



FINANCE AND DEVELOPMENT

MARCH 2018

**Angus Deaton
profiled P.34**

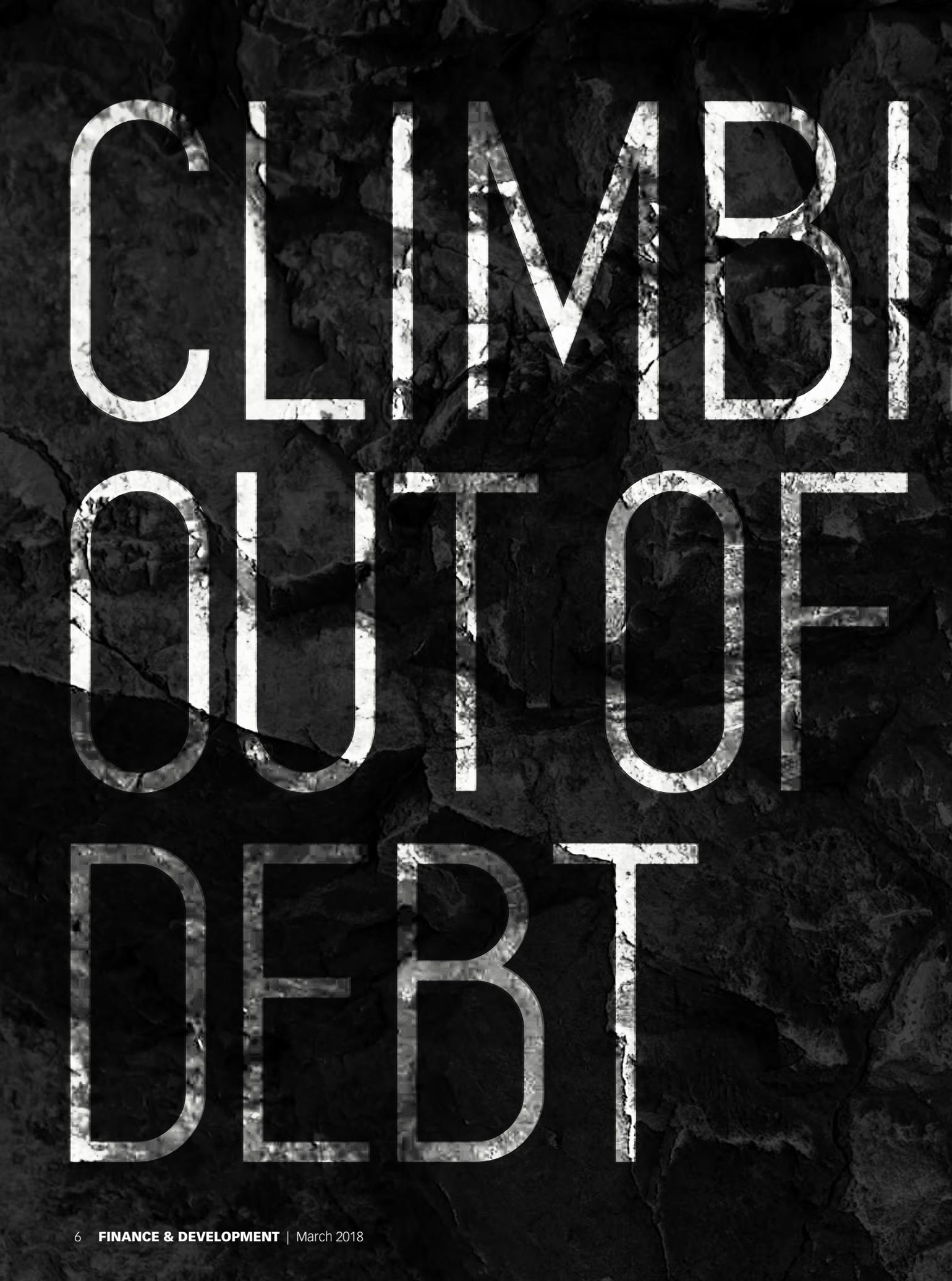
**Digital
crusaders P.40**

**Ethics and
economics P.54**



Balancing Act

Managing the Public Purse



CLIMBING OUT OF DEBT

MIG



A new study offers more evidence that cutting spending is less harmful to growth than raising taxes

Alberto Alesina, Carlo A. Favero, and Francesco Giavazzi

Almost a decade after the onset of the global financial crisis, national debt in advanced economies remains near its highest level since World War II, averaging 104 percent of GDP. In Japan, the ratio is 240 percent and in Greece almost 185 percent. In Italy and Portugal, debt exceeds 120 percent of GDP. Without measures either to cut spending or increase revenue, the situation will only get worse. As central banks abandon the extraordinary monetary measures they adopted to battle the crisis, interest rates will inevitably rise from historic lows. That means interest payments will eat up a growing share of government spending, leaving less money to deliver public services or take steps to ensure long-term economic growth, such as investing in infrastructure and education. Servicing debt will become a major burden.

