



# Four Priorities for Pandemic Relief Efforts

**Joseph E. Stiglitz**

April 2020

## About the Author

Joseph E. Stiglitz is the chief economist of the Roosevelt Institute and a professor at Columbia University. A recipient of the Nobel Memorial Prize in Economic Sciences (2001) and the John Bates Clark Medal (1979), he is a former senior vice president and chief economist of the World Bank and a former member and chairman of the US president's Council of Economic Advisers. His work focuses on income distribution, markets with asymmetric and imperfect information, globalization, public finance, and macroeconomics, and he is the author of several bestselling books. For the Roosevelt Institute, he authored *Rewriting the Rules of the American Economy: An Agenda for Growth and Prosperity* (W.W. Norton, 2015). His most recent title is *People, Power, and Profits: Progressive Capitalism for an Age of Discontent* (W.W. Norton, 2019).

## Acknowledgments

The author thanks Jeronim Capaldo for all comparative data analysis. The author also thanks the Roosevelt Institute team, especially Debarati Ghosh, Matt Hughes, Mike Konczal, Julie Margetta Morgan, Bharat Ramamurti, and Felicia Wong.

### ABOUT THE ROOSEVELT INSTITUTE

The Roosevelt Institute is a think tank, a student network, and the nonprofit partner to the Franklin D. Roosevelt Presidential Library and Museum that, together, are learning from the past and working to redefine the future of the American economy. Focusing on corporate and public power, labor and wages, and the economics of race and gender inequality, the Roosevelt Institute unifies experts, invests in young leaders, and advances progressive policies that bring the legacy of Franklin and Eleanor into the 21st century.

# EXECUTIVE SUMMARY

The COVID-19 pandemic poses deep and intertwined structural threats to an American economy that, by many metrics, was already more fragile than its global counterparts.

When the virus struck, the US had far greater wealth and income inequality than other advanced nations, and far larger coverage gaps in health and social insurance—from paid leave to unemployment insurance. As always, those inequalities were starker for Black and brown Americans.

Though Congress has intervened with trillions of dollars in stimulus and relief, these rescue packages have been poorly designed. Cash and unemployment benefits will likely run out before the crisis is over; state and local governments, facing increasing expenses and declining revenue, are not receiving the funds they need; the “payroll protection plan” is both inadequately funded and ill-equipped to reach those who most need protection.

We should not mistakenly renew and extend the existing programs that have serious design flaws. It is not too late to make different policy choices. This issue brief recommends four:

- Reducing contagion and containing the pandemic with further support for our health care and social insurance systems, including paid leave;
- Funding state and local governments;
- Keeping workers in jobs with a paycheck guarantee program that sends money straight to firms to support their workers; and
- Providing broader-based liquidity and debt relief for individuals and households.

Given continued uncertainty, and our weakened initial conditions, a failure to correct existing design flaws in the current federal packages threatens our overall economic and physical health.

The macroeconomic consequences could be dire and long-lasting. Without immediate and effective stabilization, we could see long-term debt and bankruptcy spirals—starting with middle- and low-income Americans. Without state relief, we could see a new wave of unemployment among 22 million state and local workers. We know, based on the results of other economic crises, including the 2008 financial crisis, that all of this could scar our long-term economic potential and would most hurt America’s most vulnerable.

# INTRODUCTION

The COVID-19 pandemic has thrust us into a new reality, and any course we set now will have huge and lasting repercussions on public health and the economy—on the speed of recovery; the depth and duration of a post-pandemic recession; and long-term prospects for shared prosperity.

That is why we must take a clear-eyed look at the state of the union before the virus hit and create remedies that both address short-term needs and strengthen the foundation of our economy, health care system, and social safety net—so that we're ready for the next crisis.

As the federal government prepares to deploy additional aid packages, it's important to assess how current measures have done. What are the gaps? The failures? The successes? How does the US's response compare to those of other advanced countries? We can't fully know how this all will play out—but we can examine where we are so far.

This issue brief begins with a comparative assessment of the underlying conditions—health, social insurance, and macroeconomic—that provide the context for the US's efforts to fight the COVID-19 pandemic. Deficiencies in our economic structures and social protection systems have amplified the deficiencies in our response. Compared to those of other countries, federal packages so far have been less effective at preventing contagion, protecting the most vulnerable, and providing the preconditions for a strong recovery. Of most immediate concern in the economics is the US unemployment rate, the increase of which is vastly higher than in all other countries affected by COVID-19. While all countries suffered some increased unemployment because of the pandemic, the far higher increase in the US rate suggests that both better preparation and better economic policy design in response to the crisis could have mitigated some of the pain in the American labor market.

This brief highlights the overall economic context in the US as the pandemic hit, including the vulnerability of many working people to serious economic hardship and even financial ruin. It outlines the future employment and economic problems we are likely to see throughout the country as the epidemic continues, and it delineates the failures of existing programs—including the CARES Act's Paycheck Protection Program (PPP)—to support those most in need.

Simple fixes will not suffice. Failing to act comprehensively will harm health, impede recovery, and slow long-term growth; it will mean that the country could emerge with even more inequality than the unacceptable levels we had before the crisis; unless further actions are taken, the dangers of long-term debt and bankruptcy spirals are very real. We must ensure that our coverage is broad, including relief not only for businesses and their employees but for all individuals, state and local governments, NGOs, and education and research institutions.

This brief argues that the US must focus on four priorities in its continued response: further support for our health care and social insurance systems, including paid leave; support for state and local

governments; a paycheck guarantee program in which money goes straight to firms to retain workers; and a commitment to direct all actions—including liquidity support and debt relief for individuals and families—where they are most needed and where the absence of action today would hobble the recovery.

The pandemic is testing our economic system as it's never been tested before. With so many workers and firms in so many industries being so badly affected, a more systemic collapse or credit gridlock is possible. Policy must be designed to avoid even the possibility of such an occurrence.

## **AMERICA'S PREEXISTING CONDITIONS**

Before analyzing the impacts of COVID-19 and American response efforts, we must examine the nation's preexisting conditions.

### **Health Systems**

When the pandemic struck, the US shouldered marked disadvantages relative to other advanced countries. In many ways, the US's "health status" was among the poorest in the OECD, with greater health inequality (Dickman, Himmelstein, and Woolhandler 2017) and lower—and declining—life expectancy, ranking 29<sup>th</sup> of OECD's 36 economies. (See Figures 1 and 2.) While everyone is insured through a public or private scheme in other OECD countries, in 2018, more than 27 million Americans did not have health insurance; and that number has been increasing. (See Figures 3A and 3B.) The COVID-19 virus is not an equal-opportunity killer. It goes after those with poor health conditions and brings them down. Given this, and given the inadequacies in our health care system and the inequalities in our economic system, it should not come as a surprise that we are seeing the disproportionate rates of COVID-19 illness and death borne by people of color; in many cities, Black Americans represent twice the number of cases one would expect given Black population shares (Cineas 2020). Despite expansions of coverage under the Affordable Care Act between 2010 and 2018, Black Americans remained 1.5 times more likely to be uninsured than white Americans during that time frame. For Latinx people, the uninsured rate was 2.5 times higher than the rate for white people (Artiga, Orgera, and Damico 2020).

Given the wretched state of health care and health insurance, the US was the least prepared of OECD countries to handle a pandemic. It had fewer hospital beds relative to its population (see Figure 4). Its strategic stockpile of essential health care supplies—masks, protective gear, ventilators—had been allowed to deplete. There had been cuts in funding for the Centers for Disease Control and Prevention (Bilmes 2020), the federal agency responsible for addressing a pandemic. And the global health security team within the National Security Council had been disbanded.

## **Income and Wealth**

The wealth and income inequalities within American society are well known, and so this brief does not devote much space to the voluminous and detailed data available. Suffice to say, since 1980, US income inequality has worsened significantly compared to Europe. While the income share of top earners in Western Europe remained constant over the last 40 years, the income share of the top 1 percent doubled in the US during that time (Alvaredo et al. 2017).

Wealth inequality in the US has also grown significantly since the 1980s, again with much more money going to the top 1 percent, and even more profoundly to the top 0.1 percent, whose share rose from 7 percent to 22 percent (according to the World Inequality Database).

COVID-19 does not affect everyone equally. People in poor health are the most likely to die from the disease, and they are disproportionately poor. Not surprisingly, then, the coronavirus crisis has exacerbated existing inequalities. “Essential” workers in frontline industries are largely women (65 percent), people of color (41 percent), and immigrants (17 percent). As they continue to work outside of their homes, these workers are more exposed to the virus; are less likely to have health insurance or access to federal relief; and are more likely to be low-income, with little or no wealth (Rho, Brown, and Fremstad 2020).

Amid deep uncertainty, many Americans face economic insecurity. Surveys indicate that—before the pandemic—nearly 40 percent of Americans didn’t have \$400 in savings to face even small financial emergencies (Federal Reserve 2018; Tepper 2018). They have been and will be especially vulnerable as COVID-19 continues to ravage the economy.

## **Social Insurance: Paid Leave, Unemployment Insurance**

Lacking savings and living paycheck to paycheck, many Americans infected with COVID-19 went to work anyway—largely because they did not have paid sick leave. Compared to other advanced countries, the US had among the lowest pre-crisis levels of paid sick leave, both in terms of coverage (Heymann et al. 2009) and in terms of benefits (Desilver 2020).

