

Missos, Vlassis; Blunt, Peter; Domenikos, Charalampos; Pontis, Nikolaos

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Inflated inequality or unequal inflation? A case for sustained ‘two-sided’ austerity in Greece

Vlassis Missos

Centre of Planning and Economic Research, Athens, Greece

Peter Blunt

University of New South Wales, Canberra, Australia

Charalampos Domenikos

National and Kapodistrian University of Athens, Athens, Greece

Nikolaos Pontis

National and Kapodistrian University of Athens, Athens, Greece

Empirical data are presented on expenditure inequality dynamics in Greece, how they evolved during a period of deep socio-economic crisis, and how they were sustained by inflation. A differentiated approach to expenditure inequalities is applied that reveals the size of contraction of total private expenditure and its sub-categories for different expenditure groups of the population. One of the most important aspects of expenditure inequality in Greece concerns the inability of the widely used measures of dispersion to capture the real adjustment magnitude that occurs during a period of overlapping crises. A close examination of private expenditure enables the distributional effects of contractionary measures in Greece, which are intensified by inflation, to be portrayed as inverted austerity. It is argued that the 2021–2022 inflationary pressures in Greece were a continuation of the policies used to advance the purposes of internal devaluation that had been in effect since at least 2010. The data show that the poor in Greece have suffered unprecedented hardship, and that inequality has risen sharply.

Keywords: *inequality, household budgets, inflation, austerity*

JEL codes: *D30, D63, E21, E31*

1 INTRODUCTION

The 2008–2009 economic crisis in Greece resulted in a massive increase in poverty and a general reduction in living standards. At the same time, its enormous fiscal and current account deficits forced the Greek government to renegotiate the terms of its debt repayments to international creditors. During a period of intense political turmoil and social upheaval, three comprehensive economic adjustment programmes (EAPs) were agreed

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in exchange for a huge bailout package¹ that was contingent on the strict implementation by Greece of a mixture of fiscal consolidation, internal devaluation, and market liberalization. This resulted in a period of recession that was unprecedented both in magnitude and duration (Giannitsis/Zografakis 2015; Kaplanoglou 2015; Argitis et al. 2017; Nikiforos 2020; Papanastasiou/Papatheodorou 2018).

The wide range of neoliberal reforms included within the EAPs had marked effects on the Greek economy. Among others, they eroded the pro-labour legal framework that regulated relations between trade unions and enterprises. Notably, according to the OECD, since 2012, the collective bargaining coverage rate – representing the share of workers covered by valid agreements – has decreased significantly, from 100 per cent (of all sectors) to just 14.2 per cent.² More than a decade after the crisis began, the average per-employee salary in nominal terms had decreased by 26.5 per cent while, during the same period, the corresponding index in the euro zone, on average, rose by 24 per cent.

Austerity – ‘the deliberate deflation of domestic wages and prices through cuts to public spending’ (Blyth 2013: 41) – was thereby institutionalized. The burden of these austerity reforms fell disproportionately on wages and, generally, on domestic income, rather than on prices. Fourteen years later, in cumulative terms, Greece’s GDP, disposable income and private expenditure were far below their pre-crisis levels. Prices, on the other hand, had a different trajectory, placing additional burden on the purchasing power of (significantly reduced) labour-income.

In this paper we examine expenditure inequality dynamics in Greece: how they evolved during a period of deep socio-economic crisis and how they were sustained by inflation. Our purpose is twofold. First, we propose a differentiated approach to expenditure inequalities that sheds new light on them. To do so, we present a detailed analysis of consumption sub-categories for each expenditure quintile, but particularly for the poorest group – the bottom 20 per cent of the population. Second, we interpret the 2021–2022 inflationary pressures in Greece and associated price rises as a natural and therefore unsurprising outcome of the policies that were designed to produce internal devaluation (IMF 2012). These policies had been in effect since at least 2010 (EC 2010), when the first of the three consecutive EAPs was implemented.

Against this background, we adopt a position that in several critical respects is significantly different from the literature on inequality. Our emphases are on private consumption and the distributional effects of contractionary measures in Greece, which were intensified by inflation, producing *inverted* austerity. The title asks, ‘inflated inequality or unequal inflation?’ The short answer in the case of Greece would be ‘both’, consecutively.³ It is maintained that during the first long-lasting phase of economic adjustment, income

1. Between 2010 and 2018, Greece received loans totalling more than €280 billion. The first EAP (May 2010) comprised bilateral loans amounting to €110 billion (€80 billion from the European Commission and €30 billion from the IMF), roughly equivalent to 50 per cent of Greece’s GDP. Slovakia declined to participate, resulting in a reduction of €2.7 billion. In March 2012, the second EAP was implemented, providing €141.8 billion through the European Financial Stability Facility. Of this amount, €10.9 billion remained unused and was returned. The third EAP (August 2015) provided an additional €42.6 billion. Disbursements of all three EAPs were contingent on the introduction of fiscal consolidation, wage cuts and privatization (see EC 2023).

2. See OECD: <https://stats.oecd.org/index.aspx?DataSetCode=CBC>.

3. Internal devaluation in a fixed exchange-rate system, which is designed to drive domestic prices down and enhance competitiveness, deregulates labour markets and suppresses wages. For an evaluation of internal devaluation policy for the Greek economy, see Pierros (2021). The first phase (2009/10–2019) is characterized as ‘inflated inequality’, the second phase (2020–2021/2) – which perpetuated the process of internal (domestic) devaluation – as ‘unequal inflation’.

inequality spiked (Missos 2021; Missos et al. 2024) and inflation was unequally distributed (Pierros/Theodoropoulou, 2022), initiating a new phase of austerity dynamics.

However, *expenditure* inequality dynamics are not straightforward. What is the most appropriate way of approaching expenditure inequality in Greece? Should we rely exclusively on the conventional measures of dispersion of overall inequality or are there better ways for understanding how it evolved? We show that there are.

Our arguments are consistent with those of Calcagno (2012), a strong proponent of anti-austerity measures to solve such crises, who advocates policies that ‘go beyond the macroeconomics of big aggregates’ (p. 35). Below (see Section 3), private expenditure is disaggregated into its different consumption sub-categories to reveal a reality that is starkly different from that suggested by conventional methods and analyses. A full appreciation of the uneven and generally deleterious effects of neoliberal policies calls for a refined critical approach that reveals the full extent and nature of the ensuing social fragmentation and injustice.

