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# Equally poorer: inequality and the Greek debt crisis

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[Correction added on 3 December 2024, after first online publication: The copyright line was changed.]

## Abstract

In this paper, we discuss the evolution of inequality in Greece from 2004 to 2021 in light of the Greek debt crisis that led to a sharp drop in gross domestic product per capita between 2008 and 2013. While aggregate measures of income inequality, such as the Gini coefficient, suggest a marginal improvement, domestic perceptions of social fairness remain bleak. To delve deeper into this paradox, we explore additional aggregate and distributional aspects of Greece's social landscape during this period. Our analysis reveals several contributing factors: a compression of earnings, benefits and pensions; a sharp increase in social exclusion; and high inequality in access to basic public services and housing. These factors go beyond what headline inequality indices indicate, illustrating how the sovereign debt crisis and subsequent austerity measures have affected individuals differently based on their socio-economic background, while also reducing overall welfare across the Greek population. Moreover, chronic institutional inefficiencies and widening disparities in access to services and housing significantly influence perceptions of inequality and contribute negatively to the country's social cohesion.

**KEYWORDS**
inequality, labour market, redistribution

**JEL CLASSIFICATION**
D31, H20, H31, I24

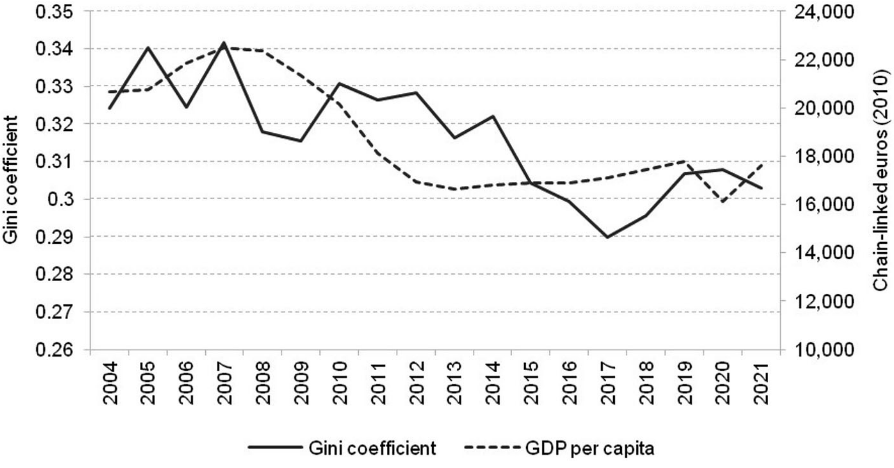


**FIGURE 1** Gini inequality index and GDP per capita. *Note*: The Gini inequality index is calculated based on household income for households, net of taxes and benefits but before housing costs have been deducted. All incomes have been equivalised using the modified OECD equivalence scale. *Source*: Authors' calculations using the EU-SILC and Eurostat data.

# 1 | INTRODUCTION

Over the 20-year period from 2004 to 2021, income inequality in Greece remained relatively stagnant, with a slight decline observed after 2014. During this time, Greece experienced a severe economic shock due to the sovereign debt crisis, which led to a significant downturn in the domestic economy, as reflected by the decline in gross domestic product (GDP) per capita from 22,370 in 2008 to 16,630 in 2013 (in 2010 chain-linked euros) or a drop of 26 per cent in five years (see Figure 1). Over the same period, the unemployment rate soared, peaking at 28 per cent in the summer of 2013.

This situation raises a critical question. How did income inequality remain relatively stable during the crisis and even declined after the end of the recession, despite the profound economic downturn and the implementation of strict austerity measures aimed at fiscal consolidation, which significantly affected incomes throughout the past 15 years?

In general, economic crises may not always lead to an increase in inequality and poverty indicators. This can be for many reasons, such as the varied evolution of the incomes of those affected (Atkinson, 2009; Nolan, 2009), the progressivity of the measures taken, and the ability of the tax–benefit system to absorb the shocks created (Rawdanowicz, Wurzel and Christensen, 2013). Nevertheless, the largely unprecedented drop in incomes for a developed economy in time of peace and the implementation of extensive fiscal consolidation and reforms make the Greek case instructive to look into in greater detail.

The literature discussing income inequality in Greece over a longer period has been limited, partly because of limited data availability prior to 2004. However, several studies do focus on the distributional effects of the crisis and the austerity measures adopted during the economic adjustment period.

For instance, Mitrakos (2014) utilises data from the Greek Household Budget Surveys (HBS) and finds that measures of inequality and relative poverty did not experience a significant increase during the initial years of the crisis. According to Matsaganis and Leventi (2014), the initial slight bump in inequality in the beginning of the debt crisis (2010–12, compared with 2009) was the result of the recession of the Greek economy rather than the impact of austerity measures, which was moderate. This can be explained by the progressive effect of some austerity measures, even though at the same time some measures were regressive (e.g. VAT hikes; Kotsios, 2022).

The combination of high unemployment rates and income reductions, however, led to a sharp rise in absolute poverty indices, a conclusion supported by Mitrakos (2014) and Petrakos et al. (2023). Mitrakos also highlights the limited redistributive effect of social benefits in Greece. Additionally,

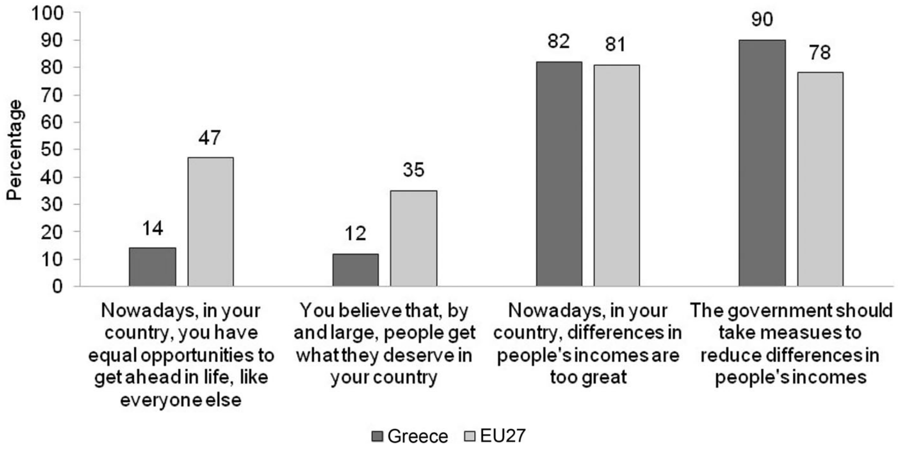


**FIGURE 2** Perceptions on inequality: percentage of individuals who totally 'agree' with the statement, 2022. *Source*: European Commission (2022).

Karavelli and Tsionas (2012) find that restrictive macro-economic policies exacerbated regional disparities in Greece, and European Union (EU) policies were insufficient in reversing these trends. Overall, a major research challenge highlighted in the literature on Greece is the high volatility of this period, characterised by simultaneous (and often radical) reforms in many policy areas, which implies that a more granular investigation beyond aggregate inequality measures is necessary.

