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CAN BIDEN BUILD BACK BETTER? YES, IF HE ABANDONS FISCAL "PAY FORS"

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Preface

With the passage of the American Rescue Plan Act in March, the total amount of funding Congress authorized for pandemic relief over the span of just one year (under Democratic and Republican administrations) grew to $5 trillion. The COVID-19 crisis seems to have brought about a suspension of Washington's usual fixation with deficits and debt (a fixation, one might add, only triggered by proposals to increase nondefense spending). However, the rollout of President Biden's two new proposed packages—the American Jobs Plan and the American Families Plan—signals the administration is returning to a prioritization of budget neutrality in its policymaking. The new spending plans, which would begin addressing the country's shortcomings in social and physical infrastructure, total around $4 trillion, and the president has proposed pairing them with a tax plan that would raise a comparable amount in revenue, mostly through increasing taxes on corporations and high-earning individuals. Although there is a timing mismatch in terms of the overall package's budgetary impact (the new spending, spread out over 8 years, would be fully offset after 15 years of revenue increases), the broader "pay for" language and framework has returned.

Yeva Nersisyan and L. Randall Wray argue that not only is this budget-neutral framework and its focus on pay fors likely to face problems as a matter of legislative strategy, it is economically unnecessary. In fact, Nersisyan and Wray go further: they argue that an a priori commitment to ensuring revenues keep pace with spending increases can defeat the goals internal to both the public investment and tax components of these plans. They do not argue that federal policymakers should ignore questions of budgeting, but that there is a better way of thinking about how to plan for large-scale public investments. In their view, as long as the central budgetary question remains "Does this plan increase the deficit?," a host of critical issues will be left ignored, undermining the effectiveness of individual proposals and fiscal policymaking more generally.

Instead of matching an expenditure price tag with the revenue that can be raised, Nersisyan and Wray urge policymakers to evaluate spending and tax proposals on their own terms, according to the goals each is intended to meet. On the expenditure side, for instance, one of the motivations behind Biden's physical infrastructure plan is to make progress in transitioning to a green economy. Nersisyan and Wray note, however, that the Biden plan falls short of what would be required for significant progress on this front. Their concern is that tethering the spending to tax increases means the former will be limited to the political feasibility of the latter.

On the tax side, there are a number of purposes one might want to achieve through tax policy changes, such as reducing income inequality, discouraging undesirable activities, or reducing private demand to head off inflationary pressures. In the pay for game, however, "raising funds" becomes the central objective and, as Nersisyan and Wray illustrate, simply matching the spending number to the revenue number does not ensure any of these other purposes will be served effectively. For example, budgetary offsets for new spending could be desirable if the economy were at full employment. However, if tax policy is going to play a role in curbing inflation, then we would need to choose the appropriate instruments for this task. Nersisyan and Wray argue that the tax changes being proposed are poorly suited to relieving inflationary pressures. In this context, the types of tax increases—those that will free up real resources to be mobilized by some new public initiative—are more important than the total revenue number. They also stress that there are other proven means, beyond the tax system, of controlling inflationary pressures.

As it happens, however, the authors do not see an urgent case for budgetary offsets (or other measures) to control inflation related to Biden's public investment plans. In their view, recent price increases represent either temporary bottlenecks or bounce backs from last year's price drops and, from a broader perspective, global structural changes mean the inflationary potential of US economic growth is far more muted than it used to be. In their estimation, the US economy is not approaching the limits of its potential output. Moreover, they stress that productive capacity can be increased with sufficient support for aggregate demand. That is, public investments in social and physical infrastructure make contributions to both the demand and supply sides of the economy—moving the economy closer to current productive potential, but also increasing future potential. Whichever impact is greater should guide policymakers' decisions around budgetary offsets. Serious budget planning around a proposal to increase public investment by 2 percent of GDP annually, which is what the Biden plan represents, would need to examine these dynamics in detail, not merely aim for a headline revenue target.

As always, I welcome your comments.

Dimitri B. Papadimitriou, *President*
June 2021

Introduction

A couple of months in, the Biden administration successfully passed the $1.9 trillion relief bill and has now proposed two ambitious spending packages to deal with our deficits in physical and human infrastructure. This is a good start that signals the return of fiscal policy and the end of America's disastrous experiment with "small government." The COVID crisis clearly demonstrated that the government can be the solution rather than (as conservatives have long maintained) the problem. Congressional action put much-needed money in the pockets of American households and businesses, while federal funding provided to pharmaceutical companies fast-tracked the development of vaccines. The administration is right to capitalize on this sentiment in pushing its climate and infrastructure agenda.

It seems there is one lesson we should (but did not) learn from the response to the crisis: government spending does not need to be "paid for" in the same sense that private spending does. Within less than a year, Congress appropriated about $5 trillion for COVID relief, through the Coronavirus Aid, Relief, and Economic Security (CARES) Act (March 2020, $2.2 trillion), as part of the Consolidated Appropriations Act of December 2020 ($900 billion), and the American Rescue Plan Act (March 2021, $1.9 trillion). The usual worry about "how will we pay for it" was put on the back burner because this was seen as an emergency response.

With Biden's two new proposals—the American Jobs Plan and the American Families Plan, which total less than the COVID relief spending—the pay for logic is back.[1] The administration has proposed to "finance" infrastructure spending by raising the corporate tax rate from 21 percent to 28 percent, and the next rounds of spending will be "paid for" with taxes on high earners and the wealthy. The administration sees this as fulfilling a campaign promise, since the president "had pledged that his long-term economic agenda would not add further to the growing national debt" (Tankersley and Cochrane 2021). According to the White House, with Biden's tax plan the spending "will be fully paid for within the next 15 years and *reduce deficits in the years after*" (The White House 2021a: emphasis added).

Unsurprisingly, conservatives have been opposing tax increases. Business groups have weighed in against them as well, while generally supporting the spending side of the program. Liberals seem to be the ones most enamored with the idea of tying the spending bill to tax increases. They see it as killing two birds with one stone—getting a much-needed boost for the public sector as well as taxing the rich and the corporations that have long pushed the neoliberal agenda.

Ironically, tying spending to taxes hurts both objectives the administration wants to accomplish: it limits our spending on progressive policy to what we can raise through taxes, and we will only tax the amount we need to spend. Without doubt, the belief that spending needs to be paid for has figured into the amount of spending the administration has proposed.[2] At the same time, even if the new taxes proposed were to become law, they would do little to accomplish the objective of reducing the obscene level of income and wealth inequality in the country.

