

Fiscal Federalism and Economic Crises in the United States: Lessons from the COVID-19 Pandemic and Great Recession

Mariely López-Santana* and Philip Rocco†

*George Mason University; mlopezs1@gmu.edu

†Marquette University

The architecture of fiscal federalism in the United States represents an obstacle for prompt and comprehensive policy responses to economic crises, especially by subnational levels of government. As both a public health and economic crisis, the COVID-19 pandemic has put unique fiscal pressures on subnational governments. This article reviews the pandemic's fiscal effects on these governments, as well as the federal government's response. By comparing the response to the COVID-19 crisis during the Trump administration with the response to the Great Recession during the Obama administration, we show that while the speed and magnitude of federal aid was unprecedented in 2020, it was nevertheless conditional in nature and beset by familiar political and institutional obstacles. Despite major fiscal pressures, state revenues rebounded earlier than expected, in part due to the relaxation of public health measures and the collection of taxes from online transactions; yet, state resources remained strained throughout the year, especially in states reliant on the hospitality and the oil sectors. And while local property taxes were buoyed by a surging housing market, cities and counties were confronted with declining revenue from other sources and intense emergency spending needs. Thus, despite unprecedented levels of federal support for state and local governments, the legacies of “fend for yourself” federalism live on.

The COVID-19 pandemic has been a stress test for national and subnational political economies. Compared to peer countries, the United States has experienced extraordinarily high rates of infection and mortality, attributable in part to President Donald Trump's transactional and punitive approach to federalism (Bowling, Fisk, and Morris 2020; Goelzhauser and Konisky 2020). With little guidance from Washington in 2020, key decisions about public health regulations, as well the coordination and provision of key public goods and services, fell in the hands of governors and mayors. These officials faced an extraordinary policy dilemma: how to control the spread of a highly contagious virus without sacrificing

Publius: The Journal of Federalism volume 51 number 3, pp. 365–395

doi:10.1093/publius/pjab015

Advance Access publication June 21, 2021

© The Author(s) 2021. Published by Oxford University Press on behalf of CSF Associates: Publius, Inc.

All rights reserved. For permissions, please email: journals.permissions@oup.com

billions in revenue in an environment in which a variety of protective measures have been highly politicized.

At the outset of the pandemic, there were good reasons to expect the return of “fend for yourself federalism,” a model of intergovernmental fiscal relations in which federal officials make a conscious choice “to let states sink or swim” (Conlan et al. 2015, 156).¹ Yet in light of an immediate shock to financial markets and economic activity, in March 2020 Democrats and Republicans compromised and passed a massive relief package. In contrast to early expectations, this article shows how federal aid positively affected states’ fiscal health (McDonald 2018, 47) by slowing down the negative impact of the pandemic on their ability to meet their financial obligations in Fiscal Year (FY) 2020 and 2021.² Despite these generous trends, the legacy of fend-for-yourself federalism was still present in 2020 in several ways. First, the Coronavirus Aid, Relief, and Economic Security (CARES) Act placed restrictions on how states could use these funds. Second, Congress did not sustain the same level of intergovernmental support in the second half of 2020. Accordingly, many governors felt pressured to “swim” by relaxing protective measures and opening their economies, thus contributing to the further spread of the virus.

To better understand current developments and examine the contemporary politics of federalism and intergovernmental aid, we draw comparisons between the COVID era, focusing on actions taken in 2020 during the final year of the Trump presidency, and the Great Recession, focusing on actions taken by the Obama administration. Given the unique nature of each crisis and the distinctive political environment in which each occurred, we show that the Great Recession and COVID-19 affected American fiscal federalism in different ways. Whereas it took close to two years for the fiscal effects of the Great Recession to peak, COVID-19’s largest shock to financial markets was immediate and simultaneous with the explosion of public health and fiscal needs for state and local governments. Further, despite intense partisan polarization during both crises, Republicans found themselves on the defensive during the initial waves of COVID-19, in part given President Trump’s approach to federalism. While these factors did not lead to a paradigm shift on intergovernmental aid, they temporarily disrupted standard partisan gridlock, allowing for the passage of a massive relief package—a process that was not replicated in the second half of 2020.

Meanwhile, while states were especially affected by the Great Recession, the negative effects of the pandemic on states’ fiscal health have not been as widespread in 2020. The presence of federal aid, relatively healthy states’ reserves and rainy day funds, as well as states’ abandonment of strong nonpharmaceutical interventions to curb the spread of the virus, allowed many states to navigate the economic crisis of 2020. Still, states were facing different realities depending on their particular mix of revenue sources. While revenues from online sales served as

cushions in the majority of the states, subnational governments heavily reliant on the accommodations, food services, and the oil sectors were especially affected by the COVID crisis. Given these diverse scenarios, states reacted differently—twenty-two states were forced to cut their budgets, fifteen states did not adopt mid-term changes, and thirteen states experienced increases in spending in FY 2020. In the same way, salient variations were found across policy areas, with K-12 and higher education being especially affected.

General units of local government experienced similar dynamics. While local property-tax revenues were buoyed by a surging housing market and a return of economic activity in the third quarter of 2020, the majority of U.S. cities reported revenue shortfalls in 2020 as well as intensifying demand for emergency services. Federal emergency aid packages primarily addressed the latter of these two problems. The former would largely remain unaddressed until 2021.

To shed light on how the dynamics of fiscal federalism affected the U.S. response to COVID-19, our analysis focuses on events that occurred during 2020 under President Donald Trump. Therefore, we do not consider how dynamics changed following the inauguration of President Joe Biden and the seating of narrow Democratic congressional majorities in 2021. Nor do we consider the effects of the passage of the American Rescue Plan Act of 2021, which included \$350 billion in general-purpose aid for state and local governments, available for use until 2024. This limitation of our analysis reflects pragmatic considerations and the publication schedule of this special issue. Even so, this piece provides important insights about how federal, state, and local governments responded at the onset of the COVID crisis, and under a divided national government—a far more common configuration of political power in recent decades.

This article is structured as follows. We begin with a brief comparison of the Great Recession and COVID-19 as crises of fiscal federalism. We then evaluate the federal response to each crisis and attend to qualitative and quantitative differences in support for state and local revenues and expenditures. To build on this discussion, the next two sections evaluate how state and local governments responded to COVID-19's fiscal effects in 2020. Placing these developments in a historical context, particularly the period since 2008, allows us to identify continuities and differences in how subnational governments tackle fiscal distress. A concluding section summarizes and discusses the main lessons from 2020 and highlights the long-term implications of the pandemic on state and local fiscal health and policies, as well as on intergovernmental relations and fiscal federalism.

Placing the COVID-19 Crisis in Context

The architecture of fiscal federalism fundamentally shapes U.S. responses to economic crises. On the one hand, the federal government has extensive countercyclical capacities, which help subnational governments to counteract the effects of economic downturns. Congress faces no hard rule against deficit spending and the Federal Reserve has the capacity to print money. On the other hand, besides their existing reserves, state and local governments have little ability to respond countercyclically to economic shocks. Not only do most states have balanced-budget requirements, but many face major institutional restrictions when it comes to issuing debt and withdrawing from their rainy day funds. And while many local governments may default and file for bankruptcy, state governments may not.

Although subnational governments are fiscally constrained, they nevertheless play a central role in work creation, economic activity, and public goods provision; for instance, they contributed more than 40 percent of total government expenditures in recent years and employ close to 13 percent of the U.S. workforce—a higher rate than the federal government ([Bureau of Economic Analysis 2021a](#); [Sheiner and Campbell 2020](#)). Even if state budgets have steadily grown since the 1970s ([Baicker, Clemens, and Singhal 2012](#); [Campbell and Sances 2013](#)), economic crises often have a disproportionate impact on highly procyclical and volatile state and local revenues derived in part from income, sales, and property taxes, which tend to fall in line with worsening economic conditions ([Chernick and Reimers 2019](#)). Absent a proportionate federal response, as discussed later in the article, state and local governments typically intervene by delaying economic recovery, freezing or cutting expenditure, accessing their reserves, or raising their own revenue.

While the architecture of fiscal federalism has remained relatively constant, economic crises interact with the system in distinctive ways. The contrast between the COVID-19 crisis and the Great Recession affords a valuable look at these differences. First, the major effects of each crisis occurred in a distinctive temporal scale. Unfolding over the better part of a decade, the Great Recession was the result of a burst in the housing bubble followed by a financial crisis, which reflected decades of financial deregulation ([McCarty, Poole, and Rosenthal 2013](#)). What followed was an extended process of recovery—the longest in the United States since World War II ([Dominguez and Shapiro 2013](#)).³

By contrast, as an unparalleled public health crisis, COVID-19 both reduced consumer demand and labor supply due to social distancing, infections, and mortality, as well as government actions to control the spread of the virus. These factors thus were associated with far more immediate and sharper economic consequences than the Great Recession. By July 2020, the recession reduced

economic activity by 11 percent, “nearly three times the decline seen during the Great Recession in one-third the time” (Spain et al. 2020). As Figure 1 shows, during the Great Recession, both private and subnational government employment declined slowly and continued to fall well after the recession’s trough. By contrast, COVID-19’s effects on private and subnational government employment were swift, with a dramatic decrease between the first and second quarters of 2020 and a partial recovery for private employment in the third quarter. By the end of July 2020, about 30 million workers received federal jobless benefits, with unemployment concentrated among leisure and hospitality industries, workers in small firms, and Latinas and Black women (Brower and Michener 2021; Couch, Fairlie, and Xu 2020; Romm 2020; U.S. Bureau of Labor Statistics 2020c).

