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WOULD MORE INFRASTRUCTURE SPENDING STIMULATE THE ECONOMY?

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Four years into the deepest recession since World War II, the U.S. economy expanded at a rate of only 0.7 percent in the first half of 2011. This means that the economy is growing at a slower pace than the population and that capita output continues to fall.[2]

In response, the president has announced a plan for yet more deficit-financed stimulus spending.[3] Like the two previous stimulus bills, this one focuses on infrastructure spending. The president's plan is rooted in the belief that stimulus spending and deeper deficits will give the economy the lift it needs to create more jobs. The hope is that, eventually, the economy will grow fast enough to allow the government to begin to pay down the national debt.

There are three problems with this approach. First, despite the claims of stimulus proponents, the evidence is not at all clear that more stimulus would be helpful right now. Second, even if one adheres to the idea that more government spending can jolt the economy, spending—particularly infrastructure spending—cannot be implemented in the way Keynesians say it ought to be. This greatly undermines its stimulative effect. Third, while no one disputes the value of good infrastructure, this type of spending typically suffers from massive cost overruns, waste, fraud, and abuse. This makes it a particularly bad vehicle for stimulus. In sum, further stimulus would be a risky short-term gamble with near-certain negative consequences in the long term.

The Rationale for Infrastructure Stimulus

According to Keynesian economic theory, recessions are caused by a fall in economy-wide ("aggregate") demand. Since one person's spending is another's income, a fall in demand makes the nation poorer. When the now poorer nation cuts back on spending, it sets off yet another wave of falling income. So, according to this view, a big shock to consumer spending or business confidence can set off waves of job losses that ripple through the economy. Can anything stop this ripple effect? Keynesians say yes. Government spending can take the place of private spending during a crisis. This spending can take a number of forms: public service employment, cash transfers, state revenue sharing, or infrastructure projects.

To combat the current recession, the U.S. government has already undertaken a number of large discretionary stimulus measures. These include $152 billion in tax rebates in early 2008, $862 billion in the American Recovery and Reinvestment Act (ARRA) of 2009 (which included over $130 billion for infrastructure), and $20 billion in more infrastructure spending in the Hiring Incentives to Restore Employment Act of March 2010. Infrastructure spending also appears to be a focus of the latest round of stimulus.

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[1] The authors are grateful to Richard Williams and Emma Elliott for numerous helpful suggestions.

[2] Bureau of Economic Analysis, "News Release," August 26, 2011, http://www.bea.gov/newsreleases/national/gdp/2011/pdf/gdp2q11_2nd.pdf.

[3] Mark Landler and Jackie Calmes, "Obama Stumps for Jobs Plan, Calling for 'Action Now'," *The New York Times*, September 9, 2011, http://www.nytimes.com/2011/09/10/us/politics/10obama.html?_r=1&hp.

Multipliers: How Much Bang for the Bucks?

A vital measure of the effectiveness of a stimulus is the government purchases multiplier (the "multiplier"). The multiplier measures the amount by which the economy expands when the government increases its purchases of goods and services by $1.00. It is important to remember that when it measures the size of the economy, the Bureau of Economic Analysis automatically counts a $1.00 increase in government purchases and gross investments as a $1.00 increase in *measured GDP*.[4] Therefore, the key question is whether this increase in public sector GDP enhances ("multiplies") private sector GDP or displaces ("crowds out") private sector GDP.

If the multiplier is smaller than 0, stimulus displaces enough private sector activity to offset any increase in public sector activity, i.e., stimulus actually shrinks the entire economy. However, if the multiplier is between 0 and 1, then stimulus displaces private-sector economic activity, but not by enough to counteract the increase in public sector economic activity. If the multiplier is larger than 1, then stimulus spending not only increases public-sector economic activity, it also increases private-sector economic activity.

Notwithstanding the confidence of stimulus advocates, there is no academic consensus regarding the size or even the sign of the multiplier. As a recent International Monetary Fund (IMF) working paper puts it, "Economists have offered an embarrassingly wide range of estimated multipliers."[5] The largest recent estimate is by Northwestern University economists Lawrence Christiano, Martin Eichenbaum, and Sergio Rebelo. They estimate that the multiplier may be as large as 3.7, implying that $1.00 in government purchases stimulates another $2.7 in private sector economic activity.[6] On the other end of the spectrum is an estimate by University of Chicago economists Andrew Mountford and Harald Uhlig. They find that the multiplier may be as small as -2.88, implying that $1.00 in government purchases displaces $3.88 in private sector economic activity.[7]

A wide range of estimates exists, in part, because there is a wide range of circumstances in which stimulus might be applied. We now turn to the particular circumstances of the United States to see how infrastructure stimulus might impact the current economic situation.

