"The Impact of the Recovery Act on Economic Growth"
Testimony to the Joint Economic Committee

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Chair Maloney, Vice Chairman Schumer, Ranking Members Brady and Brownback, and members of the Committee, it is an honor and a pleasure to be with you today.

I. Introduction

As the world's economy slowed dramatically over the last few years, an interesting policy revolution took place. Until recently, there was wide consensus among macroeconomists that activist fiscal policy was inadvisable. But in a now prescient piece, Blinder (2004) began a reconsideration of the case against fiscal policy, stating that 'virtually every contemporary discussion of stabilization policy by economists – whether it is abstract or concrete, theoretical or practical – is about monetary policy, not fiscal policy.'[1] Taylor (2009) alludes to a similar consensus, referring to his past work (Taylor 2000), to Feldstein (2002), and to Eichenbaum (1997), who quite pointedly added that, 'there is now widespread agreement that countercyclical discretionary fiscal policy is neither desirable nor politically feasible' (Taylor 2009, p. 2). These reviews generally found that stimulus measures were ineffective in the past, and were usually implemented at the wrong time.

[1] Blinder 2004, p. 1

Despite these admonitions, one thing is certain: countercyclical discretionary policy is now politically feasible. Around the world, significant temporary stimulus packages have been implemented. In the United States, government economists have even gone so far as to assert that stimulus actions have the consensus support of economists. In an article in the New York Times earlier this year, Christina Romer, chair of the Council of Economic Advisors, said that 'aggressive, well-designed fiscal stimulus is critical to reversing this severe decline'. The article then continued, 'the vast majority of the nation's economists agree that [fiscal stimulus] is necessary, and soon.'[2]

This generalization did not allude to evidence gathered from a survey of economists. It was merely an assertion. Given that Blinder in 2004 stated the opposite, it raises the question: "what new evidence emerged after 2004 that changed the decades-old consensus in academic literature advising against discretionary stimulus?" The answer, of course, is that there have been no dramatic new scientific breakthroughs. Conclusions concerning the views of the majority of economists should be drawn only after a proper survey. My view is that such a survey would show, as it would in most areas of economics, a significant difference of opinion concerning optimal policy responses to a recession. The basis for this view is presented below.

My testimony will be broken up into four parts. The first will be a brief review of the state of the economy. The second part will discuss the state of the economic literature concerning stimulus plans in general. The third part will discuss a few specifics of the latest stimulus effort. The final section will discuss the merits of alternative policies to those that were enacted this year.

[2] Uchitelle 2009

II. The State of the Economy

There are many signs that the economy has finally turned the corner. While there are many interesting individual data items, a useful summary statistic is a model of recessions that has been developed by University of California economist Marcelle Chauvet and her coauthors. Chauvet's model takes monthly economic numbers and uses them to estimate whether or not the economy is in recession. The model's key output is a recession probability, that can be thought of as being analogous to a weather forecast for the current state of the economy. When the probability of recession climbs above 50 percent, then the economy is said to be in recession. When it drops below 50 percent, then we are out of recession. Her model is quite remarkably; it has correctly predicted every postwar recession, and never given a false signal.

In a recent correspondence, Chauvet communicated to me that the latest read on the recession probability suggests that the recession most likely ended in July, or August at the latest. That means that we can expect that third quarter growth was much improved, and that growth will continue to be positive going forward.

I should add a note of caution, however. Just because the economy is growing, it does not mean that all of the slack has been taken up. In this recession in particular, the enormous increase in the number of long term unemployed is a deep policy concern, and it may be prudent to consider additional policies that hasten the rate at which the long term unemployed return to the labor market. I return to this issue in the final section of my testimony.

III. The Academic Stimulus Debate

This section will review the arguments for activist fiscal policy, and discuss the lessons

the literature has to offer concerning its form.

On the favorable side, a recent and influential summary of the arguments for short-run fiscal stimulus was provided by Elmendorf and Furman (2008). Most of the compelling arguments for activist fiscal policy rely on simulations of Keynesian models, such as Elmendorf and Reifschneider (2002). A number of extensive reviews indicate that there is a wide array of Keynesian models that suggest economic stimulus can be very effective.[3] For the most part, fiscal multipliers range from slightly below one to perhaps as high as 1.4, suggesting potential benefit in these models from significant short run stimulus.

