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Tax Policy During the Recession: The Role of Fiscal Stimulus

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A. Introduction

The U.S. economy is mired in a severe recession that officially began in December 2007.[1] The unemployment rate rose from 4.4 percent in March 2007 to 6.7 percent in November 2008, and nonfarm payrolls shed 1.9 million jobs from December 2007 to November 2008. Real GDP declined at a 0.5 percent annual rate in the third quarter of 2008 and undoubtedly fell much more rapidly in the fourth quarter. The Conference Board's index of leading economic indicators fell 2.8 percent in the six months ending in November 2008, signaling the economy is likely to remain weak for at least several more months.

During recessions, the government invariably pursues policies to stimulate aggregate demand, that is, to increase spending by households, firms, and government. (In this context, spending refers to consumer purchases, business and housing investment, government purchases of goods and services, and exports net of imports.) Monetary policy can stimulate aggregate demand by expanding the money supply and thereby lowering interest rates, which increases households' and firms' desired spending.

Fiscal policy is another available tool. A variety of tax and spending measures can stimulate aggregate demand by increasing the amount of spending that households and firms wish to do at any given interest rate. An increase in government purchases of goods and services directly increases spending. Under some circumstances, simply giving households or firms more money through tax cuts or government transfer payments may increase consumer or investment spending to some extent. Moreover, tax measures can provide incentives, or reduce disincentives, for firms and households to engage in investment and consumer spending.

Both monetary policy and fiscal policy have been used to stimulate aggregate demand before and during the current recession. The Federal Reserve has lowered the target value of the federal funds rate 10 times, reducing it to a range of zero to 0.25 percent on December 16, 2008, down from 5.25 percent in September 2007. Congress and President Bush enacted a stimulus package in early 2008 that included tax rebates intended to bolster consumer spending and temporary incentives for some business investment.[2]

Because interest rates cannot fall below zero, the Federal Reserve cannot further reduce short-term rates, although it may be able to reduce long-term interest rates to some extent. As the severity of the recession and the limits of monetary policy have become clear, support for additional fiscal stimulus has grown. After unsuccessful attempts to pass a modest stimulus package in the fall of 2008,[3] Congress and President-elect Barack Obama are planning to consider a far larger plan this month. Obama adviser David Axelrod said December 28 that the proposed stimulus package will cost $675 billion to $775 billion and that it will include tax reductions as well as spending increases.[4]

In this article, I consider the general principles of fiscal stimulus and the role of tax measures. Because fiscal stimulus does not create output and jobs from thin air, but ''borrows'' them from the future, stimulus must be properly timed to be beneficial. Although it is reasonable to pursue fiscal stimulus under today's harrowing conditions, expectations should remain limited. Stimulus measures should be temporary or business-cycle-contingent. Government purchases do not necessarily provide a larger (correctly measured) stimulative effect than tax cuts. On a more specific note, allowing greater use of net operating loss carryforwards during recessions

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[1] National Bureau of Economic Research, *Determination of the December 2007 Peak in Economic Activity*, Dec. 2008 (*available at* http://www.nber.org/cycles/dec2008.pdf).

[2] The Economic Stimulus Act of 2008, P.L. 110-185, 122 Stat. 613 (enacted Feb. 13, 2008).

[3] On September 26, 2008, the House of Representatives passed H.R. 7110, the proposed Job Creation and Unemployment Relief Act of 2008, but the bill did not become law. The bill called for $59 billion of spending on infrastructure, food stamps, Medicaid, and unemployment compensation. ''Estimated Cost of H.R. 7110, the Job Creation and Unemployment Relief Act of 2008, as Introduced on September 26, 2008,'' Congressional Budget Office (http://www.cbo.gov/ftpdocs/98xx/doc9816/hr7110.pdf).

[4] Phillip Rucker, ''Obama Tax Cuts Likely Very Soon,'' *The Washington Post*, Dec. 29, 2008, p. A4.

than during expansions can provide a modest fiscal stimulus while also reducing tax penalties on risky investment.

