Tax Cuts for Short-Run Economic Stimulus: Recent Experiences with Rebates and Bonus Depreciation

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January 18, 2013

Congressional Research Service
7-....
www.crs.gov
RS22790

CRS Report for Congress
Prepared for Members and Committees of Congress

Summary

Although the economy is recovering from the 2007-2009 recession, unemployment continues to be high and further stimulus may be considered in the 113th Congress. Recent legislation in the American Taxpayer Relief Act of 2012 (P.L. 112-240) averted part of the so-called "fiscal cliff," a set of tax increases and spending cuts that were scheduled to occur at the beginning of 2012. Shortly a decision must be made about continuing with sequestration, a set of automatic spending cuts that were delayed by two months by P.L. 112-240. In addition, while most changes were permanent, bonus depreciation was extended for only a year.

Stimulus (or avoiding contraction) could include individual tax cuts and business tax provisions. In recent years, several different types of short run fiscal stimulus measures have been enacted: an individual income tax rebate in 2001, a temporary investment incentive (bonus depreciation) in 2002, and dividend relief in 2003. The February 2008 stimulus included a rebate, bonus depreciation, and small business expensing. A stimulus adopted in February 2009 included a large component of spending, but also extended bonus depreciation and small business expensing. It also enacted an income tax credit that was spread over two years. In December of 2010, in addition to temporarily extending the expiring Bush tax cuts and unemployment compensation, a temporary one-year payroll tax credit was adopted. This payroll credit was extended through 2012, but was not extended by P.L. 112-240.

Two types of stimulus provisions have been subject to specific empirical study. They suggest that the 2001 and 2008 rebates were an effective stimulus but bonus depreciation had a limited effect. They also suggest that tax cuts directed to lower-income households are more likely to be effective in stimulating spending. Bonus depreciation was extended for another year by P.L. 112-240, and a large share of other provisions affected high income taxpayers. Thus many of the tax increases averted by the legislation probably had small effects on the economy.

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Congress may continue to consider fiscal stimulus as unemployment remains high even though the economy is recovering from the 2007-2009 recession and a recent provision has been acted to avert much of the so-called fiscal cliff, a set of tax increases and spending cuts.

Several types of tax cuts were partially or fully enacted for purposes of short run economic stimulus in the recent past (2001-2008). These tax revisions were the first in some time that were motivated, at least in part, by the need for expansionary fiscal policy. In the late 1990s, the economy experienced a protracted period of significant growth, and, in the decade prior to that most tax legislation addressed a need for deficit reduction (the objective of most tax change between 1982 and 1997, as was the case in the 1990 and 1993 tax changes) or a desire for structural change (in the 1986 and 1997 tax revisions).[1]

Different types of stimulus provisions were enacted in the period 2001-2008: the 2001 tax cut was aimed at individuals, but most of its provisions, especially the rate cuts, which were phased in over a number of years, were not based on the recession that was apparent in 2000 and that appeared in the spring of 2001. When concerns about the economy continued towards the end of 2001 and in 2002, the Congress enacted bonus depreciation. And, in 2003, the tax provision advanced to stimulate the economy was a reduction in dividend taxation. In February 2008, a stimulus package containing a rebate similar to the 2001 rebate, and bonus depreciation, was adopted.

In February 2009, as the recession continued, a package consisting of a mix of spending and tax cuts was adopted (the American Recovery and Reinvestment Act). In this case, the income tax cut was in the form of a two-year income tax cut that appeared in withholding rather than a rebate, in part in response to views of some economists that lump-sum rebates were less effective.[2] During 2010 as unemployment continued to be high, no general individual tax cuts were enacted, although in March 2010, a temporary credit against payroll taxes was allowed to employers for hiring workers who had been unemployed.[3] This tax provisions was small compared to the 2008 and 2009 tax cuts ($13 billion). Bonus depreciation was extended, but that extension was largely retroactive. In December of 2010, a package that extended the Bush tax cuts for two years and provided for a one-year reduction in payroll taxes for workers was adopted (P.L. 111-312). It also increased bonus depreciation to 100% for 2011, returning to 20% in 2012.

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[1] A stimulus provision proposed in 1992 to provide a credit against payroll taxes was vetoed by the President. During the 1960s and 1970s a variety of provisions was enacted that were associated with economic stimulus, including investment credits, rate reductions, and tax rebates. The Joint Tax Committee has released a document that reviews tax stimulus provisions from the 1960s forward. It also has a discussion of potential effects, although some of that discussion relates to longer term effects rather than short term stimulus aimed at countering an economic downturn. See Joint Committee on Taxation, *Overview of Past Legislation Providing Fiscal Stimulus and Issues in Designing and Delivering a Cash Rebate to Individuals,* January 21, 2008.

