Congressional Budget Office

Testimony

Statement of
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Policies for Increasing Economic Growth and Employment in the Short Term

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Congresswoman Maloney, Senator Schumer, Congressman Brady, Senator Brownback, and Members of the Committee, thank you for the opportunity to testify today on policies to foster economic growth and employment this year and next. My statement is drawn from the Congressional Budget Office's (CBO's) recent work on that topic.[1]

The United States has just suffered through the most severe recession since the 1930s. The economy's output is currently about 6 percent below CBO's estimate of potential gross domestic product (GDP)—the output the economy would produce if its resources were fully employed. At 9.7 percent, the unemployment rate is about twice what it was in December 2007. Since that time, employers shed about 8.4 million jobs. Moreover, if employment had grown during that period at the same rate at which it grew from 1990 to 2007, millions of additional jobs would have been added to the economy. All told, the recession has lowered employment by about 11 million jobs relative to what it would otherwise be.

The good news is that the economy appears to be starting to recover. Real (inflation-adjusted) GDP grew during the second half of 2009, after having fallen 3.7 percent since the recession began in the fourth quarter of 2007. Severe economic downturns often sow the seeds of robust recoveries. During a slump in economic activity, consumers defer purchases, especially for housing and durable goods, and businesses postpone capital spending and try to cut inventories. Once demand in the economy picks up, the disparity between the desired and actual stocks of capital assets and consumer durable goods widens quickly, and spending by consumers and businesses can accelerate rapidly. Although CBO expects that the current recovery will be spurred by that dynamic, in all likelihood the recovery will also be dampened by a number of factors. Those factors include the continuing fragility of some financial markets and institutions; declining support from fiscal and monetary policy; and limited increases in households' spending because of slow income growth, lost wealth, and a large number of vacant houses.

Therefore, CBO anticipates, as do most private forecasters, that the pace of the economic recovery will be slow. The agency's latest forecast is presented and explained in *The Budget and Economic Outlook,* which was released two weeks ago.[2] CBO projects that, under current law, real GDP will increase by 2.1 percent between the fourth quarter of 2009 and the fourth quarter of 2010 and by 2.4 percent in 2011. Growth of real GDP will accelerate after 2011, spurred by stronger business investment and residential construction. For 2012 through 2014, CBO projects that real GDP will increase by an average of 4.4 percent per year, which would close the gap between actual output and potential output completely by the end of 2014.

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1. See Congressional Budget Office, *Policies for Increasing Economic Growth and Employment in 2010 and 2011* (January 2010); and Congressional Budget Office, letter to the Honorable Robert P. Casey Jr. providing information on various approaches to reducing employers' payroll taxes to encourage employment (February 3, 2010).

2. Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2010 to 2020* (January 2010),

Figure 1.

Unemployment Rate

(Percent)
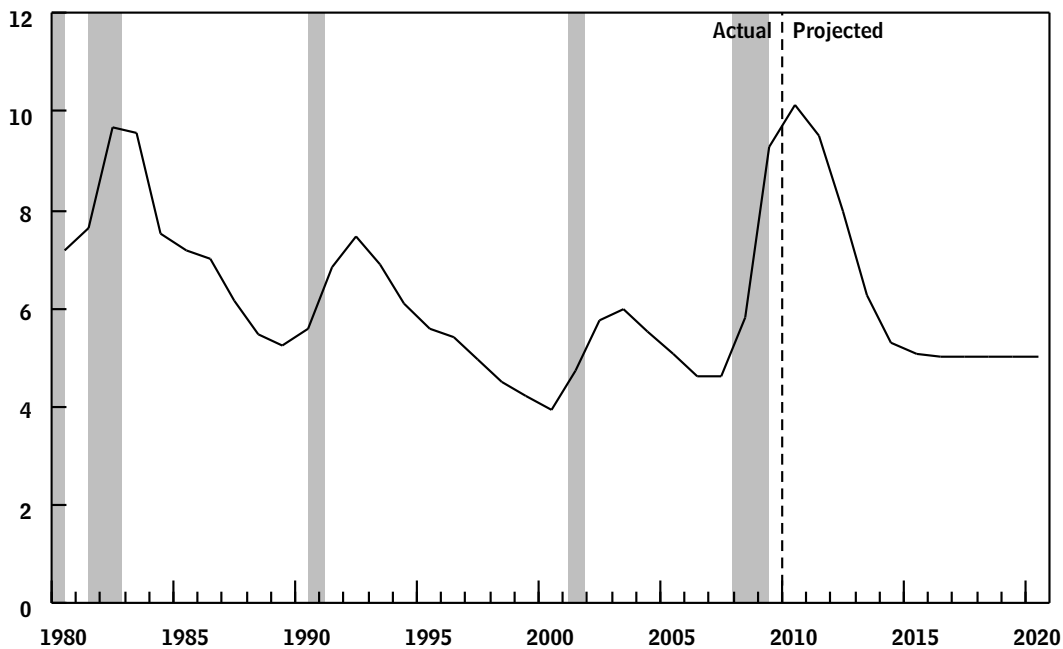
Source: Congressional Budget Office.

Note: The shaded bars indicate periods of recession.

Hiring usually lags behind output during the initial stages of a recovery because firms tend to increase output first by boosting productivity and by raising the number of hours that existing employees work; adding employees tends to occur later. CBO expects that the unemployment rate will average slightly above 10 percent in the first half of this year and then turn downward in the second half (see Figure 1). In CBO's projection, the unemployment rate does not fall below 8 percent until 2012 and does not return to its long-run sustainable level of 5 percent until 2014.

Reflecting the large amount of slack in the economy, inflation will decrease further from its already low level in 2009, CBO forecasts. The core price index for personal consumption expenditures (that is, the PCE price index excluding the prices of food and energy) will rise by about 1 percent (on a fourth-quarter-to-fourth-quarter basis) in 2010 and 2011. The overall PCE price index will rise by 1.4 percent in 2010 and 1.1 percent in 2011.

During the past three years, the government has implemented a range of policies to address the severe recession as well as the turmoil in the housing and financial markets. Concerns that the economic recovery will be slow and protracted have prompted the consideration of further fiscal policy actions. In previous reports and testimony,

CBO identified three key criteria for judging policy options for spurring economic growth and increasing employment:

- Timing—providing help when it is needed most;

- Cost-effectiveness—providing the most growth and employment per dollar cost to the federal budget; and

- Consistency with long-term fiscal objectives—preventing a short-term deficit increase due to stimulative policy from adding excessively to federal debt in the long run.

Other considerations affecting the design of policy options include uncertainty about a policy's effectiveness, the distribution of benefits among different people, and the value of additional goods and services that would be produced.[3]

This testimony summarizes the outlook for the labor market and assesses the potential impact that a variety of policy options would have on economic growth and employment. Some of the options that CBO analyzed would reduce taxes on individuals or increase aid to the unemployed and others, thereby increasing households' disposable income and boosting demand. Other policies would increase the flow of cash and reduce taxes for businesses, which would encourage them to invest and hire and thus increase employment. Additional options would increase federal spending by investing in infrastructure or providing aid to state governments, which would strengthen demand for goods and services and reduce further losses of state and local government jobs.