What is the best way to reduce debt to sustainable levels? That question has taken on renewed importance since the global financial crisis of 2008, when government spending to stimulate growth and help the unemployed boosted budget deficits to postwar records. Some economists argue that cutting spending is the best medicine for restoring fiscal health. Others insist, on the contrary, that spending cuts are self-defeating, because they hurt economic growth. They prescribe even more government spending to reinvigorate a flagging economy.

To get a handle on the issue, it helps to look at the mathematics of debt reduction. The relevant number here is not the total amount of debt, but the ratio of debt to national income, or GDP,

richer set of data covering 16 of the 35 countries belonging to the Organisation for Economic Co-operation and Development between 1981 and 2014, including Canada, Japan, the United States, and most of Europe, excluding postcommunist nations. Our analysis focused on some 3,500 policy changes geared toward reducing deficits either by raising taxes or by cutting spending. We excluded fiscal measures aimed at stabilizing output—for example, cutting spending to cool an overheated economy—because such measures depend on the state of the economy and thus do not represent exogenous policy changes.

We should emphasize that our study focuses on a relatively limited group of developed economies. Austerity policies will have different effects in

Expenditure-based plans generally were less harmful to growth than tax-based plans.

which is a measure of the resources the economy can use to repay its debt. There are two ways to lower the ratio of debt to GDP. One is to reduce the size of the budget deficit (by cutting spending or increasing revenue); the other is to expand the size of the economy. Ideally, governments will reduce deficits and turn them into primary surpluses (that is, the excesses of tax revenue over spending, net of interest) in a way that does not hurt growth. If policies geared toward reducing deficits also caused a deep recession, they would be counterproductive: the decline in GDP would increase the debt-to-GDP ratio, notwithstanding the efforts made to reduce the deficit.

Which policies are more likely to result in a lower ratio of debt to GDP? A number of papers have addressed this question since at least the early 1990s (Alesina and Ardagna 2013 summarizes the early literature). We decided to take another look at the issue using new methodology and a much

developing economies, which have much smaller governments. Second, we are concerned with the short term and leave aside longer-term issues such as the impact of aging populations on pensions. Finally, we don't look at the flip side of austerity—expansionary policies such as tax cuts or increases in spending.

In studying these episodes, we recognized that shifts in fiscal policy typically come in the form of multiyear plans adopted by governments with the aim of reducing the debt-to-GDP ratio over a period of time—typically three to four years. After reconstructing such plans, we divided them into two categories: expenditure-based plans, consisting mostly of spending cuts, and tax-based plans, consisting mostly of tax hikes. Our conclusion runs against the basic Keynesian message, which implies that spending cuts are more recessionary than tax increases. On the contrary, our study confirms that expenditure-based plans

generally were less harmful to growth than tax-based plans.

More specifically, we found that on average, expenditure-based plans were associated with very small downturns in growth: a plan worth 1 percent of GDP implied a loss of about half a percentage point relative to the average GDP growth of the country. The loss in output typically lasted less than two years. Moreover, if an expenditure-based plan was launched during a period of economic growth, the output costs were zero, on average. This means that some expenditure-based fiscal plans were associated with small downturns, while others were associated with almost immediate surges in growth, a phenomenon sometimes known as “expansionary austerity” that was first identified by Giavazzi and Pagano (1990). By contrast, tax-based fiscal corrections were associated with large and long-lasting recessions. A tax-based plan amounting to 1 percent of GDP was followed, on average, by a 2 percent decline in GDP relative to its pre-austerity path. This large recessionary effect tends to last several years.

In our results, there is expansionary austerity when a fiscal adjustment is accompanied by faster growth than would have occurred without the fiscal correction. Other definitions are possible—for instance, looking at GDP growth relative to other countries in the sample. Expenditure-based fiscal corrections that resulted in GDP growth higher than the average, for the same period, of other countries in our sample included Austria, Denmark, and Ireland in the 1980s and Canada, Spain, and Sweden in the 1990s. Following the financial crisis, the two countries that adopted spending-based austerity and did better than the rest of the sample were Ireland and the United Kingdom, despite the huge banking problems in the former.