[2] The Congressional Budget Office has evaluated the 2009 cut on several occasions, most recently in November 2010, but there have been no special studies at this point of the specific tax provisions in the 2009 legislation. See Congressional Budget Office, Estimated Impact of the American Recovery and Reinvestment Act on Employment and Economic Output From July 2010 Through September 20, November, 2010, http://www.cbo.gov/ftpdocs/119xx/doc11975/11-24-ARRA.pdf.

[3] CRS Report R41034, *Business Investment and Employment Tax Incentives to Stimulate the Economy*, by (name reda cted) and (name redacted) discusses evidence from the 1970s on jobs credits, which suggest that they were not very effective.

In recent legislation, to address the fiscal cliff, most of the 2001 and 2003 tax cuts were made permanent (except for very high income taxpayers), including rate cuts and dividend reductions. Bonus depreciation was extended for a year, but the payroll tax was not extended. Of course, the policy issues did not solely reflect the need for short run stimulus. However, the crucial element in evaluating alternative provisions is whether they induce spending. This report discusses the rebate and bonus depreciation as mechanisms for stimulating the economy in the short run based on evidence of the effectiveness of these proposals in expanding spending.

The findings reported below suggest that one-time rebates are effective in stimulating spending, and that the effects of tax cuts are largest in lower-income households, while provisions directed at businesses and investment income may have more limited effects.

The 2001 Rebate

The 2001 tax cut was not primarily enacted because of concerns about a recession and most of the provisions were phased in over a number of years. However, concerns about a slowing economy did motivate the advance tax rebate provided in 2001. Because the tax cut was enacted close to mid-year (in May) it was difficult to provide a tax cut for 2001 that could be reflected appropriately in withholding. By the time withholding changes could be put into place, much of the year would have passed and either withholding changes would be inadequate (deferring tax cuts until returns were filed the following year), or if made larger to compensate for the partial year effect would have resulted in a withholding increase for some taxpayers at the beginning of 2001. The rebate proposal provided for the mailing out of checks to taxpayers in the fall of 2001 that were advance reductions for the introduction of a 10% rate bracket for 2001. They were, however, based on taxpayers' 2000 tax returns and any excess credits did not have to be repaid when returns for tax year 2001 were filed. (Taxpayers whose credits were smaller than those allowed on 2001 returns, however, received additional relief when tax returns were filed). The checks were mailed out between July and October.[4]

The rebate met some important standards for an effective tax cut stimulus.[5] Unlike many stimulus proposals in the past, particularly in the 1960s and 1970s, where the stimulus occurred during the recovery rather than the recession phase (potentially adding to inflationary pressures), its impact occurred during the recession.[6] In addition, tax cuts are most effective as a stimulus if they are spent, and the tax reductions affected lower and moderate income taxpayers who have a high propensity to spend.

At the same time, there was some concern that lump sum payments might be spent in the same fashions as a continued increase in income through tax reductions. There was some evidence that temporary rebates in the past were not spent.[7] It appears, however, that most of the rebate was

[4] The details of the plan are discussed in CRS Report RS21171, *The Rate Reduction Tax Credit - "The Tax Rebate" - in the Economic Growth and Tax Relief Reconciliation Act of 2001: A Brief Explanation*, by (name redacted).

[5] See CRS Report RS21126, *Tax Cuts and Economic Stimulus: How Effective Are the Alternatives?* by (name re dacted), for further discussion. See also Congressional Budget Office, *Options for Responding to Short-Term Economic Weakness*, January 2008, pp. 4-9.

[6] See Congressional Budget Office, Ibid., p. 7, for a discussion and references to evidence that the fiscal stimulus packages in the 1960s and 1970s were not well-timed.

[7] Ibid., p. 10.

spent fairly quickly: at least 20% to 40% in the quarter received and two-thirds by the end of the second quarter after receipt.[8]

Studies of the 2001 rebate also point to the importance of directing the rebate to households with low incomes and with fewer liquid assets. In the study by Johnson, Parker, and Souleles, households with low incomes were estimated to have increased spending by more than the rebate, while middle-income individuals spent less than 20%. Households with few liquid assets also increased spending more.[9] Another study found that households with lower credit card limits, or who were near their limits, or used their credit cards intensively, increased spending the most.[10]

The Joint Tax Committee study[11] discusses some important administrative issues surrounding a cash rebate.

