Leadership

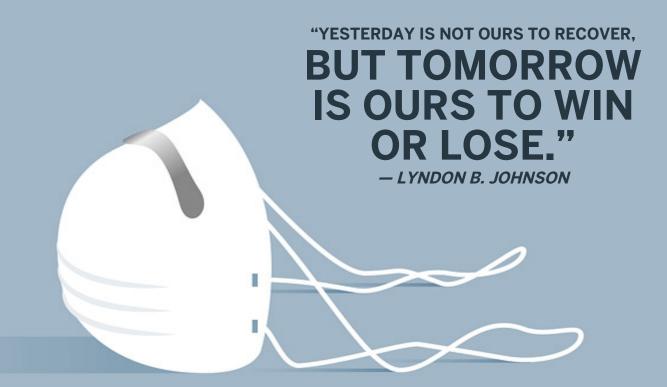
Public Finance

Public Health National Security Economic Development Climate Change

Decision-Making

Global Development





RESILIENCY // THE AGE OF COVID-19 A POLICY TOOL KIT



The LBJ School of Public Affairs, ranked No. 8 in the nation among graduate public affairs schools, makes a difference, not only within the walls of academia, but also in the public and social dialogue of the world. Contributing viable solutions to society is the LBJ School's legacy and its benchmark. Its effectiveness in channeling the purpose and passion of students into professional careers is evident in the success of more than 4,500 graduates who are the living legacy of President Johnson's bold and fearless action. The University of Texas at Austin is home to the LBJ School.

Table of Contents

Leadership & Decision-Making

Public Finance

Global Development

Intelligence & National Security

Community Resilience: Doing Better at Figuring Out Who Does What Donald F. Kettl Historical Thinking for Resilient Leaders Jeremi Suri Understanding Distributional Impacts Is Key to Community Resilience D. Cale Reeves, Vivek Shastry, and Varun Rai D. Cale Reeves, Vivek Shastry, and Varun Rai The Case for Revenue Sharing: Fiscal Equalization and the COVID-19 Recession James K. Galbraith, Michael Lind, and Martin J. Luby Minimizing the Financial Risks to State and Local Government: Through Asset-Liability Management Martin J. Luby The New Debt Trap: COVID-19 and Global Development Catherine Weaver and Rachel Rosenberg Emergency Cash Transfers During COVID-19: Implementation Lessons for the Global South Ana Canedo, Raissa Fabregas, and Megan Morris	The Reckoning: A New Role for Schools of Public Affairs Angela M. Evans
Donald F. Ketti Historical Thinking for Resilient Leaders Jeremi Suri Understanding Distributional Impacts Is Key to Community Resilience D. Cale Reeves, Vivek Shastry, and Varun Rai The Case for Revenue Sharing: Fiscal Equalization and the COVID-19 Recession James K. Galbraith, Michael Lind, and Martin J. Luby Minimizing the Financial Risks to State and Local Governments Through Asset-Liability Management Martin J. Luby The New Debt Trap: COVID-19 and Global Development Catherine Weaver and Rachel Rosenberg Emergency Cash Transfers During COVID-19: Implementation Lessons for the Global South	
Historical Thinking for Resilient Leaders Jeremi Suri Understanding Distributional Impacts Is Key to Community Resilience D. Cale Reeves, Vivek Shastry, and Varun Rai The Case for Revenue Sharing: Fiscal Equalization and the COVID-19 Recession James K. Galbraith, Michael Lind, and Martin J. Luby Minimizing the Financial Risks to State and Local Governments Through Asset-Liability Management Martin J. Luby The New Debt Trap: COVID-19 and Global Development Catherine Weaver and Rachel Rosenberg Emergency Cash Transfers During COVID-19: Implementation Lessons for the Global South	
Jeremi Suri Understanding Distributional Impacts Is Key to Community Resilience D. Cale Reeves, Vivek Shastry, and Varun Rai The Case for Revenue Sharing: Fiscal Equalization and the COVID-19 Recession James K. Galbraith, Michael Lind, and Martin J. Luby Minimizing the Financial Risks to State and Local Governments Through Asset-Liability Management Martin J. Luby The New Debt Trap: COVID-19 and Global Development Catherine Weaver and Rachel Rosenberg Emergency Cash Transfers During COVID-19: Implementation Lessons for the Global South	Donald F. Kettl
Resilience D. Cale Reeves, Vivek Shastry, and Varun Rai The Case for Revenue Sharing: Fiscal Equalization and the COVID-19 Recession James K. Galbraith, Michael Lind, and Martin J. Luby Minimizing the Financial Risks to State and Local Governments Through Asset-Liability Management Martin J. Luby The New Debt Trap: COVID-19 and Global Development Catherine Weaver and Rachel Rosenberg Emergency Cash Transfers During COVID-19: Implementation Lessons for the Global South	•
D. Cale Reeves, Vivek Shastry, and Varun Rai The Case for Revenue Sharing: Fiscal Equalization and the COVID-19 Recession James K. Galbraith, Michael Lind, and Martin J. Luby Minimizing the Financial Risks to State and Local Governments Through Asset-Liability Management Martin J. Luby The New Debt Trap: COVID-19 and Global Development Catherine Weaver and Rachel Rosenberg Emergency Cash Transfers During COVID-19: Implementation Lessons for the Global South	
COVID-19 Recession James K. Galbraith, Michael Lind, and Martin J. Luby Minimizing the Financial Risks to State and Local Governments Through Asset-Liability Management Martin J. Luby The New Debt Trap: COVID-19 and Global Development Catherine Weaver and Rachel Rosenberg Emergency Cash Transfers During COVID-19: Implementation Lessons for the Global South	D. Cale Reeves, Vivek Shastry, and Varun Rai
COVID-19 Recession James K. Galbraith, Michael Lind, and Martin J. Luby Minimizing the Financial Risks to State and Local Governments Through Asset-Liability Management Martin J. Luby The New Debt Trap: COVID-19 and Global Development Catherine Weaver and Rachel Rosenberg Emergency Cash Transfers During COVID-19: Implementation Lessons for the Global South	
Minimizing the Financial Risks to State and Local Governments Through Asset-Liability Management Martin J. Luby The New Debt Trap: COVID-19 and Global Development Catherine Weaver and Rachel Rosenberg Emergency Cash Transfers During COVID-19: Implementation Lessons for the Global South	÷ ·
Through Asset-Liability Management Martin J. Luby The New Debt Trap: COVID-19 and Global Development Catherine Weaver and Rachel Rosenberg Emergency Cash Transfers During COVID-19: Implementation Lessons for the Global South	James K. Galbraith, Michael Lind, and Martin J. Luby
Catherine Weaver and Rachel Rosenberg Emergency Cash Transfers During COVID-19: Implementation Lessons for the Global South	
Emergency Cash Transfers During COVID-19: Implementation Lessons for the Global South	Through Asset-Liability Management
Lessons for the Global South	Through Asset-Liability Management Martin J. Luby The New Debt Trap: COVID-19 and Global Development
	Through Asset-Liability Management Martin J. Luby The New Debt Trap: COVID-19 and Global Development
Intelligence Lessons From COVID: Being "Right" Is Not Enough	Through Asset-Liability Management Martin J. Luby The New Debt Trap: COVID-19 and Global Development Catherine Weaver and Rachel Rosenberg Emergency Cash Transfers During COVID-19: Implementation Lessons for the Global South
J. Paul Pope	 Through Asset-Liability Management Martin J. Luby The New Debt Trap: COVID-19 and Global Development Catherine Weaver and Rachel Rosenberg Emergency Cash Transfers During COVID-19: Implementation Lessons for the Global South Ana Canedo, Raissa Fabregas, and Megan Morris

Healthy Communities Are Resilient Communities, Resilient Communities Are Healthy Communities Sherri R. Greenberg and Michael K. Hole	66
A Roadmap to Rebuilding an Early Childhood System of Care Cynthia Osborne	71
Correcting Corrections: Lessons for Prisons and Jails in a Post-COVID World Michele Deitch	75
Cultivating Community Resilience Through Nonprofit Connections Sydney Wilburn, Alyssa Studer, Moira Porter, and David W. Springer	81
Increasing Community Resilience Through Immigrant Incorporation Ruth Ellen Wasem	86
Toward a More Inclusive and Resilient Economic Development Paradigm Steven W. Pedigo	91
Bouncing Forward: How Lessons From the Pandemic Can Help Us Adapt to Climate Change R. Patrick Bixler, Paola Passalacqua, and Regina M. Buono	97
An Action Plan for Protecting the Sustainability of Engineered Rivers in Arid Lands Jurgen Schmandt and George Ward	102

Introduction

STEVEN W. PEDIGO

n 1964, President Lyndon Baines Johnson shared his vision of what would become known as the "Great Society"—an America where the air and water are clean, poverty and racial injustice have been eliminated, and all its citizens can develop their full potential and share in the abundance. Tragically, the gap between LBJ's aspiration and our current reality is as wide today as it was then. The ravages of the COVID-19 pandemic and the ensuing economic calamity shed a blinding light on our continuing need to create more equitable communities, preserve the planet, and nourish the minds of our children. While LBJ couched his dream in the metaphors of battle and transcendence, the word that best describes our society's need today is resilience.

