

CHAPTER ONE

Introduction

AUSTERITY

The term “austerity” indicates a policy of sizeable reduction of government deficits and stabilization of government debt achieved by means of spending cuts or tax increases, or both. This book examines the costs of austerity in terms of lost output, what types of austerity policies can achieve the stated goals at the lowest costs, and the electoral effects for governments implementing these policies.

Why Austerity?

If governments followed adequate fiscal policies most of the time, we would almost never need austerity. Economic theory and good practice suggest that a government should run deficits during recessions—when tax revenues are low and government spending is high as a result of the working of fiscal stabilizers such as unemployment subsidies—and during periods of temporarily high spending needs, say because of a natural calamity or a war. These deficits should be balanced by surpluses during booms and when spending needs are low. In addition, forward-looking governments might want to accumulate funds for “rainy days” to be used when spending needs are temporarily and exceptionally high. If governments followed these prescriptions, austerity would never be needed.

Instead, periods of austerity are relatively common, for two reasons. First, most governments do not follow the foregoing prescriptions: deficits often accumulate even when the economy is growing and the deficits produced during recessions are not compensated for by surpluses during booms. As a result, many countries have accumulated large public debts even in perfectly “normal” times. Italy,

2 | Chapter One

Belgium, and Ireland built up large debts in the late 1970s and 1980s when gross domestic product (GDP) growth was relatively strong (more than 2% per year on average in all three countries). Greece accumulated an enormous debt at the beginning of this millennium when its growth was skyrocketing, at around 5% per year. Various political distortions may lead governments to not tax enough or, especially, to overspend.

The second reason why austerity may be needed is that sometimes exceptionally large amounts of government spending (for example, because of a war or a major disaster), perhaps even larger than anticipated, create so much debt that it cannot be reduced simply with economic growth. In some cases countries have grown out of debt, but this is not always possible. In the immediate aftermath of the Second World War growth and inflation were high enough to reduce the debt accumulated during the war years. But in recent decades this has not generally been the case. In fact, high debt itself is sometimes an impediment to growth, for instance because of the high taxes needed to finance the interest payments on the debt. The combination of high debt and low growth often leads to debt crises as investors lose confidence in the government's ability to service the debt. Austerity policies are then introduced in the attempt to restore confidence.

At times these two reasons—excessive accumulated debt and crisis—interact. Consider, for instance, the latest round of austerity, from 2010 to 2014, after the Great Recession. At the beginning of the financial crisis, several countries (for example, Italy and Greece) had already accumulated high levels of debt for no good reason. In other countries (Spain and Ireland), debt was relatively low thanks to temporarily and exceptionally high tax revenues originating from a bubble in the real estate sector. But as soon as the housing boom collapsed this fiscal bubble also exploded. The financial crisis generated a debt crisis because it hit economies in which past fiscal errors had resulted in high and dangerous debt levels.

The bottom line is that austerity measures sometimes are required because of past policy mistakes, or a combination of policy mistakes and unexpected negative shocks. The latter are fortunately relatively rare, so austerity is almost always the result of poor foresight and overspending relative to tax revenues.

Which Austerity ?

Discussions about the relative benefits and costs of the austerity policies implemented following the financial crisis that started in 2007 have been toxic, often taking a very ideological, harsh, and unproductive tone. One side argued that austerity, whether in Europe, the United States, or in any other Organisation for Economic Co-operation and Development (OECD) country was unnecessary. What these economies needed was more government spending and more time to recover from the financial crisis and grow out of the recession. Deficits and debts should have been allowed to grow even larger and for a longer time. The anti-austerity front argued that austerity was counterproductive because it resulted in increases, rather than reductions, in the debt over GDP ratio: it generated falls in the denominator of this ratio that more than offset the gains in the numerator. The most extreme version of this argument is that doing nothing, rather than engaging in any form of austerity, would have resulted in a lower debt over GDP ratio. The opposite side argued that rapidly rising levels of government debt, especially in some European countries, would have led to defaults and bank collapses, as many banks held large amounts of sovereign debt. This in turn would have generated a second round of financial crisis and an even harsher and longer recession. Many feared the breakdown of the euro, with unpredictable but potentially dramatic economic and political consequences. Furthermore, the accumulation of even larger debts would have made the future austerity even more severe. The markets did not seem convinced of the anti-austerity view: in countries with rapidly increasing debt such as Greece, Italy, Spain, and Portugal spreads skyrocketed and reversed only when austerity measures were implemented and when the European Central Bank (ECB) stepped in with unconventional monetary measures.