The socio-economic aftermath of the crisis is still widely felt across the Greek population, despite the relatively low current level of the Gini index, compared with the period before the sovereign debt crisis. As of 2023, Greece has the second highest unemployment rate, the fourth highest poverty and social exclusion rate, and the third highest child poverty and social exclusion rate amongst EU countries. More recently, the COVID-19 pandemic and the ongoing energy and high inflation crisis have posed new strains and challenges for Greek households, as well as fiscal policy.

The lingering economic effects of the sovereign debt crisis and the pandemic, combined with the unresolved structural problems, probably explain why Greek households hold a more pessimistic view on equal opportunities and meritocracy and believe that income inequality is a significant economic and social issue that should be addressed, to a larger degree than their EU peers (Figure 2), despite the decline in aggregate income inequality.

In this paper, we aim to go beyond aggregate inequality measures and highlight the varied effects that the debt crisis, the austerity measures and various reforms have had on granular aspects of inequality. In particular, using data from ELSTAT's Labour Force Survey (LFS) and the European Union Statistics on Income and Living Conditions (EU-SILC; Institute for Social and Economic Research, 2022) from 2004 to 2021, we explore changes in wages, pensions, benefits and taxes across the income distribution for different demographic groups. We also highlight focused areas, such as health care, education and housing, where people face unequal opportunities and access barriers based on their socio-economic status.

Among the key findings of our paper is that the slight fluctuations and then marginal reduction in aggregate measures of income inequality, despite the deep economic crisis, can be explained with levelling-down effects and some progressive elements of the instituted cuts and reforms. Wage inequality overall narrowed between high and low earners but widened between medium and low earners. In addition, the gender wage gap decreased from 22 per cent in 2008 to 10.4 per cent in 2018, partly due to the introduction of standardised pay scales in the public sector, which is quite large in Greece and employs a large share of highly educated women. Nevertheless, social exclusion and more granular aspects of inequality deteriorated over the same period. The earnings of low-wage and younger individuals became squeezed disproportionately by the hike in unemployment and the cut in the minimum wage. The progressivity of the tax system, in terms of its overall burden per income quartile, deteriorated, as measures were taken to increase public revenues while circumventing high tax evasion and the narrow tax base. Furthermore, we find that the reduction in public spending has deteriorated access to health care, especially for poorer households, while the education system does not seem able to provide sufficient opportunities for social mobility. Lastly, the declining incomes, along with increasing property prices and housing costs, hinder housing affordability, especially for tenants who do not hedge against rental price fluctuations via homeownership.

The paper is structured into seven sections. Following this introduction, Section 2 provides a brief but concise discussion of the Greek sovereign debt crisis, focusing on fiscal and structural measures introduced during the consolidation period that affected disposable income and its distribution. This discussion takes place within the backdrop of institutional characteristics and shortcomings of key policy sectors such as the tax system, the welfare system and the labour market. After establishing this context, Section 3 disentangles inequality trends with respect to income from various sources and takes the first steps to bridging the gap between headline income inequality indices and perceptions about inequality and the social situation in Greece in the broader sense. Sections 4 and 5 broaden the scope to examine inequalities in access to essential public services such as health care and education. In Section 6, we discuss the housing situation in Greece and its implications for inequality and poverty. Finally, in Section 7, we provide a conclusion based on the narrative and findings presented throughout the paper.

## 2 | INSTITUTIONAL CONTEXT

When the global financial crisis began in 2007, Greece was already suffering from long-standing structural imbalances. High and growing current account deficits were eroding the economy's competitiveness. In relation to inequality, these structural imbalances included a large shadow economy and extensive tax evasion, a high tax wedge on labour, substantially better terms of employment in the public versus private sector, an excessively generous, fragmented and inequal pension system, a domestic social protection system prioritising pensions at the expense of other policy areas in the broader social welfare sphere, and poorly functioning public services.

The announcement of a surprisingly high fiscal deficit in late 2009 triggered a collapse in the confidence that Greece could service its debt obligations, marking the start of the Greek sovereign debt crisis. In the financial sector, following the drastic drop in economic activity and household income during the crisis, the share of non-performing loans rose dramatically. Banks faced strong pressures to clean up their balance sheets, including through tightening lending criteria and applying stricter liquidation policies. In parallel, prolonged credit contraction was recorded towards both businesses and households, which lasted for more than one full decade. Real estate prices dropped significantly during the same period, inducing negative wealth effects to households.

Three successive Economic Adjustment Programmes (EAPs) were implemented with the support of European institutions and the International Monetary Fund, over the period 2010–18. The EAPs not only included austerity measures to reduce the excessively high fiscal deficit, but also introduced numerous reforms aimed at correcting the long-standing structural imbalances, improving the functioning of the public sector and strengthening the economy's competitiveness. These reforms targeted different sectors of the economy, such as the labour market, the public sector, the tax system, the pension system and the social benefits system.

In the labour market, in 2012 the statutory minimum wage dropped by 22 per cent for those aged 25 and above, and by 32 per cent for younger people, while the flat unemployment insurance benefit was cut from €454 per month in 2010–11 to €360 in 2012. Additionally, an annual lump-sum contribution was imposed on the self-employed, amounting to €300 in 2010, €500 in 2011 and €650 in 2012. Various other changes were introduced through labour laws in 2012, towards decentralising collective bargaining, reducing labour costs and increasing labour market flexibility *inter alia* through making it easier to hire and fire workers.

In the public sector, nominal compensation of employees was significantly cut, *inter alia* through a replacement of the 13th and 14th monthly payments by smaller lump-sum vacation allowances in 2010 and their total abolition after 2012. Various special allowances were also cut on average by 20 per cent in 2010, while some reforms aimed at improving the efficiency of the public administration such as efforts to improve tax collection and reduce tax evasion.

Even before the fiscal adjustment programmes, some taxes were increased, in order to reduce the fiscal deficit. The standard rate of VAT was raised from 19 per cent to 23 per cent in 2010, also affecting the reduced rates. In direct taxes, there were several changes after 2010, i.e. changes of income tax rates, changes of tax-free conditionality, introduction of emergency taxes and a new tax on properties (ENFIA), initially as an emergency tax in 2011. The introduction of the ENFIA has been a controversial issue; while proponents argue that it is important in terms of fiscal revenues (mainly due to its high collectability), the tax has been found to have an overall regressive distributional effect as, *ceteris paribus*, inequality and relative poverty indicators rose after the introduction of the tax (Andriopoulou, Karakitsios and Tsakloglou, 2018).

In the pension system, nominal pensions were cut, *inter alia* through the introduction of a pensioners' solidarity contribution, a replacement of 13th and 14th monthly pensions by smaller lump-sum vacation allowances in 2010, and their total abolition after 2012. Taxes were levied on main and supplementary pensions at rates varying from 3 per cent to 40 per cent. Additional social insurance contributions for unemployment protection were introduced in 2011. The numerous social security funds that were offering different terms and conditions to its members, despite substantial financing from the state budget, were consolidated in a single institution, while the retirement age was raised and the conditions for early retirement were made stricter. The latter came as a response to high shares of younger pensioners that were observed in Greece, *inter alia* affected by generous and fragmented early retirement rules, which prevailed until the crisis.