Stimulus with low interest rates and distortionary taxation: Some studies obtain larger multipliers than others because they assume that stimulus will be applied when interest rates are at or near zero percent.[8] Theoretically, low interest rates make stimulus more potent because the government is able to employ idle resources by borrowing funds at a low cost. At least for the time being, interest rates are indeed historically low, so this may be a reasonable assumption. Unfortunately, if temporary stimulus spending turns into permanent spending, then when interest rates eventually return to normal, the

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[4] This is not to say that the activity is valuable; only that it counts toward measured GDP. Nobel Laureate Friedrich Hayek is famous for noting that when it comes to evaluating the value of their activities, public sector decision makers are at a significant disadvantage relative to private sector decision makers because public sector decision makers are not able to benefit from the information about opportunity costs that is contained in price signals. See Friedrich Hayek, "The Use of Knowledge in Society," *American Economic Review*, vol. 35, no. 4 (September 1945): 519-30, http://www.econlib.org/library/Essays/hykKnw1.html.

[5] Eric Leeper, Todd Walker, and Shu-Chum Yang, "Government Investment and Fiscal Stimulus," (working paper, International Monetary Fund, October, 2010), http://www.imf.org/external/pubs/ft/wp/2010/wp10229.pdf.

[6] Lawrence Christiano, Martin Eichenbaum, and Sergio Rebelo, "When is the Government Spending Multiplier Large?" (working paper, Northwestern University, Chicago, IL, 2009), http://faculty.wcas.northwestern.edu/~yona/research/Multiplier-version12.pdf.

[7] Andrew Mountford and Harald Uhlig, "What are the Effects of Fiscal Policy Shocks?" *Journal of Applied Econometrics*, vol. 24, no. 6 (April 2009): 960-92, http://onlinelibrary.wiley.com/doi/10.1002/jae.1079/full.

[8] Christiano, Eichenbaum, and Rebelo.

government will have to finance its spending at a higher cost. This will make the actual multiplier significantly smaller than these studies suggest. What's more, not all studies that incorporate this low interest-rate assumption obtain large estimated multipliers. For example, studies that consider the tax that will need to be levied tomorrow to pay for today's spending, find much smaller multipliers, even when interest rates are exceedingly low.[9]

Stimulus in a highly indebted nation: An extensive study from the IMF shows that fiscal multipliers in nations with debt levels in excess of 60 percent of GDP are zero or even negative.[10] The current U.S. debt-to-GDP ratio is 70 percent and, according to the Congressional Budget Office, it will be 90 percent within seven years and 100 percent within ten.[11]

Stimulus under flexible exchange rates: The same IMF study also finds that a nation's exchange-rate regime impacts the size of the multiplier. When a nation's exchange rate is fixed, the multiplier can be relatively large.[12] But when the country allows the market to dictate movements in the exchange rate—as the United States does—the IMF economists found that the multiplier is much lower. This is because fiscal stimulus tends to cause domestic interest rates to rise relative to foreign interest rates. And when this happens, foreigners increase their demand for the domestic currency, causing it to appreciate. This, in turn, makes domestic goods more expensive and foreign goods cheaper, decreasing net exports and lowering output.

Stimulus in a balance-sheet recession: The current recession has resulted in an unprecedented collapse in net wealth. In other words, it is a deep "balance sheet" recession. But with personal wealth diminished and private credit impaired, some economists believe that stimulus is likely to be less effective than it would be in a different type of recession. This is because consumers are likely to use their stimulus money to rebuild their nest eggs, i.e., to pay off debts and save, not to buy new products as Keynesian theoreticians want them to.[13] The same is likely true for state and local governments who have used their ARRA dollars to reduce their budget gaps or reduce their borrowing rather than to increase infrastructure spending or other government purchases.[14]

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[9] See, for example, Thorsten Drautzburg and Harald Uhlig, "Fiscal Stimulus and Distortionary Taxation," (working paper, National Bureau of Economic Research, June 2011), http://www.nber.org/papers/w17111. With these assumptions, they find that the short-run multiplier is only 0.52, implying stimulus spending crowds out private sector activity. Worse, they estimate that the long-run multiplier is -0.42, implying that enough private sector activity is crowded out that it more than offsets the increased public sector activity.

