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Macroeconomic Consequences of the Infrastructure Investment and Jobs Act & Build Back Better Framework

INTRODUCTION

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Macroeconomic Consequences of the Infrastructure Investment and Jobs Act & Build Back Better Framework

BY MARK ZANDI AND BERNARD YAROS

Lawmakers in Washington DC continue to work feverishly on another massive fiscal plan,[1] including a more than $1 trillion bipartisan infrastructure deal and a $1.75 trillion package of social spending and tax breaks to lower- and middle-income households that the Biden administration and congressional Democrats hope to pass into law via the budget reconciliation process. While the legislation remains in flux, it is similar in spirit to the Build Back Better agenda President Biden proposed earlier this year. If this is close to what becomes law, it will strengthen long-term economic growth, the benefits of which would mostly accrue to lower- and middle-income Americans. The legislation is more-or-less paid for on a static basis and more than paid for on a dynamic basis through higher taxes on multinational corporations and the well-to-do and several other pay-fors (see Chart 1). Concerns that the plan will ignite undesirably high inflation and an overheating economy are overdone, as the fiscal support it provides will ensure the economy only returns to full employment from the recession caused by the COVID-19 pandemic. Because the package includes a myriad of spending and tax initiatives, some of which are new and uncertain, implementing this legislation as intended and in a timely way will take deft governance. In this white paper, we assess the macroeconomic impact of both the bipartisan infrastructure legislation and the reconciliation package of social spending and tax changes.

Infrastructure Investment and Jobs Act

The Infrastructure Investment and Jobs Act, which has bipartisan support, includes more than $1 trillion in transportation and other physical infrastructure spending over the decade 2022 to 2031, of which close to $600 billion is additional funding (see Table 1). Spending on roads and bridges, power systems, rail, broadband, water systems, and public transit gets the largest boost.[2]

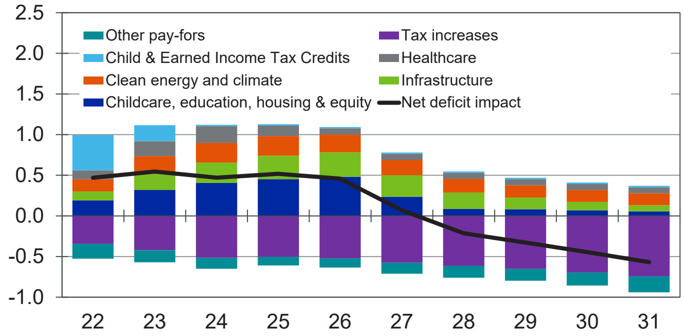
To help pay for the legislation, lawmakers have pieced together several pay-fors, ranging from a delay in a rule affecting the treatment of drug rebates to an extension of the higher mortgage guarantee fees charged by Fannie Mae and Freddie Mac. The legislation adds modestly to budget deficits over the 10-year budget horizon on a static basis, but meaningfully less so on a dynamic basis, as the increased infrastructure spending supports stronger economic growth, which in turn generates more tax revenues and reduces other government spending on income support programs such as unemployment insurance.

Increasing infrastructure investment has significant macroeconomic benefits. Near term it has a large so-called multiplier—the increase in GDP for a dollar increase in investment. It is among the highest compared with other types of federal government spending and tax policy.[3] Long term, economic research is in strong agreement that public infrastructure provides a significantly positive contribution to GDP and employment. It lowers business costs and thus improves competitiveness and productivity, allows workers to live closer to where they work, and thus reduces commute times, improves labor participation, and reduces carbon emissions.

There is more debate on whether public infrastructure spending boosts GDP by as much as private capital does. One reason for this is that, unlike private investment, federal investment is not driven solely by market forces or maximizing economic returns. Federal infrastructure also has the goal of improving

Chart 1: Paying for BBB

Static federal budget impact, % of GDP



Sources: CBO, CRFB, JCT, White House, Moody's Analytics

quality of life, reducing inequities, supporting the work of the federal government itself, and addressing other objectives that policymakers may have. The federal government also imposes various requirements that can increase the costs of the projects that it funds. We estimate the average return on private capital to be close to 10%—that is, a $1 increase in private investment, all else being equal, increases GDP by 10 cents over a year—while it is almost 7% for public infrastructure.[4]

Even so, this is an especially economically propitious time to increase public infrastructure investment, since the return on that investment is substantially greater than the government's cost of financing given the extraordinarily low interest rates. Thirty-year Treasury bond yields are close to 2%, while the return on almost any public infrastructure project is likely to be meaningfully greater than that.

Build Back Better framework

The $1.75 trillion reconciliation package includes increased spending on various social programs similar to those proposed in Biden's American Family Plan (see Table 2). There are substantial funds in the package for early childhood and higher education, child- and eldercare, housing, healthcare, and climate change mitigation. There are also substantial tax breaks for lower-income households, including an expansion of the earned income tax credit and an extension of the expanded child tax credit that was included as part of the American Rescue Plan passed into law in March; families will stop getting monthly checks at year's end unless lawmakers extend them.

To help pay for the package, lawmakers are proposing higher taxes on multinational corporations and well-to-do individuals, and more revenues from closing the tax gap. There is also a new 1% excise tax on share repurchases or a stock buyback tax. Companies buy back their stock to return profits to shareholders and support their stock price. Repurchases have become increasingly popular among publicly traded companies and will total close to $800 billion this year. The package also raises meaningfully savings from repealing the Trump administration's prescription drug rebate rule, which would have raised Medicare Part D program costs.

While the particulars of the reconciliation package are still unsure, it is fair to say it is paid for, both on a static, and particularly on a dynamic basis.[5] This conclusion abstracts from the considerable uncertainties over the actual revenues that will be generated from such policies as closing the tax gap or implementing the new share repurchase tax. There is also the possibility that policies in the package that are set to expire during the budget horizon (to ensure they do not add to deficits outside the horizon and violate budget reconciliation rules) would instead be extended given likely political pressure to continue funding. However, this does not necessarily mean that any future extension of these policies would not also be paid for.

The reconciliation package would provide a near-term boost to the economy given the tax cuts in the plan for lower-income individuals and as spending on the various social programs gears up. It also would have several important long-term economic benefits. First, it would increase the labor force participation and hours worked of mostly lower-income women. It would do this by making childcare more affordable, and expanding the earned income tax credit that encourages low-income households to work. The package makes it more cost effective for more parents to work, and the extra time and scheduling flexibility created by childcare allows them to work more hours.

Research on the labor supply impact of lower childcare costs shows there are meaningful advantages, and our own research is consistent with this.[6] Accessible childcare facilitated by federal support to childcare providers has especially strong employment effects for single mothers, mothers with young children, and lower-income moms. Moreover, the personal financial costs to parents who leave the workforce to care for a young child because of the high cost of childcare are high. They accumulate fewer skills, and their productivity is diminished, resulting in lower wages when the parent eventually returns to the workforce. The effect tends to fade only after several decades. Further, a woman's career progression is reduced even more if she has more than three children, and the penalty to wages is never made up. Even when women remain engaged through part-time work, their career progress is reduced.

