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**Research Report**

## Crisis, austerity, and fiscal expenditure in Greece: Recent experience and future prospects in the post-COVID-19 era

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# ***Public Policy Brief***

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No. 151, 2020

## **CRISIS, AUSTERITY, AND FISCAL EXPENDITURE IN GREECE: RECENT EXPERIENCE AND FUTURE PROSPECTS IN THE POST-COVID-19 ERA**

MICHALIS NIKIFOROS

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## Preface

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In this policy brief, Michalis Nikiforos provides a discussion of the relationships between austerity, Greece's macroeconomic performance, debt sustainability, and the provision of healthcare and other social services over the last decade.

Through drastic cuts to public expenditure and a nearly 10 percentage point increase in the average tax rate (if one includes social contributions), the Greek government hit the primary budget surplus targets that were set out as a condition of receiving financial assistance. A key part of these escalating rounds of austerity policies was significant reductions in healthcare expenditure. As Nikiforos observes, healthcare spending was cut nearly in half between 2009 and 2014—and Greece was already (prior to these cuts) below the EU average in terms of healthcare spending as a percentage of GDP. Although health expenditures have recovered slowly since 2014, in 2018 they were still down 42 percent from their 2009 level. The result was a drastic deterioration in the quantity and quality of healthcare coverage—including significant attrition in hospital bed capacity. In addition to the erosion of economic and social rights due to austerity in general, Nikiforos points out that the healthcare cuts in particular weakened Greece's ability to handle the COVID-19 pandemic.

According to the international and European institutions providing assistance, the justification for imposing these austerity policies—including undermining healthcare capacity from 2009 to 2014—was that Greece's public debt would thereby be rendered sustainable. Nikiforos explains that the standard of “sustainability” was twofold: (1) a stable or declining trajectory for the debt-to-GDP ratio, and (2) gross financing needs (the sum of the budget deficit and the funds necessary to roll over maturing debt in a given year) not exceeding 20 percent of GDP.

However, the European Commission's analyses of the sustainability of the Greek public debt were flawed—rooted in optimistic baseline projections and an unwavering assumption of a return to a healthy growth trend in the medium run (the latter being the result of a commitment to macroeconomic models in which fiscal policy changes have only short-term effects and the economy bounces back to its “natural” growth rate in the medium term). Nikiforos explains, however, that even slight deviations from these baseline assumptions would cause Greece's public debt to become unsustainable.

As it turned out, Greece's actual growth rate has been consistently below the rates forecast by its international lenders, resulting in a public debt ratio that has been well above lenders' projections (even despite the 2012 debt restructuring). The problem is that the fiscal targets were incompatible with the growth targets, as Nikiforos puts

it. Austerity was imposed in the name of debt sustainability. However, this generated a vicious cycle of recession and austerity, as each round of austerity measures led to slower GDP growth, which in turn increased the debt-to-GDP ratio—therefore undermining the goal of debt sustainability and leading to yet another round of austerity.

In this context, the Greek government's creation of primary budget surpluses represented a titanic effort. As Nikiforos emphasizes, budget deficits are usually countercyclical, rising in slumps and shrinking in upturns. That is, given that austerity drove growth down, which further worsened the fiscal position, hitting fiscal targets required far deeper cuts and tax increases to deal with the second-order budgetary damage resulting from prior rounds of austerity.

Ultimately, Nikiforos concludes, Greece's public debt is unsustainable and a major restructuring is needed. In his view, this was true before the pandemic. With the COVID-19 crisis, we are well beyond minor deviations from an overly optimistic baseline projection. The pandemic shock will lead to a rapidly rising public debt ratio. The pandemic thus places two pressure points on the austerity strategy imposed on Greece. As mentioned, the depleted healthcare capacity undermines their ability to contain and treat the virus's spread. And as debt and deficits rise due to the economic fallout from the pandemic, deeper and deeper cuts will be required if the austerity strategy is not abandoned—further crippling not only the country's general ability to deal with a downturn using fiscal policy, but also the healthcare system's already-weakened capacity to manage the pandemic.

Moreover, as Nikiforos observes, this coronavirus crisis will not impact Greece alone. Other vulnerable eurozone countries will see their public finances deteriorate severely enough to require financial assistance from the European Stability Mechanism—assistance whose prerequisites are conditionalities that will launch these countries into the cycle of austerity, recession, and deeper austerity that Greece experienced. To avoid this outcome—one which Nikiforos believes may hasten the breakup of the eurozone—he advocates at least limited debt mutualization (with respect to the debt increases certain to result from the pandemic) and the issuance of a common bond, along with policies to finally address the structural imbalances within the euro area.

As always, I welcome your comments.

Dimitri B. Papadimitriou, *President*  
June 2020

## Introduction

A first draft of this policy brief was written in the fall of 2019 to provide some macroeconomic background for a report by Amnesty International on the effects of austerity on basic economic and social rights in Greece, with an emphasis on healthcare provision (Amnesty International 2020). My plan was to revise the original manuscript and publish it at some point in the spring.

In the meantime, the COVID-19 shock hit economies around the world, including the Greek economy. In fact, according to some recent Organisation for Economic Co-operation and Development (OECD 2020) estimates, the Greek economy faces the most severe potential initial impact due to the partial or complete shutdowns related to the pandemic, in comparison to a relatively broad group of selected advanced and emerging market economies. The International Monetary Fund (IMF 2020a), in its April 2020 *World Economic Outlook*, is projecting that the growth rate of the Greek economy for 2020 will reach -10 percent.

The pandemic shock made this policy brief—and of course the Amnesty International report—even more timely than before. It is now widely acknowledged that a robust public healthcare system is key to fighting the pandemic. The healthcare sector employees who are now hailed as national heroes were, until only very recently, slandered by the architects of the austerity and adjustment programs as one of the main examples of corruption in the Greek public sector.

Therefore, it is important to understand what effects the austerity of the last ten years had on public healthcare in Greece, and how the healthcare expenditure cuts were justified in the name of public debt sustainability.

The first draft of this policy brief also included a section on the dangers for the Greek public healthcare sector in adhering to the future commitments required by the adjustment programs. The point I was making was that, according to the various debt sustainability analyses performed by the European Commission (e.g., 2018), Greek public debt was deemed sustainable under some optimistic baseline assumptions; however, even very small deviations from these assumptions would lead to an explosion of the debt-to-income ratio. Hence, I concluded, given the experience of the previous period, this poses great risks for the provision of healthcare and other public services.

