



Institute for Fiscal Studies

Country Studies: Inequalities in Europe and North America

A parallel study to the IFS Deaton Review

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To be or not to be (employed): two decades of fluctuating earnings and income inequality in Spain



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This draft: April 20, 2024

Abstract

This paper offers a descriptive overview of the evolution of individual earnings and household income inequality in Spain in the last two decades. First, we describe general trends in the labour market regarding educational attainment and employment. Second, we document the main stylized facts on the evolution of individual hourly wages, hours of work and annual earnings. Lastly, the analysis focus on the distribution of household income and the redistributive role of the welfare system. Over this period, there has been a noteworthy increase in the general level of education of the population and in female labour force participation from very low levels. In addition, substantial changes have occurred in the size and composition of households, with reductions in marriage and cohabiting, in particular for lower educated groups. Fluctuations in inequality, however, primarily moved with the business cycle. After a period of decreasing inequality during the mid-1990s expansion, the 2008 crisis came with sharp rises both in earnings and income inequality that peaked around 2014. After that, both unemployment and inequality decreased, except for the transitory surge during the COVID19 pandemic. Current inequality indicators are close to pre-2008 levels.

JEL Classification: D31, I24, J21, J31

Keywords: inequality, education, employment, earnings, income

^{*}This document has been prepared by the Spanish team of the Deaton Review Project, whose members are located at the Banco de España. The authors thank the members of the other teams for very valuable comments. The views expressed in this paper are those of the authors and do not necessarily reflect the position of the Banco de España or the Eurosystem.

1 Introduction

The Spanish economy has undergone significant transformations throughout the past century, from a devastating civil war and post-war period to joining the European Union in the 1980s. Since then, notable advancements were observed in educational attainment and in female employment, both coming from very low levels. Other significant demographic dynamics occurred during this period, such as an ageing population and a reduction in the number of marriages and children. At the same time, the trajectory of the Spanish economy has been marked by three significant recessions: 1991, 2008, and 2020. In between these downturns, there have been periods characterized by long expansions. From the mid-1990s up until the onset of the Great Recession, Spain experienced a noteworthy average annual growth rate of 2.5% in GDP per capita at constant prices, surpassing the European average. Nonetheless, these seemingly favourable figures concealed an imbalanced growth that fuelled the real estate bubble. Subsequent to the collapse of the bubble and the international financial crisis in 2008, and the following debt crisis in 2010, the Spanish economy suffered a steep decline until 2013. From 2014, a gradual recovery emerged. Lastly, the downturn caused by the COVID-19 pandemic was of relatively short duration. Even though, Spain has been among the last advanced economies to regain its pre-2020 economic levels ([OECD, 2023](#)). Indeed, structural problems such as one of the highest unemployment rates in Europe, the presence of a dual labour market and a rigid wage determination system have contributed to a volatile labour market during the first two decades of the 21st century ([Arellano et al., 2022](#)).

This paper adopts a descriptive but comprehensive approach to analyse the evolution of inequality in individual earnings and household income in Spain during these last two decades up until 2021. It builds upon the [Deaton Country Studies Initiative](#), a collaborative effort involving 17 advanced economies, which focuses on data and measurement harmonization to gain insights into the drivers of economic inequalities across high-income countries.

Income inequality in Spain is among the highest within developed countries. On the contrary, Spain presents a moderate degree of wealth inequality associated with a relatively more widespread home ownership than in other countries ([Anghel et al., 2018](#)). Although the level is comparatively low, it has increased since 2011, due to the reduction in the percentage of households that own their main home, especially among the youngest ([Banco de España, 2023](#)). Another Spanish specificity is that both earnings and income inequality are strongly countercyclical, boosted by the abrupt fluctuations in employment ([Bonhomme and Hospido, 2017](#)). Earnings inequality was increasing since the mid-2000s and peaked at the end of the Great Recession. After 2014 inequality declined due to the recovery of the economic activity and employment, except for the COVID-19 surge. The Gini stood at 0.41 in 2021, having reached 0.44 in 2014. The 90:10 and 50:10 ratios were respectively above 10.5 and 4 in 2021, having reached 17 and 7 at their peak. The Gini of disposable household income was decreasing until 2007, then increasing until peaking in 2013 at 0.35, to decrease again afterwards. In 2014, the 90:10 ratio nearly reached 6.9, falling to 5 in 2021.

Regarding the role of the Spanish welfare system in the evolution of these inequality measures, we find that at the worst moment of the Great Recession, in 2014, the bottom quartile received 85% of its income via social benefits, whereas the top quartile received 25%. After the Great Recession the fraction of household income coming from welfare benefits suffered a large reduction, except for the period around the pandemic. Once both benefits and taxes are considered, household disposable income is around 85% of gross income. In 2021, the poorest quartile had a disposable income amounting to 89.5% of gross income, while for the richest quartile, this figure was 75.9%.

The rest of the paper is organized as follows. [Section 2](#) briefly summarises the Spanish institutional context and the most recent related literature. [Section 3](#) presents the data sources used in the analysis. [Section 4](#) contains the main results for education and employment, [Section 5](#) for individual earnings inequality, and [Section 6](#) for household income. Finally, [Section 7](#) concludes.

2 Institutional context

[Anghel et al. \(2023\)](#) provide a detailed description of the institutional background in Spain. Here we just briefly mention labour market institutions that relate with wage and earnings inequality, and features of the welfare system that impact income inequality.

Collective agreements set wage floors for firms in a particular sector.¹ Around 80% of Spanish workers are covered by these agreements. Collective agreements restrict the ability of firms to vary wages in times of economic downturn, deriving the adjustment of wages to employment ([Estrada et al., 2009](#); [Izquierdo et al., 2003](#)). At the same time, by setting a common floor, collective bargaining may reduce wage inequality ([Ramos et al., 2022](#)).

Another important institution for wage setting is the minimum wage. It increased abruptly from 735€ per month in 2018 to 1050€ in 2022, after years of stagnation in real terms. Approximately, 10% of the Spanish workforce has been benefited by this increase, although it also induced job losses for the groups directly impacted ([Barceló et al., 2021](#)).² The implications of changes in the minimum wage for earnings inequality are somehow unclear: on the one hand, the wage distribution is compressed by the wage increase in the lower part; on the other, the composition of those still employed change due to the already mentioned employment losses at the bottom. [Autor et al., 2018](#) found that, for the US case, increases in the minimum wage reduce inequality in the lower part of the distribution, but less than in previous literature. In the case of Spain, [Bonhomme and Hospido, 2017](#) show that the timing of decreases and increases in the real minimum wage is unable to explain the patterns of total and lower tail inequality documented until 2010.

With respect to unemployment benefits, the current replacement rate during the 180 first days of unemployment is 70% of the social security contributions accumulated while working.

¹The sectoral agreements can be at the local, provincial, regional or national level, most of them being at the provincial level, the most inefficient one ([Izquierdo et al., 2003](#)). Collective agreements can be negotiated also at the firm level. Since the 2012 labour reform, the signing of collective agreements at the company level has increased, but they are still very limited ([Cruz Villalón, 2013](#)).

²[Barceló et al. \(2021\)](#) estimate that for each percentage point increase in the minimum wage there is a loss of between 0.3 and 0.5 percentage point in employment for the group of workers directly affected by the increase.

After that, it goes down to 60%. Total duration can be extended up to a maximum of 2 years. After that, an assistance subsidy of 480€ per month substitutes the unemployment benefit when exhausted. The system contemplates increases in the benefit if the unemployed person has dependent children.