The main message of this book is that in order to understand the effects of austerity, one needs to recognize that there are two different types of it. One is based on increases in taxes, direct or indirect: in OECD economies with already high tax rates, further tax increases have exactly the effects that anti-austerity commentators fear. They are deeply recessionary in the short to medium run (up to 3 or 4 years after they are introduced), inducing large declines in GDP. On the other hand,

4 | Chapter One

austerity policies based on spending cuts, at least in OECD countries over the past three decades, have had the opposite effects of those predicted by anti-austerity commentators. Their costs, in terms of output losses, have been very low, on average close to zero. Austerity based on tax hikes has often resulted in an increase in the debt over GDP ratio. Whether or not the debt over GDP ratio would have gone up even more without those tax hikes is hard to say. Instead, austerity based on spending cuts has often resulted in significant reductions in the debt over GDP ratio. This difference between the effects of tax increases and spending cuts depends on two factors. One is the different effect of the two policies on the denominator of the debt over GDP ratio. The other is that spending cuts, particularly those that reduce the rate of growth of automatic entitlement programs, have a more permanent effect on deficits than tax hikes do. This is because taxes will eventually need to catch up with the automatic increases of various spending programs, if the latter are not tackled. If taxes keep rising they will slow down GDP growth, thus affecting the denominator of the debt over GDP ratio; if they do not the numerator will increase because spending goes up and taxes do not.

What could explain these remarkable differences between expenditure-based and tax-based austerity? We explore various alternative explanations. One “theory” is that the difference is simply due to a systematic heterogeneity in accompanying policies: accompanying monetary policy, exchange rate devaluations, and supply-side reforms all could “help” expenditure-based austerity more than tax-based austerity. We will show that this is not the case. A second more promising explanation has to do with expectations and confidence. Imagine a situation in which an economy is on an unsustainable path with an exploding public debt. Sooner or later a fiscal stabilization has to occur. The longer this is postponed, the higher the taxes that will need to be raised or the spending to be cut in the future. When the stabilization occurs it removes the uncertainty about further delays that would have increased even more the costs of the stabilization. The beneficial effects of the removal of uncertainty are more likely to occur with spending cuts than with tax hikes. This is because the latter does not address the automatic growth of entitlements and other spending programs; thus it does not produce

a long-lasting effect on the budget. The result is that taxes will need to be constantly increased to cover the increase in outlays. Thus the confidence effect is likely to be much smaller for tax hikes, as expectations of future taxes will continue to rise. Spending cuts produce the opposite effects. Our findings on the behavior of business confidence during episodes of austerity support this view.

Another set of explanations relates to the supply side of the economy, which reacts very differently to tax hikes or spending cuts. Tax hikes and spending cuts have different demand and supply side effects. Increases in labor taxes, for instance, reduce the labor supply and raise labor cost for firms and thus prices. They also reduce aggregate demand of consumers, lowering disposable income. Spending cuts reduce aggregate demand directly but, especially if perceived as permanent, they reduce the expected future burden of taxation for consumers and may also influence their labor supply, since taxes are expected to go down. These interactions of demand and supply generate “general equilibrium effects” that are often overlooked in the journalistic analysis of fiscal policy. As we shall see later, a critical factor that explains these interactions is whether or not the changes in fiscal policy are expected to be permanent or transitory. We return in more detail to these issues in Chapter 7.