By examining the magnitude by which private consumption has declined during a long period of overlapping crises (economic, health, geopolitical and so on), it becomes clear that domestic price changes seem to have become almost completely detached from the unfavorable macroeconomic conditions that prevailed in Greece. On the heels of the immense drop in household disposable income and employment,⁴ had prices been at least partly driven by domestic demand, or by the deflationary policies implemented, the CPI would have been expected to have fallen a little. However, the evidence suggests otherwise. From 2008 to 2019, private expenditure diminished sharply – more than 30 per cent – while the CPI on average remained stable. Moreover, consumption patterns changed significantly. The gradually accelerating increase in prices documented after 2020 initiated a new phase of ‘unequal inflation’. That is, the burden of higher prices was unevenly distributed according to the composition of demand attached to each population group.

In what follows, the CPI is treated as a household purchasing power depreciator. Since the beginning of the 2008–2009 crisis in Greece, the policies for promoting social and economic adjustment, together with the burst of inflation at the onset of the COVID-19 pandemic, ushered in a long period of austerity and squeezed domestic consumption. The data suggest that inflationary pressures were an immediate corollary of internal devaluation.⁵ This led to abrupt fiscal consolidation, welfare contraction, and multiple liberalized reforms in the labour market. Following these significant structural reforms, the torch was passed to the COVID-19 pandemic and to inflation, which severely reduced the consumption budgets of poorer households.

Views on inflation, and associated policies, are critically reviewed in Section 2. Their limitations are particularly apparent in the Greek case which, perhaps more than any other country in the EU, needs to be examined within its historically specific macroeconomic conditions. In contrast to the conventional view, we argue that if attention is paid to specific consumption categories, the evidence shows that expenditure inequality in Greece increased significantly (Section 3).

The extensive primary data presented in this paper demonstrate the devastating consequences of austerity and inflation on the Greek population’s well-being. In particular,

4. In 2013, the unemployment rate in Greece reached 27 per cent (see Missos et al. 2022). Ten years later, it remained above 10 per cent.

5. Unit labour cost (*ulc*) is defined as $ulc = \frac{w_n}{(VA_n/P)/L}$, with w_n , P , VA_n and L , standing for average money wage, value-added deflator, value-added (nominal) and employment, respectively. Others being equal, an increase in P leads to a rise in the *ulc* (Felipe/Kumar 2011: 6). In accordance to internal devaluation, this would necessitate a moderation in the growth of nominal wages to restore competitiveness.

private expenditure of the poorest quintile is shown to have been compressed into a 'basket' that almost exclusively comprised the bare essentials for social reproduction. The evidence shows that expenditure on standard goods and services fell significantly. Moreover, inflation appears to have amplified austerity dynamics and allocated its effects disproportionately. Different levels of inflation are estimated for each of five expenditure groups (quintiles), showing the disproportionate additional pressure that is imposed on the poorest members of society.

2 VIEWS ON INFLATION

During a period when many countries were working to restore fiscal stability after responding to the challenges posed by COVID-19, global inflation pressures emerged, leading to increased borrowing costs. Socio-economic prospects were undermined (United Nations 2022).

Views on contemporary inflation can be divided into three broad categories according to the policy responses proposed for mitigating its effects. Despite the fact that its arguments are based on faulty assumptions (Chowdhury/Sundaram 2023), neoliberal ideology has dominated the field of research on inflation. Conventional research attempts to identify and explain the main causes of price hikes. In most cases, the build-up of inflationary forces is largely attributed to *excessive demand*. The standard remedies of monetary policy are then applied to manage and contain price increases.⁶ In this view, inflation is treated as a monetary phenomenon that can be controlled through interest rate adjustments.

The second category stresses the potency of fiscal policy to curb price increases, where inflation is regarded as a complex phenomenon that has serious distributional effects (IMF 2023). At critical junctures, the origins of inflation are not even remotely associated with aggregate demand incidents or with a low level 'natural rate of unemployment' (Stockhammer 2008). In this approach, attention shifts from the aggregate to the sectoral level. Supply-side explanations emphasize the role played by an abrupt reallocation in consumption spending patterns during crises (such as a pandemic), and attendant supply-chain problems.

A third viewpoint treats market power as the main driver of price increases, relying on the assumption of firm dominance over the price-setting mechanism. It assumes that high firm concentration allows cost increases to be passed on to consumers, which increases inequality. Accordingly, this category reinvigorates the discussion on price controls as applied to sectors with dense input production interlinkages.

An important aspect of this view of inflation concerns the nature of corporate market power. Within the mainstream discourse, the effects of corporate profit maximisation on inflation are explained in terms of the greed of the owners of capital and their ability and willingness to take advantage of every profit-making opportunity, or *greedflation*.⁷ Sometimes big, greedy corporations just get lucky, benefitting opportunistically from international market conditions that emerge and allow them to make abnormally high profits

6. Amid high inflation and geopolitical tensions, the Bundesbank president insisted that 'eurozone rate-setters must be "stubborn" and continue raising borrowing costs to tackle inflation' (see Arnold 2023).

7. 'Greedflation': profit-boosting mark-ups attract an inevitable backlash (see Chassany 2023). A more appropriate term is 'conflictual inflation' (Rowthorn 1977), denoting that inflation primarily stems from a dispute regarding the distribution of income. A compact survey of post-Keynesian literature concerning the latter is found in Lavoie (2024).

either through wage-squeezing or price-setting or both. For example, from his analysis of 2021–2022 inflationary dynamics, Bivens (2022) concludes that ‘it is unlikely that either the extent of corporate greed or even the power of corporations generally has increased during the past two years. Instead, the already-excessive power of corporations has been channeled into raising prices rather than the more traditional form it has taken in recent decades: suppressing wages’. As we shall show, this observation is highly relevant to Greece.

In our view, market power is conceived best as a structural feature of the extant global economic dispensation that institutionalizes corporate ability to suppress wages. Supply-chain bottlenecks that are used to justify price increases should not be allowed to obscure this. Inevitably, policy reactions lead to chronic austerity and extreme hardship for the poorest members of society, as they have done in Greece.