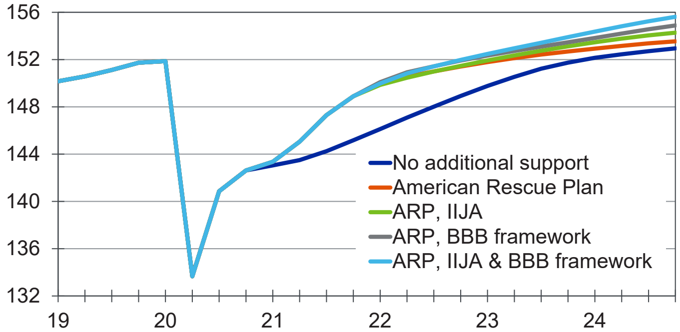
A second important macroeconomic impact of the reconciliation package is that it would increase labor productivity by raising the educational attainment of the workforce via universal pre-K, expanded funding for higher education. Increased funding for workforce development would also lift the skill level of the workforce. The positive impact on educational attainment and productivity would of course play out over many years—well beyond the 10-year budget horizon considered in this analysis.

Stronger and fairer growth

We use the Moody's Analytics model of the U.S. and global economies to quantify the impact of the bipartisan infrastructure deal and the reconciliation package on the economy.[7] We consider five scenarios. To provide context, the first scenario assumes that Biden was unable to enact any major fiscal policy changes, including the American Rescue Plan that was passed into law in March. The second scenario assumes that lawmakers fail to pass any additional fiscal policy legislation beyond the ARP. The third and fourth scenarios assume the bipartisan infrastructure deal and the reconciliation package are each passed into law, respectively, but not the other. And the final scenario assumes that both the bipartisan infrastructure deal and the reconciliation package become law.

Chart 2: Employment Gets a Boost...

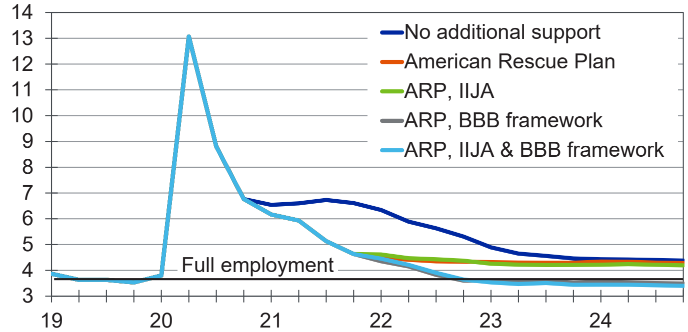
Nonfarm employment under different policy scenarios, mil



Sources: BLS, Moody's Analytics

Chart 3:…And Unemployment Declines

Unemployment rate under different policy scenarios, %



Sources: BLS, Moody's Analytics

The Moody's Analytics model is simulated over the decade through 2031. This is consistent with the Congressional Budget Office's horizon for the federal government's budget and policy analysis. The assumption is that the fiscal policies considered will become law by the end of this year and be implemented beginning in 2022. We also assume there are no other significant fiscal policy changes. Monetary policy is determined in the model based on the Federal Reserve Board's recently implemented framework for conducting monetary policy in which the Fed has committed not to begin normalizing interest rates until the economy is at full employment and inflation has been consistently above the Fed's 2% inflation target. We assume that the worst of the COVID-19 crisis and its economic fallout are over, and that the pandemic will continue to wind down.

The bipartisan infrastructure deal provides a modest increase in infrastructure spending and it thus supports only a modestly stronger economy (see Table 3). The most immediate impact in early 2022 is to reduce growth, since the pay-fors take effect right away while the increased infrastructure spending does not get going in earnest because of lags in starting infrastructure projects until late in the year. The apex in the boost to growth from the deal is expected in 2023, when real GDP increases 2.9%, compared with 2.3% when assuming only the ARP is passed into law. The deal creates more than 800,000 jobs at its peak impact in the middle of the decade, reducing the unemployment rate by a few tenths of a percentage point (see Chart 2). The unemployment rate never falls below 4% and the economy never completely returns to the full-employment conditions experienced pre-pandemic (see Chart 3). Longer term, the economy receives a bump to productivity growth due to the increase in the stock of public infrastructure, but it is small given the modest increase in infrastructure spending.

The reconciliation package is much larger and thus meaningfully lifts economic growth and jobs and lowers unemployment. The boost to growth occurs quickly, with real GDP increasing 4.9% in 2022, a percentage more than if only the ARP is passed into law. The tax cuts for lower-income individuals in the package are mostly spent quickly, while the tax increases on corporations and high-income and wealthier households have a much smaller and slower impact on investment and consumer spending. The increased social investments in the package, particularly related to child- and eldercare, healthcare and housing, also quickly support stronger GDP and jobs. There are 1.6 million more jobs by mid-decade at the peak of the boost to employment, and the unemployment rate is 0.75 percentage point lower. The unemployment rate returns to its pre-pandemic lows in the mid-threes, although labor force participation never fully recovers given longer-term fallout from the pandemic. Longer term, the economy's growth enjoys a measurable increase due to stronger productivity growth given greater educational attainment and higher labor force participation.

The reconciliation package also helps address the wide and growing disparity in the nation's income and wealth distribution. It targets most of the social investments to lower- and middle-income households and taxes multinational corporations and the well-to-do to help pay for these benefits. Moreover, high-income and wealthier households have arguably never been in a better financial position given the long-running skewing of the income and wealth distribution and surging stock values and house prices. As measured by the Gini index of income inequality, if the reconciliation package becomes law, the income distribution would not skew meaningfully further in the coming decade.[8]

The economy performs best in the final scenario, in which both the bipartisan infrastructure deal and the reconciliation package become law. Real GDP growth would average 3.2% per annum during Biden's term and 2.2% over the next decade, compared with less than 2.8% and 2.1% per annum if the legislation fails to become law. In terms of employment, under the infrastructure deal and reconciliation package, there are 2.4 million more jobs at the peak of the employment impact by mid-decade, and unemployment is a full percentage point lower. Labor force participation is also higher, although the full boost to participation occurs after the 10-year budget horizon.

Inflation, higher taxes and execution risk

Concerns have been expressed regarding the substantial additional fiscal support being considered by lawmakers. Some worry that the proposed fiscal policy is too expansive given support already provided to the economy during the pandemic, and this will exacerbate the inflationary pressures that are evident as the economy recovers from the pandemic. Inflation will remain uncomfortably high even after the current disruptions to the supply side of the economy caused by pandemic are ironed out, and the economy could potentially overheat as the Federal Reserve is forced to respond by tightening monetary policy quickly.