To alleviate the negative social impact from the crisis and to remedy the weak social safety net, some countercyclical support measures were adopted during the crisis period, such as a heating allowance, a housing allowance, a lump-sum amount for assistance to poor households in mountainous and disadvantaged areas, as well as to low-income families, and the Social Solidarity Allowance for Uninsured Elderly citizens. Furthermore, a Guaranteed Minimum Income (GMI) programme was launched for low-income households, offering financial support, access to social services and reintegration into the labour market.

Many of the above measures had progressive elements. Ceilings were introduced on pensions and public-sector wages, while below certain thresholds the successive cuts were less pronounced. 'Solidarity contributions' were introduced as extraordinary and temporary taxes, hitting those on higher incomes harder. These progressive elements may explain to some extent the fact that inequality indicators deteriorated only slightly initially and then fell to levels lower than those observed prior to the debt crisis.

Despite the implementation of the three EAPs, structural issues continue to affect living conditions in Greece. The tax system relies disproportionately on taxes on consumption, which are regressive, while the progressive taxes on income and social contributions account for a smaller share of total tax revenues. The tax system applies various tax exemptions and discounts for low-income or unemployed individuals and households, resulting in a rather narrow income tax base. Greece has an overall high tax wedge according to available international comparative statistics, resulting in low competitiveness of the Greek economy, tax and social security contribution evasion, accumulation of arrears as well as high-skilled human-capital flight (emigration), amongst other important issues.

Greece also has the highest share of self-employed in the labour force in the EU, at around 26 per cent, compared to an EU average of 13 per cent, which raises challenges for a fair share of the tax burden. The national economic activity remains skewed towards service sectors and activities (such as tourism, catering and small retail outlets) where concealing incomes is relatively easier. Despite the recorded progress over the past decade, the estimated VAT gap in Greece (17.8 per cent) in 2021 was the third highest in the EU (EU average at 5.3 per cent; European Commission, 2023).

The high rates of tax evasion reduce the effectiveness of means-tested redistributive and social policy. It is also likely associated with low expectations with respect to the level of social welfare benefits, low quality of public services and overall public infrastructure, and a belief that the social welfare system does not target those most in need. This is leading to a vicious cycle of low trust and abuse of Greece's tax and welfare benefit systems.

Furthermore, the social spending mix in Greece remains highly unbalanced, with pension spending absorbing approximately 80 per cent of the overall social protection budget as opposed to 60 per cent in EU27 countries. Other areas of social spending such as social welfare, health care, family policies and education remain underfinanced and suffer from various organisational and targeting inefficiencies.

Public services such as education, childcare, long-term care and health care continue to face underfunding, access problems, high out-of-pocket payments and various other distortions (Panayotopoulos, 2000; Maloutas, 2015; Karanikolos and Kentikelenis, 2016; Stathopoulou et al., 2018; IOBE, 2019; Danchev et al., 2023; Yfantopoulos, Chantzaras and Yfantopoulos, 2023). The country's dire demographic projections and poor performance in gender equality rankings[1] point to the pressing need to rebalance the social spending mix so as to shield the country from the imminent economic and epidemiological risks associated with demographic ageing (IOBE, 2022).

## 3 | INCOME AND WAGE INEQUALITY

In this section we examine changes to disaggregated indicators of income and wage inequality in greater detail. The aim is to explore the nuanced effects that the debt crisis and the EAP austerity measures and reforms had on aspects of inequality.

Income inequality measures, including the Gini coefficient of disposable household income, the 90:10 ratio and the top 1 per cent share of net household income, show only minimal fluctuations since 2004 (Figure 3). The overarching trend may even suggest a slight improvement in income equality over this period. This is particularly intriguing given that this period covers a relatively prosperous phase from 2004 to 2008, a sharp recession until 2013, a stagnation until 2016, a gradual recovery until 2019 and the COVID-19 pandemic of 2020–21.

It is instructive to contrast the trends in inequality indicators with that of the risk of poverty and social exclusion, which experienced a sharp rise after 2010, remained elevated until 2017, and then subsided gradually to pre-crisis levels. The path of the poverty and social exclusion rate is better aligned with expectations on the social impact of the crisis. This can be explained by elements of the indicators, such as access to goods and services, unrelated to the relative position of households on the income distribution, which deteriorated during the crisis. The contrast also indicates how levelling-down effects may underpin such trends, with the income distribution being suppressed to lower income levels, which results in a higher share of the population not being able to access important goods and services.

The increase in poverty and social exclusion has in fact been distributed quite unevenly across subcategories of the Greek population after 2010. A prominent example is the difference between younger age groups versus the retired population (Figure 4). Despite the extensive and successive pension cuts implemented after 2012, the elderly in Greece were largely protected from poverty risks during the crisis, as they were not subjected to the large employment shock. Conversely, young individuals up to 25 years of age were faced with soaring unemployment rates during the crisis and continue to exhibit the highest at-poverty and social exclusion risk to date. Relevant EU-SILC statistics also reveal that households with retired members are on average better-off than households with working-age members, and that larger households (especially those with more children) are particularly vulnerable to the risk of poverty and social exclusion.

[1] Greece has one of the most rapidly ageing populations in Europe and records the highest gender employment gap amongst EU countries in addition to a very low performance in European gender equality indicators (such as the EIGE Gender Equality Index).

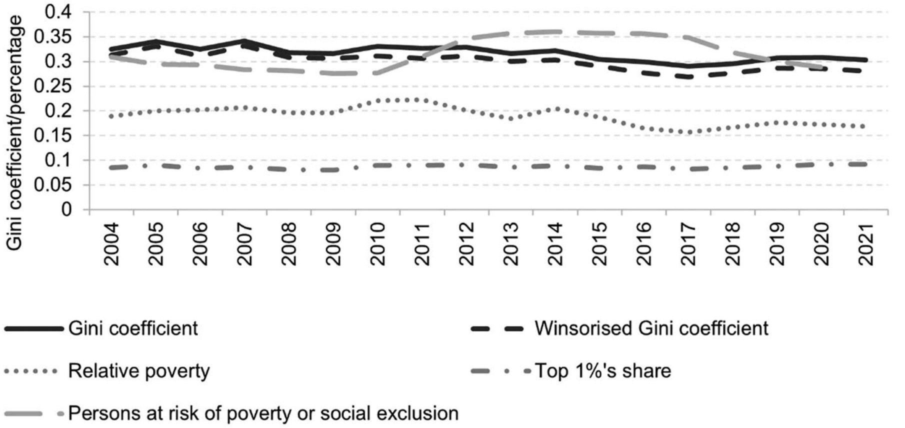


**FIGURE 3** Gini coefficient (and Gini coefficient winsorised at the 1st and 99th percentiles), relative poverty, top 1 per cent share of net household income for all households, and risk of poverty or social exclusion. *Note*: The inequality measures are based on incomes measured net of taxes and benefits but before housing costs have been deducted. All incomes have been equivalised using the modified OECD equivalence scale. The relative poverty rate is defined as the proportion of people living in households with less than 60 per cent of contemporaneous median income before the deduction of housing costs. The risk of poverty and social exclusion rate is based on the EU 2020 strategy definition. *Source*: Authors' calculations using EU-SILC microdata and EUROSTAT (EU-SILC).