In the COVID-19 era, the implications of this conclusion are very important. If even a small shock would make Greek debt unsustainable, the pandemic shock will definitely do so. Hence, sooner rather than later, Greece and the eurozone will face the same questions that were swept under the rug in the past decade.

There are three important differences compared to ten years ago. The first obvious one is that after having already lost a quarter of its output, the support for austerity policies of a similar magnitude will be considerably weaker this time around. Second, and related to the first difference, the COVID-19 shock itself demonstrates that public functions such as healthcare provision are essential. Hence, it will also be harder to justify further cuts in government expenditure, especially for these functions. Third, the problem this time will not concern Greece alone. Due to the COVID shock, several European economies will face issues with their public—and private—indebtedness when the dust settles.

Hence, the moment of truth—for Greece and for the eurozone more broadly—has come. The effect of the pandemic in every single member country will be an increase in private and public debt-to-GDP ratios. In the most vulnerable economies these ratios will most likely exceed what the markets consider acceptable. So a likely scenario for the coming years is that several countries will have to resort to funding from the European Stability Mechanism, which is tied to conditionalities and adjustment programs like those imposed on Greece. If the eurozone follows this path, the most likely outcome is a breakup that will follow in the next few years. To avert this, eurozone countries will have to agree to some measures and policies that until now seemed unrealistic. At a minimum, there is a need for a mutualization of the debt related to the pandemic, with the issuance of a common bond. In the medium run, it is also necessary to enhance the fiscal capacity of the Union, and to design regional policies that will address the structural imbalances among countries. In the case of Greece, in addition to these measures, a bold restructuring of the debt will be necessary.

## Some Basic Indicators

In the period after the Great Recession of 2007–9, the Greek economy experienced the largest drop in real output that any currently advanced economy has experienced in peacetime.

Figure 1 shows that by 2013, Greece had lost 23 percent of her output compared to 2009 (when the crisis started, after the October elections of that year). Compared to 2007, which was the peak of the previous cycle, the decline was close to 27 percent. In the same figure we can also see that the period that followed the freefall of 2009–13 was one of anemic growth. As of 2019, real GDP was only 5.5 percent above its level from six years earlier.

As one would expect, unemployment increased. At its peak in 2013 it reached 27.5 percent, almost 20 percentage points above its 2008 level. Due to the stabilization of the economy, the unemployment rate has decreased and in 2018 fell below 20 percent for the first time since the crisis began. This decline is to a certain extent due to the migration of a significant part of the labor force—the most educated and productive part—abroad, mainly to northern Europe and the United States.

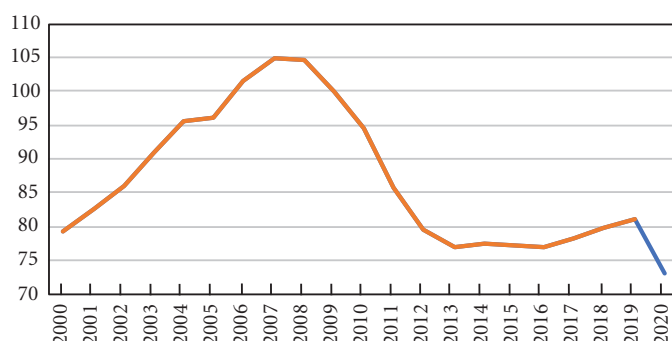
Moreover, and not unexpectedly, the crisis had severe consequences for social conditions in Greece. According to data from the European Union Statistics on Income and Living Conditions (EU-SILC), the number of people at risk of poverty or social exclusion increased rapidly between 2010 and 2013—by more than 900,000 in only three years, out of a total population of around 11 million.

The Greek crisis started as a fiscal crisis when, after the elections in October 2009, it was announced that the fiscal deficit would be roughly double what was previously projected. At the heart of the crisis, then, was an effort to consolidate the budget. The drop in output reported in Figure 1 was accompanied by severe austerity. Figure 2a shows that by 2016, real

government expenditure was 30 percent below its 2009 level. Meanwhile, as Figure 2b shows, the implicit average tax rate (including social contributions) increased by 10 percentage points compared to the precrisis period.

The expenditure cuts were across the board. Figure 3 shows that among the different categories of public expenditure, only expenditure on environmental protection increased in the 2009–18 period. The remaining categories have seen sharp decreases; expenditure on social protection, which is proportionally the largest category, decreased by a below-average 18.5 percent. This is normal, given the high unemployment rates of the period.<sup>1</sup> On the other hand, the next two biggest categories—general public services and health—have seen above-average cuts of 45 percent and 42 percent, respectively.<sup>2</sup>

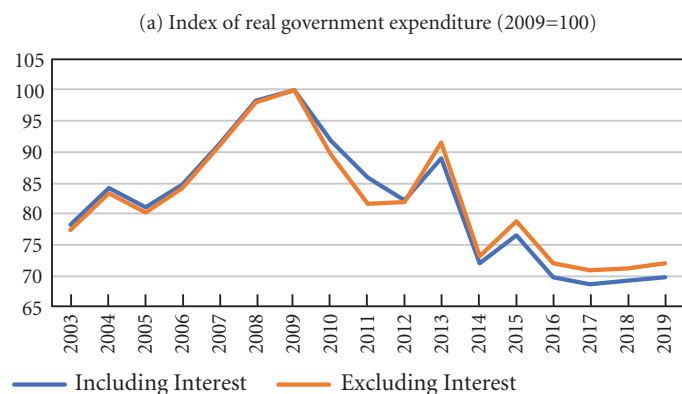
**Figure 1** Index of Real GDP 2000–20 (2009=100)



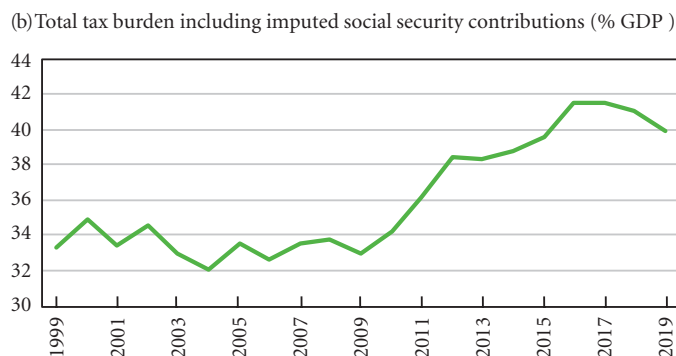
Source: AMECO

Note: The number for 2020 assumes a drop in GDP of 10 percent.