Second, each crisis posed distinctive threats to subnational finances. The COVID-19 pandemic forced state and local leaders to rapidly confront a series of perilous tradeoffs between protecting public health and safeguarding revenue (Dayen 2020). In the spring of 2020, many elements of economic activity were

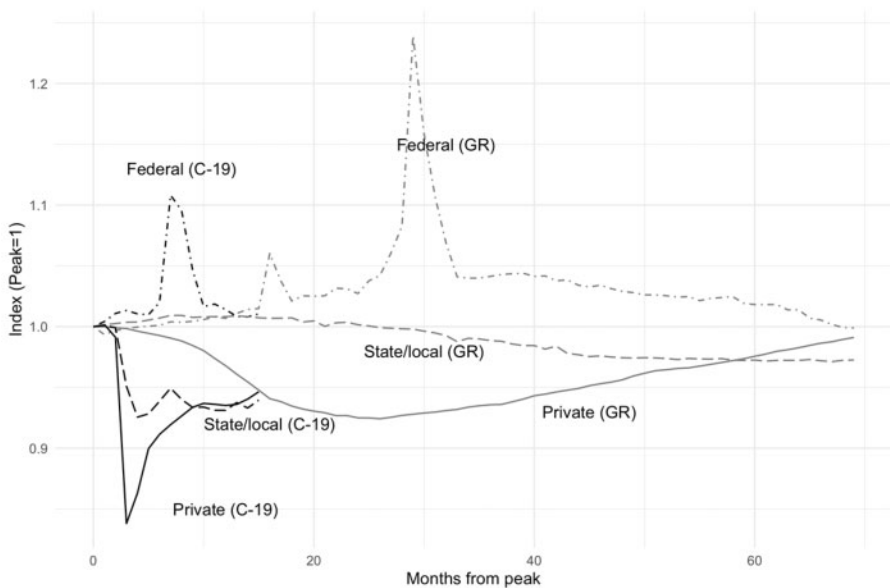


Figure 1 Change in private and government employment during the Great Recession and COVID-19.

Source: U.S. Bureau of Labor Statistics (2021).

Note: Peak month during Great Recession is December 2007; peak month during COVID-19 is January 2020. GR: Great Recession; C-19: COVID-19.

abruptly put on hold, or became illegal, through federal travel restrictions and shelter-in-place orders enacted by forty-two states (White, Crane, and Seitz 2020). In this context, the obligations of providing a wide variety of public goods placed extraordinary strain on subnational finances as state and local governments mobilized plans for simultaneously containing the spread of the virus and supporting their residents, including testing, and provision of protective equipment and technology for schools and public workers.

Despite subnational governments exercising regulatory authority to contain the pandemic, they gradually and unevenly abandoned the initial wave of severe stay-at-home orders in favor of milder interventions. This retreat from lockdowns likely contributed to the spread of the virus, but helped to mitigate some of the short-term economic damage (Gupta et al. 2020; Velasco 2020). Indeed, between the second and third quarters of 2020, the average monthly unemployment rate fell by half and consumer expenditures increased by 10 percent (Bureau of Economic Analysis 2021a, 2021b).

The impact of COVID-19 on state finances has been severe, but it is concentrated in states heavily reliant on revenue from taxes on particularly hard-hit economic sectors, such as accommodations, food services, and tourism (Bureau of Economic Analysis 2020a, 2020b, 2020c; Zandi 2020).⁴ In addition, states with undiversified economies dependent on volatile sectors (e.g., oil industry) have been especially affected by drops in prices, but in the short-run many might be able to counterbalance these pressures with their robust rainy day funds (e.g., Alaska, North Dakota; see, e.g., Moody's 2020; White, Crane, and Seitz 2020). According to Dadayan (2020), tax revenue shortfalls in the states alone are estimated at \$200 billion for FYs 2020 and 2021. States heavily reliant in the aforementioned sectors are especially vulnerable; for instance, officials in Hawaii predict that state revenue will not bounce back to prepandemic levels until 2024 (Fowers and Siegel 2021).

Based on previous estimates for FY 2020, there was a median decline of 3.3 percent in income tax revenue; yet, the picture was mixed across states—twelve states experienced increases in income tax revenue, but twenty-nine states experienced decreases in such revenue (in relation to 2019 levels) (National Association of State Budget Officers 2020a). These diverse trends are partially explained by the uneven effects of the pandemic on the labor force—high-income workers have continued to work remotely, thus states with progressive income taxes have been somewhat insulated from revenue shortfalls. When it comes to sales taxes, the second largest source of state and local revenue, the median drop is lower than in the case of income taxes (−2.6 percent), but nine states reported growth and thirty states reported declines in FY 2020. Many states, particularly those with economic nexus laws that became meaningful after the U.S. Supreme Court's ruling in *South Dakota v. Wayfair*, 138 S.Ct. 2080 (2018) and states with taxes on grocery goods,⁵ counteracted the negative effects of the lockdown by

collecting taxes on online and/or grocery purchases (Ward, Sipior, and Lombardi 2020). Since the 2018 *Wayfair* ruling, forty-three states with sales tax, Washington DC and some parts of Alaska impose sales and use tax obligations on remote companies, even if they do not have a physical location in that state. Therefore, above a certain threshold, online companies such as Amazon are required to collect and remit sales taxes if they have an “economic presence” in that state. In South Carolina, for instance, tax revenue from online sales nearly doubled in 2020. In light of the benefits of the *Wayfair* tax, in 2021 the Florida Senate approved an online sales tax bill, while Missouri is considering implementing it.

As shown in Figure 2, preliminary estimates for FY 2021 paint a mixed picture of states’ fiscal health. Some states have to make major adjustments, whereas others do not. For instance, as of November 2020, Nevada which emptied its rainy day funds in 2020 faced an estimated drop of 26 percent closely followed by Hawaii. By contrast, revenues in Delaware and Idaho are expected to drop by only 1 percent (Center on Budget and Policy Priorities 2020).

When compared to the Great Recession, the effects of COVID-19 were both far more immediate and contingent on rapid fluctuations in public policy and

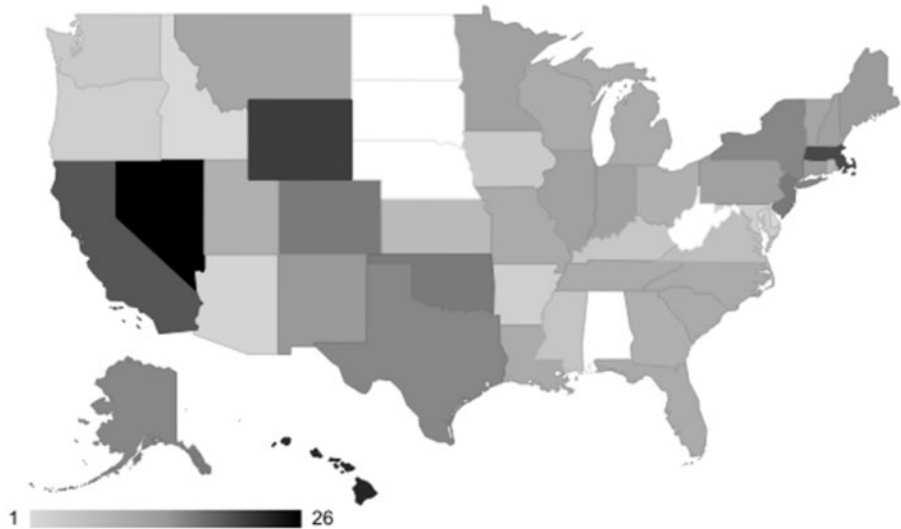


Figure 2 Projected percent decline in general fund tax revenues (based on pre-COVID projections), FY 2021 (estimates from November 6, 2020).

Source: Center on Budget and Policy Priorities (2020).

Notes: In cases where there was range in the estimates, the authors’ calculated the average percentage. There was no forecast data available for Alabama, Nebraska, North Dakota, South Dakota, or West Virginia.

intergovernmental aid. Thus understanding the pandemic's impact on fiscal federalism also requires an examination of the politics of federal relief legislation. How did the federal government respond to the challenge of COVID-19 in 2020? How did it support states and localities? How were these responses similar to and different from the remedies and policies adopted during the Great Recession? The following section explores these questions.

Federal Support for State and Local Governments

Given that state and local governments in the U.S. bear the double burden of procyclical revenues and immense responsibilities for service delivery, it is almost axiomatic that countercyclical responses to recessions depend on the actions of the federal government. Yet the timing and magnitude of federal relief, which are pivotally important to economic recovery, vary substantially across crises. This section compares the federal responses to the Great Recession and the COVID-19 crisis. For the sake of clarity, we mainly focus on federal support to the states, thereby leaving aside discussions of the 2008 stimulus package and the Troubled Asset Relief Program.

First, while the Great Recession started in 2007 under President George W. Bush, it was not until 2009 under newly elected President Barack Obama that major federal aid was introduced to state governments. By contrast, a few weeks after the pandemic hit the United States, Congress stepped in and launched the largest economic relief package in U.S. history. In 2020, four major pieces of emergency legislation were passed and each contained at least \$1 billion in intergovernmental aid (see [Table 1](#)). The package included the \$192 billion Families First Coronavirus Response Act, which made significant enhancements to Medicaid—a program that provides health insurance to one in five Americans. The Act included requirements that prevented states from limiting Medicaid eligibility during the health emergency and provided a boost in the federal matching rate, in terms of what percentage of the cost of Medicaid gets paid by the federal government rather than state governments. In March, several weeks after the passage of the Families First Act, Congress enacted under President Donald Trump the \$2.7 trillion CARES Act, which contained a variety of grants in aid, including a flexible \$150 billion Coronavirus Relief Fund (CRF; [Rocco et al. 2020](#)). In its final days in December, the 116th Congress also enacted a \$900 billion Response and Relief package as part of its annual appropriations bill, which contained \$85 billion in aid to state and local governments, including aid for education, transportation infrastructure, and Medicaid costs. It is worth noting that the only legislation in 2020 that included unconditional support for state and local revenues, the Heroes Act, died in the Senate after passage along partisan lines in the House in October.

Table 1 Proposed 2020 COVID relief packages with intergovernmental aid in excess of \$1 billion

Legislation	State and local aid (\$ billions)	General aid for state/local revenue included?	Outcome	Votes on passage
Families First Act	\$166	No	Enacted 18 March, 2020	House: 363–40; Senate: 90–8
CARES Act	\$299	No	Enacted 27 March, 2020	House: Voice Vote; Senate: 96–0
PPP and Health Care Enhancement Act	\$11	No	Enacted 24 April, 2020	House: 388–5; Senate: Voice Vote
Heroes Act	\$1,130	Yes	Died in Senate after House passage on 15 May, 2020	House: 208–199
National Defense Authorization Act for Fiscal Year 2021	\$85	No	Enacted over Presidential veto 1 January, 2021	House: 335–78; Senate: 84–13

Source: Compiled by authors from *Congressional Record* and [Committee for a Responsible Federal Budget \(2021\)](#).

