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FISCAL ADJUSTMENTS: What Do We Know and What Are We Doing?

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The ideas presented in this research are the author's and do not represent official positions of the Mercatus Center at George Mason University.

1) Introduction *

In the aftermath of the Great Recession, many OECD countries need to reduce large public-sector deficits and debts. The conventional wisdom about the political economy of fiscal adjustments goes more or less as follows. Deficit-reduction policies cause recessions. Voters do not like either spending cuts or tax increases, and they dislike the recessions associated with them. Therefore incumbent governments see fiscal adjustments as the kiss of death. They postpone them, and if they finally do implement adjustments, they will pay at the polls. In fact, many governments do the opposite: they try to increase deficits in order to win elections. Thus, we should expect fiscally "loose" governments to stay in office longer and fiscally prudent ones to be voted out of office.

If this view—which is a combination of textbook Keynesianism with "conventional" notions of naive voters' behavior—were true, we would face a dark near-future. Governments would postpone the bitter medicine of fiscal adjustments, and when they eventually enacted tight fiscal policies, they would face both recessions and incumbent political losses. The result would be a sort of so-called "W" recovery along with the political turmoil created by the loss of fiscally responsible governments.

Fortunately, the accumulated evidence paints a different picture. First of all, not all fiscal adjustments cause recessions. Countries that have made spending adjustments to reduce their deficits have made large, credible, and decisive cuts. Even in the very short run, many reductions of budget deficits, even sharp ones, have been followed immediately by sustained growth rather than recessions. Second—and this is most likely a consequence of the first point—it is far from automatic that governments that have reduced deficits have routinely lost office. Governments that have initiated thorough and successful fiscal adjustment policies have not systematically suffered at the polls, especially when the electorate has perceived the urgency of a crisis or the possibility of defaulting on an external commitment. For instance, when several European countries had to tighten their fiscal belts to enter the European monetary union, many governments that successfully implemented fiscal adjustments were reelected.

Thus, according to recent evidence, there could be reasons to be less pessimistic than what the conventional wisdom sketched above would imply. However, the problem is that the wisdom is so conventional that it is often difficult to convince politicians and their economic advisors that this conventional wisdom may also be untrue. In addition, not all governments have the capacity and political will to overcome various impediments to fiscal adjustments. For instance, until recently, public employees in many European countries were able to secure wage increases larger than those in the private sector. Retirees and elderly workers, who often form a large part of labor unions, have resisted pension reforms. However, as we shall see below, this may be changing in several European countries. Thus, relatively painless (economically and politically) fiscal

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adjustments might be possible; whether governments will take the opportunity to make those adjustments remains to be seen.

Currently, several European governments have started, at least on paper, fiscal adjustment programs. Overall, my view of these efforts is relatively positive as the emphasis is much more on spending cuts than on tax increases. Political taboos, such as cutting public-sector salaries or health spending and raising retirement ages, are on the table. Also, supply-side reforms, such as tax decreases to stimulate the economies, are being considered.

Before moving forward, let's be clear about what my argument regarding fiscal adjustment does and does not imply. I am not rejecting the "tax smoothing" theory of optimal fiscal policy (Barro 1979) at all. This theory argues that, because of the effect of automatic stabilizers, it is appropriate to allow deficits during recessions so long as during booms the deficit becomes a surplus and the deficit is, on average, zero during the cycle.¹ Thus it would be wrong to cut the deficits fighting against automatic stabilizers during recessions. This is not what I am arguing here. The point about fiscal adjustment is different. It says that when, for whatever reason, a discretionary policy of deficit reduction is needed, if it is done on the spending side, it has a good chance of not being recessionary. It has a much better chance of being expansionary and achieving a longlasting consolidation of the budget than an adjustment done on the tax side. (Note that, if an ideal tax-smoothing policy were followed and the budget were balanced over the cycle (with deficits in recessions and surpluses in booms), discretionary fiscal adjustments would never be necessary in theory. Of course reality is more complex than theory, and we have observed many examples of large deficits that would not be reabsorbed by automatic stabilizers without discretionary policy interventions.)

This paper is organized as follows: Section 2 discusses the evidence of the effects of fiscal adjustments on growth in the short run. Section 3 investigates the effects of fiscal adjustment on the popularity of governments and their prospects for reappointment. Section 4 discusses when and under what circumstances governments will initiate fiscal adjustments. Section 5 discusses the plans of several European governments for budget consolidations. Section 6 draws some implications of the previous discussion for U.S. policy makers. The last section concludes.

2) Do fiscal adjustments always cause recessions?

The answer to this question is a loud no. Since early nineties, several authors have noted how large and decisive deficit reduction policies in several European countries were accompanied by increases in growth, the opposite of the standard Keynesian story.² How can that happen?

¹ This holds under the assumption that no extraordinary temporary expenses need to be financed.