While Keynesian models suggest that large stimulus effects are possible, these effects are part of these models by construction. Neoclassical alternatives to the Keynesian approach, such as that offered by Barro (1981) or Baxter and King (1993), suggest that in many cases, private actions can largely offset a fiscal stimulus. The question, then, is an empirical one. Fortunately, there is a large literature to draw on. I will look at each of the most important questions in turn, including the impact of government spending on output, the impact of temporary tax reductions on consumption, the impact of temporary business tax reductions on business capital spending, and the effects of fiscal consolidations.

Temporary Tax Cuts and Consumption

The U.S. Congress provided economic stimulus in the form of rebate checks in 2001 and 2008, and evidence from the first episode about the efficacy of this type of measure is mixed. Economists have studied the effects of the 2001 rebate checks extensively. Johnson, Parker and

[3] For other examples see Barrel et al. (2004) or Roeger and Veld (2004).

Souleles (2006) used Consumer Expenditure Survey data that provided special details on the timing of the rebate checks. They found that total expenditures did not respond to these checks if one included durable spending in the analysis, but that there was a significant response for nondurable consumption. In the first quarter following the checks' disbursement, response of consumption to the checks was 37.1 percent, with the two quarter effect about double that. Agarwal, Liu and Souleles (2007) found evidence that money not spent was used to buy down credit card balances, making room for additional purchases. Slemrod and Shapiro (2003a, 2003b) provide survey evidence that is also roughly consistent with these results.

It is possible, of course, that the stimulus effect of the 2001 tax reductions might have been larger than that of the 2008 rebates, because the 2001 tax cuts may have been perceived to be permanent. In that case, both "Keynesian" consumers who spend their entire income, and unconstrained consumers who obey the Permanent Income Hypothesis, might have responded to the stimulus.

The evidence regarding the effectiveness of the 2008 cuts is still emerging. Slemrod and Shapiro (2008) found that only one-fifth of respondents planned to increase spending in response to their stimulus checks. This result suggests that the stimulus effect of the tax cuts may have been relatively small.

It is worth noting that the opposing view voiced by neoclassical economists argues that individuals increase their savings in anticipation of future tax increases. To the extent that this microeconomic evidence is based on the responses of low-income consumers relative to higher-income consumers, it may be that the macroeconomic effects of the stimulus would be smaller than these results imply. If consumption is reduced by the relatively wealthy who pay the

majority of taxes (but received little stimulus), then we might see differing consumption patterns in micro data that do not lead to big changes in aggregate consumption because reductions in the consumption of the wealthy offset increases by low income individuals. Given that there is some evidence that macro consumption has been disappointing during stimulus episodes (a point I return to below) this concern must be taken seriously.

The Impact of Government Spending on Output

Textbook Keynesian models suggest that government spending can increase aggregate output with a multiplier significantly greater than one; the neoclassical theory disagrees. This alternative theoretical argument is described in detail in Barro (2008), which draws heavily on Barro (1981). There he documents that the long run effect in a neoclassical model of higher government spending is likely very close to zero, but that the short run effect can be positive. He provides aggregate time series evidence consistent with these two theories. Also, Barro (1981) distinguishes between the effects of spikes in military and nonmilitary government spending on aggregate output. He finds that increases in military spending raise output, but with a multiplier that is less than one. When government spending was above trend, there were shortfalls in private investment and net exports.[4] However, Barro (1981) does not find that non-military government spending has any positive effects on output. This suggests that, if past incidents are an indication of future results, the current wars may be more productive fiscal policy than the stimulus package.

A very large literature has subsequently emerged that explores these issues, both in the short term and in the long term. Blanchard and Perotti (2002), Mountford and Uhlig (2002),

[4] Barro (1981) p. 377

Perotti (2005) and many others find that vector auto-regression (VAR) settings that near term shocks to government spending lift GDP, consumption, and real wages. These results are more consistent with the Keynesian stimulus view, but they have been challenged by an equally extensive literature.