B. Role of Aggregate Demand Stimulus

To understand the role of tax and spending measures in stimulating aggregate demand, it is necessary to clarify the potential and the limits of stimulus.

Because of various frictions in the economy, monetary and fiscal policies that affect aggregate demand can alter the level of output relative to its natural level (the level that would prevail in the absence of frictions) while also affecting inflation.

Those frictions may include sluggish adjustment of prices and nominal wages or various types of incomplete information. Economists do not agree on the exact types of frictions, but most have rejected the notion that the economy operates in a frictionless manner.[5] Nevertheless, the effect of stimulus measures is limited, as set forth below.

Tax and spending measures that stimulate aggregate demand change the timing of output. Those measures temporarily increase output relative to its natural level, with a subsequent "payback" in which output is temporarily reduced relative to its natural level.

For present purposes, the following provides the best simple representation of the tradeoff between inflation and output. A rise in the inflation rate is associated with a period in which output is high relative to its natural level. A fall in the inflation rate is associated with a period in which output is low relative to its natural level. Output is unaffected if the inflation rate remains stable, whether at a higher or lower level.[6]

In such an economy, tax and spending measures cannot permanently increase output by stimulating aggregate demand. To achieve a permanent increase in output, the inflation rate would have to continue rising forever and eventually reach hyperinflation levels, which is unsustainable.

In contrast, a sustainable policy could permanently boost the inflation rate from one level to another, perhaps from 2 percent to 3 percent. In such a case, a period of temporarily high output would be associated with the rise in inflation from 2 percent to 3 percent, but the effects on output disappear as inflation stabilizes at its new level. To obtain this one-time boost to the economy, it is necessary to live with higher inflation forever.

The case described in the preceding paragraph does not apply to the current fiscal stimulus debate. To begin with, tax and spending measures that stimulate aggregate demand do not permanently boost the inflation rate, even if the measures are permanent. Also, as far as the author is aware, no one has proposed that the inflation rate be increased forever to combat the current recession.

The case applicable to the current debate is one in which inflation is temporarily increased to combat the recession. Consider an initial increase in the inflation rate from 2 percent to 3 percent, with a subsequent reduction back to 2 percent. A period of higher output is associated with the rise from 2 percent to 3 percent, and a period of lower output is associated with the decline back to 2 percent. An unaffected level of output is associated with the period during which inflation remains at 3 percent and the period after it returns to 2 percent.

In other words, tax and spending measures that stimulate aggregate demand not only fail to provide permanent employment gains, but also fail to produce a one-time gain that the economy can keep. Instead they produce a one-time gain that must be "paid back" through a one-time loss later. A fiscal stimulus package can add output and jobs in the next year or two, but unless the inflation rate is permanently increased, it will also cause a loss of output and jobs sometime later.

"Jobs" arguments for tax and spending measures are unfounded in the long run.

An argument made for many tax and spending measures is that they create jobs by increasing the production of particular goods and services. Middle-income tax cuts and other tax policies that promote consumption are said to create jobs in industries that produce and sell consumer goods. Tax incentives for business investment are said to create jobs in the industries constructing plant and equipment. Government spending on infrastructure or defense is said to create jobs in the construction or defense industries. Tax incentives and government spending that promote renewable energy are said to create green jobs.

While those arguments are made from virtually all points of the political spectrum, the above discussion indicates that they are invalid in the long run. In the long run, tax and spending measures that increase production of an item do not increase overall employment; instead, they increase employment in a particular industry while reducing employment elsewhere in the economy. Accordingly, none of those policies should be justified in the long run on the basis of job creation. The appropriate long-run levels of consumption, business investment, infrastructure and defense, and renewable-energy spending depend on the economic gains provided by using the output, not the jobs involved in producing it.

As noted above, the jobs argument has some relevance in the short run. Tax and spending measures that promote the production of certain items have stimulus effects that initially create output and jobs, albeit with a subsequent payback.

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[5]For a prominent macroeconomist's recent survey of this topic, see Olivier Blanchard, "The State of Macro," National Bureau of Economic Research Working Paper 14259, Aug. 2008.