Though the US’s overall paid leave coverage rate is 76 percent, coverage is highly unequal across geographical areas and segments of employment (US Bureau of Labor Statistics 2019), ranging from 60 percent in services and farming occupations to more than 90 percent for business managers and teachers. Most disturbing is that only 30 percent of private-sector workers whose wages are in the lowest decile have paid sick leave, compared to 93 percent in the highest decile.

Unfortunately, it turns out that many of these low-wage workers—including workers making less than \$15 an hour in the warehousing, transport, nursing, and food industries—have been the most exposed to the virus (Berube and Bateman 2020; Tomaskovic-Devey, Dominguez-Villegas, and Hoyt 2020; Gupta and Grinstein-Weiss 2020). The situation has disproportionately affected Black and brown workers, who are overwhelmingly clustered in jobs now deemed “essential,” and, as noted above, are contracting COVID-19 at disproportionately high rates (Gould and Shierholz 2020).

By contrast, in almost all OECD countries, national schemes guarantee at least six months of paid sick leave, with 80 percent of pay for 85 percent of workers. It is worth noting that while Congress recognized the importance of sick leave in its first COVID-19 package, it provided only 10 days, and then exempted some 80 percent of all workers—both those working for firms with more than 500 workers and those working for firms with fewer than 50 workers.<sup>1</sup>

Making matters worse is that America’s overall system of social protection is weaker than other countries’. Consider, for instance, the unemployment system: The replacement rate (the percentage of an individual’s income that is replaced) is lower than in most other advanced countries, and it drops to as low as 8 percent after only six months of unemployment (see Figures 5A and 5B). This has macroeconomic consequences: It means that the “automatic stabilizers” in the economy are weaker. But it also means that individuals are more vulnerable and more insecure.

## **US RESULTS SO FAR: UNEMPLOYMENT AND HEALTH VULNERABILITIES**

Given poor American health, inequality, and income insecurity, COVID-19 has wreaked greater havoc in the US than elsewhere. Prior to the crisis, the US had a lower unemployment rate—though not a higher employment rate—than many countries did. (The fraction of the working-age population that was actually employed was markedly lower than in several other advanced countries, see Figure 6A.) But that has now changed dramatically. The increase in unemployment in the US exceeds the rate in other countries by a considerable margin, as depicted in Figure 6B.<sup>2</sup> The data there do not reflect the most current statistics: Every week seems to bring further bad news, with another 13 million people filing for unemployment benefits in the last three weeks of April, according to the Department of Labor, and many more likely unable to file for benefits. Unfortunately, we can be confident that millions more will be added in the coming weeks.

The increase in unemployment is worrisome for three reasons. First, the newly unemployed are disproportionately lower-income, often making less than \$15 an hour (Berube and Bateman 2020; Tomaskovic-Devey, Dominguez-Villegas, and Hoyt 2020). Surveys also suggest that since the pandemic began, Latinx and Black Americans have reported more household layoffs, more employment hours lost, and greater pay cuts than white Americans (Parker, Horowitz, and Brown 2020). Our unemployment insurance system is very weak. Even after being temporarily strengthened by the CARES Act, the system still does not adequately protect large numbers of the most vulnerable,

---

<sup>1</sup> The 80 percent figure is derived from data published by the US Bureau of Labor Statistics on distribution of private-sector employment by firm size class.

<sup>2</sup> Early data suggest that impacts of the pandemic on labor demand are similar in the US and Europe (Arnold 2020). However, in Europe’s largest economies, this has been met with schemes that allow employers to retain employees while wages are paid partially or in full by the government. These facilitate a recovery by reducing the fallout on workers’ incomes and reducing hiring costs.

supposedly one of the major objectives of rescue packages. Two big problems with unemployment insurance are the difficulties of applying and receiving aid, especially in states that lack the capacity for smooth administration; and the fact that extended insurance provided by the CARES Act (both through a federal boost to benefits and through an extension of regular state benefits) ends in December 2020. From now on, automatically increasing UI based on employment and underemployment numbers would be an important policy improvement.

Second, with so many workers dependent on employer-provided health insurance, the already-large ranks of the uninsured will swell. Many will turn to Medicaid, but with state budgets stretched to the brink and state revenues plummeting, the Medicaid system will be hard-pressed. The situation highlights another consequence of poorly designed and underfunded programs like PPP (discussed below): We will wind up bearing additional costs, in this case as a result of additional expenditures for Medicaid and a sicker, and thus less productive, labor force.

Third, the precipitous increase in unemployment means that the recovery may be weaker than it otherwise would have been, since firms will need time to rehire workers once business picks up again. There is strong evidence that displaced workers, when they finally do get rehired, are paid significantly less than before.<sup>3</sup> These lower wages may reflect lower productivity; the way we manage the crisis may thus have effects on long-term growth—the hysteresis effects that were observed in the aftermath of the Great Recession.

If we don't act now to stem unemployment, we could suffer a number of other economic problems: macroeconomic multiplier effects, debt spirals for individuals and households, and supply chain problems. The following paragraphs briefly describe each of these. What we hoped to be a quick V-shaped recovery will turn out to be a U (or W, depending on whether there is a second wave to the pandemic)—with the economy not returning to real prosperity for a long time.

## **BEYOND UNEMPLOYMENT: FURTHER THREATS TO THE AMERICAN ECONOMY**

### **Macroeconomic Multiplier Effects**

These are the most familiar to students of economics: The evisceration of household balance sheets and worries about the future will lead to decreases in consumption. At the beginning of the crisis, it was anticipated that many, especially in the service sector, would lose their jobs. Others, from taxi drivers to small-business owners, might see their revenues vanish. Without well-designed measures of social and employment insurance, we could see a major macroeconomic effect, especially after the

---

<sup>3</sup> For a general discussion of this point, see (Mason 2017).



pandemic itself recedes. If families are not protected, they will have to dip into their meager savings, with devastating effects on their balance sheets. Consumption won't return to normal quickly.

Decreases in expected consumption combined with worsening of firms' balance sheets will lead to decreases in investment. The two together mean that there will be an insufficiency of aggregate demand. All of this will, of course, be worse if there is a high level of unemployment. Decreased spending by some leads to decreased incomes for others, who then have to decrease their spending. The total aggregative effect can be much larger than the initial decrease, especially in periods when the economy is already weak. We saw this in the years after the collapse of the housing bubble, in the Great Recession, and likely will see this again in the years after the pandemic is brought under control.

At such times, monetary policy is often relatively ineffective: Lowering the interest rate a few percentage points won't induce firms to invest if they don't have confidence that there is a market for their goods. And the limitations of monetary policy in stimulating the economy are likely to be even more pronounced in the aftermath of the pandemic, given the long period of near-zero interest rates.

Fiscal policy is the only instrument that will work—and we shouldn't fear the debt. Before the pandemic, but after 2017's tax cuts for the wealthy, experts projected large increases in the debt-to-GDP ratio. Because of COVID-19, the combination of increased spending and lower GDP will result in a still higher debt-to-GDP ratio. The appropriate response is what the US did after World War II: We grew the economy with large investments in education, infrastructure, and technology, bringing down the debt-to-GDP ratio by raising the denominator (i.e., GDP). The true danger is austerity: Decreasing government investment and constraining GDP will lead to an increase in the debt-to-GDP ratio.

These are issues we will have to face in the near future. For now, it's imperative that the money we spend is spent well, to ensure as robust a recovery as possible. The design and implementation of key CARES Act pillars are cause for concern on that front, as the next section discusses.

## **Debt Spirals for Households and Firms**

We have developed a complex economy in which the free flow of money is critical, and a blockage can be life-threatening, just as a blood clot in a central artery can be life-threatening. The economy is a delicate piece of machinery that was designed for short-run efficiency but not for resilience, and we may now have to pay a high price for that.

As the pandemic continues, there is a risk of bankruptcy cascades or debt spirals, as the inability of some households or firms to pay what they owe affects their creditors and their creditors' creditors. Normally, A regularly pays money to B, who uses that to pay C, and some of that money returns back to A—enabling what is described in elementary textbooks as the circular flow of money. But what happens if B no longer can sell anything? They can't make the payments to C, and then C can't make payments to A.

In that situation, enormous debt arrears can arise quickly for individuals and for firms. What at first glance might simply seem an “employment problem” can quickly morph into an economy-wide problem. In the 1990s it happened twice. Most dramatically, in the East Asian crisis, almost 50 percent of the firms in Thailand, more than 50 percent in Korea, and some 70 percent in Indonesia were so much in arrears that they were effectively bankrupt. Commerce came to a screeching halt. And it was hard to figure out either how to work out the arrears or how to restart the economy.

Much of current policy is intended to prevent such a debt cascade among ordinary Americans and businesses of all sizes, especially small- and medium-sized. It’s one of the reasons that the Fed has been supplying so much money so liberally, even to companies whose long-term prospects might look questionable—meaning that there is more than a little risk associated with the loans that they are making.

Because of the lack of transparency and the complexity and scale of what is occurring, it is difficult to assess the role that connections and influence play and whether the terms on which the loans are being provided are such that the public is reaping a return commensurate with the risks they are bearing, or even whether the importance of the sector to our economy is being considered. It is difficult to determine whether any consideration has been given to the responsibility of the firm’s past behavior (e.g., failing to provide adequate capital cushions as a result of excessive share buybacks and dividends), and what constraints have been imposed on future behavior (e.g., corporate governance, maintenance of employment levels, or treatment of workers).

