benefits compose the "benefits" category. Social benefits include unemployment, pension, and invalidity benefits that come from previous social contributions. Due to data limitations, this category also includes alimony and child support, whether received or paid. All incomes are net of social contributions. For most of the income distribution, the share of net earnings (including the self-employed) in disposable income decreases further up the income distribution, as one would expect from a progressive tax and benefit system (although the decrease is not always monotone). Moreover, the range of the decrease is similar over time, and in all three years observed it decreases from around 70% to 60%.
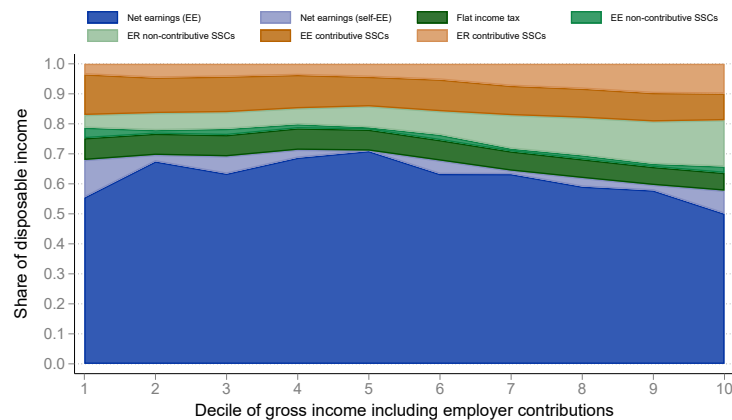
FIGURE 47: Share of gross individual incomes from net earnings, contributive and non-contributive employer and employee social security contributions, by gross income decile, various years
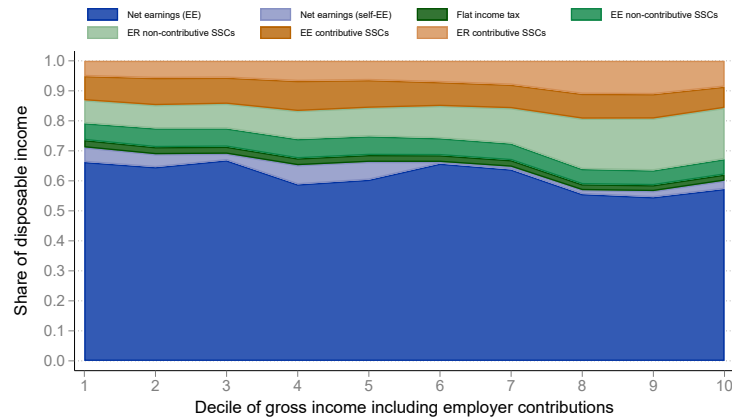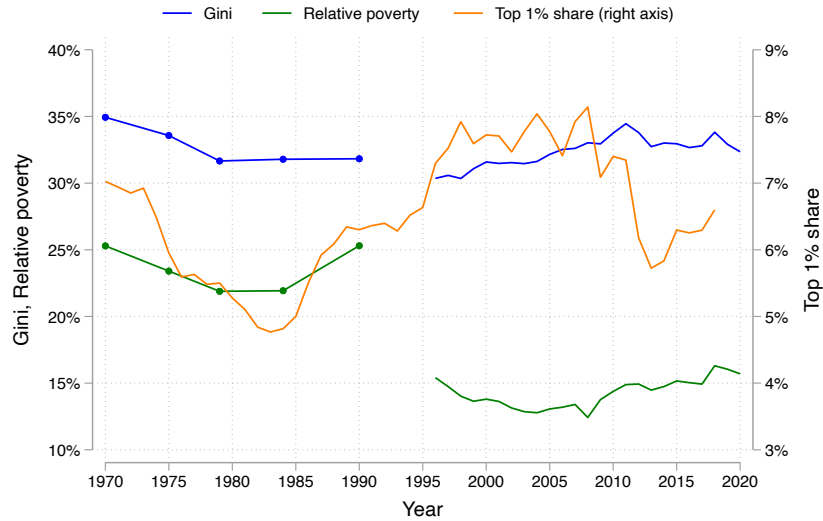

(A) 1996
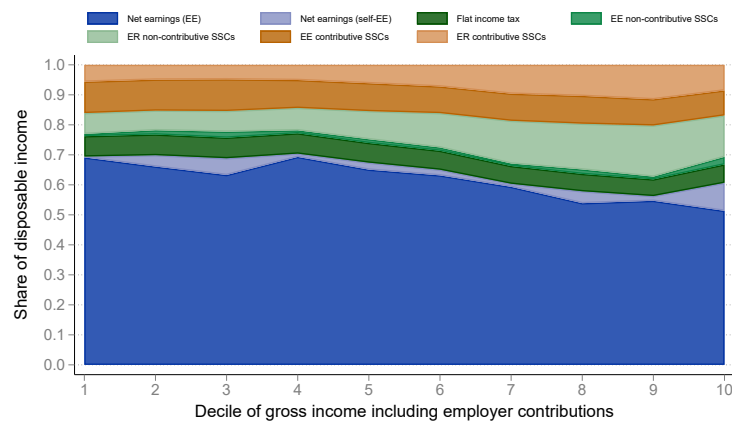
(B) 2007


(c) 2017

Source: ERFS.

FIGURE 48: Gini and relative poverty of net household income for all households, top 1% share of post-tax income (1970–2020)

Note: Sample is individuals. The inequality measures are based on incomes measured net of taxes and benefits but before housing costs have been deducted. The relative poverty rate is defined as the proportion of people living in households with less than 60% of contemporaneous median income before the deduction of housing costs. The Gini series is also restricted to positive and non equivalised household income.
Source: ERFS, Insee. Bozio, Garbainti, Goupille, Guillot & Piketty (2023) for the top 1% share of post-tax income.

FIGURE 49: P90/P10 pretax, posted and net wage ratios (1967–2019)
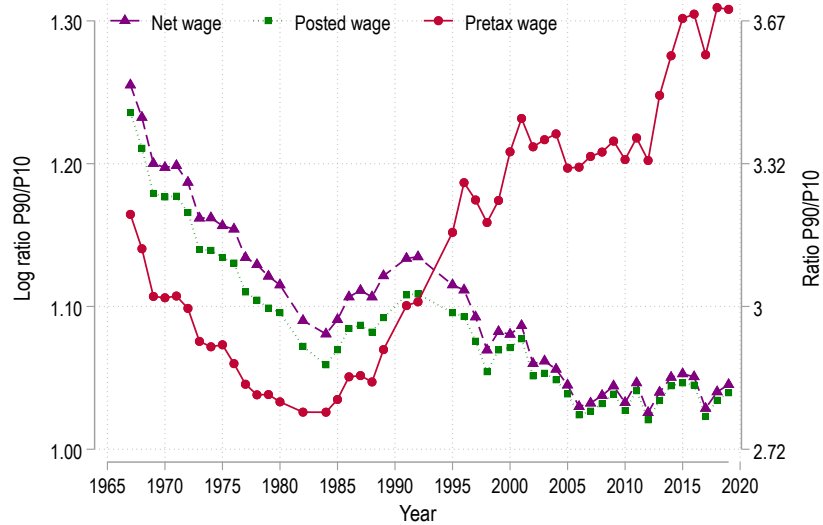
Note: Sample is individuals aged 20-64 working full-time in the private sector. The figure depicts the log wage ratios P90/P10 for net, gross and pretax wage. The right-hand side axis provides the equivalence with the wage ratios.
Source: DADS and Bozio et al. (2019).