



PENN WHARTON  
UNIVERSITY of PENNSYLVANIA

# Budget Model

## Republican and Bipartisan Infrastructure Proposals: Budget and Economic Effects

**Summary:** We estimate that Sen. Capito's \$330 billion infrastructure package, funded by user fees over 8 years, would increase GDP by about 0.05 percent in 2050. A \$579 billion infrastructure investment being considered by a bipartisan group of senators, would increase output in 2050 by 0.1 percent if funded by user fees or have roughly zero net effect on GDP if deficit financed.

### Key Points

- In recent negotiations with the White House, Senator Shelley Capito proposed \$330 billion in new infrastructure spending over eight years, funded by user fees. We estimate that this proposal would reduce government debt by 0.2 percent and boost GDP about 0.05 percent in 2050.
- Concurrently, a bipartisan group of senators is reportedly working on a proposal for \$579 billion in new infrastructure spending but have not agreed on funding mechanisms. We estimate that the proposal, if fully funded by user fees, would reduce debt by 0.3 percent in 2050 while boosting GDP by 0.1 percent. However, if this proposal is instead funded with new deficits, it would increase government debt by 1.1 percent in 2050 and have roughly zero net effect on GDP, as the negative effects of additional debt are roughly cancelled out by the productivity enhancements associated with new infrastructure.

### Introduction

On June 8, 2021, negotiations between the White House and Republicans broke down over final spending amounts on infrastructure. The final proposal from Senator Shelley Capito [R-WV] was \$330 billion in additional infrastructure spending beyond baseline over the next eight years. Reportedly, President Biden is seeking at least \$1 trillion in new infrastructure spending, down from his proposed \$2.7 trillion American Jobs Plan (AJP) that [PWBM analyzed previously](#) with additional modeling details in a [companion "explainer" brief](#).

Negotiations continue, however, among a bipartisan group of senators who have agreed to roughly \$579 billion in new infrastructure spending over the next eight years but have not agreed on funding mechanisms. The group

has [reportedly](#) ruled out tax increases, instead considering funding new spending through unspecified user fees and unused funds from previous legislation. Any “unused” funds would add to the debt relative to a baseline where the funds were not spent.

## Modeling Scenarios

This brief analyzes options for infrastructure investment corresponding to public details of the proposals from Sen. Capito and the bipartisan group of senators. Since funding details have not been specified for either proposal, we analyze three scenarios:

1. \$330 billion in new infrastructure spending funded by user fees.
2. \$579 billion in new infrastructure spending funded by user fees.
3. \$579 billion in new infrastructure spending funded by new deficits.

In each scenario, the spending and funding mechanisms occur only over the eight years 2022-2029. We set user fee levels such that the first two scenarios are deficit-neutral on a conventional basis.

## Modeling Framework

We analyze each infrastructure scenario using the same framework as in our [previous analysis](#) of President Biden’s AJP proposal. In this framework, infrastructure spending is considered as investing in “public capital” that boosts the productivity of private capital and labor. We use standard spend and build rates for infrastructure in line with a [2016 Congressional Budget Office report](#).

Under this framework, the spending in the Capito and the senators’ proposals is directly productivity-enhancing. The [Capito proposal](#) specifies spending on a broad array of infrastructure projects including transportation, water, and broadband. The bipartisan senators’ proposal does not specify spending priorities, only a focus on “core, physical infrastructure”—we therefore assume a similar mix of projects as the Capito proposal. In contrast, the [President’s AJP proposal](#) includes roughly \$600 billion of *transfer* spending, which does not boost productivity, in addition to \$2.1 trillion of productive spending.

## Economic Effects

Table 1 shows the macroeconomic effects of a \$330 billion infrastructure investment funded by user fees.

## Table 1. Economic Effects of \$330 Billion in User Fee Funded Infrastructure

*Percent Change from Baseline*

[DOWNLOAD DATA](#)

<b>Year</b>	<b>Output</b>	<b>Capital Stock</b>	<b>Hourly Wage</b>	<b>Hours Worked</b>	<b>Government Debt</b>
2031	0.05	0.02	-0.04	0.09	-0.17
2040	0.06	0.04	0.05	0.01	-0.18
2050	0.06	0.09	0.02	0.04	-0.20

Because infrastructure projects take time to build, the productivity boost from new infrastructure from the \$330 billion investment peaks at around 2040, increasing GDP in 2040 by 0.06 percent. More productive workers and capital pay more in taxes, increasing revenue collected by the government and thus reducing federal debt by 0.18 percent compared to baseline in 2040.

Past 2040, the built infrastructure is depreciating on net and so the boost to productivity slowly fades. However, productivity remains above baseline and capital continues to accumulate, increasing by 0.09 percent in 2050 relative to baseline. On net, output remains at 0.06 percent above baseline in 2050.

Table 2 shows macroeconomic effects of the \$579 billion infrastructure scenario funded by user fees.

## Table 2. Economic Effects of \$579 Billion in User Fee Funded Infrastructure

*Percent Change from Baseline*

[DOWNLOAD DATA](#)

<b>Year</b>	<b>Output</b>	<b>Capital Stock</b>	<b>Hourly Wage</b>	<b>Hours Worked</b>	<b>Government Debt</b>
2031	0.05	-0.04	0.03	0.02	-0.20
2040	0.10	0.06	0.08	0.02	-0.22
2050	0.10	0.14	0.06	0.04	-0.28

Updated on 6/15/2021.

When funded by user fees, the \$579 billion investment magnifies the long-run effects of the \$330 billion investment. By 2050, government debt is 0.28 percent smaller than baseline, with the capital stock 0.14 percent larger and total output 0.10 percent larger.

Table 3 shows macroeconomic effects of the \$579 billion infrastructure scenario funded by federal deficits.

### Table 3. Economic Effects of \$579 Billion in Deficit Financed Infrastructure

*Percent Change from Baseline*

[DOWNLOAD DATA](#)

<b>Year</b>	<b>Output</b>	<b>Capital Stock</b>	<b>Hourly Wage</b>	<b>Hours Worked</b>	<b>Government Debt</b>
2031	-0.03	-0.26	-0.04	0.00	1.76
2040	0.00	-0.23	-0.01	0.00	1.43
2050	-0.03	-0.23	-0.03	-0.01	1.10

Updated on 6/15/2021.

Government debt is 1.43 percent larger in 2040 and 1.10 percent larger in 2050 than in our baseline. Larger deficits crowd out investment in private capital, and thus the capital stock is 0.23 percent smaller in 2040 and 2050 relative to baseline. This smaller capital stock offsets the productivity boosts from new infrastructure, and so on net output is unchanged in 2040 relative to baseline. As the productivity boost depreciates, output ends up 0.03 percent smaller in 2050.

*This analysis was conducted by [Jon Huntley](#), with assistance from [Kody Carmody](#), [John Ricco](#), and [Maddison Erbabian](#), under the direction of [Richard Prisinzano](#). Prepared for the website by [Mariko Paulson](#).*