[6]The term "associated with" reflects uncertainty about the relative timing of the change in the inflation rate and the change in output. In technical terms, the description in the text is most consistent with a backward-looking Phillips curve in which the inflation rate responds positively to output or employment and to lagged inflation rates, with the coefficients on lagged inflation summing to 1. Many statistical estimates, such as those by Mark A. Hooker, "Are Oil Shocks Inflationary? Asymmetric and Nonlinear Specifications Versus Changes in Regime," *Journal of Money, Credit, and Banking*, 34(2), May 2002, pp. 540-561, at p. 542, find the sum of the lagged coefficients to be close to 1 in a backward-looking specification. The analysis in the text also largely applies to Phillips curves that also include expectations of future inflation, provided that the coefficients on lagged inflation and expected future inflation sum to 1.

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C. Guidelines for Stimulus Measures

Tax and spending measures that stimulate aggregate demand are beneficial on those grounds only if society's need for the jobs and output initially gained is greater than its need for the jobs and output lost in the payback period. Proper timing of stimulus is therefore essential but may be difficult to achieve.

Because the initial output boost from stimulus must be paid back in the future, proper timing is essential. If stimulus provides output and jobs when they are less needed and the payback occurs when they are more needed, the net effects are harmful. As many economists have noted, however, proper timing is difficult to achieve because the desired increase in consumer spending, business or housing investment, government purchases, or net exports may take some time to occur.[7]

Because of the severity of the current recession, the economy desperately needs additional output and jobs. Stimulus that boosts the economy in the next several months would be beneficial, despite the subsequent payback. Of course, matters become more problematic if measures enacted today take a long time to affect spending.

Tax and spending measures adopted solely to stimulate aggregate demand should not and will not apply permanently without regard to the state of the economy. They should and will be either temporary, or contingent on the state of the economy.

It is senseless to support a permanent tax or spending measure that applies in both good times and bad solely on the grounds that it will stimulate aggregate demand. Because the output and inflation effects of the policy are temporary, there is no reason to permanently maintain the policy if its only purpose is aggregate demand stimulus.

A permanent change can provide short-run stimulus, but that can be, at most, only part of the reason for adopting the policy. Consider, for example, a decision during the current recession to adopt a permanent tax incentive for business investment or to permanently increase infrastructure spending. The policy would produce a one-time output gain because of its demand stimulus, followed by a subsequent payback. Given today's economic conditions, that effect could be beneficial, assuming that the extra business investment or infrastructure spending occurred quickly enough. But that benefit could not be the sole reason for changing investment incentives or infrastructure spending until the end of time. The stimulus could be only a favorable side effect of a policy adopted for other reasons, such as a conviction that our nation needs more business investment or infrastructure. If stimulus were the sole motivation, the policy would be temporary or would be put in place on a permanent, but business-cycle-sensitive, basis.

Similarly, it is sometimes argued that a permanent increase in households' disposable income is a desirable way to increase consumer spending and thereby provide fiscal stimulus, because consumer spending is based on long-run, rather than current, income for many households. Again, however, a permanent change in disposable income (which would presumably require a permanent reduction in government purchases) would not be maintained solely for stimulus reasons.

In contrast, stimulus considerations could, and sometimes should, be the sole motivation for a decision to accelerate or delay a permanent change being made for other reasons. Someone who supports (on the grounds mentioned above) a permanent increase in business investment incentives or in infrastructure spending could decide on stimulus grounds to accelerate such a change to take effect during the current recession. Similarly, someone who favors (on distributional and revenue grounds) a permanent rise in the top two individual income tax brackets could decide on stimulus grounds to delay the rate increases until after the current recession, a decision that Obama may well make. Note that in each case, the change made for stimulus reasons is itself temporary, although it alters an underlying permanent measure.

Government purchases do not necessarily provide a larger (correctly measured) stimulative effect than tax cuts.