[8] See David Johnson, Jonathan Parker, and Nicholas S. Souleles, "Household Expenditures and the Income Tax Rebates of 2001," *American Economic Review*, vol. 96, no. 5 (December 2006), pp. 1589-1610. Note that a number of statements have appeared indicating that research showed only a small percentage of rebates is likely to be spent. This statement may refer to the initial quarter, where the authors found little to be spent. It may also refer to earlier research that was either based on aggregate data or direct surveys. Blinder found a rebate 38% as effective as spending: Alan S. Blinder, "Temporary Income Taxes and Consumer Spending" *The Journal of Political Economy*, Vol. 89, February 1981, pp. 26-53. Blinder also summarizes other findings including that of Okun (1971), Springer(1975), and Juster (1977) , and Modigliani and Steindel (1977). Okun found the 1968 surtax to be about half as effective as a permanent tax change but Springer found no effect on consumption. Juster found results for the 1975 rebate similar to those of Okun for the surtax. Modigliani and Steindel found a small effect of the 1975 rebate in the first one or two quarters, but virtually a full effect over six quarters. In a later aggregate study Poterba found about 20% of the rebate to be spent. James M. Poterba, "Are Consumers Forward Looking?" *American Economic Review*, Vol. 78, (May 1988), pp. 413-418. Most more recent studies of consumption responses to income increases have used household data because it has been increasingly recognized that it is difficult to determine effects from aggregate data, since there is no way to determine the counterfactual, that it, the level of consumption that would otherwise have occurred. Household studies have tended to find significant consumption responses to changes in income of any type, especially for lower income individuals. Shapiro and Slemrod , using a survey, found about 20% of respondents indicating that they would mostly spend the rebate. Matthew Shapiro and Joel Slemrod, "Did the 2008 Tax Rebates Stimulate Spending?" Mimeo, December 27, 2008 and Matthew Shapiro and Joel Slemrod, "Consumer Response to Tax Rebates," National Bureau of Economic Research Working Paper 8692, Cambridge, MA, December 2001. This latter paper was also published in the *American Economic Review*, Vol. 93, March, 2003, pp. 381-396. The difficulty with surveys of this nature is that they may not accurately reflect what consumers ultimately do with income; they may initially use the payment to save or reduce debt, but spend shortly thereafter. . See Laurence Seidman and Kenneth Lewis, "Is a Tax Rebate an Effective Tool for Combating a Recession? A Reply to Shapiro and Slemrod, University of Delaware Working Paper 2003-15, November 2003 for a methodological critique. Household studies actually track spending. There are numerous household studies that find a consumption response to cash flow, with strong evidence that lower income households are more likely to spend and weak evidence that a tax cut delivered by withholding will lead to more spending than a lump sum payment. See CRS Report RS21126, *Tax Cuts and Economic Stimulus: How Effective Are the Alternatives?*, by (name redacted).

[9] David S. Johnson, Jonathan A. Parker, and Nicholas S. Souleles, Household Expenditures and the Income Tax Rebate of 2001," *American Economic Review*, Vol. 96, December 2006, pp. 1589-1610.

[10] Sumit Agarwal, Chunlin Liu, and Nicholas S. Souleles, "The Reaction of Consumer Spending and Debt to Tax Rebates: Evidence from Consumer Credit Data," Journal of Political Economy, vol. 115, no. 6 (December 2007), pp. 986–1019.

[11] Joint Committee on Taxation, *Overview of Past Legislation Providing Fiscal Stimulus and Issues in Designing and Delivering a Cash Rebate to Individuals*.

The 2002 Bonus Depreciation

Following the September 11, 2001, attacks, concerns once more arose about the economy. A tax package proposal that included a business tax cut in the form of reduction in the corporate alternative minimum tax and an acceleration of rate reductions failed to achieve passage in 2001. In 2002, a bill was adopted and the centerpiece, as far as tax provisions were concerned, was a temporary, two-year, provision for bonus depreciation. This provision, responding to a concern about lagging business investment, allowed businesses to deduct 30% of the cost of most business equipment purchases when incurred rather than depreciating them over several years (typically five to seven years). Bonus depreciation was increased to 50% in 2003 and extended through 2004.

Among the business tax incentives, a temporary investment subsidy should have the most "bang for the buck."[12] By directing the subsidy at investment, the stimulus does not provide a windfall for existing capital. By making the provision temporary there is an incentive to make investment now rather than later. Nevertheless, a study of the effect of temporary expensing by Cohen and Cummins at the Federal Reserve Board found little evidence that bonus depreciation was effective in stimulating investment.[13] They suggest several potential reasons for a small effect. One possibility is that firms without taxable income could not benefit from the timing advantage. In a Treasury study, Knittel confirmed that firms did not elect bonus depreciation for about 40% of eligible investment, and speculated that the existence of losses and loss carry-overs may have made the investment subsidy ineffective for many firms, although there were clearly some firms that were profitable that did not use the provision.[14] Cohen and Cummins also suggested that the incentive effect was quite small (largely because depreciation already occurs relatively quickly for most equipment), reducing the user cost of capital by only about 3%, that planning periods may be too long to adjust investment across time, and that adjustment costs outweighed the effect of bonus depreciation. Knittel also suggests that firms may have found the provision costly to comply with, particularly because most states did not allow bonus depreciation.