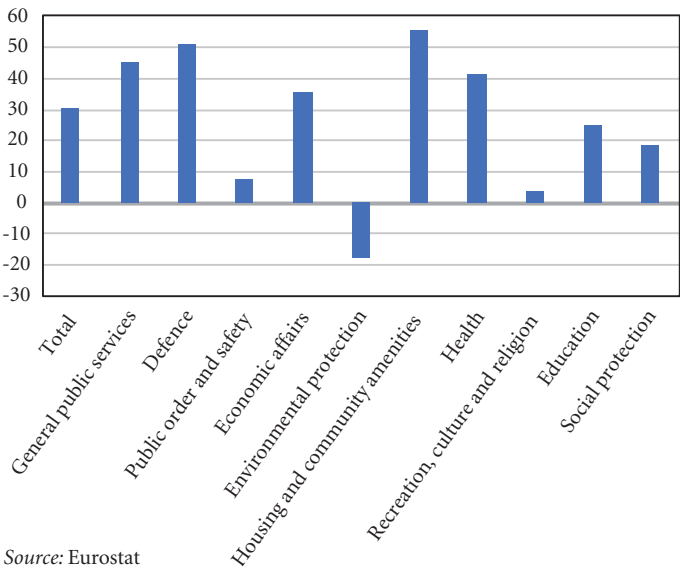
**Figure 2** Government Expenditure and Taxes



Source: AMECO



**Figure 3 Percentage Decrease in Government Expenditure by Function, 2009–18**

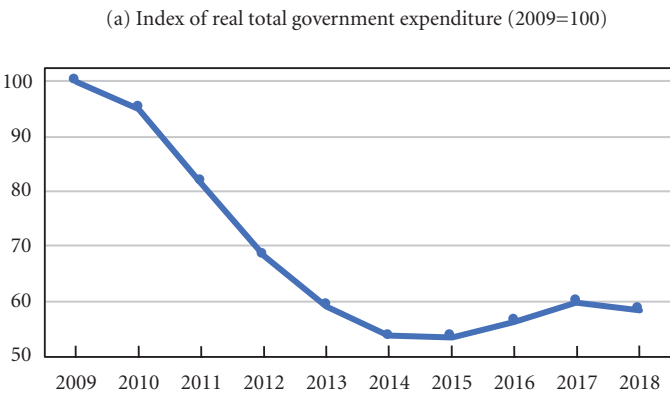


Source: Eurostat

### Public Healthcare

Sharp decreases in healthcare expenditure are a staple of austerity programs where the IMF is involved, because it is a sector where cuts can be applied quickly. In fact, Figure 3 presents only one aspect of the story. As Figure 4a shows, the cuts in real government expenditure on healthcare approached 47 percent by 2014, and then slowly recovered in the following years. In other words, real government expenditure on healthcare almost halved within a five-year period.

**Figure 4 Government Healthcare Expenditure**



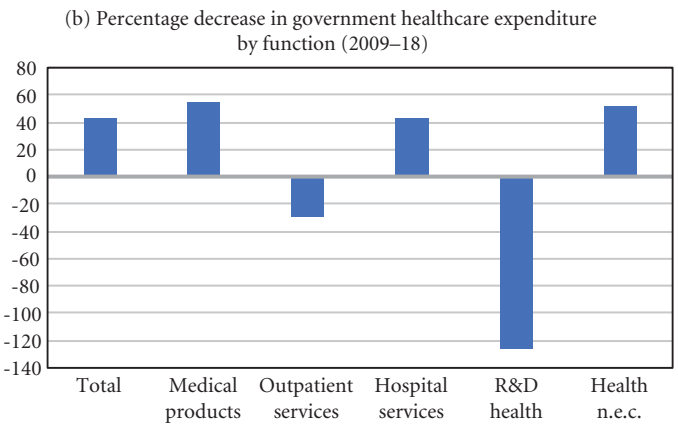
Source: Eurostat

The burden of the cuts in healthcare naturally fell on the biggest categories of healthcare expenditure: “hospital services” and “medical products, appliances, and equipment.” In 2009, they comprised 62 percent and 32 percent of total healthcare expenditure, respectively. Figure 4b shows that the former has been cut by 43 percent and the latter by 55 percent. On the other hand, minor categories such as “outpatient services” and “R&D health” (around 4 percent and 0.2 percent of total healthcare expenditure in 2009) have seen an increase.

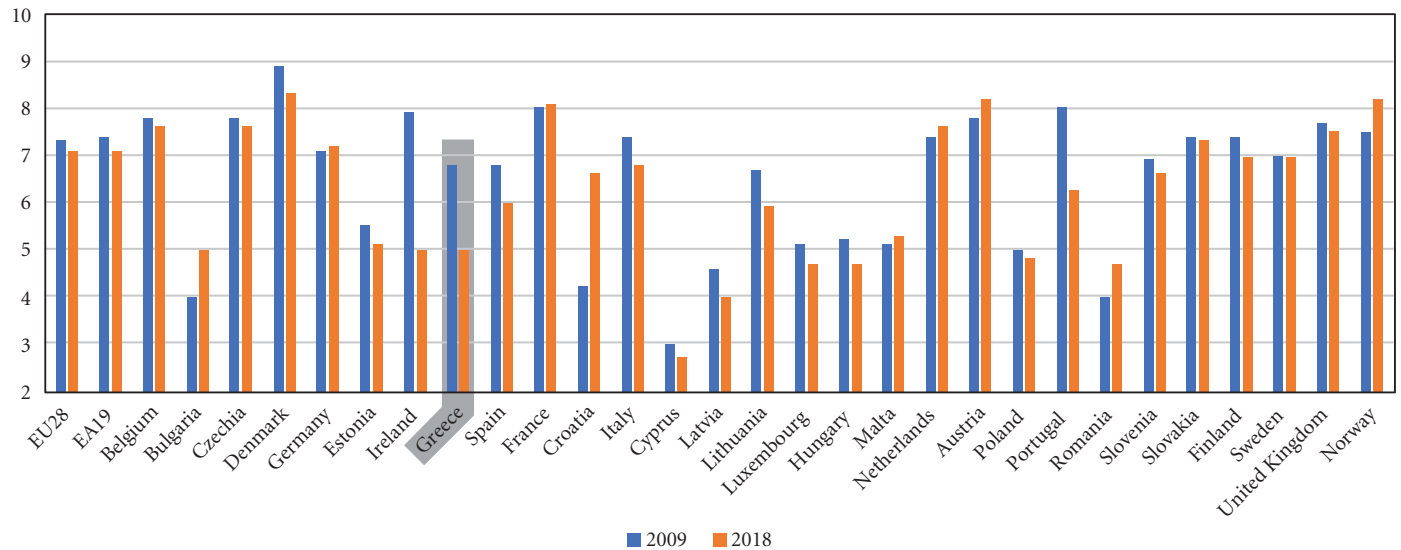
Figure 5 presents a comparison of government healthcare expenditure in Greece and other European Union (EU) countries. Before the crisis, Greece was already below the EU average. Because of the cuts of the previous years, government healthcare expenditure is now around 5 percent of GDP—on the same level as other EU countries that were subjected to austerity programs and applied the cuts (like Ireland), or Eastern European countries where healthcare expenditure was quite low to begin with (such as Bulgaria, Romania, and Estonia).