The two responses also differed in a second respect, in the magnitude of the aid packages. Although federal aid during the Great Recession was unprecedented for its time, the COVID-19 shock elicited a record fiscal policy response from Congress. To get a sense of the magnitude of this federal support in 2020, [Figure 3](#) plots the amount of federal grants-in-aid received by state and local governments against subnational sales and personal income tax revenues—major sources of cyclical revenue variation—net of nonfederal transfers. As is visible in [Figure 3](#), the spike in federal grants-in-aid in the second quarter of FY 2020 has no clear analogue during the Great Recession. Federal grants-in-aid as a share of state and local government receipts peaked at 40 percent in the third quarter of 2020, while it barely budged above 25 percent during the Great Recession and in the subsequent decade.

Congress's response to COVID-19 in calendar year 2020 was larger than five years of discretionary policy responses to the Great Recession. In terms of *overall* spending, the American Recovery and Reinvestment Act (ARRA), together with thirteen pieces of subsequent legislation between 2009 and 2013 ([Conlan, Posner and Regan 2017](#)), represented roughly *half* of what Congress appropriated in 2020 ([Council of Economic Advisers 2014](#)). Where state and local aid is concerned,

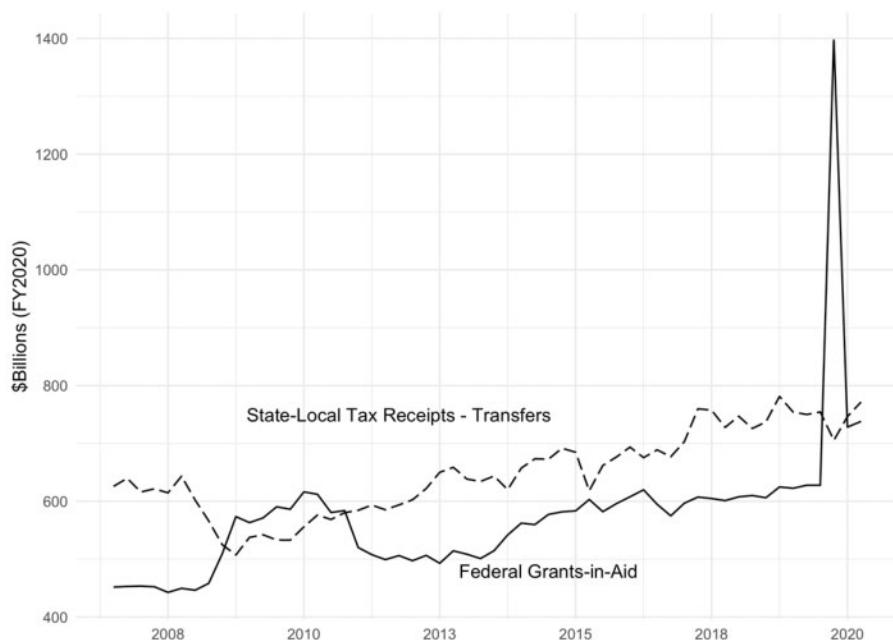


Figure 3 Federal grants-in-aid and state-local personal income and sales tax revenues net of nonfederal transfers, 2007–2020 (\$Billions FY 2020).

Source: Authors' calculations of U.S. Bureau of Economic Analysis (2021b).

ARRA appropriated at most \$250 billion to state and local governments (Posner and Conlan 2017), which is just over \$301 billion in 2020 dollars. By comparison, based on a conservative estimate, Congress allocated \$340 billion in 2020 to state and local governments through grants for education and transportation infrastructure, Medicaid enhancements, and the CARES Act's Coronavirus Relief Fund. Yet this estimate is likely far too limited. Were we to include all spending in 2020 for which state and local governments were the prime recipients, the total would be over \$500 billion (Committee for a Responsible Federal Budget 2021).

Table 2 provides a further comparison of the major intergovernmental aid provisions in fiscal legislation during a single year of the COVID-19 pandemic (2020) and the Great Recession (2009). Even when health spending provisions (aside from those related to Medicaid) are excluded, we can see across nearly all categories of spending that federal aid to state and local governments was far greater during one year of the COVID-19 pandemic than the peak year of federal fiscal activism following the Great Recession. And while Table 2 represents direct federal aid to state and local governments, congressional relief packages indirectly supported state and local revenues in several ways, including the extension of

unemployment insurance benefits, which generated \$1.3 trillion in taxable personal income between the first and third quarter of 2020 ([Bureau of Economic Analysis 2020d](#)).

Third, Congress's fiscal response to the COVID-19 pandemic was qualitatively distinctive from the response to the Great Recession. As it had during the Great Recession, in 2020 Congress temporarily increased Medicaid matching rates to states and imposed a maintenance-of-effort requirement preventing states from reducing spending on Medicaid. Yet unlike the 2009 ARRA, the 2020 Families First Act also required states to maintain continuous Medicaid coverage throughout the course of the pandemic. This meant that states could not respond to fiscal pressure by restricting eligibility for the program. While ARRA extended aid to states in the form of flexible grants for infrastructure and education ([Conlan and Posner 2011](#)), state and local governments could use money from the CARES Act's \$150 billion Coronavirus Relief Fund (CRF) for a variety of health and economic purposes, as long as these activities were not accounted for in existing budgets ([U.S. Department of the Treasury 2021](#)). The CRF, nonetheless, came with guidelines that were arguably more restrictive than those found in some components of ARRA, especially the Government Services component of the State Fiscal Stabilization Fund ([Conlan 2017](#)). However flexible they have been in practice, neither the CRF nor other pots of federal money appropriated in 2020 represented truly unconditional support for state and local revenues. While state and local officials cited inflexible federal guidelines as the main barrier for not being able to use CRF dollars, the 2020 year-end spending package—which extended the deadline for state and local governments to spend their CRF allotments by a year—did not provide greater flexibility in how these funds could be spent ([Government Finance Officers Association 2020](#)). Only with the passage of the American Rescue Plan Act in early 2021 did a more flexible form of aid—with restrictions primarily on the use of federal funds to finance tax cuts and pension plans—emerge ([Council of State Governments 2021](#)). Still, the aforementioned tax cut restriction in the 2021 relief law has been legally challenged by at least thirteen state attorneys general, mostly in Republican states.

Finally, Section 4003(b)(4) of the CARES Act provided up to \$500 billion for programs or facilities established by the Federal Reserve to provide liquidity to the financial system that supports state and local governments. This Municipal Liquidity Facility (MLF) marks the first time since the 1930s that the Fed has been authorized to lend directly to state and local governments ([Dulchin 2020](#)). As explained below, the MLF's terms however meant that access was restricted to most eligible jurisdictions.

To understand the difference in the scale of the fiscal response between the Great Recession and COVID-19, it is worth focusing on the CARES Act, which comprises the majority of overall spending and state and local aid in 2020. The

Table 2 Major intergovernmental aid appropriations in federal legislation: COVID-19 versus the Great Recession (\$billions of FY2020 dollars)

	COVID-19 (2020 legislation)	Great Recession (2009 legislation)
Medicaid enhancements	<ul style="list-style-type: none"> • Medicaid matching rate increase: \$85 billion (FF) • Continuous coverage requirement: \$80 billion (FF) 	Medicaid matching rate increase: \$105 billion
Flexible aid	Coronavirus Relief Fund: \$150 billion (C)	State Fiscal Stabilization Fund: \$65.2 billion
Education	<ul style="list-style-type: none"> • Elementary and Secondary Emergency Relief Fund: \$67.3 billion (C, RR) • Innovation Grants for Education: \$0.3 billion (C) • Governor's Emergency Education Relief Fund: \$7 billion (C, RR) • Education Grants for Tribes and Territories: \$1 billion (RR) 	<ul style="list-style-type: none"> • Title 1-A, elementary and secondary education for the disadvantaged: \$15.73 billion • Individuals with Disabilities Education Act: \$14.76 billion
Transportation	<ul style="list-style-type: none"> • Urban infrastructure grants: \$22.3 billion (C) • Rural infrastructure grants: \$2.2 billion (C) • Tribal infrastructure grants: \$0.03 billion (C) • Administration costs for transit infrastructure: \$0.08 billion (C) • State highway funding: \$10 billion (RR) • Transit infrastructure grants: \$14 billion (RR) 	<ul style="list-style-type: none"> • Highways construction projects: \$33.28 billion • Mass Transit: \$10.16 billion • Intercity Passenger Rail Capital, Congestion, and Corridor Development grants: \$9.68 billion
Housing and low-income assistance	<ul style="list-style-type: none"> • Community Development Block Grant: \$7 billion (C, RR) • Head Start: \$0.8 billion (C) • Homeless Assistance Grants: \$4 billion (C) 	<ul style="list-style-type: none"> • Temporary Assistance for Needy Families (\$5 billion) • Head Start: \$2.1 billion
Loans	Support for Municipal Liquidity Facility: \$35 billion (C)	Build America Bonds: \$36.3 billion
Other	Election Security Grants: \$0.4 billion (C)	Weatherization Assistance Grants: \$6.05 billion

Sources: Compiled by authors from [Committee for a Responsible Federal Budget \(2021\)](#); [Congressional Research Service \(2019\)](#).

C, CARES Act; FF, Families First Act; RR, Relief and Recovery Act.

passage of this legislation occurred in what can only be described as a politically exceptional moment, and one without an analogue during the Great Recession. To be sure, ideological polarization defined the contours of COVID-19 legislation just as much as it had during the Great Recession. Yet whereas ARRA passed along strict party lines in both the House (Democrats voted 246-7 in favor, and Republicans voted 176-0 against) and the Senate (Democrats voted 55-0 in favor and Republicans voted 38-3 against), CARES was enacted unanimously in both chambers, with four Senate Republicans not voting.