² Giavazzi and Pagano (1990) were the first to argue that large, decisive fiscal adjustments (deficit reductions) on the spending side could be expansionary. This was the case of Ireland and Denmark in the eighties, which were the episodes studied by Giavazzi and Pagano (1990), but there were others examples discussed and analyzed by Alesina and Ardagna (1998). There is quite a rich literature that studies the

Let's define a fiscal adjustment as a large reduction in the budget deficit, something that goes beyond the ordinary ups and down of deficits with the business cycle. In other words, a fiscal adjustment would be a discretionary policy action to reduce the deficit level for the medium run. (I will give a more precise quantitative definition below.) Theoretically, expansionary effects of fiscal adjustments can go through both the demand and the supply side. On the demand side, a fiscal adjustment may be expansionary if agents believe that the fiscal tightening generates a change in regime that "eliminates the need for larger, maybe much more disruptive adjustments in the future" (Blanchard (1990)).³ By removing the danger of sharper and more-costly fiscal adjustments in the future, current increases in taxes and/or spending cuts perceived as permanent can generate a positive wealth effect.

An additional channel through which current fiscal policy can influence the economy via its effect on agents' expectations is changing the interest rate. If agents believe that the fiscal stabilization is credible and avoids a default on government debt, they can ask for a lower premium on government bonds. If the interest rates are already low, a fiscal adjustment may avoid a future rate increase. Private demand components sensitive to the real interest rate will increase if the reduction in the interest rate paid on government bonds leads to a reduction in the real interest rate charged to consumers and firms.⁴ The decrease (or non increase) in interest rates can also lead to appreciation (or non depreciation) of stocks and bonds, increasing agents' financial wealth and triggering a consumption/investment boom. On the supply side, expansionary effects of fiscal adjustments work via the labor market and via the effect that tax increases and/or spending cuts have on the individual labor supply. In a standard neoclassical model with competitive labor markets, a reduction of income in tax rates increases the labor supply since take-home salaries increase. In unionized markets, the same mechanism is at play through union negotiations. In addition, cuts in public-sector salaries may influence negotiations in the private sector, leading to wage moderation in both sectors. Reduction in unemployment subsides may increase the willingness of workers to accept certain jobs at certain salary levels. Obviously this effect has to be evaluated against the cost of reducing help for those who can't find jobs.⁵

A recent paper by Alesina and Ardagna (2010) investigated the empirical evidence of "large" fiscal consolidations on a sample of virtually all OECD countries from roughly 1980 onward.⁶ They define a period of fiscal adjustment as a year in which the cyclically adjusted primary balance improves by at least 1.5 percent of GDP. A cyclically adjusted definition for the deficit accounts for the fact that deficits go up during recessions and

determinants and economic outcomes of large fiscal adjustments. A non-exhaustive list includes Ardagna (2004); Giavazzi, Jappelli, and Pagano (2000); Hughes and McAdam (1999); Perotti (1999); McDermott and Wescott (1996); Von Hagen and Strauch (2001); and Von Hagen, Hughes, and Strauch (2002). The latest paper along these lines is Alesina and Ardagna (2010)

³ For models that highlight this channel, see Bertola and Drazen (1993) and Sutherland (1997).

⁴ See Alesina et al (2002) on the effects of government spending on private investment.

⁵ See Alesina and Ardagna (1998) and Alesina et al (2000) for a review of the literature.

⁶ This paper also summarizes the previous related evidence on the same point. The exact sample dates depend on data availability.

down during booms in response to the so-called automatic fiscal stabilizers. The cyclical adjustment tries to capture changes in the deficit that go above and beyond "business as usual" fluctuations.⁷ This definition selects 107 fiscal adjustment periods. Of these, 65 last only for one year while the rest are multi-period adjustments. Conversely, the same authors define a fiscal expansion as a year in which the cyclically adjusted deficit over GDP ratio increases by at least 1.5 percent of GDP.

The critical question is whether the periods in which various countries that have made these deficit adjustments are associated with an expansion in economic activity during and in their immediate aftermath. The authors define an episode of fiscal adjustment as "expansionary" if the average growth rate of GDP—as a difference from the G7 average (weighted by GDP weights)—in the first period of the episode and in the two years after is in the top 25 percent of growth for the entire sample of country and years. This is a stringent definition: it says that a fiscal adjustment is expansionary only when it is higher than 75 percent of the sample!⁸ They define a period of fiscal adjustment as successful if the cumulative reduction of the debt-to-GDP ratio three years after the beginning of a fiscal adjustment is greater than 4.5 percentage points (the value of 25th percentile of the change of the debt-to-GDP ratio empirical density in all episodes of fiscal adjustments).

The results are strong and fully confirm those obtained in earlier samples from previous research. Spending cuts are much more effective than tax increases in stabilizing the debt and avoiding economic downturns. The authors find that 27 episodes of fiscal adjustments were expansionary under the stringent definition of this term given above. These 27 adjustments were much more on the spending than in the tax sides. Examples of expansionary fiscal adjustments include Spain and Ireland in the late eighties, Finland in the late nineties, and Sweden in 2004–2005, amongst others.⁹ The results are robust, and they do not change significantly as result of small changes of the definitions. Also note that the current surge of growth in Germany after the country's fiscal tightening most likely will make this another case of expansionary adjustment. The UK may be leading in a similar direction, but it is too early to tell.

Table 1, adapted from Alesina and Ardagna (2010), briefly summarizes the results. Each pair of columns represents the share of the fiscal adjustment (i.e. reduction of primary deficit) arising from spending cuts or tax increases as a share of GDP as an average of all fiscal adjustments in the sample. In the case of successful fiscal adjustments, about 70 percent of it came from spending cuts, and in the case of expansionary adjustments, almost 60 percent of them came from spending cuts. In the case of unsuccessful and contractionary adjustments, more than 60 percent of the adjustments were on the tax side. (The precise definition of successful used is the one given above.) In other words, fiscal adjustments can be accomplished without recessions, but this is more likely to happen if the adjustments occur mostly on the spending side.