Tax changes are often regarded as inferior stimulus tools on the ground that the GDP stimulus from increases in government purchases of goods and services is larger than that from tax cuts. In general, however, it is impossible to say which policy provides a larger (correctly measured) stimulus.

The claim that government purchases have a larger stimulative effect than tax cuts arises from a simple textbook analysis. Consider, for example, a choice between a $100 tax rebate and a $100 road construction project. Suppose that 20 percent of the tax rebate is spent on domestic consumer goods, with the remainder either saved or spent on imported goods, and that the same 20 percent spending ratio applies to the wages and supplier payments generated by the road project.

Then the rebate boosts measured GDP by only $25, while the road project boosts it by $125. The rebate initially generates $20 of consumer spending plus $4 of spending in the second round (as 20 percent of the $20 received by producers of the consumer goods is spent) plus 80 cents in the third round and so on, for a total of $25. The road project produces the same $25 consumer spending but also provides a road that is included in measured GDP at a $100 value. Unlike the $100 road, the $100 rebate is not part of GDP because it is merely a transfer from some members of society to others rather than production.

The impact on measured GDP is not, however, the right criterion. The road is treated as if it is worth $100 in the GDP accounts solely because it costs $100 to build (in accordance with the accounts' general treatment of government transactions). The actual value of the road to its

[7]Several studies have discussed the possible timing lags associated with different stimulus measures. Leading studies include Congressional Budget Office, ''Options for Responding to Short-Term Economic Weakness,'' Jan. 2008, pp. 8, 19, 22 (http://www.cbo.gov/ftpdocs/89xx/doc8916/01-15-Econ_Stimulus.pdf); Douglas W. Elmendorf and Jason Furman, ''If, When, How: A Primer on Fiscal Stimulus,'' *Tax Notes*, Jan. 28, 2008, p. 545, *Doc 2008-890, 2008 TNT 19-42*; Alan S. Blinder, ''The Case Against the Case Against Discretionary Fiscal Policy,'' Princeton University, Department of Economics, Center for Economic Policy Studies Working Paper 100, June 2004, (http://www.princeton.edu/~ceps/workingpapers/100blinder.pdf).

users may be either smaller or larger than that amount. In the extreme case of a worthless road, the actual improvement in (valued) output is $25 for each of the two policies. Also, the road construction, unlike the rebates, requires workers to give up their time and provide effort. In general, the road is the better option only if its value to its users exceeds the value of the workers' time.[8]

The road is inferior to the rebate if it has little value to its users. However, the road is better than the rebate if it has a large value to its users; indeed, it may then be superior by a wider margin than the textbook analysis indicates. It is necessary to scrutinize the value of each project; we cannot rely on generalizations about government purchases being better or worse than tax rebates.

This analysis highlights the importance of proper project selection. If infrastructure investment is to be a large component of the stimulus package, it is imperative that wasteful projects be avoided.

D. Loss Carrybacks

A large literature has discussed the relative merits of different stimulus measures, such as tax rebates, transfer payments, government purchases, and temporary investment incentives.[9] I will not review that discussion here, except to note that the literature has yet to identify a powerful stimulus measure that can be applied broadly. Instead, I discuss a specific policy option that has received less attention than it deserves. Allowing greater carrybacks of NOLs during recessions would serve a useful, although small, stimulus function while reducing the tax penalty on risky investments.

NOL carrybacks should be more generous during recessions than during economic expansions.

Section 172(b)(1)(A) generally allows NOLs to be carried back 2 years or to be carried forward (without interest) for 20 years. As set forth in section 172(b)(1)(H), a five-year carryback applied to losses arising in 2001 and 2002, a change that was adopted as part of the 2002 fiscal stimulus package.[10] Another temporary five-year carryback provision is being considered.[11]

As the Congressional Budget Office has noted, allowing greater use of NOLs can strengthen investment incentives to a modest extent. A firm that has unused loss deductions obtains no current benefit from deductions for new investment, which blunts its incentive to invest. In particular, such a firm is less likely to respond to any temporary investment incentive provisions included in a stimulus package. If a more generous NOL carryback allows a firm to move out of an excess-loss position, it faces greater marginal incentives to make new investments, particularly those that qualify for expensing or other large upfront deductions. More generous carrybacks also provide firms with cash flow, which may promote investment if they are constrained from borrowing, a common situation today.[12]

Still, as the CBO comments, NOL changes are "unlikely to generate substantial changes in investment in the short run." The best case for allowing more generous NOL carryback during recessions is the need to reduce tax penalties on risky investment.