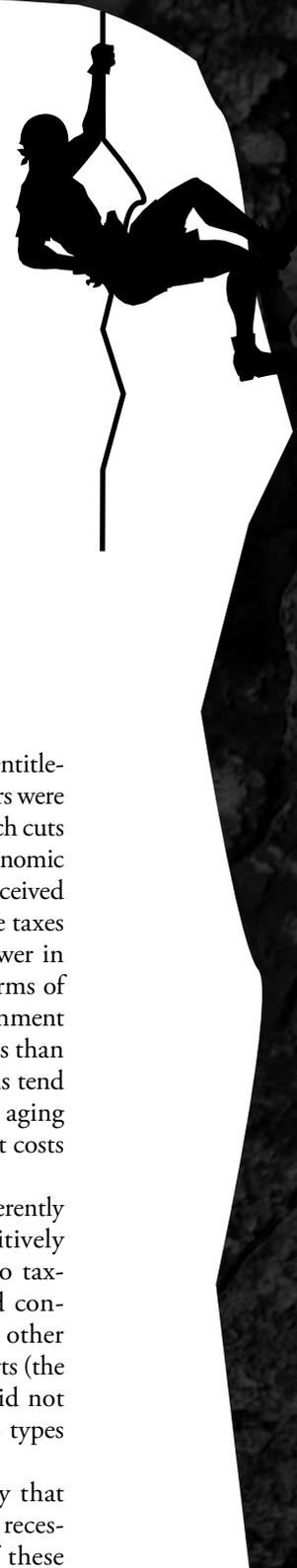
Governments sometimes seem to be aware of the different effects of tax-based and spending-based plans. For instance, in 2010 the Irish government noted that:

“The budget focused on curbing spending to adjust expenditure needs to the revenue base, which has been reduced as a result of the overall contraction of the economy and the loss of certain income streams. In addition...the Government took on board evidence from international organizations, such as the EU Commission, the OECD and the IMF, as well as the relevant economic literature which indicates that consolidation driven by cuts in expenditure is more successful in reducing deficits than consolidation based on tax increases.” (Ireland Stability Programme Update, December 2009, 15)

Our second finding is that reductions in entitlement programs and other government transfers were less harmful to growth than tax increases. Such cuts were accompanied by mild and short-lived economic downturns, probably because taxpayers perceived them as permanent and so expected that the taxes needed to fund the programs would be lower in the future. Thus, the data suggest that reforms of social security rules aimed at reducing government spending are more like normal spending cuts than tax increases. Because social security reforms tend to be persistent, especially in countries with aging populations, they entail some of the smallest costs in terms of lost output.

Private investment also responded very differently to the two types of austerity plans—positively to spending-based plans and negatively to tax-based plans. Business confidence behaved consistently with private investment. On the other hand, household consumption and net exports (the difference between exports and imports) did not appear to differ on average during the two types of adjustments.

What about recent episodes of austerity that occurred after the crisis and started during a recession? Although the sheer size of some of these



austerity plans was exceptional—not only in Greece but also in Ireland, Portugal, and Spain and to a lesser extent in Italy and the United Kingdom—the outcomes did not differ significantly from those of previous episodes. Countries that chose tax-based austerity suffered deeper recessions than those that chose to cut spending. Among the latter are Ireland, despite a massive bank bailout program, and the United Kingdom, whose economic performance was much stronger than the IMF had predicted. The UK plan consisted almost completely of spending cuts. These included cuts in government consumption and public investment; reductions in transfers, including more restrictive policies on employers' pension contributions; support allowances; and public service pensions. Spending cuts (planned or immediately implemented) between

harmful if preceded by a currency devaluation, which would make exports more competitive and support growth. We find that this was not the case: there was no systematic difference in the behavior of the exchange rate before the two types of fiscal adjustment. If the exchange rate had been a significant factor, then the difference between the two cases in terms of GDP growth should have been associated with higher growth of net exports following a devaluation, independently of the type of fiscal plan adopted. This was not the case. As mentioned above, the driving force was domestic private investment.

Finally, large fiscal adjustments are often periods of deep structural reforms, which may include the liberalization of product and/or labor markets. If these were systematically occurring at the time of

Countries that chose tax-based austerity suffered deeper recessions than those that chose to cut spending.