This concern cannot be dismissed, but it is likely overdone. With unemployment still near 5% and labor force participation well below where it was pre-pandemic, the economy still has considerable slack, equal to an estimated approximately 6 percentage points of GDP. But the bipartisan infrastructure deal and reconciliation package will deliver only about a percentage point of additional GDP growth in 2022 and closer to 2 percentage points cumulatively of additional GDP growth through mid-decade. Given the fiscal support already provided, this would be just enough to provide the added GDP needed to get the economy fully back to full employment. Consumer price inflation is a few tenths of a percentage point higher next year and in 2023 because of the stronger growth and faster return to full employment, but quickly settles near the Federal Reserve's inflation target of just over 2% per annum. Longer term, much of the additional fiscal support being considered is designed to lift the economy's longer-term growth potential and ease inflationary pressures. For example, consider the additional spending on new rental housing supply for lower-income households, which is critical to rein in rent growth and housing costs, or the efforts to reduce prescription drug costs. The legislation is also specifically designed to ease the financial burden of inflation for lower- and middle-income Americans by helping with the cost of childcare, eldercare, education, healthcare and housing for these income groups.

Others have voiced concern that the tax increases included in the legislation to help pay for it will have serious negative economic consequences. To be sure, all else being equal, higher taxes will weigh on economic growth, but the impact on the economy from the higher proposed taxes will be small. In part, the tax increases being considered on high-income and wealthy households would be the first meaningful tax hike on individuals since the early 1990s. And from a historical perspective they are, on net, modest.[9] Effective tax rates will remain close to historical norms.

There should also be no concern that the tax increases on large multinational corporations in the reconciliation package, including a 15% minimum tax on large corporations and a 15% country-by-country minimum tax on foreign profits of U.S. corporations, will meaningfully hurt economic growth. This is based on the experience to date with the large tax cuts corporations received under the Tax Cuts and Jobs Act in 2018, including the reduction in the top marginal corporate tax rate from 35% to 21%. There is little evidence that the TCJA led to a meaningful sustained increase in business investment, hiring or wages, or prompted businesses to shift production to the U.S. from overseas as intended. While it is difficult to disentangle all that is going on in the economy to isolate the impacts of the TCJA, it is difficult to conclude that the tax cuts in the TCJA have supported a stronger economy. Therefore, it is difficult to think that the increases in corporate taxes in the reconciliation package will meaningfully hurt the economy.

The most serious concern with the legislation is around execution risk. That is, the bipartisan infrastructure deal and reconciliation package are complex, with lots of massive moving parts. Successfully organizing them would be difficult even among the best-managed private companies. Scaling up existing programs as envisaged in the legislation is one thing, but standing up new programs and tax policy is another. In our analysis, we try to account for expected lags and delays in implementation, but this could be trickier than we are anticipating. This is especially the case for much of the new policy related to addressing climate change.

Moreover, while the legislation is paid for and does not add to the nation's deficits and debt, there is a risk that future lawmakers will not allow the increased spending and tax credits in the plan to expire as legislated, and not pay for their extension. Heightened tax enforcement on wealthy taxpayers and the tax on stock repurchases also might not raise as much additional revenue as anticipated. Running large deficits is good economic policy during the pandemic, so those hit hard can manage through. It also makes sense as the pandemic winds down, to get the economy back to full employment. But, once the economy has returned to full employment, focusing on our long-term fiscal problems will become critical.

Conclusions

The nation has long underinvested in its infrastructure and social needs and has been slow to respond to the threat posed by climate change, with mounting economic consequences. The bipartisan infrastructure deal and reconciliation package help address these issues. Greater investments in public infrastructure and social programs will lift productivity and labor force growth, and the attention on climate change will help forestall its increasingly corrosive economic effects. Moreover, the policies being considered would direct the benefits of the stronger growth to lower-income Americans and address the long-running skewing of the income and wealth distribution. Passage of legislation remains uncertain, but failing to pass legislation would certainly diminish the economy's prospects.

Table 1: Infrastructure Investment and Jobs Act

Static budget cost, $ bil

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2022-2026	2022-2031
Static budget deficit	**-5.3**	**24.8**	**44.2**	**65.3**	**78.6**	**70.7**	**52.9**	**38.0**	**23.6**	**6.1**	**207.7**	**398.9**
Total infrastructure spending	**27.2**	**50.5**	**68.0**	**81.9**	**89.0**	**81.4**	**64.2**	**47.6**	**35.4**	**26.8**	**316.7**	**572.0**
Transportation	8.2	17.8	27.0	36.1	45.6	47.4	42.1	34.2	26.5	20.4	134.6	305.2
Environmental remediation and other authorizations	13.9	18.0	19.1	20.5	19.4	15.3	10.1	6.1	4.1	3.0	90.9	129.6
Energy and water	3.6	9.1	12.9	14.1	13.6	11.8	9.1	6.4	4.5	3.1	53.4	88.4
Broadband	1.5	5.7	8.9	11.1	10.3	6.7	2.7	0.6	0.1	0.0	37.5	47.6
Bond provisions	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	1.2
Total pay-fors	**-32.5**	**-25.7**	**-23.8**	**-16.6**	**-10.4**	**-10.7**	**-11.3**	**-9.6**	**-11.8**	**-20.7**	**-109.0**	**-173.1**
Delaying rule affecting treatment of drug rebates	-6.2	-14.6	-17.8	-10.3	-1.9	0.0	0.0	0.0	0.0	0.0	-50.8	-50.8
Information reporting for brokers and digital assets	0.0	-0.9	-2.1	-2.9	-3.1	-3.3	-3.5	-3.8	-4.0	-4.3	-9.0	-28.0
Extension of enterprise guarantee fees	-3.3	-3.4	-2.9	-2.4	-2.0	-1.7	-1.5	-1.3	-1.3	-1.3	-14.0	-21.0
Chemical superfund	-0.8	-1.3	-1.4	-1.4	-1.5	-1.5	-1.6	-1.6	-1.7	-1.7	-6.4	-14.4
Rescission of COVID-19 appropriations	-14.0	-5.3	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	-17.3	-13.4
Spectrum auctions	0.0	0.0	0.0	0.0	-2.1	-3.4	-3.4	-1.3	0.0	0.0	-2.1	-10.2
Extension of direct spending deductions into fiscal 2031	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.7	-9.4	0.0	-8.7
Termination of employee retention credit	-8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-8.2	-8.2
Customs user fees	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.9	-2.3	0.0	-6.2
Strategic petroleum reserve	0.0	0.0	0.0	0.0	0.0	-0.8	-1.3	-1.4	-1.3	-1.3	0.0	-6.1
Manufacturer rebates for unused drugs in Medicare Part B	-0.1	-0.2	-0.2	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-1.1	-3.2
Extension of interest rate stabilization	0.0	0.0	0.0	-0.0	-0.1	-0.3	-0.4	-0.6	-0.7	-0.8	-0.2	-2.9

Note: These budget cost estimates do not include any dynamic benefits.