Can Austerity Be Expansionary?

Yes, it can. Expansionary austerity occurs when reductions in government spending are accompanied by increases in other components of aggregate demand (private consumption, private investment, and net exports), which more than compensate for the reduction in government expenditures. We shall see how the role of private investment is especially important. Because the idea of expansionary austerity has raised a few eyebrows, it is worth clarifying from the very beginning what we posit. The possibility of expansionary austerity does not mean that every time a government reduces public spending the economy expands. The term instead implies that in certain cases the direct output cost of spending cuts is more than compensated for by increases in other components of aggregate demand.

More precisely, what does it mean that austerity can be “expansionary”? One definition could be that austerity is expansionary when growth is positive during the period of austerity or in the immediate aftermath. This would be a rather weak definition. Imagine that austerity occurs in a period when most countries are experiencing a boom and the country with austerity performs worse than average but still with positive growth. The opposite argument applies when a country implements austerity in a period of worldwide recession. An alternative definition implies that austerity is expansionary when it is accompanied by output growth above a certain threshold, say near the top of the distribution of growth, in comparable countries at that time. This is the definition that we adopt in our descriptive analysis. A cursory look at the data suggests some examples of expansionary austerity: Austria, Denmark, and Ireland in the 1980s; Spain, Canada, and Sweden in the 1990s. In the aftermath of the financial crisis the two countries that did better with austerity were Ireland and the United Kingdom, despite huge banking problems in the former. Both countries used mostly spending cuts. We illustrate some of these “expansionary” episodes, and others, in detail in Chapters 3 and 8 for those before and after the financial crisis respectively, and of course we include them all in our statistical analysis in Chapters 7 to 10. In our statistical simulation, expansionary austerity occurs when the fiscal adjustment leads to higher growth than in the alternative scenario with no policy change. According to this definition expansionary austerity may occur only in cases of spending cuts.

When Austerity?

Governments should implement austerity policies when their potential cost is lowest. One might think that this is the case when the economy is growing, not when it is in a recession. This intuition is reasonable. Note that in our sample we have more cases of austerity that started in a recession than in a boom. This is in part by construction, since we exclude cases of spending cuts or tax increases occurring to cool down the economy. By doing so we “err” on the side of excluding cases of

austerity that “took advantage of” a situation in which the economy was expanding. These considerations suggest that if a country could choose to implement austerity when not in a recession, then our estimates of the costs of austerity would be lower. In particular, spending cuts would have even lower costs than those, already very low, that we find; and expansionary austerity would be more likely to occur.

The issue of whether multipliers (i.e., the effects of tax hikes or spending cuts on output) are higher in a recession is complicated, as we will see in Chapter 9. A variety of subtle issues are at play in these comparisons. First, when an economy is in a recession it may already have put in motion its adjustment forces; the opposite is true in a boom, which may already nurture the forces of its reversal. Second, governments, typically because of past mistakes, often do not have the luxury of waiting. Consider the recent episodes of austerity in Europe. During 2010–11 the collapse of confidence in sovereign European debt and the explosion of interest rates on government bonds in some countries (Italy, Spain, Greece, Portugal) led to a situation that was close to a debt-induced financial crisis. Could the governments of these countries have waited, postponing austerity to when the recession was over? Hard to say. We do not know what would have happened absent austerity. What we can say, however, is that even in these cases, namely when austerity policies are implemented during a recession, the differences between the two types of austerity described in the foregoing still hold: tax-based austerity plans have been much more costly than spending-based plans. A related question is the timing of the introduction of an austerity plan, given what a country’s trading partners are doing. If a group of trading partners all implement austerity policies at the same time, these may be more costly in terms of output losses because of negative spillovers through the channel of international trade.