A better approach to public policy would be to focus on goals instead. On the spending side, we need to address two questions: How much do we need to spend to accomplish the public purpose (to transition to green energy and improve our crumbling infrastructure, for instance), and can the economy absorb that amount of spending without price pressures? If the amount we want to spend is in excess of what the economy can absorb without inflation, then we need to think about not only raising taxes, but also pursuing other policies that have successfully prevented inflation in the past. Further, if the goal of taxing corporations and wealthy individuals is to reduce inequality, then the tax changes should be formulated to accomplish just that—not to "raise funds" to finance the proposed spending.

During the debates surrounding COVID relief spending, the deficit and debt arguments were muted. Hardly anyone seriously argued that the government should not ramp up relief spending because doing so would add to the deficits and the national debt. Instead, leading up to the passage of the $1.9 American Rescue Plan Act in February 2021, the disagreement was over whether it would be inflationary, not whether the government could afford it. We had finally moved away from the deficit and debt rhetoric, which did so much to hurt the recovery in the aftermath of the Great Recession because it had restrained the Obama administration's fiscal response.

By insisting now that new spending needs to be offset by equivalent revenue increases, Biden and his progressive allies are unwittingly contributing to resurrecting the zombie idea that deficits and debt are dangerous and need to be avoided. (They should be reminded that Republicans did not "pay for" their 2017 tax cuts, nor for any of the Republican-led tax cuts since the days of Reagan.) The "pay for" zombie is generally reserved for spending increases, not tax cuts—which usually

means it is a barrier to Democratic proposals, not Republican ones, at least over the past 40 years.

Biden's spending proposals enjoy strong support among the public, making it harder for opponents to derail them. To ensure they are successfully passed, the administration and the Democrats in Congress should separate spending proposals from their tax-increase plans and abandon the logic of fiscal pay fors. COVID relief spending did not need to be offset with taxes and neither do the new packages. Government finances work the same way whether we are in a crisis or not.[3]

Note that we are not arguing that the administration should abandon efforts to increase taxes, but any tax hikes should be formulated to achieve well-stated objectives such as reducing inequality, punishing polluters, reducing high-speed trading, or improving the fairness of the tax system. We will argue that the tax proposals, so far, have not been satisfactorily justified on such bases. Finally, it is possible that general tax hikes might be needed to prevent the spending programs from fueling inflation pressures, but we have not seen evidence that the administration or Congress has adequately addressed the inflationary impacts when considering tax hikes—and we would argue that the kinds of taxes proposed so far would do little to relieve inflation pressures should they arise.

Building Back Better: The Plan(s)

The American Jobs Plan features ambitious goals, such as transitioning the United States to "100 percent carbon pollution-free electricity" by 2035 (Rappeport and Tankersley 2021).[4] At a price tag of $2.3 trillion over eight years, it "includes a wide range of investments in highways, transit and electric vehicle charging systems and upgrades to water pipes, the electric grid and veterans' hospitals" (Tankersley and Cochrane 2021). It proposes $621 billion spending on transportation infrastructure for roads and bridges, spending on electric vehicles (and related infrastructure), modernizing transit systems, and repairing and expanding Amtrak. The plan would spend $213 billion on building and retrofitting affordable housing, $100 billion for improving infrastructure at public schools, $100 billion to build high-speed broadband networks, and $400 billion to support affordable care for the elderly and people with disabilities. Around $300 billion would be invested in manufacturing, and $180 billion would fund climate-related research and development (Zarracina, Garrison, and Petras 2021).

The president's tax plan to "pay for" his spending proposal includes raising the corporate tax rate to 28 percent from 21 percent, imposing a minimum tax on global profits, and cracking down on companies that try to move profits offshore (Rappeport and Tankersley 2021). It would also impose a 15 percent tax on the profits big corporations report to investors—whether they owe taxes or not. The Biden administration calculates this would affect about 45 corporations that have avoided tax liabilities even while earning $2 billion or more per year. In addition, the plan would double the tax on global intangible low-taxed income to 21 percent, "which would narrow the gap between what companies pay on overseas profits and what they pay on earned income in the U.S." (Rappeport and Tankersley 2021). A provision in the president's tax plan called SHIELD (Stopping Harmful Inversions and Ending Low-tax Developments) targets domestic firms that move their headquarters abroad for tax purposes—a process known as an "inversion." The proposal would also prevent companies from lowering their US income tax bill by sending their profits as payments to their headquarters abroad.

The American Families Plan is investment in human infrastructure. It adds four years of free education to the existing system by providing universal free access to two years of preschool and two years of community college education. It provides direct support to children and families, including childcare assistance to some families (based on income), extending the tax credits from the American Rescue Plan until 2025, and expanding the Affordable Care Act (Obamacare) subsidies. The package also includes financing for a federal paid leave program to eventually guarantee 12 weeks of paid parental, family, and personal illness leave (The White House 2021b). In all, the American Families Plan includes $1.8 trillion in investments ($1 trillion) and tax credits ($800 billion) for American families and children over the next ten years (The White House 2021b). The plan would also "invest $9 billion in American teachers, addressing shortages, improving training and supports for teachers, and boosting teacher diversity."

To "finance" this spending, the administration proposes raising the top marginal tax rate from 27 percent to 39.6 percent, restoring it to its pre-2017 level, and ending capital income tax breaks and other loopholes for the very top. The plan would close the carried interest loophole, eliminate the cap on income subject to the Medicare tax, and raise the capital gains tax so that "households making over $1 million—the top 0.3 percent

of all households—will pay the same 39.6 percent rate on all their income, equalizing the rate paid on investment returns and wages" (The White House 2021b).

Note that the spending takes place over 8 years, while the taxes to "pay for it" are planned for a 15-year period, i.e., it is not "paid for" in the traditional sense. As Jim Tankersley and Emily Cochrane (2021) reported, "[t]he unusual 15-year window for a tax increase to offset spending could help Democrats if they choose to attempt to push Mr. Biden's plan via budget reconciliation, a parliamentary process that would allow them to bypass the 60-vote requirement imposed by the Senate filibuster and pass the plan with only Democratic votes." In other words, this appears to be a maneuver to get around a political constraint rather than for economic reasons—Republicans would filibuster, and the Democrats are highly unlikely to obtain the 60 votes they would need to move forward.