[10] Ethan Ilzetski, Enrique Mendoza, and Carolos Vegh, "How Big (Small?) Are Fiscal Multipliers?" (working paper, International Monetary Fund, 2011), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1784540.

[11] Congressional Budget Office, *2011 Long-Term Budget Outlook*, Alternative Fiscal Scenario, June 2011, http://www.cbo.gov/doc.cfm?index=11579.

[12] Under a fixed exchange rate regime, the central bank cannot, by law, let its currency appreciate. Since fiscal stimulus tends to put pressure on the domestic currency to appreciate, central banks in fixed exchange regimes respond to stimulus by buying foreign currencies. This is effectively a monetary stimulus. Thus, fiscal stimulus under a fixed exchange-rate regime automatically induces monetary stimulus as well. This model has come to be known at the "Mundell-Fleming model" and it has had an enormous impact on modern macroeconomics. See Robert Mundell, "Capital Mobility and Stabilization Policy Under Fixed and Flexible Exchange Rates," *Canadian Journal of Economic and Political Science*, vol. 29, no. 4 (1963): 475-85, http://www.sonoma.edu/users/e/eyler/426/mundell2.pdf. See also Marcus Fleming, "Domestic Financial Policies Under Fixed and Floating Exchange Rates," *IMF Staff Paper*, vol. 9 (1962): 369-79, http://www.jstor.org/pss/3866091.

[13] Richard Clarida, "A Lot of Bucks, But How Much Bang?" *VoxEU*, March 2009, http://www.voxeu.org/index.php?q=node/3271.

[14] John Taylor and John Cogan, "What the Government Purchases Multiplier Actually Multiplied in the 2009 Stimulus Package," (working paper, National Bureau of Economic Research, October 2010), http://www.stanford.edu/~johntayl/Cogan%20Taylor%20multiplicand%2010-25.pdf.

Diminishing marginal returns to stimulus: New research also suggests that there are diminishing marginal returns to stimulus.[15] This makes new stimulus even less helpful than what has already been undertaken.

The Federal Government has already spent over $1 trillion in legislated stimulus. Beyond this, unlegislated "automatic stabilizers" in the budget have helped to push the primary deficit well over $1 trillion.[16]

The problems with infrastructure stimulus: There are unique problems with infrastructure stimulus that tend to diminish its chances of success. Chief among these are long implementation delays. The Congressional Budget Office reports that:

> [F]or major infrastructure projects supported by the federal government, such as highway construction and activities of the Army Corps of Engineers, initial outlays usually total less than 25 percent of the funding provided in a given year. For large projects, the initial rate of spending can be significantly lower than 25 percent.[17]

Economists from the IMF studied the impact of implementation delays on the multiplier and found that, "Implementation delays can postpone the intended economic stimulus and may even worsen the downturn in the short run."

Implementation

Perhaps the most important reasons to be skeptical about further stimulus—particularly infrastructure stimulus—have to do with the way it is implemented. As a general rule, the studies that obtain large multipliers do so by assuming that stimulus funds will be distributed just as Keynesian theory says they ought to be. Keynesian economist and former presidential economic advisor Lawrence Summers has offered a widely accepted summary of how—ideally—fiscal stimulus ought to be applied.[18] He argues that fiscal stimulus "can be counterproductive if it is not timely, targeted, and temporary." In reality, however, infrastructure spending cannot fulfill these criteria.

There is no such thing as a "shovel ready" project: By nature, infrastructure spending fails to be timely. Even when the money is available, it can be months, if not years, before it is spent. This is because infrastructure projects involve planning, bidding, contracting, construction, and evaluation.[19]

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[15] Christopher Erceg and Jesper Lindé, "Is There a Fiscal Free Lunch in a Liquidity Trap?" International Finance Discussion Paper, *The Federal Reserve Board*, July 2010, http://www.federalreserve.gov/pubs/ifdp/2010/1003/default.htm.

[16] "Automatic stabilizers" are provisions in the budget such as means-tested programs that automatically increase deficit spending when the economy slows. Some economists believe that these automatic stabilizers are the optimal way to apply Keynesian stimulus. See, for example, John Taylor, "Reassessing Discretionary Fiscal Policy," *Journal of Economic Perspectives*, vol. 14, no. 3 (Summer 2000): 21-36, http://dspace.ceu.es/bitstream/10637/2240/1/Taylor_JB2000.pdf. The primary deficit does not include interest payments on the debt and so it is the most conservative measures of the government's deficit.