The second characteristic of the recent round of austerity is the zero lower bound. That is, austerity policies were introduced when short-term interest rates were already so low that monetary policy could not help by pushing them even lower. Obviously this was not the case for those countries where term spreads and spreads over the yields on safe bonds had increased during the crisis, raising long-term interest rates

to levels above 6%: they were not at the zero lower bound, at least on long-term interest rates. Austerity helped to reduce those high rates. We shall discuss the ways in which the recent round of austerity is different from previous ones. Our basic finding on the different effects of tax-based and expenditure-based austerity continues to hold, even in these cases of austerity at zero lower bound.

Is Austerity a (Political) Kiss of Death?

The president of the European Commission at the time of this writing, Jean-Claude Juncker, famously remarked a few years ago “We all know what are the policies which we should follow, but we do not know how to introduce them and then be re-elected.” He was referring to fiscally prudent policies, geared toward reducing deficits. In academia and in policy circles the idea, vastly held as obvious, is that voters always punish incumbents who raise taxes or cut spending to reduce deficits. But if one looks at the data more closely, this view is much less supported by the evidence than one may think, even outside of traditionally fiscally conservative countries like Germany. Many governments that have implemented tight fiscal policies and reduced deficits have been reelected, and the other way around, fiscally careless governments were punished by the voters. More generally, especially in multiparty political systems, it is not easy to predict electoral outcomes based purely on economic policies, and fiscal policy is only one of them. The evidence does not support Juncker’s statement: many governments have been able to implement austerity policies and be reelected. Of course this does not mean that governments that cut spending or raise taxes are always reelected: it means that reality is much more subtle and complex than what Juncker’s statement implies.

FOUR CONTRIBUTIONS OF THIS BOOK

This book makes four contributions to the literature on fiscal policy. First is the data. We have documented in detail close to 200 multiyear austerity plans carried out in 16 OECD economies (Australia, Austria,

Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Portugal, Spain, Sweden, the United Kingdom and the United States) from the late 1970s to 2014. To reconstruct these plans we have consulted original documents (some produced by national authorities, some produced by organizations such as the OECD, the International Monetary Fund (IMF) or the European Commission) concerning about 3,500 individual fiscal measures. We have classified these measures in 27 categories, then aggregated into 15: among them Transfers are classified separately from other government spending, Direct Taxes separately from Indirect Taxes, Tax Credits and Deductions separately from other tax revenue, and so on. In our statistical analysis, however, we used a coarser level of aggregation because, given the size of our sample, it is difficult to identify the effects of such a large number of components. However, this higher level of disaggregation can be used in future research to investigate the effects of finer plans than the ones analyzed in this book. The documentation we provide is very extensive, allowing other researchers to improve on our classification and exogeneity judgment calls. A link to the data available in a form which is ready to use is at <https://press.princeton.edu/titles/13244.html>. Since the coverage of this dataset is very large, although in retrieving the data we have consulted a number of experts, mistakes and imprecisions are always possible. Thus, suggestions on how our data could be improved are welcome.

Our second contribution is methodological. The standard approach evaluates fiscal policy period by period, studying individual shifts in taxes or spending, what is often referred to as “fiscal shocks.” This approach overlooks two important points. One is the multiyear nature of fiscal adjustments. When legislatures decide to launch a fiscal consolidation program, this rarely consists of isolated shifts in this or that tax, or in this or that spending item; instead, what is adopted is typically a multiyear plan with the objective of reducing the budget deficit by a certain amount every year. To the extent that expectations matter for the planning of consumers and investors, the multiyear nature of a fiscal adjustment, and the announcements that come with it, matter. The second observation is that the decisions of how much to cut spending and how much to raise taxes are interconnected through the

deficit reduction target and cannot be assumed to be independent of one another. Once these considerations are taken into account, the year-by-year, instrument-by-instrument analysis of fiscal policy appears to be incomplete and statistically misleading. We address these concerns by constructing multiyear fiscal plans and describing their effects on the economy.

The results of the analysis constitute our third contribution. We document a sharp difference between adjustment plans based mostly on tax increases and plans based mostly on expenditure reductions. The first, tax-based plans, are significantly more recessionary than expenditure-based plans throughout, and particularly in the 2 years after the start of a fiscal adjustment plan. This finding suggests that there is no “austerity” as such: the effects of austerity policies are sharply different depending on the way they are implemented.

