Where Did the Stimulus Go?

More than $1 trillion in federal-deficit spending did little or nothing to help the economy. Why? Because it was used to pay down debts and reduce borrowing.

By John F. Cogan and John B. Taylor

DURING THE RECENT recession, the U.S. Congress passed two large economic stimulus programs. President Bush's February 2008 program totaled $152 billion. President Obama's bill, enacted a year later, was considerably larger at $862 billion. Neither worked. After more than three years since the crisis flared up, unemployment is still very high and economic growth is weak. Why have such large sums of money failed to stimulate the economy? To answer this question, we must look at where the billions of stimulus dollars went and how they were used.

Keynesian stimulus packages come in three basic types. In the first type, the federal government puts money directly into the hands of consumers. The hope is that consumers will use the money to increase their purchases of goods and services. In the second type, the federal government directly purchases goods and services, including infrastructure projects, equipment, software, law enforcement, and education. In the third type, the federal government sends grants to state and local governments in the hope that those governments will use the funds to purchase goods and services.

In each case, according to Keynesian theories, the increase in purchases will stimulate additional economic activity over and above the initial increase in purchases. The 2008 stimulus was mainly of the first type, while the 2009 stimulus was a mix of all three types.

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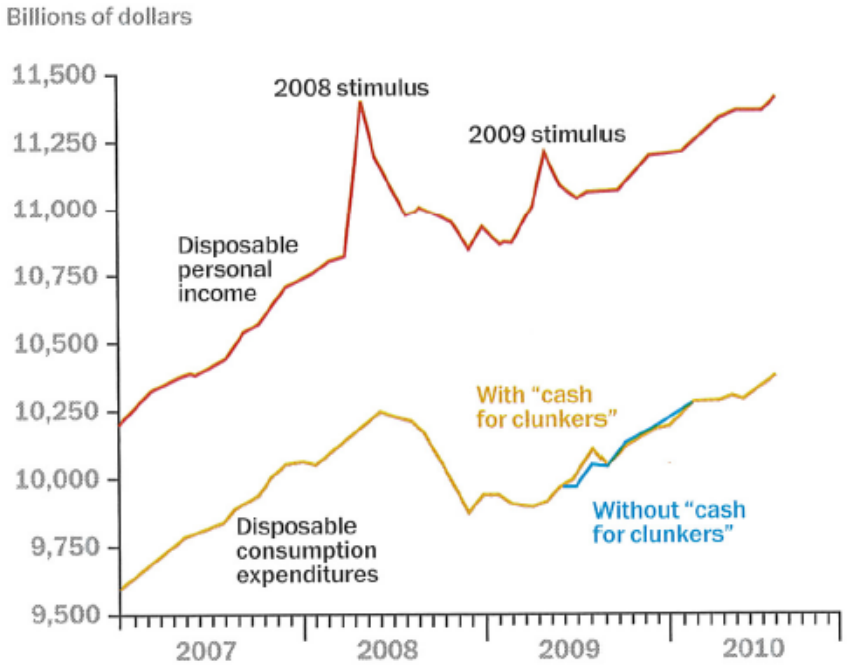
LET'S start with the effort to put money temporarily into the hands of consumers. In the 2008 stimulus, the U.S. Treasury began issuing one-time payments to households in the spring. This temporary boost in income was designed to jump-start personal consumption of goods and services and thereby increase production and jobs at the firms that produce those goods and services. It didn't work.