Of course, this raises the question: If an eight-year program can be paid for over a fifteen-year period, could we extend the payments to twenty-five years? One hundred and twenty-five years? Some indefinite future? What does "pay for" mean? We will return to this issue below.

Should We Raise Taxes to Pay for the Spending? An Alternative View of Taxation

While raising taxes to offset the spending might seem intuitive, there is no economic reason why that should be the case. Taxes can serve several important functions in the economy, but paying for the national government's spending is not one of them. The federal government always pays for its spending by crediting bank accounts, whether the amount of spending is offset by taxes or not. It is able to do so by virtue of being the monopoly issuer of the national currency. Any spending that takes place has already been paid for.[5]

This was recognized by Chairman of the New York Federal Reserve (also a New Dealer and the "father" of income tax withholding) Beardsley Ruml (1946), who rightly argued that taxes are "obsolete" as a source of revenue. Instead, taxes serve to:

1) remove private demand in order to free up resources to be used for government programs;
2) reduce inequality of income and wealth;
3) distribute costs among the beneficiaries of a government program (not to pay for the program, but rather for equity purposes and to reduce command over resources by the program's beneficiaries); and
4) punish "bad behavior" or encourage "good behavior."[6]

Coming out of World War II, Ruml (1946, 36) argued that:

> [t]he war has taught the government, and the government has taught the people, that federal taxation has much to do with inflation and deflation … If federal taxes are insufficient or of the wrong kind, the purchasing power in the hands of the public is likely to be greater than the output of goods and services with which this purchasing demand can be satisfied. If the demand becomes too great, the result will be a rise in prices, and there will be no proportionate increase in the quantity of things for sale . . . The dollars the government takes by taxes cannot be spent by the people, and therefore, these dollars can no longer be used to acquire the things which are available for sale.

In Ruml's view, taxes are not imposed to raise revenue, but to accomplish specified goals, from controlling inflation to discouraging undesirable behavior. Point (1) above, for instance, addresses inflation pressure—taxes remove private income (or wealth) to reduce private spending and hence free up real resources. By pairing taxes with spending (as the "pay for" approach suggests), we imply that every increased dollar of spending by the government should be offset with a tax hike that will withdraw a dollar of spending from the economy. There are times when this might be desirable (e.g., if the economy is already at full employment and the government still wants/needs to spend more), but that is not the usual situation. Whether we want to inject spending or withdraw it depends on conditions in the economy and is not determined a priori.

Ruml's functional approach to taxes implies that they need to be well targeted to efficiently accomplish their purpose. If the goal is to control inflation, which is what matters from a macroeconomic perspective, matching spending with taxes without care for the kind of spending and the kind of taxes will not be very effective, because not all taxes have the same impact on private spending. A one-dollar tax on high income or on financial transactions is not likely to reduce spending on output as much as a dollar of tax on low-wage workers. If we really need to reduce private spending by one dollar, we might need a tax of

$100 on a high-income household.[7] If we wish to reduce spending on a wide range of consumer goods and services (freeing up the resources used to produce them), we would want a broad-based tax on income or perhaps consumption.

In other words, we should not pursue balance in terms of spending and tax revenue, but rather balance in terms of matching the increased government demand for resources relative to the resources released by the tax imposed. While it would be impossible to ensure a perfect match in terms of impact on resource use, there is no reason to believe that the "pay for" approach comes closest to achieving the ideal, especially because it does not even operate with a view to achieving that ideal. Pursuing taxes for revenue purposes is not fit for the task of releasing real resources—and may well be in conflict with it. Case in point, the Biden tax plan aims to inject spending over 8 years, but withdraw it (through taxes) over the following 15 years. Clearly, if the goal is to fight inflation, that makes no sense—you want to remove resources while you are spending, not when you are done and the economy might face disinflation/deflation.

Even as we must drop the notion that the projected tax revenue should match the proposed spending dollar-for-dollar, we must still consider equity issues: Is it better to impose the burden on low-wage workers or on high-income individuals? From an equity perspective, it is better to aim taxes at excessive, luxurious, and (socially and environmentally) destructive consumption of the nation's resources rather than at spending that promotes adequate living standards for lower-income households. We would not want to reduce consumption below socially accepted subsistence levels (generously defined). Sales taxes on consumption often exempt food and other necessities precisely for that reason, but an income tax with a generous exclusion for low-income households is probably better. Even better is a progressive and high marginal income tax above an exemption level, to significantly reduce the nonessential consumption of resources. If we are implementing a time-limited spending program (such as to fight a war or to implement a Green New Deal) then it would be better still to postpone consumption (especially by the general population) rather than permanently reduce it. This is the approach we have taken in our Green New Deal proposal, which would impose a temporary surcharge on payroll taxes for a decade, and then hike Social Security payments to return income later—essentially postponing a measure of consumption until retirement years (Nersisyan and Wray 2020).

Alternatively, high marginal tax rates on high incomes, together with steep taxes on large wealth holdings and inheritances, can further the effort to free up resources while reducing income and wealth inequality. Many "progressive" proposals advocate small rate hikes (a few percentage points) on billionaires and millionaires (and corporations) to "pay for" the spending proposals. We believe this is wrong-headed. To fight inflation and inequality, the higher the rate hikes, the better.[8] There is no reason to limit the rate increases to whatever levels are believed to raise revenue sufficient to match proposed spending; indeed, that would almost certainly be counterproductive, as it would not sufficiently reduce consumption by the rich to free up the resources needed for the projects, nor would it make much of a dent in inequality. From our perspective, these proposals fail to promote either of these important goals (releasing resources and reducing inequality).[9] Moreover, if the goal is to reduce income inequality, taxation policy should be combined with other measures—such as raising the minimum wage, job guarantee programs, and other measures to create a robust labor market.

Taxes can also serve a useful role in discouraging "bad" behavior and encouraging "good" behavior (point 4 above). Taxes might be placed on polluters (carbon taxes, for example) and tax incentives provided to those who adopt environmentally friendly solutions (rooftop solar panels) to achieve environmental objectives. Such practices are widely discussed and we believe that they can play some role in furthering the effort to slow and ultimately reverse a climate catastrophe. We do not have anything important to add to the discussion except to insist that taxes and tax incentives should be imposed where they can be effective in achieving program goals, and not with regard to how much revenue they can raise (or lose).