Figure 5 also reveals that, at least in the European context, public expenditure on healthcare increases with a country’s per capita income and level of development. Seen from that point of view, one of the results of the austerity policies was to push the countries where it was implemented backwards toward earlier stages of economic development.

In recent work, Temin (2018) and Storm (2017) use the distinction between “dual” and “mature” economies that was originally proposed by Lewis (1954). They argue that the political and economic developments of the last four decades



**Figure 5 Government Expenditure on Healthcare for Various European Union Countries (percent of GDP)**

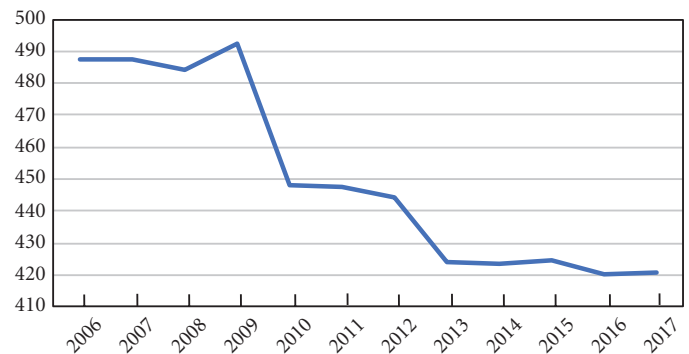


Source: Eurostat

have led to the reversion of the US economy to a “dual” economy, with only a fraction of the population having access to education, healthcare, and enjoying the benefits of economic growth. The austerity policies in the European periphery have also led to a fast-track dualization of its respective economies and societies—thus achieving in only a few years what took four decades of slow change in the United States. Figure 5 also gives a glimpse of this process.

A detailed discussion of the effects of this precipitous cut in expenditure on healthcare is beyond the scope of this policy brief (the aforementioned report by Amnesty International [2020] provides such a discussion, and the interested reader can refer to that). Two comments are sufficient here. First, as one can easily imagine, halving government expenditure on healthcare in only five years led to an equally dramatic decrease in the quality and quantity of healthcare coverage. Second, these cuts had an obvious effect on the ability of the Greek healthcare system to cope with the recent COVID-19 pandemic. One metric of this ability, to which many commentators have recently referred, is hospital bed capacity. As Figure 6 shows, the austerity and the decrease in expenditure on “hospital services” led—unsurprisingly—to a rapid decrease in the number of hospital beds. The figure shows that the Greek healthcare system lost roughly 14 percent of its bed capacity within five years. Almost half of the decrease took place in the very first round of austerity in 2010.

**Figure 6 Hospital Beds per 100,000 Inhabitants**



Source: Eurostat

### The “Logic” of Austerity

The political economy of fiscal austerity is a very interesting topic; it is, however, beyond the scope of this policy brief. One aspect is important for our purposes. When a country finds itself in the position to ask for external financial assistance—from the IMF or from European institutions—austerity is justified in the name of the sustainability of public finances.

If a country’s debt burden is unsustainable, then the government will not be able to repay whatever funds it borrows. For that reason, the IMF has an explicit policy not to lend to a government with unsustainable debt, unless there are additional measures (such as debt restructuring) that bring about



this sustainability. The European institutions do not have such an explicit clause, but it would be political suicide to admit that they are lending funds that will never get repaid.

In turn, assessing debt sustainability is a difficult issue, and different measures have been proposed (for a recent discussion, see Corsetti [2018]). The most common one, especially for medium- and long-run analyses, is the public-debt-to-GDP ratio. A country's debt is considered sustainable if the ratio tends to stabilize or decrease in the medium run; it is considered unsustainable if the ratio keeps increasing (or “explodes” in economic jargon).

There are five main factors that determine the debt-to-income ratio's trajectory: (1) the primary surplus, (2) the growth rate, (3) the interest rate, (4) the inflation rate, and (5) the level of the debt-to-income ratio itself. All other things equal, an increase in the primary surplus, the growth rate, or the inflation rate would tend to decrease the debt-to-income ratio. Conversely, an increase in the interest rate and a high level of the ratio itself tend to increase and destabilize it.

In mathematical terms, the trajectory of public debt as a percentage of GDP can be described by the following equation:

$$\Delta(D/PY)_t = [d_t^P + (j_t - g_t - \pi_t - \pi_t g_t)D_{t-1}]/P_t Y_t \quad (1)$$

where  $\Delta$  is the difference operator,  $D$  stands for government debt,  $P$  for the real GDP,  $Y$  for the price level,  $d_t^P$  for the primary deficit,  $j$  for the interest rate,  $g$  for the real GDP growth rate,  $\pi$  for the inflation rate, and the subscript  $t$  for the time period to which each variable refers.