⁷ There are many alternative ways to calculate cyclically adjusted deficits. For the result reported below, it does not really matter which methods one uses.

⁸ Had the authors chosen an easier definition of expansionary, say on the top half of the sample, their results would be even stronger.

⁹ See Appendix B of Alesina and Ardagna (2010) for a complete list of episodes

Table 1



One of the most striking results of Alesina and Ardagna (2010) is that fiscal adjustments (reductions) on the spending side are almost as likely to be associated with high growth (i.e. a successful episode) as fiscal expansions on the spending side, where fiscal expansion is defined in a reverse way relative to fiscal adjustments. These results are fully consistent with recent (and more econometrically sophisticated) research which shows that "spending multipliers" are low and most likely less than 1.¹⁰ A spending multiplier is the estimated effect on GDP of a one dollar increase in government spending. According to the standard Keynesian theory, spending multipliers should be much larger than 1 during deficit spending and close to 1 if budgets are kept in balance (i.e. if the spending increases are financed by taxes). Most recent research finds spending multipliers much lower than 1 even when financed with bond issues (i.e. when deficits increase). These results are consistent with the fact that the recent U.S. spending stimulus does not seem to have worked particularly well. Additional research along similar lines suggests, perhaps unsurprisingly, that the sharper and more permanent debt/GDP ratio's reductions are obtained by stopping the growth of entitlements and government wages.¹¹ In addition to the examination of episodes, Alesina and Ardagna (2010) include an extensive regression analysis that tries to uncover whether other factors may explain the

¹⁰ See Blanchard and Perotti (2002) and Ramey (2009) amongst others. Romer and Romer (2007) find very strong effects of tax changes on output but do not investigate the effects of spending.

¹¹ See for instance Alesina and Ardagna (1998).

occurrence of expansionary fiscal adjustments, such as devaluations, the initial condition of the economy, the level of interest rates, etc. They find that even after controlling for a host of other determinants that may explain increases in growth, the composition of the adjustment remains a very string expansionary variable. That is, the chances of having an expansionary fiscal adjustment are larger if the adjustments occur on the spending rather than the tax side. Tax-based adjustments are normally recessionary.

In summary, there are two conclusions that can be drawn from this research. One is that fiscal adjustments can be associated with growth rather than causing or prolonging recessions. The second is that fiscal adjustments on the spending side are more likely to be expansionary than tax increases.

Regarding the first result, an important question is under what conditions fiscal adjustments are more likely to be expansionary. For example, are fiscal adjustments more likely to be expansionary when they occur during a recession or when the economy is growing? The accumulated evidence does not suggest a clear answer. It does not appear that the preexisting state of the economy is a significant predictor of the effects of fiscal adjustments. Since the recent Great Recession is unprecedented in the sample period, we cannot test what may happen during exceptionally large recessions. Because of the small sample size, neither we nor other researchers can definitively say what will happen in large recessions when there are spending cuts.

A recent paper by Jayadem and Konzcal (2010) argues that Alesina and Ardagna's results do not apply to the current situation because fiscal adjustments on the spending side are expansionary only when they occur when the economy is already expanding. The criticisms of that paper are at best overstated. As shown by Alesina and Ardagna, the preexisting state of the economy does not seem to affect the result of the fiscal adjustment. Having said that I certainly do not reject the basic prescriptions of the "tax smoothing" model; namely, that it is perfectly correct to allow the deficit to grow during recessions because of the automatic stabilizers. The latter would then bring back surpluses during booms. Thus, no one, including me, would have advocated a tight fiscal policy in 2008-2009 to counterbalance the effects of the automatic fiscal stabilizers. The question addressed in the paper by Alesina and Ardagna is different. That paper shows that when governments decide that it is time to reign in deficits, if done on the spending side, it can sometimes be expansionary. It also shows that this result does not seem to depend on the strength of the recovery, i.e., how fast the economy is growing at the moment of the adjustments.¹² In addition, what is unfolding currently in Europe directly contradicts Jayadev and Konczal. Several European countries have started drastic plans of fiscal adjustment in the middle of a fragile recovery. At the time of this writing, it appears that European speed of recovery is sustained, faster than that of the U.S., and the ECB has recently significantly raised growth forecasts for the Euro area. See more on this below.

¹² Other criticisms of the paper are simply incorrect. Looking at growth in difference from G7, a procedure criticized by them is simply a way of correcting for the world business cycle. In any case the results are not depended on this procedure. Also their definitions of period "pre adjustments" and post adjustment are too long, allowing many confounding factors to play a role.

The second question is whether fiscal adjustments can be expansionary only in small, open economies because they are associated with devaluations. Alesina and Ardagna (1998, 2010) and Alesina, Perotti, and Tavares (1998) show that devaluations are not significantly larger in the aftermath of expansionary or contractionary fiscal adjustments. Thus, the composition of tax versus spending is critical, devaluations are not.