There are several potential explanations for the exceptional politics of CARES, which represents both a far larger and swifter fiscal policy response than ARRA. As mentioned in an earlier section, the COVID-19 economic shock occurred with greater rapidity and intensity than the recession that started in 2007. Whereas the Dow Jones Industrial Average saw its largest decrease in intraday trading on the week of March 9, 2020, it took nearly eighteen months for market indices to reach their trough during the Great Recession. In addition, configurations of political power varied across the two crises. Following the 2008 elections, Republicans were an out-party, highly motivated to weaken the legislative accomplishments of the Obama administration, especially where major packages like ARRA were concerned (McCarty, Poole, and Rosenthal 2013). During negotiations over the CARES Act in 2020, Republicans found themselves in a defensive election-year posture. Senate Majority Leader Mitch McConnell initially attempted to set the table for CARES by daring Democrats to vote against cloture on smaller packages that represented only Republican priorities and contained far less than the \$150 billion that ultimately ended up in the Coronavirus Relief Fund. Yet perhaps sensing their leverage, Democrats twice denied McConnell's bill the necessary sixty-vote majority for cloture. As a consequence, the Senate Majority leader delegated responsibility for negotiations to Treasury Secretary Steven Mnuchin, who bargained directly with House Speaker Nancy Pelosi (a Democrat). Despite objections from Senate Republicans to the compromise legislation, in part given President Trump's brand of punitive and transactional federalism, McConnell told his caucus to "gag and vote for it" (Carney 2020).

This exceptional political moment did not extend to all proposals for state and local aid, however. For instance, negating the need for additional intergovernmental support, in April McConnell referred to federal aid as "blue state bailouts" and called for states facing budget shortfalls to file for bankruptcy, even if they are unable to do so (Wagner 2020). In May, Democrats proposed a second major piece of relief legislation—the Heroes Act—which would have allocated \$1.1 trillion in unconditional aid for state and local governments (see Table 1). Unlike aid contained in CARES, these funds could have been used to patch holes in state and local budgets. While state and local officials quickly announced their support for these proposals, a highly centralized and partisan bargaining environment

frustrated their efforts at lobbying (Rocco et al. 2020). Proposals for state and local revenue support received a frosty reception among many Republicans, who blocked both the Heroes Act as well as proposals with significantly smaller levels of intergovernmental aid, which reflected revised state and local revenue estimates.⁶

Even in cases where unprecedented intergovernmental policy innovation seemed possible, existing ideological fractures impeded implementation. The Municipal Liquidity Facility (MLF) is an ideal example. Managed by former Bear Stearns executive Kent Hiteshew, the MLF became a tool to stabilize the municipal bond market rather than, in Hiteshew's words, "a first stop that replaces private capital" (Hiteshew 2020). As such, the MLF functionally excluded 97 percent of eligible units of government because its pricing was higher than in the private market for many cities (Dulchin 2020). The Fed's caution on lending to state and local governments, typical of central banks in federal systems (Lohmann 1998), is not reflected in other Fed facilities. Indeed, in June 2020, the Fed began purchasing billions in individual corporate bonds (on far more agreeable terms than the MLF) through a Secondary Market Corporate Facility. As of January 2021, only Illinois and New York's Metropolitan Transportation Authority had applied for access to the MLF.

In sum, COVID-19 elicited a far more expansive federal response than the Great Recession, including federal grants-in-aid to state and local governments. While state and local governments received an unprecedented boost in federal grants-in-aid under President Donald Trump, especially in the early stage of the pandemic (see Figure 3), none of it was truly unrestricted—which prevented states from patching holes in subnational budgets. As a result, reductions in subnational spending continued to offset improvements in other sectors of the economy into the fourth quarter of 2020 (Bureau of Economic Analysis 2021a, 2021b). The following sections investigate how state and local governments have managed under these policy and fiscal conditions.

States' Responses to the COVID-19 Recession

In times of crisis, state governments face a dilemma. On the one hand, subnational entities typically have to extend high-demand services and benefits. On the other hand, U.S. states also often engage in austerity measures given the absence of unrestricted aid from the federal government, flagging revenue collections, and the presence of balanced budget requirements. During COVID-19, this familiar dynamic played out with greater rapidity than during the Great Recession and was further complicated by the challenge of mitigating the virus itself. While the vast majority of states saw a significant decline in revenue collection in 2020, the demand for public goods and services to slow the spread of the virus only increased (National Association of State Budget Officers 2020a). States,

accordingly, have adjusted by freezing or cutting spending over other strategies, including raising revenues and accessing their rainy day funds. Yet, in contrast to early estimates, the negative effects of the pandemic on states' fiscal health have not been as widespread in 2020, in part due to the presence of federal aid, relatively healthy states' reserves and rainy day funds, as well as states' abandonment of strong nonpharmaceutical interventions to curb the spread of the virus.

Spending Adjustments

Historically, U.S. states have first resorted to spending freezes and cuts when facing budget difficulties, in part given that they are politically and administratively less costly than tax increases (Franko 2021; Klase 2011). According to researchers from the Center on Budget and Policy Priorities, during the Great Recession “spending cuts accounted for nearly half of state actions to close their shortfalls between 2008 and 2012, three times as much as tax increases and five times as much as ‘rainy day’ fund withdrawals” (Leachman and Williams 2021). These measures, which are more likely to be adopted when there is a strong balanced budget requirement and/or a unified Republican government in place (National Association of State Budget Officers 2013; Rueben, Randall, and Boddupalli 2018), include freezes in hiring and discretionary spending, reduction in working hours and benefits for public employees, furloughs or layoffs, and restrictions on funding to local levels (see, e.g., Maher, Hoang, and Hindery 2020). Governor Andrew M. Cuomo, for example, noted that without “federal relief New York will cut \$8.2 billion in grants to local governments, a blow [that] had ‘no precedent in modern times.’ The cuts would hit ‘nearly every activity funded by state government,’ including special education, pediatric health care, substance abuse programs, property-tax relief and mass transit” (Williams Walsh 2020).

In many ways, state politicians followed comparable trajectories in the late 2000s and in 2020. Still, the data suggest that the initial shock of the crisis on state budgets was more marked in FY 2020 than in early stages of the Great Recession, despite COVID hitting relatively late in the FY and the CARES Act being promptly passed. Facing revenue shortfalls, in the middle of FY 2008, thirteen states were forced to adjust their budgets. By contrast, in FY 2020, nineteen states reported mid-year spending cuts given revenue shortfalls, even if typically there is little flexibility at the end of a FY. However, in the majority of the states, the picture does not point to major austerity. As shown in Figure 4, thirteen states experienced increases in spending in FY 2020 and fifteen states did not adopt any mid-term changes. In line with Campbell and Sances (2013) findings on the Great Recession, in 2020 partisanship does not explain budget cuts, but Democrats were more likely to engage in budget increases (Rigby and Hatch 2017).

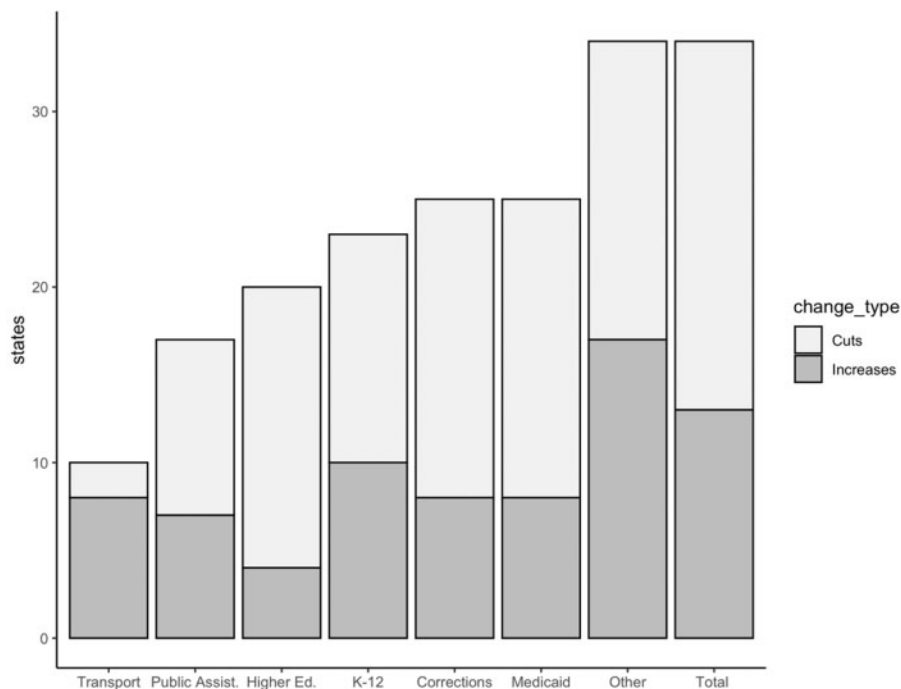


Figure 4 FY 2020 mid-term expenditure changes by policy area (number of states).

Source: National Association of State Budget Officers (2020a).

Note: No data available for Texas.

According to preliminary data from the National Association of State Budget Officers (2020a), the magnitude of the cuts increased in FY 2021, as just four states expanded spending. In fact, it is the first time since the Great Recession that state general fund spending is expected to drop. As in the late 2000s and early 2010s, K-12 education has been especially affected (Fowers and Siegel 2021; Gamkhar and Pickerill 2012; Leachman and Williams 2021). For instance, in FY 2020 mid-year cuts reached \$3,397.3 million in K-12 (the highest in all policy areas presented on Figure 4), and in September 2020 employment in the education sector in state and local governments fell by 280,000 (U.S. Bureau of Labor Statistics 2020a). These trends, nonetheless, were not universal as 10 states increased spending on K-12 education prior to closing FY 2020.

Based on lessons from previous episodes, we should expect cuts to increase in 2021. For instance, between 2008 and 2009 midterm cuts spread from 13 to 41 states, and in 2011 general fund expenditures was lower than in the middle of the Great Recession (Gamkhar and Pickerill 2011, 365). Federal aid from the 2021

American Rescue Plan is expected to slow down these potential trends; nonetheless, there is still uncertainty about the length of the pandemic and the speed of recovery.