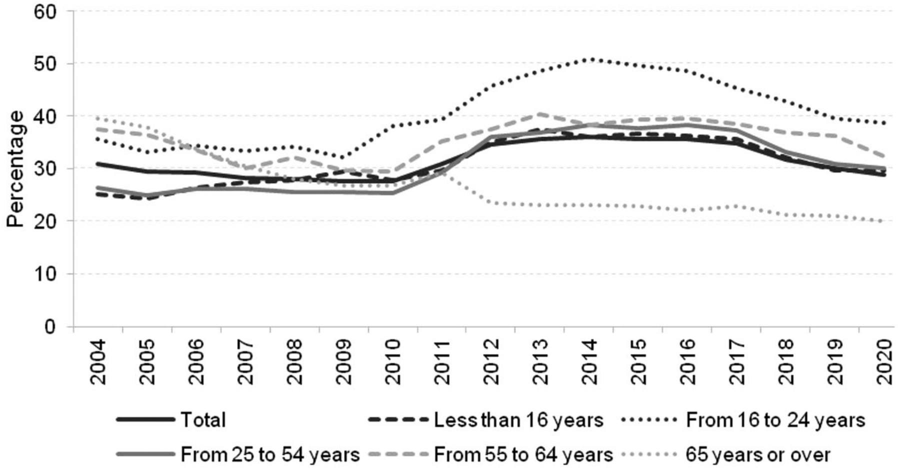


**FIGURE 4** People at risk of poverty or social exclusion by age. *Note*: People at risk of poverty or social exclusion following the Eurostat 2020 strategy definition. *Source*: EUROSTAT.

To better understand these trends, we look into the distribution of wages, benefits and pensions in different snapshots before and after the sovereign debt crisis. During and after the crisis, employee wages shifted towards the lower end of the distribution, with higher wages becoming less common (Figure 5). Earnings of self-employed individuals also moved closer to the lower end of the distribution, reflecting decreased revenues and, possibly, also a reluctancy to declare incomes in the tax administration and surveys following reforms leading to an increase in their total tax wedge.

During the same period, significant and simultaneous reforms in the social protection system led to substantial changes to the welfare and pension benefits. The pension reductions were particularly pronounced for those at the higher end of the pension income distribution (Figure 6, right panel). In contrast to the substantial increase of the density at the low end of the wage distribution, the

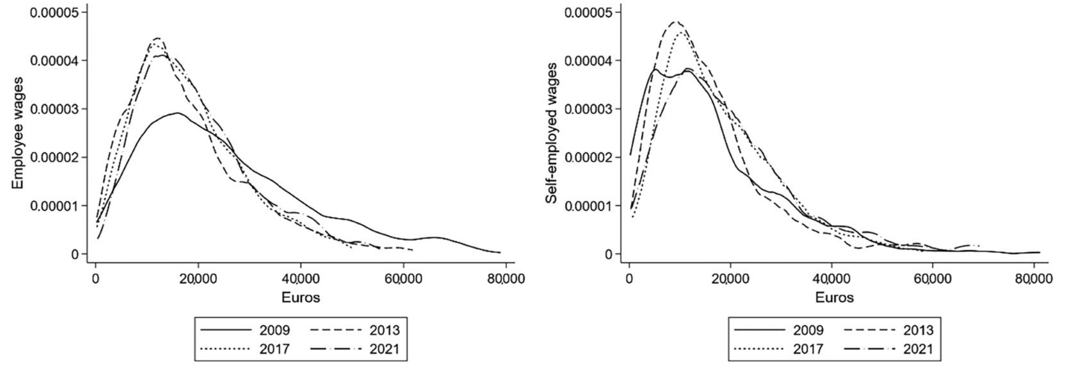


**FIGURE 5** Distribution of wages: employed and self-employed people. *Source*: Authors' calculations (kernel probability density functions) using EU-SILC microdata.

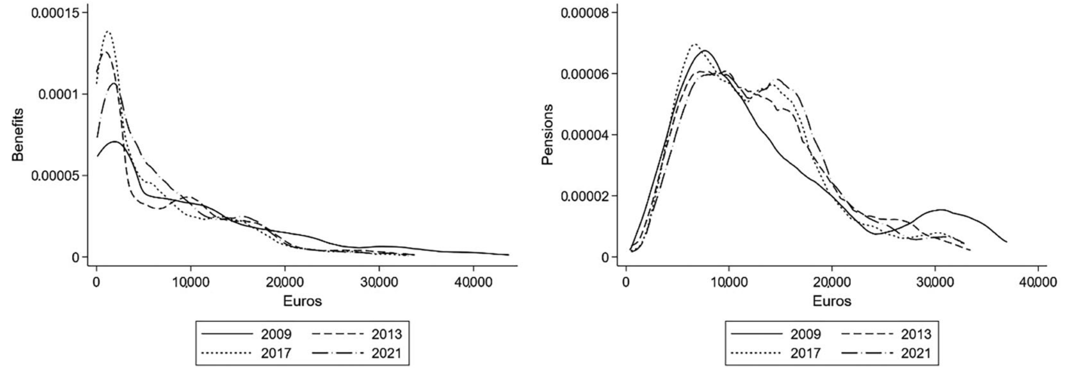


**FIGURE 6** Distribution of benefits (left panel) and pensions (right panel). *Source*: Authors' calculations (kernel probability density functions) using EU-SILC microdata.

corresponding section of the curve for pensions changed remarkably little over the same period, illustrating the protection on low-level pensions that was maintained during this period.

Meanwhile, these cuts also contributed to narrowing the gender pension gap, which decreased from 31.1 per cent in 2011 to 23.7 per cent in 2023. This shift is largely attributed to the fact that before the crisis, recipients of higher pensions were, predominantly, men.

It is instructive to compare the distribution shifts in pensions and benefits. Both experienced substantial cuts at the high end of the curve, but the change in density at the low end was very different, with density increasing sharply for low-level benefits. As the pool of benefits shifted to much smaller amounts, this may imply a shift to a more targeted, means-tested benefit system.

To explore this possibility, we can look at benefits as a proportion of gross income by net household income quartile (Figure 7). In the early years of the crisis (2011–13), the relative share of income from benefits to overall household income increased for the middle-income categories, exceeding the share for the bottom quartile, which shows the ineffective targeting of benefits during this period. The targeting improved substantially from 2015, as the relative share of income from benefits reached 25 per cent and 18 per cent of gross income for the bottom and second quartiles, respectively. The difference between the second and third quartile diminished and disappeared subsequently, which implies that there may still be room for improvement, yet the share for the bottom quartile has remained by far the highest, even in 2020 and 2021 when broad support measures were implemented to support incomes from the impact of the pandemic.