2.1 Monetary policy

In conventional theory, inflation is perceived as a macroeconomic phenomenon that affects individual behavior. Accordingly, economic policy is based on assumptions about the ways in which consumers and entrepreneurs are assumed to react. For example, for Abel et al. (2019) inflation is a function of demand that speeds up faster than supply. Such asymmetry is frequently attributed to increases in consumption spending, fiscal expansion, and supply shocks. Nevertheless, ‘the only factor that can create *sustained* rises in aggregate demand, and thus ongoing inflation, is a high rate of money growth’ (Abel et al. 2019: 505, emphasis in the original). Though acknowledged, the impact of other factors is generally assumed to be ephemeral or marginal. Since excessive demand is tightly linked with the rate of growth of the money supply, increasing the interest rate is assumed to reduce demand and eventually to bring down consumer prices.

Moreover, in a Phillips curve context that entails inflation–unemployment trade-offs, policymakers can never be sure about what level of inflation will lead to significant increases in unemployment.⁸ To solve the theoretical difficulties that arise, conventional policy attempts to eliminate or close the gap between expectations and outcomes. Clearly, this is easier said than done. For example, Rudd (2022) suggests that models of inflation treat expectations as a short-term variable whereas policymakers treat them as a long-term one. In addition, firms, financial entrepreneurs, and households are likely to have very different – and sometimes irreconcilable – views about what the future might bring.

It is important to tease out the threads that bind wages, unemployment, and demand to inflation. Mainstream attempts to do so have an innate anti-labour bias, positing that inflation is largely attributable to wage increases. The logic has two flaws. First, the fact that aggregate demand is more than just private consumption is rarely discussed. Second, product and labour markets are interrelated, and lower unemployment is ‘Phillipsly’ related to higher inflation. That is to say, if wage inflation is driven by low unemployment, tight labour markets will only produce a new cycle of inflationary pressures (labour supply adjusts slowly to demand requirements).

The idea of wage–price spirals is the other side of the coin. It relies on the assumption that labour unions negotiate in their members’ interests without realizing the wider, adverse unintended consequences of their actions. When they succeed in their bargaining for higher wages, so the argument goes, prices rise and can lead to a vicious cycle of excess demand. Tight labour markets and modest real wages are therefore crucial to addressing

8. The expectations-driven Phillips curve was acknowledged by Friedman (1968) in his famous presidential address to the American Economic Association.

inflation (Blanchard 2022; Domash/Summers 2022). However, extensive time series data suggest otherwise. For example, Alvarez et al. (2022) found that since the 1960s there have been very few wage–price spirals, and that nominal wage rise acceleration is due to catching-up with inflation after a period when wages lagged well behind prices.

On the other hand, a Kaleckian framework developed by Ratner/Sim (2022) supposes that the Phillips curve is determined by negotiations between firms and trade unions. By following a conflict theory of inflation, they argue that the implementation of neoliberal labour market reforms increases the unequal distribution of power within economies and facilitates the maximisation of profit by firms, (analytically, this results in a flattening Phillips curve where inflation is disentangled from the unemployment rate).

A different approach to inflation, which gained favour during the COVID-19 pandemic, stressed the role of supply shocks driven by an unprecedented shift in consumption for goods relative to services, and supply bottlenecks that were accompanied by labour shortages.⁹ In this view, inflation is portrayed as an outcome of supply-side rigidities in both the manufacture of products and labour markets. During the pandemic, localized lockdowns adversely affected the operation of factories and disrupted distribution networks. It follows that where there are dense sectoral linkages price rises will spread more rapidly.¹⁰

Similarly, inflation is frequently attributed to the sudden reallocation of the demand for goods that arises from high labour costs and heterogeneous price rigidities among sectors. Price flexibility is taken to be higher in sectors producing goods, amplifying the effects on inflation caused by changes in demand (Ferrante et al. 2023). For example, when demand for goods increases, it is supposed that prices might rise more quickly in sectors with high labour shortages than in those with greater labour mobility. However, as time passes, relative prices among sectors are expected to readjust in response to gradual factor movements. On the other hand, this way of thinking could also imply that where input-factor mobility is limited, horizontal borrowing cost increases to all sectors are not efficient because adjustment capability varies according to the structural characteristics of each sector. Again, much of the responsibility for the persistence of high prices is attributed to labour and, most importantly, its (supposed) inflexibility.

2.2 Fiscal policy

Though widely discussed in the literature, the role of fiscal policy as a means of combatting inflation is not widely held. Notable exceptions include Stiglitz/Regmi (2022) who argue that, where supply bottlenecks arise, fiscal policy is the most appropriate response to supply-driven inflation. In their view, in cases of excess aggregate demand, monetary tightening may prove effective. But where sectoral demand shifts are found to vary significantly, interest rate hikes are unlikely to reduce prices and may cause (unnecessary) rises in unemployment. The conventional approach is thereby reduced to a special case.

Moreover, Stiglitz/Regmi (2022: 20) maintain that 'one has to go beyond aggregates and macroeconomics to understand inflation'. This is because, first, private consumption constitutes just a fraction of aggregate demand, and the latter should not be regarded as the principal cause of widening gaps between demand and supply. Second, price rises

9. During the first quarter of 2023, a significant shortage of construction workers in the US was blamed for hampering the government's ambitious plan to improve domestic infrastructure. See Chu (2023).

10. Exemplified by the production of semiconductors discussed by Celasun et al. (2022).

should be treated as a sectoral issue, and policies adjusted accordingly. The need for a disaggregated approach to inflation is dictated by the acknowledgment that its major supply-side causes lie in specific sectors of the production network. For these authors, fiscal policy has a wide compass, from the expansion of energy supplies to aspects of industrial policy (such as low-interest loans). Accordingly, whenever big firms exert their market power to influence prices, Stiglitz/Regmi (2022) would advise governments to consider taxation policy remedies.

A quasi-differentiated view in support of fiscal policy is also found in Korinek/Stiglitz (2022). Here, too, the conventional approach to inflation is challenged on the grounds of the oversimplified assumptions on which the New Keynesian models are based and on numerous market failures which, though well documented, are seldom reflected in policy. Once again, Korinek/Stiglitz (2022) argue in favour of fiscal policy ‘unbound’ – for example, from the theoretical prejudices of a ‘Ricardian equivalence’. Moreover, according to these authors, fiscal policy should not be applied *ad hoc* or only in special circumstances, it should be applied systemically and as an integral part of mainstream policy.