[17] Congressional Budget Office, "Options for Responding to Short-Term Economic Weakness," (CBO: Washington, DC, January 2008).

[18] Lawrence Summers, "The State of the U.S. Economy," *Brookings Institution Forum*, December 19, 2007.

[19] See Leeper, Walker, and Yang for more details.

According to the GAO, as of June 2011, 95 percent of the $45 billion in Department of Transportation infrastructure money had been appropriated, but only 62 percent ($28 billion) had actually been spent.[20]

Un-targeted: Effective targeting means that stimulus money should be spent in those areas that have been hardest hit by the recession. The goal is to make the most use of "idle resources" (as Keynesian theory terms them). For instance, depressed areas like Detroit have a considerable number of unemployed resources (people, firms, equipment, etc.). So theoretically, government stimulus should be able to put these idle resources to work. A number of studies, however, have shown that stimulus funding tends not to go to those areas that have been hardest hit by a recession.[21]

- *Even targeted stimulus may fail*: Many of the areas that were hardest hit by the recession are in decline because they have been producing goods and services that are not, and will never be, in great demand. Therefore, the overall value added by improving the roads and other infrastructure in these areas is likely to be lower than if the new infrastructure were located in growing areas that might have relatively low unemployment but do have great demand for more roads, schools, and other types of long-term infrastructure.[22]

- *Job poaching, not creating*: Unemployment rates among specialists, such as those with the skills to build roads or schools, are often relatively low. Moreover, it is unlikely that an employee specialized in residential-area construction can easily update his or her skills to include building highways. As a result, we can expect that firms receiving stimulus funds will hire their workers away from other construction sites where they were employed rather than from the unemployment lines. This is what economists call "crowding out." Except that in this case, labor, not capital, is being crowded out. In fact, new data confirm that a plurality of workers hired with ARRA money were poached from other organizations rather than from the unemployment lines.[23]

Not temporary: Even in Keynesian models, stimulus is only effective as a short-run measure. In fact, Keynesians also call for surpluses during an upswing.[24] In reality, however, the political process prefers to implement the first Keynesian prescription (deficit-financed spending) but not the second (surpluses to

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[20] Government Accountability Office, "Recovery Act: Funding Used for Transportation Infrastructure Projects, but Some Requirements Proved Challenging," GAO 11-600, June 29, 2011, http://www.gao.gov/new.items/d11600.pdf.

[21] Veronique de Rugy, "Stimulus Facts—Period 2," (working paper, Mercatus Center at George Mason University, Arlington, VA, 2010), http://mercatus.org/sites/default/files/publication/WP1015_Stimulus%20Facts%202.pdf; and Jason Reifler and Jeffrey Lazarus, "Partisanship and Policy Priorities in the Distribution of Economic Stimulus Funds," (working paper under review, September 2010), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1670161; Jennifer LaFleur and Matt Grabell, "Stimulus Infrastructure Funding Short-Changes States with High Unemployment," *Pro Publica*, February 2009, http://www.propublica.org/special/stimulus-unemployment-chart-and-map; and Robert Inman, "States in Fiscal Distress," (working paper, National Bureau of Economic Research, June 2010), http://www.nber.org/papers/w16086.

[22] Gary Becker, "Infrastructure in a Stimulus Package," Becker-Posner Blog, January 18 2009. http://gregmankiw.blogspot.com/2009/01/infrastructure-spending-as-stimulus.html.

[23] Garett Jones and Daniel Rothschild, "Did Stimulus Dollars Hire the Unemployed? Answers to Questions About the American Recovery and Reinvestment Act," (working paper, Mercatus Center at George Mason University, Arlington, VA, 2011), http://mercatus.org/sites/default/files/publication/Did_Stimulus_Dollars_Hire_The_Unemployed_Jones_Rothschild_WP34.pdf.