The intuition behind this equation is straightforward. An increase in the growth rates of income and inflation tend to increase the denominator of the debt-income ratio (and thus decrease the ratio itself). An increase in the primary surplus means more savings and therefore a decrease in the stock of debt in the ratio's numerator. Finally, an increase in the interest rate and a high level of debt burden imply a high level of interest payments, which tend to decrease savings and increase the debt-income ratio.

Equation (1) was first used by Domar (1944) in an analysis of “the burden of debt” and national income of the US economy after the war. It is a simple stock-flow accounting identity, and therefore it is true by definition, and applies to the analysis of the debt-income ratio of any sector or agent. Hall and Sargent (2011, 193) have called it the “least controversial equation of macroeconomics.”

This discussion makes clear the “logic” of austerity, as it was stated in the various memoranda and reviews of the three adjustment programs. Austerity—the cuts in government expenditure and the increase in tax rates (see Figures 2 and 3)—will lead to a decrease in the government deficit (or an increase in the surplus) and therefore will have a direct positive effect on debt sustainability. Additionally, the various “structural reforms” will boost the growth rate and also contribute to debt sustainability. It was recognized that inflation might fall, but this would have a positive effect on competitiveness and growth that would be larger than the negative direct effect. Finally, by providing loans with interest rates below the market rate, the adjustment programs would also contribute to the sustainability of public finances.

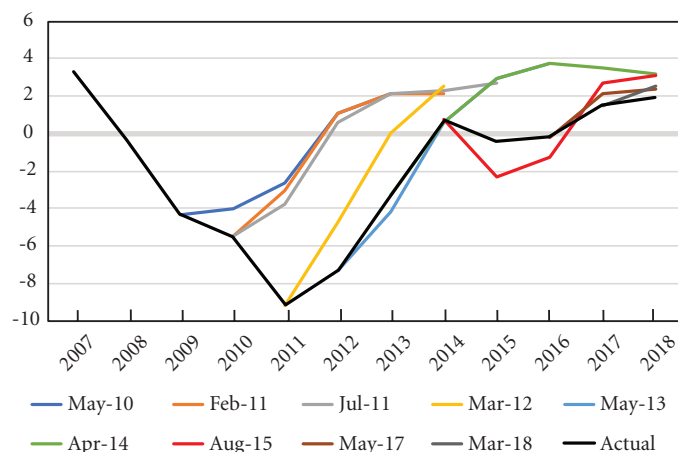
For example, the first memorandum, signed in May 2010, predicted a very fast fiscal consolidation: namely, a 12 percentage point improvement in the primary deficit by 2013. This fiscal adjustment was projected to be accompanied by a relatively shallow recession and a fast return to growth in 2012. Together with the proceeds of privatization of public assets, the forecasted trajectories of these basic macroeconomic variables (deficit, growth, inflation rate) were supposed to lead to a containment of the debt-income ratio, which would, according to the projection, reach 150 percent in 2013 and decrease thereafter.

## The Vicious Cycle of Recession and Austerity

Things turned out differently. The original projections—and the projections after them—proved to be wildly optimistic. Figure 7 presents the projections made in the three memoranda and intermittent reviews, contrasted with the Greek economy's actual GDP growth rate, for the years 2010 to 2018.<sup>3</sup> It becomes immediately clear that the actual growth rate has been consistently below what the international lenders were forecasting. The growth rate reached -9.13 percent in 2011 (as opposed to the -2.6 percent rate forecasted in May 2010 or the -3.8 percent rate forecasted in July 2011).<sup>4</sup>

Another interesting observation one can make in relation to Figure 7 is that, despite the successive forecasting errors, the medium-term projections remained unchanged for a long period of time. In all these projections, the economy is bound to return to an “equilibrium” growth rate of between 2 percent

**Figure 7 Actual and Projected Growth Rate, 2007–18**



Source: AMECO; European Commission; author's calculations

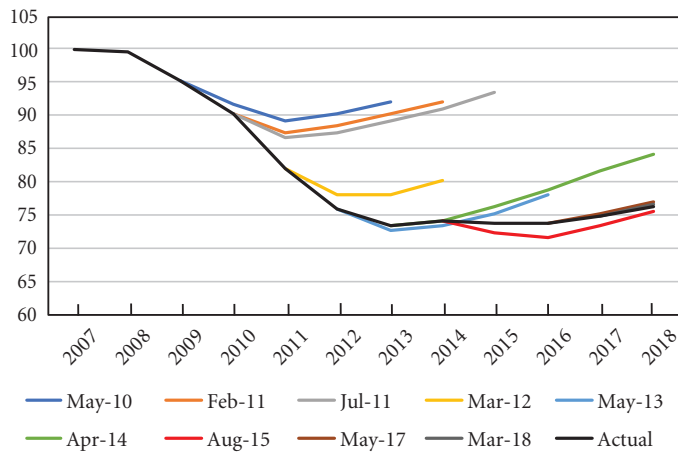
and 3 percent in the medium run, which is independent of what is happening in the near term.

The same sort of overoptimism—albeit with a smaller margin of error—has been common in the forecasts made by the IMF, the European Commission, and other official agencies (like the US Congressional Budget Office) for most European economies in the period after the recession.<sup>5</sup> In other words, the conventional wisdom for many years after the crisis was that the economies would bounce back and return to their pre-crisis rates of growth.<sup>6</sup>

These errors are telling. The implicit assumption being made is that fiscal policy or monetary and financial factors can have an impact on the real economy only in the short run. In the medium run, the economy tends to return to what economists call its “natural growth rate,” which is equal to the rates of labor force growth and technical change. These two factors are assumed to be structural and independent from short-run shocks. Hence, according to this approach, the best way to boost an economy’s long-run prospects is through “structural reforms” that will increase the growth rate. A lot of the “reforms” in Greece were justified along these lines.