The decisions about who gets money and on what terms may shape—and distort—the economy for years to come. In many cases, they are life-or-death decisions for enterprises. But while enormous attention has been paid to the liquidity of large firms, much less attention has been paid to other parts of the economy—for instance, to households, states and local governments, and educational and research institutions. An unbalanced allocation of funds now will result in an unbalanced economy when we recover; it will delay and constrain recovery, making our society less vibrant, exacerbating preexisting inequalities, and weakening our preparedness for the next crisis. At the core of long-term progress are investments in education and advances in science; if our states and localities, institutions of higher education, and research foundations are not helped, our human capital will be lower, as will the future growth of productivity.

The failure to have a comprehensive program, taking into account the pre-crisis weaknesses in our economy and society, and a vision of what we would like to see emerging from the pandemic will have significant adverse effects, as discussed more fully below.

## Supply Chain Problems

Policymakers to date have focused mostly on the demand side—"stimulus"—and looked to the last crisis's demand collapse in shaping this crisis's response. Shortfalls in demand are important, but in this crisis focusing on demand alone will not be enough.

The reason people aren't going to restaurants or flying is because they fear contracting COVID-19; that creates a lack of demand, but not in the classic sense, and it's a lack of demand that won't be corrected by giving people more spending power. Further, if people don't or can't go to work, we could eventually see shortages in important products, including many intermediate inputs. There may even be supply chain problems in essentials, from medicine to food supply. We've already seen some aspects of this.

Indeed, the converse of the old (wrong) Say's law—that supply creates its own demand—may, at last, have some relevance here: Lack of supply will create its own lack of demand. But the resulting lack of demand will, in turn, have its own consequence, even in areas where contagion might not directly be the issue.

Even in the first stages of "reopening" the economy, production potential is likely to remain far below the pre-crisis levels simply because workers and their employers remain concerned about the disease. How long will it last? Will there be a second (or third) wave? How long will immunity last?

While there will thus be some uncertainty about the overall balance of supply and demand in this period, there may well exist excess demand for certain commodities—especially with the interruption of global supply chains, and especially so if some countries, worried about shortages, impose export restraints. (To avoid these, it will be essential to maintain a spirit of international cooperation and work closely with multilateral institutions. The US should have realized that if it restricts exports, others might do the same. The consequences for the US would be very adverse, at least in the short run, since our imports of many of the essential commodities far exceed our exports.) At the same time, there may exist excess supply for other commodities. With excess demand likely to occur in certain essential commodities, there will rightfully be a concern about simply relying on the price mechanism. Already, there are reports of the wholesale price of rice doubling or more.

Careful thought about how to deal with such contingencies is required: We have already witnessed the consequences of not preparing for the worst possible contingencies. The market has not responded how one would have hoped. While such failures might have come as a surprise to market ideologues, they were not unexpected for those who've engaged in a closer study of markets' strengths and limitations. We should consider government interventions in the production of essential goods—actions that, had they been taken earlier, in the case of masks, protective gear, and tests, might have saved a multitude of lives.

# POLICY RECOMMENDATIONS

So far, four policy packages have been signed into law, but they are insufficient to generate a robust recovery.<sup>4</sup> Based on this analysis of preexisting weaknesses in America’s economic and social protection systems, and based on what has happened during the pandemic, including after the passage of the CARES Act, this section identifies four key sets of recommendations for the next policy response. A caveat: Emerging from this pandemic with a robust economy and a healthy population will require more than these four measures, and a longer version of this paper will discuss further recommendations.

But there is urgency in responding to the crisis. The failure to act quickly has already cost us lives and almost surely has meant the downturn will be deeper and longer than it might have been. Urgency requires prioritization, and forthcoming rescue packages should consider these measures priorities.

## 1. Reducing Contagion and Containing the Pandemic

Aid to hospitals, the production and distribution of effective tests, protective gear (including masks), and ventilators seem hard to dispute as priorities.<sup>5</sup> But there is one more essential policy that should be part of our health measures: paid sick leave for all.

An important aspect of containing the epidemic is for infected people to isolate themselves. But the ability and willingness of low-income workers with few financial reserves to do that is limited without paid sick leave. As noted above, Congress seems to have recognized this when it extended paid sick leave. But the exemption of some 80 percent of workers from mandatory sick leave undermined the legislation’s effectiveness and imposed huge social costs. It is not just workers (especially those who

---

<sup>4</sup> These are the \$8.3 billion package enacted on March 11 (H.R. 6074), the “Families First Act” guaranteeing free testing and providing other benefits with delayed financial impact (H. R. 6201), the \$2.2 trillion CARES Act enacted on March 27, and the \$484 billion Paycheck Protection Program and Healthcare Enhancement Act (H. R. 622).

<sup>5</sup> This list of measures that *should* be taken to provide a strong “health” response to COVID-19 is not meant to be comprehensive, but to reflect the constraints of what might be done quickly by Congress. For instance, we should increase significantly the budgets of the Centers for Disease Control, the National Science Foundation, and the National Institutes of Health. We need to produce more scientists and doctors who can help us cope with future pandemics, and so we need increased support for our educational institutions, especially for research universities (Smyth and Jack 2020). We don’t want undocumented workers going to work, or not getting treated, for fear of deportation. The Trump administration recognized this, putting ICE actions on hold, but no commitment was made not to use information gathered from treatment for future deportations. We don’t want individuals who are contagious hesitating to get treatment—even to find out whether they have COVID-19—because of lack of health insurance, so we have to quickly fill in the gaps in coverage, and in the meanwhile provide free health care to anyone who has, or believes they have, COVID-19. We haven’t provided within OSHA or other government regulatory structures safety requirements for those going to work: It is particularly disturbing that workers who are viewed as essential, including in the health care industry, are going to work without protections that could significantly reduce their exposure to COVID-19, or the exposure that they may impose on others. In some cases, unions have demanded such protection for their workers; but in many parts of the economy, unions are not strong enough to provide this kind of protection. Face masks, protective gear, plastic shielding, and other appropriate measures should be mandatory.

There are still other measures that need to be taken with respect to intellectual property. A poorly designed IPR system combined with a reluctance of the US government to invoke compulsory licenses has played into the shortage of N-95 masks, which are protected by numerous patents, and matters may be even worse if a private firm is the first to develop a vaccine or retroviral.

are asymptomatic) whose incentives are not well-aligned with societal concerns; the same is true for employers, especially shortsighted employers who do not see the potentially devastating effects on their workforce when contagious people show up to work.

Therefore, it is imperative that the next federal relief package include 100 percent paid sick leave for all workers. Until rapid testing becomes widely available, sick leave must be available to everyone. Optimally, this mandate should be imposed on every firm, and thought of like a minimum wage: The minimum *compensation* package should include 10 days of paid sick leave. If that appears politically unacceptable, then the requirement should be imposed on every firm with more than 50 employees and every small firm receiving government assistance. Small firms that are not receiving assistance and did not provide paid sick leave before the pandemic would be eligible for government assistance to offset the costs of providing paid sick leave.

## **2. Funding State and Local Governments**

The states are at the forefront of ensuring that everyone has adequate health care and preventing further spread of the disease. But they are also at the core of our society's provision of education and welfare benefits. The states' resources are badly stretched—not just because of costs related to COVID-19 but even more so because of the large decreases in current and anticipated revenues. States depend on income, profits, and sales taxes, and all of these will plummet. As a result of shrinking revenue and surging expenses for health care and unemployment, state and local budget shortfalls are already widening. One study estimates \$500 billion in state and local needs between now and the end of 2021 (Bivens and Walker 2020). Another study, which does not take into account the extra health-related spending, projects a \$500 billion state funding shortfall over three years (McNichol, Leachman, and Marshall 2020), almost \$300 billion of which is concentrated in 2021. Other studies provide similar results. The CARES Act gave only limited assistance to states, not even enough to compensate for the additional costs directly associated with the care of COVID-19 patients. The subsequent April 2020 relief package contained a meager \$100 billion in funding for hospitals and testing.

States operate within balanced budget frameworks, so when their revenues decrease, they have to cut expenditures (or raise taxes, which will be virtually impossible under current circumstances). Moreover, if there are higher health care costs (additional individuals under Medicaid plus additional expenditures associated with COVID-19), other expenditures will have to be squeezed. Likely cuts in education funding will jeopardize our economy's future.

Cutbacks in employment by states and localities necessitated by the revenue shortfalls will make a broad-based and timely recovery all but impossible. In the Great Recession, real tax revenues for states and localities fell by 7 percent (peak to trough), almost twice the decline in real GDP of 4.6 percent. Not surprisingly, this resulted in a larger decrease in state and local employment than occurred for the country as a whole. And the effects have been long-lasting: according to BLS data, state and local employment have still not recovered to pre-crisis levels.

To ascertain a rough order of magnitude of these employment effects, assume that state and local spending decreases in proportion to GDP and that the contraction is “only” 6 percent, compared to the 2 percent growth that was expected. In our \$20 trillion economy, that’s a shortfall of \$160 billion. But the IMF recognizes that the shock to the economy could be twice the standard estimates, or more, depending on how long it takes to get the pandemic under control. The earlier cited data suggesting a shortfall of \$300 billion in 2021 is consistent with such estimates—and could even be considered conservative if one takes into account the experience of the Great Recession, during which tax revenues fell almost twice as much as GDP.