Take a look at Graph 1, which shows both income and consumption in the economy as a whole from the start of 2007 to the present. You can see the big blip in disposable personal income in the spring of 2008 as checks were sent out. But consumption did not increase at all around the time of the stimulus payments. What happened to the money? It went to pay down some debt or was simply saved rather than spent on consumption.*

GRAPH 1

Income and consumption, 2007 to 2010



This should not have surprised anyone. Long ago, the Nobel Prize–winning economists Milton Friedman and Franco Modigliani explained that individuals do not increase consumption much when their income increases temporarily. Instead, they save most of the funds or use the money to pay back some of their outstanding debts. Friedman and Modigliani demonstrated that most people, when deciding how much to consume, consider more long-lasting, or permanent, changes in income. Because one-time increases in transfer payments and temporary tax rebates are, by their very nature, temporary, people should not have been expected to alter their consumption patterns. The Friedman-Modigliani theory, called "the permanent income" or "the life-cycle" hypothesis, profoundly influenced macroeconomic thinking for decades. It was, oddly, ignored in the development and enactment of the stimulus of 2008.

The American Recovery and Reinvestment Act of 2009 (ARRA) repeated this mistake. The amount paid out to households was smaller and delivered over a longer period of time than the 2008 stimulus, but the largest portion of increased payments was made in the spring of 2009. You can see the resulting blip in income in Graph 1.

Again, there was no noticeable effect on consumption. Instead, individuals used the money to shore up depleted bank accounts or pay off overextended credit card bills. As had been true a year earlier, the temporary cash payments failed to create consumption and, as a consequence, failed to increase production and employment.

Graph 1 also illustrates the failure of another recent stimulus attempt: the 2009 "cash for clunkers" program. For a temporary period, this program provided a one-time subsidy if individuals purchased a qualifying new car and simultaneously traded in their old car. The program's objective was to increase the demand for new cars to spur production and employment.

By definition, a one-time subsidy cannot cause a permanent increase in consumer demand. So what happened? Consumers merely shifted forward in time the purchase of a new car by a few months. This behavior is evident in the lower-right-hand part of Graph 1. Consumption rose sharply as consumers responded to the temporary subsidies, then came right back down. There was no net increase in consumption to bolster the recovery.†

NOW let us consider direct federal-government purchases of goods and services and their stimulative impact.

Despite the large size of the 2009 act, the change in federal-government purchases it has generated has been remarkably small. Thus far, such purchases have increased by $20 billion, or only 3 percent of the $862

* One might argue that had the payments not been made there would have been a sharp drop in consumption. But statistical analysis that controls for factors that would have caused consumption to drop, such as sharply higher oil prices, shows this would not have been the case.

† The evidence in the graph is based on a sophisticated empirical study by economists Atif Mian and Amir Sufi.

billion spent. Of that $20 billion, only $4 billion has been devoted to infrastructure projects. Compared to GDP, the expenditures are even smaller. Federal infrastructure spending due to the 2009 act was only .04 percent of GDP in the most recent quarter. The stimulus money went elsewhere.

The slow pace of infrastructure spending is not unique to the 2009 stimulus. The slow-spending phenomenon has been a common element in public-infrastructure appropriations in stimulus programs dating back to at least the 1970s. The administrative process that federal agencies use to allocate appropriated funds, to incur binding obligations, and to eventually liquidate those obligations is cumbersome and slow. The idea of a "shovel ready" job is useful in concept but not in allocating federal funds. A San Antonio official put the reality succinctly: "FEMA stated to me that 'shovel ready' was not a term in their lexicon."

NOW we turn to the manner in which the 2009 act sent federal grants to state and local governments.

From the enactment of the stimulus in March 2009 to the third quarter of 2010, a total of $173 billion was issued to state and local governments. The principal purpose of these grants was to provide state and local governments with additional funds to enable them to boost their purchases of goods and services in tandem with federal purchases.

The impact of these grants on state- and local-government purchases can be seen with the help of Graph 2. It shows changes in state and local revenues, purchases of goods and services, and 2009 act grants from 2007 to the present. Revenues (excluding stimulus dollars) began to decline sharply in the first half of 2008 and then began to rise slowly. By the third quarter of 2010, state and local revenues were 4 percent higher than they had been in the last quarter of 2008.

Federal grants, which began to flow in the first quarter of 2009, dampened the initial revenue decline and then caused total revenues to grow. By the third quarter of 2010, state- and local-government revenue,s including the act grants, were 10 percent higher than they had been in the fourth quarter of 2008.