Revenue Increases

Beyond budget savings, states can raise revenue to balance their budgets. They could do so by increasing existing tax rates and fees and/or adopting new taxes or fees on a permanent or temporary basis. While tax and fee increases are not as common as budget cuts, especially since the early 2000s (Jonas 2012; Klase 2011; National Association of State Budget Officers 2013, 3), they were prominently used during the Great Recession. And even if these actions allowed states to soften the magnitude of austerity measures in the late 2000s, they were insufficient to make up for losses.⁷

When assessing the COVID crisis, analysts are making similar observations—tax and fee increases have not yet been as common as cuts and the use of rainy day funds. This was especially the case in FY 2020, as lawmakers do not tend to implement mid-year tax increases (Rueben, Randall, and Boddupalli 2018). In the first part of FY 2021, the situation did not change much, as states were awaiting another round of federal support, and it was politically difficult to raise taxes during a pandemic, economic crisis, and election year. Still, in FY 2021, Arizona, through the initiative process, and New Jersey, via legislation, raised taxes on high-income-earners.

Despite these trends, some observers have noted that tax increases are inevitable in the near future. Moody's (2020,1), for instance, estimated that "revenue is unlikely to return to fiscal 2019 levels by fiscal 2024 without tax increases." Lawmakers in some states are considering a variety of options, such as following Arizona and New Jersey's footsteps (e.g., Minnesota), legalizing and taxing recreational marijuana (e.g., Pennsylvania, Virginia), taxing capital gains (e.g., Washington), taxing digital goods and services, as well revising the terms of economic nexus law by lowering the threshold that was upheld in *South Dakota v. Wayfair* (Jetter 2020). While it might be costly for politicians, especially for Republicans, to increase taxes and fees, recent research suggests that people who lived in states with a revenue-based approach during the Great Recession were better off financially than those living states that relied in spending cuts (Franko 2021).

Accessing Reserves

Beyond budget cuts and tax increases, states could also recur to their savings accounts, including their rainy day funds. Nonetheless, policymakers are generally conservative when accessing their rainy day funds. Besides having to meet a variety

of conditions prior to accessing these funds, including repayment rules in ten states (Chapman, Loiaconi, and Oh 2020), lawmakers generally first seek to assess whether spending levels can be sustained (National Association of State Budget Officers 2013, 2). For instance, while cuts represented 45 percent of all total budget closing efforts between 2008 and 2012, accessing savings accounts was only 9 percent of all total budget closing efforts during that period (Campbell and Sances 2013, 256; Jonas 2012; National Association of State Budget Officers 2012, 2013).

Despite rainy day and total funds being at record levels in FY 2019,⁸ in 2020 policymakers and lawmakers have continued to be generally cautious about accessing rainy day funds. In FY 2020, fifteen states accessed their budget stabilization funds to close budget shortfalls, in part because it was too late in the FY to raise revenue (National Association of Budget Officers 2020a; Walczak and Cammenga 2020). Alternatively, many states resorted to their ending balances to tackle budget shortfalls. These two actions in conjunction with federal aid might explain why more than half of the states did not have to cut spending in FY 2020.

Yet, as the pandemic lengthened and balances started to dwindle, in FY 2021 states have already started to access their budget stabilization funds, and they will continue to do so if they follow the trends of the Great Recession when most of these funds were depleted (Dinan and Gamkhar 2009). In light of their historic high levels, these funds can be a critical tool to soften the fall and counteract austerity trends. Once the crisis comes to a closure, we should expect states to once again make a conscious effort to replenish these savings accounts and reach the post-Great Recession 10-percent target.

Given the fragmented nature of U.S. federalism (Bowling and Pickerill 2013; Kettl 2020), there are wide variations in states' fiscal structures and conditions which might support, or hurt, these governments when navigating the crisis. For instance, in FY 2019, Wyoming could use its rainy day fund as a cushion for 397.7 days, while Illinois could have been able to fund its government for less than a tenth of a day (Rosewicz, Maynard, and Fleming 2020).⁹ These and other factors including partisanship, reserve levels, executive powers, budget processes, and the nature of the balanced budget requirement (Poterba 1994; White 2020), could help explain why some states have been able to expand Medicaid and public assistance, while others have had to cut social programs.

Relaxing Public Health Regulations

Policy responses to the prospect of pandemic-induced fiscal crises were not limited to the three types of traditional adjustments discussed above. Given the unique nature of the COVID-19 crisis, states have had an additional policy on the table to shape the flow of subnational revenue—measures to regulate economic activities. While the virus itself jeopardized revenue-generating economic activity, so too did

states' decisions to enact social-distancing measures, the closure of nonessential businesses, and the enactment of restaurant capacity limitations (Gupta et al. 2020). While state decisions on the stringency of COVID-19 restrictions varied widely, largely given differences in the partisan control of government, the majority of states abandoned mandatory stay-at-home orders in favor of advisory orders by the middle of May 2020 (Moreland et al. 2020). Thus, while the virus continued to surge, economic activity nevertheless rebounded. In turn, state tax revenues increased on average by 15 percent between the second and third quarter of 2020 (U.S. Census Bureau 2020). While buoying state and local revenues, the relaxing of public health measures kept the risk of COVID-19 transmission high into the fall and winter months (Hallas et al. 2020).

Local Governments and the Politics of Economic Uncertainty

City and county governments' fiscal rules, which are generally shaped by state regulations, constrain their responses to economic slowdowns, forcing them to engage in a combination of expenditure reductions, revenue increases, and municipal borrowing (see, e.g., Chernick et al. 2020; López-Santana 2019; Nelson 2012). Yet while both COVID-19 and the Great Recession caused local governments to experience some amount of fiscal stress, the timing and causes of each crisis, the initial reactions of local governments, as well as the measures taken at multiple levels of government to alleviate the economic shock, differed in important ways.

As in the case of states, COVID-19 brought swift and sharp consequences for cities and counties. The Great Recession's effects on local fiscal health, however, did not fully materialize until 2010—following the decline in property tax assessments—though they were profound and long-lasting. With the collapse of the housing market, local governments' inflation-adjusted revenues fell by 5 percent between 2007 and 2012 and did not return to their prerecession levels until at least 2014 (U.S. Census Bureau 2020). By contrast, in the weeks and months following the 2020 national emergency declaration, many cities and counties quickly found themselves in a difficult fiscal position. A survey of 900 municipalities conducted by the National League of Cities (NLC) revealed that nearly 70 percent reported experiencing negative fiscal effects from COVID-19 (National League of Cities 2020). Of those that did, 90 percent reported experiencing revenue losses in FY 2020 of 21 percent on average. Additionally, 76 percent of cities surveyed reported experiencing increased pressure for expenditures. Still, the vast majority of the states, with the exception of California, Maryland, and Rhode Island, continued to provide local aid in FY 2020.

We do not yet have the full picture of how local governments responded to these pressures, but there are several preliminary pieces of data that can shed light

on this question. First, whereas local governments did not engage in workforce reductions until later in the Great Recession, COVID-19 ushered in a significant decline in local government employment (see [Figure 1](#)). Beyond furloughs and layoffs, local governments engaged in a number of other actions, including hiring freezes, the elimination of unfilled positions, and the incentivization of early retirement ([International Conference of City/County Managers 2020](#); [National League of Cities 2020](#); [National Association of Counties 2020](#)). As [Green and Loualiche \(2020\)](#) suggest, in light of stay at home orders, states where local governments were highly dependent on sales taxes as a revenue source were more likely to experience workforce reductions. Second, according to a survey conducted by the International City/County Management Association, COVID-19 forced local governments to delay, and less frequently to cancel, plans for capital improvements. For instance, 51 percent of local governments delayed, and 9 percent cancelled, plans for capital improvement in public recreation; and 40 percent reported delaying capital improvements in roads or sidewalks, while 5 percent intended to cancel these plans ([International Conference of City/County Managers 2020](#)). Finally, local governments took on additional debt. In 2020, new municipal bond issuance—the vast majority of which occurred at the local level—amounted to over \$500 billion, 22 percent higher than the inflation-adjusted five-year average ([Municipal Securities Rulemaking Board 2021](#)).

While the immediate impact of COVID-19 on local finances appears to be greater than in the Great Recession, the long-term consequences are not entirely clear ([McDonald and Larson 2020](#)). Initial analyses of fiscally standardized cities by [Chernick et al. \(2020\)](#) forecast average revenue shortfalls of between 5.5 percent in a less severe scenario and 9 percent in the more severe scenario. By the winter of 2020, revised economic forecasts appeared to suggest a far more optimistic reality for local governments, with own-source revenues exceeding 2019 levels in just two years ([Auerbach et al. 2020](#)).

One source of uncertainty here is that the pandemic has thus far affected specific local revenue sources differently than the Great Recession, whose prolonged local fiscal effects owed much to declines in property taxes—a result from the housing crisis and drops in state aid. In 2020, property taxes have been far more stable. The reason: despite falling prices in the commercial and residential real-estate markets during 2020, home prices have surged. The housing market, bolstered by historically low interest rates and pent-up demand, is expected to remain strong well into 2021, assuming a continuation of accommodative Federal Reserve policy ([National Association of Realtors 2020](#); [Orton 2021](#); [Salviati, Popov, and Warnock 2020](#)). Yet where state aid to local government is concerned, the pandemic has already created more vulnerabilities. Unlike other state spending, most notably Medicaid spending, there are few guarantees of a minimum level of local aid ([Kass et al. 2020](#)). Hence, if revenue collection continues to be affected

and pressure for mandatory expenditures increases, local governments highly dependent on state aid could see greater revenue shortfalls (Chernick et al. 2020).

Thus the timing of federal aid to both state and local governments, as well as other economic relief policies, will continue to set the parameters of subnational fiscal policy. Local fiscal crises of the Great Recession era largely occurred after federal fiscal activism had been supplanted by deficit-reduction impulses (Sheiner and Ng 2019). By contrast, during the pandemic, federal fiscal activism has thus far occurred simultaneously with shutdowns and local fiscal crises. The CARES Act's expansion of taxable unemployment benefits and economic support payments no doubt account for the rebound in consumer spending, which helped to buoy local revenue collections. If Congress continues to be responsive to changing economic conditions, local governments may not face the protracted fiscal crisis they did during the Great Recession.