2.3 Price controls

Much attention has been given to the role of markups (price over cost) and profit seeking as contributing factors to inflation (Bräuning et al. 2022). Increasing economic concentration allows big firms to exercise their power as price-setters, so long as their market share expands. This has important policy implications that are contrary to those that draw on conventional arguments for suppressing demand. For example, Konczal/Lusiani (2022) argue that unusually high profit margins can create space for higher wages with no adverse effects. In the absence of competitive markets, and irrespective of whether inflation is demand- or supply-driven, firms can manipulate prices to suit themselves.¹¹

Distributional effects are emphasized by Weber (2022), who focuses on supply-side explanations for inflation. Her work underlines the far-reaching distributional consequences of profit explosions in large oil companies operating in an inflationary international environment. Price rises for essential petroleum products have significant detrimental effects on household ‘baskets’, transmitted both directly – as an important consumption good – and indirectly, through inflationary pressures exerted on industries using them as intermediate inputs. Simulating price shocks in an input–output table framework, Weber et al. (2022) show that fossil fuel products have the most important effects on the CPI.

When inflation is regarded as a large-firm supply-side phenomenon, price control policies become more likely. For example, setting a price ceiling on fossil fuels can be seen as

11. The liberalization of the Greek economy in 2019 had many consequences. One of the most damaging concerned the energy sector, which was privatized, and the state monopoly was replaced by an oligopoly (see: <https://investmentpolicy.unctad.org/investment-policy-monitor/measures/3467/greece-privatization-of-energy-sector>). The result was that energy prices more than quintupled – according to the Independent Power Transmission Operator (IPTO), in 2020, the ‘weighted average market price’ for energy in Greece was 58 €/MWh. In 2021 it had risen to 132 €/MWh and in 2022 to 306 €/MWh (see: <https://www.admic.gr/en/agora/statistika-agoras/kyrioi-deiktes-dashboard/mesos-tathmiki-timi-agoras>). Many households were unable to pay for their energy needs. At the same time, from mid-2021 to 2022, the cost of basic necessities like food and non-alcoholic beverages also surged. The government intervened, spending almost €8.2 billion to subsidize such costs. However, rising prices and inflation were immune to such policy measures. On the contrary, it could be well argued that such emergency state transfers fuel high prices by enabling consumers to pay whatever is demanded by the handful of companies controlling the market.

an act of 'strategic price controls' (Weber 2021) targeting a specific sector, the effects of which are transmitted through the interlinkages of the production network (see also Galbraith 2022; Korinek/Stiglitz 2022). Paesani/Rosselli (2017) explain the re-emergence of price control policy as a function of the failure of monetary policy to bring about price stability, its concomitant clearly being that essentially inflation is a distributional matter reflecting social conflict.¹²

In what follows, inflation is treated as a factor that depreciates the value of private expenditures. In Section 3.3, it is argued that, in Greece, inflation seems to have been strongly affected by rising markups. However, the main thesis presented on inequality holds whatever the cause of inflation might be.

3 FROM AUSTERITY TO INFLATION: INTERPRETING EXPENDITURE INEQUALITY IN GREECE

Clearly, austerity policies and price inflation have more damaging effects on some segments of the population than others. Unsurprisingly, poor people tend to be the worst affected (Daoud et al. 2022; Woo et al. 2013). Whatever the causes of inflation might be, its distributional effects are a function of national socio-economic and cultural variables.¹³ For example, state subsidies can cushion the effects of price rises in many consumption categories, including health services, medicines, education, insurance, and so on. These categories alone comprise a large share of total household expenditure. Their commodification burdens society as a whole, but particularly the poor, and especially in circumstances where prices rise more rapidly than incomes.

The OECD regards consumption as 'a primary component of economic well-being [as well as] a primary indicator of living standards' (OECD 2013: 102). Household expenditure and its distribution can provide a reliable proxy of a population's living standards and prosperity. In what follows, a series of data offer a new interpretation of expenditure inequality dynamics in Greece.

3.1 Method and data

The data presented below are drawn from (Greek) Household Budget Surveys conducted between 2008 and 2022. Pre-(financial) crisis survey results from 2008 show that while total disposable income continued to grow until 2009, private expenditure peaked a year earlier. It seems that household consumption was at least partly a reflection of falling consumer confidence about the short-term future. The clear inference to be drawn from

12. The historical roots can be traced back to Galbraith (1952), whose analysis of post-war price controls addressed questions surrounding the conflict over high prices between the oligopolistic structure of specific sectors and strong labour unions. The validity of price controls in a post-pandemic world is well argued by Chirat/Clerc (2023: 26), who see inflation as a product of insoluble distributional conflicts and do not regard unemployment as an inescapable consequence of curbing prices.

13. Chomsky (2022: 223) argues that not taking such variables into account is worse than trying to fix a computer by hitting it with a crowbar: 'there are a million different social and cultural and economic factors they [people who approach the problem in this way] don't understand.' His reference point is a supposed economist, 'from, say, Harvard', who goes to 'some Eastern European country' and says, 'here's the way to develop'. Any resulting changes that are imposed on people are 'likely to be disastrous, no matter what [they are]'.

this is that household expenditure in Greece can be a reflection of both current and projected economic circumstances and uncertainties.

Income is a heterogeneous measure consisting of several different components such as labour, dividends, rents, and so on. Household consumption can be approached in a similar way. Most tellingly, the effects of disaggregating the objects of consumption (food, clothing, transportation, etc.) are very different to those highlighted by aggregate measures of consumption. The same applies to what causes it. As we have suggested, consumption is not solely a function of income. It can also be influenced by concerns about the future, and by other independent variables such as household savings and debt. In accordance with standard practice, household data have been converted into individual expenditures using the OECD modified equivalence scale (Asghar Zaidi et al. 1994).¹⁴

3.2 Expenditure inequality in Greece

The socio-economic effects of contractionary policies cannot be assessed validly if aggregate measures of private expenditure are used because they obscure significant differences between expenditure groups. On the other hand, disaggregated measures of expenditure show that the combination of long-term austerity policies and inflation imposed a heavy burden on the poor, who were compelled to confine their consumption to the basics.

We demonstrate this as follows. First, total expenditure is divided into 12 basic sub-categories, as shown in Table 1. Each of these sub-categories includes a particular group of goods and services, with a corresponding index of consumer prices. Second, the total population is divided into five expenditure groups or quintiles, ordered from lowest (first quintile) to highest (fifth quintile). In that way, changes in the private *per capita* expenditure of each group and for each sub-category of goods and services can be scrutinized.