Severance payments are currently at 20 days of salary per year worked. For temporary contracts, the compensation lies between 8 and 12 days of salary per year worked. This gap by type of contract lowers the cost of temporary contracts, which have been particularly prevalent in Spain relative to other countries in Europe up until the labour reform of 2021 ([Rodríguez-Rodríguez and Izquierdo, 2022](#)). This high protection for permanent workers, but not for temporary ones, encourages firm to make adjustments through employment (mostly destroying temporary contracts), not through reductions in wages or working hours. A dual labour market like this one would deliver higher earnings inequality due to the wage gap by type of contract, but –most importantly - due to more work turnover (less days worked).³

During the COVID-19 pandemic, one of the most notable economic policy measures was the implementation of furlough schemes by firms (ERTEs by their Spanish name) together with the suspension of activity in the case of the self-employed. Such measures were still in force in 2021 and they helped significantly to mitigate the increase in unemployment ([Banco de España, 2022](#)).

Aside from labour market institutions, the Spanish welfare system that provides public healthcare, education, and social benefits covering parenthood, sickness, permanent disability, retirement, and survival (such as orphan and widowhood), also impact income inequality.

According to Eurostat data, expenditures in social protection in Spain has been below the European average both at the aggregate level and for items such as sickness/healthcare, disability, old age, family/children and housing. On the contrary, unemployment benefits and survivor pensions has been greater than in Europe. In terms of its redistributive capacity,

³[García-Louzao et al. \(2023\)](#) show that young workers with fixed-term contracts have 16 percentage point less wage growth after 15 years compared to peers that had open-ended contracts. [García-Pérez et al. \(2019\)](#) find that the large liberalisation in the regulation of fixed-term contracts in 1984 reduced the number of days worked (by 4.9%) and earnings (by 9.8%) over the first 10 years in the labour market.

the Spanish welfare system was redistributing less than its European counterparts ([Cantó, 2013](#)).⁴ More recently, social care policies, active employment policies and minimum income schemes have gained weight ([Balbona and Guillén, 2021](#)). In 2020 Spain introduced a national minimum income scheme, so-called the Ingreso Mínimo Vital (IMV). Prior to the IMV introduction, the minimum income system in Spain was made up of 19 different regional schemes assessed as having limited poverty alleviation capacity because of limited generosity, restrictive eligibility criteria and low take-up ([Arriba and Moreno, 2005](#); [AIReF, 2023](#)). The IMV is a household-level measure available to Spanish residents above 23 years old with low income and wealth. [Bilbao-Goyoaga \(2023\)](#) shows that during the initial year and a half of implementation, the policy had no statistically significant effect on households' material conditions (poverty rate and mean income). However, after two and a half years, it did considerably improve how households perceive the evolution of their finances.⁵ Also during COVID-19, Spain was one of the countries that expanded more its welfare system expenditure, contributing greatly to the reduction in inequality after the initial shock ([Martínez-López and Ruiz-Huerta, 2022](#)).

Within the social benefits, the reduced presence of social housing is notable. In contrast to neighbouring countries, social housing is mainly for purchase, not for rent. This is in line with the Spanish tendency to own houses rather than rent them, resulting in one of the highest home ownership rates in Europe. There are other housing benefits, aimed at covering part of the rent for families in social exclusion, but these types of measures vary a lot between regions and municipalities.

⁴Much of the reduction in inequality from gross to net incomes is thanks to the pension and transfers system (around 80%) and only the remaining 20% due the tax system ([Moliné, 2016](#)). Other pending aspects are the regressivity of tax credits, which tend to benefit high incomes, and the low top tax rates in some Autonomous Communities ([García-Miralles et al., 2019](#)).

⁵Still, there are high expectations regarding the recent implementation of the Minimum Living Income, which could reach up to 52% of households living in poverty. However, so far it has only reached 40% of potential beneficiaries, with a non-take up of 57% ([AIReF, 2022](#), [Banco de España, 2023](#)).

3 Data sources

This paper combines several surveys, namely: the Labour Force Survey (EPA, by its Spanish acronym), the Wage Structure Survey (EES), the Life Conditions Survey (ECV) and the Survey of Household Finances (EFF).

The Spanish Labour Force Survey is the main source for obtaining employment and education statistics. It is available every year since 1976 up until 2023. However, it does not contain information neither on hourly wages nor on earnings. Given this limitation, subsections 5.1 and 5.2 use data from the EES, while subsection 5.3 and section 6 use data from the ECV and the EFF.

The EES is available in years 1995, 2002, 2006, 2010, 2014, and 2018, and contains detailed information on hourly wages for employees in firms with at least 10 workers and in a given point of the year. In addition, to ensure comparability across survey years, some sectors not included in the first waves are excluded from our analysis throughout the period.⁶ To scale up the information to annual wages, however, the EES survey assumes that individuals work the full year. This assumption tends to overestimate earnings for individuals at the bottom of the distribution and, consequently, underestimate inequality. This is the main reason why for annual earnings, we focus instead on the figures obtained from the ECV survey.

The ECV is available annually from 2004 to 2023.⁷ It contains information at both individual and household levels. Our period of analysis covers since 2004 for household income and from 2006 onwards for individual annual earnings. The reference year for individual earnings and household income is the year prior to the survey. Contrary to the EES, the ECV contains both employed and self-employed workers, does not exclude any sector or type of firm and reflects total annual labour income without any adjustment to reflect full-time equivalent.

⁶These sectors are: Agriculture, hunting and forestry, Fishing, Public administration, social security, and defence; Domestic service and home production, Extra-territorial organizations and bodies, Education, Health and Social Work, Other community, social and personal service activities.

⁷The European version of the ECV (EU-SILC) provides comparative statistics on the distribution of income and on social exclusion in Europe.

Finally, the Survey of Household Finances (EFF) is an official survey conducted by the Banco de España since 2002 with the aim of obtaining direct information on the investment and financing conditions and decisions of Spanish households, as well as their wealth situation. It is available in years 2002, 2005, 2008, 2011, 2014, 2017 and 2020. As with the ECV, the EFF reference year for annual earnings and income is the year prior to the survey.

4 Employment and education

The Spanish labour market is characterized by two salient features relative to other advanced economies: the structurally high level of unemployment and its marked cyclicity (Dolado et al., 2021). Unemployment has been on average 14% over the 1977-2023 period, reaching peaks as high as 20% in 1994 or 24% in 2013 (Figure 1). Also, except for the 2001-2008 period, long-term unemployment represents half of the total unemployment. As a consequence of these pronounced fluctuations in employment, wage inequality in Spain is strongly countercyclical (Bonhomme and Hospido, 2017). There are other often-mentioned problems in the Spanish labour market that might also contribute to this cyclicity, such as high temporary rates, low wage flexibility, low productivity in large established firms and high entry barriers for young workers (Bentolila et al., 2021; Dolado et al., 2021).

Although these structural features are present throughout the period, the Spanish labour market also witnessed relevant compositional changes, being the massive entry of women into the labour force and the increase in the educational level of workers the two most important.

The employment rate for women increased dramatically over this period, from 28% in 1977 to 71% in 2023 (Figure 2). As a consequence of that, the gender gap in employment diminished from 69% in 1977 to 13% in 2023.

In 1977, 91% of the working population had only completed primary education or less whereas the remaining 9% was equally spread among those with secondary education (4.7%) and those with tertiary education (4.7%). By 2023, 34% of the population had at most

primary education, 36.3% secondary education, and 29.7% tertiary education (Figure 3).⁸

Although educational attainment has advanced more rapidly for women, females still have systematically lower employment rates than males at every education level (Figure 4). The employment rate of tertiary-educated males was on average 86% versus 74% for females. The gender gap is larger among those with secondary education (85% versus 58%) and is the highest among those with at most primary education (76% vs 36%). Over time, gender gaps were generally decreasing until 2013, but since 2014 the trend has halted. Nowadays, the labour force participation of women with children is still low compared to men, due to the inability of social policies (such as paternity leave, tax incentives or family policies) to fully overcome traditional gender roles (Osuna, 2018; Hupkau and Ruiz-Valenzuela, 2022).

