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The Case for Fiscal Stimulus:

The Likely Effects of the American Recovery and Reinvestment Act

There are many thrills to my new job:

- Three gates have to open to allow me to park each morning.
- I get to speak frequently with the leader of the free world.
- And, as a courtesy I get to see the Federal Reserve's Greenbook forecast in real time rather than with a five-year delay.

Actually, the biggest thrill of all is that after more than two decades of studying macroeconomic policy, I had the privilege of helping to craft what is without question the boldest countercyclical fiscal action in American history. In the face of a severely escalating recession and an even more severely stressed financial system, the Administration and Congress worked together to pass the American Recovery and Reinvestment Act of 2009. This act provides nearly \$800 billion of stimulus over the next few years.

Over the past several months, there has been much discussion about whether the act will do enough to get the country back on track. I am extremely optimistic that it will, and thought it would be useful to spend my time today explaining why. In the process, I will explain why I disagree with some arguments that have been made against the

recovery plan. Before I dive in, I want to apologize in advance for occasionally sounding like an Administration cheerleader. Like any normal parent, I am sure I find the baby I helped raise just a tad more perfect than it actually is. But, at the same time, I will strive to do my CEA best to give a balanced, dispassionate assessment.

The first issue is what it would mean for the policy to work. The President gave a very concrete metric: he wanted a program that would raise employment relative to what it would be in the absence of stimulus by 3 to 4 million by the end of 2010. Some on the blogosphere (such as the best man at my wedding, Greg Mankiw) call this metric meaningless: they complain that because we never observe the outcome under the no-stimulus baseline, it isn't verifiable. But it is, in fact, the intellectually sound and appropriate metric to use. Exactly what any macroeconomist would ask of a policy is what are its effects, holding constant all the other forces affecting the economy.

I feel the strongest evidence that the President's metric is a good one is that it has focused the debate on the right issue. Numerous forecasters, from Mark Zandi to Macroeconomic Advisers to CBO to the Federal Reserve, have looked at what they expect the Act to do. Rather than fighting over the differences in the no-stimulus baselines, which are substantial and largely outside the control of policymakers, the debate has centered on what the policy would accomplish.

Of course, one can also debate the baseline and the question of whether creating or saving 3 to 4 million jobs will be enough to fully heal the economy. But, it is important to acknowledge that creating or saving that many jobs would be a tremendous accomplishment.

This discussion of what the bill is intended to do leads naturally to the more important question of whether it will actually accomplish the President's goal. This involves two issues. One concerns the effects of a typical fiscal change. What will a quintessential increase in government spending or cut in taxes do to output and employment? The other concerns the particular fiscal changes in this bill. Are there aspects of its structure or timing, or of the economic environment in which it is taking place that would lead us to expect the effects to be different from usual?

Let me start with the issue of the effects of fiscal policy in general. If we cut taxes by 1% of GDP or increase spending by a similar amount, what will that typically do to the economy? I will be the first to point out that estimating these multipliers is difficult and that there is surely substantial uncertainty around any estimate. But, I feel quite confident that conventional multipliers are far more likely to be too small than too large.

David Romer and I have argued that omitted variable bias is a rampant problem in estimating the effects of fiscal policy. One good way to illustrate this is to discuss Robert Barro's approach to estimating multipliers. Barro has argued that a reasonable way to estimate the effects of increases in government spending is to look at the behavior of spending and output in wartime. But, consider one of his key observations – the Korean War. If he were using just this observation, Barro would basically divide the increase in output relative to normal by the increase in government purchases relative to normal during this episode. When one does this, one gets a number less than one. From this Barro would conclude that the multiplier for government spending is less than one. But, other things were going on at this time that also affected output. Most importantly, taxes

were raised dramatically; indeed, the Korean War was largely fought out of current revenues. The fact that output nevertheless rose substantially is in fact evidence that the effects of increases in government spending are very large.