Beyond economic relief, COVID-19's threat to local budgets is also contingent on actions taken by multiple levels of government to control the spread of the virus. While improved economic forecasts hinge in at least some part on the speed and effectiveness of vaccine efforts, the local fiscal picture also depends at least as much on traditional public health interventions. As state and local officials intervened to enforce stay-at-home orders and business closures in April of 2020, the national unemployment rate rose to an unprecedented 15 percent. And while governments' decisions to reverse these lockdowns helped to ensure a recovery in the labor market during the summer and fall, they also contributed to the spread of the virus, which poses a threat to economic long-term recovery (Gupta et al. 2020). Further, as long as the virus continues to spread, expenditure pressures will continue. Expanded state Medicaid spending associated with the pandemic could threaten aid to local governments (Chernick et al. 2020). Local governments will also have additional responsibilities for delivering services associated with the pandemic. As such, they will continue to experience expenditure pressure that did not exist during the Great Recession. Survey data collected by the NLC in November of 2020 help to substantiate this point (National League of Cities 2020). Of the 622 municipalities who reported receiving aid from the federal Coronavirus Relief Fund, 70 percent reported spending this money to assist in the purchase of personal protective equipment, 50 percent reported purchasing technologies to enable remote work, virtual meetings, or other public events, and 43 percent reported using the funds to support overtime pay for essential government employees. In other words, understanding the future of local fiscal health in the United States requires a deeper appreciation of government's ability to protect public health and deliver goods and services.

Conclusion

As the pandemic hit countries around the world, President Trump's policies drew attention to the model of transactional and punitive federalism (Bowling, Fisk, and Morris 2020; Goelzhauser and Konisky 2020), which put significant weight on state and local leaders for the regulation of public health measures and the provision of a wide variety of public goods. In the face of an unprecedented crisis, which combined a public health emergency with a swift economic downturn, Congress was able to briefly overcome its extreme partisan polarization and launch a comprehensive federal aid package. The federal response to the COVID crisis was swift and far more substantial when compared to the Great Recession.

Despite these trends, the legacies of “fend for yourself federalism” were present. While federal relief did help states to cover a large number of pandemic-related expenditures and extend vital social benefits, the aid came with conditions that are more likely to affect states that were already facing fiscal challenges. The second part of 2020, nonetheless, was characterized by a familiar pattern of gridlock matched with Trump's approach to federalism which preempted the passage of unconditional federal support for state and local revenues. Confronted with high levels of uncertainty, subnational officials face a limited set of choices, including spending adjustments and the relaxation of public health restrictions. This trend is especially salient in states and localities that are highly reliant on tourism and natural resources.

What does the COVID-19 pandemic reveal about the contours of fiscal federalism in the United States, especially in times of crises? As we have detailed in this article, and as a variety of scholarship suggests, state and local responses to economic crises are highly procyclical. Limitations on spending and borrowing have effectively forced these governments to historically respond to revenue shortfalls by making deep spending cuts, especially in the area of education. Even if the federal government retains extensive countercyclical capacity, it has not yet pursued a policy of general-purpose “automatic stabilization” of state and local finances. And while Medicaid is often regarded as a powerful automatic stabilizer, the program's design nevertheless requires discretionary congressional adjustment of matching rates during crises. The evidence discussed in this paper from the Great Recession and COVID-19 crisis suggests that federal countercyclical support for subnational governments continues to hinge on a delicate confluence of political variables that permit discretionary action. Given these constraints, countercyclical aid works like a makeshift dam—capable of protecting subnational finances to some extent, but at risk of giving away when the next flood arrives.

From the vantage point of state and local governments, the architecture of fiscal federalism has created incentives for subnational politicians to loosen emergency public health measures, despite public concern (Pew Research Center 2020). In this

case, partisan politics represent a noteworthy factor as Republican governors have tended to adopt less stringent measures than Democrats (Hallas et al. 2020). Paradoxically, while the choice to favor “the economy” over emergency health measures promoted economic activity in the short run, in the long-run it has delayed economic recovery and also costed lives as the virus continued to spread at high rates in late 2020 (Dayen 2020).

In short, just as COVID-19 has once again exposed the fragmentation of U.S. federalism, the dangers of polarization, and the structural weaknesses of the public health and welfare systems, its economic effects have also made evident the limitations of the architecture of American fiscal federalism. Some might argue that tight restrictions on state and local spending and borrowing preserve markets, and limit free-riding and moral hazards. Yet the pandemic has revealed another moral hazard: federal officials can push off unsavory policy dilemmas—such as the choice between protecting revenues and defending public health—onto subnational governments (Williams 2020). Should partisan cleavages over intergovernmental aid persist, and should the Fed remain reluctant to support states, a prolonged economic crisis could injure the ability of states, cities, and counties to perform some of their vital tasks. At the local level, the economic crisis might be accompanied by a variety of governance challenges in that municipalities in distress often face tight state oversight (e.g., oversight boards, emergency managers) which is often characterized as undemocratic in nature (López-Santana 2019). If these scenarios come to pass, it will only accentuate the need to dramatically rethink the structure and contours of American fiscal federalism.

Notes

The authors thank Tim Conlan, John Dinan, Amanda Kass, David Konisky, Paul Nolette, and the three anonymous reviewers for comments on earlier versions of this manuscript. For research assistance, we wish to thank Erica Seng-White.

1. See also Gamkhar and Pickerill (2012); Posner and Conlan (2017); and Rodden (2006).
2. In line with the accounting/public budgeting literature, we adopt McDonald and Larson’s (2020, 377) definition of fiscal health as “the ability of a government to balance its financial obligations with its available revenue streams.” More specifically, “A government is considered fiscally healthy if it has enough resources to meet its obligations” (McDonald and Larson 2020, 380). For detailed discussions on how to study and measure the concept of fiscal health, see, for instance, Maher, Ebdon, and Bartle (2020) and McDonald (2018).
3. For instance, adjusting for inflation, it took states close to eight years to restore their revenues to pre-recession levels (National Association of State Budget Officers 2020a).

4. Statewide variations in the impact of COVID-19 reflects existing trends. By the third quarter of 2019, tax revenues lagged behind Great Recession levels in six states, and for the rest “their recovery ranged from as much as 69.9% higher tax revenue to less than 1%” (Rosewicz, Theal, and Fall 2020). North Dakota was the leader (69.9 percent above the peak), while Alaska had the worst performance with 85.1 percent below its peak.
5. Out of forty-five states with a sales tax, only Florida and Missouri do not have a collection obligation on remote sellers and marketplace facilitators.
6. These proposals included a \$500 billion proposal by the bipartisan House Problem Solvers Caucus and a \$160 billion proposal floated in the small bipartisan Senate group whose members negotiated the year-end appropriations package (Everett, Caygle, and Levine 2020).
7. Revenue increases became more common: (i) after FY 2010 (when the damage became obvious), (ii) in states with strong balanced budget requirements, and (iii) in states with divided governments or controlled by Democrats (Jonas 2012; Rueben, Randall and Boddupalli 2018).
8. According to researchers at the Pew Charitable Trusts, “more than two-thirds of states—the most yet—could cover a bigger share of spending with rainy day funds alone . . . states could run government operations for a median of 27.9 days . . . also a new high—compared with 17.3 days . . . just before the recession” (Rosewicz, Maynard, and Fleming 2020).
9. The Government Finance Officers Association recommends that state and local governments set aside reserves equal to at least two months of general fund operating expenditures.

References

- Auerbach, Alan, William Gale, Byron Lutz, and Louise Scheiner 2020. Fiscal effects of COVID-19. *Brookings Papers on Economic Activity*. Available: <https://www.brookings.edu/wp-content/uploads/2020/09/Auerbach-et-al-conference-draft.pdf>. Accessed 27 January 2021.
- Baicker, Katherine, Jeffrey Clemens, and Monica Singhal. 2012. The rise of the states: U.S. fiscal decentralization in the postwar period. *Journal of Public Economics* 96 (11–12): 1079–1091.
- Bowling, Cynthia J., and J. Mitchell Pickerill. 2013. Fragmented federalism: The state of American federalism 2012–13. *Publius: The Journal of Federalism* 43 (3): 315–346.
- Bowling, Cynthia J., Jonathan M. Fisk, and John C. Morris. 2020. Seeking patterns in chaos: Transactional federalism in the Trump Administration’s response to the COVID-19 pandemic. *American Review of Public Administration* 50 (6–7): 512–518.
- Brower, Margaret Teresa, and Jamila Michener. 2021. Latina and Black women lost jobs in record numbers. Policies designed for all women don’t necessarily help. *Washington Post*, February 9. Available: <https://www.washingtonpost.com/politics/2021/02/09/latina-black-women-lost-jobs-record-numbers-policies-designed-all-women-dont-necessarily-help/>