The concept of resilience grows out of a long tradition of emergency management.¹ The more resiliency a community has, the less likely it is to break under pressure and the faster it rebounds. Typically, the word is used to assess a community's capacity to withstand an environmental disaster, but it can also describe the ability of a community to cope with crises like pandemics and economic shocks. Where the COVID-19 emergency is concerned, resiliency is less about "bouncing back" than "moving forward." The concept is best understood through what John Kingdon calls the "policy stream"—the ways that

problems, politics, and policies intersect to define where a community is, how it responds, and how it grows through a crisis.² This understanding cannot be achieved without a frank evaluation of the system flaws the crisis exposes, which need to be repaired as a crucial step toward restoration.

Resiliency as a Policy Tool

That critical evaluation—and a toolkit for addressing those repairs—is precisely what we have undertaken in these pages. Tapping into the expertise of our faculty and scholars, the essays in this toolkit offer both a diagnosis of where the Austin region, America, and the world went wrong in its handling of the COVID-19 crisis, and a prescription for what it can do better.

While LBJ couched his dream in the metaphors of battle and transcendence, the word that best describes our society's need today is resilience.

Topics covered include:

- **Equity,** including the ways that the virus and strategies for treating it impact different populations
- **Public Finance**, how federal governments can supplement state revenues in crises and how states can maximize their revenues by different funding approaches
- **Corrections**, and more particularly, the scandal of COVID-19 in prisons, and the dangers it poses not just to prisoners, but also to their guards and their communities
- **Intelligence**, how the intelligence community delivered good information about the threat of the pandemic but failed to get federal decision makers to act on it
- **National Security**, how the US, despite its manifest failures, could reclaim its status as a world leader
- **Public Health**, samples of approaches that ensure that the most vulnerable populations receive all the help they are entitled to
- **Community Building**, and the importance of collaboration between nonprofits and the public sector, and among nonprofits themselves

There are also important essays that highlight the role of public management education in developing effective leaders, global development and the stresses that COVID-19 is creating in the developing world, economic development and inclusion, community health, and how COVID-19 foreshadows the coming shocks borne of climate change. Together, they make a powerful case for the value of evidence-based research and thinking in the service of policy-making—and the clear need for greater expertise in state houses, in Washington, DC, and at private philanthropies and NGOs.

44 Thinkers and doers: people who dream of progress and who will try to turn those dreams into achievements.

Fifty years ago, LBJ founded our school and introduced its first public affairs graduate program as one that would blend the practical with the academic to produce a new generation of "thinkers and doers: people who dream of progress and who will try to turn those dreams into achievements." This toolkit was produced in that spirit, to not only help policymakers as they struggle to turn their good intentions into effective actions, but also to put the issue of equitable community development and LBJ's vision of the Great Society back on the national agenda.

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Leadership and Decision-Making

The Reckoning: a New Role for Schools of Public Affairs

ANGELA M. EVANS

iven the clear evidence of our government's failures, we as schools of public affairs are facing an existential reckoning. COVID-19's threat to public health, the drumbeat of revelations of social injustices, the economic devastation experienced by millions of Americans, and the fear and doubt surrounding the integrity of our most sacred of rights—the right to vote—have rightfully cast doubt on the preparedness and integrity of our public services. It is imperative that we act to restore confidence in the public service corps by cultivating a new generation of talent that can rise to these challenges.

The major disruptions we face are not momentary, and the adjustments we have to make are not fleeting. We are living through a clear test of our foundational institutions and the values we hold as Americans. Actively assessing our failures in real time is important, but it is not enough. We have to fix these errors. We also have to acknowledge the things that give us reason for hope. People have rallied; they have collaborated, innovated, and sacrificed. They have taken care of each other and found ways to advance the public good.

While uncertainty remains, a path for the future has emerged. We know what problems exist, we know we have to address them, and we know we have the capacity to solve them.

The past cannot be prologue. Our complacency has made us complicit to the extent that we failed to promote the exchanges of knowledge and expertise between ourselves and policy communities that would have improved their responses.

Now is the time for schools of public affairs to step up and ensure that going forward, the public service is supplied and refreshed with expertise that is matched to the demands of self-government. We need to welcome new ideas and discard old ones. And we need to do this quickly—managing risk and anticipating mistakes.

Now is the time for schools of public affairs to step up and ensure that going forward, the public service is supplied and refreshed with expertise that is matched to the demands of self-government.

The LBJ School of Public Affairs at The University of Texas at Austin is well-positioned to lead this necessary transformation. In its fifty years, it has consistently maintained a balance of research and scholarship and practical expertise, ensuring that its programs are well-grounded, workable, and relevant. We have set a singular example by producing rich scholarship and moving that scholarship through the halls of policymaking. This legacy will serve us well as we embark on this new mission. We must leave behind the "as it was," work through the "as it is now," and design the "as it could be." We must do this by not only being open to but also eager to change how and where we teach, what we teach, and whom we teach.

How We Teach

The pandemic has clearly demonstrated that schools can change the ways they teach. Within two weeks of campus closure, the school moved from regularly scheduled inperson class meetings to a fully remote, virtual platform. Not perfect and not without limitations, the transition demonstrated the power of flexibility and sheer will.

Through trial and error, we discovered a number of innovative teaching techniques that virtual platforms make possible. While some degree of in-person learning is needed to achieve student engagement, critical thinking, and speaking skills, the use of remote and virtual platforms also has distinct advantages.

Virtual learning expands the notion of the classroom. Classes can take place anywhere, and participants can be everywhere. The physical plant of the school became less important as a core requirement of learning—thus opening up the possibility of "holding class" in places aligned with course content, such as organizations and governments that apply the subject matter in their daily operations. Classes on public financial management, for example, could be offered to city, county, and state officials, creating opportunities to integrate students and practitioners.

Remote platforms also offer opportunities to expand the expertise and capacity available to faculty, students, and staff. It is much easier to invite experts and practitioners to participate in remote/virtual programs and activities, as they are not required to visit the Austin campus.

Another unanticipated outcome of the shift to virtual platforms were the many formal and informal collaborations among faculty. These not only enlivened and improved the learning experience for students, but also led to the creation of groups and spaces in which faculty and practitioners can share best practices and experiences.

What We Teach

Course catalogs reflect not only what the school deems essential for the completion of a program of study, but also what can launch graduates into their chosen careers.

The principles upon which these courses are designed and chosen should be clearly stated, to maintain focus and ensure that students choose the courses most relevant to their needs. Many sets of principles exist. One set offered by Ernest Boyer, a renowned educator who served as Chancellor of the State University of New York, United States Commissioner of Education, and President of the Carnegie Foundation for the Advancement of Teaching, is especially resonant today. The first five are his own words; I have added the sixth to emphasize current conditions:

- **The scholarship of discovery:** the pursuit of inquiry and investigation in search of new knowledge
- **The scholarship of integration:** making connections across disciplines and advancing knowledge through synthesis
- **The scholarship of application:** applying knowledge to the social issues of the times in a dynamic process that generates and tests new theory and knowledge
- The scholarship of teaching: transmitting knowledge and also transforming and extending it
- **The scholarship of engagement:** connecting any of the above dimensions of scholarship to the understanding and solving of pressing social, civic, and ethical problems

• And added—**The scholarship of participation:** welcoming those seeking or working in other career paths to learn with us and to bring different expertise and viewpoints into the educational experience.

These principles assume that academic programs operate in dynamic, aggressive settings. COVID-19 has both underlined the relevance of scholarship and revealed the shortcomings in academic programming that affect the overall performance of public servants.

The failures of public policies and public management practices are on display daily as is the need for public servants who have skills that are applicable in a wide variety of circumstances, that are foundational in nearly all public settings, and that position them to achieve success. These skillsets enable them to be:

- **Force-Multipliers:** People who have the ability to influence without authority; possess adaptive capacity that responds effectively to innovations in techniques, platforms, and perspective; have mastered the levers that affect policymakers' receptivity to analysis; and have learned how to account for the motivations, challenges, and positions of others.
- **Coalitions Builders:** People who know how to build and sustain collaborations, even when participants do not agree with each other and are reluctant to join; foster agreement on goals and benchmarks; facilitate deliberations; understand and overcome differences; and understand how people seek and use analyses and data.
- **Strategists for Solving Policy Issues/Problems:** People who use facilitation and convening skills; build meaningful agendas; and have mastered the art of the long view.

Further, they are skilled at:

- **Partnership Engagement:** The ability to secure multi-sector partners, bridge systems, and solve issues across sectors; learn how to find and recruit allies; and achieve community involvement to inform practice and policy.
- **Measuring Impact:** Knowing what data and information can be used to establish a foundation for non/bipartisan discussion and how to use tools to communicate it clearly and simply; understanding both the strengths and the limitations of computational analyses, dashboards, road maps, and project/strategic plans.
- **Managing Projects and People:** Knowing how to procure resources; lead multi-generational workforces; and establish welcoming and accountable work environments.
- **Communicating:** Knowing how to lead deliberations among people with a diversity of viewpoints; separate truth from opinion; distinguish between hearsay and curated, respected sources; communicate the essence of their ideas; and convince others of the value of their work.