But a spending cut of this magnitude, in a recession, will also have a large multiplier effect, although with a slight lag. With a fiscal multiplier of 1.5 (Whalen and Reichling 2015; Blanchard and Leigh 2013), the impact on GDP could be between \$240 billion and \$450 billion. This is nothing more than a large dose of fiscal austerity at the state and local levels, caused by the failure of the federal government to respond quickly and appropriately. Contraction of state and local spending could, by itself, induce a significant contraction in GDP.

The effects on the unemployment rate are commensurately large. Assuming a one-to-one effect on employment, the 1.5 percent of GDP spending cut (\$300 billion) translates roughly into a total increase in unemployment of 2.25 percentage points, or another 3.7 million jobs lost. But because the labor intensity of state and local government is high, the unemployment effect will almost surely be even larger.<sup>6</sup> As noted earlier, the percentage decline in state and local employment in the Great Recession was larger than for the country as a whole, and arose because we did not provide adequate assistance to the states and localities. The contraction at the state and local level countered the stimulus that was provided by the federal government and helps explain the anemic recovery.

The adverse effects of the contraction in state and local government spending and employment are likely to be particularly stark because of timing: States and localities will not immediately contract their spending. They may start to cut just as we emerge from the pandemic, as the full impact of the economic slowdown becomes more apparent. That means it is plausible that the magnitude of the response, say in the late summer or fall, will be all the greater; that is, if we were to emerge from the pandemic in the next few months, the adverse economic effects from the contraction of state and local expenditures would be felt then, and with a force that could be significantly larger in subsequent quarters.

If we are to avoid all of these dire consequences, there needs to be substantial assistance to state and local governments now, to offset *fully* the adverse revenue effects and increased costs

---

<sup>6</sup> According to the Bureau of Economic Analysis (Table 3.25U), states and localities allocate half of their expenditures to employee compensation (wages and employers’ Social Security contributions), compared to 10 percent for the federal government. Furthermore, according to the US Census, half the compensation paid by states and localities is allocated to wages.

associated with COVID-19. Congress must allocate at least \$500 billion in state and local relief in the next aid package.

While substantial sums should be included in the next packages passed by Congress, we can't be sure of the total impact of COVID-19. Only time will tell. The adverse revenue effects could be much worse than the rough estimates provided here, particularly if the pandemic lasts longer than is now expected or if there is a second wave. Therefore, there should also be a provision ensuring that the federal government will offset the revenue losses and increased expenditures associated with the employment and health consequences of COVID-19 as those numbers become clear. The states and localities need to have greater certainty for their planning, and Congress should not have to be asked over and over again, when the consequences of *not* providing this assistance—a kind of automatic destabilizer for the economy—are so clear. Thus, the assistance needs to be indexed to state and local government revenues and health care expenditures.

### **3. Keeping Workers in Jobs**

Even before the passage of the CARES Act, the alternative approach of *direct payments to employers to retain workers* seemed to some more likely to be more effective than the disparate programs included in that bill. The evidence over the last few weeks seems consistent with those expectations.

The federal government, both through the IRS and the Social Security Administration, has a direct link, in most cases electronically, with every employer in the US, so it should be easy to transfer money directly from the government to these employers based on employer retention. A paycheck guarantee program, such as the one proposed by Rep. Pramila Jayapal (D-WA), or the Paycheck Security Act, just unveiled by Sens. Bernie Sanders (I-VT), Mark Warner (D-VA), Doug Jones (D-AL), and Richard Blumenthal (D-CT), give examples of what such a program might look like. Provided that the employer retained employees, the government would make up for the shortfall in revenues experienced by any firm, based on a simple formula (e.g., 90 percent of the payroll for wages and salaries of up to, say, \$85,000—augmented by amounts representing “fringe benefits” and “overhead”). Several studies have estimated the costs of this kind of program, which obviously depend on the precise parameters. Variants range from \$115 billion to \$150 billion a month during the shutdown. Costs associated with partial shutdowns would be proportionally smaller.

These costs, however, are largely gross estimates, not net; the net costs are likely to be substantially smaller. The government would otherwise have to face additional costs in unemployment insurance and Medicaid. The program would, moreover, replace the costly Paycheck Protection Program (PPP), which, if the pandemic lasts much longer, could require a further injection of funds even beyond the “phase 3.5” monies authorized in late April.

The program might be made even more effective by providing supplementary support for training, so that workers who are not fully engaged in production could be more productive when the economy emerges from the pandemic. In the US, on-the-job training is far less common than in many other

high-wage, high-productivity economies, such as Denmark (OECD 2018). This would not only be a more productive use of their time but would almost surely contribute to a more general sense of well-being.

This program represents a significant improvement over the existing PPP; it is simpler to administer, with more of the money going where needed, and considerably less costly and more effective.

The reports on the first set of disbursements—representing the original allocation of \$350 billion—are disturbing. The problems with the PPP design are four-fold. The first problem is the overall randomness of who was allegedly going to get helped initially. The second problem is bias; those mostly likely to get help were those who were best-connected, most likely to know about the program, and most apt to understand how to apply. The third problem was the introduction of banks as intermediaries. As profit-seekers, banks are incentivized to help the largest and most reliable of applicants. And the fourth problem is lack of clarity and transparency. Whether the PPP funds are loans or forgivable grants was unclear to many applicants.

There were glaring gaps between the industries most vulnerable to the crisis (Lund et al. 2020) and where the money actually went: Construction and professional/technical services were the largest recipient (by sector), though neither of those represents the most fragile areas of the economy—accommodation, food service, and retail trade (US Small Business Administration 2020).

The procedure by which the funds were disbursed had inbuilt biases that could have been expected to produce the disappointing results that were observed. The program was administered by the banks; there were delays and confusion in informing the banks about the rules. Companies with better connections with those banks that gave priority to the PPP program and had sufficient scale and flexibility to divert resources to processing applications effectively got preferential treatment.<sup>7</sup> It was this that introduced the unwanted degree of randomness into the program and the biases noted above. Construction companies, for example, are typically funded by construction loans and have good bank relations; these were never originally on the list of the most vulnerable, partly because many construction projects are going ahead anyway, and partly because the sector is used to cyclical fluctuations and should be in a better position to fend for itself.

Public companies and large enterprises, well-staffed by lawyers and with good political connections, seem to have fared well too (Indap 2020). While the program was *supposed* to be about small businesses, Ruth's Chris Steak House, with 5,000 employees (10 times the limit for a small business), was a recipient. This was not an accident or an administrative oversight: Lobbyists got their way, as they did with the Tax Cuts and Jobs Act of 2017. “Exemptions” allowing the money to go to big

---

<sup>7</sup> Puerto Rico, already devastated by two hurricanes, illustrates how badly the program has played out. The Center for the New Economy (CNE) reports, “In Puerto Rico, for example, local credit unions have not been able to gain access to the SBA’s system, a necessary first step to begin processing loans. Financial tech companies, such as Paypal, Intuit, and Square, also had to wait for authorization from the SBA, though they have recently started processing loans.”



businesses were put into the bill for franchised hotel and restaurant businesses, inclusions which at the time were subject to extensive criticism (Davis and Haddon 2020). Large professional services companies, again well-linked with lawyers and bankers, many of whom can easily work from home, were also large recipients, but again not necessarily among the most vulnerable.

This note sent to the author by the co-owner of a small firm describes their experience and aptly captures the PPP's flaws:

What is terribly sad is that the large companies gobbled up funds that small businesses desperately needed . . . allowing the banks to determine which applications made it into the SBA pipeline was a huge mistake. In many cases, the banks (especially the big ones) served their own interests by splitting up the PPP applications into 2 buckets—the commercial/private bank bucket vs the retail bank bucket. The first bucket got VIP access; the second bucket got no service or access. [Our bank] sent out another auto-email a few days ago saying we were in the SBA queue but that funds were likely to run out quickly and there is no guarantee that all loans in the queue will be fulfilled. I think a lot of small businesses will be wiped out in the coming months. It's very sad to think of the suffering that this will cause.

Recent data suggest that large firms got a significant percentage of the PPP dollars: 4 percent of loans accounted for 43 percent of the monies allocated, 75 percent of smaller loans (under \$150,000) accounted for only 17 percent of funds allocated, and 9 percent of the funding went out in large loans (over \$5 million) (Rabouin 2020).

The data available so far do not allow us to assess the extent to which the money actually went to preserve jobs of lower-income workers. However, as unemployment data have shown, the program has clearly not succeeded in keeping workers attached to their firms.

Another problem that some small businesses have raised is lack of clarity about the “debt forgiveness” part of the program. It is through this channel that firms are encouraged to borrow money to maintain their labor force. But many are worried that, in the end, their debt will not be forgiven; there is a lack of trust. And if that is so, firms will not maintain their employment levels; they will simply use the money as a capital cushion—to pay, for instance, top management—knowing that if things turn out bad enough, they can simply default, while if they turn out well, they will easily be able to repay, especially given the interest rates charged. And if somehow their debt gets forgiven, all the better: It's just a one-sided bet.

It appears that this program intended to provide funds for small businesses is in fact a relief program for large banks. The banks get a fee of 1 percent—not for bearing risk but simply for helping businesses complete the forms and transmitting them to the government. In normal times, giving the banks \$6.6 billion (an estimate of what they will get in total for administering the program) would be considered a large amount. It still should be. The banks are not asked to evaluate the application, or even to assess its accuracy. They are just data transmitters, and in a world where most firms have an

electronic interface, there is no need for a data transmitter. But using banks as data transmitters introduces a distortion in the system, since some businesses are more linked with banks than others, and some more linked with banks that are linked with the SBA than others. Larger firms and those that regularly turn to banks (such as construction) are more linked. Smaller firms, and also those owned by people of color, are less well-connected.