A study by House and Shapiro found a more pronounced response to bonus depreciation, given the magnitude of the incentive, but found the overall effect on the economy was small, which in part is due to the limited category of investment affected and the small size of the incentive.[15] Their differences with the Cohen and Cummins study reflect in part uncertainties about when expectations are formed and when the incentive effects occur.

A study by Hulse and Livingstone found mixed results on the effectiveness of bonus depreciation, which they interpret as weakly supportive of an effect.[16]

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[12] These issues are discussed in more detail in CRS Report RL31134, *Using Business Tax Cuts to Stimulate the Economy*, by (name redacted).

[13] Darryl Cohen and Jason Cummins, *A Retrospective Evaluation of the Effects of Temporary Partial Expensing*, Finance and Economics Discussion Series 2006-19, Federal Reserve Board, Washington, D.C. April 2006. They compared investment increases for shorter lived and longer lived assets (longer lived assets received a larger incentive) and investment closer to expiration to test the effects.

[14] Matthew Knittel, *Corporate Response to Bonus Depreciation: Bonus Depreciation for Tax Years 2002-2004*, U.S. Dept. of Treasury, Office of Tax Analysis Working Paper 98, May 2007.

[15] Christopher House and Matthew Shapiro, "Temporary Investment Tax Incentives: Theory With Evidence from Bonus Depreciation, American Economic Review, Vol. 98, June, 2008, pp. 737-768.

[16]Davis S. Hulse and Jane R. Livingstone, Incentive Effects of Bonus Depreciation, January 2010, http://www.ifigr.org/ (continued...)

One issue that these studies do not provide insight to is the desirable length of time to allow the temporary provision. If the time is too long, the provision is not very effective because the stimulus may be delayed, but if it is too short firms do not have time to make adjustments.

Cohen and Cummins also report the results of several surveys of firms, where from 2/3 to over 90% of respondents indicated bonus depreciation had no effect on the timing of investment spending.

Overall, bonus depreciation did not appear to be very effective in providing short-term economic stimulus. It is possible, however, that a stimulus during current times, when losses are not as large as they were in 2002-2004 when the economy was already in a recession, could be more successful.

The 2008 Rebate

The February 2008 stimulus package included an individual tax rebate. Unlike the 2001 rebate, this rebate provided for refundability for taxpayers with at least $3,000 of earnings, Social Security benefits, or veterans benefits. It also included bonus depreciation of 50% for one year. In a preliminary study of households, Broda and Parker found that 20% of the rebate was spent in the first month.[17] They predict that the 2008 rebate will have a significant effect on spending in subsequent months. Their study also found higher levels of spending for lower income households and those with fewer liquid assets. Parker, Souleles, Johnson, and McClelland, examining the timing of payments and spending, found 12% to 30% was spent on consumption in the first three months, and adding spending on consumer durables raised the share to 50% to 90%.[18] They also found that a larger fraction of the payment was spent by lower-income households. Finally, they tested whether self-reporting provided a reliable measure of spending and concluded that self- reporting understated the amount of spending.[19]

(...continued)

workshop/spring10/Hulse.pdf.

[17] Christian Broda and Jonathan Parker, The Impact of the 2008 Tax Rebates on Consumer Spending: Preliminary Evidence, Kellogg Insight, August 2008, http://insight.kellogg.northwestern.edu/index.php/Kellogg/article/the_impact_of_the_2008_tax_rebates_on_consumer_spending.

[18] Jonathan Parker, Nicholas Souleles, David S. Johnson, and Robert McClelland, "Consumer Spending and the Economic Stimulus Payment of 2008," http://www.kellogg.northwestern.edu/faculty/parker/htm/research/PSJM2010.pdf.

[19] As with the 2001 rebate, a survey study on the 2008 rebate found a small effect. Matthew D. Shapiro and Joel Slemrod, "Did the 2008 Tax Rebate Stimulate Spending?" American Economic Review, Vol. 99, May 2009, pp. 374-379. A study of the 2009 income tax cut that would lead economists to predict a larger spending rate actually showed a smaller one on surveys, another reason to question the validity of survey responses. See Claudia R. Sahm ,Matthew D. Shapiro, and Joel B. Slemrod, *Check in the Mail or More in the Paycheck: Does the Effectiveness of Fiscal Stimulus Depend on How it is Delivered?,* National Bureau of Economic Research Working paper 16246, July 2010 , Joel B. Slemrod http://www-personal.umich.edu/~shapiro/papers/w16246.pdf.

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