Finally, and this is the fourth contribution of the book, we ask whether austerity is the “kiss of death” for governments that adopt these policies. We conclude that it is not, or at least not necessarily.

THE PUNCHLINE IN A NUTSHELL

In developing our argument we need to overcome three major obstacles. The first is the so-called “endogeneity” problem, namely the interaction between fiscal policy and output growth. Suppose you observe a reduction in the government deficit and an economic boom. It would be highly questionable to conclude that policies that reduced deficits have generated growth, as it could easily be the other way around: other factors (not fiscal policy) may have increased growth and by doing so raised tax revenue for given tax rates and reduced spending for unemployment compensation or welfare, thus reducing deficits. We address the endogeneity problem by considering only policy changes motivated not by the state of the business cycle but only by a desire to reduce deficits. The former would be a reaction to the cycle and not necessarily the “cause” of GDP fluctuations. Once exogenous fiscal adjustments episodes have been identified, then the calculation of their impact on the economy requires the specification of an empirical model. The simpler the model the easier it is to calculate the effects of taxes and spending,

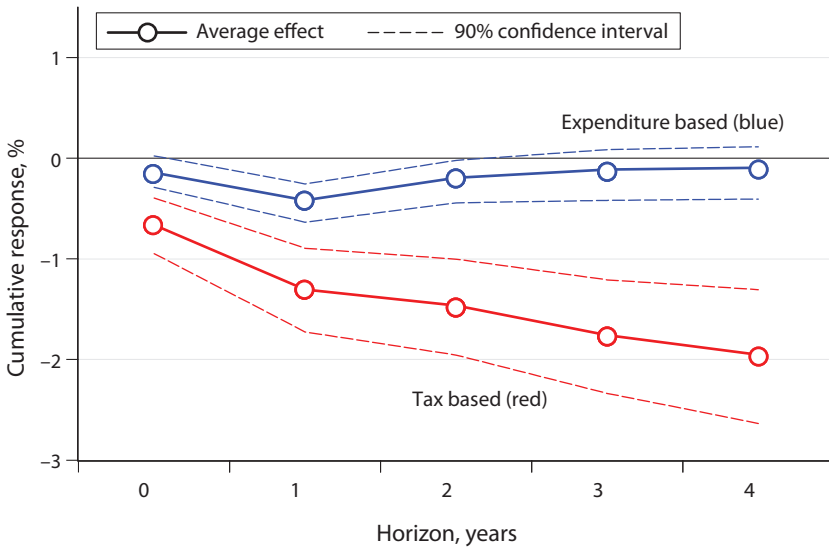


Figure 1.1. Response of GDP to two different austerity plans.

but the simpler the model the more likely it is that important relations among variables are missed. One faces a trade-off between simplicity and accuracy.

Second, major episodes of austerity often are accompanied by changes in other policies: monetary policy, exchange rate, labor market reforms, regulation or deregulation of various product markets, tax reforms, and so on. In addition, austerity is sometimes adopted at times of crisis because of runaway debt, not in periods of “business as usual.” Third, virtually all austerity programs are multiyear plans announced in advance and then revised along the way: we need to take these announcements into account.

Two key figures summarize our results and hopefully will motivate the reader to follow our detailed explanation of how they were constructed.

The first is Figure 1.1, which shows the effect on GDP of tax-based versus expenditure-based austerity plans. The word “plans” is important because we will embrace in our empirical analysis the fact that austerity is almost always conducted through multiyear policy packages involving immediate policy changes, announcements for the future, and implementation of past announcements. We will consider all three factors in modeling the economic effects of austerity, thus taking into

account the expectations of consumers and investors. We will also allow for the fact that different countries may have different “styles” of policymaking. Some typically adopt frontloaded plans, in which most of the fiscal adjustment is implemented when the plan is announced; others adopt a set of measures but postpone their implementation to subsequent years.