Whom We Teach

The pandemic has moved the role of public policies and the consequences of public mismanagement and social injustice to the center of public consciousness. The country is keenly aware of how policy affects peoples' lives and how public institutions protect or fail to protect citizens' rights and security. This creates an opportunity for schools of public policy to expand our offerings beyond traditional master's programs and the occasional executive education and certificate program. Schools should open up access to their faculties, design new learning models, and collaborate with other public entities to teach the basics of public policy and its governing processes and tools to a much wider set of students and citizens.

The intended outcome of these expansions would be to better utilize the expertise resident in policy schools to advance understanding and engagement in the arena of public action. To achieve this, public affairs schools need to consider the following actions:

- Open program development to new partners, including public, nonprofit, and business sectors.
- Open curriculum construction to new partners, including faculty from other disciplines and expert practitioners from public, nonprofit, and business sectors, especially in the development of experiential learning opportunities.
- Open programs to new participants, including nontraditional students, lifelong learners, and explorers, and consider mixing these new participants with traditional master's students.
- Open programs to new ways of instilling experiential learning, including apprenticeships, breaks in study, and intermittent internships.

As a top public affairs institution, the LBJ School of Public Affairs at The University of Texas at Austin has faced challenges before. Born in an era of social unrest and civil strife, we have never shied away from challenges, nor have we accepted the status quo when change is warranted. The pandemic and the civil disruptions that have followed it are a call for us to recommit to our core mission of informing civic discourse and developing public leaders.

The time to do this is now.

Angela M. Evans, a National Academy of Public Administration Fellow, became dean of the LBJ School of Public Affairs at The University of Texas at Austin in 2016. She is the former deputy director of the Congressional Research Service of the US Congress.

Community Resilience: Doing Better at Figuring Out Who Does What

DONALD F. KETTL

n looking back over America's response to COVID-19 thus far, it's impossible to sidestep one awful, troubling fact: at a time of clear and present danger, we had the wrong strategies of governance for the crisis at hand.

The core of the problem lies in our system of federalism. Too many decisions drifted to the wrong places, to dangerous effect. There could be no greater irony than millions of Americans turning on Disney+ over the Fourth of July weekend to watch Hamilton, a celebration of the nation's founding, while the system that Hamilton helped create was collapsing under COVID's weight.

At 46.48 deaths per 100,000 population, the fatality rate in the US is the fourth-highest in the world, trailing only the United Kingdom, Peru, and Chile, according to the Johns

Hopkins Coronavirus Research Center.³ The virus has cut a fearful swath, but there's powerful evidence that it might have been contained had the government not failed to do what had to be done.

Americans have long celebrated their system of federalism, which spreads power across its federal, state, and local governments. The Trump administration found it convenient to pass key decisions along to governors and, indeed, it would have been unwieldy to try to run everything from Washington. Some on the left have been grateful that the Trump team allowed governors to step up and lead the response.

The debate about which levels of government are responsible for which policies has been going on for a long time. James Madison wrote about it in Federalist 51 in 1788, and theorists have been at it ever since.⁴ But, at its core, the sad fact is this: America's brand of federalism crippled the nation's response to the virus. Compared to the world's other major federal systems, the US has done dramatically worse by almost every metric. Check out this chart (Figure 1). Not only is the fatality rate in the US higher than in any other federal system, but it's twice as high as in Canada and Switzerland, and four times higher than in Germany.

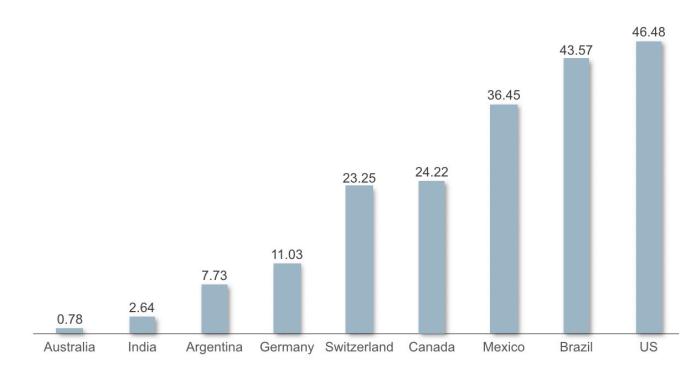


Figure 1: COVID-19 Fatality Rate per 100,000 Population Source: Johns Hopkins Coronavirus Research Center It's going to take some time to sort out which strategies have proven most effective in those other countries because the conditions are so different in each. It's clear that in a country as vast in geography and population as the US, devolving some important operational decisions to the level of governors and mayors was both inevitable and wise. But it's also very clear that the nation's response was crippled from the start by the federal government's failure to take a stronger role.

The core of the problem lies in our system of federalism. Too many decisions drifted to the wrong places, to dangerous effect.

Here are five areas where federal leadership would have made a big difference:

Measuring

- **Defining the problem.** Federal leaders were in a unique position to define the problem authoritatively for the nation, which analysts have pointed out is a hallmark of effective leadership.⁵ Instead, they failed to acknowledge the utter seriousness of COVID-19, downplaying it for weeks as not much more than a seasonal flu. Then, they couldn't decide what kind of problem it was: an assault on public health or a challenge to the economy? Actually, it's both, so they also failed to decide which to prioritize.
- **Blocking the spread.** Instead of quashing the dispute about COVID-19's seriousness and putting forth a plan of action, the federal government failed to send clear signals about what should be done about it. In retrospect, its advice in the early days to not wear masks turned out to be bad, although it was based on the best science at the time—and on the recognition that masks were in very short supply. But even as it became clear that masks were an effective first line of defense, the mixed messages continued, feeding a deep polarization on that and most other COVID-19 issues. This encouraged non-mask-wearing customers to have meltdowns in mega-stores and even led to armed protests in state houses. Federal leaders missed their best to stop it.
- **Tracking the problem.** The American response was further crippled by the failure to create a single language with which everyone could speak about COVID. Different states collected and reported different data sets, and some states even reported the

same data differently over time.⁶ Kansas began reporting its count only on Mondays, Wednesdays, and Fridays; while in Texas, long lags between hospitalizations and hospitalization reports made it difficult to gauge what was happening. In Florida, there was a major spat about the state's dashboard.⁷ Dashboards run by Johns Hopkins and the University of Washington became the go-to sources for information because government reporting was so inconsistent.⁸ Major newspapers became so frustrated that they created their own data systems.⁹ If the federal government had created and maintained a vocabulary that everyone could understand and use, our conversation might have been a lot less contentious.

Allocating

• **Managing scarce resources.** As the virus ramped up, state officials scrambled to track down vital supplies, from ventilators to personal protective equipment. Both Illinois Governor J.B. Pritzker and California Governor Gavin Newsom complained that bidding wars among the states created a "wild west" situation that advantaged manufacturers and their distributors and hurt citizens.¹⁰ Kentucky Governor Andy Beshear said he thought he had a deal for PPE only to find that "FEMA came out and bought it all out from under us."¹¹ It's one thing for the governments of American federalism to compete for the best policy innovations, but it makes no sense for them to battle against each other for medical supplies. Federal leaders should have bargained for the best prices for the equipment and sent it where it was needed the most.

Resilient communities need to build on a robust federal system, as there are some things that only the federal government can do. That's a critical lesson to learn from COVID-19.

Leveling

• **Preventing and redressing inequities.** The dark underbelly of COVID-19 is that it has hit communities of color most fiercely.¹² After adjusting for age differences, the mortality rate for Black Americans is 2.1 times more than for White Americans.¹³

The virus has struck especially hard in communities that have less access to health care and whose members perform frontline work. Federal leaders could have been in a strong position to gauge this problem and devise strategies to attack it. Instead they punted, allowing COVID-19 to become a scourge that hit hardest at the most defenseless.

As I noted in a blog post, "big national crises have local roots; all problems with local roots require effective local response; effective local responses demand an interconnected strategy; and an interconnected strategy depends on resilient communities."¹⁴ But resilient communities need to build on a robust federal system, as there are some things that only the federal government can do. That's a critical lesson to learn from COVID-19—and one that's been very painfully taught.

Donald F. Kettl is the Sid Richardson Professor at the LBJ School of Public Affairs at The University of Texas at Austin and author of <u>The Divided States of America</u> (Princeton University Press, 2020). An earlier version of this piece appeared in a blog for the IBM Center for the Business of Government.

Historical Thinking for Resilient Leaders

JEREMI SURI

he future is unknowable, which is why we study the past. The long record of humanity is the best laboratory we have for understanding how people are likely to act in a range of different, often unanticipated, circumstances. Patterns of behavior, not genetics, define markets, organizations, and ultimately societies.

No matter how rich and powerful, leaders cannot control the currents of change or the surrounding circumstances. No matter how smart and hardworking they might be, they can never master every necessary task or understand every crucial issue for the survival of the ship of state. They must make choices—often small, but ultimately significant—with limited information and under conditions of profound uncertainty. The smartest leaders recognize how little they really know and make up for it by leveraging a broad knowledge of history to navigate what are always rough seas.

Few people associate humility with Henry Kissinger, the larger-than-life figure who did so much to reshape American foreign policy in the 1970s. But when writing on the subject of historical dynamics and the limitations of leaders, he aptly summoned the wisdom of Otto von Bismarck: "The statesman can never create anything himself; he can only wait and listen until he hears the footsteps of God through the force of events, then lunge forward and seize the hem of His coat—that is all."