3) The political consequences of fiscal adjustments

What happens to governments that engage in the kind of large fiscal adjustments examined in the previous paragraph? This is the question addressed by Alesina, Carloni, and Lecce (2010) using the evidence from OECD countries.¹³ Contrary to the conventional wisdom, these authors do not find that those governments that reduce deficits drastically lose either popularity or the following election systematically.

The definition of "losing" politically depends on the nature of the political systems. The authors investigate various alternative definitions of government "changes," from a change in the identity of the prime minister, to changes in the coalition running the government, to loss of a majority. They do not find any systematic relationship between the occurrence of a large reduction of budget deficits and electoral success of the government. These authors also find some evidence that the popularity of the governments is affected more strongly by fiscal adjustments on the spending side, possibly because they do not see resulting changes in GDP.

Table 2, adopted from Alesina, Carloni, and Lecce (2010), summarizes, in order of cumulative size, the ten largest fiscal adjustments from 1975 to 2008 in 19 OECD countries. These are the ten countries that had the largest cumulative deficit reductions summed over consecutive years of deficit reductions.

In addition to the size of the adjustments in terms of deficit reduction, they also report measures of the composition of the adjustment. In our previous discussion, we showed the importance of the effects of tax increases versus spending cuts on the economy. It is also interesting to examine the composition of the adjustment. Note that the spending share of a fiscal adjustment can be greater than 100 if taxes were actually cut during the adjustment or can be negative if spending was increased. By "termination," the authors mean that there was an election during the period of the adjustments and/or in the two years following the end of the adjustment. The last column, government change, indicates how many changes in the political orientation occurred during the fiscal adjustments and in the two years that followed its end. Table 2 shows that government changes occurred in 7 cases out of 19 terminations, about 37 percent. But if one looks at the five largest adjustments in cumulative size, the ratio decreases considerably as changes in government occurred in only 1 case out of 10. There were about 40 percent of government changes over the total when we look at the data from 1975 to 2008 for the countries sampled in the table. Note also that expenditure-based adjustments were associated with less frequent change in government.

¹³ For earlier work along the same line, see Alesina, Perotti, and Tavares (1998)

The same authors then examine more systematically their entire sample and find no evidence that governments that have been tougher in reducing deficits are systematically punished by voters. These results are consistent with the evidence by Brander and Drazen (2008). These authors find that there is no electoral premium for governments that increase budget deficits; in fact, there is some evidence that deficits are viewed negatively by voters and fiscally loose governments are punished at the polls.¹⁴

Table 2

COUNTRY	YEAR ¹⁵	# OF YEARS	CHANGE IN CYCL. ADJ. DEFICIT ¹⁶	CHANGE IN CYCL. ADJ. EXPENDITU RES ¹⁷	CHANGE IN CYCL. ADJ. REVENUES ¹⁸	<i>CUMULATIVE</i> FISCAL ADJUSTMENT ¹⁹	% OF FISCAL ADJ. DUE TO CUT IN EXPENDITU RES ²⁰
Denmark	1983–86	4	-2.43	-0.85	1.58	-9.74	35.03
Greece	1990–94	5	-1.88	-0.50	1.38	-9.39	26.38
Sweden	1994–2000	7	-1.20	-0.81	0.38	-8.38	67.91
Belgium	1982–87	6	-1.26	-0.96	0.30	-7.57	76.50
Canada	1993–97	5	-1.36	-1.25	0.11	-6.80	91.80
United Kingdom	1994–99	6	-1.12	-0.66	0.47	-6.72	58.45
Finland	1993–98	6	-1.04	-0.81	0.23	-6.23	78.13
Portugal	1982–84	3	-1.89	-1.14	0.75	-5.67	60.16
Italy	1990–93	4	-1.24	0.13	1.36	-4.95	-10.21
Ireland	1986–89	4	-1.21	-1.54	-0.33	-4.82	127.50

In other words, there is no evidence that, in established democracies, governments can successfully use budget cycles as a strategic electoral tool. Thus, while this is a strongly

¹⁴ Brander and Drazen (2005) also show that in established OECD democracies, there is no evidence of political budget cycles. That is governments do not increase budget deficits around election time, as for instance in model by Rogoff and Sibert (1997). Political budget cycles are common only in new democracies, like those in central and Eastern Europe.

¹⁵ Years of consecutive deficit reductions.

¹⁶ Reduction of cyclically adjusted deficit over GDP on average per year.

¹⁷ Changes in the ration of cyclically adjusted spending over GDP on average for all the year of the adjustment

¹⁸ Changes in the ration of cyclically adjusted revenues over GDP on average for all the year of the adjustment.

¹⁹ Total cumulative reduction in the deficit over GDP ratio in the episode.

²⁰ Percentage of the total deficit reduction due to cuts in expenditures.

²¹ Number of elections during the period of the adjustment or in the two years following it.

²² Number of changes of government in which the incumbent one was not reappointed.

held view by many politicians, this view does not appear to survive careful statistical analysis.

4) When do governments adjust? And why do they often delay?

If it is the case that certain types of fiscal adjustments are not necessarily costly in terms of lost output or lost votes, why are they often delayed and politicians reluctant to implement them?