5 Wage and Earnings Inequality

In this section we first examine the evolution of individual hourly wages and, second, of hours worked, subsequently consolidating these two dimensions into annual earnings.

5.1 Hourly wages

The median real hourly wage in Spain barely changed from 10.1 euros in 1995 to 10.2 euros in 2018.⁹ Over the period, males had a median hourly wage of 11.1 euros versus 8.7 euros for females. This gender gap went from having that women’s median hourly wage represented 78% of men’s in 1995 to 83% in 2018.¹⁰

By level of education, we see that – between 1995 and 2018 - median real hourly wage diminished for males with tertiary education, increased for those with primary education and remained quite stable for those with secondary education. For females, on the contrary, median real hourly wages increased except for those with secondary education (Figure 5).

Both for men and women, the college premium (that is, the ratio of the median hourly

⁸Despite this positive evolution, the Spanish education system continues to have problems such as the high dropout rates during secondary education, especially among men (Felgueroso et al., 2014).

⁹All monetary quantities in this document are expressed in euros of 2021.

¹⁰Interestingly, gender differences in hourly wages increase along the working life: gender wage gaps at age 25 are smaller at every education groups than the gap at later ages.

wages of the most highly educated relative to the least) diminished over the period, but particularly so from 1995 to 2006.

Figure 6 depicts the evolution of the Gini coefficient in hourly wages from 1995 to 2018. It went down from 0.26 in 1995 to 0.24 in 2006, and then increased to 0.26 again in 2018. The same pattern is observed both for males and females. Two factors explain this evolution. During the expansion, employment increased substantially while, at the same time, Spain experimented a decrease in the college premium among those working (Pijoan-Mas and Sánchez-Marcos, 2010). During the great recession, the required adjustments were done in terms of reducing the amount of people working and less so in terms of the wages of those that remained employed (Bonhomme and Hospido, 2017).

We get similar qualitative results when using percentile ratios instead of the Gini index (Figure 7). In 1995, individuals in the 90th percentile earned 3.7 times more than those of the 10th percentile. The ratio went down to 3.1 in 2010 and increased to 3.2 in 2018. The 50:10 ratio also decreased, but more modestly (from 1.7 in 1995 to 1.5 in 2010 and to 1.6 in 2018).

5.2 *Hours of work*

In Spain, there has been a decline in hours worked per week from 39.4 hours in 1995 to 36.8 in 2014. Working hours recovered slightly in 2018 (up until 37.1 hours).

Figure 8 shows that all males, regardless of their educational attainment, work on average a similar number of hours per week (39 hours). Only those males with at most primary education significantly reduce their working hours from 40.1 in 1995 to 38.4 in 2018. For females, on the contrary, differences in working hours are substantial across education groups as well as the reductions over time. On average, females with at most primary education worked 33.6 hours per week, 36.5 those with secondary education, and 37.9 those with tertiary education. From 1995 to 2018, working time among employed women has decreased in 5 hours for primary-educated, in 2.5 hours for secondary-educated, and in 0.6 hours for tertiary-educated.

Importantly, females with low hourly wages saw the biggest reduction in hours worked. These two facts combined reinforce the positive correlation between education and earnings. Additionally, given the increase in employment for females along these years, it seems that the new working women entered with shorter working hours.

5.3 *Annual earnings*

As a result of stagnated hourly wages, decreased working hours and less stable working histories, median real annual earnings have also declined over the period. Median annual earnings were 18.1 thousand euros in 2005, decreased to 15.8 in 2014, and increased again up to 17.6 in 2022, although without recovering the levels before the Great Recession.

By gender the evolution has shown only some mild convergence. Women’s median earnings represented 70% of men’s median earnings in 2005, and by 2022 the gap was 80%.¹¹ Disaggregating by education, we uncover some noticeable differences (Figure 9). In terms of annual earnings, the college premium for men increased from 2005 to 2022. In 2005 the highest-educated men earn 1.5 times more than the least-educated men, while in 2022 the highest-educated men (women) earn 1.9 times more than the least-educated men. For women, on the contrary, the highest-educated earn relative to the least-educated the same amount (2.1 times more) both in 2005 and 2022.

Figure 10 depicts the evolution of the Gini coefficient of annual earnings in Spain, from 0.35 in 2005 to 0.41 in 2022. Two sub-periods stand out in the graph: until 2014 inequality increased almost continuously, while we see a reduction after that, with the exception of the COVID-19 episode in 2020 that implied a temporary surge in this measure. Importantly, contrary to what happens with hourly wages, inequality in annual earnings is higher for females than males. This comes from the previous observation that men have very similar working hours, whereas women have bigger disparities in working hours and employment depending on their level of education.

¹¹This slow convergence has also been noticed by [Osuna \(2018\)](#). In general, despite being more educated than men, females still earn much less ([Guner et al., 2014](#)).

Figure 11 shows the evolution of the percentile ratios, documenting similar patterns as with the Gini. Between 2005 and 2014, the 90:10 ratio almost tripled (from 6 to 17) and then went down again (to 9 in 2022), while the 50:10 ratio more than doubled (from 2.8 to 6.6) to went down to 3.7 in 2022.¹²

6 Inequality in Household Income

This section starts by looking at household composition. Next, we analyze the evolution of household incomes and, finally, the distributional impacts of the Spanish welfare system.¹³

6.1 Household composition

The first salient fact about the composition of Spanish households is the reduction of marriages, from around 80% of the population to less than 60% in 50 years. Part of this decline has been compensated by an increase in cohabitation since the turn of the century. If we take cohabitation and marriages together, the number of couples living together has decayed more significantly for the least educated group (from 84% in 1977 to 68% in 2023) than for the tertiary-educated group (74% and 65%, respectively).

The second fact is that, as women’s labour force participation has increased, the likelihood of having dual earners couples versus single earner is also higher now.

As a result of these shifts, three main changes occurred on the typology of Spanish households (Figure 12): first, a significant decrease in the share of couples with children (from

¹²If we instead consider the numbers obtained using the EES we would have a Gini and values for the percentile ratios substantially below those obtained with the ECV. These differences in levels emphasize the importance of accounting for unstable working histories when explaining the evolution of wage and earnings inequality in Spain. The cyclical and temporality of the Spanish labour market, accounted by in the ECV but not considered in the EES, shift inequality upwards. In any case, even if the database we choose alters the level of inequality, the overall evolution does not differ much. Also, results obtained using administrative records from the Social Security display a similar evolution (Arellano et al., 2022).

¹³Household income measures are all expressed in euros of 2020, refer to one year before the reference year of the sample, and have been equivalised using the modified OECD equivalence scale so as figures are an approximation to the annual income available per adult household member. Hence, when we comment on characteristics of households (i.e. level of education) we refer to those of each adult member. The inequality measures are based on incomes measured net of taxes and benefits but before housing costs have been deducted.

42% in 1988 to 30% in 2023);¹⁴ second, a substantial increase in the share of single households without children (from 3.7% in 2000 to 13.4% in 2023); and, third, a sizeable number of households (over 20%) composed of parents and adult children. For this latter group, there exists a noticeable gradient by education of the parents with important consequences for inequality: when parents have lower education, this category represents 34% of the total number of households, while when parents have tertiary education, this category represents 16%.