To seize the moment is to see opportunities where others do not. Kissinger succeeded because he recognized openings for new partnerships, even with former adversaries like China. He could see through the partisanship and distractions of his time because he did not focus only on the present, but also looked back to assess how societies had developed over a long period of time—and how they might change in the future. China needed assistance against a continuous Russian border threat, despite their shared communist dogmas. The US needed allies in Asia, especially after its lengthy and painful war in Vietnam.

Kissinger drew on a history of shared Chinese-American trade and security interests dating back to the nineteenth century to envision how leaders in Beijing and Washington could work productively together in the future. They had to look deeper than the public recriminations of their current moment and imagine something different, based on past experiences. Kissinger found partners in Mao Zedong and Zhou Enlai, who famously spoke of a "historic opportunity" for collaboration, even as they condemned American policies elsewhere.

Kissinger, Mao, and Zhou recognized that while the controversies of the present attract most of our attention (which is even more the case today, with our 24-hour news cycles and pervasive social media), history, even forgotten history, can have a greater bearing on the future course of behavior. Patterns forged over a long time are likely to be more enduring than the passions of the moment. Enlightened leaders understand this and take action to awaken dormant historical possibilities.

Abraham Lincoln did this better than anyone. Struggling to win a civil war, justify the abolition of slavery (which was protected by the US Constitution), and reunite the country, he dug deep into the past. He went back to the American Revolution and the true founding document for what would become the United States: the Declaration of Independence. Speaking at Gettysburg on November 19, 1863, he began by returning to 1776—"four score and seven years ago"—when "our fathers brought forth on this continent a new nation, conceived in liberty and dedicated to the proposition that all men are created equal." Lincoln reframed the war not as North versus South, but as "unfinished work," completing the founders' vision that "this nation under God shall have a new birth of freedom, and that government of the people, by the people, for the people shall not perish from the earth."

One hundred years after Lincoln, the leaders of the American Civil Rights Movement used history in the same way—to reconnect with a deeper past and articulate an alternative to the hatred and violence around them. The peaceful sit-ins and marches organized throughout the South by local activists like Fannie Lou Hamer and Diane Nash reenacted a long history of efforts by mistreated citizens who appealed to the rule of law for fairness and justice. The most famous speech of the movement, delivered by Martin Luther King, Jr. at the Lincoln Memorial on August 28, 1963, struck an enduring chord in its return to the historic promise of the country's founding:

When the architects of our republic wrote the magnificent words of the Constitution and the Declaration of Independence, they were signing a promissory note to which every American was to fall heir. This note was a promise that all men, yes, Black men as well as white men, would be guaranteed the "unalienable rights" of "life, liberty, and the pursuit of happiness."

King contended that "America has defaulted on this promissory note." But his famous dream—the dream that he stamped on the Civil Rights Movement—was a return to the neglected historical trajectory of inclusion, justice, and opportunity for all Americans. King called upon his listeners to strive for a future built not on the present hatred of Jim Crow, but rather on a deeper strain of American togetherness and hope. He closed with the powerful words of an early nineteenth-century hymn to the nation, often sung by abolitionists:

My country, 'tis of thee, Sweet land of liberty, Of thee I sing; Land where my fathers died, Land of the pilgrims' pride, From every mountainside Let freedom ring!

Of course, Lincoln and King did not convince all of their critics. They were both murdered because their words provoked the violent defenders of the very hatred they strove to overcome. They could not remake the world themselves; single leaders never can. But Lincoln and King succeeded in pushing enduring change because they mobilized countless citizens to see beyond their present circumstances and imagine a different future, based on past experiences and expectations. By looking backward, they redefined the terms of debate, opening up a new potential for future change.

The past does not, however, make any single future inevitable. Historical thinking allows leaders to see alternatives to the present in the past, but each of those alternatives offers many different possible futures. For that reason, successful leaders do not make

predictions. If we believe we know the future, then we lock ourselves into a very narrow understanding of the present and the past; we see only the evidence that confirms our beliefs.

Historical thinking allows leaders to see alternatives to the present in the past, but each of those alternatives offers many different possible futures.

Historical thinking should move leaders from prediction to anticipation—the active preparation for any number of possible futures. Franklin Roosevelt's New Deal policies illustrate this well. Entering the presidency during the worst days of the Great Depression, when unemployment was higher than 25 percent and banks across the country were failing, Roosevelt looked deep into the past—including many earlier reforms to help the poor and vulnerable—to craft a diverse range of programs that stimulated the economy. In contrast to Herbert Hoover's economic orthodoxy, Roosevelt knew he had to widen the range of policy options beyond contemporary expectations.

He promised recovery, but he never predicted what it would look like. Roosevelt knew that each New Deal program—the Civilian Conservation Corps, the Works Progress Administration, and numerous others—would have unpredictable results. Instead of locking himself into one view of the future, he anticipated many possible futures and resolved to adjust as new information became available. The New Deal was an iterative experiment, in which leaders implemented ideas from the past, observed the results, and made new decisions based on what occurred. The goal was national recovery, but the expectation was that the nature of the recovery would evolve over time. Roosevelt anticipated mixed and unforeseen developments, and he prepared to adjust. He encouraged a deep look into the past and an open vision of what that past could mean for an ever-changing future.

We live in a time similar to Roosevelt's. COVID-19 has caused a global health and economic emergency. Democratic institutions have come under attack from demagogues and their supporters, who seek to exploit the suffering of citizens. And long-standing threats, especially climate change, are now adversely affecting vulnerable communities on every continent.

Although we do not know what the future will bring, we do know that current conditions cannot endure. Leaders are poorly served by reactive efforts to reduce risks and limit change. Instead, they must accept and embrace the fact that this is a time of transformation. Historical perspective allows leaders to see many different patterns of change in the past, which they can try to leverage for a better future. Leaders must avoid narrow predictions, anticipate many possibilities, and prepare to adjust as they emerge. Openness and flexibility are necessary in looking backward and forward at the same time, escaping the paralysis of the present.

Historical perspective allows leaders to see many different patterns of change in the past, which they can try to leverage for a better future.

Resilient leaders ask the right historical questions: *What are the deeper, longer patterns of behavior that will shape our future? Which paths of action from the past look promising for the future? How can I prepare to observe and adjust to developments I cannot predict?*

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Understanding Distributional Impacts Is Key to Community Reslience

D. CALE REEVES, VIVEK SHASTRY, VARUN RAI

n the wake of large-scale shocks like the COVID-19 pandemic, community wellbeing requires policy responses that put equity and opportunity across all sections of the community at their center. A common policy response in the first few months of the pandemic was some form of local lockdown. For example, in March 2020, the mayor of Austin declared a local disaster and issued the "Stay Home, Work Safe" (SHWS) order, "requiring all individuals in the City to stay home or in their place of residence except to perform certain essential activities, or to perform work in or obtain service from an Essential Business, Essential Government Service, or in Critical Infrastructure."¹⁵ While orders like these clearly reduced the local impact of COVID-19, shutting down nonessential business and government functions had a wide range of secondary impacts, which were not all positive. It is now clear that some already-vulnerable populations bore a disproportionate share of the negative health, economic, and social outcomes. Not all communities—nor the individuals who comprise them—have equal access to the resources that enable resiliency. Many people quickly adapted to the new behaviors that the lockdown required, for example, picking up their groceries through "curbside" delivery programs. Those who could shift to working from home did so in compliance with the SHWS order, continuing to earn their incomes in isolation, while reducing their risk of infection. But many employed in the service industry were unable to work at all, as bars and restaurants saw substantially reduced business or in many cases shuttered entirely. Many employees in roles declared essential were able to retain their income streams but at the expense of increased exposure to COVID-19. The inequitable impacts illustrated here are problematic in and of themselves, but they are exacerbated when they aggravate underlying inequities—such as when service industry or essential employees are disproportionately composed of lower-income earners or marginalized groups. Unless holistically designed, even necessary and effective policy actions can cause irreparable long-term damage to certain populations.

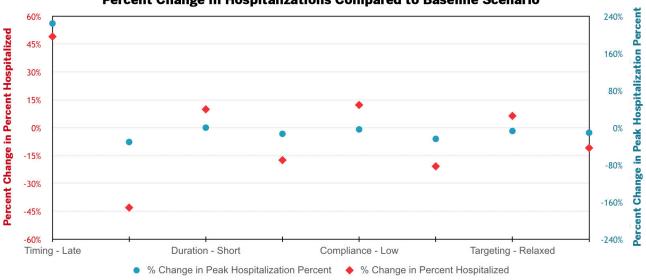
Effectiveness *and* equity together must form the core criteria by which policy outcomes are evaluated—the long-term resilience of the community as a whole demands it. But with little precedent to identify what might constitute a holistically good response in the face of high levels of uncertainty, a wide variety of policy designs are inevitable. Shelter-in-place—similar to the SHWS order in Austin—started as early as March 17th in some California counties, and two weeks later in Texas and Florida. The duration of the shelter-in-place order was only a month in Texas and Florida and two months or longer in Washington and Michigan. Additionally, varying definitions of essential services target shelter-in-place orders to different groups of workers. Each of these policy design elements—timing, duration, and targeting—evokes a different pattern of behavior among individuals in the jurisdiction. At a systems level, the effectiveness of the response depends on the degree to which individuals do or do not comply with it—a decision stemming from individual risk perceptions, risk tolerances, and social influences.