In retrospect, it is clear we made a big mistake in adopting the PPP program rather than something akin to a paycheck guarantee program. But even though the first two tranches of PPP monies have been approved, there is a compelling case for moving to a new program: Still more money will be required. The second tranche will run out, well before demand is fully satisfied. And the whole program was designed for a short shutdown. It is looking like the total “effective” shutdown—especially taking into account the partial shutdown that is likely to be the next stage in dealing with the pandemic and a possible second wave—will be far larger than the program was designed for. More money will be spent, and it is important that it be spent well. The fixed costs of establishing a new program are small compared to the variable costs of running the existing program. The flaws in the PPP are inherent; there are no “easy fixes” that will enable it to do what it is supposed to—be an efficient, transparent way of getting money to those who most need it. It was not designed for transparency, so that Americans could know the most vulnerable were being protected.

There is another advantage in an alternative program. The attempts within the CARES Act to maintain employment (which so far have obviously failed) consist of a patchwork—one program for small firms, another for large firms. Certain sectors, especially educational and research institutions, have been left out. Many colleges and universities are economically fragile, and many have begun to announce hiring freezes or other budget cuts (Pandey 2020). Research institutions are important for the fiber of the country; at one level, our obligation to protect the vulnerable should be universal, without regard to the sector in which they work. And in the process of recovery, the stimulus of demand from consumption will be just as strong coming from workers in these sectors as in any other. But on the other hand, the long-run vibrancy of the economy depends on preserving and strengthening the sectors that are most vital to the country’s future—not to its past—and the sectors that are most fragile. Just because educational and research institutions didn’t have lobbyists as good as those of businesses doesn’t mean their workers are less vulnerable or less important to the future of the economy and the nation.

It would be far easier to make a new program—along the lines of paycheck guarantee proposals—more transparent, with lower overheads and greater targeting of money where it’s needed. Such a program would be more comprehensive and successful than the PPP in preserving links between employers and workers, which will prevent our unemployment and Medicaid systems from becoming overwhelmed and quicken our recovery.

#### 4. Providing Liquidity and Debt Relief Where Needed

The CARES Act and the Federal Reserve have recognized that many firms might face liquidity constraints, which could threaten their very survival and make a recovery difficult. But they paid only a little attention to similar problems facing households. Already, there is evidence of severe liquidity problems: According to the National Multifamily Housing Council, as of the first week in April, 31 percent of tenants nationwide failed to pay their rent, as compared to 18 percent in the same period one year ago (Dougherty 2020). As explained earlier in this brief, such a liquidity problem could trickle up, infecting the entire economy and impeding recovery.

The CARES Act did some things right: no evictions or foreclosures on *government* mortgages and no payments on student loans. But it didn't go far enough in helping people who needed it. The program didn't provide a stay on usurious credit card debt, on car and homeowner loans, or on non-federally insured mortgages. At the same time, the program gave assistance to some companies that surely didn't require the help—money on generous terms to big corporations, which, if solvent, could probably get money in any case. While the rest of the economy is on “stay” as a result of COVID-19—out of work, without sales, on hold—the banks and other creditors are not. They keep racking up the returns, even more so with late fees. This should not be considered acceptable, especially since so many of the banks are in business today because “we,” the taxpayers, saved them in 2008 and in a host of bailouts before that.<sup>8</sup> Such a stay is necessary if we wish to ensure that the benefits given to the most vulnerable people are actually enjoyed by them—rather than just transmitted on to their creditors. This is especially important for low-income households, a majority of which have someone who has lost a job or taken a pay cut (Parker, Horowitz, and Brown 2020).

At the very least, borrowers should be shielded from involuntary collections and the garnishment of wages over the course of the public health crisis.

One of the best ways to provide liquidity to Americans is to go beyond just a stay and to consider a range of debt relief, including some student loan forgiveness.<sup>9</sup> In the absence of such debt relief—for which a strong case had been made before the pandemic—recipients of federal aid may not spend the money they receive, and the stimulative effects of the government programs will be attenuated. They will save those funds so that they will eventually be able to repay debt.

---

<sup>8</sup> Note that if the government calls for an interest rate stay, low-to-moderate-income individuals who depend on such payments must be protected, with the government making up at least part of what is lost.

<sup>9</sup> In 2019, students loans exceeded \$1.6 trillion, the second largest category of consumer debt after real estate debt (Federal Reserve 2020) and roughly five times the sovereign debt of Argentina.

## CONCLUSION

There is a compelling case for government action to protect the health of our citizens and the health of the economy. Expenditures spent on recovery now, like paycheck guarantees and assistance to states and localities, will have expansionary macroeconomic effects, and government will collect substantial amounts from the incremental GDP (roughly 20 percent). Over the long run, the benefits will be even larger, as a result of better health and higher productivity. Taking all of these effects into account, the net cost of the programs proposed here will be substantially less than “headline” numbers, and possibly even negative. This spending is clearly an investment in the country’s future.

Even if the programs described here are enacted by the federal government, the going won’t be easy. There are many other gaps, some of which have been described in this paper. There is one more to which attention should be drawn: Students graduating from high school and college this year will find, at best, limited job opportunities. There will be almost 4 million college graduates this spring. If only 25 percent of them get jobs, that alone will increase the unemployment rate by 2 percentage points, impeding a strong recovery and imposing long-term consequences for economic growth. The US should consider a special program for recent graduates, of the kind that several European countries formulated after the onset of the Great Recession. Every young person should be in a job, in school, or in a training program. The government could help pay for training programs—internships—and make a new emergency “Pell Grant” program available to a wider range of applicants: those students with limited economic resources whose parents have incomes somewhat exceeding the maximum for eligibility in the Pell program. If there is a V-shaped recovery, such a program may not be necessary. But as prospects of the V-shaped recovery diminish, the urgency for such an extended Pell Grant program increases. It would be an enormous waste of resources if large numbers of youth, in their most vital years, remained without a job, out of training, and not in school. It would foment discontent with our economic and political systems, and rightfully so.

Today, we’re suffering in part because of a lack of planning. We shouldn’t let that happen again. It is, for instance, possible that there can be serious interruptions in supply chains, affecting not just the supplies of masks, ventilators, protective gear, and tests—market failures that we have already experienced—but those of other essential products, such as food. There is a need for planning even for these extreme contingencies.

The design of government programs has to take into account the huge uncertainties associated with COVID-19. Programs can’t be designed as just two-month interventions, with the built-in assumption that the economy will be on the mend in a couple of months. It is possible that anxiety about a recurrence will be with us for a year or two, or even more. That’s why this paper has advocated that the assistance for state and local governments be indexed to revenue shortfalls and COVID-19 expenditures and that the time is now to switch employment support to some variant of the Paycheck Guarantee Program.

New measures must be designed to take into account the possibility of a U-shaped recovery—with the intent that the flat side of the U is as short as possible. An essential design aspect of any program dealing with COVID-19 is *flexibility*: the ability to expand and contract and to make adjustments as the health and economic crises evolve. In principle, we want quick adjustments; in the economic arena, automatic stabilizers—which inject money into the economy automatically as the economy weakens, without waiting for data to confirm that the unemployment rate is up—are highly desirable. Programs that require repeated legislative action may not provide the timely and flexible response that this unprecedented event requires. The programs advocated here take these needs into account.<sup>10</sup> We also need to take into account the preexisting weaknesses in our health and social protections: Four decades of denigrating the public sector has taken its toll, and we've seen glaring weaknesses in the capacities to administer necessary programs in the transparent, efficient, effective, and urgent way that the situation requires. From now on, attention must be paid to these aspects of the program, including administrability in the way that the public rightfully demands.

The plunge in output and the increase in unemployment that we have experienced in just the past few months has been unprecedented. How long this all lasts depends both on the course of the disease and on our policy response. Evidence from other deep downturns tells us that the economy exhibits close to a unit root: The return to pre-crisis levels of growth is slow, and the economy essentially never recovers to where it would have been had there not been a crisis.

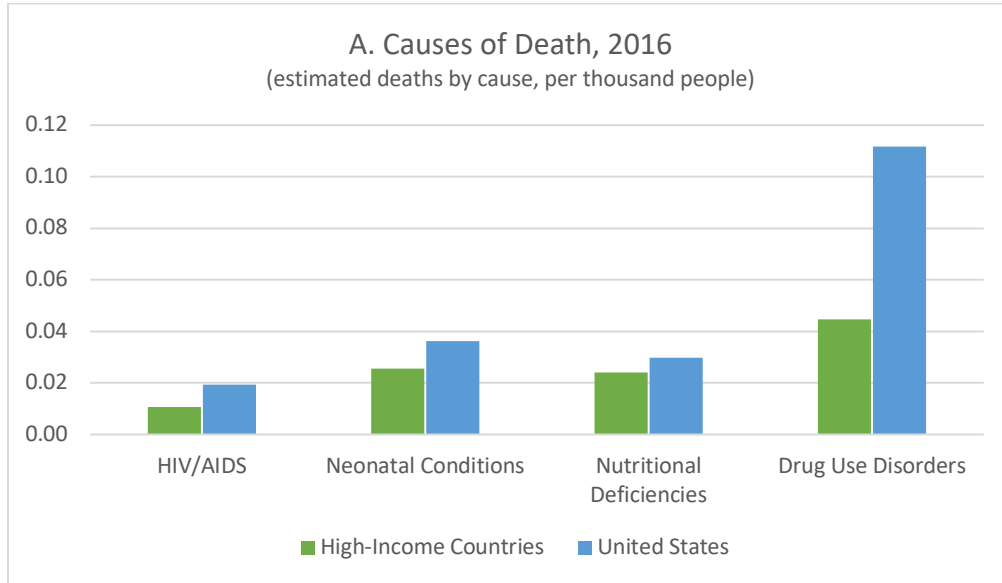
Crises and their aftermaths tend to be moments of intense distributive conflict. We should expect nothing less now, and for our overall economic health, our policy responses today must anticipate how all of this might unfold.