Figure 1 shows that in Greece over the period 2008–2021 consumption prices, cumulatively, rose by more than 8 per cent, while cumulative domestic *per capita* consumption fell by more than 35 per cent. The data also afford insights into living standards. In order to maintain them at the levels that obtained in 2008 (before the CPI and private expenditure began to diverge), household consumption would have had to have kept pace with the CPI, which it clearly did not. We must therefore ask how the growing divergence affected different segments of society.

Based on these data, the prevailing view is that overall, between 2008 and 2022, both private expenditure and inequality fell significantly. Figure 2 sets out some of the most widely used measures of inequality such as the *p* ratios, the *Gini* coefficient, the Atkinson indices for inequality aversion parameters 0.5 (low) and 2 (high), and three generalized entropy indices, namely, *L* (mean logarithmic deviation), *Theil*, and *CV* (coefficient of covariance). Using similar measures, Kaplanoglou (2022), shows that consumption inequality in Greece increased from 2008 to 2014 but fell thereafter. Similar conclusions, for the longer period of 2008–2022, can be inferred from Figure 1.

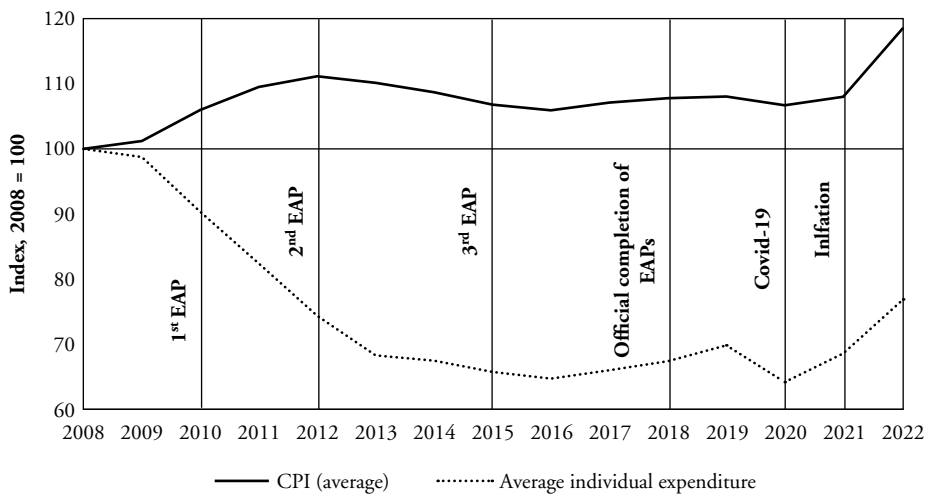
The left-hand side of Figure 2 combines all consumption sub-categories into a single composite measure. In that part of Figure 2, all the *p* ratios show that the gaps between the percentiles of the distribution have decreased, while *L* has decreased by 3.3 per cent. As far

14. To provide an example of the OECD ‘equivalence scale’ – also used by Eurostat – a weight of 1 is attributed to the adult-member bearing most responsibilities in the household; 0.7 is assigned to every additional adult-member; and 0.3 to all members below 16 years of age. Accordingly, the ‘equivalence scale’ for a four-member household of two adults and two dependents is calculated as ‘ $1 + 0.7 + 0.3 + 0.3 = 2.3$ ’. Hence, if total household expenditure is €23,000, then the individual *equivalized expenditure* attributed to each member is €10,000.

Table 1 Average (2008–2022) shares of each consumption category in total expenditure by quintile

Sub-categories of total expenditure	1st	5th
1 Food and non-alcoholic beverages	27.0%	12.6%
2 Alcoholic beverages and tobacco	3.2%	2.7%
3 Clothing and footwear	2.6%	6.4%
4 Housing	37.0%	22.8%
5 Durable goods, household appliances and services	2.6%	5.7%
6 Health	4.8%	6.8%
7 Transport	5.3%	13.6%
8 Communication	4.4%	2.9%
9 Recreation and culture	1.5%	5.8%
10 Education	1.6%	4.1%
11 Hotels, cafés, restaurants	5.6%	10.0%
12 Miscellaneous goods and services	4.3%	6.6%
Total expenditure	100%	100%

Sources: ELSTAT, Household Budget Surveys and authors' calculations.

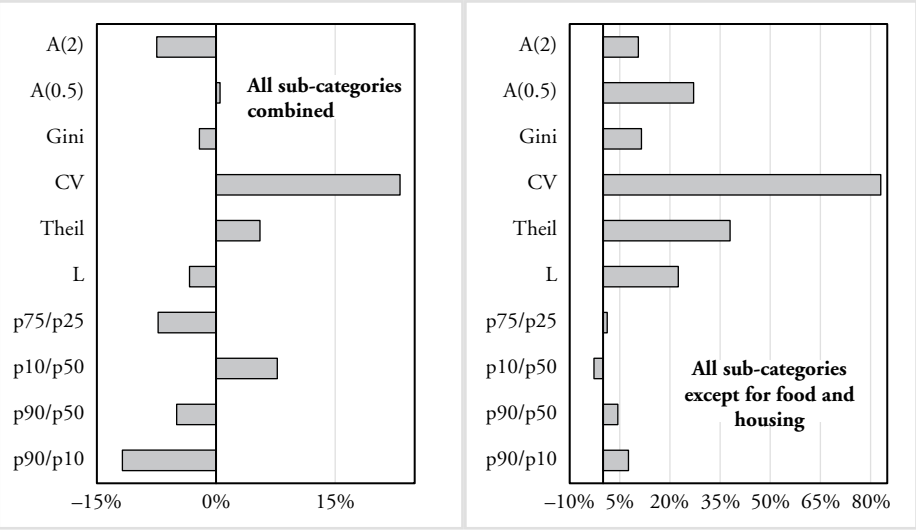


Sources: ELSTAT, Household Budget Surveys and authors' calculations.