There are two possible, related reasons. The first is that "vote-counting" is not the only political factor at play. Certain constituencies may be able to "block" adjustments to continue receiving rents from government spending because they have enough political energy (time, organization, money). This is sometimes referred to as an issue of diffuse benefits and concentrated costs.²³

For example, in some cases strikes of (often overpaid and overstaffed) public-sector employees may create serious disruptions. Pensioners lobby to persuade politicians not to touch their pension systems even when future generations will suffer the costs of delayed reforms. Lobbyists for certain protected sectors use campaign contributions for continued protection. Tax evaders may cripple the tax collection systems. Interestingly, the rhetoric that some of these groups use is that of the recession threat of a fiscal tightening. Thus, textbook Keynesian rhetoric about the evil of any spending cuts is often a good selling point for the protection of certain groups whose income depends on government wages, subsidies, or pensions. It is common to hear, for example, public employees appealing to the risk of recessions caused by budget cuts as a selling point to defend their members' salaries.

A second and related problem is what Alesina and Drazen (1990) modeled as a "war of attrition" political game. Political conflicts over the allocation of costs of the budget cuts or tax increases, for example, lead to a stalemate that requires time to be resolved. Postponing an adjustment may be costly, but all sides hope to be able to shield themselves from such costs, and the "war" continues until one side gives in. Thus, more polarized political systems and fractionalized societies, where "deals" and compromises are more difficult to reach quickly, should have a harder time stabilizing. Another implication is that a political consolidation of a stable and secure cohesive majority may be a precondition for a fiscal consolidation. Finally, this model is consistent with the "crisis hypothesis," namely that the idea that a sharp deterioration of the economic situation may lead to reforms. In this case, a fiscal consolidation occurs simply because it becomes too costly to continue to postpone.

So, when do fiscal adjustments normally occur? This is a question empirically taken up by Alesina, Ardagna, and Trebbi (2006). They use the war of attrition model as a starting point and consider fiscal adjustments in both OECD and developing countries.

²³ See Buchanan and Tullock (1963)

First, they find support for the crisis hypothesis: namely that a crisis stimulates an impetus for reforms. Obviously one has to be careful about a dose of tautology here: reforms in general and fiscal ones in particular are unnecessary when everything is going well. Conversely they "have" to occur when there is a crisis although timing is everything. Nevertheless, it does appear that a prolonged malaise is more difficult to cure than a sharp deterioration. In addition, and perhaps more interestingly, Alesina et al. (2006) examine the types of political conditions that would, when a crisis occurs, be more likely to lead to stabilization. Stabilization is more likely to occur if a crisis hits when a "strong" government, a government that can overrule political opposition to policy changes and act decisively, is in office. For instance, stabilizations are more successful and easier to come by in presidential systems; systems in which the executive faces fewer institutional veto points; systems in which the ruling party (or parties) has a large majority; and in periods of unified government wherein the same party holds the executive and the legislature. The authors also find that stabilization is more likely to occur immediately after an election, presumably when the new government enjoys a mandate and when new elections are long time away. External inducements to stabilization sometimes work; sometimes they do not. The effect of IMF conditionality is mixed.

One major impediment to large fiscal adjustments is that the public might believe that they imply large social costs for the disadvantaged. In fact, that is a legitimate concern. Does this mean that fiscal adjustments need to have large social costs? This is a critical question: the answer once again is not so obvious. Table 3 shows that the degree of efficiency of welfare states varies greatly. By "efficiency" I mean the number of families that are removed from the risk of poverty by state intervention. So the key comparison is the share of families at risk of poverty before and after state intervention. This table shows the proportion of families removed from poverty in existing welfare states. Some social safety nets are expensive but very efficient (northern European countries). Some are somewhat less expensive but much less effective (southern European countries). The latter are also those countries with more serious fiscal problems. Take Greece, Spain, and Italy for instance. These three countries are in need of fiscal prudence. From this table, it does not appear that government spending does much to reduce poverty.²⁴ This means that a lot of that spending is either wasted or misdirected. Therefore, cutting part of it could be done without affecting the relatively small percentage that is well directed and well targeted. In other words, in these countries, fiscal adjustments that are accompanied by welfare reforms that both improve efficiency and craft more-targeted safety nets could create fiscal sustainability and better protect the truly disadvantaged.

In summary, the rhetoric about the immense social cost of fiscal adjustment is blown out of proportion, and it is often used strategically by certain groups—not necessarily the most disadvantaged—to protect them.

²⁴ Another country in need of adjustment is Portugal, which is not included in the table, but the welfare state of this country suffers problems similar to those of other Mediterranean countries.

Table 3

Expensive but ineffective welfare systems

per cent of households at risk of poverty before and after social transfers (2003)

	before	after
Sweden	29	11
Finland	28	11
Holland	22	12
Denmark	32	12

	before	after
Germany	24	16
France	26	12
Belgium	29	16
Italy	22	19
Spain	22	19
Greece	24	21
U.K.	26	18

Source: Eurostat

5) What are European countries doing to fight deficits?

Several European countries have engaged in sizeable multiyear fiscal-adjustment plans in response to the fiscal crisis that, in the spring of 2010, threatened the recovery and pushed the world financial markets on the brink of a second meltdown. The UK, Ireland, Spain, Portugal, Italy, and, of course, Greece were the most-watched countries because of their combination of present and expected deficits and debts in various combinations.²⁵

5.1) Greece

This was the most watched country as it was the first in crisis. In May 2010, Greece signed an agreement with the IMF in exchange for funds at subsidized rates from the European Union and the International Monetary Fund. In return, Greece agreed to reduce its deficit-to-GDP ratio by roughly10 percent in 2–3 years. The measures adopted, if proven effective, could signify a turnaround for a country whose recent polices were extraordinarily poorly managed. Immediate measures included:

i) Tax increases (the value added tax and fuel), adding about 0.6 percent to GDP.