---

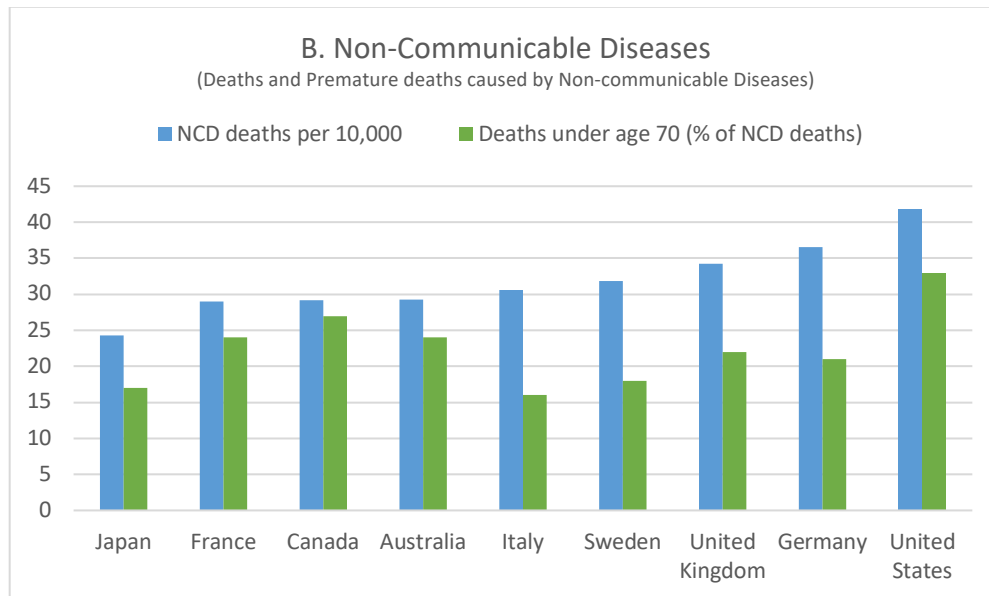
<sup>10</sup> This paper has also emphasized transparency and accountability. Provisions benefiting special interests—such as that from which Ruth's Chris Steak House benefited—undermine confidence and trust in government. Such provisions are more likely to be inserted and survive in legislation passed in a hurry without hearings or public scrutiny—something we saw in the TARP legislation and in the 2017 tax legislation. We are now discovering a wealth of such special provisions in CARES—such as a loss-offset provision applying only to those making over \$500,000.