To address the problem of omitted variables, David and I used narrative evidence to isolate tax changes uncorrelated with other factors affecting output. We read Congressional reports, Presidential speeches, the *Economic Reports of the President*, and other documents to identify relatively exogenous tax changes. We found that the estimated effect of these changes is very large. A tax cut of 1% of GDP raises GDP by between 2 and 3% over the next three years.

Unfortunately, doing the same kind of narrative analysis for government spending would be very difficult: there are vastly more spending changes than tax changes, and the motivations for them are less easily classified. But, the same issue of omitted variables is surely present. As the war example illustrates, spending changes are often taken at the same time as tax changes that push output in the opposite direction. Also, spending increases are often taken in recessions, where other factors are clearly reducing output. As a result, it is likely that conventional estimates of spending multipliers are also biased downward.

In estimating the effects of the recovery package, Jared Bernstein and I used tax and spending multipliers from very conventional macroeconomic models. We used simulations based on the realistic assumption that monetary policy would remain loose, and on the assumption that people would treat the individual tax cut as permanent. This last assumption is justified by the fact that the President ran on a permanent middle class

tax cut and just included it in his budget. In these models, a tax cut has a multiplier of roughly 1.0 after about a year and a half, and spending has a multiplier of about 1.6.

As I have suggested, it is very hard to claim that those are excessively large. Indeed, if you want to know why I am more optimistic than some, it is probably because I believe my own research. I think that both the change in taxes and the change in spending may pack more bang than the official Administration estimates assume.

Before leaving multipliers, one issue that has come up is the interaction with the financial crisis. A common argument is that fiscal stimulus will have less effect because financial markets are operating poorly and lending is not flowing. I want to offer a different view. I think it is possible that fiscal policy will have even more oomph in this situation. When households and businesses are liquidity-constrained by reduced lending, any money put in their pockets is more likely to be spent.

More fundamentally, there is strong reason to believe that a recovery in the real economy is salutary to the financial sector. When people are employed and buying things, loan defaults fall and asset prices are likely to rise. Both of these developments would surely be helpful to stressed financial institutions. This is, I believe, a key lesson of the Great Depression. In the Depression, the end of deflation, renewed optimism, and increased employment and output were as crucial to the recovery of the financial system as the more direct actions taken to stabilize banks. Thus, real and financial recovery reinforced each other. So, fiscal policy to raise employment may help to restart lending and in that way generate a more durable recovery.

So much for the generic effects of fiscal policy. What about the particular actions

called for in the Recovery Act? In many ways, the stimulus plan looks pretty plain vanilla: it emphasizes traditional aggregate demand stimulus over more sophisticated possibilities, it contains a wide range of specific items rather than just one or two big programs, and it includes some things that to a layman don't look a lot like stimulus. Nonetheless, I believe all these aspects of the package are in fact desirable in our current situation. Let me take each of the three points I just mentioned – the emphasis on traditional demand stimulus, the broad nature of the package, and the inclusion of some things that, to some, at first glance look questionable – in turn.

With regard to the first point, economists tend to think that substitution effects can be powerful, and so there is some sentiment that stimulus should rely on incentives to change the timing of spending rather than on the traditional Keynesian approach of trying to increase overall spending. We seriously considered possibilities that focused on substitution effects. And, we did include some modest efforts along these lines, such as the homebuyer tax credit and the auto sales tax deduction.

But, we concluded that the traditional approach was better, for two reasons. One was practical: putting in place mechanisms that give people incentives to change the timing of their spending is not as easy as it seems. Scaling up the types of changes that we did turned out to be very difficult. The other, deeper reason has to do with the nature of the current downturn. The economy is likely to be operating below its normal capacity for the next several years. In that environment, what we need is to stimulate demand in general, not rearrange the timing of demand.

The second issue is the breadth of the plan. I believe that a broad bill, with tax

cuts, increases in transfers to those who need them, assistance to the states, and a wide array of government spending programs, is exactly right. There is both a macroeconomic reason for this and a microeconomic one. The macroeconomic reason is that we do not need stimulus narrowly targeted to a specific time window, specific regions, or specific sectors. Given the breadth, depth, and expected length of the downturn, we need broad stimulus – some that will come on line quickly and some that will give the economy a boost next year, and stimulus that will affect all sectors and regions. Moreover, many of the stimulus channels run into constraints on the capacity of the government to move money quickly. Smaller increases along multiple channels are more likely to boost aggregate demand in a timely fashion than one big increase.