CBO concludes that further policy actions, if properly designed, would promote economic growth and increase employment in 2010 and 2011. The policies analyzed vary in cost-effectiveness as measured by the cumulative effects on GDP and employment per dollar of budgetary cost and in the timing of those effects. Policies that could be implemented relatively quickly or targeted toward people whose consumption tends to be restricted by their income, such as reducing payroll taxes for firms that increase payroll or boosting aid to the unemployed, would have the largest effects on output and employment per dollar of budgetary cost in 2010 and 2011. By contrast, policies that temporarily increased the after-tax income of people with relatively high income, such as an across-the-board reduction in income taxes or an increase in the exemption amount for the alternative minimum tax (AMT), would have smaller effects because such tax cuts would probably not affect the recipients' spending significantly.

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3. See Congressional Budget Office, *Options for Responding to Short-Term Economic Weakness* (January 2008); and statement of Douglas W. Elmendorf, Director, Congressional Budget Office, before the House Committee on the Budget, *The State of the Economy and Issues in Developing an Effective Policy Response* (January 27, 2009).

Despite the potential economic benefits in the short run, such actions would add to the already large projected budget deficits. Unless offsetting actions were taken to reverse the accumulation of additional government debt, future incomes would tend to be lower than they otherwise would have been.

The Outlook for the Labor Market

Conditions in the labor market deteriorated less rapidly during the second half of 2009 than in the preceding year and a half, but a sustained turnaround in the unemployment rate and a recovery in employment are clearly lagging behind the recovery in production and output. The unemployment rate continued to rise in the second half of the year, reaching 10.1 percent in October and finishing the year at 10.0 percent. The rate then fell to 9.7 percent in January, surprising CBO and most private forecasters; whether that decline represents a temporary improvement or heralds the beginning of a downtrend is not clear. Payroll employment dropped sharply during much of 2009 but appeared to be leveling out by the end of the year. Still, payroll employment has not yet shown significant growth. New claims for unemployment insurance have fallen substantially since early 2009, but they remain well above prerecession levels. At the same time, hiring rates are still very low, with only weak signals pointing to imminent improvement.

That pattern is typical of recent recessions, in which the unemployment rate continued to rise and employment continued to fall for 6 to 12 months after real GDP began to grow. Hiring usually lags behind output during the initial stages of a recovery because firms tend to increase output first by boosting productivity and by raising the number of hours existing employees work; adding to payrolls tends to occur somewhat later. Indeed, productivity in the nonfarm business sector surged at an annual rate averaging about 6.7 percent from the second quarter through the fourth quarter of 2009. Moreover, the unemployment rate generally lags further behind the turning point in output because the number of people seeking work also increases in a recovery.

Effects of the Recession on Unemployment

At the beginning of the recession, only 4 states had an unemployment rate of 6 percent or higher. In November 2009, that number increased to 48; in 15 states, the rate was above 10 percent, and the highest rate was 14.7 percent.

In the recent recession, those who have been hit especially hard include men, younger workers, and less educated workers. The unemployment rate for men age 20 or older rose from 4 percent in the fourth quarter of 2007 to 10 percent in the fourth quarter of 2009; the rate for women, also 4 percent in late 2007, rose less—to 8 percent. Unemployment among workers between ages 20 and 24 rose from 9 percent in late 2007 to 16 percent in the fourth quarter of 2009. During the same period, the unemployment rate for workers age 25 or older who had less than a high school diploma rose from 8 percent to 15 percent.

The long duration of this recession has sharply increased the number of discouraged workers and part-time workers. An alternative measure of unemployment that accounts for "marginally attached" workers (people who say they have given up looking for work) and for part-time workers who would prefer full-time employment rose from 9 percent in December 2007 to 17 percent in December 2009.[4]

The recession has also had dramatic effects on the flows of workers through the job market. In an average month in 2007, about 5.3 million people were hired, and 5.2 million people left their jobs (constituting separations by quitting, retiring, being fired, or changing jobs). The net effect of those huge flows was an increase in employment each month of about 100,000. By the third quarter of 2009, the average monthly number of people hired and separated had fallen to about 4.1 million and 4.3 million, respectively; those smaller but still very large flows resulted in a net decline in employment that averaged about 240,000 each month. Separations declined despite an increase in layoffs and discharges because the number of people quitting their jobs declined dramatically.

Factors Leading to a Slow Recovery in Employment and Unemployment
Like the consensus in the most recent *Blue Chip* survey (compiled from about 50 private-sector forecasts), CBO envisions only a gradual recovery in employment and other measures of the labor market.

The first and most important factor underlying that assessment is that output is expected to grow fairly slowly. Following the two previous most severe recessions in the postwar period—the 1973–1975 and 1981–1982 recessions—employment recovered much more rapidly than CBO and others currently expect. But those recoveries featured much faster growth in output than is now anticipated; real GDP grew by 6.2 percent in the four quarters following the 1973–1975 recession and by 7.8 percent in the same period following the 1981–1982 recession. In contrast, employment changed little during the four quarters following the 1990–1991 recession, when real GDP rose by 2.6 percent; and employment fell by more than 1 million in the six quarters following the 2001 recession, when real GDP grew at an average annual rate of 2.1 percent. CBO currently projects that real GDP will increase by an average annual rate of about 2¼ percent from the fourth quarter of 2009 to the fourth quarter of 2011.

Second, average weekly hours worked in private industries fell sharply during the most recent recession, to a level well below their long-term downward trend. Increasing the hours worked by existing employees is one way that employers can increase

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4. Department of Labor, Bureau of Labor Statistics, Table A-12, "Alternative Measures of Labor Underutilization," measure U 6. The data are available from 1994. Marginally attached workers are people who currently are not working and are not looking for work but indicate that they want and are available for a job and have looked for work sometime in the recent past. People employed part time for economic reasons are those who want and are available for full-time work but have had to settle for a part-time schedule.

labor input without having to bear the fixed costs of hiring new workers. Although average weekly hours worked increased in late 2009, they remain below the long-term trend, suggesting that many firms will increase workers' hours before doing new hiring on a large scale.

Third, the movement of unemployed workers into new jobs will probably be more difficult in this recovery than in past ones. Recessions often accelerate the demise or shrinkage of less efficient and less profitable firms, especially those in declining industries and sectors. Thus, the share of unemployed workers whose previous jobs are permanently lost tends to rise during recessions; the rise has been especially pronounced during the past two years. At the same time, workers who have been temporarily laid off represent a smaller percentage of the unemployed than they did in past recessions.

As a result, gains in employment after this recession will probably rely more than usual on the creation of new jobs, possibly in new firms that are located in different places and require workers with different skills than those needed in the jobs that have disappeared. For workers who have lost jobs to which they cannot return, acquiring new skills can take time. (In contrast, it is easier for workers who have been laid off temporarily to return to their jobs because the employers already know the workers and the workers already have the right skills and are familiar with the work.) For workers who need to move to different regions to find new jobs, the sharp declines in home prices during this recession, combined with the high loan-to-value ratios on many mortgages before the downturn, will hinder relocation. With a significant share of homeowners now owing more on their mortgages than their homes are worth, many people may not be able to sell their house for enough money to enable them to buy one in a new area.