Biden's tax plan does contain certain provisions that correspond to this logic, such as tax incentives for electrical transmission lines and electricity storage projects, as well as various clean energy tax credits. Further, it plans to eliminate tax preferences for the fossil fuel industry (The White House 2021a). While the Treasury Department has estimated that eliminating fossil fuel subsidies would increase tax revenue by $35 billion over the coming decade, that is beside the point. What matters is whether these tax changes can help accomplish the goal of transitioning to green energy.

The pay for approach to federal budgeting not only fails to accomplish the goal of ameliorating income and wealth

inequality, it is also inconsistent with the objectives policymakers are trying to accomplish on the spending side. While the administration's infrastructure plan is ambitious by today's standards, it might fall short of what we need to fully transition to a green economy.[10] In Nersisyan and Wray (2020), we look at different estimates of "greening" the economy, most of which exceed $1 trillion per year for 10 years (Senator Bernie Sanders's plan comes in at $1.6 trillion/year). This amounts to around 5 percent of US GDP. By contrast, the administration's proposal is around just 1 percent of GDP per year, and only a portion of that is geared toward greening the economy. Although it is not clear how the administration has come up with its spending numbers, it is likely that striving to match the spending with the tax revenue that can be raised has played a role. If we delink spending from the revenue that can be raised from what are probably viewed as the limits of politically viable tax hikes, we can pursue a proposal that is big enough to accomplish the necessary transition.

Politically, the "pay for" approach is not a winning argument at the moment, either. Tying very popular spending programs to revenue offsets could be a losing proposition with both parties. Republicans are adamant that they will not support tax hikes.[11] On the other side of the aisle, Democrats insist on reversing Trump's limit on exemptions for state and local taxes.[12] The administration is caught between Democrats who insist on restoring tax deductions that benefit upper-middle class homeowners and workers in high-tax states, and Republicans who oppose higher taxes on high-income individuals and corporations.

In conclusion, there is no economic reason why the spending program needs to be matched with a tax program. The earlier Trump and Biden relief programs proved not only how popular spending delinked from tax hikes can be, but also proved that none of the supposed consequences of larger deficits and debts have materialized. The two sides of the government's budget accomplish different goals and should be judged based upon their effectiveness in accomplishing those goals. The merits of the tax plan should be debated on their own—not with the goal of raising revenue, but focused on accomplishing the public purpose. We should close tax loopholes and prevent the wealthy from avoiding taxes. We should also tax capital gains at a high rate. But we should do so not to raise revenue, but to reduce income inequality and create a fairer economy.

Some might argue that this approach makes it less likely for higher taxes to ever become a reality. But framing the issue as if we are taking the money from the wealthy to pay for services for the poor is not a winning argument in the United States. It creates resistance because it gives the impression that the rich are paying for "goodies" for everyone else. In reality, we are paying for public services with public money, by utilizing the state's own monetary system. What we accomplish by taxing the affluent is not raising funds to pay for spending, but preventing them from devouring an oversized share of society's resources. Still, we cannot let the survival of human civilization be conditional on our ability to overcome rich people's resistance to paying taxes.

But Won't It Be Inflationary If Not Paid For?

Some are already worried about inflation even before Congress considers the proposal. Recent data indicate a sharp rise in the consumer price index (CPI) and some also point to market jitters that have bumped up interest rates on longer-term bonds—supposedly because investors expect higher inflation (and want to protect inflation-adjusted returns). Because conventional theory now believes that inflation is largely driven by expectations, market expectations of inflation will be self-fulfilling according to many pundits.

We believe that because the plan will add only about 2 percent of GDP worth of new spending into the economy annually (with much of that time-limited), it is unlikely to be inflationary.[13] There could be bottlenecks and price pressures in different industries, but not true inflation—which would occur only if the economy were pushed beyond full employment of its labor and capital resources. These could be dealt with by careful planning that releases spending gradually and allocates it in a way to avoid inflation.

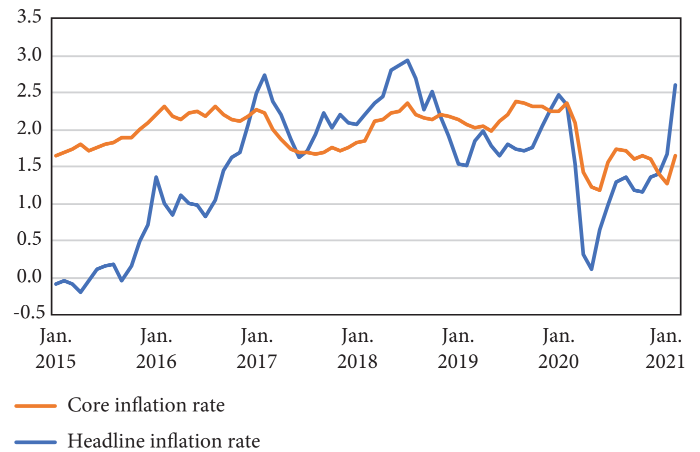
A closer look at the CPI data shows that recent price increases are largely just recoveries from previous drops. For example, import prices in March 2021 were up 6.9 percent, but in April 2020 they were down 6.8 percent. Imported fuel had fallen by 31 percent in April 2020 and was up 6 percent in March 2021. For the entire CPI basket of goods and services, the index was up 0.6 percent this March and down by 0.7 percent last April. Energy was a driver of the price rise in March 2021, up at a 20 percent pace year over year. Although overall inflation has increased in recent months, the less volatile measure that excludes energy and food has been more stable and remains within the Fed's desired range (up just 1.6 percent year over year—under the 2 percent target), as shown in Figure 1.

Indeed, core inflation has been lower in the past year than it has been in the last six years. On the face of it, inflation worries are premature according to CPI data.

In fact, inflation has not really been a problem for the US economy for a few decades, as shown in Table 1. Further, there is no clear inverse relationship between economic growth and inflation, which means that even if spending programs raise the growth rate, they need not cause inflation. The average inflation rate since the 1990s has been 2.4 percent, just slightly above the Fed's target. In this period, we had two of the longest recoveries on record, neither of which was able to push the economy into out-of-control inflation territory. We will not go into detail, but we believe that global structural transformation has played a big role in reducing the inflationary potential of domestic growth. Global supply chains and competition with low-wage suppliers have reduced production costs and prices. While there have been disruptions due to COVID-19, recovery from the pandemic will keep costs in check.