Sources: CBO, CRFB, JCT, Moody's Analytics

Table 2: President Biden's Build Back Better Framework

Static budget cost, $ bil

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2022-2026	2021-2031
Static budget deficit	**121.0**	**116.0**	**83.2**	**81.6**	**56.8**	**-49.7**	**-121.0**	**-146.7**	**-176.7**	**-209.4**	**458.5**	**-245.0**
Total spending and tax cuts	**218.2**	**237.5**	**235.3**	**237.7**	**234.0**	**158.1**	**110.1**	**107.8**	**105.8**	**105.6**	**1,162.8**	**1,750.0**
Childcare, education, housing and equity	47.0	82.2	109.7	128.2	142.2	72.4	27.4	27.1	23.8	20.0	509.3	680.0
Child care and preschool	33.0	55.1	73.4	89.1	106.8	42.7	0.0	0.0	0.0	0.0	357.3	400.0
Higher ed and workforce	2.0	3.3	3.8	4.1	4.2	4.3	4.4	4.6	4.6	4.6	17.4	40.0
Equity and other investments	4.8	8.1	9.8	9.7	9.4	9.6	9.6	9.6	9.7	9.6	41.9	90.0
Affordable housing	7.2	15.7	22.7	25.3	21.8	15.7	13.3	12.9	9.6	5.8	92.7	150.0
Clean energy and combating climate change	36.4	57.1	65.3	68.1	64.3	57.4	53.2	49.9	50.2	53.0	291.3	555.0
Healthcare	27.7	47.2	56.1	36.9	22.9	23.3	24.2	25.1	25.7	25.9	190.7	315.0
Medicare hearing benefits	0.0	0.0	0.4	1.1	2.7	4.5	5.5	6.5	7.0	7.3	4.2	35.0
Home care	4.9	8.3	11.5	14.4	17.5	18.7	18.7	18.7	18.7	18.7	56.7	150.0
ACA premium tax credits	22.8	38.8	44.1	21.4	2.7	0.2	0.0	0.0	0.0	0.0	129.8	130.0
Child Tax and Earned Income Tax Credits	107.0	51.0	4.3	4.4	4.7	4.9	5.3	5.7	6.1	6.6	171.5	200.0
Total pay-fors	**-97.2**	**-121.5**	**-152.1**	**-156.1**	**-177.2**	**-207.7**	**-231.1**	**-254.4**	**-282.5**	**-315.0**	**-704.3**	**-1,995.0**
Tax increases	-84.8	-108.9	-139.6	-142.9	-154.4	-177.2	-196.3	-215.8	-239.0	-266.0	-630.7	-1,725.0
IRS investments to close the tax gap	0.1	-3.2	-8.1	-14.9	-24.4	-37.2	-51.9	-68.7	-86.0	-105.5	-50.7	-400.0
Corporate international reform	-29.4	-47.1	-54.2	-47.1	-33.0	-26.6	-25.8	-26.4	-28.7	-31.6	-210.8	-350.0
15% corporate minimum tax on large corporations	-27.9	-31.8	-30.3	-30.6	-32.1	-33.8	-34.6	-34.2	-34.4	-35.4	-152.7	-325.0
Close Medicare tax loophole for the wealthy	-15.3	-19.9	-22.0	-23.9	-25.8	-27.2	-27.9	-28.6	-29.3	-30.0	-106.9	-250.0
AGI surcharge on the top 0.02%	-10.0	-5.0	-23.1	-24.3	-25.5	-26.3	-27.2	-28.4	-29.5	-30.8	-87.8	-230.0
Limit business losses for the wealthy	-2.3	-1.9	-2.0	-2.0	-13.6	-26.1	-28.8	-29.5	-31.1	-32.7	-21.8	-170.0
Other pay-fors	-12.4	-12.7	-12.6	-13.2	-22.8	-30.5	-34.7	-38.7	-43.5	-49.0	-73.6	-270.0
Prescription drugs: repeal rebate rule	0.0	0.0	0.0	-0.8	-10.6	-18.1	-22.2	-26.2	-30.9	-36.4	-11.3	-145.0
Stock buybacks tax	-12.4	-12.7	-12.6	-12.4	-12.3	-12.4	-12.5	-12.5	-12.6	-12.6	-62.3	-125.0