The microeconomic reason is the simple one of diminishing returns or diminishing marginal utility. While all spending provides stimulus, it is obviously important to devote the spending to valuable activities. The short-run aggregate demand effects of government outlays are generally similar across different activities, but the effects on social welfare or on long-run productivity can be quite different. Moreover, these benefits – like the macroeconomic benefits – tend to decline as the government does more of a particular type of spending.

The third issue is how much of the plan is really stimulus. Here, my answer is clear: the vast majority. Spending does not have to be on tangible manufacturing goods or on obvious, visible projects to raise incomes and create jobs. Let me give you three examples. First, relief to the states could look like merely moving money from one level of government to another. And when, a week after the bill is signed, we see my home

state of California raising taxes and cutting spending by more than the amount of the relief the package provides, it certainly doesn't feel like we've accomplishing anything. But we have. States have balanced budget requirements. In the absence of the relief provided in the package, the best case is that their spending cuts and tax increases would be even larger, and the worst case is that they would be unable to pay their bills at all. The fact that states are already changing their budgets, and are factoring in the funds from the package in doing so, is a sign that this portion of the package is timely and effective.

Second, there's a tendency in some circles to criticize specific spending proposals, like funding for preventative care or Pell Grants for college, that involve spending that looks very different from our traditional view of stimulus projects where brawny men build things out of steel. But, those types of spending provide just as much stimulus as road-building and school-weatherizing. Spending on preventative care leads to the increased employment of nurses and clinic staff. Pell Grants lead to job creation in education, and by relaxing the budget constraint for households, lead to jobs in industries that produce consumer goods

Third, there's been criticism of the fact that not all of the spending will occur quickly. But again, this is not just OK, but desirable. This is something that just jumps out at you if you try to do forecasts. If you take several hundred billion dollars of stimulus off all at once, the results aren't pretty. Unless you think the economy would have gone into a rip-roaring boom at the beginning of 2011 in the absence of stimulus, taking stimulus off suddenly causes the recovery to stall. So, it's a good thing that the stimulus tapers off rather than ends all at once.

So, I think almost everything in the bill is useful stimulus. The AMT patch, while desirable as public policy, is less important for the goal of net new job creation. It clearly prevented a large tax increase from occurring, but it is something that households had most likely been counting on in any event. For this reason, in our own estimates of the jobs effects, we gave it a relatively small multiplier. And there's a small amount of spending after 2011. CBO estimates that about 4% of the overall package won't be spent out until 2012, which is probably fine in terms of having stimulus taper off, and another 5% in 2013 and beyond. Although our own estimates are that the tail will be even smaller than this, having some tail is an inevitable consequence of devoting some of the spending to valuable long-term investment projects.

Finally, I'd like to say a bit more about the issue of socially valuable spending that I keep alluding to. I think there's pretty broad agreement that we have been neglecting public investment in recent decades, to the point where there are important areas where additional investment is very likely to have substantial payoffs. Examples include conventional infrastructure, the portion of the electricity grid that requires public investment, and support for basic research. It is hard to think of a better time to make such investments than when resources are underutilized and borrowing costs are low. These investments will not only help mitigate the downturn in the short run and help spur recovery in the medium run, but will also make the economy more productive in the long run.

The bottom line is that I fully believe the American Recovery and Reinvestment Act will have the effects we said it would. This belief is reflected in the economic

assumptions underlying the budget announced yesterday. We are projecting somewhat stronger growth than some private forecasters. In part, this is due to the fact that we did the forecast two months ago, and the economic news since then has not been good. But the more fundamental reason is that we firmly believe the stimulus package, together with financial stabilization and our housing policy, will have a tremendous impact. I understand that actual developments may prove me wrong. But everything I know from history and macroeconomics tells me that the policies we are taking will make a crucial difference.