6.2 Household income

Median real gross household income has not changed substantially since 2005. At that time, it was 18 thousand euros, the same level as in the worst moment of the Great Recession. By 2022, median real gross household income was 20.4 thousand euros. The evolution of median disposable income is similar: from 15 thousand euros in 2005, and 2014, to 17 thousand euros in 2022. Working households have twice as much disposable income as non-working households. This ratio illustrates the importance of having a job in Spain.

Figure 13 documents large differences by educational level. Households with tertiary education have almost twice as much disposable income as those with primary education (21 thousand euros vs 12 thousand euros in 2022).

As Figures 14 and 15 show, also income inequality is highly countercyclical in Spain. From the turn of the century, we can differentiate three periods for which inequality move in parallel to unemployment. Firstly, a decrease in inequality until 2007. Secondly, an increase until 2013. Finally, there has been a progressive decline in inequality since 2014, altered only by the COVID-19 pandemic.¹⁵

¹⁴During the 2000s, this decrease was partially compensated by the influx of immigrants who had higher fertility. Nevertheless, this effect was short lived.

¹⁵The results presented in this subsection 6.2 come from the Spanish Life Conditions Survey (ECV). The same figures are included in the template using instead the Spanish Survey of Household Finances (EFF). The countercyclical evolution for inequality is less clear using the EFF. This discrepancy deserves more in-depth analysis. The great advantage about using the EFF is that, in addition to income, it also provides detailed information on wealth and consumption. According to the results in Anghel et al. (2018), which are currently in the process of being updated, wealth inequality is much higher than income inequality. However, by international standards, Spain has a moderate level of wealth inequality, which is associated with more

Figure 14 shows that the Gini coefficient in disposable household income peaked in 2013 at 0.34, and that 23.3% of households had an income below 60% of the median. The income share belonging to the top 1% peaked earlier in 2010, rising to 4.8%. As with earnings inequality, we observe a reduction in household inequality since 2013. In 2022 the Gini coefficient was 0.31, close to the pre-crisis levels in 2007 and 2008.

The 90:10 percentile ratio depicted in Figure 15 shows that from the starting value on 5.7 in 2003, the highest level of inequality was 5.8, reached in 2014. Comparing the evolution of the 90:50 and 50:10 ratios, we see that it is the latter that has increased the most. This tells us that inequality at the bottom of the distribution is behind the increase in overall inequality between 2007 and 2014. It is important to note that the pension system, the increase in top marginal rates between 2012 and 2014 and the increase in household size limited the expansion of inequality during the worst moment of the crisis (Anghel et al., 2018). After 2014, the percentile ratios decreased except for the 2020 episode. In 2022, the 90:10 percentile is at the same level as in 2007 (4.3).

6.3 Welfare system

Figure 16 aims to illustrate the redistributive role of the welfare system.

First, Panel A plots how much of the gross household income comes from the welfare state's benefits. Both in 2014 and 2020, the bottom quartile of the income distribution received 35% of it via benefits, whereas the top quartile received 10%.¹⁶ Except for those peaks, values stand at around 28% for the bottom quartile and 9% for the top.

Second, Panel B shows the fraction of gross income, households paid in direct taxes¹⁷.

widespread ownership of real assets. The net wealth Gini index has risen to over 60% after 2011. Since 2011, the share of households that own their main home fell by 10pp, being the decline of 33pp for younger households and of 20pp for those in the bottom quartile of the wealth distribution. On the other hand, the variations in per capita consumption qualitatively followed the developments in per capita income. Even though, both the level of the inequality indicators and the size of the fluctuations are smaller than for income inequality.

¹⁶Of all the countries in the Deaton Review, only Italy's and Greece's bottom quartiles reach such a high dependency from the state.

¹⁷The direct taxes considered here are the personal income tax and the wealth tax, also including employee social security contributions.

Over the sample period, the bottom quartile paid 9% of direct taxes and the top 22%. The level of progressivity for these taxes was the highest in 2016, when the share for the top quartile was 4 times higher than the one for the bottom quartile; while in 2022 is around 3, similar to the pre-crisis level in 2007 or 2008.

Third, once both benefits and taxes are considered (Panel C), household disposable income is around 85% of gross income. In 2022, the variation across quartiles was substantial: the poorest quartile has a disposable income that represents 87% of their gross income, while for the richest quartile the corresponding figure is 75%. The range of that variation has remained above 10 pp since 2008.

7 Conclusions

During the last two decades in Spain, fluctuations in earnings and income inequality moved with the business cycle. First, we observed decreasing inequality during the mid-1990s expansion. The 2008 crisis came with sharp rises both in earnings and income inequality that peaked around 2014. After that, inequality decreased except for the transitory surge during the COVID19 pandemic. In 2022, inequality levels are close to those pre-2008.

Importantly, there exists one demographic group that have suffered increasingly harsher conditions after the 2008 crisis: immigrant households ([Sanz-de Galdeano and Terskaya, 2020](#)). Prior to 2005, the small immigrant population in Spain was similarly skilled as natives and also have similar employment outcomes. Even though, they had lower individual earnings and household income. After 2005, the group of immigrants become larger (from 1.5% in 2000 to 10% in 2015 and 15% in 2022) but less educated than natives, further worsening their labour market outcomes (except for hours of work). As a result of this, by 2020 migrants accounted for almost 40% of the poorest income decile, while their representation is only 6% in the richest decile. This group represents an interesting avenue for future research.

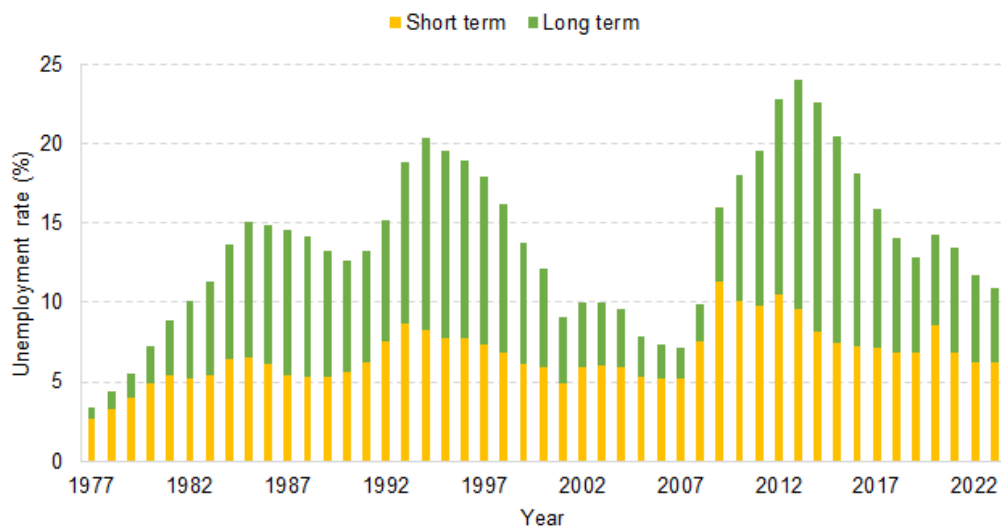
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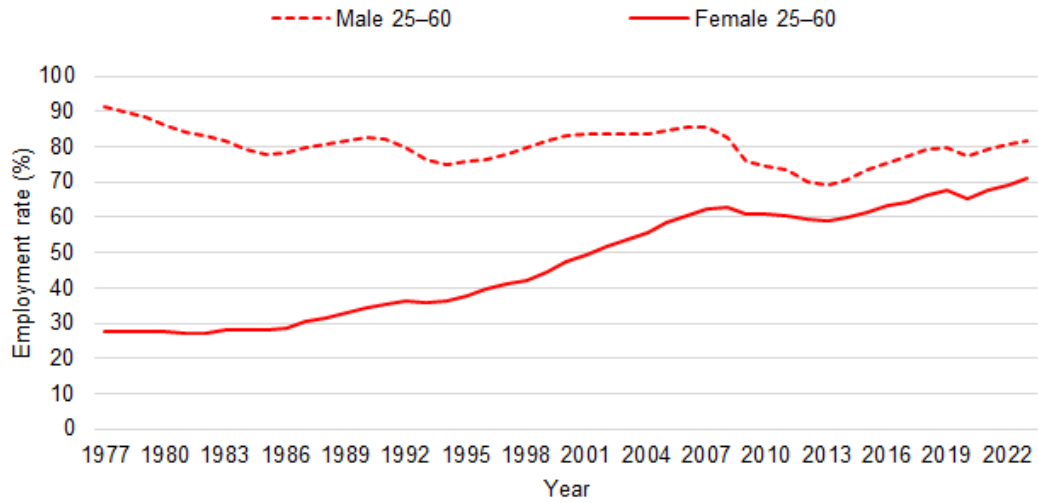
Figure 1: Unemployment rate by duration of unemployment over time



Source: Spanish labour force survey (INE) 1977-2023.