As Figure 2 shows, rentals (imputed and actual total about three-quarters of a percentage point), transportation (almost a full percentage point), healthcare and utilities (one-third of a percentage point), and food (one-quarter of a percentage point)

Figure 1 **Headline and Core CPI Inflation, Jan 2015–Mar 2021 (percent)**

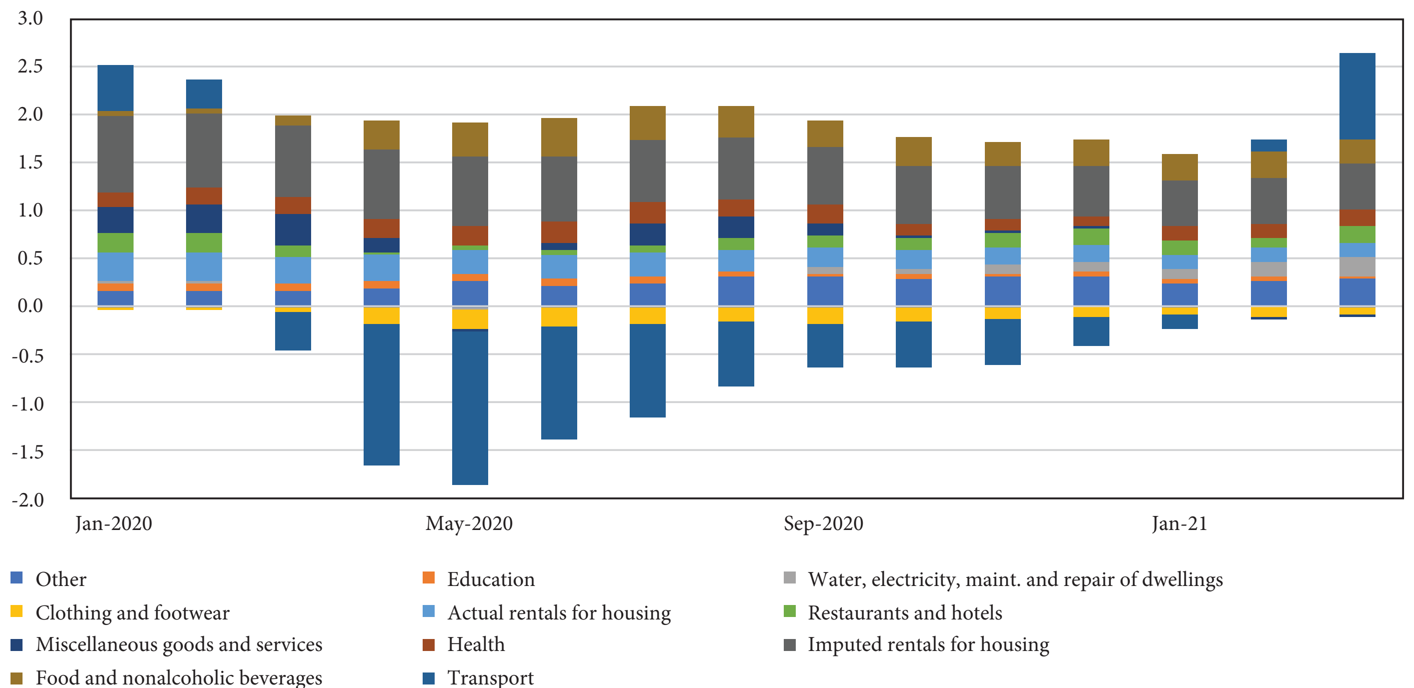


Source: OECD

Table 1 **Average Inflation and Growth Rates in the United States, by Decade**

Decade	Inflation Rate	Growth Rate
1950–59	2.05	4.24
1960–69	2.36	4.53
1970–79	7.08	3.24
1980–89	5.55	3.13
1990–99	3.01	3.23
2000–09	2.56	1.92
2010–19	1.77	2.30

Figure 2 **Contribution to Inflation (percentage points), Jan 2020–Mar 2021**



Source: OECD

together account for almost all of the recent change in the CPI. However, the costs of housing, healthcare, and transportation do not move closely with the business cycle. In other words, prices in these sectors would not necessarily respond to a growing economy in the way that some other components of the CPI might. In fact, by developing affordable housing, increasing the supply of care for children and the elderly, and providing free community college education (constraining the pricing power of private suppliers of housing, care services, and education), the plan might be disinflationary for these components of the CPI. Similarly, by reducing our reliance on fossil fuels, the prices of which are subject to speculation and largely determined in international markets, we might provide more stability to energy prices here in the United States (helping to constrain inflation more generally).

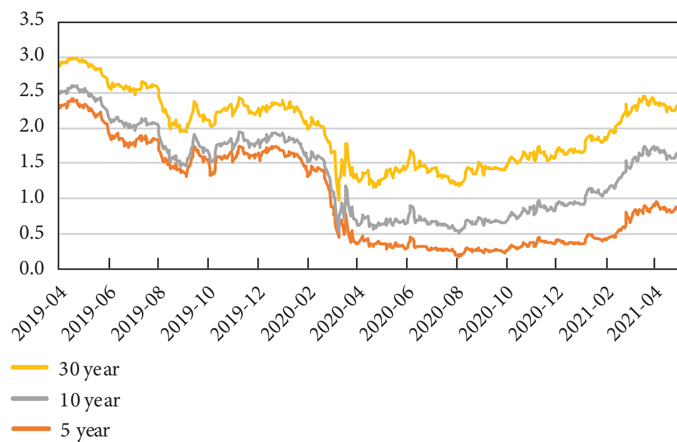
With respect to longer-term interest rates, they have merely returned to a more reasonable level—rising from around 1 percent in the summer of 2020 to around 2 percent this spring, as shown in Figure 3. It is hard to believe that longer-term interest rates could remain much below 2 percent because of the risk of capital losses if the Federal Reserve should raise the fed funds rate. The widespread view is that the return to holding longer maturity bonds must be above 2 percent to compensate for capital losses (applying either the duration method or Keynes's square rule,[14] potential capital losses increase quickly as the yield falls). In other words, even if one takes the Fed at its word that it will keep the fed funds rate low for the foreseeable future, prudent bond holders need a higher return to compensate for the inevitable tightening of monetary policy. Furthermore, we would point out that asset prices are probably too high across the entire range of financial assets, so asset prices should be expected to fall (and yields to rise)—quite apart from whether inflation lurks on the horizon. Thus, we doubt that the observed rise of rates on longer maturities really reflects expected inflation.