- utm_source=twitter&utm_campaign=wp_monkeycage&utm_medium=social. Accessed 9 February 2021.
- Bureau of Economic Analysis. 2020a. Gross domestic product by state, *1st quarter 2020*. Available: <https://www.bea.gov/news/2020/gross-domestic-product-state-1st-quarter-2020>. Accessed 4 September 2020.
- . 2020b. *Gross domestic product by state, 2nd quarter 2020*. Available: <https://www.bea.gov/news/blog/2020-10-02/gross-domestic-product-state-2nd-quarter-2020>. Accessed 10 October 2020.
- . 2020c. *Gross domestic product by state, 3rd quarter 2020*. Available: <https://www.bea.gov/news/2020/gross-domestic-product-third-estimate-corporate-profits-revised-and-gdp-industry-third>. Accessed 21 January 2021.
- . 2020d. *Effects of selected pandemic response programs on personal income*. Available: <https://www.bea.gov/sites/default/files/2020-12/effects-of-selected-federal-pandemic-response-programs-on-personal-income-november-2020.pdf>.
- . 2021a. Gross domestic product, fourth quarter and year, *2020*. Available: https://www.bea.gov/sites/default/files/2021-01/gdp4q20_adv.pdf. Accessed 3 February 2021.
- . 2021b. *National income and product accounts: Table 3.3. State and local government current receipts and expenditures*. Available: <https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=3&isuri=1&1921=survey&1903=86>. Accessed 8 April 2021.
- Campbell, Andrea Louise, and Michael W. Sances. 2013. State fiscal policy during the great recession budgetary impacts and policy responses. *Annals of the American Academy of Political and Social Science* 650 (1): 252–273.
- Carney, Jordain. 2020. McConnell says Senate will pass House coronavirus bill without changes. *The Hill*, March 17. Available: <https://thehill.com/homenews/senate/488061-mcconnell-says-senate-will-pass-house-coronavirus-bill-without-changes>. Accessed 27 January 2021.
- Center on Budget and Policy Priorities. 2020. States grappling with hit to tax collections. Available: <https://www.cbpp.org/research/state-budget-and-tax/states-grappling-with-hit-to-tax-collections>. Accessed 27 January 2021.
- Chapman, Jeff, Airlie Loiaconi, and Angela Oh. 2020. *State rules can complicate rainy day fund withdrawals*. Pew Charitable Trusts. Available: <https://www.pewtrusts.org/en/research-and-analysis/articles/2020/05/12/state-rules-can-complicate-rainy-day-fund-withdrawals>. Accessed 11 September 2020.
- Chernick, Howard, and Cordelia Reimers. 2019. Consumption taxes, income taxes, and revenue sensitivity: States and the great recession. *Public Finance Review* 47 (2): 349–381.
- Chernick, Howard, David Copeland, and Andrew Reschovsky. 2020. The fiscal effects of the COVID-19 pandemic on cities: An initial assessment. *National Tax Journal* 73 (3): 699–732.
- Committee for a Responsible Federal Budget. 2021. COVID money tracker. Available: <https://www.covidmoneytracker.org/>. Accessed 1 February 2021.

- Congressional Research Service. 2019. Federal grants to state and local governments: A historical perspective on contemporary issues. Available: <https://fas.org/sgp/crs/misc/R40638.pdf>. Accessed February 3, 2021.
- Conlan, Timothy J. 2017. A lifeline to struggling states: The state fiscal stabilization fund. In *Governing under stress: The implementation of Obama's economic stimulus program*, eds. T. Conlan, P. Posner, and P. Regan, 45–64. Washington, DC: Georgetown University Press.
- Conlan, Timothy J., and Paul L. Posner. 2011. Inflection point? Federalism and the Obama administration. *Publius: The Journal of Federalism* 41 (3): 421–446.
- Conlan, Timothy J., Paul L. Posner, and Priscilla M. Regan. 2017. *Governing under stress: The implementation of Obama's economic stimulus program*. Washington, DC: Georgetown University Press.
- Conlan, Timothy, Paul Posner, Heidi Jane Smith, and Matt Sommerfeld. 2015. Autonomy and interdependence: The scope and limits of “fend for yourself federalism” in the United States. In *Institutions of intergovernmental fiscal relations: Challenges ahead*, eds. J. Kim and H. Blöchliger, 155–179. Paris, France: OECD.
- Couch, Kenneth A., Robert W. Fairlie, and Huanan Xu. 2020. The Impacts of COVID-19 on Minority Unemployment: First Evidence from April 2020 CPS Microdata. Working Paper 20-021, Stanford Institute for Economic Research. Available: <https://siepr.stanford.edu/sites/default/files/publications/20-021.pdf>. Accessed 11 September 2020.
- Council of Economic Advisers. 2014. *Economic Report of the President*. Washington, DC: GPO.
- Council of State Governments. 2021. *Analysis for states: The coronavirus state and local fiscal recovery fund*. Available: https://web.csg.org/tcs/wp-content/uploads/sites/13/2021/03/FiscalAnalysisForStates_032621.pdf. Accessed 8 April 2021.
- Dadayan, Lucy. 2020. *States saw freefall drop in revenues in the second quarter; partly offset in the third quarter but still depressed from pandemic*. Urban Institute. Available: https://www.urban.org/research/publication/state-tax-and-economic-review-2020-quarter-2/view/full_report. Accessed 17 January 2021.
- Dayen, David. 2020. Yes the CARES Act did induce premature state reopenings. *The American Prospect*, July 13. <https://prospect.org/coronavirus/unsanitized-cares-act-really-did-induce-premature-state-reopenings>. Accessed 14 October 2020.
- Dinan, John, and Shama Gamkhar. 2009. The State of American Federalism 2008–2009. *The Presidential election, the economic downturn, and the consequences for federalism*. *Publius: The Journal of Federalism* 39 (3): 369–407.
- Dominguez, Kathryn M. E., and Matthew D. Shapiro. 2013. Forecasting the recovery from the great recession: Is this time different? *American Economic Review* 103 (3): 147–152.
- Dulchin, Benjamin. 2020. Aiming to underachieve: How a federal reserve lending program for local governments is designed to fall short. The Center for Popular Democracy. Available: <https://populardemocracy.org/sites/default/files/Aiming%20to%20Underachieve%20-%20Fed%20Up%20White%20Paper%20June%202020.pdf>. Accessed 19 August 2020.

- Everett, Burgess, Heather Caygle, and Marianne Levine. 2020. Feuds, Zoom and Italian food: How the stimulus got done. *Politico*, December 21. Available: <https://www.politico.com/news/2020/12/21/how-stimulus-bill-got-done-449722>. Accessed 27 February 2021.
- Franko, William W. 2021. How state responses to economic crisis shape income inequality and financial well-being. *State Politics & Policy Quarterly* 21 (1): 31–54.
- Fowers, Alyssa, and Rachel Siegel. 2021. Why some state and local governments are desperate for more stimulus aid. *Washington Post*, February 15. Available: <https://www.washingtonpost.com/business/2021/02/15/biden-stimulus-state-local-aid/?arc404=true>. Accessed 15 February 2021.
- Gamkhar, Shama, and J. Mitchell Pickerill. 2012. The State of American Federalism 2011–2012: A fend for yourself and activist form of bottom-up federalism. *Publius: The Journal of Federalism* 42 (3): 357–386.
- . 2011. The State of American Federalism 2010–2011: The economy, healthcare reform and midterm elections shape the intergovernmental agenda. *Publius: The Journal of Federalism* 41 (3): 361–394.
- Goelzhauser, Greg, and David M. Konisky. 2020. The State of American Federalism 2019–2020: Polarized and punitive intergovernmental relations. *Publius: The Journal of Federalism* 50 (3): 311–343.
- Government Finance Officers Association. 2020. CARES Act Coronavirus Relief Fund: The prime recipient perspective. Available: <https://www.gfoa.org/materials/crf-recipient-perspective>. Accessed 8 April 2021.
- Green, Daniel, and Erik Loualiche. 2020. State and local government employment in the COVID-19 crisis. Unpublished paper. Available: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3651605. Accessed 11 September 2020.
- Gupta, Sumedha, Montenegro Laura, Thuy D. Nguyen, Felipe Lozano Rojas, Ian M. Schmutte, Kosali I. Simon, Bruce A. Weinberg, and Wing. Coady 2020. Effects of Social Distancing on Labor Market Outcomes. *NBER Working Paper 27280*, Cambridge, MA: National Bureau of Economic Research.
- Hallas, Laura, Ariq Hatibie, Saptarshi Majumdar, and Monika Pyarali. 2020. Variation in US States' Responses to COVID-19. Version 2.0. Blavatnik School of Government Working Paper Series, Oxford University. Available: https://www.bsg.ox.ac.uk/sites/default/files/2020-12/BSG-WP-2020-034-v2_0.pdf. Accessed 5 February 2021.
- Hiteshew, Kent. 2020. Testimony before the Congressional Oversight Commission, September 17. Available: <https://www.federalreserve.gov/newsevents/testimony/hiteshew20200917a.htm>. Accessed 27 January 2021.
- International Conference of City/County Managers. 2020. ICMA survey research: COVID-19 impacts on local governments. September 1. <https://icma.org/documents/icma-survey-research-covid-19-impacts-local-governments>.
- Jetter, Jay. 2020. Covid-19 impacts on sales tax landscape. *Bloomberg Tax*, October 14. Available: <https://news.bloombergtax.com/daily-tax-report/covid-19-impacts-on-sales-tax-landscape>. Accessed 19 January 2021.

- Jonas, Iris. 2012. *Great recession and fiscal squeeze at U.S. subnational government level*. International Monetary Fund. Available: <https://www.imf.org/external/pubs/ft/wp/2012/wp12184.pdf>. Accessed 9 September 202
- Kass, Amanda, Michael Pagano, and Farhad Keyb Omeyr. 2020. *How states provide cities with general revenue: An analysis of unrestricted state aid*. Cambridge, MA: Lincoln Institute of Land Policy.
- Kettl, Donald F. 2020. States divided: The implications of American Federalism for COVID-10. *Public Administration Review* 8 (4): 595–602.
- Klase, Kenneth A. 2011. The intersection of flexible budgeting and cutback management: Factors affecting the responses of selected states to recent economic recessions. *Public Finance and Management* 11 (2): 197–230.
- Leachman, Michael, and Erica Williams. 2021. *States can learn from great recession, adopt forward-looking, antiracist policies*. Center on Budget and Policy Priorities. Available: <https://www.cbpp.org/research/state-budget-and-tax/states-can-learn-from-great-recession-adopt-forward-looking>. Accessed on 13 February 2021.
- Lohmann, Susanne. 1998. Federalism and Central Bank Independence: The politics of German Monetary Policy, 1957-92. *World Politics* 50 (3): 401–446.
- López-Santana, Mariely. 2019. The politics of financial oversight boards in the United States. Paper Delivered at the 2019 Annual Meeting of the American Political Science Association.
- Maher, Craig S., Carol Ebdon, and John R. Bartle. 2020. Financial condition analysis: A key tool in the MPA curriculum. *Journal of Public Affairs Education* 26 (1): 4–10.
- Maher, Craig S., Trang Hoang, and Anne Hindery. 2020. Fiscal responses to COVID-19: Evidence from local governments and nonprofits. *Public Administration Review* 80 (4): 644.
- McCarty, Nolan, Keith Poole, and Howard Rosenthal. 2013. *Political bubbles*. Princeton, NJ: Princeton University Press.
- McDonald, Bruce D., III. 2018. Local governance and the issue of fiscal health. *State and Local Government Review* 50 (1): 46–55.
- McDonald, Bruce D., and Sarah E. Larson, 2020. Implications of the coronavirus on sales tax revenue and local government fiscal health. *Journal of Public and Nonprofit Affairs* 6 (3): 377–400.
- Moody's. 2020. Revenue recovery from coronavirus hit will lag GDP revival, prolonging budget woes. Available: <https://www.law360.com/articles/1268199/attachments/0>. Accessed 21 August 2020.
- Moreland, Amanda, Christine Herlihy, Michael Tynan, Gregory Sunshine, Russell F. McCord, Charity Hilton, Jason Poovey, et al. 2020. Timing of state and territorial COVID-19 stay-at-home orders and changes in population movement — United States, March 1–May 31, 2020. *Morbidity and Mortality Weekly Report* 69 (35): 1198–1203.