If all losses reported on tax returns were real losses arising from risky investments that were intended, *ex ante*, to generate profits, then losses should be fully deducted at the same tax rate that applies to profits, with any resulting negative tax liability refunded in cash. Only that policy provides neutral treatment for risky investments relative to safe investments; any more restrictive policy offers firms a "heads I win, tails you lose" deal that penalizes them for taking risks.

Unfortunately, some restrictions on loss deductions are likely to be necessary because some losses may be spurious, arising from code provisions that mismeasure income — and some losses may be claimed in connection with outright tax evasion. Although the restrictions disallow some genuine losses and thereby penalize risky investments, they safeguard the Treasury from unlimited deduction of spurious losses.

The extent to which loss deductions should be allowed reflects a balancing between the desire to allow true losses and to disallow spurious losses. That implies, however, that more generous loss deductions should be allowed during recessions. During a recession, a higher fraction of reported losses are likely to be true losses caused by the bad economy, while a lower fraction are likely to be spurious.

In short, allowing firms to deduct losses if a future recession causes their risky investments to go sour helps level the playing field. The loss deductions provide the appropriate counterbalance to the taxes that firms will pay on their gains if a future economic upturn boosts the payoffs from their risky investments.[13]

Strictly speaking, this level-playing-field argument primarily implies that firms should be assured of loss deductions during future recessions for risky investments they will undertake in coming years. It does not directly imply that firms should receive more generous loss deductions during the current recession for risky investments that they have already undertaken. Allowing a longer carryback during the current recession, however, is probably the most direct way to provide an assurance about policy during future recessions (and, as noted above, is also modestly useful as stimulus). Consideration should be given to amending section 172 to give the Treasury secretary regulatory authority to lengthen the carryback period during future recessions.

[8]This point was recently developed by N. Gregory Mankiw, "How Not to Stimulate the Economy," Greg Mankiw's blog, Dec. 22, 2008 (http://gregmankiw.blogspot.com/2008/12/how-not-to-stimulate-economy.html).

[9]*See* the sources listed in *supra* note 7, and the references that they cite.

[10]The Job Creation and Worker Assistance Act of 2002, P.L. 107-147, section 102(a), 116 Stat. 25 (enacted Mar. 9, 2002).

[11]Chuck O'Toole, "Stimulus Bill Might Include Five-Year NOL Carryback, Aide Says," *Tax Notes*, Dec. 15, 2008, p. 1233, *Doc 2008-26141, 2008 TNT 240-5*.

[12]CBO, *supra* note 7, p. 16.

[13]A similar argument suggests that the $3,000 limit on deductions of net capital losses, as set forth in section 1211(b), should be loosened during recessions or bear markets. That change would probably have no appreciable stimulus effects.

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E. Conclusion

The above analysis suggests several conclusions. The potential role of tax and spending measures as stimulus should not be overstated; fiscal stimulus borrows output from the future rather than creating it from nothing. Proper timing is essential and may be difficult to achieve. Stimulus measures should be temporary or business-cycle-contingent. Government purchases do not necessarily provide a larger (correctly measured) stimulative effect than tax cuts. Allowing greater use of NOL carryforwards during recessions would provide a modest fiscal stimulus while also reducing tax penalties on risky investment.

As a final note, the stimulus debate should supplement, rather than replace, the quest for long-run growth. To that end, tax policy should be oriented to tax consumption rather than saving. It should also keep marginal tax rates as low as reasonably possible. As we address the current economic calamity, let's also adopt policies that will continue to enable each generation to attain a higher standard of living.

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