Most notably, Ramey and Shapiro (1999) and Ramey (2008) use exogenous military shocks to identify the effect of government expenditure on growth. The Ramey-Shapiro results are highly consistent with neoclassical predictions: indeed, they conclude in their introduction that "[w]hen shocks to defense spending rather than overall spending are identified using a standard VAR, I find that the Keynesian effects on consumption and real wages disappear."[5] Ramey and Shapiro also reconcile their results with those of the more Keynesian structural VARs. They find that the VARs tend to use a government shock identification approach that leads to a mistiming of the results. Additional work by Edelberg, Eichenbaum, and Fisher (1999) leads one to conclude that the government spending shocks have a positive short run effect that peaks in about a year, but this effect declines and can even turn negative shortly thereafter. Tenhofen and Wolff (2007) provide a neat bridge between the VAR and the Ramey and Shapiro literatures, finding that they can roughly reproduce Ramey and Shapiro's results inside the structural VAR framework by including a model of consumer expectations toward government policy. Given the earlier indictment of VAR timing by Ramey and Shapiro, this result closes the circle.

Hemming, Kell, and Mahfouz (2002) document an extensive VAR literature that, across many countries, finds short term effects of government spending on growth that imply

[5] Ramey (2008) p. 3.

multipliers that are quite small when compared to the predictions of Keynesian models. Nonetheless, this literature makes it clear that a government spending boom in the U.S. is likely to lift output to some degree above its counterfactual path. However, this may come at some short term cost in reduced private activity. In the long term, one needs to factor in two other literatures before assessing the net costs and benefits of the current actions.

Finally, one should note that this literature, combined with an earlier public finance literature, raises questions concerning the welfare gain associated with short term increases in spending. Ballard, Shoven and Whalley (1985) for example, find that the marginal cost of $1 of public expenditure is about 17 cents. Browning (1987) finds that the marginal cost ranges widely, between 10 and 300 percent. Thus, the welfare costs of paying the bill may be greater than the short term boost to the economy from the most optimistic estimates.

The non-Keynesian effects of fiscal consolidations

Giavazzi and Pagano (1990) began an enormous literature when they studied the impact of fiscal contractions. They found that in some cases--the first identified were Ireland and Denmark--a country can have a dramatic reversal in economic growth when it achieves a successful fiscal consolidation; that is, when it cuts rather than increases government spending, and raises rather than lowers taxes. Similar results have been found for other countries by Alesina and Perotti (1997), Alesina and Ardagna (1998), and Alesina, Perotti, and Tavares (1998).

It is necessary, of course, to attempt to find a roadmap that allows one to predict when a country can expect a non-Keynesian effect of a fiscal consolidation, and when it cannot. Perotti

(1999) finds that Keynesian effects seem to be most likely when a government begins the episode with relatively low debt. Jonsson (2007) finds that a consolidation is most likely to stimulate growth if it cuts transfers. Hjelm (2002), in a cautionary tale, finds that the results may be significantly influenced by exchange rate swings, something that might make an expansionary consolidation more likely in a relatively small country with a questionable government prior to the consolidation. Reading through the literature, it is clear that fiscal consolidations can be stimulative, and even when they are not, their presence provides significant challenges to Keynesian models with large multiplier effects.

A possible theoretical path that could produce non-Keynesian results would be dismay over the possibility that a government might deviate from its long run budget constraint. Canzoneri et al. (2002) use the term Ricardian in the Woodford (1995) sense: A Ricardian regime means that future and discounted budget revenues are expected to pay future government spending and interest on debt (budget surpluses satisfy a present value budget constraint for any prices and discount factors). A non-Ricardian regime means that there is no guarantee that budget revenues will pay for future spending and debt.

The authors show that in non-Ricardian regimes, fiscal policy determines price levels. If taxes are cut in an economy with flexible prices and wages, real households have increased wealth, which puts pressure on the aggregate demand and raises prices.

Canzoneri and Diba (1998) and Canzoneri, Cumby, and Diba (2001) argue that monetary policy loses its ability to restore prices in the non-Ricardian scenario. The Fed cannot raise the interest rate enough to make the selling of bonds offset the decrease in revenue created by tax

cuts. Since a government flipping to non-Ricardian status is a doomsday scenario, a fiscal consolidation might have an enormous positive impact on expectations.