# FIGURES

**Figure 1: Death Rates by Cause in the US Compared to Other High-Income Countries**

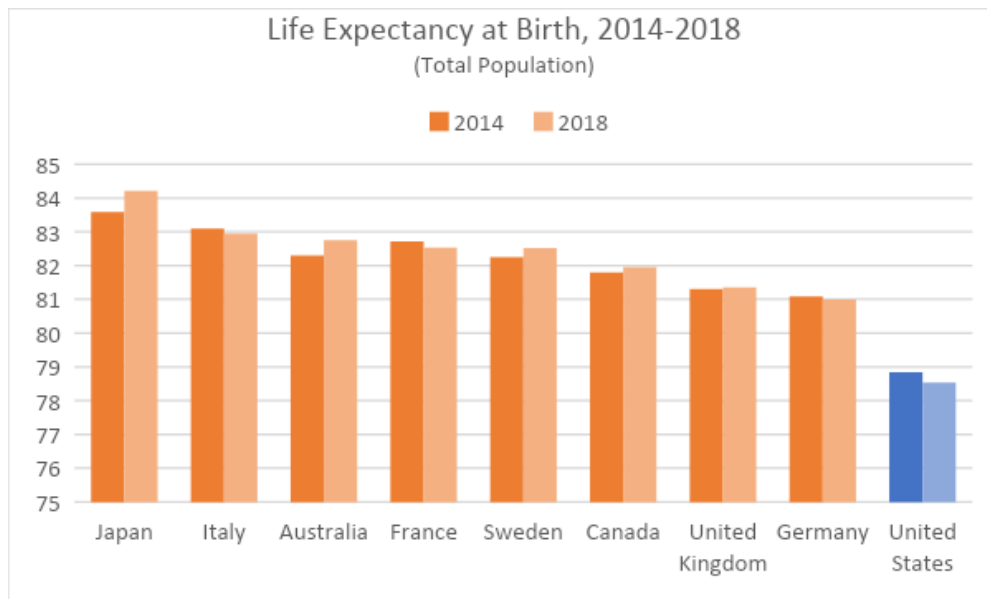


Source: WHO



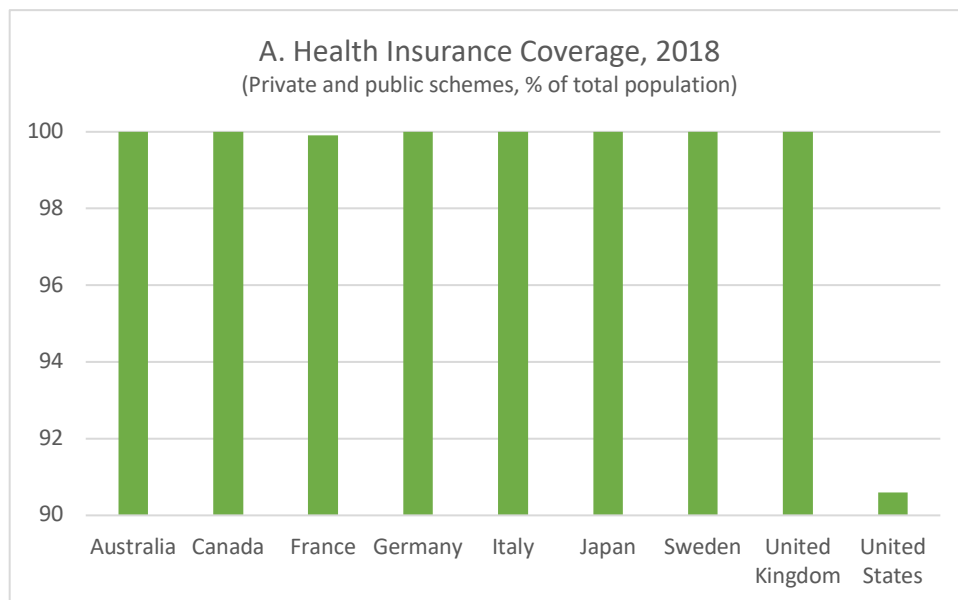
Source: OECD

**Figure 2: Life Expectancy in the US Is Markedly Lower Than in Other Advanced Countries and Declining**

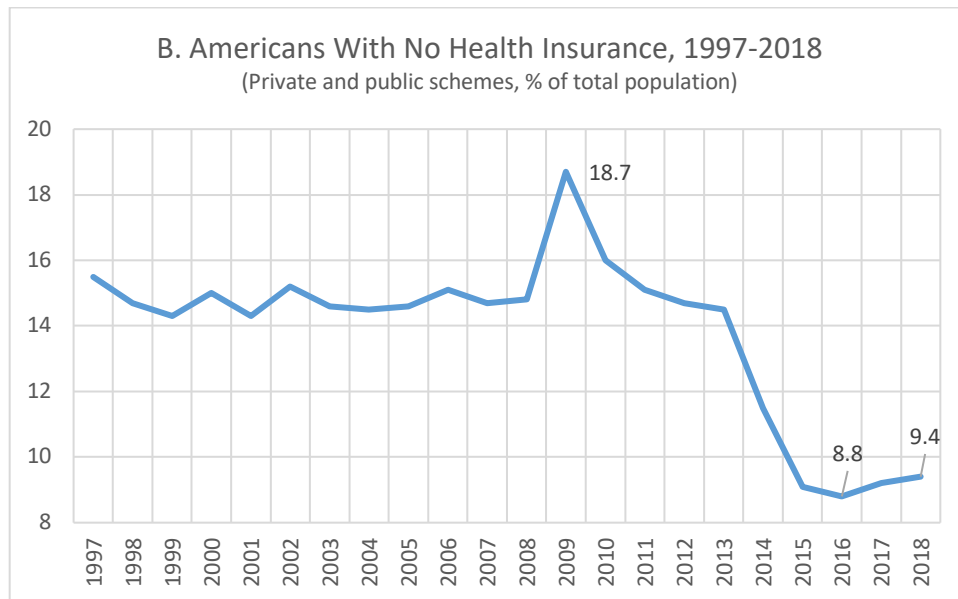


Source: World Bank

**Figure 3: Health Insurance Coverage in the US Is Lower Than in Other Advanced Countries and Declining**

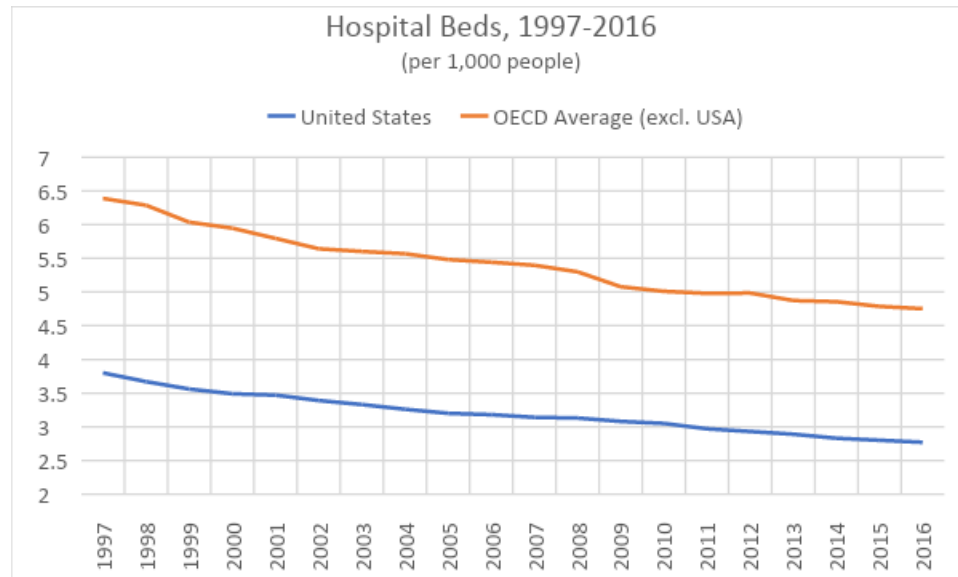


Source: OECD



Source: OECD

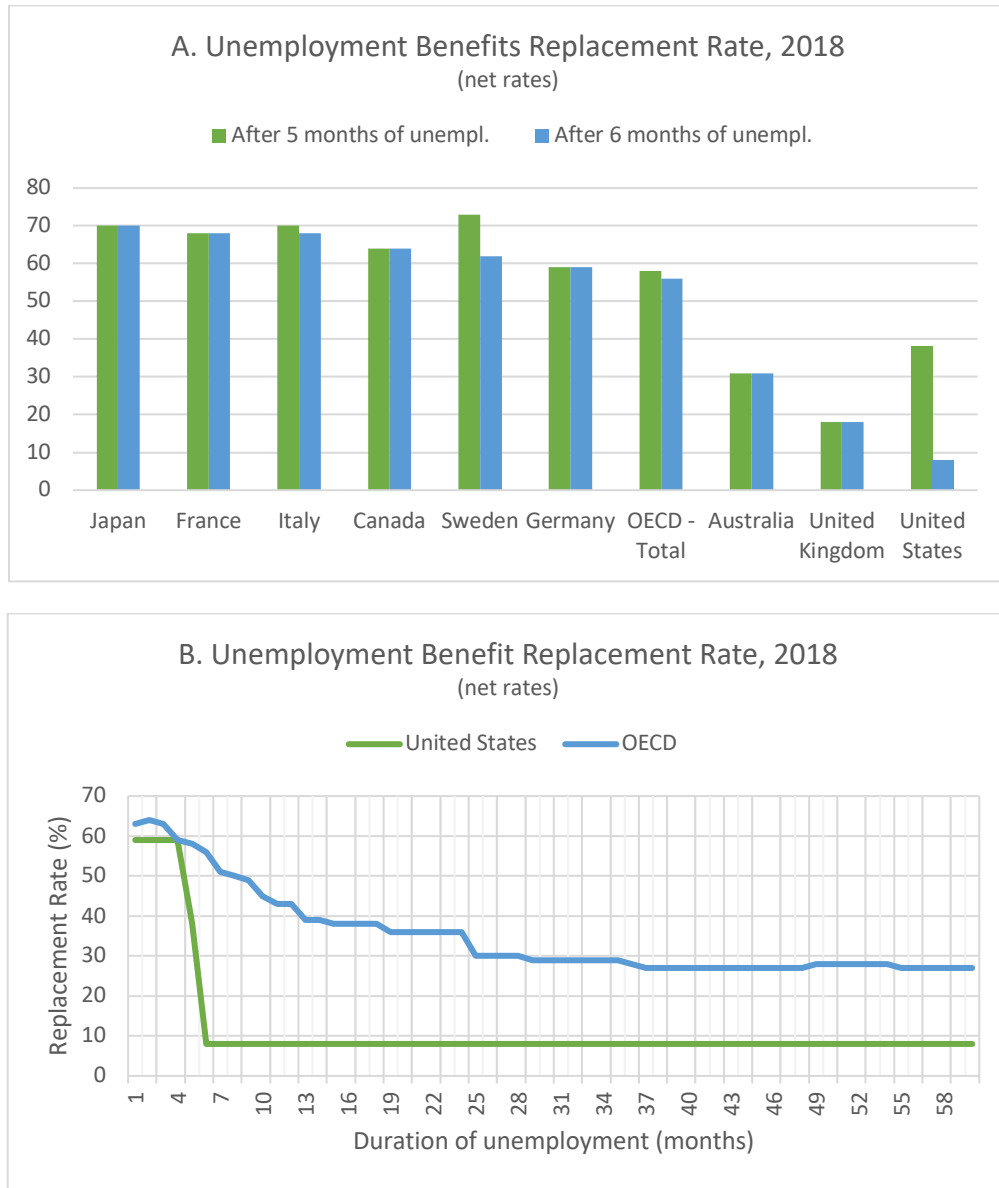
**Figure 4: US Has Markedly Fewer Hospital Beds per 1,000 People Than the Average of Advanced Countries**



Source: OECD

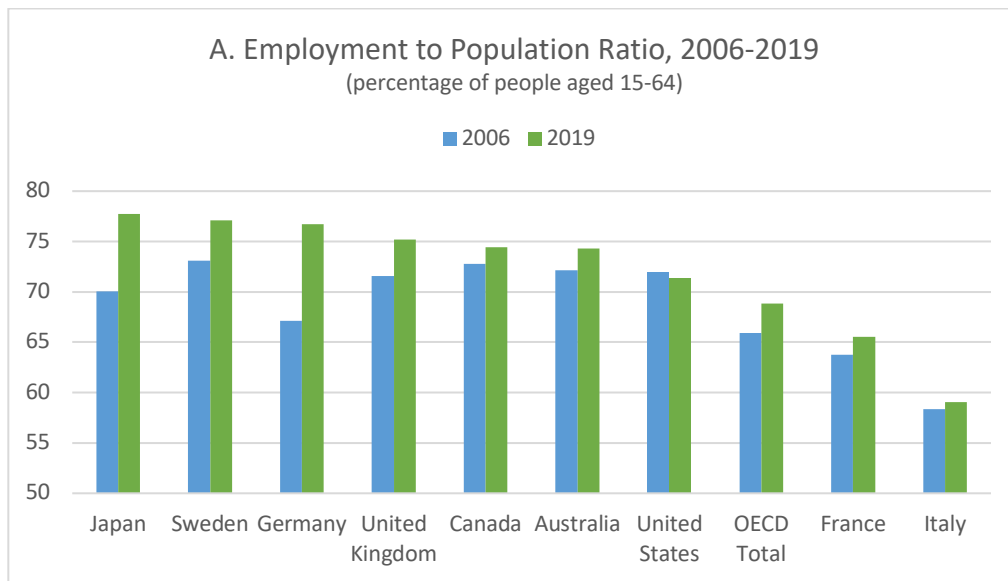


**Figure 5: US Provides Low Levels of Unemployment Insurance**

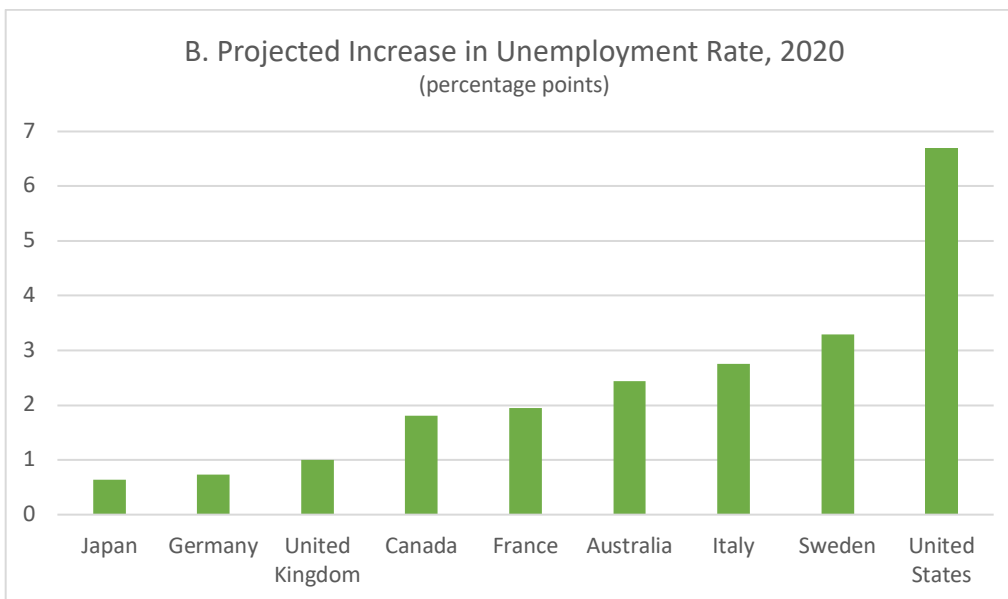


Source: OECD, Note: Rates refer to a single worker without children earning 67 percent of the average wage. For higher pre-unemployment earnings, benefits are lower (for all family types).