Finally, the labor force is expected to begin to grow again, which will slow the pace of decline in the unemployment rate. During the recession, many workers were discouraged from looking for a job; when they stopped actively seeking work, they were no longer counted as part of the labor force. When they again actively seek work, they will be counted among the unemployed. Following the pattern of past recessions, those workers will probably return to the labor force as economic conditions improve, slowing the decrease in the unemployment rate.

Although all of those factors suggest that the pace of the recovery in employment is likely to be slow during the next few years, several indicators suggest that hiring conditions may improve in the near future. Employment in temporary help services, a leading indicator for the labor market, showed large gains in late 2009. Moreover, the increase in output that began in mid-2009 was achieved by increased productivity rather than increased employment. Although such a surge in productivity is quite typical around the end of a recession and in the early stage of a recovery, in the past such surges have not lasted more than a few quarters. Consequently, the pace of productivity growth will probably slow significantly in 2010, and as long as economic activity continues to grow at even a modest pace, some new hiring can be anticipated.

Assessing Policy Options for Increasing Economic Growth and Employment

CBO has assessed the potential of a variety of fiscal policy options for promoting economic growth and increasing employment. In particular, the agency has evaluated the timing and cost-effectiveness of the stimulus to output and employment that would be provided by different fiscal actions.

Types of Policy Options Considered

The different policy options would work somewhat differently depending on whether they sought to support spending by households, businesses, or governments.

Policy options aimed at assisting households would spur demand for goods and services to varying degrees and thereby boost production to varying degrees. Because businesses' decisions on investing and hiring depend on the demand for their products, higher demand and production would lead to more investment and hiring. The size of those effects would depend largely on which households got the money. Policies that temporarily increased the after-tax income of people who are relatively well off would probably have little effect on their spending because they generally would be able finance their consumption out of their income or assets without such a change. However, policies that increased the resources of families with lower income, few assets, and poor credit would probably have a larger impact on consumption spending. Because of the extent of job losses and declines in asset prices in this recession, more families probably fit that description now than was the case in the immediate aftermath of many previous recessions.

Policy options that support businesses would operate somewhat differently. Some policies would seek to encourage business spending by providing incentives for new investment, such as allowing firms to "expense" their investment costs for tax purposes —that is, to deduct the cost of an investment in the year it is made. Those policies would increase firms' after-tax return on investment by reducing the present value of taxes, and they would increase firms' cash flow for the year in which the new investment is made. The success of such incentives in encouraging spending would depend on the economic conditions when the incentives were in effect: A reduction in the cost of capital will generally not cause a business to buy new machinery if demand for the business's output is so low that the machinery would stand idle. Several studies suggest that the impact of being able to expense investment costs in the early 2000s, when demand was depressed (though not nearly as weak as it is now), was modest.[5]

Other policies would encourage hiring by temporarily or permanently reducing the cost of labor. The cost-effectiveness of those policies would depend on firms' responses to the tax benefits received—whether they passed the benefits on to custom-

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5. For a summary of the literature on the effects of partial expensing and bonus depreciation in the early 2000s, see Congressional Budget Office, *Options for Responding to Short-Term Economic Weakness.*

ers in the form of lower prices, to employees in the form of higher wages, or implicitly to shareholders by retaining them as profits—and the extent to which they increased employment and hours worked during a period when doing so would be temporarily less expensive.

Additional government spending would also boost output and employment, both directly through the government-funded activity and indirectly through increases in consumers' demand for goods and services resulting from the higher income of the households and firms that directly benefited from the government activity. The federal government can boost demand by increasing its own purchases of goods and services or by providing funds to state and local governments to increase their purchases of goods and services. How fast significant sums of money could be wisely spent, however, is unclear. In general, large increases in funding tend to be spent more slowly. Also, many public infrastructure projects, which require coordination among different levels of government, take a long time to implement. Such projects can be cost-effective in terms of the number of jobs generated per dollar of budgetary cost because they involve direct purchases of goods and the hiring of workers, but only a small share of the full effect is likely to be felt in the first two years after a proposal becomes law.

Federal grants to state and local governments can contribute to national economic growth—and aid people in the jurisdictions that receive the funds—by reducing the need for those governments to cut spending or raise taxes to narrow their budget shortfalls. Analysts expect those shortfalls to be very large in the next few years. For fiscal year 2010, 18 states are projected to have budget gaps (projected revenue short-falls as a percentage of general fund expenditures) that exceed 20 percent, and 3 have gaps exceeding 40 percent.[6] Aid would be less effective in increasing employment if it simply allowed jurisdictions to borrow less. However, in the current economic environment, most states have already borrowed as much as they can under their own budget rules and will probably remain up against those limits during the next few years.

CBO's Modeling Approach
For each policy, CBO used evidence from empirical studies and econometric models to estimate the impact on:

- Output—the cumulative effects on GDP per dollar of total budgetary cost (additional government spending or reduction in tax collections), and

- Employment—the cumulative effects on years of full-time-equivalent employment per million dollars of total budgetary cost.

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6. Calculation based on data from Pew Center for the States, *Beyond California: States in Fiscal Peril* (Washington, D.C.: Pew Charitable Trusts, November 2009).

The approach CBO adopted to measure a policy's effect on output is similar to the method the agency previously used to assess the effects of the American Recovery and Reinvestment Act (ARRA, Public Law 111-5).[7] The estimated impacts include both direct and indirect effects. Direct effects consist of immediate (or first-round) effects on economic activity. For example, government purchases of goods and services directly elicit economic activity and thereby have a direct dollar-for-dollar impact on output. Indirect effects are the second-round effects, which may enhance or offset the direct effects. For example, if the economy has idle resources, as it does now, government funding for projects can lead to the hiring of otherwise unemployed workers; and the additional spending by those workers, who now would have more income, would constitute a positive indirect effect. In contrast, a substantial increase in government spending tends to drive up interest rates, which discourages spending on investment and on durable goods by raising the cost of borrowed funds. Those indirect "crowding-out" effects would offset some of the direct effect. On the basis of its assessment of the available research, CBO chose low and high estimates of multipliers for a given policy to encompass most economists' views about the effects of that type of policy.

To assess a policy's impact on employment, CBO used a series of steps to translate the estimated effects on output into estimated effects on cumulative years of full-time-equivalent employment. First, CBO calculated the impact on the output gap—the percentage difference between actual output and potential output (the amount that the economy is capable of producing given its labor supply, capital stock, and technology). Next, CBO calculated the magnitude and timing of effects of changes in the output gap on productivity, hours per worker, and the unemployment rate using the historical relationships between those measures. Changes in the output gap initially have the largest effects on productivity; they affect hours per worker and unemployment gradually over several quarters. CBO also took account of the effect of changes in the unemployment rate on the labor force, because discouraged workers and people who have chosen to pursue activities such as schooling rather than work tend to return to the labor force when unemployment declines and the economic environment improves.