The negative impact of government in the long run

While there is a good deal of uncertainty concerning the size of the government multiplier effect in the short run, the long run impact of government spending on growth has a fairly robust underpinning in the empirical growth literature. Barro (1989, 1991) examines the impact of government consumption and investment spending on economic growth in a series of cross-country growth regressions. He concludes that public consumption spending has a robust negative relationship with growth and investment while public investment spending has an insignificant effect on economic growth. Grier and Tullock (1989) find that a one standard deviation increase in government growth reduces average GDP growth by 0.39 percentage points. In other words, there is a strong negative effect of the growth of government consumption as a fraction of GDP. Alesina, et al. (1999) find similar negative results of government spending on economic performance, as measured by business investment, in an analysis of OECD countries. Folster and Henrekson (1999 and 2001) find a negative growth effect of large public expenditures in cross-country analysis.

Other notable papers examining the long run economic impact of government spending include Landau (1983), Barth and Bradley (1987), and Kormendi and Maguire (1985).[6] Grossman (1988) examines the impact of government expenditure on economic growth in the United States from 1929-1982 and concludes that the negative impact of rent-seeking behavior

[6] For a review of the literature evaluating the empirical relationship between government spending and economic growth in a cross-country setting, see Slemrod, Gale and Easterly (1995).

and the misallocation of resources has considerable costs. In fact, the positive impact of increased government size was offset by the inefficiencies of the provision process. He also notes that the size of these negative effects is likely to increase with the relative size of government.

Summing Up

Since the short run effects of Keynesian policies are uncertain, and the long run effects likely negative, one might wonder whether on balance, activist countries are serving their citizens. One study that looked at this question is Fatas and Mihov (2003). Looking at a panel of 91 countries, they found that

> "(1) governments that use fiscal policy aggressively induce significant macroeconomic instability;
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> (2) the volatility of output caused by discretionary fiscal policy lowers economic growth by more than 0.8 percentage points for every percentage point increase in volatility;
>
> (3) prudent use of fiscal policy is explained to a large extent by the presence of political constraints and other political institutional variables."[7]

Hemming, Mahfouz and Schimmelpfennig (2002) provide a useful case history of past recessions. Based on data from all OECD recessions between 1971 and 1998, they find that the impacts of expansionary policy were barely noticeable, and may at times have been negative. Consistent with the pattern one would expect from the fiscal consolidation literature, they find that countries with high debt positions that pursued fiscal expansions in their recessions saw their

[7] Fatas and Mihov, (2003) p 1419.

growth rate drop 4.3 percent below trend growth, on average, during the recession in question. Countries that had high debt positions and contracted their fiscal position posted rates 3.8 percent below trend growth. For lower debt countries, the pattern was reversed. Those countries that pursued fiscal contractions had posted rates that were 5.3 percent below trend, while those with fiscal expansions grew at 4.4 percent below trend growth.

These disappointing results are consistent with the balance of the literature as summarized above, and rather bad news for countries attempting Keynesian stimulus at the moment. Government debt has expanded so rapidly during the government bailout that one might expect the high debt results to apply in most countries. In that case, then, the short run positive effects may be minimal. The large expansion of government spending also creates something of a problem for policy makers. If they unwind the spending all at once, then they may, even optimistically, only postpone some subset of the recession. If the government spending spike is not unwound, then the long run negative growth results kick in.

IV. A Look at the Latest Stimulus Effort

This year's stimulus bill consisted of an attempt to stimulate consumption through temporary tax cuts, a few targeted programs such as the First-Time Homebuyer Tax Credit and the "cash for clunkers," and increases in government spending.

Consumption Effects

The consumption stimulus is viewed by proponents as a macroeconomic success if it leads to a short-run increase in consumption. A neoclassical skeptic would emphasize that the increased saving (reduced consumption) by those who anticipate higher future taxes might offset

the increased consumption by "Keynesian" consumers who rush out to spend their checks from the government.

Figure 1 suggests that the scale of the concern is significant. In Figure 1, I assume that the deficits for fiscal years 2009 and 2010 will be closed via future tax increases to maintain that maintain the distribution of tax payments. I compare the current value of this expected future tax increase at each income bracket to the size of the stimulus check. Clearly, if consumers are even a little bit worried about future taxes, it could offset the stimulus.