Notes: Sample is individuals aged 25-60. Unemployment rate is calculated as the fraction of labour force aged 25-60, split between short-term (less than 1 year) and long-term (1 year or more) duration of unemployment.

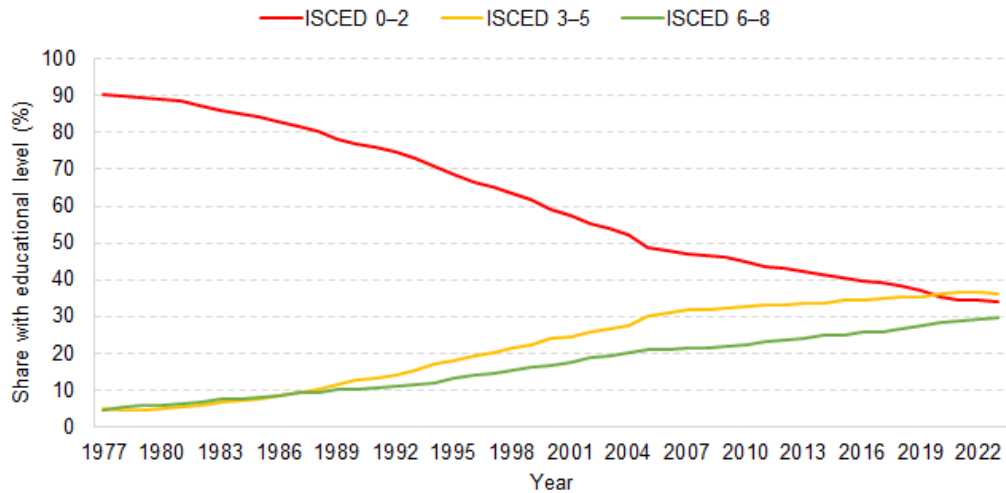
Figure 2: Employment rates by sex, over time



Source: Spanish labour force survey (INE) 1977-2023.

Notes: Sample is individuals aged 25-60 who have completed full-time education.

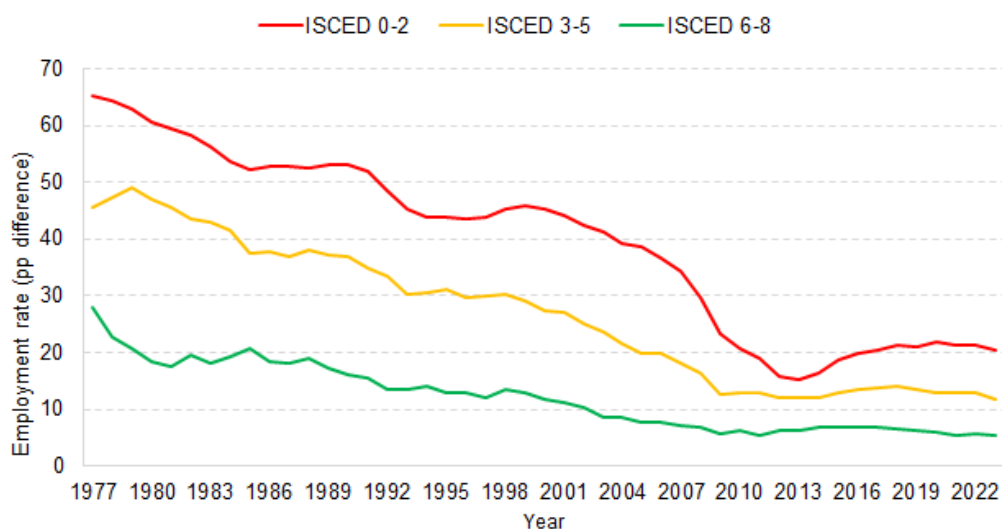
Figure 3: Educational attainment over time



Source: Spanish labour force survey (INE) 1977-2023.

Notes: Sample is individuals aged 25-60 who have completed full-time education.

Figure 4: Gender gaps in employment rates by education, over time



Source: Spanish labour force survey (INE) 1977-2023.

Notes: Sample is individuals aged 25-60 who have completed full-time education.

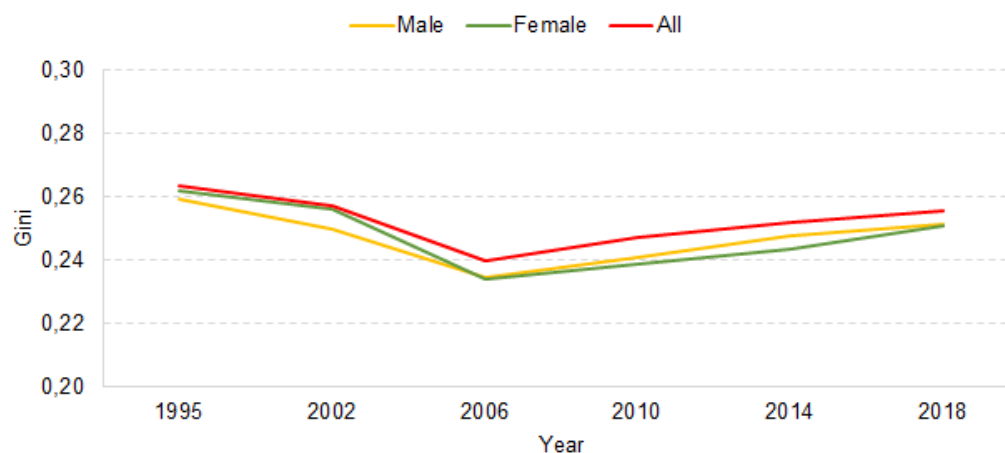
Figure 5: Median real hourly wage among employees by sex and education, over time



Source: Structure of Earnings Survey (INE) 1995, 2002, 2006, 2010, 2014, 2018.

Notes: Sample is employees aged 25-60. Wages are in 2021 prices.

