



# Infrastructure Programs as a Countercyclical Tool

BY YONGHONG WU

**T**he pressures brought about by the COVID-19 pandemic have created an environment conducive to innovative approaches to government finance and new ways to build the capacity necessary to help states and localities ride through difficult times. Governments at all levels are expected to play a stabilizing role during economic downturns. According to orthodox macroeconomic theory, the federal government has the primary responsibility for stabilizing macroeconomic conditions using its unique fiscal and monetary policy instruments, like the recently passed Infrastructure Investment and Jobs Act—but the extraordinary situation we find ourselves in still calls for state governments to play a more important role in stabilizing regional economies.

Although state governments do not possess monetary policy instruments, they do have fiscal policy authority

under state constitutions regarding public infrastructure investments. The unprecedented economic challenges states and localities have dealt with recently and will continue to face require creative ideas beyond conventional or mainstream thinking about what states can do to promote growth and development.

One of these is the notion of funding infrastructure projects. States have the capacity to incorporate economic stabilization into their capital planning as an important policy goal. The countercyclical capital budget can direct more capital spending during recessionary periods and less capital spending during expansionary periods.

State and local governments own and manage most of the nondefense public capital stock in the United States. In 2018, for instance, out of a total of \$522 billion in total nondefense capital spending, about three-quarters was invested by state and local governments, according to Andrew Haughwout, senior vice president at

the Federal Reserve Bank of New York.<sup>1</sup> Furthermore, wrote Haughwout, out of an April 2021 total of \$107 billion in 2016 highway capital investment, state and local governments spent \$78 billion and \$28 billion, respectively, much of which comes from funds provided by the federal government. The federal government's direct expenditure, however, was a mere \$500 million.

## Why use infrastructure spending as an economic stabilizer?

The potential benefits of investments in capital are substantial. According to one study, infrastructure spending in the United States would create 18,000 total jobs for every \$1 billion in new infrastructure spending. One significant advantage for states that fund major infrastructure projects is that they can be significantly more responsive to local needs and their stimulus programs can be tailored to local economic situations.

As an investment in productive capacity, investment in public infrastructure will likely generate long-term economic growth in states as it provides the support for private economic activity.

Research shows a near consensus about the positive long-run effects of public infrastructure investment. A meta-analysis conducted by the World Bank shows many positive results on long-run aggregate economic growth related to the impacts of infrastructure stock and quality.<sup>2</sup> In addition, studies of transportation infrastructure spending tend to find substantial impacts on real GDP, employment, population flows, and interregional trade.<sup>3</sup> Infrastructure investment is perceived as being more effective than other types of spending, as it tends to “enhance the productivity of the private sector and is thus likely to promote economic prosperity in normal times, while often offsetting falling private demand and stimulating the economy during recessions,” according to Yin Germaschewski.<sup>4</sup>

There is historical evidence of the benefits of such investments in difficult fiscal periods. Programs such as the Public Works Administration (PWA) and Works Progress Administration (WPA) were key elements of the overall countercyclical fiscal investment that the federal government adopted

during the Great Depression of 1929. Similarly, capital and infrastructure investment programs were a major part of the American Recovery and Reinvestment Act (ARRA) of 2009—a massive fiscal policy adopted by the federal government to help stimulate the economy after the Great Recession of December 2007 to June 2009.

### Barriers to using infrastructure programs as a countercyclical tool

State fiscal policies are made within the confines of relevant legal limits and prevailing political culture. For example, all the states have balanced budget requirements (BBRs) either in statute, constitutional provisions, or—in Vermont—by traditional practice. As a result, the implementation of proposed state countercyclical infrastructure programs may require mitigating some of the legal and institutional barriers that restrict states’ capacity to finance a fiscally countercyclical and economically stimulative infrastructure program.

The legally binding BBRs limit a state’s capacity to use current revenues to finance capital projects on a pay-as-you-go basis. These restrictions are particularly troublesome for potential state countercyclical infrastructure programs because states are not able to make important infrastructure investments due to revenue shortfalls during economic downturns.

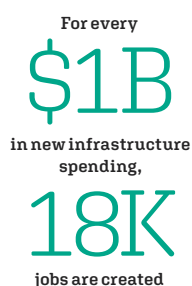
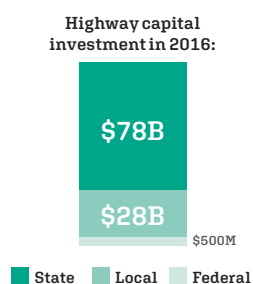
Furthermore, though there is ample evidence that there is an economic multiplier effect to investments in infrastructure, many states tend to move in precisely the opposite direction during downturns. They are inclined to postpone elements in their capital spending plans as a strategy to balance their budgets.