**Figure 6: US Employment Rate Well Below Best-Performing Economies and Still Below 2006 Level, Though Above Average for Advanced Countries**



Source: OECD



Source: IMF, World Economic Outlook Database

## REFERENCES

- Alvaredo, Facundo et al. 2017. “World Inequality Report 2018.” Paris: World Inequality Lab. <https://wir2018.wid.world/>.
- Arnold, Martin. 2020. “Over 30m Workers in Europe Turn to State for Wage Support.” *Financial Times*, April 28, 2020. <https://www.ft.com/content/3e68bb70-1b17-4fd3-82f5-dfa4ea7454a2>.
- Artiga, Samantha, Kendal Orgera, and Anthony Damico. 2020. “Changes in Health Coverage by Race and Ethnicity since the ACA, 2010–2018.” San Francisco: Kaiser Family Foundation. <https://www.kff.org/disparities-policy/issue-brief/changes-in-health-coverage-by-race-and-ethnicity-since-the-aca-2010-2018/>.
- Berube, Alan, and Nicole Bateman. 2020. “Who Are the Workers Already Impacted by the COVID-19 Recession?” Brookings. <https://www.brookings.edu/research/who-are-the-workers-already-impacted-by-the-covid-19-recession/>.
- Bivens, Josh, and Naomi Walker. 2020. “At Least \$500 Billion More in Coronavirus Aid Is Needed for State and Local Governments by the End of 2021.” *Working Economics Blog*. Economic Policy Institute. April 9, 2020. <https://www.epi.org/blog/at-least-500-billion-more-in-coronavirus-aid-is-needed-for-state-and-local-governments-by-the-end-of-2021/>.
- Blanchard, Olivier, and Daniel Leigh. 2013. “Growth Forecast Errors and Fiscal Multipliers.” *IMF Working Papers* 13/1: 43.
- Cineas, Fabiola. 2020. “COVID-19 Is Disproportionately Taking Black Lives.” *Vox*, April 8, 2020. <https://www.vox.com/identities/2020/4/7/21211849/coronavirus-black-americans>.
- Darity, William Jr. et al. 2018. “What We Get Wrong About Closing the Racial Wealth Gap.” Samuel DuBois Cook Center on Social Equity and Insight Center for Community Economic Development. <https://socialequity.duke.edu/wp-content/uploads/2019/10/what-we-get-wrong.pdf>.
- Davis, Bob, and Heather Haddon. 2020. “Big Restaurant, Hotel Chains Won Exemption to Get Small Business Loans.” *Wall Street Journal*, April 6, 2020. <https://www.wsj.com/articles/big-restaurant-hotel-chains-won-exemption-to-get-small-business-loans-11586167200>.
- Desilver, Drew. 2020. “As Coronavirus Spreads, Which US Workers Have Paid Sick Leave—and Which Don’t?” *Pew Research Center* (blog). March 12, 2020. <https://www.pewresearch.org/fact-tank/2020/03/12/as-coronavirus-spreads-which-u-s-workers-have-paid-sick-leave-and-which-dont/>.
- Dickman, Samuel L, David U Himmelstein, and Steffie Woolhandler. 2017. “Inequality and the Health-Care System in the USA.” *The Lancet* 389 (10077): 1431–41. [https://doi.org/10.1016/S0140-6736\(17\)30398-7](https://doi.org/10.1016/S0140-6736(17)30398-7).
- Dougherty, Conor. 2020. “31% Can’t Pay the Rent: ‘It’s Only Going to Get Worse.’” *New York Times*, April 8, 2020. <https://www.nytimes.com/2020/04/08/business/economy/coronavirus-rent.html>.
- Federal Reserve. 2019. “Report on the Economic Well-Being of US Households in 2018.” May 2019. <https://www.federalreserve.gov/publications/files/2018-report-economic-well-being-us-households-201905.pdf>.
- Federal Reserve (2020). Statistical Release, Consumer Credit G.19, April 7, 2020. <https://www.federalreserve.gov/releases/g19/current/g19.pdf>.
- Gould, Elise, and Heidi Shierholz. 2020. “Not Everybody Can Work from Home.” *Working Economics Blog*. Economic Policy Institute. March 19, 2020. <https://www.epi.org/blog/black-and-hispanic-workers-are-much-less-likely-to-be-able-to-work-from-home/>.
- Gupta, Brinda, and Michal Grinstein-Weiss. 2020. “We Don’t Need a Map to Tell Us Who COVID-19 Hits the Hardest in St. Louis.” *Brookings Up Front* (blog). April 6, 2020. <https://www.brookings.edu/blog/up-front/2020/04/06/we-dont-need-a-map-to-tell-us-who-covid-19-hits-the-hardest-in-st-louis/>.

- Heymann, Jody, Hye Jin Rho, John Schmitt, and Alison Earle. 2009. "Contagion Nation: A Comparison of Paid Sick Day Policies in 22 Countries." Washington, DC: Center for Economic and Policy Research.
- Indap, Sujeet. 2020. "Scores of US Public Companies Take Small Business Rescue Funds." *Financial Times*, April 21, 2020. <https://www.ft.com/content/f33e5b29-c666-4a72-a0a1-a54cea2a7b1f>.
- Lund, Susan et al. 2020. "Lives and Livelihoods: Assessing the Near-Term Impact of COVID-19 on US Workers." McKinsey Global Institute. <https://www.mckinsey.com/industries/public-sector/our-insights/lives-and-livelihoods-assessing-the-near-term-impact-of-covid-19-on-us-workers>.
- Mason, J.W. 2017. "What Recovery? The Case for Continued Expansionary Policy at the Fed." New York: Roosevelt Institute. <https://rooseveltinstitute.org/what-recovery/>.
- McNichol, Elizabeth, Michael Leachman, and Joshua Marshall. 2020. "States Need Significantly More Fiscal Relief to Slow the Emerging Deep Recession." Center on Budget and Policy Priorities.
- OECD. 2018. "Seven Questions about Apprenticeships: Answers from International Experience." OECD Reviews of Vocational Education and Training. Paris: OECD Publishing. <https://doi.org/10.1787/9789264306486-en>.
- Pandey, Erica. 2020. "Coronavirus Sends American Universities over a Cliff." *Axios*, April 23, 2020. <https://www.axios.com/coronavirus-colleges-universities-7cfc5228-00fb-44e1-a850-e332050641a7.html>.
- Parker, Kim, Juliana Horowitz, and Anna Brown. 2020. "About Half of Lower-Income Americans Report Household Job or Wage Loss Due to COVID-19." Washington, DC: Pew Research Center. <https://www.pewsocialtrends.org/2020/04/21/about-half-of-lower-income-americans-report-household-job-or-wage-loss-due-to-covid-19/>.
- Rabouin, Dion. 2020. "How Many Big Companies Got PPP Loans." *Axios*, April 21, 2020. <https://www.axios.com/ppp-loans-big-companies-small-businesses-760d8fd1-30dd-45eb-a44a-e103cf0f5bc6.html>.
- Rho, Hye Jin, Hayley Brown, and Shawn Fremstad. 2020. "A Basic Demographic Profile of Workers in Frontline Industries." Washington, DC: Center for Economic and Policy Research. <https://cepr.net/a-basic-demographic-profile-of-workers-in-frontline-industries/>.
- Smyth, Jamie, and Andrew Jack. 2020. "Coronavirus: Universities Face a Harsh Lesson." *Financial Times*, April 21, 2020. <https://www.ft.com/content/0ae1c300-7fee-11ea-82f6-150830b3b99a>.
- Tepper, Taylor. 2018. "Most Americans Don't Have Enough Savings to Cover A \$1K Emergency | Bankrate.Com." <https://www.bankrate.com/banking/savings/financial-security-0118/>.
- Tomaskovic-Devey, Donald, Rodrigo Dominguez-Villegas, and Eric Hoyt. 2020. "The COVID-19 Recession: An Opportunity to Reform Our Low Wage Economy? | Center for Employment Equity | UMass Amherst." Amherst, MA: UMASS Amherst. <https://www.umass.edu/employmentequity/covid-19-recession-opportunity-reform-our-low-wage-economy>.
- US Bureau of Labor Statistics. 2019. "Employee Benefits in the United States - March 2019." Washington, DC. <https://www.bls.gov/ncs/ebs/benefits/2019/employee-benefits-in-the-united-states-march-2019.pdf>.
- US Small Business Administration. 2020. "Paycheck Protection Program (PPP) Report Approvals through 12 PM EST 4/16/2020." Washington, DC. <https://www.sba.gov/sites/default/files/2020-04/PPP%20Deck%20copy.pdf>.
- Whalen, Charles J., and Felix Reichling. 2015. "The Fiscal Multiplier and Economic Policy Analysis in the United States." *CBO Working Paper* 2015 (2). <https://doi.org/10.1111/coep.12104>.