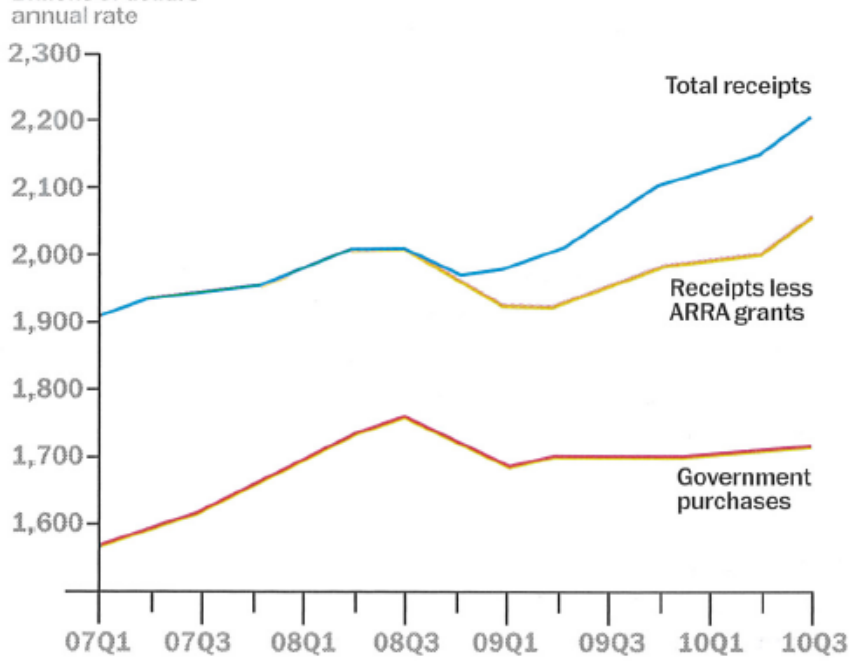
And what of state- and local-government purchases? Well, they declined with the initial reduction in revenues—and despite the addition of those $170 billion in ARRA grants, remained at this lower level throughout.

THE IMPACT of the ARRA grants on government purchases was negligible.* So where did the stimulus funds sent to state and local governments go? Graph 3 *(see page 26)* summarizes the results of our efforts to track the money. Our finding: most of it went to reduce borrowing by state and local governments.

As federal stimulus grants flowed into state- and local-government treasuries, borrowing by these same governments declined steadily. Instead of issuing more debt, state and local governments used most of the federal stimulus grants to finance their expenditures. To put it another way, the federal government borrowed funds from the public and transferred these funds to state and local governments, which then used the funds mainly to reduce borrowing from the public.

GRAPH 2

State and local revenue and purchases, 2007 to 2010



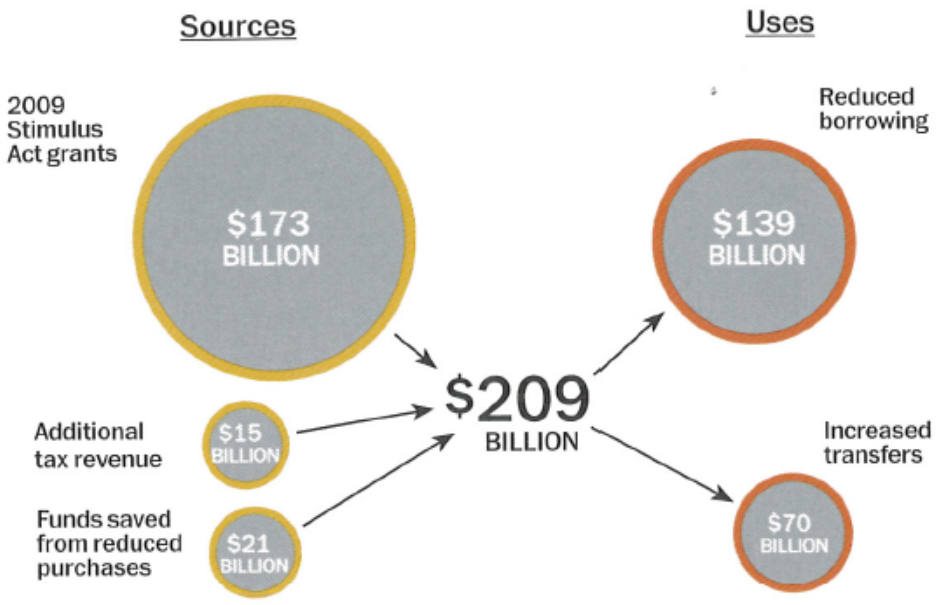
Just as was the case with the failure of the temporary income increases to stimulate consumer purchasing, the failure of federal grants to stimulate state and local government purchases should come as no surprise. Neither should the use of those grants by state and local governments to reduce their public borrowing.