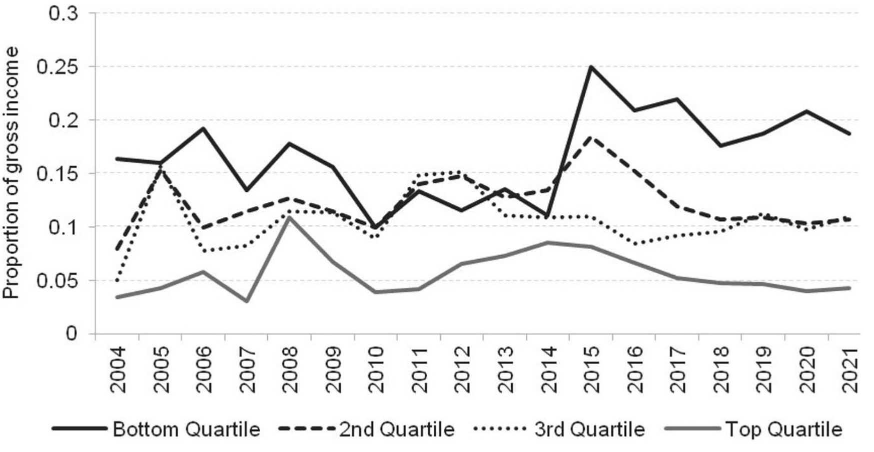


**FIGURE 7** Benefits as a proportion of gross income, by net household income quartile. *Note*: Benefits cover pensions and means-tested and non-means tested benefits. *Source*: EU-SILC data.

Another major policy change that is worth exploring in further detail concerns the minimum wage and other changes to labour market regulations. In 2012, the minimum wage was cut by 22 per cent and 32 per cent for those aged above and below 25, respectively, aiming to lower labour costs and prevent the low skilled from being priced out of the formal labour market, while a new minimum wage setting mechanism was introduced, based on tri-partite consultation. The levels of collective bargaining declined drastically, from 38 per cent in 1978 to below 20 per cent in 2016. The labour market reforms suppressed wages, but also may have contributed to the slowdown and then reduction of the sharply growing unemployment rate that peaked in the summer of 2013 and then gradually declined.

The bite of the minimum wage was growing sharply before the reforms, as the share of people earning below 120 per cent of the minimum wage increased to 25 per cent in 2011, from 13 per cent in 2008. The indicator fell significantly with the drop in the minimum wage in the summer of 2012, stabilised at 22 per cent until 2017 and rose again in 2019 with mounting pressure to raise the minimum wage following the end of the EAPs and then with the outbreak of the pandemic (Vettas et al., 2023).

With respect to disposable income and the impact of the tax system on inequality, we can observe that the progressivity of the tax system deteriorated sharply after 2011 (Figure 8). Average tax rates remained rather stable for the top quartile during the crisis, while growing for the other three income categories, with the increase being particularly sharp for the lowest category. As a result, the average tax rate of the bottom quartile exceeded the rates of the other three income categories between 2012 and 2017. This change can be largely attributed to the introduction of tax measures not directly linked to the taxpayers' income level (such as an annual lump-sum tax on the self-employed and a new broad-based property tax), in an effort to overcome the effects of extensive tax evasion and the narrow tax base. After 2017, the relative share of tax payments increased for the top quartile and exceeded that recorded for the bottom quartile, which declined further. However, tax payments for the bottom quartile continue to be disproportionate when compared with the middle-income categories.

Another interesting observation concerns the difference in disposable income between working and non-working households, which appears to be small (Vettas et al., 2023). The gap narrowed during the crisis and up until 2015 and then began widening somewhat from 2016. One factor that may help explain this finding is the high tax wedge in Greece (high income taxation and social security contributions). Another factor is the relatively low level of wages compared with other sources of income. Both of these factors (high tax wedge and low pay) are believed to significantly reduce incentives to participate in the official labour market in Greece. A third possible factor is the high level of undeclared and underdeclared labour in Greece.

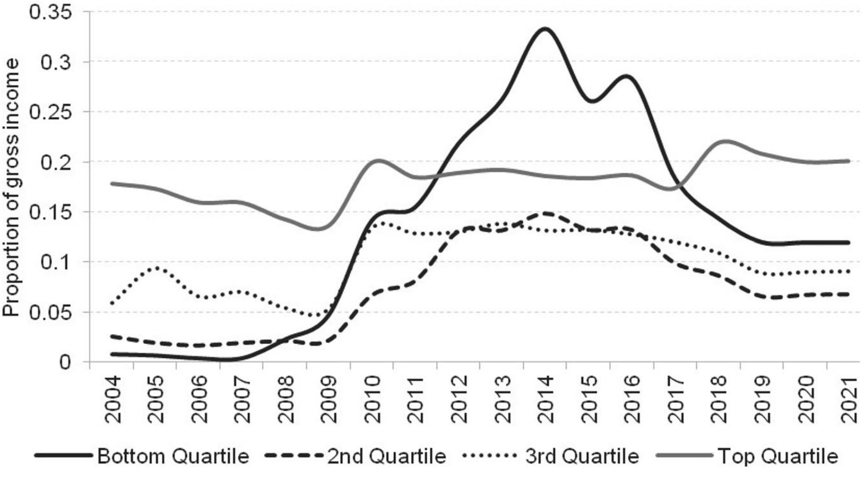


**FIGURE 8** Tax payments as a proportion of gross income, by net household income quartile. *Note*: Benefits cover pensions and means-tested and non-means tested benefits. Gross income includes employee contributions. *Source*: EU-SILC data.

Observable differences also occur when comparing wages across gender and educational attainment. More specifically, men are on average higher earners than women, a spread that marginally decreases during the crisis period. On average, median real earnings increased from 2004 until 2009–10, by 31 per cent for women and by 28 per cent for men. Real earnings contracted by 18 per cent on average for men and women during the economic crisis (2010–15), with a gradual recovery in subsequent years, but they still remain below their pre-crisis levels (Vettas et al., 2023).

As a result, gender-specific wage inequality reduced during the period of economic squeeze. According to Eurostat data, the unadjusted wage gap in Greece decreased from 22 per cent in 2008 to 12.5 in 2014 and 10.4 per cent in 2018. Overall, the gender wage gap in Greece appears lower compared to the EU27 average in the years for which data are available for Greece. A possible explanation is the large public sector employment in which highly educated women dominate and where pay scales are fixed and depend on years of seniority and educational attainment. In Greece, only 43 per cent of the population considered in 2017 that women are paid less than men, compared to 69 per cent in the EU and 94 per cent in Sweden (European Commission, 2017).