For policy options that would reduce labor costs and provide direct incentives for increasing employment and hours worked, CBO also accounted for firms' possible reactions, which would probably take several forms. Some firms would use additional labor to enhance the quality of products and services in ways not reflected in GDP. Some would use additional labor to increase maintenance of existing plants and equipment (such as doing preventive maintenance on motor vehicles), which would make plants and equipment last longer and delay the need to invest in replacements. Depending on the type of products they made, some firms would also increase their

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7. For the methodology to assess the economic effects of ARRA and the range of multipliers used for each policy category, see Congressional Budget Office, *Estimated Impact of the American Recovery and Reinvestment Act on Employment and Economic Output as of September 2009* (November 2009).

use of labor that was temporarily less expensive while the policy was in effect and reduce their use of labor later. Last, some firms would hire a little sooner to cover anticipated increases in their labor needs.

By measuring employment impacts in cumulative years of full-time-equivalent employment, each defined as 40 hours of employment per week for one year, this analysis incorporates the effects of policies on hours worked in addition to their effects on the number of people who would be employed. Thus, it includes increases in hours among part-time employees and possibly some overtime for full-time employees. In contrast, CBO's earlier analysis of ARRA was based on the number of employed people at a point in time and did not include shifts from part-time to full-time work or overtime.

Another difference between this analysis and the analysis done for ARRA is that, instead of reporting a policy's multiplier or impact at a point in time, this analysis focuses on cumulative changes over specific time periods. Effects on output were measured as the cumulative effects between 2010 and 2015, with a particular focus on the increase in years of full-time-equivalent employment in 2010 and 2011. The estimates include the effect of fiscal policy actions on monetary policy, reflecting an expectation that the Federal Reserve would gradually begin to offset such fiscal policy actions at the end of 2011 in order to avoid increasing the risk of inflation; as a result, some policies would generate cumulative effects on employment that were lower for 2010 through 2015 than for 2010 through 2011.[8]

For this analysis, policies were assumed to be temporary (that is, to be in effect for specific time periods or for specific dollar amounts), although some of the policies could also be designed to be permanent. The total effect of a policy on economic growth and employment would depend critically on the magnitude of the reduction in taxes or increase in spending that would occur. The largest feasible magnitude of the budgetary change would vary among the policies, but all of the options considered would be sufficiently scalable to allow tens of billions of dollars of spending increases or tax cuts in 2010 and 2011.

8. When estimating ARRA's effects, CBO assumed that the Federal Reserve would not reduce the amount of stimulus it was providing with its own policy levers (such as low interest rates and its efforts to increase liquidity by other means) to offset the output growth caused by ARRA. That assumption rested on the assessment that the economic outlook was sufficiently worrisome that the Federal Reserve was trying to provide a great deal of stimulus and would have welcomed additional stimulus from fiscal policy. However, CBO now assumes that as the recovery progresses, the Federal Reserve will see less need to provide monetary stimulus. Under CBO's economic forecast, that assumption implies that at the end of 2011 the Federal Reserve will gradually begin to offset fiscal policy actions by raising interest rates (or engaging in other actions to tighten monetary policy) in order to reduce the risk of excessive inflation. As a result, fiscal policy actions that would initially have a positive impact on output in 2010 or 2011 would have a smaller negative effect later; consequently, for some policies, the cumulative effects on years of full-time-equivalent employment from 2010 to 2015 would be smaller than the effects in 2010 and 2011.

Table 1.

Estimated Effects of Policy Options on Output and Employment

| | Cumulative Effects on GDP, 2010–2015[a] (Dollars per dollar of total budgetary cost) | | Cumulative Effects on Employment[b] (Years of full-time-equivalent employment per million dollars of total budgetary cost) | | | | | |
| | | | 2010 | | 2010–2011 | | 2010–2015 | |
	Low	High	Low	High	Low	High	Low	High
	Policy Options with a Substantial Proportion of Impacts Beginning in 2010							
Increasing Aid to the Unemployed[c]	0.70	1.90	4	7	8	19	6	15
Reducing Employers' Payroll Taxes	0.40	1.20	3	5	5	13	4	11
Reducing Employers' Payroll Taxes for Firms That Increase Their Payroll	0.40	1.30	5	9	8	18	7	16
Reducing Employees' Payroll Taxes	0.30	0.90	2	4	3	9	2	7
Providing an Additional One-Time Social Security Payment	0.30	0.90	2	6	3	9	2	8
Allowing Full or Partial Expensing of Investment Costs[d]	0.20	1.00	1	3	2	9	1	8
	Policy Options with a Substantial Proportion of Impacts Beginning in 2011							
Investing in Infrastructure[e]	0.50	1.20	*	1	2	4	4	10
Providing Aid to States for Purposes Other Than Infrastructure[e]	0.40	1.10	1	1	3	7	3	9
Providing Additional Refundable Tax Credits for Lower- and Middle-Income Households in 2011	0.30	0.90	*	*	3	6	3	7
Extending Higher Exemption Amounts for the Alternative Minimum Tax	0.10	0.40	*	*	1	4	1	4
Reducing Income Taxes in 2011[f]	0.10	0.40	*	*	1	3	1	4

Source: Congressional Budget Office.

Notes: In estimates of the effects on output and employment, the total budgetary cost is the amount of tax revenues or budget authority over the full duration of the policies' effects unless otherwise specified.

All years are calendar years.

The ranges between low and high estimates are designed to encompass most economists' views.

Unless otherwise specified, spending policy options are assumed to provide budget authority as of April 2010, and tax policy options are assumed to be in effect for 2010 only.

* = between zero and 0.5.

a.   Estimated as gross domestic product (GDP) with a policy minus GDP without the policy.

b.   Estimated as years of full-time-equivalent employment (FTE-years) with a policy minus FTE-years without the policy. An FTE-year is 40 hours of employment per week for one year. For example, four people working 20 hours per week for six months equals one FTE-year.

c.   Spending begins in March 2010, and no benefit payments are made after July 2011.

d.   Initial reductions in revenues are nearly fully offset by later increases. The policy's effects are therefore estimated per dollar of the present discounted value of the policy (discounted at the businesses' cost of debt and equity) instead of per dollar of total budgetary cost.

e.   Timing of spending from new funding follows historical experience.

f.   Includes the effects of extending higher exemption amounts for the alternative minimum tax in 2010.

Policy Options with a Substantial Proportion of Impacts Beginning in 2010
Among the policy options considered in CBO's analysis, those that were estimated to have a substantial proportion of their impacts beginning in 2010 are increasing aid to the unemployed, reducing employers' payroll taxes, reducing payroll taxes for firms that increase their payroll, reducing employees' payroll taxes, providing an additional one-time Social Security payment, and allowing full or partial expensing of investment costs (see Table 1 and Figure 2).