²⁵ It is still too early to have papers written about the implementation of various plans in different countries. The information collected below come from IMF reports and the press, mostly the *Financial Times*.

ii) Pay cuts for public employees and pension cuts, which amounted to about 2 percent of GDP.

iii) Increases in the retirement age (expected future savings in pension expenses).

iv) Various measures to rationalize debt management, including public disclosure of information. These measures were taken in response to the enormous public "confusion" about the true size of Greek budget.

v) Liberalization of several professional services by eliminating protective entry barriers to certain professions and service providers.

The initial effect of these reforms has been positive, probably more than anticipated. Whether or not the adjustment effort can be maintained remains to be seen, but thus far it is progressing at a better-than-expected pace.

5.2) Spain

Spain was the second-most-watched country because of its deep recessions, rapidly growing deficits, and stagnant productivity. The Spanish government was slow in responding to market worries but finally acted on May 20 with a bold plan. The plan includes a reduction of the deficit to GDP ratio from the current 11.2 percent to 9 percent in 2011 and to 3 percent in 2013. Virtually all of the adjustment is on the spending side including:

i) A pay cut for all levels of government employees of 5 percent with immediate effect (for 2010) and zero increase in 2011.

ii) A possible pension reform that would increase retirement age from 65 to 67 and would link received contributions to payment to the system. Pension payments for 2010 and 2011 are frozen.

iii) The elimination of child subsidies.

iv) Sizeable cuts in public investments obtained by abandoning large, planned infrastructure programs.

5.3) Portugal

The government has announced an additional 1 percent reduction of the deficit this year to about 7 percent of GDP and a further reduction to about 4.5 percent next year. The fiscal adjustment is almost entirely on the tax side. The government increased the VAT, taxes on profits, and taxes on various services. There is some discussion of pay cuts for some public employees.

5.4) Italy

Italy entered the Great Recession with the largest debt-to-GDP ratio of the European countries. However, it managed not to let the deficit go much beyond 5 percent of GDP. In response to market fears about the debt level, the Treasury minister proposed a plan to reduce the deficit by about 1.5 percent of GDP. The plan was based almost exclusively on spending cuts in particular: freezing public sector salaries, eliminating various "useless" public entities and related waste,²⁶ and increasing the retirement age of women to equal that of men (age 65). Current political turmoil in Italy and the possibility of early elections coming soon with the resignation of the current government has made the adoption of the plan uncertain.

5.5) Ireland

Ireland started a fiscal-adjustment plan earlier than any other country in Europe. The goal is to reduce the deficit from the current 12 percent of GDP to 5 percent of GDP in 2015. The fiscal adjustment is completely on the spending side. In fact, the VAT tax has been slightly reduced.

The spending cuts are concentrated on public-sector salaries, with large cuts (up to 20 percent) for higher salaries. These cuts have been announced as permanent with a pay freeze that will follow for several years. Retirement age for public employees is raised from 65 to 66. Other cuts include some welfare programs, including child subsidies. There will be some cuts in unemployment subsidies but an increase in spending for job training programs.

5.6) UK

On June 22, 2010, the new conservative government announced a host of measures that include both tax increases and spending cuts to reduce the deficit. Roughly, tax hikes represent one-third of the deficit reduction (although there were some tax cuts). Spending cuts compose the other two-thirds.

On the tax side the main measures are:

i) The VAT rises to 20 percent from 17.5 percent from January 2011.

ii) The capital gains tax (CGT) will rise for higher-rate taxpayers to 28 percent. (The CGT will remain at 18 percent for lower-income taxpayers.)

iii) Corporation taxes will be cut to 27 percent starting in 2011.

iv) Small businesses taxes will be cut from 23 percent to 20 percent.

²⁶ One example is an economic research center that was duplicating research done at the Treasury. Other cuts included activities run by local governments but paid for by the national governments.

On the spending side, the main measures are:

- i) Welfare cuts worth £11bn (about \$17 billion) by 2014/15.
- ii) A two-year pay freeze for public-sector workers pay. (However, public-sector workers earning less than £21,000 will be paid £250 extra each year for two years.)
- iii) Retirement age increased to 66.
- iv) Child benefits frozen for the next three years.
- v) Tax credits reduced for families earning more than £40,000.
- vi) Housing benefits restricted to a maximum £400 a week.

5.7) Summary

Spain and especially Ireland seem to be relying on fiscal adjustments almost exclusively on the spending side, and these fiscal adjustments are focused on public-sector wages and pensions. However, too many of the spending cuts in Spain are on public investments and not enough on other types of spending. Greece is making changes on both sides but is relying mostly on spending cuts as well as increasing retirement ages. Portugal is relying mostly on the tax side, and the UK is doing a bit of both spending and revenue changes. Italy is doing relatively little thus far perhaps because of looming political changes.

6) What are the lessons for the United States?