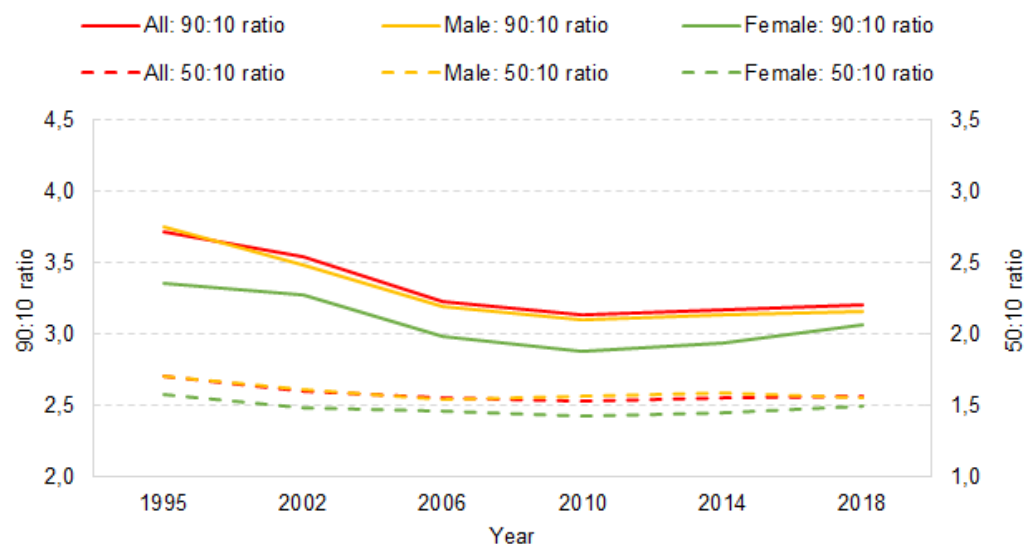
Figure 6: Gini coefficient of hourly wages among employees, overall and by sex, over time



Source: Structure of Earnings Survey (INE) 1995, 2002, 2006, 2010, 2014, 2018.

Notes: Sample is employees aged 25-60.

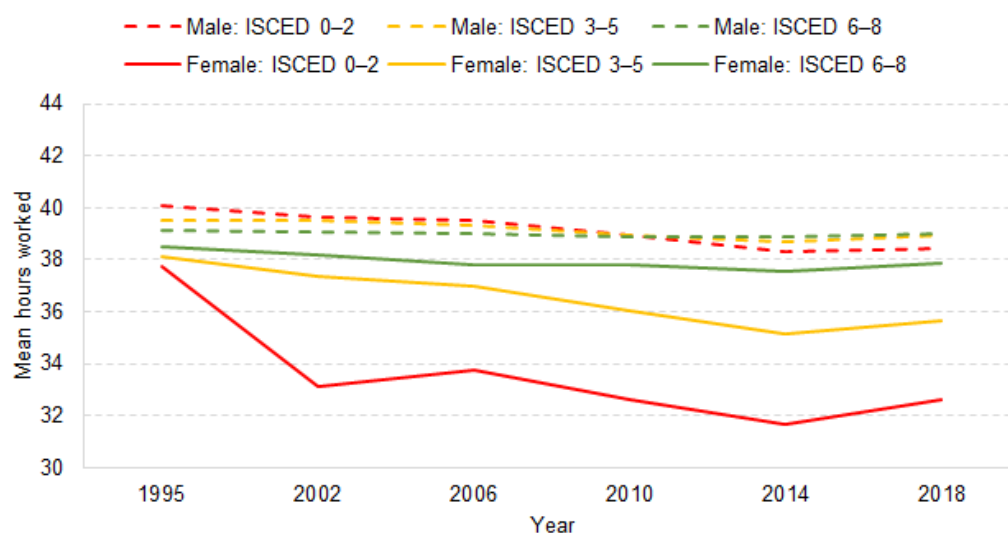
Figure 7: 90:10 and 50:10 ratios of hourly wages among employees, overall and by sex, over time



Source: Structure of Earnings Survey (INE) 1995, 2002, 2006, 2010, 2014, 2018.

Notes: Sample is employees aged 25-60.

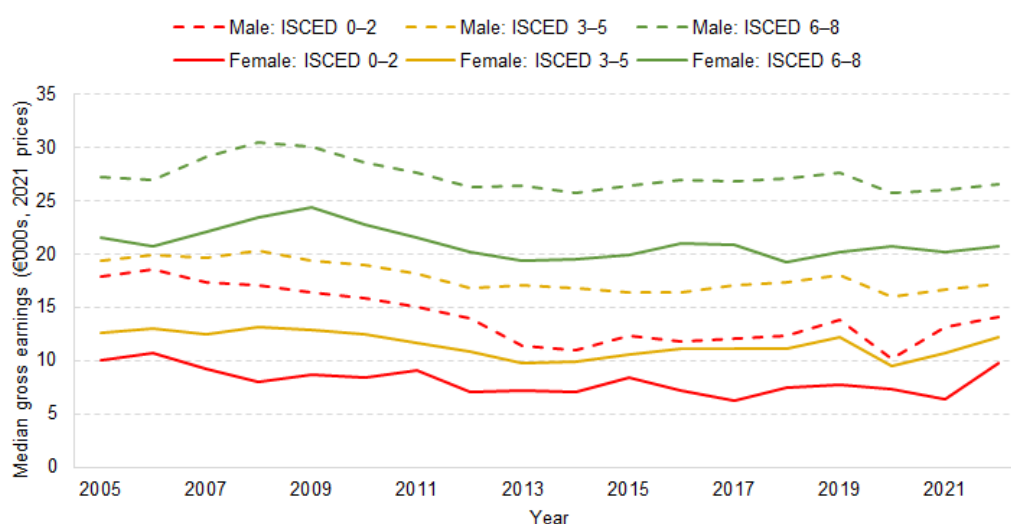
Figure 8: Mean hours worked among employees, by sex and education, over time



Source: Structure of Earnings Survey (INE) 1995, 2002, 2006, 2010, 2014, 2018.

Notes: Sample is employees aged 25-60. Hours include paid (but not unpaid) overtime and have been top-coded to 97 hours per week.

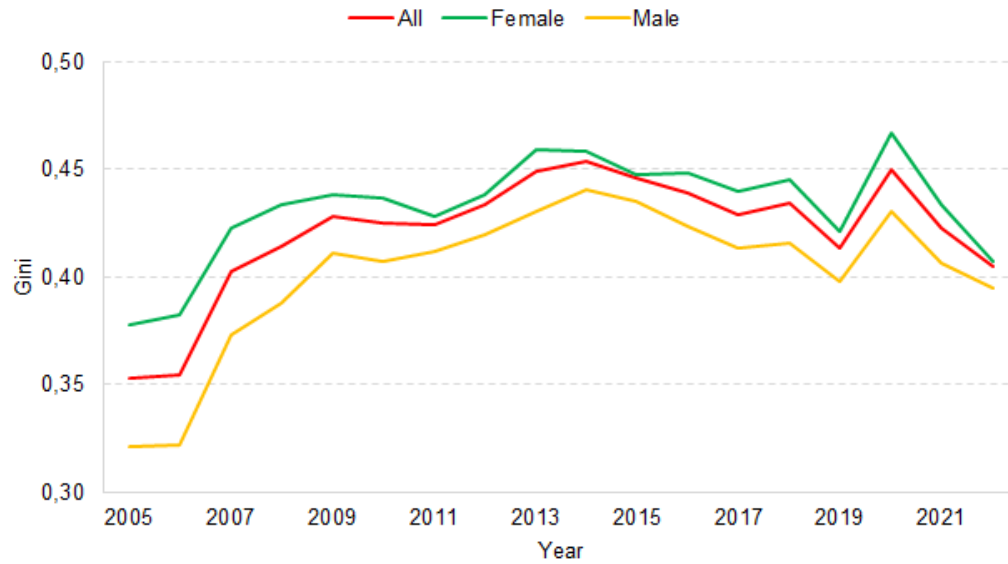
Figure 9: Median real gross individual earnings, by sex and education, over time



Source: Spanish Life Conditions Survey (INE) 2006-2023.

Notes: Sample is employees and self-employed aged 25-60. Individual earnings are in 2021 prices.