[24] Paul Krugman, "Hard Keynesianism," The Conscience of a Liberal, *The New York Times*, May 2, 2011, http://krugman.blogs.nytimes.com/2011/05/02/hard-keynesianism/.

pay off the debt).[25] The inevitable result is a persistent deficit that, year-in, year-out, adds to the national debt.[26] A review of historical stimulus efforts has shown that temporary stimulus spending tends to linger and that two years after an initial stimulus, 95 percent of the spending surge remains.[27]

- *Ratchet-up effect*: Evidence from World War II suggests that when spending spikes, as is the case during the current recession, it tends not to return to pre-spike levels.[28] This "ratchet up" in spending is exacerbated when federal spending is channeled through state and local governments, as was the case in ARRA. Data from 50 states over a 13-year period show that temporary grants from the federal government to state and local governments cause the latter to increase their own future taxes by between 33 and 42 cents for every dollar in federal grants received.[29]

Cost overruns are the rule rather than the exception: The most comprehensive study of cost overruns examines 20 nations spanning five continents. The authors find that nine out of 10 public works projects come in over budget.[30]

Cost overruns dramatically increase infrastructure spending: Overruns routinely range from 50 to 100 percent of the original estimate.[31] For rail, the average cost is 44.7 percent greater than the estimated cost at the time the decision is made. For bridges and tunnels, the equivalent figure is 33.8 percent, and for roads 20.4 percent.[32] On average, U.S. cost-overruns reached $55 billion per year.[33] Even if they lead to localized job growth, these investments are usually inefficient uses of public resources.

Inaccurate estimates of demand plague infrastructure projects: A study of 208 projects in 14 nations on five continents shows that 9 out of 10 rail projects overestimate the actual traffic.[34] Moreover, 84 percent of rail-passenger forecasts are wrong by more than 20 percent. Thus, for rail, passenger traffic

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[25] John Cullis and Philip Jones, *Public Finance and Public Choice*, Chapter 14, 2nd ed. (New York: Oxford University Press, 1998).

[26] Office of Management and Budget, Historical Tables, Table 1.2, http://www.whitehouse.gov/omb/budget/Historicals/. If the federal government followed the full Keynesian prescription, then it would have run a primary deficit during most of the last 40 years. Instead, the federal government ran a primary deficit 66 percent of the time. When interest payments are counted as expenses, the government ran a deficit 95 percent of the time.

[27] Olivier Blanchard and Roberto Perotti," An Empirical Characterization Of The Dynamic Effects Of Changes In Government Spending And Taxes On Output," *The Quarterly Journal of Economics*, v. 117 no. 4 (2002): 1329-368, http://ideas.repec.org/a/tpr/qjecon/v117y2002i4p1329-1368.html.

[28] Robert Higgs explores the theoretical arguments for why government activity might "ratchet up" during a crisis and never return to pre-crisis levels. See Robert Higgs, *Crisis and Leviathan: Critical Episodes in the Growth of American Government*. (Oxford: Oxford University Press, 1987).

[29] Russell Sobel and George Crowley, "Do Intergovernmental Grants Create Ratchets in State and Local Taxes?" (working paper, Mercatus Center at George Mason University, Arlington, VA, 2010), http://mercatus.org/features/sites/default/files/publication/Do%20Intergovernmental%20Grants%20Create%20Ratchets.Sobel_.9.7.10.pdf.

[30] Bent Flyvbjerg, Mette K. Skamris Holm, and Søren L. Buhl, "Underestimating Costs in Public Works Projects: Error or Lie?" *Journal of the American Planning Association*, vol. 68, no. 3, (Summer 2002): 279-25.

[31] Ibid.

[32] Ibid.

[33] The Capitol Hill Visitor Center, an ambitious three-floor underground facility, originally scheduled to open at the end of 2005, was delayed until 2008. The price tag leaped from an estimate of $265 million in 2000 to a final cost of $621 million.

[34] Bent Flyvbjerg, "Measuring Inaccuracy in Travel Demand Forecasting: Methodological Considerations Regarding Ramp Up and Sampling," *Transportation Research A*, vol. 39 no. 6, (2005): 522–30.

average 51.4 percent less than estimated traffic.[35] This means that there is a systematic tendency to overestimate rail revenues. For roads, actual vehicle traffic is on average 9.5 percent *higher* than forecast traffic and 50 percent of road traffic forecasts are wrong by more than 20 percent.[36] In this case, there is a systematic tendency to *underestimate* the financial and congestion costs of roads.