Effectiveness and equity together must form the core criteria by which policy outcomes are evaluated—the long-term resilience of the community as a whole demands it. For policymakers to balance effectiveness and equity, they need access to tools that allow them to assess the system-level dynamics of both the pandemic and of their own (policy) responses, so they can resolve potential problems of unequal impacts. Top-down "massaction" type models—i.e., those that focus directly on population-scale dynamics, such as progression of the pandemic at the county or city level while only coarsely resolving sociodemographic aspects—are well-understood tools for describing entire systems and have played a central role in guiding policymakers through the uncertainties of this pandemic. But top-down modeling often lacks the individual- and community-level insights that can drive nuanced, equity-based decision making.

Agent-based modeling (ABM) is a bottom-up approach that focuses on the investigation of individual-level outcomes and then links those micro-level responses and impacts into a system-wide macro-level estimate of efficacy. By focusing on individuals or households, ABM also incorporates aspects of individual-level decision making—such as the decision to comply with a shelter-in-place order—that most mass-action models only resolve at aggregate levels. The ABM approach permits a nuanced understanding of the distributional impacts of policy choices, an understanding that is critical for enacting just and equitable policies that help build and preserve the resilience of communities.

To understand the full spectrum of interactions among policy design elements and behavioral responses, we introduced the COVID-19 Policy Evaluation (CoPE) tool, developed recently at the LBJ School of Public Affairs at The University of Texas at Austin. CoPE is a flexible, modular, empirically and epidemiologically grounded agent-based model of the spread of COVID-19 that compares, *ex ante*, the impacts of different policy design elements on the effectiveness and distributional equity of policy outcomes. Tools such as CoPE, which use equity as a central criterion for policy evaluation, can help policymakers choose the responses that allow communities to better absorb and recoil from large-scale shocks in the short term, while safeguarding their resilience in the long term.

We used the CoPE tool to simulate a range of policy and behavioral response scenarios for Travis County, Texas. (CoPE enables similar studies for nearly all other counties across the US.) In our baseline scenario, the shelter-in-place policy goes into effect twenty-eight days after the first exposures occur and is partially lifted forty-five days later. Occupations not designated as essential under the guidelines from the CDC and the Texas Governor's office cease having "on-the-job" interactions, while essential employees continue to interact both with their coworkers and with those receiving their services. CoPE also models social interactions outside the workplace (this is important since mobility reports suggest that only about 75 percent of Travis County residents reduced their social activities in compliance with the shelter-in-place order).



Percent Change in Hospitalizations Compared to Baseline Scenario

Figure 1: An early shelter-in-place order substantially reduces hospitalizations compared to the baseline. The effect is most noticeable in peak hospitalizations. Late SIP orders increase both cumulative (left vertical axis) and peak (right vertical axis) hospitalizations over the baseline. Note: To highlight the tradeoff in efficacy and equity, the model that generates these results has a higher rate of infection than is empirically observed typically.

From this baseline, we investigate several hypothetical scenarios shown in Figure 1, including what would have happened had shelter-in-place been enacted one week earlier or later than it was. The CoPE tool shows, among other outcomes, the important impact of shelter-in-place timing on cumulative hospitalizations and peak hospitalizations. For the illustrative scenarios shown in Figure 1, we estimate that a shelter-in-place policy enacted one week earlier than the baseline results in about 40 percent lower total hospitalizations and 30 percent lower peak hospitalizations compared to the baseline. On the other hand, a shelter-in-place policy enacted one week later than the baseline results in about 50 percent higher total hospitalizations and over 200 percent higher peak hospitalizations compared to the baseline. These results from the CoPE tool are generally consistent with the consensus from several other modeling approaches, including top-down mass-action type models. From both top-down and bottom-up modeling approaches, it is clear that when faced with a shock event such as the COVID-19 pandemic, policy responsiveness is paramount. But that is only half of the story.

Because it uses a bottom-up approach, the CoPE tool can also explore the distributional impacts of policy choices. For the same illustrative scenarios described above, Figure 2 shows how a difference in policy design can impact income groups differently. A rapid policy response—enacting shelter-in-place only twenty-one days after initial exposures

(i.e., one week earlier than the baseline scenario)—yields fewer hospitalizations (Figure 1), but the hospitalizations that do occur disproportionately burden the lowest income group (left panel vs. middle panel, Figure 2). In this case, the efficacy gain of an early shelter-inplace order is borne in part on the shoulders of those with the least access to resources that enable resilience.

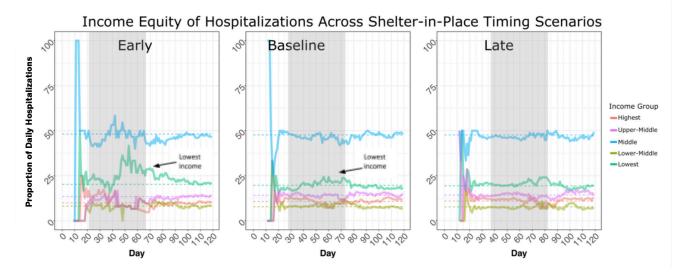


Figure 2: Distributional equity of shelter-in-place (the shaded time period) impacts on hospitalization by income groups show that the lowest income groups are hardest hit in both extremes. Dotted lines show the baseline proportion of the population comprising each group, (e.g., middle-income earners make up nearly 50 percent of the population). Solid lines show the proportion of daily new hospitalizations from each income group. When the solid line is above the dotted line—as it often is for the lowest income group—that group is experiencing disproportionately higher hospitalization rates. Note: To highlight the tradeoff in efficacy and equity, the model that generates these results has a higher rate of infection than is empirically observed typically.

Policy that is designed and implemented without consideration of distributional impacts is no longer excusable—our communities demand and deserve better.

The discussion above suggests two key takeaways relevant to community resilience. First, a critical aspect of resilience is to manage the scale and scope of shock experienced by communities. In the case of COVID-19, rapidly enacted policies helped prevent the situation from spiraling out of control in many places, thereby limiting the overall burden of COVID-19. This shows the importance of maintaining vigilant awareness of the threat horizon and of having contingency plans that can be implemented rapidly. Second, the distributional impacts of policy decisions can substantially disadvantage already underserved communities—for example, the lowest income groups, as illustrated above. When they are disproportionately impacted by events like hospitalization—which can incur unexpected costs and decreased income, alongside significant health impacts—individual and community survival are put at risk in both the short and long term. Effective policy is still a central value; but when a policy is expected to be effective and to disproportionately burden the vulnerable, complementary programs must be implemented specifically to support those vulnerable communities and minimize adverse impacts.

A socially just policy response must consider both effectiveness and equity. Policymakers need more tools like CoPE to enable them to make decisions and design policy with distributional effects at the fore of the discussion. Policy that is designed and implemented without consideration of distributional impacts is no longer excusable—our communities, particularly those that are already marginalized and vulnerable, demand and deserve better.

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Public Finance

The Case for Revenue Sharing: Fiscal Equalization and the COVID-19 Recession

JAMES K. GALBRAITH, MICHAEL LIND, MARTIN J. LUBY

he COVID-19 pandemic is pushing state and local governments across America into a state of crisis as revenues collapse and deep, damaging, and counterproductive cuts in essential public services, including medical care, are being contemplated. According to the Center on Budget and Policy Priorities, state budget deficits may be nearly \$110 billion in FY 2020 and more than \$290 billion in FY 2021.¹⁶ These projected deficits are just now showing up as dramatic drops in state tax revenue. In Texas, general fund tax revenue in the biennium ending August 31, 2021, is estimated to drop by 8 percent (\$4.4 billion) in FY 2020, and 15 percent (\$8.8 billion) in FY 2021.¹⁷

The ability of most state and local governments to cover such shortfalls by borrowing, even in a recession, is strictly limited by their constitutions or laws, which require balanced budgets for operating expenses and generally restrict deficits and debt to capital projects. The federal government faces no such constraints, but emergency transfers from the federal government to states and localities, when they occur at all, take the form of bailout packages which are often too little, too late, too narrowly targeted, and impeded by sectional and partisan rivalries.

The CARES Act, enacted on March 27, 2020, established the Coronavirus Relief Fund, which provided \$150 billion in federal payments to state governments (80 percent) and large local governments (20 percent), along with a Municipal Liquidity Facility (MLF) that can provide up to \$500 billion in direct loans to state and local governments. But to date, the MLF has been utilized only by one state (Illinois) and one government authority (the NYC Metropolitan Transportation Authority) since the interest rate is set at a premium over market rates and thus is only attractive to borrowers who can't access the credit markets on reasonable terms. Moreover, the MLF is a short-term lending program to help state and local governments manage their cash flow needs. It does not provide resources to offset sustained revenue declines or increased spending caused by the pandemic and cannot be used for ordinary operating expenses, even Medicaid payments, which increase significantly during recessions and epidemics.