Lastly, educational attainment is also a major factor that explains wage differences in Greece. It is interesting to note that those with higher levels still experience lower hourly wages compared with the mid-2000s. As these individuals typically earn higher wages, this suggests an overall reduction in earnings inequality after the crisis. Factors contributing to this include higher wage decreases among more skilled and high-income workers, including those in the public sector. Our findings also indicate that while the wage gap between high and low earners has narrowed, the gap between medium earners and low earners has widened (Vettas et al., 2023). Additionally, the disproportionate impact on higher-income workers, who are predominantly men, has also contributed to a reduction in the gender wage gap since 2012. These dynamics were exacerbated by the effect of the economic crisis on employment across all education groups and were a highly contributing factor for the 'brain drain', as a very high number of educated young people emigrated from the country. Lastly, the COVID-19 pandemic had a more pronounced impact on less-educated individuals, albeit temporarily.

## 4 | INEQUALITIES IN ACCESS TO HEALTH CARE, LONG-TERM CARE AND CHILDCARE

In the previous sections, we highlighted how the levelling-down effects with respect to various sources of income following the sovereign debt crisis, high levels of poverty and social exclusion, and the

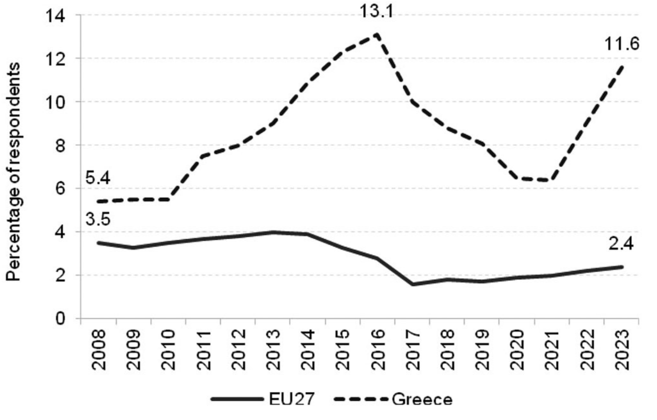


**FIGURE 9** Self-reported unmet needs for health care (too expensive, too far to travel or waiting list), 2008–23.
*Source*: Eurostat (EU-SILC).

large shadow economy can potentially explain the divergence of trends in aggregate inequality indices and the public perception of income fairness in Greece. To further reconcile the relatively stagnant and even falling trend of inequality with the widespread perception of high social unfairness in the country, we broaden our focus beyond earnings and income to examine other areas where high socio-economic inequality is evident.

These areas are characterised by low public spending compared with peers, organisational inefficiencies and other significant distortions leading to barriers in equitable access for the population. Among these areas, those that impede access to essential goods and services with a fundamental value for humans are particularly significant. For instance, there is consensus that health-related inequalities are deeply inequitable. They are often seen as a dual injustice, given that health is considered a special good with both an instrumental and an intrinsic value for all individuals (Sen, 1999).

In particular, Greece faces exceptionally high levels of self-reported unmet health-care needs. In 2023, 11.6 per cent of the Greek population reported being unable to access medical services due to cost, distance or waiting lists, in contrast to 2.4 per cent of EU citizens (Figure 9). The primary reason cited was cost, with 9.4 per cent of the population stating that they could not afford medical care. Unmet health-care needs spiked during the crisis period, peaking in 2016 when over 13 per cent of the population reported being unable to access the health-care system. After a decline from 2016 to 2020, these needs have begun to rise sharply once again.

Unmet needs for health care are high across income quintiles and individuals report much higher problems in accessing medical care compared with their counterparts in other EU countries (Figure 10). For instance, 3.4 per cent of individuals in the highest income quintile in Greece reported unmet medical needs, which is only slightly lower than respondents in the bottom quintile across the EU (3.8 per cent). Despite this, access barriers are distributed very unevenly in Greece, more so than in the rest of Europe, as indicated by the steepness of the gradient between income quintiles.

Another relevant example is access to dental care, with 11.7 per cent of Greek citizens reporting that dental care was too expensive for them in 2023, a notable contrast to the EU average of 2.9 per cent. Unmet need for dental examinations was 5.7 per cent for the highest income quintile, while it surged to 19.5 per cent for the lowest income quintile.

There are various reasons why accessing the health-care system in Greece can be a challenge for citizens, including for those of higher socio-economic status. Some of these reasons include the fact that the system relies heavily on social insurance, and therefore labour market status. High unemployment rates are understood to have left millions of citizens without health insurance coverage during the peak of the recession – until late 2015 when some measures were adopted to enable access to the system for the uninsured population. Income reductions have also played an important role.

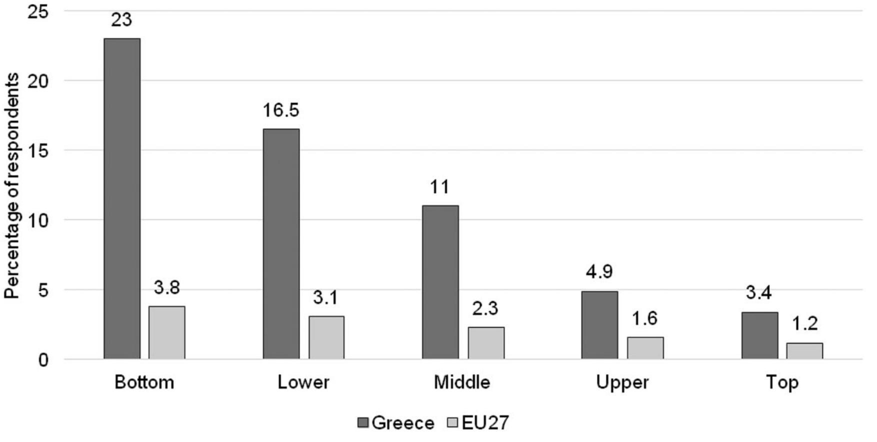


**FIGURE 10** Unmet needs for health care (too expensive, too far to travel or waiting list), 2008–23. *Source*: Eurostat (EU-SILC).

Greece's health-care system is overly centred on hospitals, with significant gaps in the public provision of primary health care, and a large proportion of specialist doctors operate private practices without referral requirements. Out-of-pocket payments (OOPPs) therefore constitute a major source of health-care financing, accounting for over 33 per cent of total health expenditure in 2022, compared to 14.5 per cent in the EU. In this institutional setting, income reductions after the crisis have had an impact on the ability of households to access medical care. Leaving crisis periods aside, the reliance on OOPPs poses significant financial risks to households in a broader sense. Households are inadequately protected against large or unexpected medical expenses with total welfare risks being even higher for poorer households whose members forego treatment altogether due to cost considerations (O'Donnell et al., 2008).

Greece also faces significant challenges in providing access to childcare and long-term care compared with its European peers. Approximately 17 per cent of childcare needs are unmet in Greece, with 62 per cent of households citing lack of availability and affordability of public services as the main reasons (Privalko et al., 2019). Half of children aged 0–3 do not receive formal childcare, with even lower enrolment rates for those aged 0–2 (Eurostat; Privalko et al., 2019). In 2021, Greece allocated 0.1 per cent of GDP to long-term care, the lowest among 27 EU countries (Eurostat). This is very concerning given Greece's rapidly ageing population, and it places a significant financial, physical and social burden on households.