Cogan, et al. (2009) has analyzed the macroeconomic movements in consumption behavior this year, and compared them to personal income movements. Taylor (2009a) has updated their analysis, presented in Figure 2. While there are many moving parts, and one should be wary of reading too much into such a simple chart, it suggests that we should be cautious about concluding that a massive stimulus to consumption has occurred. Indeed, the stimulus checks visibly affect income but not consumption. If this is the case, it is because reductions in consumption from non-Keynesian consumers offset the increases of the Keynesians.

I should add a note that even if stimulus did motivate consumption, it is not obvious that it made consumers better off. If consumers do consume their stimulus checks because they ignore the possible future tax increase, then they will likely regret that choice when the inevitable tax increase occurs.

Targeted Measures

While I am unaware of the existence of a detailed study, there is no question that the cash for clunkers program stimulated automobile purchases. The First-Time homebuyer Tax Credit,

however, is something of a case study of the perils of rushing government cash out the door. The issue is that the IRS did not require documentation to prove eligibility for the credit, and a review of the program by J. Russell George, the U.S. Treasury inspector general for tax administration, has exposed extensive fraud.

According to George's investigation which he revealed in a recent testimony, ``we identified more than 19,300 electronically filed 2008 tax returns on which taxpayers claimed the First-Time Homebuyer Credit for a home which had not yet been purchased." In addition, George said his office found almost 74,000 claims ``by taxpayers who had indications of prior home ownership within the preceding three years." Some taxpayers were able to claim the credit by purchasing a house for a child. George testified that ``more than 580 taxpayers younger than 18 years of age who claimed almost $4 million in First-Time Homebuyer Credits. The youngest taxpayers receiving the credit were 4 years old."[8]

The problems with the homebuyer credit expose the flawed Keynesian reasoning behind this year's stimulus efforts. There is no question that the credit's stimulus effect was likely magnified by these frauds. After all, checks were mailed, and individuals who bought beach homes in the names of their children likely used the government checks to purchase furniture for their new vacation paradise. The question is not whether it is feasible to use policy to provide a short run boost to the economy, the question is, what is the best way to provide the boost? I return to the latter question in the final section of my testimony.

Government Spending

[8] George (2003)

The final major stimulus effort focused on government spending through infrastructure and other measures. I should add that since infrastructure spending is likely far below its optimal level in the U.S., much of this portion of the stimulus bill represents prudent policy. But it was probably not much use in providing stimulus.

A recent analysis of government spending by Alex Brill of AEI and his colleague Rachel Forward concluded that stimulus money has "gone out the door" at about the expected pace, but that the composition has been much different than expected. After a detailed analysis, they concluded that "Transfer payments to states and individuals for unemployment insurance and education have far exceeded initial projections, while spending for construction and infrastructure projects, designed to fuel job creation, is far below the original plan."[9]

Regardless of what one assumes the government spending multiplier to be, it is simply impossible to assert that higher government spending has done much so far. The higher transfer payments did, however, undoubtedly boost consumption at the margin. Looking ahead, Brill and Forward's analysis suggests that a good deal of additional stimulus is in train.

V. Policy Alternatives

One argument in support of economic stimulus that has received significant attention in Washington is the view that stimulus cannot hurt. If Keynesians are correct, the argument goes, then the economy will be stimulated. If Keynesians are incorrect, then consumers increase savings to offset the stimulus, but, since they then have the savings, the policy is a wash. Either way, the policy should be adopted because any positive probability of Keynes being correct (and that probability cannot be zero) would imply the policy would have a positive impact.

[9] Brill and Forward (2009)

The problem with this argument is that it assumes that the alternative to Keynesian stimulus is doing nothing. Sadly, this argument is the source of a significant policy error, which is to accept without question the view that a recession is a bad time to fix something that is broken, or that it is wrong during a recession to pursue policies that are not temporary. There really is no rational support for this view, unless we accept that sounder policies are politically impossible. By refusing to acknowledge the opportunity to improve broken policies, we have, perhaps ironically, wasted the crisis.