Figure 1.1 shows the effects of two austerity plans, one based mostly on spending reductions (the blue line) and one based mostly on tax hikes (the red line). Both plans reduce the primary deficit by 1% of GDP. The blue and red paths describe the response of GDP relative to the path GDP would have followed in the absence of the fiscal plan. The figure reflects the average of the effects simulated on all 16 countries of our sample and is based on parameters estimated over the period 1978–2014. The difference between expenditure-based and tax-based plans is striking, and they are statistically different from one another (confidence intervals are such that the simulated response lies within the interval with a 90 percent probability). Tax-based plans lead to deep and prolonged recessions, lasting several years. Expenditure-based plans on average exhaust their very mild recessionary effect within two years after a plan is introduced. This average is the result of cases with more pronounced recessions and cases of expansionary austerity, namely cases in which, following the introduction of an adjustment plan, between 1978 and 2014, GDP grew faster than its average growth rate. We shall explore in more detail the results of Figure 1.1 in Chapter 7, where we shall also distinguish the effect of cuts in expenditure on goods, services, and investment and cuts in transfers, showing that the results are broadly similar, although cuts in transfers imply even lower costs in terms of GDP growth. The component of aggregate demand that mostly drives the heterogeneity between tax-based and expenditure-based austerity is private investment. We shall also discuss which “theory” could explain these findings.

Chapter 8 shows that these results apply also to the austerity plans adopted by a number of European countries after the financial crisis that started in 2007. On this point our results stand in contrast with those widely publicized by Blanchard and Leigh (2014). They argue that austerity post-2008 looks different from before; namely, it was

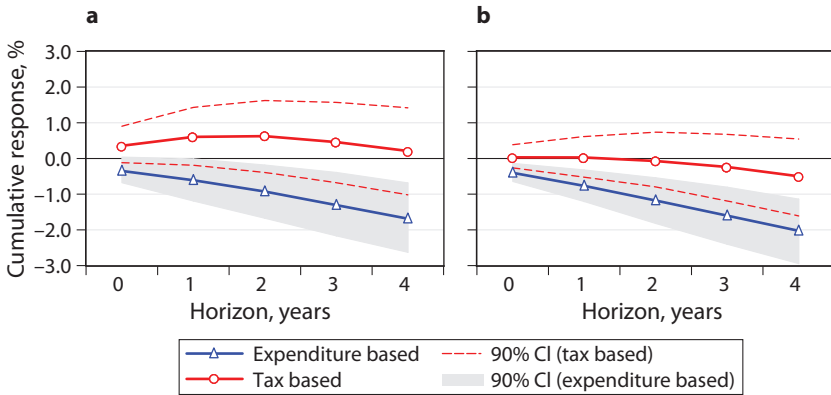


Figure 1.2. Debt dynamics. (a) High debt (to GDP)—high cost of debt. (b) Low debt (to GDP)—low cost of debt.

more costly per unit of austerity than what was predicted based on past experiences. We argue that this is probably not the case.

Figure 1.2 shows the response of the government debt over GDP ratio to the two types of austerity, tax based and expenditure based. To measure these effects it is necessary to reconstruct the debt dynamics which depends on the inherited debt ratio, the rate of growth of GDP, and the pattern of inflation, which, together with the average interest cost of the debt, determine how much government revenue is needed to service the debt. Figure 1.2 shows the response of the debt ratio to adjustment plans in the case of a high level of debt (around 120% of GDP) and relatively high cost of debt servicing and in the case of a low level of debt (around 60% of GDP) and relatively low cost of debt servicing. The figure reports the difference between the pattern of the debt ratio in the presence of austerity and the same pattern absent austerity. In the high debt–high cost of debt scenario an expenditure-based (blue) plan has a stabilizing effect on the debt dynamics differently from a tax-based (red) plan; in the low debt–low cost scenario the expenditure-based adjustment remains stabilizing, while the effect of a tax-based plan is neutral. The blue and red paths describe the response of the debt ratio to a plan relative to the path that the ratio would have followed in the absence of any plan.