Increasing Aid to the Unemployed. Under current law, some people who exhaust their unemployment benefits by the end of February 2010 will be eligible for additional weeks of benefits through emergency unemployment compensation. People receiving those benefits also are eligible to collect an additional weekly payment of $25; payments for those supplements are scheduled to be phased out beginning in March 2010. In addition, under amendments to the Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA, Public Law 99-272), the government will pay for 65 percent of health insurance premiums for up to 15 months for individuals whose employment was involuntarily terminated between September 2008 and February 2010. The policy option analyzed by CBO would provide further assistance to the unemployed by extending through December 2010 the benefits that will begin to be phased out in March 2010 under current law; under this option, no added benefits would be paid after July 2011.
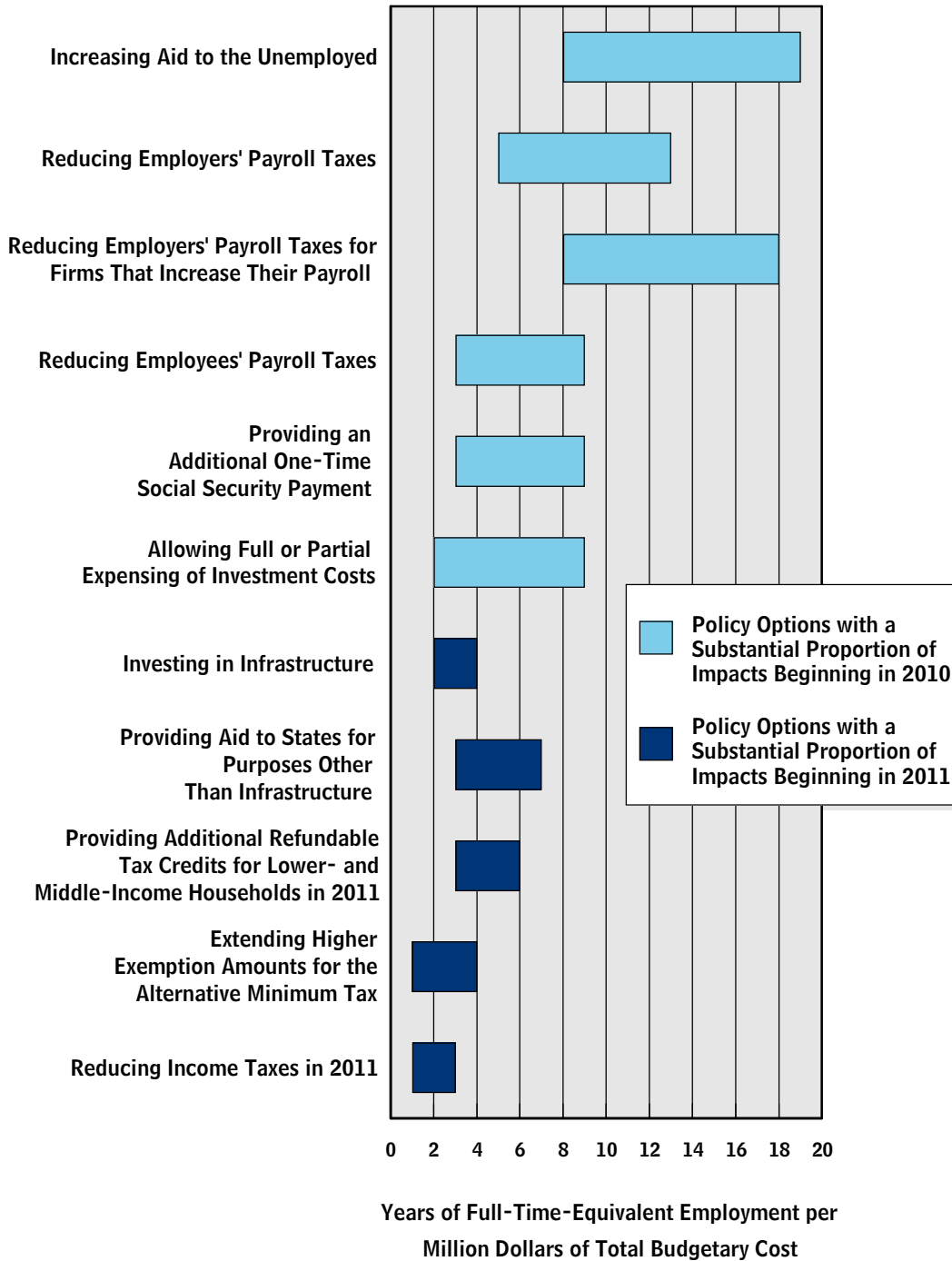
Extending additional unemployment benefits would directly help those who would otherwise exhaust their unemployment benefits between March and December of this year. Households receiving unemployment benefits tend to spend the additional benefits quickly, making this option both timely and cost-effective in spurring economic activity and employment. A variant of this option would extend assistance with paying health insurance premiums, which would allow some recipients to maintain health insurance coverage they would otherwise have dropped. This variant would result in increased demand for health care services, and it would increase the income available to purchase other goods and services for recipients who would have purchased insurance even without this special assistance. Both policy options could dampen people's efforts to look for work, although that concern is less of a factor when employment opportunities are expected to be limited for some time.

CBO estimates that those policies would raise output cumulatively between 2010 and 2015 by $0.70 to $1.90 per dollar of total budgetary cost. CBO also estimates that the policies would add 8 to 19 cumulative years of full-time-equivalent employment in 2010 and 2011 per million dollars of total budgetary cost.

Reducing Employers' Payroll Taxes. Social Security, which consists of Old-Age, Survivors, and Disability Insurance, is financed by payroll taxes. Under current law, both employers and employees pay 6.2 percent of an employee's annual earnings up to a ceiling that is adjusted for wage growth and equals $106,800 in 2010. CBO analyzed an option that would reduce employers' payroll taxes for 2010.

Figure 2.

Cumulative Effects of Policy Options on Employment in 2010 and 2011, Range of Low to High Estimates

Increasing Aid to the Unemployed

Reducing Employers' Payroll Taxes

Reducing Employers' Payroll Taxes for Firms That Increase Their Payroll

Reducing Employees' Payroll Taxes

Providing an Additional One-Time Social Security Payment

Allowing Full or Partial Expensing of Investment Costs

Investing in Infrastructure

Providing Aid to States for Purposes Other Than Infrastructure

Providing Additional Refundable Tax Credits for Lower- and Middle-Income Households in 2011

Extending Higher Exemption Amounts for the Alternative Minimum Tax

Reducing Income Taxes in 2011

Policy Options with a Substantial Proportion of Impacts Beginning in 2010

Policy Options with a Substantial Proportion of Impacts Beginning in 2011

0   2   4   6   8   10   12   14   16   18   20

Years of Full-Time-Equivalent Employment per Million Dollars of Total Budgetary Cost

Source: Congressional Budget Office.

Firms would probably respond to this temporary reduction in their portion of the payroll tax through a combination of four channels. First, some firms would respond to lower employment costs by reducing the prices they charge in order to sell more goods or services. Those higher sales would in turn spur production, which would then increase hours worked and hiring. Second, some firms would pass the tax savings on to employees in the form of higher wages or other forms of compensation, which would encourage more spending by those employees. However, wages tend to be inflexible in the short run because of negotiation and administrative costs, so that response is not likely to be very large. Third, some firms would retain the tax savings as profits. Higher profits would raise companies' stock prices, and the resulting higher household wealth would encourage more consumption, although shareholders are likely to spend only a small portion of their gains. Higher profits would also improve cash flow, enabling firms facing borrowing constraints to buy new equipment. Fourth, some firms would use slightly more labor during a period when it was temporarily less expensive. However, most of the money forgone by the government would go to reduce employers' taxes for existing workers, so—per dollar of forgone revenues—the added incentive to increase employment and hours worked would be small.