Sources: White House, Moody's Analytics

Table 3: Macroeconomic Impact of the Build Back Better Legislation

	REAL GDP									
	No additional support		American Rescue Plan		ARP & IIJA		ARP & BBB framework		ARP, IIJA & BBB framework	
	2012$ bil	Ann. growth	2012$ bil	Ann. growth	2012$ bil	Ann. growth	2012$ bil	Ann. growth	2012$ bil	Ann. growth
2020Q1	18,952	(5.0)	18,952	(5.0)	18,952	(5.0)	18,952	(5.0)	18,952	(5.0)
2020Q2	17,258	(31.4)	17,258	(31.4)	17,258	(31.4)	17,258	(31.4)	17,258	(31.4)
2020Q3	18,561	33.4	18,561	33.4	18,561	33.4	18,561	33.4	18,561	33.4
2020Q4	18,768	4.5	18,768	4.5	18,768	4.5	18,768	4.5	18,768	4.5
2021Q1	18,853	1.8	19,056	6.3	19,056	6.3	19,056	6.3	19,056	6.3
2021Q2	18,932	1.7	19,368	6.7	19,368	6.7	19,368	6.7	19,368	6.7
2021Q3	18,866	(1.4)	19,465	2.0	19,465	2.0	19,465	2.0	19,465	2.0
2021Q4	19,046	3.9	19,822	7.5	19,822	7.5	19,822	7.5	19,822	7.5
2022Q1	19,355	6.7	20,012	3.9	19,968	3.0	20,089	5.5	20,046	4.6
2022Q2	19,630	5.8	20,137	2.5	20,098	2.6	20,300	4.3	20,261	4.4
2022Q3	19,881	5.2	20,252	2.3	20,234	2.7	20,490	3.8	20,472	4.2
2022Q4	20,091	4.3	20,366	2.3	20,381	2.9	20,616	2.5	20,631	3.1
2023Q1	20,240	3.0	20,479	2.2	20,534	3.0	20,731	2.2	20,786	3.0
2023Q2	20,381	2.8	20,595	2.3	20,685	3.0	20,849	2.3	20,939	3.0
2023Q3	20,522	2.8	20,717	2.4	20,836	2.9	20,970	2.3	21,089	2.9
2023Q4	20,648	2.5	20,843	2.5	20,973	2.7	21,092	2.4	21,222	2.6
2024Q1	20,760	2.2	20,962	2.3	21,098	2.4	21,205	2.2	21,341	2.3
2024Q2	20,871	2.2	21,058	1.8	21,210	2.1	21,298	1.7	21,450	2.0
2024Q3	20,981	2.1	21,156	1.9	21,309	1.9	21,394	1.8	21,547	1.8
2024Q4	21,098	2.2	21,261	2.0	21,405	1.8	21,497	1.9	21,641	1.8
2025Q1	21,209	2.1	21,357	1.8	21,496	1.7	21,594	1.8	21,733	1.7
2025Q2	21,311	1.9	21,447	1.7	21,581	1.6	21,685	1.7	21,819	1.6
2025Q3	21,411	1.9	21,540	1.7	21,667	1.6	21,778	1.7	21,906	1.6
2025Q4	21,513	1.9	21,633	1.7	21,759	1.7	21,873	1.7	21,998	1.7
2026Q1	21,614	1.9	21,728	1.8	21,847	1.6	21,969	1.8	22,088	1.6
2026Q2	21,718	1.9	21,828	1.8	21,942	1.7	22,069	1.8	22,183	1.7
2026Q3	21,821	1.9	21,928	1.9	22,038	1.8	22,168	1.8	22,277	1.7
2026Q4	21,928	2.0	22,033	1.9	22,143	1.9	22,268	1.8	22,378	1.8
2027Q1	22,038	2.0	22,142	2.0	22,249	1.9	22,367	1.8	22,474	1.7
2027Q2	22,157	2.2	22,257	2.1	22,356	1.9	22,478	2.0	22,577	1.8
2027Q3	22,279	2.2	22,378	2.2	22,468	2.0	22,588	2.0	22,678	1.8
2027Q4	22,400	2.2	22,498	2.2	22,580	2.0	22,698	2.0	22,781	1.8
2028Q1	22,520	2.2	22,618	2.2	22,694	2.0	22,811	2.0	22,887	1.9
2028Q2	22,640	2.1	22,737	2.1	22,808	2.0	22,923	2.0	22,994	1.9
2028Q3	22,760	2.1	22,858	2.1	22,923	2.0	23,038	2.0	23,104	1.9
2028Q4	22,877	2.1	22,974	2.1	23,037	2.0	23,153	2.0	23,216	2.0
2029Q1	22,995	2.1	23,092	2.1	23,149	2.0	23,272	2.1	23,329	2.0
2029Q2	23,113	2.1	23,211	2.1	23,262	2.0	23,391	2.1	23,442	2.0
2029Q3	23,228	2.0	23,328	2.0	23,380	2.0	23,513	2.1	23,564	2.1
2029Q4	23,345	2.0	23,447	2.1	23,496	2.0	23,638	2.2	23,688	2.1
2030Q1	23,464	2.1	23,568	2.1	23,614	2.0	23,766	2.2	23,811	2.1
2030Q2	23,584	2.1	23,688	2.1	23,731	2.0	23,893	2.2	23,936	2.1
2030Q3	23,705	2.1	23,809	2.1	23,851	2.0	24,021	2.2	24,062	2.1
2030Q4	23,827	2.1	23,933	2.1	23,971	2.0	24,149	2.2	24,188	2.1
2031Q1	23,950	2.1	24,056	2.1	24,093	2.0	24,277	2.1	24,314	2.1
2031Q2	24,073	2.1	24,180	2.1	24,213	2.0	24,405	2.1	24,438	2.1
2031Q3	24,198	2.1	24,305	2.1	24,335	2.0	24,535	2.1	24,564	2.1
2031Q4	24,322	2.1	24,431	2.1	24,458	2.0	24,664	2.1	24,691	2.1
2020	18,385	-3.7	18,385	-3.7	18,385	-3.7	18,385	-3.7	18,385	-3.7
2021	18,924	2.9	19,428	5.7	19,428	5.7	19,428	5.7	19,428	5.7
2022	19,739	4.3	20,192	3.9	20,170	3.8	20,374	4.9	20,352	4.8
2023	20,448	3.6	20,658	2.3	20,757	2.9	20,910	2.6	21,009	3.2
2024	20,927	2.3	21,109	2.2	21,256	2.4	21,348	2.1	21,495	2.3
2025	21,361	2.1	21,494	1.8	21,626	1.7	21,732	1.8	21,864	1.7
2026	21,770	1.9	21,880	1.8	21,993	1.7	22,119	1.8	22,232	1.7
2027	22,218	2.1	22,319	2.0	22,413	1.9	22,533	1.9	22,627	1.8
2028	22,699	2.2	22,797	2.1	22,866	2.0	22,981	2.0	23,050	1.9
2029	23,170	2.1	23,270	2.1	23,322	2.0	23,454	2.1	23,506	2.0
2030	23,645	2.1	23,750	2.1	23,792	2.0	23,957	2.1	24,000	2.1
2031	24,136	2.1	24,243	2.1	24,275	2.0	24,470	2.1	24,502	2.1

Note: IIJA is the Infrastructure Investment and Jobs Act

Sources: BEA, BLS, Moody's Analytics

Table 3: Macroeconomic Impact of the Build Back Better Legislation (Cont.)