As we look ahead to many months--if not years--of unemployment that is far higher than what is desirable, we must consider policies that help the economy reach full employment more quickly while providing a sustained basis for long run recovery. Several policies come to mind that are likely to be more effective than those adopted so far, and that draw on the extensive academic literature on discussed earlier. These policies would make permanent changes to provide an immediate boost to the economy, and would run a smaller risk of running into problems highlighted by the fiscal consolidation literature.

First, the indexing formula for Social Security could be changed from wages to prices. A recent analysis by the Social Security Administration found that over a 75 year time horizon, this would improve the long run budget condition by $4.5 trillion in present value.[10] If some fraction of that revenue were recycled, say, through a reduction in the payroll tax (increasing monthly take-home pay), then one might see both a consumption increase and a positive fiscal consolidation effect. The consumption increase would be dramatic if it improved recipients' confidence that they will receive benefits, thus increasing their perceived permanent income.

Alternatively, the government could announce today that the corporate tax rate would gradually

[10] Social Security Administration (2008)

be reduced from 35 percent to 25 percent, while again covering any expected revenue loss from that with the introduction of a value added tax (VAT) that does not take effect for a number of years. The declining corporate tax rate would act like an Investment Tax Credit today, giving investors an incentive to pull their deductions forward into the high tax rate period. The future VAT would induce individuals to consume today, before consumption is taxed. In addition, the move toward a consumption tax would improve the long run efficiency and vitality of the economy. The lower corporate tax rate would be a long overdue response to our many competitor countries that have already reduced their rates.

Such policies would, the literature suggests, stand a much better chance of providing significant and sustained growth than those that have already been adopted. To the extent that the high level of unemployment motivates additional policies, it would be unfortunate if such permanent fixes were again taken off the table.