The main lesson to be learned from the previous discussion is that we don't know as much as we should about the effects of fiscal policy. All policy discussions ought to acknowledge of this uncertainty. The absolute certainty with which the economists in the current administration, as well as some public intellectuals, talk about the positive Keynesian effects of government spending as a cure to the recession is not warranted by the state of our economic knowledge. There are reasons to believe that several non-Keynesian effects may be at work.

The U.S. fiscal stimulus does not seem to have succeeded as hoped. Unemployment is still at 9.5 percent, and it would be higher if the labor-force participation had not come down. Some of this unemployment is becoming long-term, so-called "structural unemployment." Recent revisions of GDP growth data have indicated a rapid decrease in the rate of growth since the beginning of 2010.

If a medicine does not work, it is either because it is not the right medicine or the dosage is too low. The current administration seems to believe the second argument: we need more of the same medicine. The evidence suggests that the first argument may be more plausible: the medicine may be wrong.

Why? My sense is that a fear of future fiscal adjustments on the tax side, possibly coupled with some populist and illiberal measures, is keeping American firms from investing the sizeable profits they are making. Uncertainty over the future path of fiscal policy may be the key for the lack of risk-taking attitudes. Budget projections from the current administration are based on overly optimistic assumptions about growth in 2010 and 2011 being 3.6 and 4 percent respectively. If the economy were healthy, we would not need a fiscal stimulus. If we need it, it is because the economy is not that healthy. Also, the promise of not increasing taxes for any family with an income below \$250,000 is not credible unless the promise is accompanied by a program for spending cuts. Without sizeable spending cuts, the tax rates on the roughly 1 percent of the population above that threshold would have to be impossibly high to close the deficit gap.

The U.S. has an extremely high deficit, a debt ratio to GDP of 60 percent (and that is rapidly increasing), and an economy that is not recovering as fast as is necessary to reduce unemployment. The fiscal alternatives are clear. 1) Ignore the deficit, don't raise taxes, and spend more. 2) Raise taxes on someone (the rich presumably) to keep the budget under control and continue to spend more. 3) Tax more and spend less to control the budget. 4) Do not tax more to avoid further obstacles to the recovery, and spend less to control the budget.

The choice with the highest chance of success is the last one. Option 1 risks making necessary, future fiscal adjustments more costly and will increase uncertainty and its effects. Option 3, the "fiscal hawk" option, risks making the recovery even slower. Options 2 and 4 are attempts to walk the fine line between budget control and recovery. The evidence reviewed above suggests that option 4 has been much more successful in the past than option 2.

One argument that the proponents of option 1 often make is that interest rates on U.S. government debt are still low, unlike long-term rates on some European countries' debts. However, this argument is not sufficient to support option 1. First, interest rates may increase. In this case, a country that is approaching close to (or more than) 100 percent of debt to GDP may be in serious trouble, and, as argued recently by Rogoff and Reinhart (2010), the interest-rate burden may be too great for the recovery. Looking at past experiences of countries with debt ratios above 90 percent, Rogoff and Reinhart show that those countries exhibit signs of stress. If markets begin to doubt U.S. fiscal solidity, the consequences might be serious.

Based on a recent IMF report regarding the behavior of entitlements and tax revenues, Kotlikoff (2010) argues that the "U.S. is bankrupt." He notes, "The U.S. fiscal gap associated with today's federal fiscal policy is huge for plausible discount rates."²⁷ He

²⁷ Section 6 of the July 2010 Selected Issues Paper.

adds that "closing the fiscal gap requires a permanent annual fiscal adjustment equal to about 14 percent of U.S. GDP." The warnings from the Congressional Budget Office a few months back sounded similar notes.

If (or better, when) financial markets wake up and realize the seriousness of the U.S. fiscal position, interest rates may jump. The U.S. may not yet be bankrupt, and there probably is time to adjust if the adjustments are begun immediately. However, simply ignoring the problem and continuing to rely on the discredited fiscal stimulus to push the economy along seems less and less like a sensible policy.

Those in favor of more stimulus point to the U.S. unemployment level of about 9.5 percent. However, 9.5 percent unemployment could also be seen as an indicator that the fiscal stimulus has not worked particularly well at reducing unemployment. If that is the case, perhaps more of the same medicine would not work either. Much of the unemployment rate in the U.S. is becoming structural, i.e., long lasting. Two of the most commonly cited explanations are: 1) a mismatch between the skills and training of the unemployed and the market needs and 2) reduced mobility out of high-unemployment areas because the collapse in housing prices in those areas makes it difficult for workers to relocate. It is far from obvious that more federal spending would help solve these problems.

Finally, one should be clear about the goals of any tax policy. The discussion about taxing only the rich (defined as those who make more than \$250,000) mixes two policy goals: deficit control and redistribution. It is perfectly permissible for an administration to want to increase the progressivity of the tax system. It is a policy goal with which one can disagree, but it is a perfectly understandable one given the increase in inequality in the U.S. in the last two or so decades.²⁸ What is incoherent is to sell this redistributive policy as an appropriate budget control tool and at the same time argue that the recovery is weak.