In addition, states and localities have been unsure which restrictions on the use of CARES Act funding will ultimately apply; as a result, much of the CARES Act funding has gone unspent four months after passage of the law.¹⁸ In consequence, states and cities facing severe drops in their revenues may have to lay off teachers, police, and first responders or defer spending on capital projects, even if they receive more federal funds for pandemic-related health care. In July 2020, almost 100 mayors of cities in Texas asked Congress for more flexible funding to help address the shortfalls caused by the pandemic.¹⁹

More flexibility would provide two critical advantages. First, it would permit states and localities to maintain essential public services, including education, health care, public safety, and core amenities, as well as critical infrastructure and environmental quality. Second, the funds would support local economic activity, already severely compromised by cutbacks in consumer and investment spending during the pandemic. During slumps, the feedback from lower sales and sales tax receipts to lower public spending and lower personal incomes worsens economic conditions, compounding the problems facing state and local governments and those who rely on them for essential services. The question, therefore, is how best to address this problem? We argue for fiscal equalization in the form of federal revenue sharing.

The Organization for Economic Cooperation and Development (OECD) defines fiscal equalization as "a transfer of fiscal resources across jurisdictions with the aim of offsetting differences in revenue raising capacity or public service cost. Its principal objective is to allow sub-central governments to provide their citizens with similar sets of public

services at a similar tax burden."²⁰ In Canada, fiscal equalization dates back to 1957 and was enshrined in the Canadian Constitution in 1982: "Parliament and the Government of Canada are committed to the principle of making equalization payments to ensure that provincial governments have sufficient revenues to provide reasonably comparable levels of public services at reasonably comparable levels of taxation."²¹

The US is the only major democracy that does not have a system of fiscal equalization at the national level, although many state governments address local property tax disparities with equalization policies. This has not always been the case. Between 1972 and 1986, the US had its own fiscal equalization policy in the form of the General Revenue Sharing (GRS) program, sending federal funds to state and local governments, which enjoyed wide discretion in their use.

The US is the only major democracy that does not have a system of fiscal equalization at the national level.

First proposed by the Democratic economist Walter Heller, chair of the Council of Economic Advisers under Presidents Kennedy and Johnson, the GRS program was pushed through Congress by Republican President Richard Nixon. It enjoyed the support of Hubert Humphrey, Barry Goldwater, Ronald Reagan, Nelson Rockefeller, Gerald Ford, and Thomas P. "Tip" O'Neill, Jr. Administrative costs of revenue sharing were low, only one-tenth of one percent. In the state of New York, "revenue sharing paid for teachers in Manhattan and streetlights in Buffalo, provided snowplows for Adirondack villages, and built the community hall and ice rink in New Hartford."²²

Support for revenue sharing was broad but shallow, and the opposition of an odd coalition of anti-government conservatives and liberals who preferred narrowly targeted federal programs was intense. Ultimately, after fourteen years of operation, revenue sharing was abolished in the interest of deficit reduction by the Tax Reform Act of 1986. Federal revenue sharing should be revived now as an emergency measure for the duration of the economic crisis caused by COVID-19. Revenue sharing would reduce the need for one-time, last-minute congressional rescue packages and eliminate the partisan impasses that we are presently seeing across the country.

The allocation of \$150 billion for state and local governments by the CARES Act provides one model for a revenue-sharing formula that could be sustained over several years.

Funding for local governments with more than 500,000 people was divided among local jurisdictions themselves (45 percent) and state governments to be used for the same jurisdictions. State governments controlled 100 percent of the funding for populations in localities with fewer than 500,000 residents, and each state received a minimum of \$1.25 billion, regardless of population. Funds were also earmarked for US territories and the District of Columbia and tribal governments.²³

Following the present crisis, Congress might consider making the temporary system of federal revenue sharing permanent. Revenue sharing could become a part of the economic toolkit known as automatic fiscal stabilizers, available as needed in situations that states and localities cannot control. During downturns, the federal government would provide funds that state and local government could use to cover gaps in their operating expenses, providing a lifeline to teachers, first responders, and other public employees. The economic effect of revenue sharing would be counter-cyclical, moderating economic declines. Revenue sharing might phase back down as the state and local economy and tax base improved.

If a prolonged but temporary program of emergency revenue sharing were converted into a permanent system, numerous questions of program design would need to be addressed. The federal funds could be drawn from general revenues or from an earmarked (hypothecated) tax, like the resource taxes on oil and gas which the Canadian and Australian federations distribute among their sub-units as part of their fiscal equalization programs. Earmarked taxes for revenue sharing might be sequestered in a trust fund. Limiting revenue sharing to funding of public services rather than contributions to social insurance, such as the state portions of Medicaid and unemployment insurance (UI) funding, might improve the likelihood of the program's adoption.

The economic consequences of the COVID-19 pandemic would have been less severe if Congress had not abolished the General Revenue Sharing program. Fiscal equalization in the form of a temporary but automatic system of federal revenue sharing, which could be converted into a permanent program in the future, can still do much to promote recovery. Should it be made permanent, it would significantly reduce the harm caused by future economic disasters as well.

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MARTIN J. LUBY

he Galbraith et al. piece in this toolkit detailed how federal revenue sharing can promote the resilience of state and local governments during times of fiscal stress. With federal support, painful budget austerity measures—especially in the areas of personnel, programmatic, and capital maintenance spending—can be avoided, speeding the eventual recovery.

However, one spending category in state and local government budgets can be reduced strategically in times of economic slowdowns without impeding recovery efforts: the interest expenditure on the debt that governments sell. Through a strategic program of asset-liability management (ALM), state and local governments can reduce their interest costs. Like revenue sharing, such a measure would reduce the need for counterproductive cuts in spending (though at a smaller scale). More holistically, an ALM program would

reduce risks while encouraging a more holistic approach to the management of assets and liabilities.

ALM was first developed in the 1970s and is used extensively by banks and insurance companies. The Society of Actuaries defines it as:

The ongoing process of formulating, implementing, monitoring, and revising strategies related to assets and liabilities to achieve an organization's financial objectives, given the organization's risk tolerances and other constraints. ALM is relevant to, and critical for, the sound management of the finances of any organization that invests to meet its future cash flow needs and capital requirements.²⁴

A common form of ALM seeks to mitigate risk to an organization from changes in interest rates by better matching its assets and liabilities in terms of maturity length and interest rate type (floating or fixed). Through ALM, an organization avoids making implicit bets on the future direction of interest rates, which improves its cash flow management by reducing the spread between asset earnings and liability costs.²⁵

An ALM program would reduce risks while encouraging a more holistic approach to the management of assets and liabilities.

How does ALM apply to state and local governments, and how can they use it to make their operating budgets more resilient? Depending on their size, these governments have considerable amounts of assets and liabilities subject to interest rate risks that can impact their operating budgets. Assets typically include operating and reserve funds invested in short-term investments carrying a floating rate that changes regularly (daily, weekly, monthly, etc.) based on market conditions. The short-term investment horizon is appropriate, as it allows the governments to preserve the principal on their investment while maintaining liquidity, since the funds will either definitely be needed within the fiscal year (operating funds) or possibly be needed, depending on economic conditions (reserve funds).

Among their liabilities are long-term debt obligations used to fund capital projects. Most state and local governments sell these bonds with a fixed interest rate that does not

change over time. This has the effect of locking in the borrowing cost, providing a benefit for future budgetary planning as the interest costs for the entire term of the bonds are known when they are sold. Politically speaking, this has the additional benefit of avoiding "headline risk," since fixed-rate debt is often viewed by taxpayers as the most financially conservative. However, from an interest rate forecasting perspective, by selling most (if not all) of their debt on a long-term fixed interest rate basis, these governments are implicitly making a bet that interest rates will rise. Such bets entail risks.

On the asset side, a decline in interest rates would reduce interest earnings and thus revenues for the operating budget. On the liabilities side, the interest rate risk is just the opposite. An increase in rates would raise the cost of debt and thus reduce budgetary resources. State and local governments typically have unmatched asset and liability portfolios, with short-term, floating-rate investments on the asset side and fixed-rate, long-term debt on the liabilities side. A declining interest rate environment would reduce their budgetary assets without changing the costs of their liabilities, while a rising interest rate environment would produce additional budgetary resources from assets but no change in costs from the government's liabilities. Under an unmatched asset-liability portfolio, as is typical for state and local governments, they are better off in a rising interest rate environment.

But this is problematic in two ways. First, over the last twenty years, the municipal bond market has experienced historically low interest rates. That means that governments lost their bet. They would have realized significantly lower interest costs if they had sold short-term, floating-rate debt. Second, and perhaps more importantly for this toolkit, a declining short-term interest rate environment is precisely what usually occurs during an economic recession.²⁶ So, precisely when state and local governments can least afford it, their unmatched asset-liability balance sheets produce a situation where they earn less on their assets, putting fiscal stress on their operating budgets, but do not realize a corresponding reduction in their interest costs since their debt is not in short-term, floating-rate mode.

But what about in a rising interest rate environment? Yes, governments with unmatched asset and liability portfolios would be better off in that they would earn more on their short-term assets while seeing no change in their interest costs. But rising interest rate environments are usually associated with economic expansions, with increased tax revenues, and other resources. Moreover, the point of ALM is to hedge the two sides of the government's balance sheet and avoid making implicit bets on the direction of interest rates. So, under an ALM strategy, when interest rates rise, the increased costs on the debt are offset by the increased earnings on the government's assets. When interest rates decline, the reduction in asset earnings is offset by the reduction in interest costs.

