Budget Model

Short-Term Economic Effects of a “Phase 4” Infrastructure Response to Coronavirus

Summary: We estimate that a large infrastructure bill would increase GDP by no more than $360 billion per year for 2020 and 2021. Short-run GDP expansion from new infrastructure spending is limited by available projects and likely social distancing measures, and so states could not absorb more than $300 billion per year in new federal aid over the next two years.

Introduction

Last month, President Trump called for a $2 trillion investment in infrastructure, as part of a “Phase 4” response to the current coronavirus pandemic. House Democrats have also pushed for infrastructure spending as a potential economic stimulus post-pandemic, building on their $760 billion green infrastructure plan released earlier this year.

Public infrastructure spending can boost long-run GDP by making the economy more productive. In 2019, PWBM analyzed a $2 trillion infrastructure agreement between the White House and Congressional Democrats, finding that it would change GDP in 2043 by -0.4 percent to +0.5 percent depending on the method of financing. These long-run effects on productivity would not materialize quickly enough to change economic conditions during this recession.

However, when actual GDP is far below so-called “potential GDP,” defined as the maximum sustainable output of the economy, federal aid to states for infrastructure projects effectively stimulates demand and thus increases short-term GDP. Given states’ current fiscal challenges, their infrastructure spending is likely to fall quickly. Federal infrastructure grants will sustain state and local projects that would otherwise be cut and thus keep workers employed during the recession. We estimate that state and local governments would be able to use up to $300 billion per year in federal infrastructure grants over the next two years, accounting for the availability of shovel-ready projects and the likelihood of project delays due to the virus.

Previously, PWBM projected that the CARES Act would soften the short-term decline in GDP to 8.4 percent (30 percent annualized) in 2020 Q2, down from an 11 percent drop (37 percent annualized) without the CARES Act. We project that an additional, immediate $300 billion per year of federal grants for infrastructure would result in an additional $360 billion in GDP per year for the next two years, further softening the short-term decline in GDP to 7.8 percent (28 percent annualized). However, any additional federal aid above the $300 billion per year or after the recession ends would have close to zero additional effect on GDP.

Effect on Total Infrastructure Spending

While the productivity-boosting effects of infrastructure investment are too slow to effectively fight recessions, in times of economic distress, federal infrastructure aid can provide a significant short-term boost to demand. Three main factors determine how effective federal infrastructure aid is at boosting short-term *total* infrastructure spending: (i) whether state and local governments reduce their own infrastructure spending in response to federal grants; (ii) state and local capacity for shovel-ready projects; and (iii) disruptions that slow infrastructure projects and spending.

In normal economic times, state and local governments may respond to federal aid by reducing their own infrastructure spending and using the money they save for other types of spending with low fiscal multipliers, i.e., small effects on GDP. Our review of empirical evidence found that an additional dollar of federal infrastructure investment typically increases *total* (federal, state, and local) infrastructure investment by much less than one dollar.

Now that actual GDP is far below "potential GDP," however, we find that additional federal infrastructure investment is unlikely to directly displace state infrastructure spending. Instead, states are likely to decrease their own infrastructure spending even without new federal aid.

The pandemic already has many state and local governments preparing to face major revenue shortfalls, which will likely lead them to cut infrastructure spending. For example, New Mexico has already begun to shift money away from planned infrastructure projects due to the pandemic. Because state and local governments are faced with very large revenue shortfalls, they are going to act more like the "distressed areas" discussed in our previous analysis, for which total infrastructure spending increased by as much as a dollar for each dollar in federal aid. Additional federal investment will keep projects that would otherwise be cut, such as those in New Mexico, ready to continue as soon as it is safe to resume work.

Total infrastructure spending is limited by the availability of shovel-ready state and local projects and by how quickly these projects can actually proceed. State and local governments spent about $342 billion on infrastructure investment in 2017. Accounting for a small increase from 2017 spending levels to 2020 and 2021 as well as some shovel-ready projects that are currently unfunded, we estimate that there are at most $400 billion per year in shovel-ready state and local infrastructure projects. Federal aid beyond that level would likely go towards non-shovel-ready projects, and so its effects on short-term demand would be hindered by slow spending rates.

Even shovel-ready projects, however, will likely see delays due to effects of the pandemic. Disruptions such as worker illnesses and supply chain issues will limit how quickly state and local governments can spend federal infrastructure grants. While their magnitude is uncertain, and will depend on the trajectory of the pandemic, we expect that these disruptions will limit total new infrastructure spending to about $300 billion per year.

Fiscal Multiplier for Total New Infrastructure Spending

To find the economic effects of the new federal grants, we then take this total new infrastructure spending and apply its fiscal multiplier, which is the dollar increase in GDP from each new dollar of total infrastructure investment. During times when actual GDP is close to potential GDP, estimates of the fiscal multiplier for infrastructure spending are close to zero.

Currently, however, actual GDP is far below potential. Based on PWBM's recent analysis of the effectiveness of fiscal stimulus in the CARES Act, we estimate that current federal aid to state and local government for infrastructure spending would have a fiscal multiplier of about 1.2.[1] A $300 billion increase in total infrastructure spending would therefore increase GDP by up to $360 billion per year while the recession lasts.

However after the recession ends, when actual GDP is close to potential, this multiplier will fall to close to zero and so additional infrastructure spending will have roughly zero additional effect on GDP.

Overall we project that--assuming that states would otherwise cut all planned infrastructure spending--an additional $300 billion of federal infrastructure grants in 2020 would boost total infrastructure spending by up to $300 billion and GDP by up to $360 billion.

The effect of federal spending on total spending likely shrinks to the extent that states would *not* have fully cut their planned infrastructure spending due to this crisis without the federal funds. To the extent that states would have maintained some of their existing infrastructure spending without new federal aid, the new federal aid would cause some of that existing spending to be redirected to other spending that might have a smaller or larger multiplier.

This analysis was conducted by Jon Huntley and Zheli He with writing support from Kody Carmody.

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1. The transportation support provision of the CARES Act includes spending besides transfers to state and local governments for infrastructure and so has a different multiplier than what we apply here. These other categories include transfers to persons, business tax provisions primarily affecting cash flow, and a one-year tax cut for higher-income people. ↩