	NONFARM EMPLOYMENT									
	No additional support		American Rescue Plan		ARP & IIJA		ARP & BBB framework		ARP, IIJA & BBB framework	
	Mil	Change, ths	Mil	Change, ths	Mil	Change, ths	Mil	Change, ths	Mil	Change, ths
2020Q1	151.9	132	151.9	132	151.9	132	151.9	132	151.9	132
2020Q2	133.7	(18,201)	133.7	(18,201)	133.7	(18,201)	133.7	(18,201)	133.7	(18,201)
2020Q3	140.9	7,195	140.9	7,195	140.9	7,195	140.9	7,195	140.9	7,195
2020Q4	142.6	1,759	142.6	1,759	142.6	1,759	142.6	1,759	142.6	1,759
2021Q1	143.1	431	143.4	736	143.4	736	143.4	736	143.4	736
2021Q2	143.5	445	145.1	1,701	145.1	1,701	145.1	1,701	145.1	1,701
2021Q3	144.3	756	147.3	2,246	147.3	2,246	147.3	2,246	147.3	2,246
2021Q4	145.2	924	148.9	1,592	148.9	1,592	148.9	1,592	148.9	1,592
2022Q1	146.1	947	150.0	1,079	149.9	968	150.1	1,198	150.0	1,087
2022Q2	147.1	970	150.6	586	150.5	603	150.9	833	150.8	850
2022Q3	148.0	924	151.0	441	151.0	527	151.4	507	151.4	593
2022Q4	148.9	906	151.4	413	151.5	478	151.9	486	152.0	551
2023Q1	149.8	847	151.8	377	151.9	455	152.3	425	152.5	503
2023Q2	150.5	771	152.1	335	152.4	431	152.7	388	153.0	484
2023Q3	151.2	690	152.4	301	152.7	391	153.1	372	153.4	462
2023Q4	151.7	510	152.7	258	153.1	376	153.5	359	153.9	478
2024Q1	152.2	410	152.9	241	153.5	341	153.8	365	154.4	465
2024Q2	152.5	300	153.2	233	153.8	313	154.2	374	154.8	454
2024Q3	152.7	260	153.4	215	154.0	271	154.6	367	155.2	423
2024Q4	153.0	240	153.5	172	154.3	231	154.9	318	155.6	377
2025Q1	153.2	200	153.7	137	154.5	200	155.1	252	155.9	315
2025Q2	153.3	160	153.8	135	154.7	176	155.3	205	156.2	246
2025Q3	153.5	160	154.0	137	154.8	167	155.5	162	156.4	192
2025Q4	153.7	210	154.1	145	155.0	149	155.7	163	156.5	167
2026Q1	153.9	220	154.3	156	155.1	141	155.8	171	156.7	156
2026Q2	154.1	220	154.4	160	155.2	133	156.0	167	156.8	140
2026Q3	154.3	170	154.6	163	155.4	130	156.2	161	157.0	128
2026Q4	154.5	190	154.8	173	155.5	126	156.3	167	157.1	120
2027Q1	154.7	190	154.9	176	155.6	124	156.5	166	157.2	114
2027Q2	154.9	200	155.1	194	155.8	128	156.7	168	157.3	102
2027Q3	155.1	190	155.3	201	155.9	145	156.8	153	157.4	97
2027Q4	155.3	210	155.5	210	156.1	156	157.0	148	157.5	94
2028Q1	155.5	210	155.8	224	156.2	171	157.1	151	157.6	98
2028Q2	155.7	227	156.0	229	156.4	179	157.3	153	157.7	103
2028Q3	155.9	229	156.2	233	156.6	190	157.4	155	157.8	112
2028Q4	156.2	230	156.5	234	156.8	193	157.6	162	157.9	121
2029Q1	156.4	232	156.7	236	157.0	201	157.8	174	158.1	139
2029Q2	156.6	236	156.9	238	157.2	216	158.0	191	158.2	168
2029Q3	156.9	240	157.2	238	157.4	223	158.1	193	158.4	177
2029Q4	157.1	241	157.4	238	157.7	231	158.4	209	158.6	201
2030Q1	157.4	239	157.6	241	157.9	233	158.6	223	158.8	217
2030Q2	157.6	238	157.9	245	158.1	233	158.8	225	159.1	225
2030Q3	157.8	236	158.1	244	158.4	236	159.1	224	159.3	239
2030Q4	158.1	235	158.4	243	158.6	237	159.3	227	159.5	247
2031Q1	158.3	236	158.7	342	158.8	236	159.7	230	159.8	250
2031Q2	158.5	237	159.0	242	159.1	237	159.9	231	160.0	251
2031Q3	158.8	237	159.2	240	159.3	239	160.2	230	160.3	250
2031Q4	159.0	236	159.4	240	159.5	239	160.4	231	160.5	249
2020	142.3	(8,683)	142.3	(8,683)	142.3	(8,683)	142.3	(8,683)	142.3	(8,683)
2021	144.0	1,740	146.2	3,899	146.2	3,899	146.2	3,899	146.2	3,899
2022	147.5	3,545	150.7	4,585	150.7	4,545	151.1	4,940	151.1	4,900
2023	150.8	3,282	152.3	1,521	152.5	1,840	152.9	1,819	153.2	2,139
2024	152.6	1,745	153.3	994	153.9	1,355	154.4	1,461	155.0	1,822
2025	153.4	838	153.9	638	154.7	840	155.4	1,043	156.3	1,245
2026	154.2	795	154.5	611	155.3	577	156.1	673	156.9	638
2027	155.0	770	155.2	726	155.8	524	156.7	653	157.3	452
2028	155.8	855	156.1	878	156.5	670	157.4	614	157.8	406
2029	156.8	933	157.0	943	157.3	816	158.1	703	158.3	576
2030	157.7	954	158.0	965	158.2	922	158.9	891	159.2	848
2031	158.7	945	159.1	1,069	159.2	946	160.1	1,110	160.2	987

Note: IIJA is the Infrastructure Investment and Jobs Act

Sources: BEA, BLS, Moody's Analytics

Table 3: Macroeconomic Impact of the Build Back Better Legislation (Cont.)