7) Conclusions

Fiscal adjustments, even large ones that reduce budget deficits, can be successful in reducing debt-to-GDP ratios relatively quickly without causing recessions. Fiscal adjustments based upon spending cuts have the highest chance of success by far. Politicians are typically reluctant to make the necessary changes and often delay the adoption of restrictive fiscal policies, which makes the adjustment even more costly. The common explanation for this reluctance is that voters dislike budget cuts and would punish any fiscally prudent politicians, but there is no evidence for this commonly held view. In fact, voters dislike deficits. According to recent polls, a majority of U.S. voters are more worried about the deficit than about the weak recovery. Perhaps they see the deficit as a cause of the weak recovery.

While the U.S. continues to push on the fiscal accelerator, many European countries are beginning to take their feet off the pedal. We shall see who is correct. Thus far the U.S.

²⁸ See Goldin and Katz (2008).

recovery seems quite weak. However, Germany, the most fiscally conservative of the major economies, is leading the recovery in the OECD group of countries. This should give pause to those who argued that fiscal responsibility in Europe would lead this region to a second recession. Certainly Europe should and could grow more, and it should have done so before the Great Recession. But more public spending is not the road to more growth in either Europe or the United States.

References

- Alesina, A. "The End of Large Public Debts" in F. Giavazzi and L. Spaventa (eds.), *High Public Debt: The Italian Experience* (Cambridge, U.K.: Cambridge University Press, 1988).
- Alesina, A. and S. Ardagna (2010) "Large Changes in Fiscal Policy: Taxes versus Spending" Tax Policy and the Economy, Issue 24, NBER and University of Chicago Press. 34–68.
- Alesina, A., and S. Ardagna, "Tales of Fiscal Adjustments", *Economic Policy*, October (1998): 489–545.
- Alesina, A., S. Ardagna, R. Perotti, and F. Schiantarelli, "Fiscal Policy, Profits, and Investment," *American Economic Review*, 92, (2002) no. 3, 571–89.
- Alesina, Alberto and A. Drazen, "Why Are Stabilizations Delayed?" *American Economic Review*, 81 (1991): 1170–88.
- Alesina, A., D. Carloni, and G. Lecce (2010) "The Electoral Consequences of Fiscal Adjustments," unpublished.
- Alesina, A., R. Perotti, and J. Tavares, "The Political Economy of Fiscal Adjustments," Brookings Papers on Economic Activity, Spring 1998.
- Ardagna, S., "Fiscal Stabilizations When Do They Work and Why," European Economic Review, 48, No. 5 (2004) 1047–74.
- Barro, R. (1979) "On the Determination of Public Debt" *Journal of Political Economy*, 87: 940–47
- Blanchard, O., "Comment on Giavazzi and Pagano," *NBER Macroeconomics Annual*, (Cambridge, MA: MIT Press, 1990).
- Blanchard, O. and R. Perotti, "An Empirical Investigation of the Dynamic Effects of Changes in Government Spending and Revenues on Output," *Quarterly Journal of Economics*, November 2002) 1329–68.
- Bertola, G. and A. Drazen (1993) "Trigger Points and Budget Cuts: Explaining the Effects of Fiscal Austerity," *American Economic Review*, 83: 11–26.
- Brender, A. and A. Drazen (2008) "How Do Budget Deficits and Economic Growth Affect Reelection Prospects? Evidence from a Large Panel of Countries," *American Economic Review*, 98(5): 2203–20.

- Buchanan, J. and G. Tullock, *The Calculus of Consent* (Ann Arbor: University of Michigan Press, 1963).
- Giavazzi, F., T. Jappelli, and M. Pagano, "Searching for Non-Linear Effects of Fiscal Policy: Evidence from Industrial and Developing Countries," *European Economic Review*, 44 (2000): 1259–89.
- Giavazzi, F. and M. Pagano, "Non-Keynesian Effects of Fiscal Policy Changes: International Evidence and the Swedish Experience," *Swedish Economic Policy Review*, 3, Spring (1996): 67–112.
- Giavazzi, F. and M. Pagano, "Can Severe Fiscal Contractions Be Expansionary? Tales of Two Small European Countries," *NBER Macroeconomics Annual*, (Cambridge, MA: MIT Press, 1990): 95–122.
- Goldin, C. and L. Katz (2008) "Long Run Changes in the Wage Structure, Widening, Narrowing and Polarizing" *Brookings Papers on Economic Activity*.
- Jayadev, A. and M. Konczal. (2010) *The Boom not the Slump: The Right Time for Austerity*, The Roosevelt Institute.
- Kotlikoff, L. (2010) "Let's face it, the US is broke." Bloomberg News on line.
- McDermott, J. and R. Wescott, "An Empirical Analysis of Fiscal Adjustments", IMF Staff Papers, 43, n.4 (1996) 723–753.
- Mountford, A. and H. Uhlig, "What Are the Effects of Fiscal Policy Shocks?" NBER working paper 14551, 2008.
- Perotti, R. "Fiscal Policy When Things Are Going Badly," *The Quarterly Journal of Economics*, 114, November (1999) 1399–1436.
- Ramey, V., "Identifying Government Spending Shocks: It's All in the Timing," NBER working paper 15464, 2009.
- Romer, C. and D. Romer, "The Macroeconomics Effects of Tax Change: Estimates Based on a New Measure of Fiscal Shocks," NBER working paper 13264, (2007).
- Sutherland, A., "Fiscal Crises and Aggregate Demand: Can High Public Debt Reverse the Effects of Fiscal Policy?" *Journal of Public Economics*, 65 (1997): 147–62.