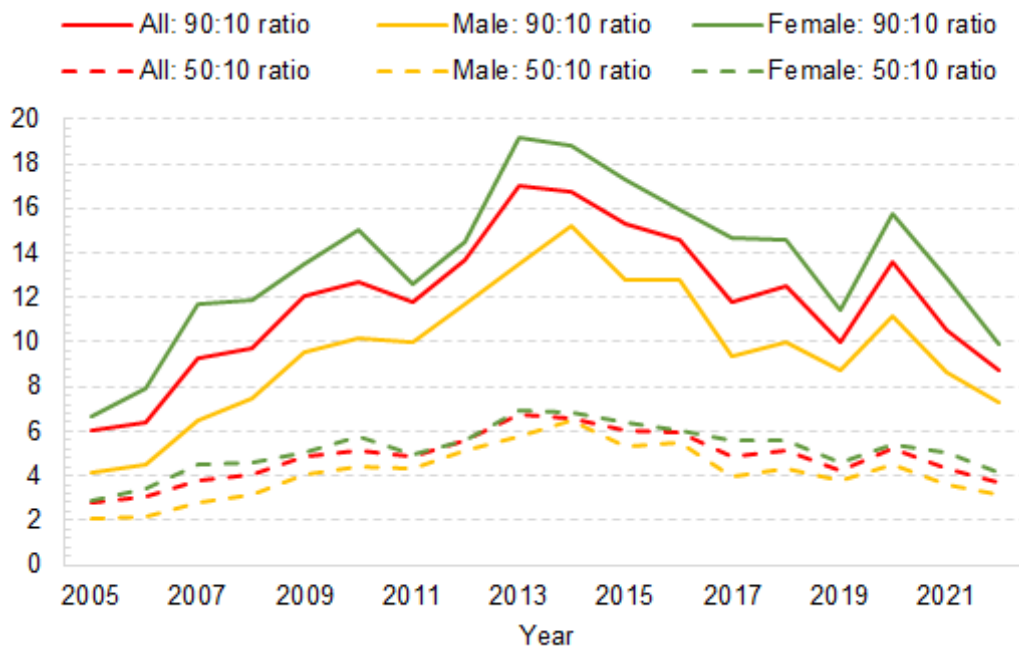
Figure 10: Gini coefficient of gross individual earnings, overall and by sex, over time



Source: Spanish Life Conditions Survey (INE) 2006-2023.

Notes: Sample is employees and self-employed aged 25-60.

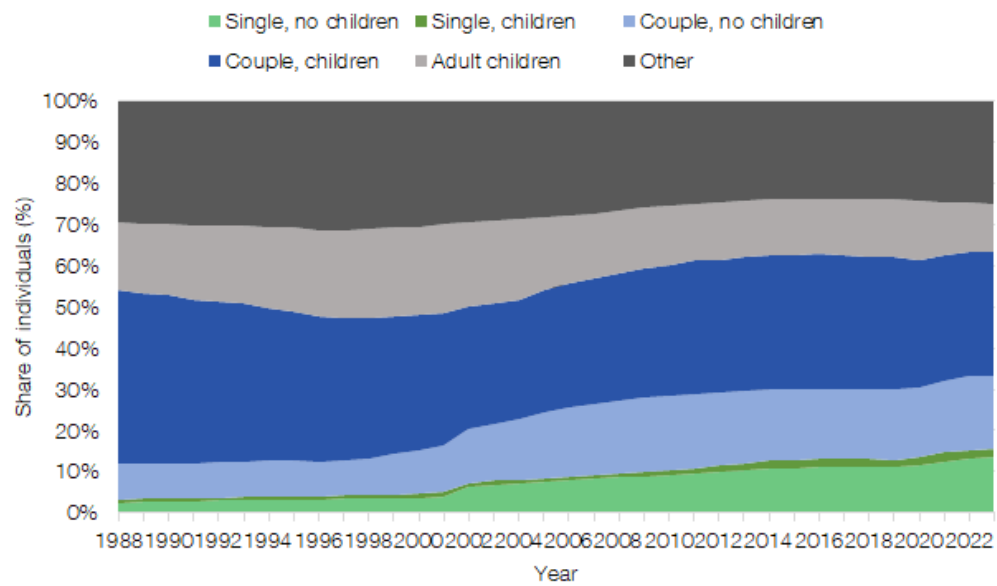
Figure 11: 90:10 and 50:10 ratios of gross individual earnings by sex, over time



Source: Spanish Life Conditions Survey (INE) 2006-2023.

Notes: Sample is employees and self-employed aged 25-60.

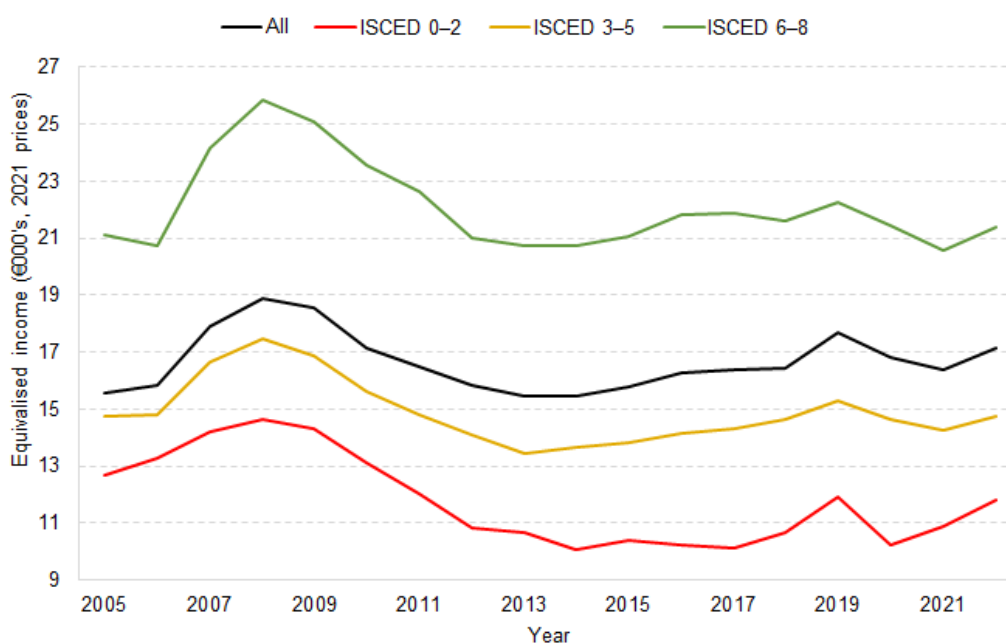
Figure 12: Share of individuals by position in the household, over time



Source: Spanish labour force survey (INE) 1988-2023.

Notes: Sample is individuals aged 25-60 who have completed full-time education.