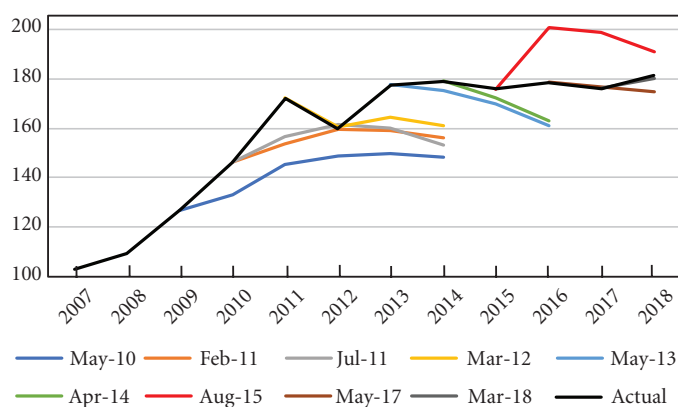
A corollary to the failure of these growth rate projections is that real GDP fell much more than forecasted. Figure 8 presents the trajectory of real GDP together with the forecasts at the various stages of the three programs. It shows that—as mentioned—the original May 2010 projection envisaged a shallow recession. Assuming that the economy would keep growing at a rate of 2.1 percent, which was the medium-term

**Figure 8 Actual and Projected Real GDP, 2007–18**



Source: AMECO; European Commission; author's calculations

**Figure 9 Actual and Projected Government Debt-to-GDP Ratio, 2007–18 (percent of GDP)**



Source: AMECO; European Commission; author's calculations

growth rate estimated at the time, the Greek economy would have surpassed its precrisis (2007) peak in 2017. This would still be a “lost decade.” However, as we also saw in Figure 1, as of 2019, real GDP was still nearly a quarter below its 2007 level and heading even lower due to the pandemic shock.

Another consequence of the lower-than-expected economic performance was that the public debt-to-GDP ratio projections also proved to be overly optimistic. Figure 9 presents the actual and projected trajectories of this ratio. It shows that, as in the case of the growth rate and the level of real GDP, the public debt-to-GDP ratio is way above what it was expected to be, despite the debt restructuring that took place in 2012 (hence the drop in the ratio that year).<sup>7</sup>

The most accurate of the adjustment programs' forecasts has been the primary balance. According to the original May 2010 agreement, the primary balance was supposed to have improved by around 12 percentage points until 2013.<sup>8</sup> This adjustment had to take place during a recession in Greece and Europe and amidst a fragile global economic recovery after the 2007–9 crisis. The actual consolidation approached these projected levels. If we exclude the expenditure on bank recapitalization, the difference between the primary deficits of 2009 and 2013 was 12 percentage points.

Fiscal deficits are usually countercyclical: they tend to increase in recessions and decrease in upswings. The reason for that is that certain kinds of public expenditures—such as unemployment benefits—increase during recessions, while tax revenues decrease since taxable income decreases. Therefore, given the drop in output that took place over the same period, the fiscal consolidation that took place in Greece is extraordinary.

The prioritization of fiscal consolidation over other policy targets is crucial to understanding the evolution of the Greek crisis (and has important implications for the future, which will be discussed in the next section). A basic characteristic of the Greek programs is that the fiscal targets are incompatible with the growth targets. The austerity put forward in the first program had much more severe effects on GDP than those officially projected.<sup>9</sup> At the same time, these effects also had a negative impact on the government's fiscal position through the automatic stabilizers (higher unemployment benefits, lower tax collection, etc.). The prioritization of fiscal targets meant that new fiscal measures had to be adopted (lower government expenditures, higher taxes) to compensate for the worsening fiscal position. In turn, these new measures led to a further decline in economic activity, further undermined the targeted fiscal balance, and eventually necessitated the adoption of even more fiscal measures. In addition, the depressed economic activity had a very adverse effect on the banking sector. As a result, Greek banks—which had been otherwise quite conservative before the 2007 crisis—needed two rounds of recapitalization.

This was the vicious cycle between austerity and recession that led to the collapse in output (Figures 1 and 8), which was accompanied by a similar collapse in government expenditure—as demonstrated in the discussion around Figure 2—and an increase in the tax burden (Figure 3).

## Implications for the Future

The preceding discussion has some important implications for the future. At the end of 2019, the public debt-to-GDP ratio was around 177 percent. Given these high levels of debt relative to GDP, even small macroeconomic shocks could have caused its trajectory to explode. The pandemic shock, and the ensuing crisis, will definitely do that. Hence, Greece faces the danger of yet another round of austerity that will lead to another downward spiral and further undermine economic and social rights in the country—and healthcare provision in particular.

To understand this, we can refer to the Debt Sustainability Analysis (DSA) in the July 2018 Compliance Report, which was the last report of the third adjustment program that ended in August 2018 (European Commission 2018a, 41–3). Since the end of the third adjustment program, Greece has been under an “enhanced surveillance” status and Enhanced Surveillance Reports have been regularly published. The July 2018 DSA forms the basis of the DSA in the more recent reports and their results are broadly similar.<sup>10</sup>

The underlying assumptions of the July 2018 DSA are the following:

- 1) Short-term real GDP growth follows the Commission's (then) latest forecast (around 2 percent until 2020).
- 2) Long-term real GDP growth is 1 percent after 2022.
- 3) Inflation gradually rises from 0.9 percent in 2018 to 2 percent in 2023 and maintains that level thereafter (hence, nominal growth is 3 percent over the long run).
- 4) Total privatization revenues are around €14 billion between 2018 and 2060.
- 5) The government's primary surplus is 3.5 percent of GDP until 2022, and then decreases 0.5 percentage points per year, reaching 2.2 percent of GDP in 2025 and remaining there afterward.
- 6) Market interest rates follow the expected risk-free rate plus a risk premium; they are expected to reach 4.1 percent in 2019, and then gradually increase to 5.4 percent by 2030, ending up at 5.1 percent in 2060.
- 7) Part of the Greek government's available cash reserves will be used to cover its debt (bringing its cash balance down to €12 billion by 2022).

Under these assumptions, the debt-to-GDP ratio was projected to decrease to 136.6 percent in 2030, to 125 percent in

2050, and then eventually to converge to 127 percent by the end of the projection period in 2060 (see Figure 10). This is still a high level of debt, but represents a declining trajectory.

Another commonly used measure of debt sustainability is gross financing needs (GFN), defined as the sum of budget deficits and funds required to roll over debt that matures in the course of the year. Debt sustainability requires GFN to remain below 20 percent of GDP. Under the baseline projections, this is also the case. Hence, under both measures, the debt is considered sustainable.