Figure 1 Average CPI and per capita private expenditure (in current prices), 2008 = 100, Greece, 2008–2022

as $A(2)$ is concerned, its contraction is mostly attributable to the high inequality aversion parameter ε .¹⁵ The higher the ε , the more $A(\varepsilon)$ is influenced by differences detected at the

15. For a distribution comprising of n members having individual values y_i and average value equal to \bar{y} , Atkinson indices may appear as: $A(\varepsilon) = 1 - \frac{1}{\varepsilon} \left(\frac{1}{n} \sum_{i=1}^n y_i^{1-\varepsilon} \right)^{\frac{1}{1-\varepsilon}}$ for $\varepsilon \neq 1$. Aversion inequality parameter ε is arbitrarily chosen. The higher it becomes, the more the index is influenced by the differences that exist between the values of the lower parts of the distribution. That is to say, the value of $A(\cdot)$ informs us of the percentage of the overall value which, if it was fairly distributed,



Notes: $p90/p10$ compares the expenditure at the 90th percentile to the one at the 10th. The rest follow the same pattern. L stands for mean logarithmic deviation, CV stands for coefficient of variance and $A(.)$ stands for Atkinson with parameters 0.5 and 2, respectively.
Sources: ELSTAT, Household Budget Surveys and authors' calculations

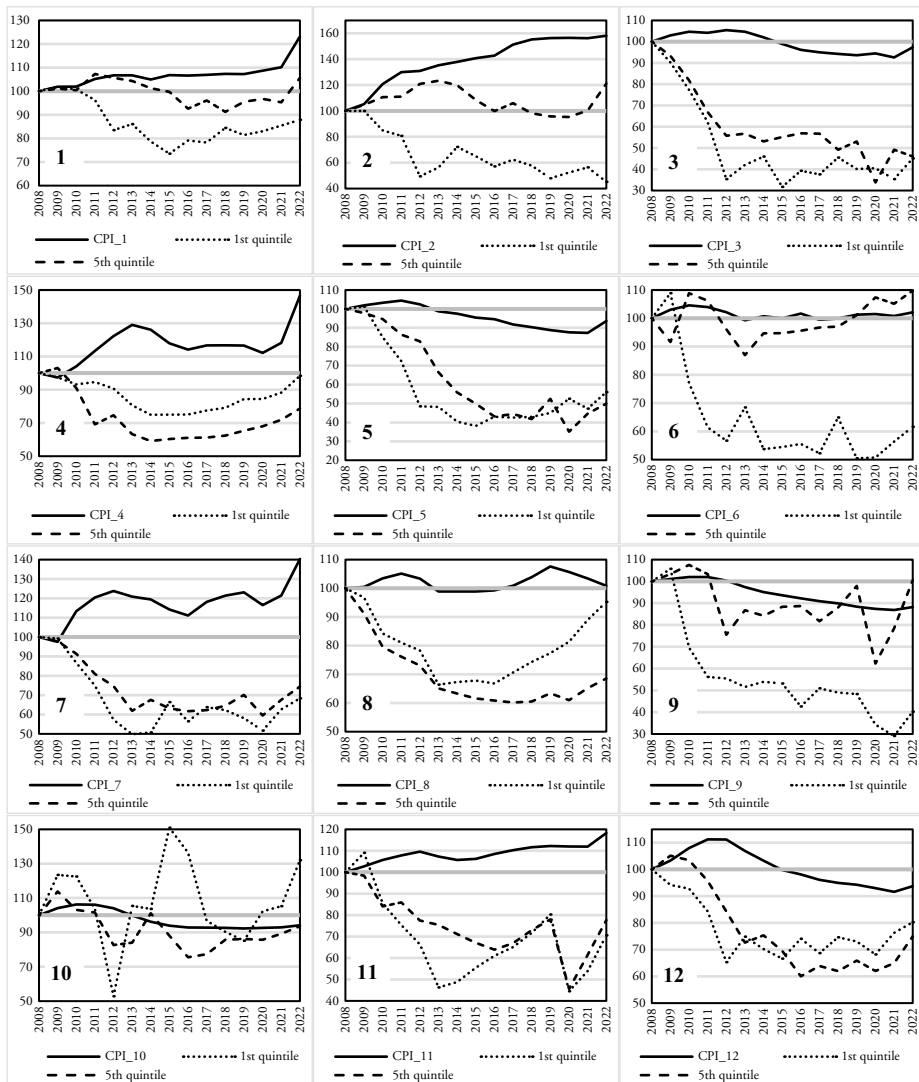
Figure 2 Percentage changes in measures of dispersion between 2008–2022, Greece

lower parts of the distribution (see Shorrocks/Foster 1987). Hence, the estimated decrease of $A(2)$ indicates that the level of inequality is driven particularly by the changes that occur in the left-hand tail of the distribution. *Theil* and *CV*, on the other hand, follow a different logic. The latter, for instance, responds exclusively to the differences evident at the higher parts of the distribution, signifying that despite the contraction of total inequality, the spread in the upper segments seems to have widened. Overall, the substantial decrease of private consumption did not bring the price level down with it, but nevertheless inequality seems to have improved. The IMF reached the same conclusion, noting that ‘Household Budget Survey data [in Greece] show a significant decline in the consumption-based inequality indicator ($p80/p20$ ratio) in 2020’ (IMF 2022: 9). Below, a comparison is made between the first and fifth quintiles, which correspond to the $p80/p20$ ratio, using a different perspective. This alternative approach could yield a significantly different interpretation of the documented results.

The right-hand side of Figure 2 shows how all of the measures of dispersion increased, as did the *CV*, suggesting that – apart from food and housing – all the other joys (and some necessities) of life had become (and remain) luxuries enjoyed by a small group that belong to the upper tail of the distribution. In other words, austerity significantly increased the gap between rich and poor in Greece.

As in Figure 1, Figure 3 shows the cumulative changes of the first and the fifth quintiles, for each consumption sub-category, numbered from 1 to 12 (see Table 1). In addition,

could produce the same level of welfare. For example, 0.6 means that the same level of welfare generated by the actual distribution of expenditures could be provided by 40 per cent of total expenditures, if they were distributed equally among its members.



Notes: 1. Food and non-alcoholic beverages; 2. Alcoholic beverages and tobacco; 3. Clothing and footwear; 4. Housing; 5. Durable goods, housing appliances and services; 6. Health; 7. Transport; 8. Communication; 9. Recreation and culture; 10. Education; 11. Hotels, cafés, restaurants; 12. Miscellaneous goods and services.

Sources: ELSTAT, Household Budget Surveys and authors' calculations.