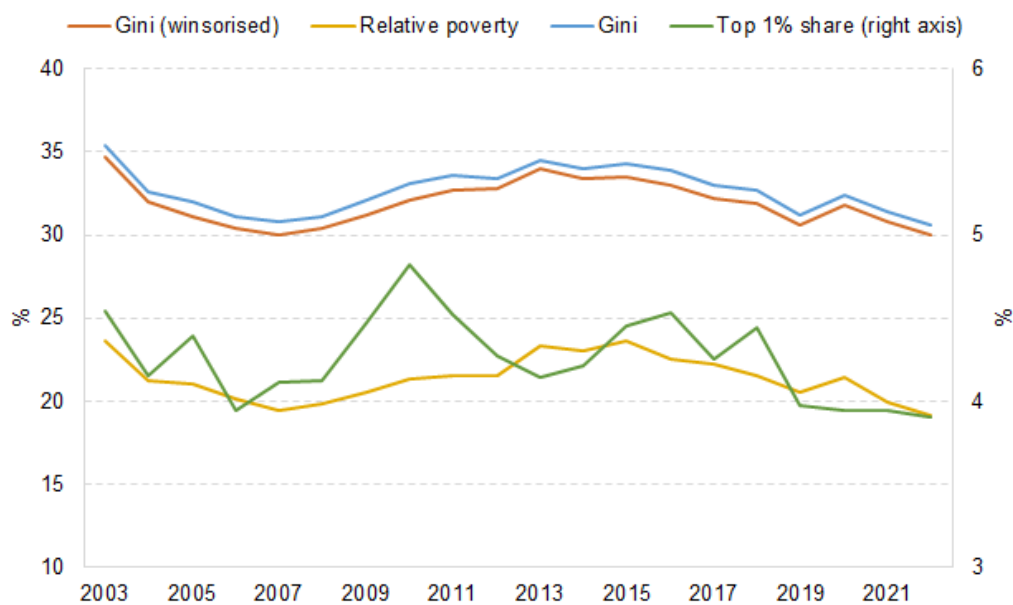
Figure 13: Median real disposable household income for working households, overall and by education, over time



Source: Spanish Life Conditions Survey (INE) 2006-2023.

Notes: Sample is individuals aged 25-60 in working households. Disposable income is gross household income, plus benefits less taxes and social security contributions, adjusted using the OECD equivalence scale. Income is in 2021 prices.

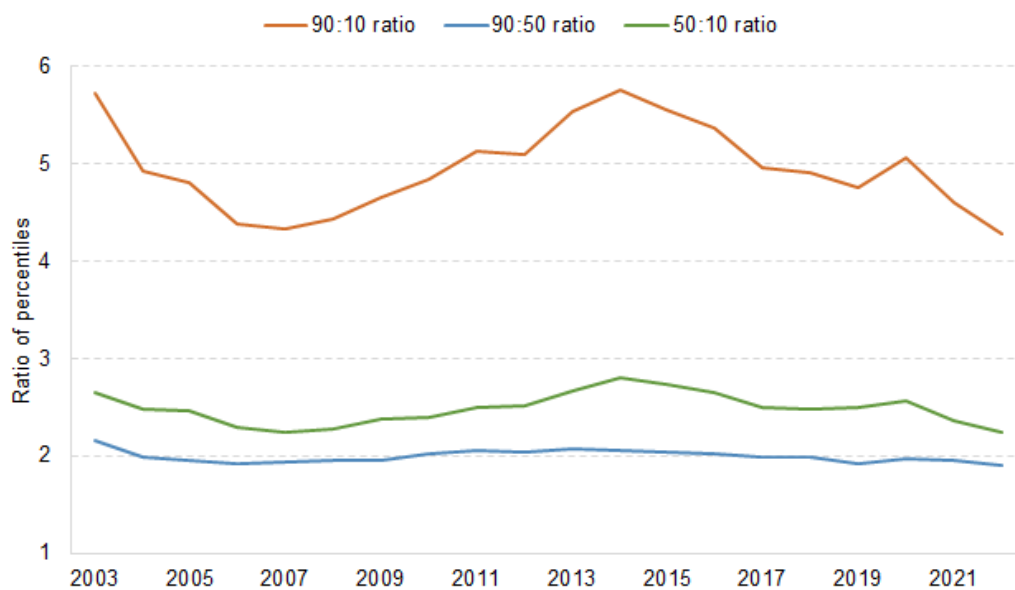
Figure 14: Gini, relative poverty, and top 1% share of disposable household income for all households, over time



Source: Spanish Life Conditions Survey (INE) 2004-2023.

Notes: Sample is individuals aged 25-60. The relative poverty rate is defined as the proportion of people living in households with negative than 60% of contemporaneous median income before the deduction of housing costs.

Figure 15: 90:10 and 50:10 ratios of disposable household income for all households, over time

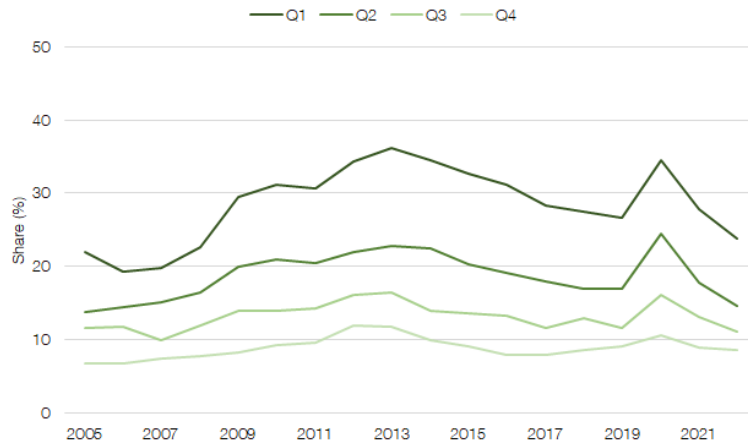


Source: Spanish Life Conditions Survey (INE) 2004-2023.

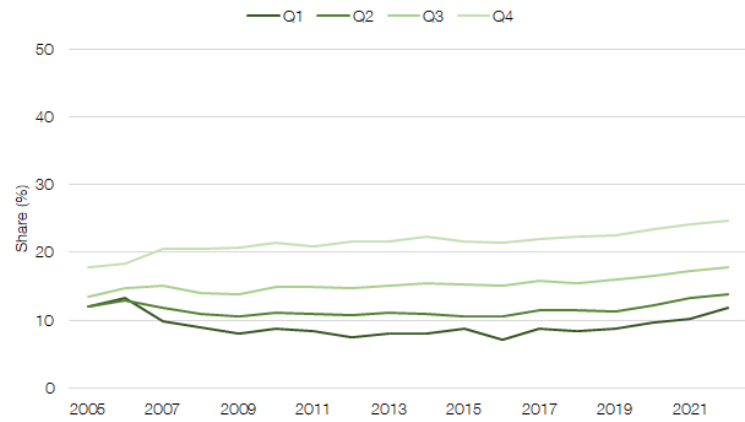
Notes: Sample is individuals aged 25-60.

Figure 16: Welfare state effect on incomes, by quartiles

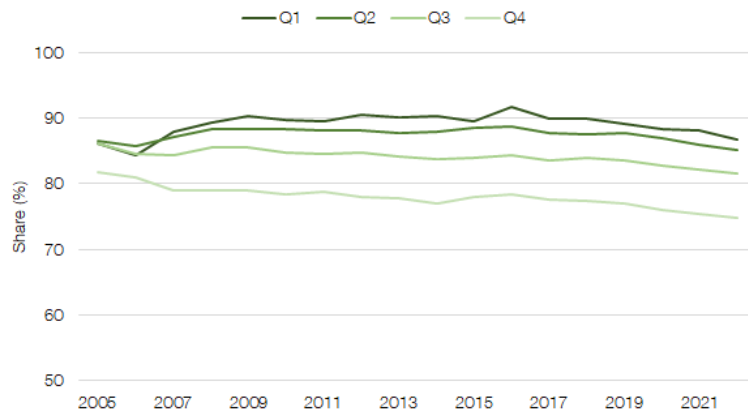
Panel A: Benefits / (Gross Income + Employee SSCs)



Panel B: Direct taxes / (Gross Income + Employee SSCs)



Panel C: Disposable Income / (Gross Income + Employee SSCs)



Source: Spanish Life Conditions Survey (INE) 2006-2023.

Notes: Sample is individuals aged 25-60. Individuals with zero or negative earnings are excluded. Benefits include unemployment, old-age, survivor, sickness and disability benefits, education, family, children and housing allowances, and other social exclusion benefits not elsewhere classified.