CBO estimates that reducing employers' payroll taxes would raise output cumulatively between 2010 and 2015 by $0.40 to $1.20 per dollar of total budgetary cost. CBO also estimates that the policy would add 5 to 13 cumulative years of full-time-equivalent employment in 2010 and 2011 per million dollars of total budgetary cost.

Reducing Employers' Payroll Taxes for Firms That Increase Their Payroll. In the late 1970s, the New Jobs Tax Credit was enacted in order to increase employment by reducing labor costs. CBO analyzed a related policy that would give employers a one-year nonrefundable credit against their payroll tax liability for incremental increases in their payroll during 2010. Because the credit would be nonrefundable, the credit amount would not exceed the firm's payroll tax liability. Such a credit could be based on payrolls in each calendar quarter so that firms could receive the credit quickly. To prevent firms from firing existing employees and hiring new ones, the credit could be based on the difference between the wage base in the current quarter and the wage base four quarters previously (the "reference period"). Also, to reduce the incentive for firms to delay hiring or to lower their wage base before the policy was implemented, the policy could be retroactive to the beginning of the quarter of enactment. In addition, the eligible wage base could be capped at an annual amount for each employee. Wage bases for the Federal Insurance Contributions Act (up to $106,800 in annual earnings for 2010) and the Federal Unemployment Tax Act (up to $7,000 in annual earnings) can be calculated quarterly for most employers from information already reported to the Internal Revenue Service, thus reducing the administrative costs of this option.

Providing tax credits for increases in payrolls would increase both output and employment. The effect on output would come through the same four channels as the effect on output of reducing employers' payroll taxes. CBO estimates that this option and

the preceding one would have approximately the same economic impact per dollar of budgetary cost through the first three channels discussed above. Through the fourth channel, however, this option would provide a substantially larger increase in employment and hours than the previous option because this policy would provide tax benefits linked to payroll *growth*; fewer budget dollars would be used to cut taxes for workers who would have been employed anyway, so the incentive to increase payroll per dollar of forgone revenues would be greater.

CBO estimates that reducing payroll taxes for firms that increase their payroll would raise output cumulatively between 2010 and 2015 by $0.40 to $1.30 per dollar of total budgetary cost. CBO also estimates that the policy would add 8 to 18 cumulative years of full-time-equivalent employment in 2010 and 2011 per million dollars of total budgetary cost.

Various alternatives in the design of such a policy would affect its impact on employment:[9]

■ Each firm's tax cut could be limited to a fixed dollar amount, a percentage of the firm's payroll in a base year, or both. Such a cap would reduce the policy's total budgetary cost, but it would also limit the incentives to increase employment. A firm that would have boosted its payroll in the absence of the policy by enough to reach the cap would receive the maximum tax cut under this alternative, but it would receive no additional tax cut for further expanding employment. Thus, the policy would give such a firm tax benefits but no extra incentive to hire more workers, decreasing the employment effect per dollar of budgetary cost.

■ The tax cut could be offered only to firms with a total number of employees or total revenues below a specified threshold. However, employment at small firms is especially volatile: Those firms exhibit high rates of job creation and job loss as well as high rates of entering and leaving the markets in which they sell their products. As a result, the average duration of jobs subsidized under such a targeted tax cut would probably be shorter than the average duration under a broad-based policy. Moreover, small firms that do expand have proportionally higher average payroll growth than large firms that expand, so a larger fraction of the tax cut would fund payroll growth that would have occurred anyway. Consequently, CBO concludes, restricting eligibility to small firms would decrease the employment effect per dollar of budgetary cost.

■ The eligible wage base could be limited. A low maximum (say, the wage base for federal unemployment taxes) would mean that the tax reduction would apply essentially to the net change in the number of employees, which would especially encourage the hiring of low-wage and part-time workers. A higher maximum (say,

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9. More discussion of these and other design elements can be found in Congressional Budget Office, *Policies for Increasing Economic Growth and Employment*; and Congressional Budget Office, letter to the Honorable Robert P. Casey Jr. (February 3, 2010).

the wage base for Social Security taxes) would induce greater increases in hours per employee.

■ The tax cut could be based on the total payroll for newly hired workers (with a requirement that firms not decrease their total payroll) rather than on the net change in a firm's payroll. CBO estimates that the total payroll in 2010 for newly hired workers at growing firms would be about as large as the net change in payroll for those firms from what it was a year ago.[10] As a result, a similar share of the tax reduction would provide incentives for additional employment under both policies, and the impact on employment per dollar of budgetary cost would be about the same.

■ Government funds could be used to raise awareness of the tax change. One of the lessons of the New Jobs Tax Credit of the 1970s was that many employers did not know about the credit until they filed their tax returns—at which point the credit could no longer affect hiring decisions. If a new payroll tax cut was enacted, an outreach campaign could make firms more aware of the tax benefits of expanding employment. Although such a campaign would require additional resources, an effective outreach program would probably increase the employment effect per dollar of overall budgetary cost.

Reducing Employees' Payroll Taxes. Employees pay Social Security payroll taxes equal to 6.2 percent of their annual earnings, and self-employed workers pay 12.4 percent of their earnings up—both up to a ceiling that equals $106,800 in 2010. This option would reduce those taxes for 2010.

A temporary reduction in employees' portion of the payroll tax would not immediately affect employers' costs. Instead, it would have initial effects similar to those of reducing other taxes for people below the 2010 income cap. The increase in take-home pay would spur additional spending by the households receiving the higher income, and that higher spending would, in turn, increase production and employment. Those effects would be spread over time, however, and the majority of the increased take-home pay would be saved rather than spent.

CBO estimates that reducing employees' payroll taxes would raise output cumulatively between 2010 and 2015 by $0.30 to $0.90 per dollar of total budgetary cost.

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10. That result is specific to the time period used in the analysis (March through December 2010), and other policy durations would have different results. The result stems from two offsetting effects. The net change in payroll would tend to be smaller because it would include the impact of job losses at those firms, whereas the payroll increase for newly hired workers would not. But net payroll growth would tend to be larger because it would include all of the growth relative to the firms' payroll a year earlier, whereas the payroll for the newly hired would reflect growth only since the policy took effect (which in this case was assumed to be March 2010). Net payroll growth is also boosted because it would reflect increases in the hours and wages of existing employees, who have higher average earnings than new employees.

CBO also estimates that the policy would add 3 to 9 cumulative years of full-time-equivalent employment in 2010 and 2011 per million dollars of total budgetary cost.