Figure 3 Sub-category CPIs and average expenditure changes in the first and fifth quintiles, 2008–2022

Figure 3 sets out the CPI that corresponds to each of these categories, suggesting that, in some consumption groups, inflationary pressures appear to be stronger even during a period of deep recession, such as the period 2009–2016. For example, as far as the general level of prices of sub-category 1 is concerned ('food and non-alcoholic beverages'), between 2008–2021, CPI_1 went up by 10 per cent and by another 10 per cent within 2022. At the same time, the per capita expenditure of the first quintile was much greater than that of the fifth. The same is true of sub-category 2 (alcoholic beverages and tobacco) and, to a lesser extent, sub-category 3 (clothing and footwear).

Further examination of Figure 3 shows the extent of deprivation experienced by the poorest 20 per cent of Greek society. In particular, for the first quintile, expenditure on health goods and services (Sub-category 6) and 'recreation and culture' (Sub-category 9) fell dramatically while that of the fifth quintile more or less tracked the CPI. Throughout the period of high austerity, spending by the poorest 20 per cent of the population on the sub-categories measured fell by more than 50 per cent.

The marked divergences that are evident in the consumption patterns of the first and fifth quintiles – broken down according to the 12 sub-categories – present a very different and much starker picture than the one obtained using aggregate measures of consumption. More and more during the period in question the consumption spending of the poorest households was confined to absolute necessities such as food and housing. This group was compelled to allocate much higher proportions of total household expenditure to them than richer members of society needed to do. On average, food expenditures comprised 27 per cent of total expenses for the first quintile and 12.6 per cent for the fifth. Likewise, housing expenses amounted to 37 per cent and to 22.8 per cent for the first and fifth quintiles, respectively.

In other words, the documented changes reflect the operation of an inverted Engel's Law. In its normal state, Engel's Law refers to a commonly observed fact, namely, that greater income makes for smaller proportions of total spending devoted to food and other necessities. Its 'inversion' suggests that in a context where socioeconomic status and material wellbeing are improving, the demand for basic goods increases and their share of consumption diminishes. However, in the case of Greece, this notion has worked the other way round. Income depreciation was so great that the proportion of spending on these goods by poorer groups gradually increased. Households in economic distress went through a process of reallocating their consumption bundles by restricting spending on commodities considered non-essential for preserving the material aspects of their lifestyle. Clearly, such adjustments detract from the quality of their social life and entail considerable material hardship. In short, poor families in Greece have had to reduce or eliminate consumption of goods that are not essential to their survival but, nevertheless, are important to social reproduction and to development.

3.3 Levels of inflation by quintile

Sudden price upswings – especially on energy products – prompted the Greek government to take measures aimed at protecting households' consumption needs and increasing the purchasing power of disposable income. Mitigating the socio-economic effects of surging prices effectively is a highly complex and challenging task, not least because of the diverse consumption patterns among households. From this perspective, the measures enacted were insufficiently targeted at specific population-groups, reflecting the hastiness of their development and implementation. Between 2021 and 2022, out of the total of €9.5 billion emergency subsidies announced for combating inflation, only 8.3 per cent

were targeted at households with specific socio-economic characteristics.¹⁶ The great majority of public spending was allocated as non-means tested transfers, that is, they were provided irrespective of the ability of households to cover the rising costs of living.

To reiterate, the long-lasting period of austerity in Greece did not have a significant effect on the general level of prices. However, the international price hikes of 2021–2022 introduced a new phase that can be interpreted as 'inverted austerity'. Following Konczal/Lusiani (2022), data from Structural Business Statistics (SBS) are used to calculate markups for the Greek economy.¹⁷ Table A1 (see Appendix) sets out percentage changes for specific economic activities in the manufacturing and the service sectors. During a period of economic lockdowns that was accompanied by a sharp reduction in domestic demand, markups rose significantly. The growth in tourism-related activities has undeniably contributed to keeping price levels high, as income from travellers constitutes a significant portion of total demand.¹⁸ However, in Table A1, the 'accommodation and restaurants' sector shows a decreasing mark-up due to the COVID-19 lockdowns, which restricted the 2020 tourism season.

Supply and demand conditions in Greece afford some insights into what drives prices up and what the distributional consequences might be. If demand remains unchanged or is reduced, rising markups may result either from the introduction of a new, cost-reducing, technology or from exerted market power. Using data on individual firms, Loecker/Eeckhout (2021) discuss the distributional implications of rising market power through the estimation of markups. The data indicated a steady rise in market power over four decades (Ibid.: 4), with the most pronounced increases observed among technology and pharmaceutical corporations (Akcigit et al. 2021). They concluded that market concentration is likely to intensify in the post-pandemic era. Most of the empirical evidence set out in Table A1 supports these views.

The effect of almost every macroeconomic phenomenon on standards of living is not uniform. When it comes to consumer prices, it can be assessed in relation to the position that each population group occupies on the distribution of income and the composition of goods and services of their basket. According to Baez Ramirez et al. (2021), the impact of higher-priced goods depends on the share that these goods represent of total consumption. The data in Table A1 indicate that the impact of inflation on each of these quintile groups will be in proportion to the percentage share of their consumption basket held by each of the sub-categories. These changes, both in size and proportion, significantly affected the expenditure pattern of each quintile.

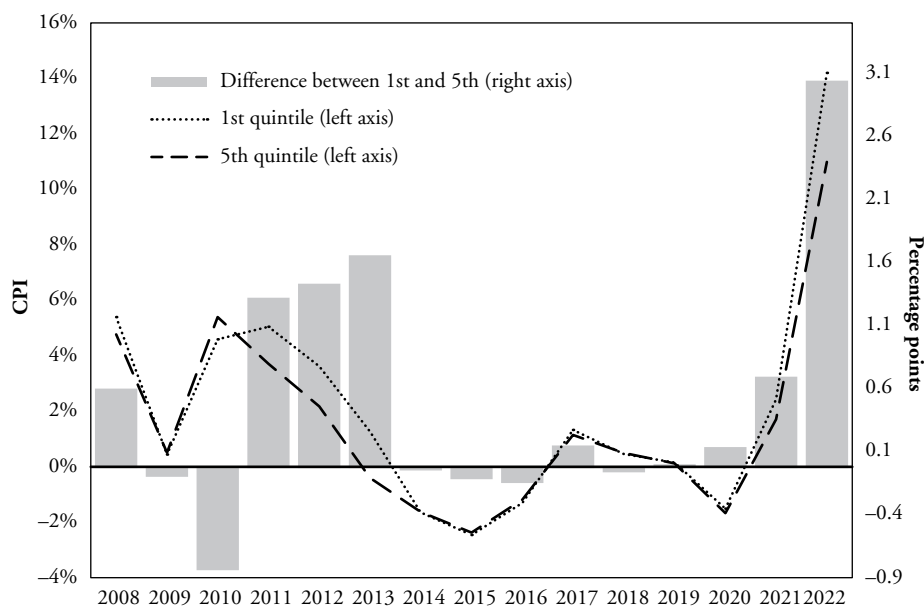
Between 2008 and 2022, consumption in Greece varied according to the different effects that austerity policies had upon social groups and households. Changes in the annual percentages enable us to estimate the different levels of inflation that applied to each quintile (P_q), calculated as the weighted average given by:

$$P_q = \sum_i \frac{E_{qi}}{E_q} p_i$$

16. According to Bruegel's database, updated to June 2023, most of this money was used to cover rising energy costs, meaning that €7 billion was directed at electricity consumption. Whereas subsidies targeted at vulnerable households amounted to €787 million (Sgaravatti et al., 2021).

17. Mark-ups are calculated as gross profits over cost of goods sold. SBS data are provided by ELSTAT, see: <https://www.statistics.gr/en/statistics/ind>.

18. For instance, in 2022, Greece had a negative balance of payments (BoP) of €21.2 billion. Notably, the 'travel balance', which is a component of the BoP, remained positive at €19.4 billion, highlighting the influence of external demand on domestic prices.



Sources: ELSTAT, Household Budget Surveys and authors' calculations.

Figure 4 CPIs per expenditure quintile and differences, Greece, 2008–2022

where, E_{qi} stands for expenditure of consumption sub-category i of each quintile q ; E_q is the total amount of expenditure of quintile q ; and p_i corresponds to the sub-index inflation of consumption category i .

The results set out in Figure 4 show the different levels of inflation in Greece attributable to the first and the fifth quintiles (left-hand axis), and how the disparity between them has evolved (right-hand axis). Clearly, throughout the whole period, the purchasing power of the first quintile was disproportionately adversely affected, most dramatically when inflation pressures increased significantly in 2022. In that year alone, the difference between the two levels of inflation set out in Figure 4 is estimated to be 3.1 per cent. This leads to the conclusion that the prices of goods consumed by the first quintile were increasing faster than those consumed by the fifth quintile. The distributional impact of inflation in Greece is determined by the already unequal conditions that were in place as a result of the policy-mix introduced to address the crisis. The socio-economic repercussions of the EAPs in Greece were so profoundly deleterious that the idea of recovery to pre-crisis levels seems delusional.

4 CONCLUDING REMARKS

The basic logic underlying austerity relies on the tightening of fiscal and monetary policy to reduce aggregate demand. From this perspective, the policy mix implemented in Greece squeezed private consumption and *liberalised* economic activity, which promoted internal devaluation and deregulation of the labour market. Economic adjustment resulted in regressive distributional effects that are reflected in the extent to which lower expenditure

groups in Greece – with higher consumption propensities – have had to reduce their overall spending and modify their consumption patterns.

An important watershed with significant implications for social justice in Greece was marked by the implementation of austerity programs in 2010. Our analysis indicates that the poor in Greece have suffered unprecedented hardship, the social consequences of which are hard to measure precisely. Comparisons of expenditure levels by different groups before and after the onset of the 2008–2009 economic crisis demonstrate that the quality of life of the poor has deteriorated substantially and that consumption patterns have changed radically. The consumption pattern data for higher groups show that the gaps between rich and poor have widened.

More than a decade of uninterrupted austerity has torn Greek society apart. A new social duality has emerged out of the radical policy changes of liberalization. The markedly increased (and increasing) polarization between rich and poor is reflected in our data. For lower-income groups, the high costs of basic needs such as food and shelter make it difficult for them to maintain a decent and dignified way of life, producing conditions – then and now – that, according to Varoufakis (2016), are analogous to those that obtained in the nineteenth-century poor-houses of Europe, a kind of Dickensian dystopia.

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APPENDIX

Table A1 Change of markups between 2018 and 2020, per economic activity, in percentage points, Greece

	Change between 2018/2020
<i>Manufacture of food products</i>	-0.3
Manufacture of beverages	5.8
Manufacture of tobacco	9.4
Manufacture of textiles	12.4
<i>Manufacture of wearing apparel</i>	-5.3
<i>Manufacture of leather and related products of other materials</i>	-8.8
Manufacture of wood, except furniture; manufacture of articles of straw and planting materials	0.9
Manufacture of paper and paper products	5.1
Printing and reproduction of recorded media	8.2
<i>Manufacture of coke and refined petroleum products</i>	-9.1
Manufacture of chemicals and chemical products	0.7
<i>Manufacture of basic pharmaceutical products and pharmaceutical preparations</i>	-0.1
Manufacture of rubber and plastic products	12.7
Manufacture of other non-metallic mineral products	0.5
<i>Manufacture of basic metals</i>	-0.6
Manufacture of fabricated metal products, except machinery equipment	3.9
Manufacture of computer, electronic and optical products	11.4
Manufacture of electrical equipment	11.1
Manufacture of machinery and equipment n.e.c.	9.0
Manufacture of motor vehicles, trailers and semi-trailers	2.1
Manufacture of other transport equipment	1.3
Manufacture of furniture	4.7
Other manufacturing	2.3
Repair, maintenance and installation of machinery and equipment	18.4
Wholesale and retail trade and repair of motor vehicles and motorcycles	1.2
Wholesale and retail trade except of motor vehicles and motorcycles	0.5
Retail trade, except of motor vehicles and motorcycles	2.0
<i>Construction of buildings</i>	-2.4
Civil engineering	13.5
Specialized construction activities	0.5
Transporting and storage	-7.5
<i>Accommodation and food service activities</i>	-29.4
Information and communication	17.8
Real estate activities	11.1
Professional, scientific and technical activities	9.5
Administrative and support service activities	22.1
<i>Other services activities</i>	-3.1

Source: ELSTAT, Structural Business Statistics (<https://www.statistics.gr/en/statistics/ind>), authors' calculations.