In 1979, the late Ned Gramlich, who served on the Federal Reserve Board and earlier as a professor at

* Using data from 1969 to the present, we estimated the relationship between state and local purchases, revenues, and ARRA grants. Controlling for revenues, ARRA grants have no statistically significant impact on state and local government purchases.

GRAPH 3

Where state and local government funds came from and how they were used after the 2009 Stimulus Act



the University of Michigan, studied the impact of similar grants in stimulus packages in the 1970s. He found that the federal stimulus grants to state and local governments had little effect on their purchases of goods and services. He concluded that the grant recipients used the grants "to pad the surpluses of state and local governments."

State and local governments did not allocate all the ARRA grants to reducing their issuance of debt. As Graph 3 indicates, they allocated a portion to financing increases in spending on health and welfare programs (particularly the former). Over the seven quarters that ARRA has been in existence, about $70 billion of its funds have been allocated to transfer payments, mostly health and welfare spending. Indeed, the increase in health and welfare spending, particularly the former, was an explicit objective of the stimulus. Nearly half of all stimulus-program grants to states have been funds for Medicaid, the primary state-government health-care program for low-income families. These grants were designed to achieve the Obama administration's goal of increasing health-care coverage by expanding government health-care programs.

But that goal is a far different one from stimulating aggregate economic activity. Medicaid grants were unlikely to provide much if any stimulus to aggregate economic activity, and they haven't. Moreover, these grants appear to have caused state governments to shift funds away from purchases of goods and services and into their Medicaid programs.

The 2009 stimulus conditioned a state's receipt of Medicaid funds on its willingness not to reduce benefits nor restrict eligibility rules. In some instances, this has meant undoing benefit reductions or eligibility restrictions that had been enacted prior to the stimulus program. It appears that this provision actually forced states to allocate to their Medicaid programs funds that would have otherwise been devoted to state and local purchases.

Our detailed statistical analysis confirms this hypothesis. Using data going back to 1969, we estimated the relationship between state- and local-government purchases, revenues, ARRA Medicaid grants, and all other ARRA grants. Controlling for these other factors, the receipt of ARRA Medicaid grants significantly reduced state and local purchases of goods and services.

The policy choice of allocating a large component of the ARRA grants to transfer payments like Medicaid, which provide less "bang for the buck" if any at all, than to infrastructure and other similar expenditures seriously impaired any potential overall stimulus.

TO SUM up: the federal government borrowed funds that it mainly sent to households and to state and local governments. Only an immaterial amount was used for federal purchases of goods and services. The borrowed funds were mainly used by households and state and local governments to reduce their own borrowing. In effect, the increased net borrowing at the federal level was matched by reduced net borrowing by households and state and local governments.

So there was little if any net stimulus. The irony is that basic economic theory and practical experience predicted this would happen. If policymakers had only remembered what Milton Friedman, Franco Modigliani, and Ned Gramlich had said, we might have avoided these two extremely costly policy failures.