ORGANIZATION OF THE BOOK

In a sense the main goal of this book is to explain the empirics and the theories that underlie Figures 1.1 and 1.2. We will also devote much space to a discussion of the more recent experiences with austerity plans implemented after the financial crisis, especially in Europe, including the events in Greece.

In Chapter 2 we review the basic “theory” of fiscal policy. We start with the simple Keynesian theory and then add a number of elements including supply-side effects, expectations, and tax distortions. In Chapter 3 we review several examples of austerity plans implemented before the financial crisis. We compare more or less costly plans, including examples of expansionary austerity. Chapter 4 reviews previous econometric evidence on the effects of austerity and the related empirical evidence on “fiscal multipliers.” Chapter 5 presents our main methodological innovation, the notion of fiscal plans. Chapter 6 describes the construction of our data: a link to these is available to other researchers at <https://press.princeton.edu/titles/13244.html> along with all the replication packages that allow the reader to reproduce the results presented in the book. Chapter 7 presents our main results on the effects of expenditure-based and tax-based austerity plans. We discuss effects on GDP and its components—consumption, investment and net exports—but also on consumers’ and business confidence and on interest rates. We also study the role of accompanying policies: devaluations, monetary policy, and structural reforms in the goods and labor markets. We also examine the effects of austerity on the debt over GDP ratio. Chapter 8 focuses on the recent round of austerity plans implemented after the financial crisis. We discuss whether they look different from previous cases and whether they have been more costly in terms of output losses. One of the reasons why the postcrisis austerity in Europe might have been especially costly is that it was started when the economies were still in a deep recession. Motivated by this observation in Chapter 9, we examine what difference it makes if an austerity plan is introduced at a time when the economy is growing rather than during a recession. Chapter 10 asks the political economy question of whether austerity is the kiss of death for the

government that implements it, concluding that the answer is much less obvious than the popular debate would seem to suggest. The last chapter concludes.

The main body of the book is non-technical. We illustrate the more technical aspects in Chapter 12.

How to Read This Book

We hope with this book to satisfy both the technical and the non-technical reader, a reader interested mostly in recent events and a graduate student looking for a review of the literature on fiscal multipliers. The technical reader principally interested in the econometric and measurement methodology that underlies our results can jump to Chapter 5, continue from there and focus also on Chapter 12. The non-technical reader can start from Chapters 2 and 3, skim over chapters 5 and 6, and concentrate on Chapters 7, 8, and 10, which contain all the basic results, skipping Chapter 9. The reader looking for a broader connection of this book with recent research in fiscal policy will find Chapter 4 especially valuable. The reader interested only in events following the financial crisis can skip Chapters 3 to 6 and focus on Chapters 7 to 10. The reader interested in case studies, rather than in econometrics can focus on Chapters 2, 3, 8, and 10.

What This Book Does Not Do

We want to be clear about what we do not cover in this book. First, we focus only on OECD countries, and in fact not even on all of them. Our sample includes mostly European and North American countries (plus Japan and Australia). The effects of different types of austerity may be different in developing countries, which, among other things, have much smaller governments than richer countries. Second, we are concerned only about what the effects of austerity are in the short run: namely, within five years from the introduction of a plan. Of course there are many important fiscal issues that go well beyond the short run. For instance, the aging of populations in many countries implies serious problems for pension systems; any austerity plan that reduces the deficit in the short run may not have a permanent effect on public debt

if pension reform is not addressed. We do not investigate these long-run intergenerational issues in this book. Furthermore, the flip side of austerity is discretionary fiscal expansion, that is, increases in government spending or tax cuts implemented to stimulate the economy: this is another topic we do not address. Finally, we study only the effects of austerity on aggregate macroeconomic variables: we do not study the consequences on income distribution or on sectoral reallocations.