Survival of the un-fittest: Studies have shown that project promoters routinely ignore, hide, or otherwise leave out important project costs and risks to make total costs appear lower.[37] Researchers refer to this as the "planning fallacy" or the "optimism bias." Scholars have also found that it can be politically rewarding to lie about the costs and benefits of a project. The data show that the political process is more likely to give funding to managers who underestimate the costs and overestimate the benefits. In other words, it is not the best projects that get implemented but the ones that look the best on paper.[38]

A rapid increase in stimulus spending makes things worse: There is an inherent tradeoff between speed and efficiency. Policy makers need time to weigh the merits of a project, structure requests for proposals, administer a fair bidding process, select the best firms, competently build the project, and impartially evaluate the results. Quite understandably, economists have found that when funds are spent quickly, they are not spent wisely.[39] In October 2010, President Obama conceded that, in fact, "There's no such thing as shovel-ready projects."[40]

In sum, there are strong reasons to suspect that stimulus is not likely to be implemented as Keynesian theoreticians say it ought to be. This means that even by Keynesians standards, the newest round of stimulus is likely to fail. Tellingly, the political economy problems that plague the implementation of stimulus were actually significant enough to make Lord Keynes himself a skeptic. Toward the end of his life, he wrote:

> Organized public works, at home and abroad, may be the right cure for a chronic tendency to a deficiency of effective demand. But they are not capable of sufficiently rapid organization (and above all cannot be reversed or undone at a later date), to be the most serviceable instrument for the prevention of the trade cycle.[41]

Given the experience with recent stimulus packages, Keynes's observations appear to be remarkably prescient. Unfortunately, modern-day Keynesians appear not to have paid heed.

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[35] Bent Flyvbjerg, Mette Skamris Holm, and Søren L. Buhl, "How (In)accurate are Demand Forecasts in Public Works Projects? The Case of Transportation," *Journal of the American Planning Association*, vol. 71, no. 2 (Spring 2005): 131-46.
[36] Ibid.
[37] Bent Flyvbjerg, "Design by Deception: The Politics of Megaproject Approval," *Harvard Design Magazine*, no. 22, (Spring/Summer 2005): 50-9. See also Flyvbjerg, "Machiavellian Megaprojects," *Antipode*, vol. 37, no. 1, (January 2005): 18-22 and Flyvbjerg, "Megaprojects and Risk: An Anatomy of Ambition," *The Sociologist*, vol. 1, no. 1 (Summer 2004): 50-5. See also Bent Flyvbjerg, Mette K. Skamris Holm, and Søren L. Buhl, "What Causes Cost Overrun in Transport Infrastructure Projects?" *Transport Reviews*, vol. 24, no. 1 (January 2004): 3-18.
[38] Bent Flyvbjerg, "Survival of the Unfittest: Why the Worst Infrastructure Gets Built—And What We Can Do about It," *Oxford Review of Economic Policy*, vol. 25, no. 3 (2009): 344–67, http://www.sbs.ox.ac.uk/centres/bt/Documents/UnfittestOXREPHelm3.4PRINT.pdf.
[39] Ibid., 362.
[40] Stephanie Condon, "Obama: 'No Such Thing as Shovel-Ready Projects,'" *CBSNews.com*, October 13, 2010, http://www.cbsnews.com/8301-503544_162-20019468-503544.html. See also Bruce Bartlett, "How Not to Stimulate the Economy," *The Public Interest*, vol. 112 (Summer 1993): 99-109, and Blanchard and Perotti.
[41] *The Collected Writings of John Maynard Keynes: Volume 27, Activities 1940-46: Shaping the Post-war World: Employment and Commodities*, ed. E. Johnson, D. Moggridge (Cambridge: Cambridge University Press, 1980), 122.

Conclusion

Economists have long recognized the value of infrastructure. Roads, bridges, airports, canals, and other projects are the conduits through which goods are exchanged. In many circumstances, private firms can and should be allowed to provide this infrastructure. But in other cases, there may be a role for public provision at the local level.[42] But whatever its merits, infrastructure spending is not likely to provide much of a stimulus.

As a short-term measure, more deficit-financed infrastructure spending is a risky bet. At best, it is likely to be ineffective; at worst it will be counterproductive. One long-term impact of further stimulus is certain: it would leave the United States deeper in debt at time when we can ill afford it.

[42] Typically, economists believe that "public goods" will be underprovided by private firms. A public good is one whose benefits are non-excludable and non-rivalrous. This means that private actors who provide such goods have no way of charging users, even though additional users are costless. New technologies such as wireless toll booths, however, are rapidly changing some public goods into private goods.