	UNEMPLOYMENT RATE					LABOR FORCE PARTICIPATION RATE				
	No additional support	American Rescue Plan	ARP & IIJA	ARP & BBB framework	ARP, IIJA & BBB framework	No additional support	American Rescue Plan	ARP & IIJA	ARP & BBB framework	ARP, IIJA & BBB framework
2020Q1	3.8	3.8	3.8	3.8	3.8	63.1	63.1	63.1	63.1	63.1
2020Q2	13.1	13.1	13.1	13.1	13.1	60.8	60.8	62.9	62.9	62.9
2020Q3	8.8	8.8	8.8	8.8	8.8	61.5	61.5	63.1	63.1	63.1
2020Q4	6.8	6.8	6.8	6.8	6.8	61.5	61.5	63.2	63.2	63.2
2021Q1	6.5	6.2	6.2	6.2	6.2	61.4	61.4	63.1	63.1	63.1
2021Q2	6.6	5.9	5.9	5.9	5.9	61.5	61.6	60.8	60.8	60.8
2021Q3	6.7	5.1	5.1	5.1	5.1	61.6	61.7	61.5	61.5	61.5
2021Q4	6.6	4.6	4.6	4.6	4.6	61.7	61.9	61.5	61.5	61.5
2022Q1	6.3	4.5	4.6	4.4	4.5	61.8	62.5	61.4	61.4	61.4
2022Q2	5.9	4.4	4.5	4.2	4.2	62.0	62.6	61.6	61.6	61.6
2022Q3	5.6	4.4	4.4	3.8	3.9	62.1	62.6	61.7	61.7	61.7
2022Q4	5.3	4.3	4.4	3.6	3.6	62.1	62.6	61.9	61.9	61.9
2023Q1	4.9	4.3	4.3	3.6	3.5	62.1	62.7	62.5	62.5	62.5
2023Q2	4.7	4.3	4.2	3.6	3.5	62.1	62.7	62.6	62.6	62.6
2023Q3	4.6	4.3	4.2	3.6	3.5	62.1	62.7	62.6	62.6	62.6
2023Q4	4.5	4.3	4.2	3.5	3.4	62.2	62.7	62.6	62.7	62.7
2024Q1	4.4	4.3	4.2	3.6	3.4	62.2	62.7	62.7	62.7	62.7
2024Q2	4.4	4.3	4.2	3.5	3.4	62.3	62.7	62.7	62.7	62.7
2024Q3	4.4	4.3	4.2	3.5	3.4	62.3	62.7	62.7	62.7	62.7
2024Q4	4.4	4.3	4.2	3.5	3.4	62.3	62.7	62.7	62.7	62.8
2025Q1	4.4	4.3	4.2	3.5	3.4	62.4	62.7	62.7	62.8	62.8
2025Q2	4.4	4.3	4.2	3.6	3.5	62.4	62.7	62.7	62.8	62.8
2025Q3	4.4	4.4	4.2	3.7	3.5	62.4	62.7	62.8	62.8	62.8
2025Q4	4.5	4.4	4.2	3.7	3.5	62.4	62.7	62.8	62.8	62.8
2026Q1	4.5	4.5	4.3	3.8	3.6	62.5	62.7	62.8	62.8	62.8
2026Q2	4.5	4.5	4.3	3.8	3.6	62.5	62.7	62.7	62.8	62.8
2026Q3	4.6	4.5	4.3	3.9	3.6	62.5	62.7	62.7	62.8	62.8
2026Q4	4.6	4.5	4.2	3.9	3.6	62.5	62.7	62.7	62.8	62.8
2027Q1	4.6	4.5	4.2	4.0	3.7	62.5	62.7	62.7	62.8	62.8
2027Q2	4.6	4.5	4.2	4.1	3.8	62.4	62.6	62.7	62.8	62.8
2027Q3	4.6	4.5	4.2	4.2	3.8	62.4	62.6	62.7	62.8	62.8
2027Q4	4.5	4.5	4.3	4.1	3.9	62.4	62.6	62.7	62.8	62.8
2028Q1	4.5	4.5	4.3	4.1	3.9	62.4	62.6	62.7	62.8	62.8
2028Q2	4.5	4.5	4.3	4.1	3.9	62.4	62.6	62.7	62.8	62.8
2028Q3	4.5	4.5	4.3	4.1	3.9	62.4	62.6	62.6	62.8	62.8
2028Q4	4.5	4.5	4.3	4.1	3.9	62.3	62.5	62.6	62.8	62.8
2029Q1	4.5	4.5	4.3	4.1	3.9	62.3	62.5	62.6	62.7	62.8
2029Q2	4.5	4.4	4.4	4.0	3.9	62.3	62.5	62.6	62.7	62.8
2029Q3	4.5	4.4	4.4	3.9	3.9	62.3	62.5	62.6	62.7	62.8
2029Q4	4.5	4.4	4.4	3.9	3.9	62.3	62.5	62.6	62.7	62.7
2030Q1	4.5	4.4	4.4	4.0	4.0	62.3	62.5	62.5	62.7	62.7
2030Q2	4.5	4.4	4.4	4.0	4.0	62.2	62.4	62.5	62.7	62.7
2030Q3	4.5	4.4	4.4	4.0	4.0	62.2	62.4	62.5	62.7	62.7
2030Q4	4.5	4.4	4.4	4.0	4.0	62.2	62.4	62.5	62.7	62.7
2031Q1	4.5	4.4	4.4	4.0	4.0	62.2	62.4	62.5	62.7	62.7
2031Q2	4.5	4.4	4.4	4.0	4.0	62.2	62.4	62.5	62.7	62.7
2031Q3	4.5	4.4	4.4	4.0	4.0	62.2	62.4	62.5	62.7	62.7
2031Q4	4.5	4.4	4.4	4.0	4.0	62.2	62.4	62.4	62.6	62.7
2020	8.1	8.1	8.1	8.1	8.1	61.7	61.7	61.7	61.7	61.7
2021	6.6	5.5	5.5	5.5	5.5	61.6	61.7	61.7	61.7	61.7
2022	5.8	4.4	4.5	4.0	4.1	62.0	62.6	62.6	62.6	62.6
2023	4.6	4.3	4.2	3.6	3.5	62.1	62.7	62.7	62.7	62.7
2024	4.4	4.3	4.2	3.5	3.4	62.3	62.7	62.7	62.8	62.8
2025	4.4	4.4	4.2	3.7	3.5	62.4	62.7	62.7	62.8	62.8
2026	4.5	4.5	4.3	3.9	3.6	62.5	62.7	62.7	62.8	62.8
2027	4.6	4.5	4.2	4.1	3.8	62.4	62.6	62.6	62.8	62.8
2028	4.5	4.5	4.3	4.1	3.9	62.4	62.6	62.6	62.7	62.8
2029	4.5	4.4	4.4	4.0	3.9	62.3	62.5	62.5	62.7	62.7
2030	4.5	4.4	4.4	4.0	4.0	62.2	62.4	62.5	62.7	62.7
2031	4.5	4.4	4.4	4.0	4.0	62.2	62.4	62.4	62.7	62.7

Note: IIJA is the Infrastructure Investment and Jobs Act

Sources: BEA, BLS, Moody's Analytics

Table 3: Macroeconomic Impact of the Build Back Better Legislation (Cont.)