An alternative explanation would be that rates are rising because of increasing budget deficits and government debt. Figure 4 and Figure 5 cast some doubt on that intuition by demonstrating that interest rates are largely determined by the Fed, and not by government spending or debt.

The correlation of both the short-term and long-term rates with the fed funds rate is nearly 99 percent and 89 percent, respectively. This does not prove that inflation (or expected inflation) is not the cause of higher interest rates—since the causal sequence can run from a Fed rate hike to fight inflation to higher market rates. However, the Fed has repeatedly emphasized that it does not see inflation on the horizon and therefore it plans to keep rates low.

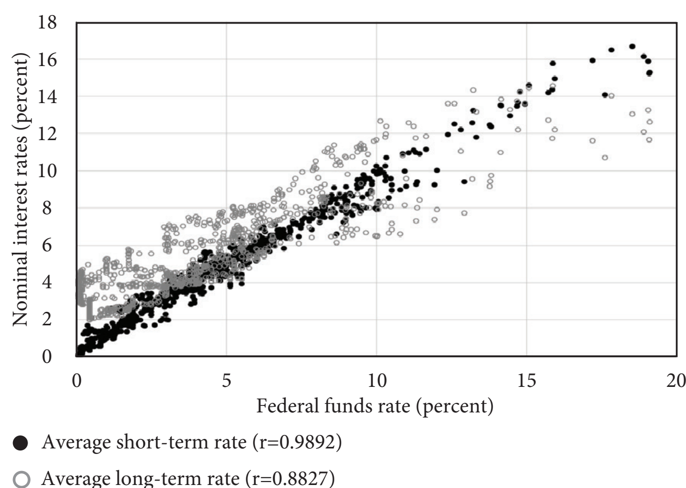
As Figure 5 shows, in recent years, even as the federal-government-debt-to-GDP ratio has risen, both the Fed's target rate and the rate on 10-year Treasury debt have declined. In other words, the Fed has lowered its policy rate despite deficits and

Figure 3 **Daily Treasury Rates, April 2019–April 2021 (percent)**



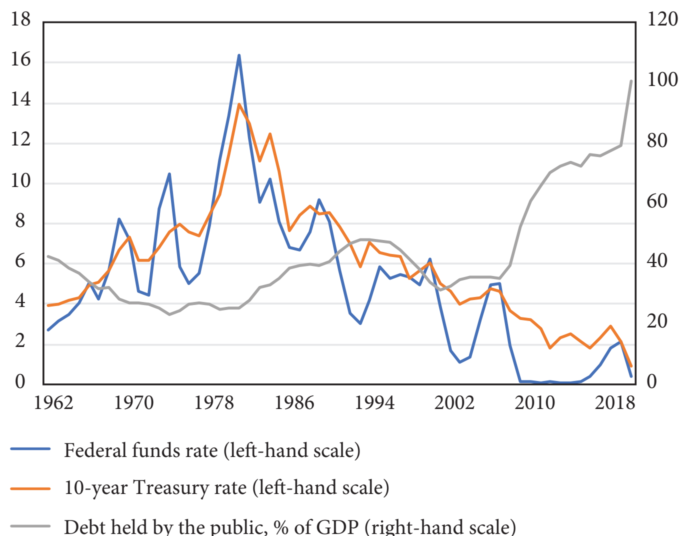
Source: Board of Governors of the Federal Reserve System, retrieved from FRED

Figure 4 **Correlation between Long-Term and Short-Term Interest Rates**



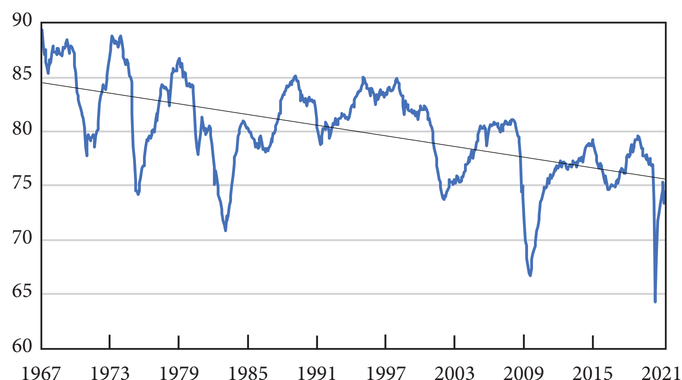
Source: Board of Governors of the Federal Reserve System

Figure 5 **Government Debt and Interest Rates, 1962–2020**



Source: FRED for interest rates; White House for debt (except for the 2020 observation, which was retrieved from FRED)

Figure 6 **Capacity Utilization Index, Jan 1967–Mar 2021 (percent of capacity)**



Source: Board of Governors of the Federal Reserve System, retrieved from FRED

rising debt and seems prepared to continue to do so. To conclude, we see the recent rate rise on longer maturities to be a market correction rather than caused by a "market knows best" reaction to incipient inflation or higher deficits.

To be sure, some output prices are (or will be) rising significantly—partly due to relief already distributed and partly due to the pandemic's economic effects. Many households have not experienced a reduction in their market-derived income but have received relief checks. Much of that relief has been saved or used to pay bills, although some has been spent on home renovation, new homes, outfitting home offices, purchasing recreational vehicles, and—soon—will be spent on postponed vacations. Production of some of the desired goods and services has been hampered by the pandemic, meaning supplies are still short. Global supply chains were disrupted (auto manufacturers are short of the electronics they need). All of this means that we should expect, and not be overly concerned about, scattered but significant price hikes.

On the other hand, global production will return (and in the case of China, recovery is well underway already). Foreign exporters still want to sell output for US dollars; low wages and prices abroad will hold down inflation in the United States. Higher domestic prices will provide the incentive needed to induce suppliers to produce more. That is how markets are supposed to operate.

While capacity utilization has recovered significantly from the bottom of the COVID-19 crisis, it is still below the pre-COVID levels. Further, Figure 6 shows the downward trend in capacity utilization in the post–World War II period. This indicates that even in recoveries, we have not strained productive capacity—which is part of the explanation for the long-term trend toward lower inflation rates.