The severity of gaps in provision and financing is evident as 92 per cent of Greeks express a desire for increased government spending on long-term care, the highest percentage among EU countries, even if it means higher taxes and social security contributions (European Commission, 2022). A study has estimated the unmet need for home care at 56 per cent in Greece, the highest among the 11 European countries studied (Privalko et al., 2019).

Unmet needs in childcare and long-term care have diverse consequences in terms of disposable household income and various types of inequalities, with the effects being particularly important in terms of gender equality. Reduced female labour market participation, earnings gaps across the life course, the pension gap, and mental and physical health consequences for informal carers are some of the potential direct and indirect consequences of public financing gaps and unmet needs in these areas.

## 5 | INEQUALITIES IN ACCESS TO EDUCATION

Educational disparities represent another important aspect of inequality, embodying not only unequal education outcomes but unequal opportunities in life. The Greek educational system offers free-of-charge access to publicly provided education up to and including the first degree of tertiary education.[2] As a result, secondary and tertiary education have expanded considerably since the 1980s and the level of education attainment has improved over the past four decades, especially among women.

However, overall intergenerational mobility in education remains low compared with other OECD countries. Data indicate that disadvantaged students face greater challenges in improving their social standing within their generation, despite achieving absolute educational gains compared with their parents' achievements (Danchev et al., 2023). Barriers to equitable access to educational opportunities include the disproportionate enrolment of individuals from the upper and upper-middle classes in highly sought-after faculties such as law, medicine and engineering (Maloutas, 2015; IOBE, 2019; Panayotopoulos, 2000).

Another significant distortion is the high expenditure on private tuition fees by households. It is estimated that households with children in lower and upper secondary education spent over 900 million euros annually (0.5 per cent of GDP) on private lessons during the crisis in 2016, excluding private school tuition fees (IOBE, 2019).

Two primary factors contribute to the high payments for private education services. First, families incur substantial costs for afternoon tutorials that prepare students for the national exams in their final year of high school, which determine access to tertiary education. Second, the perceived quality of education in public schools is often regarded as low, prompting the necessity for private afternoon lessons to help students cope with their school obligations and enrolment in private-sector schools. Additionally, private household expenditure on foreign language lessons is also prevalent and substantial among households with children in Greece.

The shortcomings of the country's educational system are evident in the results of the OECD's Programme for International Student Assessment (PISA) tests, where Greek students have consistently underperformed compared with their international peers for over two decades. This performance gap widened during the pandemic, with Greek students' scores in mathematics, reading and science declining more significantly compared to the OECD average during the last wave of assessments.

An in-depth analysis of the PISA microdata (Danchev et al., 2023) has identified several forms of inequality in both student performance and aspirations, based on their family's socio-economic status measured by the educational, social and cultural status (ESCS) index (Figure 11). Significant disparities were found concerning students' immigration status, which showed a negative association with test scores, and private school attendance, which showed a positive association. The study also highlighted gender differences: females tend to achieve higher scores in reading and aspire more to pursue tertiary education, but they score lower in mathematics. This reveals that the sectoral segregation in education and the labour market, and the resulting gender earnings gap, starts during schooling. In 2019, 71 per cent of high school students in the humanities stream were female, compared to only 43 per cent in science and 37 per cent in technology streams (ELSTAT).

## 6 | INEQUALITY IN ACCESS TO AFFORDABLE HOUSING

The lack of access to affordable housing may also be a significant factor contributing to the adverse perceptions of equality in Greece. According to Nikolaidis (2023), real estate represents about 70 per cent of domestic households' assets. Therefore, the increasing real estate prices alleviate budgetary stress for homeowners, but tenants are especially constrained, as the poorest 20 per cent of Greek households pay 43 per cent (median) of their income on rent. Furthermore, important implications for household affordability can arise for households with different demographic and socio-economic characteristics. In particular, low-income households are more likely to face housing affordability challenges (Lens, 2018), along with younger households (Linneman and Megbolugbe,

[2] Tuition fees often (but not always) apply for postgraduate studies.

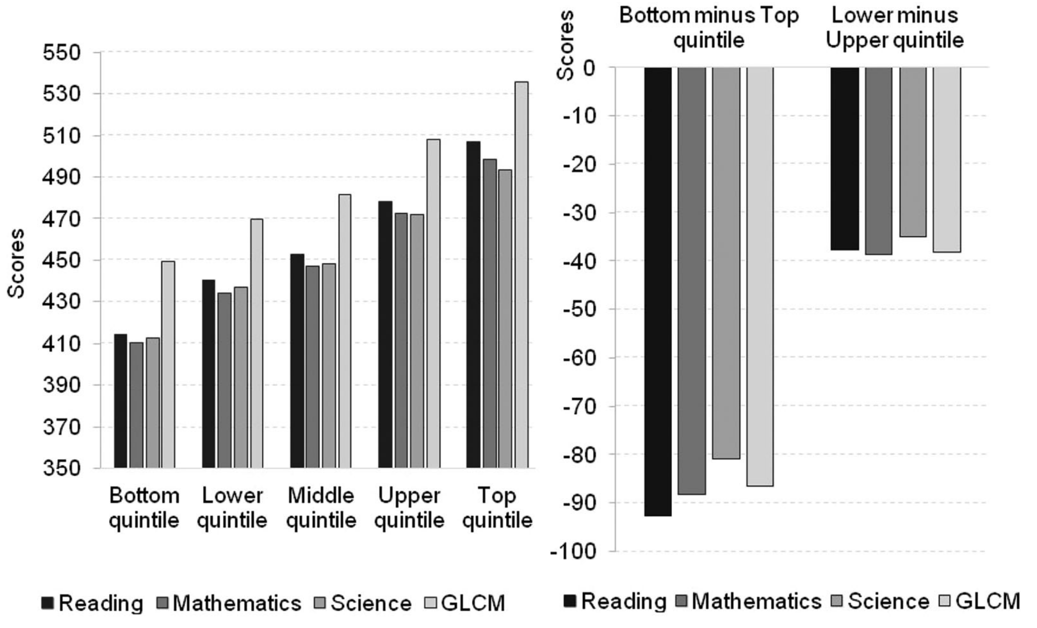


**FIGURE 11** PISA scores per subject, by ESCS quintile, Greece 2018: mean scores (left panel) and mean scores' gap (right panel). *Note*: GLCM (Global Competence) measures students' capacity in understanding and acting on global and intercultural issues. *Source*: PISA micro data set; authors' calculations.

1992). Therefore, an analysis of the profile of households that face the largest budget constraints due to the lack of affordable housing is essential, as it can direct future research and policymaking.