Besides the baseline scenario, the report simulates an “adverse scenario,” which is particularly interesting. Under this scenario:

- 1) Between 2023 and 2060, nominal GDP growth is reduced by 0.2 percentage points per year compared to the baseline scenario (that is long-run nominal growth of 2.8 percent as opposed to 3 percent in the baseline).
- 2) The primary surplus follows the baseline path until 2022 and then decreases to 1.5 percent in 2023 and afterward.
- 3) *The rest of the assumptions remain unchanged.*

In this adverse scenario, debt explodes after 2032 and reaches 235 percent of GDP in 2060. Similarly, GFN exceeds the threshold of 20 percent after 2033 and exceeds 50 percent by 2060.

The results of the “adverse” scenario are important because the scenario is not that adverse: long-run nominal growth is only 0.2 percent below the baseline and the primary surplus is only 1 percent below the baseline. Nevertheless, even

with these minor changes the debt trajectory is radically different compared to the baseline, and debt explodes.

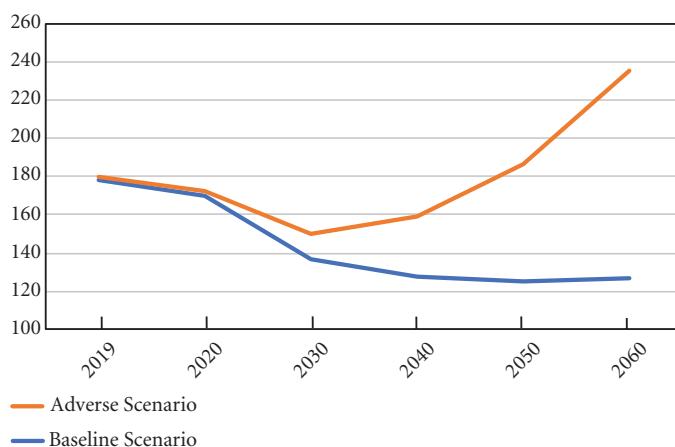
Even before the pandemic shock, the sensitivity of these debt sustainability projections to even minor deviations from the optimistic baseline assumption was worrisome. To a certain extent, it looked like the baseline assumptions were calibrated in such a way to make the debt appear sustainable. These considerations led the IMF to abstain from the third set of adjustment programs, as according to their own DSA the Greek public debt was not sustainable, even in their baseline calculations (see, for example, IMF [2016]).

There are several reasons why the baseline assumptions in the European Commission’s DSA are unrealistic. A permanent primary surplus of 2.5 percent is far above the Greek historical experience. It also implies a permanent improvement in the trade balance, and at the moment it is not clear how this would come about.<sup>11</sup> Similarly, it is also not clear how the inflation rate will converge to 2 percent so quickly. This is in line with the European Commission’s modeling assumptions (where everything converges to some sort of “natural” level in the medium run), but it is very questionable as to whether it will materialize. Inflation in the eurozone over the last decade has consistently undershot official projections.<sup>12</sup> Finally, economic growth in Europe and all around the world had slowed down and a global recession is becoming more and more likely (even without the pandemic shock). Such a global slowdown would certainly impact the Greek economy as well.

The pandemic shock, besides its immediate effect on GDP growth, will clearly push the debt-to-GDP ratio off track. If we assume that, due to the pandemic, Greece’s 2020 GDP will fall by 10 percent and the primary deficit will exceed 5 percent of GDP (these projections are probably on the optimistic side), the overall debt-to-GDP ratio will climb toward 200 percent. According to the European Commission’s latest projections—available in the AMECO database—the debt-to-GDP ratio in 2020 will be 196.4 percent, while in its April 2020 *Fiscal Monitor*, the IMF is projecting 200.7 percent (IMF 2020b).

Thus, Greece and the eurozone will soon face the same questions they faced ten years ago. When the dust settles it will become clear that Greek debt is not sustainable. What will be the answer to these questions? If meeting the fiscal targets remains the priority for Greece’s international lenders, it is very likely that there will be a repetition of the aforementioned vicious cycle of recession and austerity—further fiscal

**Figure 10 European Commission’s July 2018 Main Debt Sustainability Analysis Results (percent of GDP)**



Source: European Commission (2018)

contraction, which will trigger further drops in the level of economic activity and employment. In such a scenario, fiscal expenditure on healthcare will most likely be on the menu of cuts, as it has been in the recent past. More broadly, another round of austerity will increase poverty and undermine social and economic rights, much as it has done in the last ten years.

For that reason—and as was explained in Nikiforos, Zezza, and Papadimitriou (2015)—a restructuring of the Greek debt will be necessary one way or another. A continuation of austerity cannot be justified on either moral or practical grounds. Moreover, the recovery from the current pandemic depression in Greece and most other European countries will require some form of debt mutualization, so that the debt burden due to the depression does not push these countries into another vicious cycle of recession and austerity. Finally, in the medium run the eurozone will also need to take steps to address its structural imbalances.

Many would counter that these measures seem politically unrealistic at this point. This might be true, but at the same time they are necessary preconditions for the long-run survival of the eurozone.

At the time of writing this brief, the European Commission put forward a plan called “Next Generation EU,” which would allow the Commission to borrow €750 billion in the financial markets and then provide €500 billion in grants and €250 billion in loans for the eurozone economies’ recovery from the pandemic crisis. According to initial reports, Greece would receive roughly €22 billion in grants and €10 billion in loans. This plan—if it is adopted without being watered down in the process and if these funds are not associated with explicit or implicit conditionalities—is a significant step in the right direction. It is also an example of a policy initiative that would have seemed unthinkable even very recently. Nevertheless, as previously emphasized, these kinds of measures need to be further expanded and made permanent.

## Concluding Remarks

The present policy brief discussed Greece’s recent experience with austerity and the likely future implications of the policy framework that is currently being implemented. It was shown that the years after the beginning of the first adjustment program saw a dramatic decrease in government spending on healthcare expenditure. This decrease—which reached

50 percent in 2014—was part of the wider fiscal consolidation that occurred over the same period.

It was explained that fiscal austerity has been justified as the means to achieve debt sustainability. The underlying assumption has been that austerity does not have significant effects on economic activity. Hence, the decreases in fiscal deficits will eventually lead to the stabilization and eventual decrease in the public debt-to-GDP ratio.

Things turned out differently. The fiscal targets were incompatible with the programs’ growth targets. The attempted decreases in fiscal deficits led to a sharp decrease in demand and increases in unemployment; this, in turn, tended to increase fiscal deficits. Over the course of the programs’ implementation, the target that was most closely met was the achievement of the primary surpluses. This prioritization of fiscal targets led to a vicious cycle of recession and austerity.