Infrastructure Spending "Pays for Itself"

Probably the most popular part of Biden's plan is the proposal to ramp up infrastructure spending. Not only would it promote transitioning to a more sustainable economy, it would also generate well-paying jobs. Further, parts of his plan have been favorably compared to Franklin D. Roosevelt's Works Progress Administration and other New Deal programs that essentially developed America and created our twentieth-century economy. Before the New Deal, the United States was largely an underdeveloped country unfit to compete. Unfortunately, that description is uneasily too apt for today's America, which is rapidly being left behind by China. FDR's words ring too true with respect to our current position: "I see one-third of a nation ill-housed, ill-clad, ill-nourished . . . The test of our progress is not whether we add more to the abundance of those who have much; it is whether we provide enough for those who have too little" (January 20, 1937). As John Steinbeck said at the memorial service for Harry Hopkins—who ran FDR's New Deal employment programs—"Human welfare is the first and

final task of government. There is no other" (Hopkins 2021). President Biden might be the president to resurrect this long-dormant notion.

It is interesting to look at another infrastructure project that preceded FDR's New Deal, not only for its results but also for the argument made to justify its finance. In 1921 Henry Ford proposed a major energy infrastructure project (at Muscle Shoals) to be funded by government through issue of currency. As reported in a *New York Times* (1921) interview:

> "But would not Mr. Ford's suggestion that Muscle Shoals be financed by a currency issue raise some objections?" Mr. Edison was asked.
>
> "Certainly. There is a complete set of misleading slogans kept on hand for just such outbreaks of common sense among people. The people are so ignorant of what they think are the intricacies of the money system that they are easily impressed by big words. There would be new shrieks of 'fiat money,' and 'paper money' and 'green-backism,' and all the rest of it—the same old cries with which the people have been shouted down from the beginning."[15]

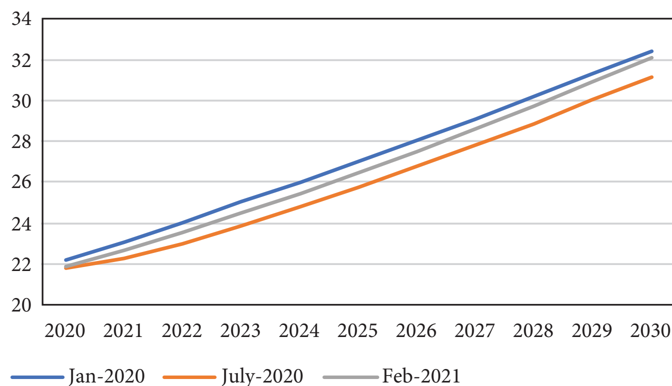
He explained that so long as the money created to finance government spending increases productive capacity, it will remain sound:

> "Now, here is Ford proposing to finance Muscle Shoals by an issue of currency. Very well, let us suppose for a moment that Congress follows his proposal. Personally, I don't think Congress has imagination enough to do it, but let us suppose that it does. The required sum is authorized—say 30 million dollars. The bills are issued directly by the Government, as all money ought to be. When the workmen are paid off, they receive these United States bills. When the material is bought it is paid in these United States bills.… They will be based on the public wealth already in Muscle Shoals, and their circulation will increase that public wealth, not only the public money but the public wealth—real wealth."
>
> "When these bills have answered the purpose of building and completing Muscle Shoals, they will be retired by the earnings of the power dam. That is, the people of the United States will have all that they put into Muscle Shoals and all that they can take out for centuries—the endless wealth-making water power of that great Tennessee River—with no tax and no increase of the national debt."

What is interesting about this interview is that Edison recognized the inflation danger of government spending but argued that the spending would be producing real wealth and productive capacity. Purchasing the electricity derived from the project would absorb income and return currency to the government—what Modern Money Theory calls "redemption," the notion that the purpose of taxes is to "redeem" currency issued by government, taking it out of circulation rather than "paying for" the spending (that had already occurred). No taxes would be needed to "pay off" debt (or interest). And long after all the currency had been redeemed, the project would continue to provide electricity to drive further production.

In truth, the long-run impact of the project could be disinflationary, not inflationary—once the major construction was finished, the project would absorb income, not create more income (except what was needed to keep producing electricity). By increasing productive capacity (through the increased supply of energy), the long-run impact would be disinflationary—which should be the long-run impact of public infrastructure investment more generally.[16] Indeed, when the United States emerged from World War II and returned its productive capacity to civilian use, they enjoyed a period of unprecedented prosperity with low inflation. While it had been feared that the

Figure 7 **Nominal Potential GDP Estimates, 2020–30 ($ trillion)**



Source: CBO

nation would slip back into depression at war's end, the pent-up demand—fed in part by substantial "patriotic savings" that included government debt accumulation equal to 100 percent of GDP—kept consumption high enough to utilize the capacity.[17]

The economy's potential is not set in stone but can be expanded by maintaining sufficient aggregate demand. As an example, the Congressional Budget Office revised estimates of potential nominal GDP sharply downward in July 2020 (compared to January 2020), only to then revise them upward in February of 2021 (see Figure 7). That's because fiscal policy actions, such as the CARES Act, changed the economy's trajectory and thus the trajectory of its potential (similarly, in the post–global financial crisis period, the estimates for potential GDP were consistently lowered as the real-world collapse of GDP forced a reappraisal of the growth of potential output going forward).

To some degree, one could criticize the "moving target" approach to calculating potential—as if the forecasters are embarrassed that actual economic performance would move ever-further away from what had been thought to be potential, so potential is readjusted downward. On the other hand, current performance impacts future performance. If government programs keep spending up economy-wide, this will lead to more investment in both physical and human capital, thus increasing GDP now, as well as affecting productivity and the economy's potential. In other words, government adds to aggregate demand but also to aggregate supply as investments expand capacity. Further, any well-planned infrastructure spending is going to raise the country's potential output significantly, producing disinflationary pressures and keeping inflation at bay even as growth improves.

Given these two points—that potential is neither "natural" nor known with certainty, and that increasing spending not only can move the economy closer to today's potential but actually increase tomorrow's potential—we should not be overly concerned about adding 2 percent of GDP worth of spending to aggregate demand. To the degree that spending provides both physical and human capital, it is likely that the supply side of the economy could grow as fast as, or faster than, the demand side. And if that is the case, the notion that we need tax revenue (which can reduce demand) to keep pace with government spending (that generally boosts demand) is wrongheaded.