Moreover, as domestic residential real estate is characterised by deteriorating homeownership rates, although high compared with other European countries (69.6 per cent in 2023, from 76.7 per cent in 2007), all households face very high housing costs in relation to their income (Eurostat, 2023). These housing costs incorporate rental and mortgage payments, as well as energy-related costs, with 32.4 per cent of Greek households in urban areas and 22 per cent in rural areas spending at least 40 per cent of their disposable income towards covering housing costs in 2021 (the highest percentages in the EU).

Accelerating housing costs (either from increasing sale or rental prices, energy bills or mortgage payments) have been found to disproportionately affect poorer households, which ultimately enhances overall inequality (Albouy, Ehrlich and Liu, 2016). At the same time, increasing house prices hinder the transition to homeownership, thus inflicting further barriers to accessible housing. Similar findings are discussed in the Monetary Policy Report from the Bank of Greece (2024), where price hikes in basic goods disproportionately affect household finances, therefore imposing further constraints in discretionary income on households in the lower half of the income distribution. Further income distortions push households into payment arrears, either on their mortgage or on rental payments (Figure 12). Households in the lower part of the income distribution are more likely to be in arrears. Especially after 2020, their share increased from 60 per cent to 80 per cent, compared to a 10 per cent increase (from 30 per cent to 40 per cent) for richer households.

As homeownership functions as a hedge against fluctuations in rent prices, tenure status differs across households' income profiles. According to Eurostat data, in 2023, 70.8 per cent of households with income above the 60 per cent of the median equivalised income were homeowners, compared with 64.5 per cent of homeowning households below 60 per cent of the median equivalised income. Nevertheless, the tenure trends are the same across both household income groups.

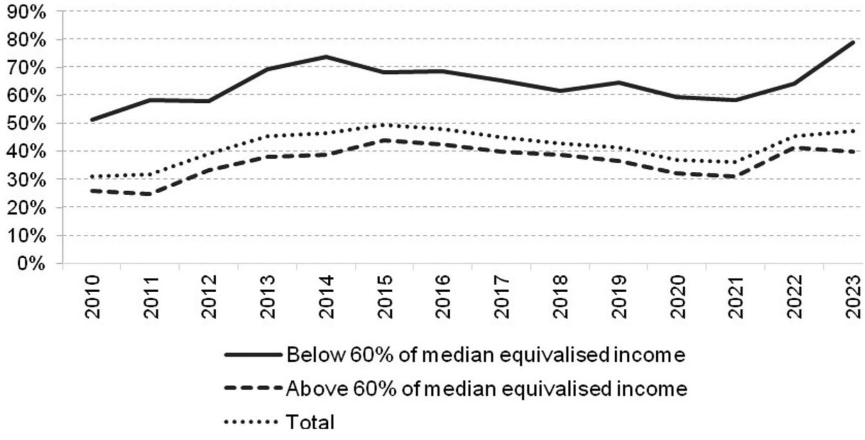


**FIGURE 12** Households in arrears: mortgage or rent, utility bills or hire purchase. *Note*: A household in arrears is one that, in the past 12 months, has been unable to pay on time due to financial difficulties. *Source*: Eurostat.

Lastly, a qualitative aspect of inequality in housing affordability is the fact that poorer households are more likely to live in overcrowded houses, therefore consuming housing of lesser quality.[3] Quite interestingly, the housing overcrowding rate declines after 2020 for households below 60 per cent of the median equivalised income, implying that this type of housing inequality declines as well. As we consider housing to be a rather illiquid good, we consider that this effect is possibly mostly driven by demographic trends, rather than better housing.

## 7 | SUMMARY

In this paper, we review inequality in Greece from 2004 to 2021, in light of an apparent paradox. Whereas the Gini inequality index on household incomes fluctuated marginally and then declined slightly, during the same period Greece underwent major socio-economic shifts as a result of an economic crisis with a severity that was unprecedented in the country's modern history. Meanwhile, perceptions on equality of incomes and opportunities have remained more pessimistic than the EU average.

To address this apparent paradox, we discuss the distributional aspects of austerity measures and institutional reforms implemented as part of the EAPs of 2010–18 and we analyse the trends in various aspects of inequality at a more disaggregated level. In particular, we examine changes in wages, benefits, pensions, taxes and disposable income across the income distribution and population segments, while we also discuss other types of inequality, such as discrepancies in access to health care, education and housing. Identifying granular inequalities helps us to explain the rather pessimistic outlook that Greek households still hold, despite the decline in aggregate inequality measures.

In greater detail, the gradual decrease of the Gini coefficient on household incomes, despite the deterioration of living standards across the population, can be partially explained by the simultaneous levelling-down effects for the population segments that were better-off before the crisis. Reductions in the outcomes of higher-income groups were sharper, as various consolidation measures under the

[3] About 40 per cent of households below 60 per cent of median equivalised income live in overcrowded conditions, in contrast to 24 per cent for those above the 60 per cent threshold in 2023 (Source: Eurostat). Note that an individual is considered as living in an overcrowded household if the household does not have at its disposal a minimum number of rooms equal to: one room for the household; one room per couple in the household; one room for each single person aged 18 or more; one room per pair of single people of the same gender between 12 and 17 years of age; one room for each single person between 12 and 17 years of age and not included in the previous category; one room per pair of children under 12 years of age.

EAPs targeted those groups (e.g. people receiving higher pensions, earning higher wages as civil servants, or paying higher income taxes). Low-pension earners were largely shielded from the effects of the crisis, while the reform of the benefit system with the national rollout of the guaranteed minimum income scheme significantly improved the targeting of the social benefits system. These effects are coupled with the narrowing of the gender wage gap and of gender differences in education and employment participation, as well as overall aggregate improvements in educational attainment across the domestic population.

However, over the same period, other aspects of inequality deteriorated or remained acute. We find that low-wage and younger individuals were to a certain degree more severely affected by high unemployment and the reduction in the minimum wage. Changes in the tax system, instituted to overcome tax evasion and the narrow tax base, compromised the system's progressivity, especially between 2010 and 2017, when the tax burden on the bottom quartile exceeded that of the top quartile.

The overall drop in income led to substantial deterioration in terms of social exclusion, as access to health care, education and affordable housing deteriorated further for lower-income individuals. More specifically, the decrease in public spending on health care and reductions in disposable income have left many lower-income households without proper access to health care. Low spending on childcare and long-term care imposes further budgetary constraints on already tight household finances and undermines national gender equality goals. Increased budgetary needs are also required for better access to educational opportunities, as access to tertiary education is strongly dependent on private tuition or attendance of private schools. The same holds for access to affordable housing, as Greek households spend, by a large margin, the highest ratio of their disposable income towards covering housing costs. These issues are more prevalent for tenants rather than homeowners, while the high homeownership rates in Greece, compared with EU peers, provide a hedge mechanism against rental price accelerations. Nevertheless, the steady decline of homeownership, and the increasing rental and energy prices impose ever stronger strains on the household budgets.

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## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from Eurostat. Restrictions apply to the availability of these data, which were used under license for this study. Data are available from https://ec.europa.eu/eurostat with the permission of Eurostat.

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