The policy implication of ALM in terms of budget resiliency is for state and local governments to add some floating-rate debt to their bond portfolios. Given the size of

many state and local governments' short-term assets and the limited amount of unhedged floating-rate debt that is currently a part of their debt portfolios, adding a sizeable amount of floating-rate debt over time may be appropriate. The use of floating-rate debt in reasonable amounts is advocated by many financial experts, including the Government Finance Officers Association (GFOA). In fact, the GFOA explicitly identifies the potential benefits of floating-rate debt in the ALM context while recommending that governments carefully evaluate its risks.²⁷

One of the few state governments that has transparently adopted ALM is the Commonwealth of Massachusetts. Massachusetts estimated that its unmatched assetliability portfolio cost it over \$1 billion dollars between 2004 and 2014.²⁸ While \$1 billion in savings over ten years will not have the kind of impact that federal revenue sharing does with respect to alleviating immediate budgetary stress, it is not an insignificant amount of money. To address this economic loss, Massachusetts planned to sell \$3.6 billion in floating-rate debt for capital projects between 2015 and 2018. Of course, the appropriate amount of floating-rate debt for any government will be contingent on the amount of their short-term assets that need to be hedged.

> Improving the resiliency of state and local governments requires more strategic financial thinking.

A few caveats should be noted. First, the use of floating-rate debt requires additional credit support facilities from an outside bank, which increases the cost of the debt. This credit support can become more costly or scarcer over time, as was the case during the financial crisis of 2007–2008. Second, floating-rate debt entails a greater administrative burden on the government due to the periodic changes in interest rates that need to be tracked and monitored. Thus, any government considering an ALM approach should have a financial staff with considerable capacity and financial sophistication. Finally, this policy implication does not contemplate a wholesale change in capital finance strategy. More specifically, state and local governments should still sell most of their long-term bonds on a fixed-rate basis given that their overall debt likely exceeds the amount of their short-term assets, with the floating-rate portion of their debt only approximating the size of their floating-rate assets over time.

Improving the resiliency of state and local governments requires more strategic financial thinking. It also requires an end to the siloing of the people who manage assets and the people who oversee liabilities that is all too common.²⁹ ALM provides a good example of the strategic advantage that can be gained from a holistic focus on both sides of a balance sheet. While there is some hope that the worst may be over in terms of COVID-19's budgetary impacts, there can be no doubt that another economic contraction will occur in the future. When it comes, state and local governments that adopted the strategic use of ALM will experience some budgetary relief which, in concert with other fiscal support, will ensure that the trajectory of their eventual recovery is both steeper and speedier.

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Global Development

The New Debt Trap: COVID-19 and Global Development

CATHERINE WEAVER, RACHEL ROSENBERG

s of October 30, 2020, the number of global COVID-19 cases was approaching 45 million.³⁰ Nearly 8.2 million of them were in the leading advanced industrial economy—the United States. Yet, the real and potential consequences of the pandemic are likely to be far more extensive, lethal, and long-term in emerging markets and developing economics (EMDEs) than in the US.

By many accounts, the COVID-19 pandemic may set back progress in alleviating global poverty by at least twenty years.³¹ Numerous estimates published by the International Monetary Fund, United Nations, and World Bank predict GDP growth to contract anywhere from 3.8 to 7.6 percent under the rather hopeful assumption that a COVID vaccine is approved and ready for distribution by the end of 2020. In turn, the International Labour Organization³² estimates that nearly half of the global workforce—close to 1.5 billion

people—may become unemployed due to the "great lockdown."³³ Moreover, nearly 250 million people³⁴ could face severe food insecurity or famine³⁵ due to disruptions in global and domestic food supply chains and loss of income and livelihoods.³⁶ In East Africa alone, the World Food Program estimated that the number of acutely food insecure people could increase by 73 percent this year.³⁷ Additionally, in the first months of the COVID-19 pandemic, nearly 30 percent of the world's children³⁸ were unable to access schooling either in person or remotely. The lack of access to education poses the multiple risks of lost or delayed learning, increased hunger due to the absence of free school meals, and increased risk of forced child labor or early marriage.³⁹

The COVID-19 pandemic may set back progress in alleviating global poverty by at least twenty years.

Overall, the threat to global development is severe: this year, between 130 million⁴⁰ and 500 million⁴¹ people worldwide may fall back into extreme poverty, defined as living on less than \$1.90 per day.⁴² As a result, numerous experts⁴³ predict that progress toward the 2030 Sustainable Development Goals is not only slowing, but may be moving in reverse.⁴⁴ Even in the most optimistic scenarios, COVID-19 will likely result in "lost decades of development."⁴⁵

Here, we focus on one of the most serious systemic threats related to the COVID-19 pandemic and global development: **the looming debt crisis**. Nearly half of emerging markets and developing economies (EMDEs) were already at high risk of debt crisis before COVID-19 was declared a global pandemic by the World Health Organization in March 2020.⁴⁶ Since then, the debt situation has only worsened. The IMF projects that average 2021 debt ratios will rise by 7 to 10 percent of GDP in these countries.⁴⁷

While the debt-to-GDP ratio projection is even worse for advanced economies such as the US (with projected increases near 20 percent), developing countries do not have the same capacity to carry additional debt. Their economic stress is exacerbated by private capital flight into "safe haven" economies, limited access to hard currencies that are necessary to service debt payments, and slowing economic growth due to declining commodity prices, falling remittance inflows, and disruptions in global trade and tourism.⁴⁸ In March 2020 alone, foreign investors withdrew more than \$83 billion from low-income countries (LICs) and lower middle-income countries (LMICs), the largest capital flow ever recorded.⁴⁹

One example of the looming debt crisis is Uganda. While the African country has a remarkably low number of reported COVID cases, it has suffered tremendously from the economic dislocations the pandemic unleashed. According to a study by Development Initiatives, a UK-based think tank, Uganda's domestic job losses and declining remittances have resulted in a significant loss of tax revenues.⁵⁰ Without export earnings or domestic resources, it is difficult for the Ugandan government to address key gaps in its health infrastructure, much less enduring problems in poverty, education, and food insecurity. Scarce resources have been reallocated toward COVID prevention and treatment, but at the cost of reduced spending on malaria prevention and treatment. Public debt in Uganda is roughly equal to 41 percent of its GDP, and debt service accounts for nearly 12 percent of the government's annual budget. Uganda's struggle with COVID-19 demonstrates that the pandemic is not simply a public health crisis: it is a threat to the long-term sustainable development of most low-income and lower middle-income countries (LICs and LMICs).

Debt burdens in developing countries limit fiscal resources and the policy space needed to address immediate crises in their health care and other social policy systems, as shortfalls in inward investments and high debt payments curtail spending on other sectors. This is particularly debilitating in the least-developed countries, where health care infrastructure was weak prior to the pandemic. The World Health Organization (WHO) estimated in 2014 that 83 countries did not meet their basic threshold for health workers (23 skilled professionals per 10,000 people).⁵¹ More recently, the WHO calculated that an additional nine million nurses and midwives will be needed globally by 2030.⁵² As a result, these countries are not only at higher risk for COVID-related illness and death, they are also vulnerable to rapid increases in maternal and infant mortality, the spread of untreated diseases like malaria, and an inability to sustain critical vaccination campaigns against preventable diseases like polio and tuberculosis. Globally, weak health care systems are further threatened as political support wanes for institutions such as the WHO, from which President Trump announced his intent to withdraw US membership in July 2020.

In October 2020, at the fall meetings of the IMF and World Bank, the United Nations' Director of Financing for Sustainable Development warned G-20 finance ministers and central bank governors of "protracted fiscal paralysis" and the "worst global crisis since WWII" if developing countries do not receive significant debt relief.⁵³ Yet debt relief initiatives led by the G-20 so far have fallen short for three key reasons.

First, global aid has fallen in the past several years as official development assistance from many major donor countries (including the US) has stagnated or declined in the face of domestic economic downturns and the rise of right-wing, ethnonationalist opposition to foreign aid.⁵⁴ Multilateral financial institutions, including the IMF and World Bank, had promised to deliver on the estimated \$2.5 trillion in financing needed to combat COVID-19.⁵⁵ Yet, as detailed by financial experts, many of these institutions have been slow to tap all of their available resources, and disbursement of funds has been painfully slow.⁵⁶

By August 2020, the IMF and multilateral development banks had approved just under \$175 billion, despite having the legal authority to mobilize and allocate nearly \$1 trillion from existing resources.⁵⁷ According to one of these reports, as of September 2020, only about \$90 billion had been disbursed—less than 12.6 percent of available multilateral and bilateral financing.⁵⁸ This may largely be due to fundamental disagreements between major donors over the conditions placed on debt relief, debt suspensions, or debt restructuring. For example, while China supported the expansion of IMF Special Drawing Rights in April 2020, the US and India blocked this in the G20.⁵⁹ Overall, while the G20 agreed just recently at the IMF and World Bank annual meetings to extend its Debt Services Suspension Initiative (DSSI), it has been very slow to come to an agreement on the terms of debt relief and to disburse needed funds. Moreover, the IMF and World Bank may be hesitant to overextend themselves on debt relief out of fear that they themselves might lose their "preferred creditor status" and face a degradation of their own bond credit ratings.⁶⁰

More critically, other current programs, such as the IMF's Catastrophe Containment and Relief Trust (CRRT), do not adequately address the structural problems of contemporary debt restructuring and relief initiatives. Instead, these initiatives repeat historical mistakes in placing the burden of adjustment more squarely on borrowers without redressing the moral hazards that perpetuate bad lending on the creditor's side. While the DSSI and previous debt relief programs have actively solicited creditor cooperation with innovative options such as green debt swaps and buyouts to encourage action on climate change, private creditors are rarely forced to realize the risks of their behavior. They are the first to be "bailed out" when countries receive debt relief, as Emerging Markets and Developing Economies (EMDEs) are eager to maintain critical credit ratings and access international credit markets.⁶¹ As a result and not surprisingly, private sector cooperation in the DSSI and other debt relief programs has been slow and uneven and is only on a voluntary basis. This problem grows as the overall percentage of private sector debt grows relative to public sector debt offered via multilateral and bilateral sovereign channels. According to Gulati 2020, in 2018 alone, EMDEs (excluding China) had a collective external debt of \$5.9 trillion, of which \$2.1 trillion was in private sector debt (e.g., loans from commercial banks) and \$1.7 billion in public sector debt to private creditors (e.g., bond-holders).⁶² This indicates that debt relief or restructuring programs without full buy-in from private creditors are unlikely to succeed and may even exacerbate the crisis if debt relief stimulates developing countries' sales of new high-yield sovereign bonds to private creditors or worse, triggers a new round of private capital flight.