As we have argued above, however, even if growth in demand outpaces growth in supply, the proper set of taxes would not be those that keep revenue growth on par with growth of government spending. Rather, the proper tax structure would release real resources to be mobilized for the growth of government programs. And, indeed, that mobilization would be designed to only temporarily remove resources from alternative uses—that is, during the development phase of the physical and human capital. After that, policy would need to stop subtracting private demand and instead promote more demand so that the infrastructure could be fully utilized. This was the principle that John Maynard Keynes stressed and why he proposed "postponed consumption" over taxes that would permanently reduce income. And that is what was done after World War II, as consumption was unleashed and supported by wealth (financial and real) accumulated during the war. For the Green New Deal, we have suggested use of a temporary surcharge on a broad base of income sources (such as wages, salaries, and self-employment income), with a boost to consumption later (such as more generous Social Security payments) (Nersisyan and Wray 2020).

This, we think, would make more economic sense. If properly communicated, it might be more politically palatable, too, in an environment in which spending proposals are favored by a majority (and some are favored by a large majority) of the population while the tax increases are less popular.

Notes

1. For example, Janet Yellen (2021) argues: "we do need fiscal space to be able to address emergencies like the one that we've been in with respect to the pandemic. We don't want to use up all of that fiscal space and over the long run deficits need to be contained to keep our federal finances on a sustainable basis. So, I believe that we should pay for, pay for these historic investments."
2. Representative Alexandria Ocasio-Cortez has joined with environmentalists in arguing that the commitment to the environment alone should be closer to $10 trillion if we are going to stop climate change.
3. And, of course, it is puzzling that the climate catastrophe we face does not rise to the level of a "crisis" though the very future of humanity lies in the balance. We live in the age of multiple and intertwined pandemics: COVID-19 (which is likely to mutate and make regular returns), climate change, inequality (by race, gender, and ethnicity), poverty, unemployment, homelessness, secular stagnation,

racism, refugees, sea-level rise, forever wars, and demagogues subverting democracy.

4. More recently, it was reported that Biden will announce a plan to "cut planet-warming emissions nearly in half by the end of the decade, a target that would require Americans to transform the way they drive, heat their homes and manufacture goods" (Friedman and Davenport 2021).
5. Technically, when the Treasury spends (either electronically or by issuing a check), the Fed credits a bank's reserves and that bank credits the demand deposit of the recipient of the spending. This is always true, whether the federal government's budget over the course of the year turns out to be in balance, in deficit, or in surplus; see Wray (2015).
6. Ruml's list of legitimate purposes for taxes follows in general terms what the Musgraves (Musgrave and Musgrave 1984) had incorporated into perhaps the most import public finance textbook. We are not going to provide a detailed summary but would include it among the works most important to the current discussion; see also Lane and Wray (2020).
7. Note that a one-dollar tax on a very low-income household might not reduce its spending, either, if it is already living on the edge of subsistence. Instead, they would have to maintain spending by running down saving or charitable giving.
8. To further prove our point, Saez and Zucman (2019) show that setting a lower wealth tax rate leads to little deconcentration of wealth, although it raises "revenue" forever, while higher tax rates rapidly lower the concentration of wealth, but do not raise revenue for long. If the objective of taxation, therefore, is to reduce wealth inequality (as we maintain it should be since the state is not revenue constrained), then a higher wealth tax rate is desirable.
9. Further, the American Families Plan includes cost sharing with state governments, which have to rely on often regressive taxes to finance their spending. This in turn exacerbates the problem of income inequality that the administration is attempting to solve. Again, this is an example of how formulating policy based on the inaccurate thinking that the federal government is financially constrained leads to the opposite of what the policy is trying to accomplish.
10. We need to not only build infrastructure to promote greening of the economy, we also need to shut down operations that contribute to the climate catastrophe. John Kerry is working in the Biden administration to get Wall Street on board with financing green investments but is not applying enough pressure to defund fossil fuels. We cannot have it both ways and defunding destructive activities is the quickest and technically easiest move the administration could pursue (McKibben 2021). The administration should push to remove all government support for fossil fuels and pressure private finance to remove its support of environmentally and economically unsound investment. This is not to generate revenues for spending but to reduce resources used and environmental damage done by the fossil fuel sector.
11. "'Raising corporate taxes, and others, is kind of a nonstarter for Republicans. It's kind of a nonstarter for us, too,' said Ed Mortimer, the chamber's vice president of transportation and infrastructure" (Tankersley and Cochrane 2021).
12. "We say, 'No SALT, no deal,'" said the lawmakers, Representatives Tom Suozzi of New York, and Josh Gottheimer and Bill Pascrell Jr., both of New Jersey. "We will not accept any changes to the tax code that do not restore the SALT deduction and put fairness back into the system" (Tankersley and Cochrane 2021).
13. This is approximately in line with our earlier estimate of the net impact on GDP of a full-scale Bernie Sanders–type Green New Deal proposal, which would have been phased in over a ten-year period; see Nersisyan and Wray (2020). Unlike Biden's proposal, the Green New Deal proposal would have included programs resulting in a net reduction of resource use (such as Medicare-for-all) and, as discussed, the "greening" programs were more ambitious. On the other hand, the Biden proposal has more spending on social welfare programs.
14. If the rate of interest rises by more than the square of itself, the coupon payment will just offset the capital loss. For example, at an interest rate of 2 percent, a mere 4 basis-point increase will cause a capital loss sufficient to wipe out coupon earnings.
15. Edison went on with a view that is particularly apt as a description of the political quagmire Biden faces:

> "But maybe we have passed beyond the time when the thoughtful 2 percent—you know, I gather from my questionnaire that only 2 percent of the people think," and Mr. Edison smiled broadly. "Maybe they can't shout down American thinkers any longer. The only dynamite that works in this country

is the dynamite of a sound idea. I think we are getting a sound idea of the money question. The people have an instinct which tells them that something is wrong, and that the wrong somehow centers in money. They have an instinct also, which tells them when a proposal is made in their interests or against them." (New York Times 1921)

16. Schumpeter distinguished between the short-run inflation from innovators withdrawing resources from other uses versus the long-run deflationary impact of the innovations that increased output. Greening the economy should be expected to temporarily move resources to solar panel production, etc., but will eventually increase capacity while improving the environment (which will free-up resources that now must be used to clean up after environmentally destructive activities).
17. Inflation did come later, at the end of the 1960s and especially in the 1970s. This might be attributed at least in part to the Vietnam War (which drained the nation's resources without an accompanying strategy to reduce domestic civilian spending; this often results in inflation during wartime) and, later, to OPEC oil price hikes.

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