In comparison with the effects of reducing employees' payroll taxes, the effects of reducing employers' payroll taxes are somewhat larger per dollar of forgone revenues. Reducing employers' payroll taxes for one year has an economic effect related to that of a temporary cut in sales taxes because a temporary reduction in prices (the first channel described in the section on reducing employers' payroll taxes) would encourage purchases while the reduction was in effect. The effects on spending, output, and employment through this channel are estimated to be somewhat larger than the corresponding effects of increases in take-home pay from reducing employees' payroll taxes.

Providing an Additional One-Time Social Security Payment. Income tax reductions and additional unemployment benefits would have small effects on senior citizens because many of them do not pay income taxes, and most are not in the labor force. One way to reach senior citizens is to provide direct payments. In 2009, for example, ARRA provided $250 in additional income to each senior citizen who received Social Security benefits in any month between November 2008 and January 2009 and to certain other retirees and disabled veterans.[11] This option would provide an additional one-time Social Security payment in 2010.

An additional payment of this sort in 2010 would increase demand to the extent that the recipients spent the additional income. Many of the elderly save at rates similar to those of the working-age population, suggesting that part of the additional income to seniors would not be spent (or at least not spent quickly) and part would. Hence, the option would probably have a moderate effect on demand and thus a moderate effect on output and employment.

CBO estimates that an additional Social Security payment in 2010 would raise output cumulatively between 2010 and 2015 by $0.30 to $0.90 per dollar of total budgetary cost and would add 3 to 9 cumulative years of full-time-equivalent employment in 2010 and 2011 per million dollars of total budgetary cost.

Allowing Full or Partial Expensing of Investment Costs. ARRA raised the maximum amount a firm can expense to $250,000 for equipment purchased in 2009. The amount that could be expensed phased out dollar for dollar for purchases above $800,000, so the provision targeted relatively small firms. ARRA also extended to the end of 2009 a provision first instituted in 2008 that allowed additional first-year depreciation of 50 percent for qualified investments. CBO analyzed a policy option to

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11. Social Security beneficiaries received a cost-of-living adjustment in 2009 that was larger than usual because a run-up in oil prices boosted the consumer price index. The subsequent decline in oil prices pushed down the consumer price index. If the rules for Social Security benefits treated increases and decreases in prices symmetrically, the cost-of-living adjustment in 2010 would have been negative; however, the rules do not operate in that way, so beneficiaries received no cost-of-living adjustment in 2010.

provide further incentives to invest by extending both provisions of ARRA for one more year.

Full or partial expensing (sometimes called "bonus depreciation") of investment costs allows firms to realize the tax benefits of depreciation deductions more quickly, which provides a greater incentive for investment because a dollar of tax benefit this year is more valuable than a dollar of tax benefit in a future year. The effect of the incentive may be smaller when the economy is weak than when it is strong: Firms may be less likely to increase investment when they have idle capacity and when they are less confident about the future demand for their products and services. In addition, when the economy slows, more firms incur losses and pay no income tax; some of those firms therefore get less benefit from immediate tax deductions, although firms that paid taxes in previous years may be able to reclaim some of those taxes.

To the extent that temporarily reducing the after-tax price of investments accelerates the purchase of capital goods, that increased investment when the credit is available may be partially offset by a subsequent decrease when the credit expires. In addition, the policy would probably have the greatest effect on investment just before it expired at the end of 2010 (as firms accelerated equipment purchases from 2011), so much of the indirect effects on output and employment would spill over into 2011.

CBO estimates that allowing full or partial expensing would raise output cumulatively between 2010 and 2015 by $0.20 to $1.00 per dollar of total budgetary cost. CBO also estimates that the policy would add 2 to 9 cumulative years of full-time-equivalent employment in 2010 and 2011 per million dollars of total budgetary cost.

Policy Options with a Substantial Proportion of Impacts Beginning in 2011

Among the policy options considered in CBO's analysis, those that were estimated to have a substantial proportion of their impacts beginning in 2011 are investing in infrastructure, providing aid to states for purposes other than infrastructure, providing additional refundable tax credits for lower- and middle-income households in 2011, extending higher exemption amounts for the AMT in 2010, and reducing income taxes in 2011 (see Table 1 on page 11 and Figure 2 on page 13).

Investing in Infrastructure. ARRA appropriated about $60 billion for spending on water, transportation, and housing projects. CBO analyzed a policy option that would boost the demand for goods and services and thereby increase output and employment by providing additional increases in federal funding for infrastructure projects.

Infrastructure spending directly increases employment because workers are hired to undertake construction projects. It also adds to demand for goods and services through purchases of material and equipment and through additional spending by the extra workers who are hired; as with other policy options discussed in this analysis, that increase in demand would lead to further hiring. One drawback of this option is that infrastructure projects often involve considerable start-up lags. To be sure, some projects, such as highway repair and resurfacing, can be implemented relatively

quickly. However, large-scale construction projects generally require years of planning and preparation; for example, building new transportation infrastructure that requires establishing new rights-of-way and developing and implementing alternative energy sources would probably have their biggest effects on output and employment after the recovery was well along. As a practical matter, the experience with ARRA suggests that fewer projects are "shovel ready" than one might expect: By the end of fiscal year 2009, outlays for infrastructure spending from ARRA made up less than 10 percent of the budget authority granted for infrastructure in that year. Moreover, given the substantial increase in infrastructure funding provided by ARRA, achieving significant increases in outlays above the amounts funded by ARRA would probably take even longer. Thus, most of the increases in output and employment from this option would probably occur after 2011.

CBO estimates that additional investments in infrastructure would raise output cumulatively between 2010 and 2015 by $0.50 to $1.20 per dollar of total budgetary cost and would add 2 to 4 cumulative years of full-time-equivalent employment in 2010 and 2011 per million dollars of total budgetary cost.

Providing Aid to States for Purposes Other Than Infrastructure. Many states have experienced a high degree of fiscal stress and are expected to have large budget gaps in the next few years. Eighteen states have budget gaps larger than 20 percent of general fund expenditures. Those budget gaps have occurred despite more than $200 billion provided to state governments by ARRA for purposes other than infrastructure. CBO analyzed a policy to further assist states by providing funding to state governments for a variety of purposes. Even if funding was intended for a specific activity, such as education or health care, CBO anticipates that the availability of those additional funds would both increase net state spending for that activity and affect other aspects of state budgets.

Without further aid from the federal government, many states would have to raise taxes or cut spending by more than they would if aid was provided. Such actions would dampen spending by those governments and by households in those states, and more state and private jobs would be lost. Under current policies, states will be taking such balancing actions on an ongoing basis, so federal aid that was provided promptly would probably have a significant effect on output and employment in 2010 and 2011. Such aid could lead to fewer layoffs, more pay raises, more government purchases of goods and services, increases in state safety-net programs, and fewer increases in state taxes; some might be saved for future use.

CBO estimates that providing aid to states for purposes other than infrastructure would raise output cumulatively between 2010 and 2015 by $0.40 to $1.10 per dollar of total budgetary cost. CBO also estimates that the policy would add 3 to 7 cumulative years of full-time-equivalent employment in 2010 and 2011 per million dollars of total budgetary cost.