At the same time, the insistence on meeting fiscal targets has important implications for the future. Because of Greece’s high level of public debt, the sustainability of that debt is very sensitive to even minor macroeconomic shocks. The current pandemic shock and its impact on the government deficit and growth will make it obvious that Greek debt is unsustainable. If international lenders persist in chasing fiscal targets, the likelihood of further cuts to fiscal expenditure in general, and to expenditure on healthcare and social provisions in particular, is high.

Thus, the pandemic shock brings the necessity of a bold restructuring of the Greek public debt back to the fore, as well as policies that will tackle the eurozone’s structural imbalances.

## Notes

1. In 2009, social protection accounted for 34.5 percent of total expenditure. By 2018, its share had increased to 40.5 percent.
2. In 2009, general public services and healthcare accounted for 22.3 percent and 12.6 percent, respectively. By 2018, they had fallen to 17.7 percent and 10.6 percent.
3. The various documents from which the data were collected can be found on the European Commission website’s page “Financial assistance to Greece”: [https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-financial-assistance/which-eu-countries-have-received-assistance/financial-assistance-greece\\_en#first-programme-for-greece](https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-financial-assistance/which-eu-countries-have-received-assistance/financial-assistance-greece_en#first-programme-for-greece)



4. The exception to this overoptimism was the August 2015 projection that accompanied the third adjustment program, which turned out to be overly pessimistic for the short run (although in the medium term it also overestimated the growth rate).
5. A graph similar to Figure 7 presenting the actual and forecasted growth rate of world GDP even appeared in the 2016 Economic Report of the President in the United States.
6. For a related discussion with reference to the United States, see Nikiforos and Zezza (2018).
7. For a detailed discussion of the trajectory of the public debt during the crisis, see Nikiforos, Papadimitriou, and Zezza (2015).
8. According to the number in the agreement, the 2009 primary deficit was 8.63 percent (this was later revised upwards) and the 2013 deficit would be 3.2 percent.
9. We have provided detailed discussions of several aspects of this process in various Levy Institute policy reports on Greece (see, for example, Papadimitriou, Nikiforos, and Zezza 2013a, 2013b, 2014).
10. Five of these Enhanced Surveillance Reports have been published: in November 2018, February 2019, June 2019, November 2019, and February 2020. They can all be found on the European Commission's "Financial assistance to Greece" website (see note 3). The only noteworthy difference in the reports' DSA is that the one published in February 2020 does not have an adverse scenario.
11. A basic macroeconomic accounting identity is that the financial balances of the three institutional sectors of the economy need to sum to zero. Assuming the balance of the private sector does not change, this identity implies that an improvement in the government balance has to be matched by an improvement in the foreign sector balance and vice versa (for a discussion, see Nikiforos and Zezza [2017, sec. 4]).
12. Such an increase in inflation implies a significant increase in nominal wages. Given the current state of the Greek economy and the still-high level of unemployment, this does not seem plausible.

## References

- Amnesty International. 2020. "Resuscitation required: the Greek health system after a decade of austerity." Report, April 28. London: Amnesty International.
- Corsetti, G. 2018. "Debt Sustainability Assessments: The State of the Art." Study requested by the ECON committee of the European Parliament. Economic Governance Support Unit Directorate-General for Internal Policies of the Union.
- Domar, E. 1944. "The 'Burden of Debt' and the National Income." *American Economic Review* 34(4): 798–827.
- European Commission. 2018. "Compliance Report, ESM Stability Support Programme for Greece: Fourth Review." July 2018. Brussels: European Commission.
- Hall, G. J., and T. J. Sargent. 2011. "Interest Rate Risk and Other Determinants of Post-WWII US Government Debt/GDP Dynamics." *American Economic Journal: Macroeconomics* 3(3): 192–214.
- IMF (International Monetary Fund) 2016. "Greece: Preliminary Debt Sustainability Analysis—Updated Estimates and Further Considerations." Country Report No. 16/130. Washington, DC: International Monetary Fund.
- \_\_\_\_\_. 2020a. *World Economic Outlook, April 2020: The Great Lockdown*.
- \_\_\_\_\_. 2020b. *Fiscal Monitor*. Washington, DC: International Monetary Fund. April.
- Kalecki, M. 1943. "Political aspects of full employment." *The Political Quarterly* 14(4): 322–30.
- Lewis, W. A. 1954. "Economic Development with Unlimited Supplies of Labour." *Manchester School* 22(2): 139–91.
- Nikiforos, M., D. B. Papadimitriou, and G. Zezza. 2015. "The Greek public debt problem." *Nova Economia* 25(SPE 2015): 777–802.
- Nikiforos, M., and G. Zezza. 2017. "Stock-Flow Consistent Macroeconomic Models: A Survey." *Journal of Economic Surveys* 31(5): 1204–39.
- OECD (Organisation for Economic Co-operation and Development). 2020. "Evaluating the initial impact of COVID-19 containment measures on economic activity." Online report. Available at: <http://www.oecd.org/coronavirus/policy-responses/evaluating-the-initial-impact-of-covid-19-containment-measures-on-economic-activity-b1f6b68b/> (updated April 14, 2020).

- Papadimitriou, D. B., M. Nikiforos, and G. Zezza. 2013a.  
“A Levy Institute Model for Greece.” Technical Paper.  
Annandale-on-Hudson, NY: Levy Economics Institute of  
Bard College. July.
- \_\_\_\_\_. 2013b. “The Greek Economic Crisis and the  
Experience of Austerity.” Strategic Analysis. Annandale-  
on-Hudson, NY: Levy Economics Institute of Bard  
College. July.
- \_\_\_\_\_. 2014. “Prospects and Policies for the Greek Economy.”  
Strategic Analysis. Annandale-on-Hudson, NY: Levy  
Economics Institute of Bard College. February.
- Storm, S. 2017. “The New Normal: Demand, Secular  
Stagnation, and the Vanishing Middle Class.”  
*International Journal of Political Economy* 46: 4.
- Temin, P. 2018. *The vanishing middle class: Prejudice and  
power in a dual economy*. Cambridge, MA: MIT Press.

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