- Municipal Securities Rulemaking Board. 2021. Market statistics. Available: <https://emma.msrb.org/MarketActivity/ViewStatistics.aspx>. Accessed 27 January 2021.
- National Association of Counties. 2020. *Comprehensive analysis of COVID-19's impact on county finances and implications for the U.S. economy*. Washington, DC: National Association of Counties.
- National Association of Realtors. 2020. *Commercial real estate trends and outlook*. Washington, DC: National Association of Realtors.
- National Association of State Budget Officers. 2012. State fiscal outlook. Available: <http://budgetblog.nasbo.org/budgetblogs/blogs/admin-user/2012/12/10/state-fiscal-outlook>. Accessed 4 August 2020.
- . 2013. State budgeting and lessons learned from the economic downturn. Analysis and commentary from State Budget Officers. Available: <https://higherlogicdownload.s3.amazonaws.com/NASBO/9d2d2db1-c943-4f1b-b750-0fca152d64c2/UploadedImages/Reports/State%20Budgeting%20and%20Lessons%20Learned%20from%20the%20Economic%20Downturn-final.pdf>. Accessed 4 August 2020.
- . 2020a. The fiscal survey of the states: Fall 2020. Available: https://higherlogicdownload.s3.amazonaws.com/NASBO/9d2d2db1-c943-4f1b-b750-0fca152d64c2/UploadedImages/Fiscal%20Survey/NASBO_Fall_2020_Fiscal_Survey_of_States_S.pdf. Accessed 11 January 2021.
- National League of Cities. 2020. *November member survey. Topline data provided to authors by organization*.
- Nelson, Kimberly L. 2012. Municipal choices during a recession: Bounded rationality and innovation. *State and Local Government Review* 44 (1): 44S–63S.
- Orton, Kathy. 2021. Experts predict what the 2021 housing market will bring. *Washington Post*, January 11. Available: <https://www.washingtonpost.com/business/2021/01/11/2021-housing-market-predictions/>.
- Pew Research Center. 2020. Most Americans say state governments have lifted COVID-19 restrictions too quickly. Available: <https://www.pewresearch.org/politics/2020/08/06/most-americans-say-state-governments-have-lifted-covid-19-restrictions-too-quickly>. Accessed 22 February 2021.
- Posner, Paul, and Timothy Conlan. 2017. Beyond the financial crisis: The future of fiscal federalism in the United States. In *The Future of Federalism. Intergovernmental Financial Relations in an Age of Austerity*, eds. R. Eccleston and R. Krever, 49–72. Cheltenham, UK: Edward Elgar Publishing.
- Poterba, James M. 1994. State responses to fiscal crises: The effects of budgetary institutions and policies. *Journal of Political Economy* 102 (4): 799–821.
- Rigby, Elizabeth, and Megan E. Hatch. 2017. For richer or poorer: The politics of redistribution in bad economic times. *Political Research Quarterly* 70 (3): 590–603.
- Rocco, Philip, Daniel Béland, and Alex Waddan. 2020. Stuck in neutral? Federalism, policy instruments, and counter-cyclical responses to COVID-19 in the United States. *Policy and Society* 39 (3): 458–477.

- Rodden, Jonathan A. 2006. *Hamilton's paradox: The promise and peril of fiscal federalism*. New York, NY: Cambridge University Press.
- Romm, Tony. 2020. Trump's Unemployment Extension may only provide three-week boost, Federal Guidance Reveals. *The Washington Post*, August 17. Available: <https://www.washingtonpost.com/us-policy/2020/08/17/trump-extended-unemployment>. Accessed 26 August 2020.
- Rosewicz, Barb, Justin Theal, and Alexandre Fall. 2020. *States posted healthy tax gains in first half of budget year*. Pew Charitable Trusts. Available: <https://www.pewtrusts.org/en/research-and-analysis/articles/2020/04/28/states-posted-healthy-tax-gains-in-first-half-of-budget-year>. Accessed 17 July 2020.
- Rosewicz, Barb, Melissa Maynard, and Joe Fleming. 2020. *States take early steps to manage COVID-19 budget fallout*. Pew Charitable Trusts. Available: <https://www.pewtrusts.org/en/research-and-analysis/articles/2020/04/24/states-take-early-stepsto-manage-covid-19-budget-fallout>. Accessed 22 July 2020.
- Rueben, Kim, Megan Randall, and Aravind Boddupalli. 2018. *Budget processes and the great recession how state fiscal institutions shape tax and spending decisions*. Urban Institute. Available: https://www.taxpolicycenter.org/sites/default/files/publication/155886/budget_processes_and_the_great_recession.pdf. Accessed 31 August 2020.
- Salviati, Chris, Igor Popov, and Rob Warnock. 2020. Apartment list national rent report. December 28. <https://www.apartmentlist.com/research/national-rent-data>.
- Sheiner, Louise, and Sophia Campbell. 2020. How much is COVID-19 hurting state and local revenues? Available: https://www.brookings.edu/blog/up-front/2020/09/24/how-much-is-covid-19-hurting-state-and-local-revenues/?preview_id=1055208. Accessed 28 September 2020.
- Sheiner, Louise, and Michael Ng. 2019. How stabilizing has fiscal policy been? In *Recession ready*, eds. H. Boushey, R. Nunn, and J. Shambaugh, 49–66. Washington, DC: Brookings Institution.
- Spain, Carol H., Geoffrey E. Buswick, Sussan S. Corson, David G. Hitchcock, and Timothy W. Little. 2020. U.S. States mid-year sector view: States will continue to be tested in unprecedented ways. *S&P Global Ratings*. Available: <https://www.spglobal.com/ratings/en/research/articles/200713-u-s-states-mid-year-sector-view-states-will-continue-to-be-tested-in-unprecedented-ways-11567410>. Accessed 15 December 2020.
- U.S. Bureau of Labor Statistics. 2020a. *Employment situation summary—September 2020*. Available: <https://www.bls.gov/news.release/empisit.nr0.htm>. Accessed 3 October 2020.
- . 2020c. *The employment situation—April 2020*. Available: https://www.bls.gov/news.release/archives/empisit_05082020.pdf. Accessed 26 August 2020.
- . 2021. *Employment by industry*. Available: <https://www.bls.gov/charts/employment-situation/employment-levels-by-industry.htm>. Accessed 8 April 2021.
- U.S. Census Bureau. 2020. *Quarterly summary of state and local tax revenues: Quarter 3*. Available: <https://www.census.gov/data/tables/2020/econ/qtax/historical/q3.html>. Accessed 5 February 2021.

- U.S. Department of the Treasury. 2021. Coronavirus relief fund for states, tribal governments, and certain eligible local governments. *Federal Register* 86 (10): 4182–4194.
- Velasco, Edgar. 2020. *State budgets amid COVID-19*. Arlington: Stateside Associates.
- Wagner, John. 2020. McConnell takes flak after suggesting bankruptcy for states rather than bailouts. *Washington Post*. Available: https://www.washingtonpost.com/powerpost/mcconnell-takes-flak-after-suggesting-bankruptcy-for-states-rather-than-bailouts/2020/04/23/f70311fe-8560-11ea-a3eb-e9fc93160703_story.html. Accessed 29 January 2021.
- Ward, Burke, Janice C. Sipior, and Danielle R. Lombardi. 2020. COVID-19: State sales and use tax implications. *Information Systems Management* 37 (4): 343–347.
- Walczak, Jared, and Janelle Cammenga. 2020. State rainy day funds and the COVID-19 crisis. *Tax Foundation*. Available: <https://taxfoundation.org/state-rainy-day-funds-covid-19>. Accessed 29 July 2020.
- White, Kathryn. 2020. State fiscal outlook: Pre- & post-COVID-19. *National Association of State Budget Officers*. Available: <http://budgetblog.nasbo.org/budgetblogs/blogs/kathryn-white/2020/06/25/state-fiscal-outlook-pre-post-covid-19?CLK=16128ce1-febb-4a7a-888a-61f14b3c2bcb>. Accessed 4 August 2020.
- White, Dan, Sarah Crane, and Colin Seitz. 2020. Stress-testing states: COVID-19. *Moody's Analytics*, April 14, 2020. Accessed July 31, 2020. <https://www.economy.com/getlocal?q=37F6F320-EF2A-4806-9AAB-EADE66FA0317&app=download>.
- Williams, Alex. 2020. Moral hazard in a modern federation. *Journal of Post-Keynesian Economics* doi:10.1080/01603477.2021.1872031.
- Williams Walsh, Mary. 2020. With Washington deadlocked on aid, states face dire fiscal crises. *New York Times*, September 7. Available: <https://www.nytimes-com.mutex.gmu.edu/2020/09/07/business/state-budgets-coronavirus-aid.html>. Accessed 8 September 2020.
- Zandi, Mark. 2020. Testimony before the Congressional Coronavirus Oversight Commission. September 17. Available: <https://coc.senate.gov/sites/default/files/2020-09/MLF%20Testimony%20-%20ZANDI.pdf>. Accessed 21 January 2021.