Providing Additional Refundable Tax Credits for Lower- and Middle-Income Households in 2011. Some tax credits are refundable—that is, the government makes cash payments to people who do not have enough income to pay income taxes. ARRA contains several provisions that reduced taxes for individuals and families in 2009 and 2010 and that serve as examples of refundable credits that could be provided again in 2011. One such provision is the Making Work Pay credit, which provides a tax credit of up to $400 for individuals and up to $800 for married taxpayers filing joint returns; that credit is phased out as income exceeds $75,000 ($150,000 for joint filers). Another provision temporarily increased the earned income tax credit for taxpayers with three or more qualifying children and raised the threshold at which the amount of the credit begins to be reduced for married couples filing jointly. Yet another provision modified the existing Hope credit (a federal tax credit for education expenses of students meeting certain criteria) in 2009 and 2010 to make the credit partially refundable, providing education tax benefits to a larger group of taxpayers and allowing the credit to be claimed for four years of postsecondary education instead of two. CBO analyzed an option to extend those credits through 2011.

Refundable credits are often phased out when income increases above some amount and thus are effectively limited to lower- and middle-income households. Moreover, credits that are refundable provide a larger income boost to those households than do comparable credits that are not refundable, because lower-income households are more likely not to owe income tax. Therefore, providing additional refundable credits would increase after-tax income for households that are more likely to spend a greater share of the funds received. As a result, such credits would increase output and employment by more per dollar of budgetary cost than would cutting taxes for a broader set of taxpayers.

CBO estimates that providing additional refundable tax credits would raise output cumulatively between 2010 and 2015 by $0.30 to $0.90 per dollar of total budgetary cost. CBO also estimates that the policy would add 3 to 6 cumulative years of full-time-equivalent employment in 2010 and 2011 per million dollars of total budgetary cost.

Extending Higher Exemption Amounts for the Alternative Minimum Tax. The alternative minimum tax was originally intended to impose taxes on high-income individuals who used tax preferences to greatly reduce or eliminate their liability under the regular income tax. For most of its existence, the AMT has played a minor role in the tax system, accounting for less than 2 percent of revenues from the individual income tax and affecting fewer than 1 percent of taxpayers in any year before 2000. However, unlike the regular income tax, the AMT is not indexed for inflation. As a result, left unchanged, the AMT would affect significantly larger numbers of taxpayers over time, and lawmakers have intervened each year since 2001 to slow the expansion of the AMT and prevent it from affecting more taxpayers outside of the higher-income groups. At the expiration of each of those annual "patches," the exemptions would have reverted to their prior-law levels, so the prospective year-to-year increase in tax

revenues if current law regarding the AMT was maintained has become larger each year. In 2010, under current law, the AMT will affect about 16 percent of taxpayers (up from less than 3 percent in 2009), who will, on average, pay $3,900 more in taxes than they would under the regular income tax system; nearly every married taxpayer filing jointly with income between $100,000 and $500,000 will owe some amount under the AMT. The option considered here would reduce taxes by making another adjustment to the amount of income that is exempt from the AMT during 2010 only.

The impact of this option on consumption is likely to be limited, because the AMT largely affects people in the upper half of the income distribution, and their consumption is unlikely to be constrained by their income in a given year. In addition, although the AMT extension would affect tax liability in 2010, most of its impact on consumption would probably occur in 2011. The effect would be delayed both because many taxpayers are allowed to pay their 2010 AMT liability in 2011 and because the increase in liability in 2010 would probably not be recognized immediately. In particular, taxpayers who have not previously paid the AMT may not know that they are becoming liable, and those previously liable for the AMT probably expect that another extension will be enacted; for both of those groups, the AMT liability under current law would not affect their consumption much until 2011, so changing the law would also not have much effect on their consumption until 2011.

CBO estimates that a one-year AMT patch would raise output cumulatively between 2010 and 2015 by $0.10 to $0.40 per dollar of total budgetary cost. CBO also estimates that the policy would add 1 to 4 cumulative years of full-time-equivalent employment in 2010 and 2011 per million dollars of total budgetary cost.

Reducing Income Taxes in 2011. Various provisions of the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA) and the Jobs and Growth Tax Relief Reconciliation Act of 2003 (JGTRRA) will expire at the end of 2010, raising tax liabilities for most people. If policymakers wanted to avoid increasing taxes during a period of economic weakness, they could defer those increases as well as extend the higher exemption amounts for the AMT. Accordingly, CBO analyzed a policy that would defer, for one year, the scheduled 2011 income tax increases from the expiration of provisions in EGTRRA and JGTRRA and would increase the exemption amounts for the AMT in 2010 and 2011.

As compared with the one-year AMT patch, this option would convey a greater share of the tax reduction to households that have less income and that would therefore be more likely to spend a larger fraction of an increase in after-tax income. Still, only a fraction of the tax cut in this option would be received by those whose consumption is constrained by their current disposable income.

Deferring the scheduled increases in tax rates in 2011 would help some businesses as well as households. In particular, it would keep lower tax rates in place in that year for businesses that do not pay the corporate income tax (the pass-through entities such as sole proprietorships, partnerships, S corporations, and limited liability companies).

However, increasing the after-tax income of businesses typically does not create much incentive for them to hire more workers in order to produce more, because production depends principally on their ability to sell their products.

The economic effects of this option relative to those of the one-year AMT patch are influenced by two other factors. First, the effects would occur later, because the option would primarily reduce taxes in 2011 and much of the economic impact would not be felt until 2012. Second, because the economic effects would be delayed, more of them would occur in a period when CBO assumes that the Federal Reserve will begin to offset stimulative fiscal policy actions in order to avoid increasing the risk of excessive inflation. That response would reduce the overall boost to growth and employment from this option.

CBO estimates that a two-year AMT patch and one-year deferral of the EGTRRA and JGTRRA tax increases would raise output cumulatively between 2010 and 2015 by $0.10 to $0.40 per dollar of total budgetary cost. CBO also estimates that the policy would add 1 to 3 cumulative years of full-time-equivalent employment in 2010 and 2011 per million dollars of total budgetary cost. Although the effects of this policy per dollar of budgetary cost are smaller than the effects of extending ARRA's tax credits, the dollar amount of tax cuts under this option is substantially larger, so the total effects on output and employment also would be larger.

One variant on this option is to defer most of the tax increases in EGTRRA and JGTRRA for one year but allow the rate increases for the top brackets to go into effect. That approach would cost less than would deferring all of the scheduled tax increases, and it would be more cost-effective because the higher-income households that would be excluded would probably save a larger fraction of their increase in after-tax income. However, the difference relative to the option analyzed here would be small, because much of the remaining tax reduction would still go to higher-income taxpayers.

A related option is to permanently eliminate the scheduled tax increases in EGTRRA and JGTRRA. A permanent extension would have a bigger effect on demand in 2011 than would a temporary extension, because households that expected higher after-tax income in subsequent years would spend a larger share of the additional income they receive in 2011. However, a permanent extension would entail large revenue losses after the recovery is over, so its effects on output and employment in the next few years per dollar of total budgetary cost would be much lower than those of the one-year deferral analyzed here.