2010 and 2014 amounted to 2.9 percent of GDP—about 0.6 percent a year on average. Of all these measures, 87 percent were implemented within this five-year interval, with the rest deferred. The result: growth in the United Kingdom was higher than the European average. Investment growth recovered from the 21 percent drop of 2009 and increased almost 6 percent in 2010.

There are at least three possible explanations for these striking results. One is that the difference between tax- and spending-based plans is due to a difference in accompanying policies. The most obvious candidate is monetary policy. Guajardo, Leigh, and Pescatori (2014) argue that differences in the response of monetary policy are largely responsible for the different effects of the tax- and spending-based corrections they analyzed. We, however, find only a small fraction of the difference to be related to monetary policy.

A second possibility relates to the behavior of the exchange rate. A fiscal correction could be less

spending cuts, they might explain our finding. But in fact, these reforms did not occur systematically during periods of spending cuts.

A more promising explanation points to the role of confidence and expectations. Imagine an economy on an unsustainable path with exploding public debt. Rising interest rates in countries with high debt may generate exactly this scenario. Sooner or later fiscal stabilization must occur. The longer the delay, the more taxes must be raised (or spending cut) in the future. Stabilization, when it occurs, removes uncertainty about further delays that would have increased the costs even more.

Blanchard (1990) provides a simple model that illustrates this point. Stabilization that eliminates uncertainty about higher fiscal costs in the future stimulates demand today—especially from investors, who are more sensitive to uncertainty given the long-term nature of their plans. In their models, Blanchard (1990) and Alesina and Drazen (1991)

do not distinguish between stabilization on the tax and the spending side. However, it is quite likely that the benefits of removing uncertainty are more likely to occur with spending-based, rather than tax-based, austerity plans. A tax-based plan that does not address the automatic growth of entitlements and other programs over time is much less likely to produce a long-lasting effect on the budget. If the plan doesn't address automatic spending increases, taxes must be continually raised to cover the additional outlays. So the confidence effect is likely to be much smaller for tax-based plans, because of rising expectations of future taxes. Spending-based plans, on the other hand, produce the opposite effects. Our finding for the response of business confidence to austerity supports this view. Business confidence increases immediately at the start of a spending-based austerity plan, in contrast to what happens at the beginning of a tax-based plan.

Another set of explanations relates to the supply side of the economy, which reacts very differently to tax hikes and spending cuts. The persistence of the fiscal policy change is also crucial to any austerity plan and works in opposite directions depending on the type of plan. We found that a tax-based plan that lasts longer produces a deeper recession. One explanation is that without a reduction in spending, tax hikes must be long-lasting, producing long-lasting negative effects—for instance, on labor supply and investment—because of higher distortionary taxes. In contrast, a longer-lasting spending cut produces a milder recession because it signals that sooner or later it will be possible to cut taxes and the associated distortions.

The bottom line is that reducing the debt-to-GDP ratio depends a lot on how the budget deficit is corrected. If a surplus is increased by raising taxes, the downturn in growth may be so large that it raises rather than reduces the debt-to-GDP ratio. Deficit reduction policies based on spending cuts, however, typically have almost no effect on output, so they are a sure bet for a reduction in debt to GDP. **FD**



ALBERTO ALESINA is the Nathaniel Ropes Professor of Political Economy at Harvard University. **CARLO A. FAVERO** holds the Deutsche Bank chair in quantitative finance and asset pricing at Bocconi University in Milan. **FRANCESCO GIAVAZZI** is professor of economics at Bocconi University in Milan. This article is based on their forthcoming book, *Austerity: When It Works and When It Does Not*, to be published by the Princeton University Press.

References:

- Alesina, Alberto, and Silvia Ardagna. 2013. "The Design of Fiscal Adjustments." *Tax Policy and the Economy* 27 (1): 19–68.
- Alesina, Alberto, and Allan Drazen. 1991. "Why Are Stabilizations Delayed?" *American Economic Review* 81 (5): 1170–88.
- Blanchard, Olivier J. 1990. "Can Severe Fiscal Contractions Be Expansionary? Tales of Two Small European Countries: Comment." *NBER Macroeconomics Annual* 5: 111–16.
- Giaavazzi, Francesco, and Marco Pagano. 1990. "Can Severe Fiscal Contractions Be Expansionary? Tales of Two Small European Countries." *NBER Macroeconomics Annual* 5: 75–122.
- Guajardo, Jaime, Daniel Leigh, and Andrea Pescatori. 2014. "Expansionary Austerity? International Evidence." *Journal of the European Economic Association* 12 (4): 949–68.