Because delays in repairs of roads, pipes, buildings, bridges and so on are often invisible to taxpayers, it can be far easier to put these necessary expenditures off without losing votes come election day. In this sense, the BBRs play a pro-cyclical rather than countercyclical role because the delayed capital expenditures likely further drag the economy down when economic stability is much needed during recessionary times.

To effectively implement the state infrastructure program, the pro-cyclical nature of BBRs should be addressed. The primary intent of BBRs is to control government spending within its available resources; however, to balance government budgets annually or biennially may not be in the best interest of a state. The state economy expands and contracts through business cycles. So, it is more sensible to balance a state budget over a multiyear cycle. With this in mind, consideration should be given to suspending BBRs if needed to provide necessary funds for states to stabilize economic condition through investing in public infrastructure. Some states would need to rewrite their constitutions or statutes to allow temporary suspension of BBRs.

Establishing an infrastructure investment fund, in addition to an existing budget stabilization fund, can also help ensure that resources are devoted to infrastructure improvements and maintenance at the appropriate time. State and local governments have long used budget stabilization funds, generally known

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as rainy day funds, to stabilize their budgets and continue to provide services during downturns. Just as is the case with budget stabilization funds, rules need to be enacted to ensure that state infrastructure investment funds accumulate sufficient resources during expansionary years and that they are only released under certain conditions such as precipitous declines of statewide employment.

### Borrowing for infrastructure expenditures

State governments can avoid undue pressure on their current revenues by financing projects using borrowed funds. By matching the term of debt maturity with the useful life of the funded capital project, debt financing meets the criterion of intergenerational equity because the cost of repaying the debt will fall on the users who will benefit from the facility.

Another advantage of debt financing is that interest rates charged on borrowing for infrastructure are often lower than those on borrowing for other purposes because the interest received from municipal bonds is tax-exempt to bondholders. One challenge to using borrowing in most states is limits on their capacity to issue general obligation bonds. These limits are either tied to the total personal income or the taxable property values in a state. For example, in the State of Minnesota, the total tax-supported principal outstanding shall be 3.25 percent or less of total state personal income. The Wisconsin State

Constitution limits the aggregate state debt in any calendar year to a certain percent of the aggregate value of all taxable property in the state.

In states like Illinois, Michigan, and Minnesota, the limits can be overridden with a supermajority of state legislators. Of course, the use of debt is not without its downsides. There are a variety of expenses associated with issuing a bond, including legal, financial, and underwriting costs. Moreover, the debt service for general obligation bonds and some revenue bonds comes from government general funds, and substantial debt service payments may compete with financial resources that would otherwise be available for other programs.

### Conclusions

The reason the countercyclical state program focuses on public infrastructure is twofold. First, well-implemented infrastructure investment can stimulate the economy and generate sustained benefits to a diverse workforce including skilled and unskilled workers. Infrastructure investment is generally considered to be a highly effective engine of job creation that is much needed during recessionary periods. Second, there has been a gap between the condition of and investment in critical infrastructure in the United States. Substantial government investment is required to improve public infrastructure, which is a major determinant of economic competitiveness. State and local governments don't have to

make excessive investments in public infrastructure; they should adjust the timing of infrastructure investment in response to business cycles.<sup>1</sup>

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**Read the UIC Government Research Center's full report:**  
<https://cuppa.uic.edu/profiles/wu-yonghong>

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<sup>1</sup> Andrew Haughwout, "Infrastructure Investment as an Automatic Stabilizer," the Hamilton Project, 2019.

<sup>2</sup> Stéphane Straub, "Infrastructure and Growth in Developing Countries: Recent Advances and Research Challenges," World Bank Policy Research Working Paper No. 4460, 2008.

<sup>3</sup> Sylvain Leduc and Daniel Wilson, "Infrastructure Spending as Fiscal Stimulus: Assessing the Evidence," *Review of Economics and Institutions*, 2014.

<sup>4</sup> Yin Germaschewski, "Stabilization Policy, Infrastructure Investment, and Welfare in a Small Open Economy," *Economic Modelling*, 2020.