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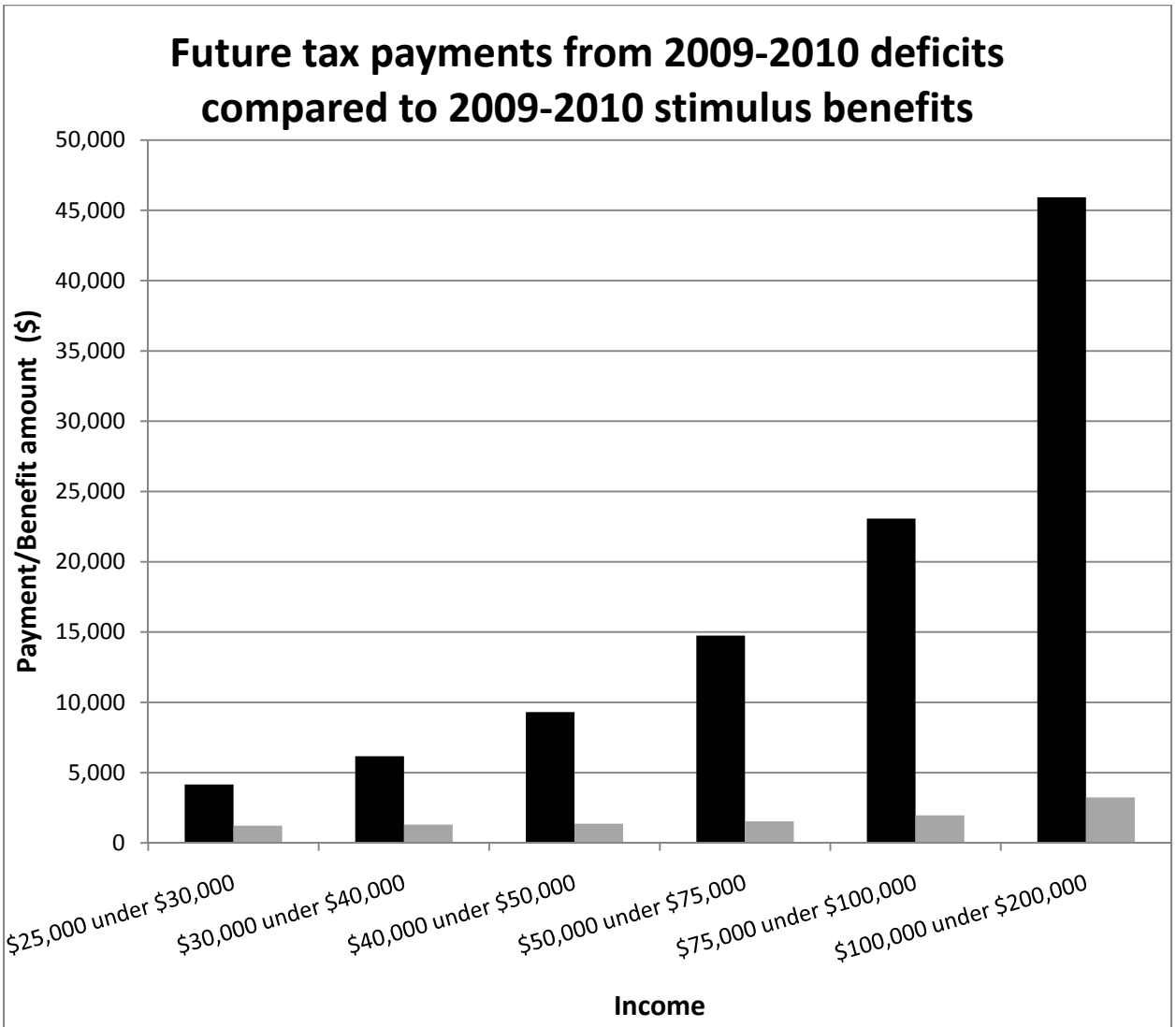
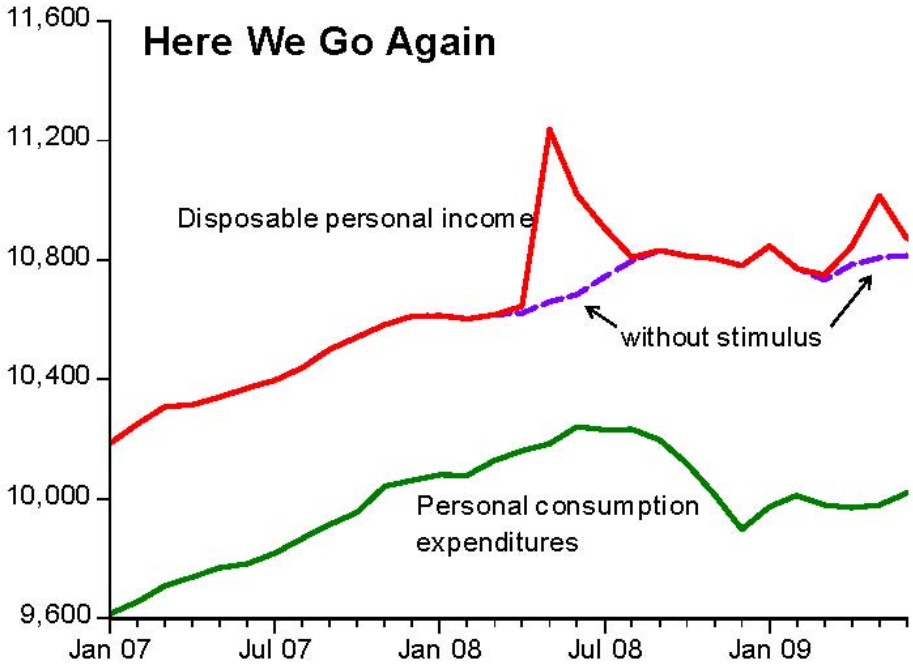
Figure 1.



Sources: The author's calculations are based on data from the Brookings–Urban Tax Policy Center and IRS Statistics of Income. Notes: The combined $2.78 trillion deficit for FY 2009 and 2010 is assumed for future tax burden calculations. Black bars indicate the additional tax burden associated with the 2009-2010 projected deficit for each income category. The deficit is distributed across taxpayers according to the distribution of 2006 tax liabilities. If the distribution of the income tax is unchanged, and the deficit is ultimately paid for via income taxation, then the table indicates the additional burden associated with the projected deficit. Grey bars show the distribution of individual income tax changes from The American Recovery and Reinvestment Tax Act of 2009 as estimated by the Brookings–Urban Tax Policy Center and the author's calculations. Income categories are based on adjusted gross income for tax year 2006; income tax amounts are based on "income tax before credits." Incomes below $25,000 are assumed to have zero or negative income tax liability.

Figure 2.



Source: Taylor, John B. (2009a)