	CONSUMER PRICE INDEX									
	No additional support		American Rescue Plan		ARP & IIJA		ARP & BBB framework		ARP, IIJA & BBB framework	
	Index	Ann. growth	Index	Ann. growth	Index	Ann. growth	Index	Ann. growth	Index	Ann. growth
2020Q1	258.5	1.0	258.5	1.0	258.5	1.0	258.5	1.0	258.5	1.0
2020Q2	256.5	(3.1)	256.5	(3.1)	256.5	(3.1)	256.5	(3.1)	256.5	(3.1)
2020Q3	259.4	4.7	259.4	4.7	259.4	4.7	259.4	4.7	259.4	4.7
2020Q4	261.0	2.4	261.0	2.4	261.0	2.4	261.0	2.4	261.0	2.4
2021Q1	263.1	3.3	263.4	3.7	263.4	3.7	263.4	3.7	263.4	3.7
2021Q2	265.5	3.6	268.8	8.4	268.8	8.4	268.8	8.4	268.8	8.4
2021Q3	268.1	4.0	273.1	6.6	273.1	6.6	273.1	6.6	273.1	6.6
2021Q4	271.6	5.3	276.0	4.3	276.0	4.3	276.0	4.3	276.0	4.3
2022Q1	275.6	6.1	278.1	3.1	278.1	3.0	278.2	3.2	278.3	3.3
2022Q2	277.8	3.2	279.8	2.4	279.7	2.4	280.1	2.7	280.3	2.9
2022Q3	279.5	2.4	281.3	2.2	281.3	2.3	281.8	2.5	282.1	2.6
2022Q4	281.1	2.2	282.7	2.0	282.8	2.1	283.5	2.4	283.8	2.5
2023Q1	282.6	2.1	284.0	1.9	284.3	2.1	285.2	2.4	285.6	2.5
2023Q2	284.1	2.1	285.6	2.2	285.9	2.3	286.9	2.4	287.3	2.4
2023Q3	285.5	2.0	287.2	2.2	287.6	2.3	288.6	2.4	289.1	2.4
2023Q4	286.9	2.0	288.8	2.3	289.2	2.3	290.3	2.3	290.8	2.4
2024Q1	288.4	2.1	290.5	2.3	290.9	2.3	292.0	2.4	292.5	2.4
2024Q2	289.9	2.1	292.1	2.3	292.5	2.3	293.7	2.4	294.2	2.4
2024Q3	291.4	2.0	293.8	2.3	294.2	2.3	295.4	2.3	295.9	2.3
2024Q4	292.9	2.1	295.4	2.3	295.9	2.3	297.1	2.3	297.6	2.3
2025Q1	294.5	2.2	297.1	2.3	297.6	2.3	298.8	2.3	299.3	2.3
2025Q2	296.2	2.3	298.8	2.3	299.3	2.3	300.6	2.3	301.1	2.3
2025Q3	297.9	2.3	300.6	2.3	301.1	2.4	302.3	2.4	302.8	2.4
2025Q4	299.6	2.3	302.3	2.3	302.9	2.4	304.1	2.4	304.6	2.4
2026Q1	301.3	2.3	304.1	2.3	304.6	2.4	305.8	2.4	306.4	2.4
2026Q2	303.1	2.3	305.8	2.3	306.4	2.3	307.6	2.3	308.1	2.3
2026Q3	304.8	2.3	307.5	2.3	308.1	2.3	309.3	2.3	309.9	2.3
2026Q4	306.4	2.2	309.2	2.2	309.8	2.2	311.0	2.2	311.5	2.2
2027Q1	308.1	2.1	310.8	2.2	311.4	2.2	312.7	2.2	313.2	2.2
2027Q2	309.7	2.1	312.5	2.2	313.1	2.2	314.4	2.2	314.9	2.2
2027Q3	311.3	2.1	314.2	2.2	314.8	2.2	316.0	2.2	316.6	2.2
2027Q4	312.9	2.1	315.9	2.2	316.5	2.2	317.7	2.2	318.3	2.2
2028Q1	314.6	2.1	317.6	2.2	318.2	2.2	319.4	2.1	319.9	2.1
2028Q2	316.3	2.1	319.3	2.2	319.9	2.2	321.1	2.1	321.6	2.1
2028Q3	317.9	2.1	321.0	2.2	321.6	2.2	322.8	2.1	323.3	2.1
2028Q4	319.6	2.1	322.7	2.2	323.3	2.2	324.5	2.1	325.0	2.1
2029Q1	321.3	2.1	324.5	2.2	325.1	2.2	326.2	2.1	326.7	2.1
2029Q2	322.9	2.1	326.2	2.2	326.8	2.2	328.0	2.2	328.5	2.1
2029Q3	324.6	2.1	327.9	2.2	328.6	2.2	329.7	2.1	330.2	2.1
2029Q4	326.3	2.1	329.7	2.1	330.3	2.1	331.4	2.1	331.9	2.1
2030Q1	328.0	2.1	331.4	2.1	332.0	2.1	333.1	2.1	333.6	2.1
2030Q2	329.7	2.1	333.1	2.1	333.7	2.1	334.9	2.1	335.4	2.1
2030Q3	331.4	2.1	334.8	2.1	335.5	2.1	336.6	2.1	337.1	2.1
2030Q4	333.1	2.1	336.6	2.1	337.2	2.1	338.4	2.1	338.9	2.1
2031Q1	334.9	2.1	338.3	2.1	339.0	2.1	340.2	2.1	340.7	2.1
2031Q2	336.7	2.1	340.1	2.1	340.8	2.1	342.0	2.1	342.5	2.1
2031Q3	338.4	2.1	341.9	2.1	342.6	2.1	343.8	2.1	344.3	2.1
2031Q4	340.2	2.1	343.7	2.1	344.4	2.1	345.6	2.1	346.1	2.1
2020	258.8	1.2	258.8	1.2	258.8	1.2	258.8	1.2	258.8	1.2
2021	267.1	3.2	270.3	4.4	270.3	4.4	270.3	4.4	270.3	4.4
2022	278.5	4.3	280.4	3.7	280.5	3.8	280.9	3.9	281.1	4.0
2023	284.8	2.2	286.4	2.1	286.8	2.2	287.8	2.4	288.2	2.5
2024	290.7	2.1	292.9	2.3	293.4	2.3	294.6	2.4	295.1	2.4
2025	297.0	2.2	299.7	2.3	300.2	2.3	301.4	2.3	302.0	2.3
2026	303.9	2.3	306.6	2.3	307.2	2.3	308.4	2.3	309.0	2.3
2027	310.5	2.2	313.4	2.2	313.9	2.2	315.2	2.2	315.7	2.2
2028	317.1	2.1	320.1	2.2	320.7	2.2	321.9	2.1	322.5	2.1
2029	323.8	2.1	327.1	2.2	327.7	2.2	328.8	2.1	329.3	2.1
2030	330.6	2.1	334.0	2.1	334.6	2.1	335.8	2.1	336.3	2.1
2031	337.6	2.1	341.0	2.1	341.7	2.1	342.9	2.1	343.4	2.1

Note: IIJA is the Infrastructure Investment and Jobs Act

Sources: BEA, BLS, Moody's Analytics

Endnotes

1 Since the COVID-19 pandemic struck the United States in March 2020, federal government fiscal support has totaled an estimated more than $5 trillion, equal to close to 25% of the nation's GDP.

2 The IIJA is a scaled-down version of the American Jobs Plan proposed by President Biden in April as part of his Build Back Better agenda. Biden's American Jobs Plan included more than $900 billion in more spending on these types of traditional infrastructure, and then an additional $1.7 trillion in other spending and tax credits. Much of this other proposed funding was for less traditional infrastructure such as housing, research and development, and manufacturing supply chains.

3 In a full-employment economy, the GDP multiplier on traditional infrastructure is estimated to be 1.23 one year after the investment, and 1.12 for nontraditional infrastructure. It is higher when the economy is operating below full employment.

4 This differs from the Congressional Budget Office's estimate that the average rate of return on private-sector investment is about 10% and that the average return on federal investment is about half that. The difference is largely because the CBO assumes that a significant part of the increased federal spending on infrastructure will be offset by less infrastructure spending by state and local governments. We do not expect this offset to be nearly as large with this infrastructure deal.

5 A more detailed description of the programs and tax changes in the reconciliation package is available on request.

6 For more information on the labor force participation rate impacts, a literature review is available in L. J. Bettendorf, E. L. Jongen, and P. Muller, Child Care Subsidies and Labour Supply—Evidence From a Large Dutch Reform, Labour Economics (2015).

7 A description of the Moody's Analytics model of the U.S. economy is available here. More detailed validation documentation is available on request. The Moody's Analytics model is similar in theory and empirics to those used by the Federal Reserve Board and Congressional Budget Office for forecasting, budgeting and policy analysis. The model has been used to evaluate the plethora of fiscal and monetary policies implemented during the COVID-19 pandemic.

8 The Gini index is a statistical measure of economic inequality. A value of 0 represents perfect economic equality, and a value of 1 represents perfect economic inequality. The 2019 Gini index for income in the U.S. was 0.465 and has been steadily rising since the late 1970s, indicating that there has been steady skewing of the income distribution.

9 Of all the tax increases since World War II, this would rank 24th largest as a percent of GDP.

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