Moreover, unlike past debt crises, today's overwhelming balance of bilateral debt held by EMDEs is owed to China, which has largely eschewed multilateral debt relief in favor of direct negotiations on bilateral debt agreements.⁶³ In June 2020, China suspended some debt repayments for seventy-seven countries, and President Xi pledged to provide \$2 billion over the next two years to aid developing countries in responding to the COVID-19

crises within their borders.⁶⁴ However, many critics point out that China primarily offers debt relief in the form cancellation of zero-interest loans⁶⁵ or loans that were already in default.⁶⁶ These loans represent only a small portion of China's aid. This inadequate form of debt relief leaves most developing countries—especially those participating in the Belt and Road Initiative—still on the hook for existing and new non-concessional loans—a form of "debt trap" diplomacy that may exacerbate, rather than alleviate, the looming debt crisis.⁶⁷

In the long term, aid and global finance need to be reimagined to avoid the inevitable debt traps that we have seen repeatedly in history.

Overall, an effective global response to the COVID-19 pandemic will require a wellcoordinated and ambitious effort by multilateral and private sector donors. These actors must quickly offer debt relief and suspension packages on conditions that do not undermine the ability of borrowing countries to service existing debt. More critically, debt programs must enable countries to attract new sources of capital, which will allow them to reallocate financial resources to address the immediate public health crisis. In the long term, aid and global finance need to be reimagined to avoid the inevitable debt traps that we have seen repeatedly in history. Without such steps, the developing world is not just going to suffer from the lost decade of development. It is likely to be living with the consequence of the COVID crisis for decades to come.

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Emergency Cash Transfers During COVID-19: Implementation Lessons for the Global South

ANA CANEDO, RAISSA FABREGAS, MEGAN MORRIS

ollowing the imposition of lockdowns in March 2020, the US federal government implemented a one-time \$1,200 payment to qualifying adults. The government's ability to provide direct economic assistance during a crisis relied on existing platforms and employment paper trails to target and deliver the funds. Lists of recipients could be generated from existing IRS databases, eligibility could be targeted to levels of income and numbers of dependents, and most recipients received their payment directly through their bank accounts.⁶⁸ Absent this infrastructure, how could other countries deploy rapid economic support for those in need?

Addressing the Economic Impacts of COVID-19 Through Cash Transfers

In developing countries, where the economic impacts of COVID-19 are expected to be even more severe, the deployment of cash transfers is subject to additional challenges. These countries have fewer resources and lower fiscal capacity than advanced economies and a much higher share of self-employed or informal workers (see Figure 1). Informal sector workers are more vulnerable to the COVID-19 crisis since they are rarely enrolled in social security coverage or health insurance and depend on their daily incomes for subsistence. They are also more difficult to reach through traditional social security programs since their work is often not visible to the government.⁶⁹

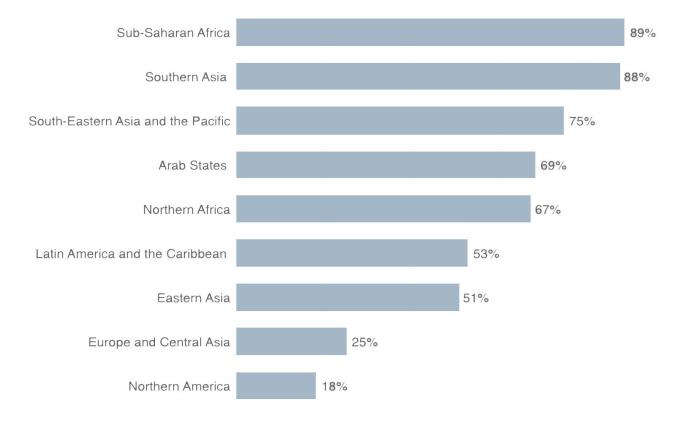


Figure 1: Total Informal Employment by Region Source: ILO, 2018

Policymakers have adopted several strategies to address the crisis, including cash transfers, social insurance programs, low-cost credit, job retention schemes, and utility and financial waivers.⁷⁰ As long as people have access to markets, cash transfers may be disbursed faster than food vouchers or other in-kind schemes and enable people to prioritize their needs while stimulating their local economies. Importantly, cash transfers can measurably improve conditions.^{71, 72} In rural Kenya, for example, cash benefits have been shown to have positive impacts on food security and physical and mental health.⁷³

Extensive research is underway to examine further the impacts of COVID-19 emergency cash initiatives in Pakistan, Jordan, South Africa, Brazil, Colombia, Peru, Mexico, and Ecuador.⁷⁴

Via a research partnership with a Mexican state agency, we are analyzing the impacts of an emergency cash transfer program (a one-time \$235 payment) specifically designed to target informal workers who lost their primary income sources during the COVID-19 pandemic. The sampled population shows marked signs of distress: 72 percent reported food insecurity, and 56 percent had signs of depression. Figure 2 reports the use of these transfers among surveyed individuals. The majority reported using them to cover basic needs, including food.

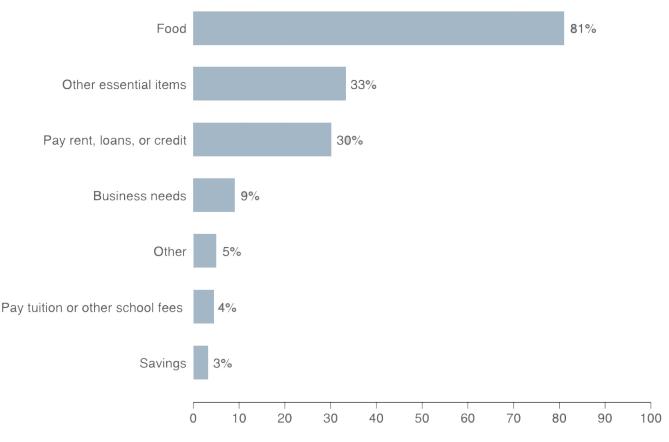


Figure 2: Cash Transfer Use for Sampled Population

Despite the positive role that transfers can play, there are many questions about how exactly to implement them. The priority should be to ensure that the most vulnerable get the income support they need as quickly as possible. But how should governments identify and target the most vulnerable? How should they be reached? Difficult decisions must be made, given the uncertainty of the pandemic, fiscal and political constraints,

and the flexibility or inflexibility of existing systems. While research is still ongoing, the emerging evidence highlights some important considerations for policymakers.

Adapting Cash Transfers to the COVID-19 Era

Identifying and targeting beneficiaries through existing systems speeds up the response. A big challenge for policymakers is to quickly and accurately identify vulnerable people. Countries with existing social registries in place can more rapidly respond to emergencies. For example, the Dominican Republic used its extensive social registry to expand emergency support to 70,000 informal workers.⁷⁵ Likewise, Brazil's Cadastro Unico, a nation-wide database of vulnerable populations, enabled a quick expansion of cash support to at least 11 million people. In other countries, like South Africa and Pakistan, eligibility was simplified because applicants could be matched across existing government databases via unique ID numbers. Other countries, such as El Salvador, have used non-traditional data sources to target beneficiaries, such as households with low electricity consumption (250kw/month).⁷⁶

Informal sector workers are more vulnerable to the COVID-19 crisis since they are rarely enrolled in social security coverage or health insurance and depend on their daily incomes for subsistence.

Self-targeting is an attractive option during an emergency, but better systems should be built for the future. Unfortunately, social registries and other administrative databases that could identify potential recipients do not exist in many developing countries. This makes identifying potential beneficiaries much more difficult. During non-emergency situations, countries can rely on a series of approaches like proxy-means testing, which relies on observing a households' assets, or community-based targeting, which relies on community knowledge to allocate support.⁷⁷ But in the context of the current crisis, these approaches may be inappropriate as they require significant amounts of time and resources. Geographic targeting is an inexpensive and quick method but risks leaving out people in need who live in richer regions. This might be a particular concern during COVID, where lockdowns are more stringent in urban areas.

Given these limitations, self-targeting can be an attractive option. The main concern with this approach is inclusion errors, meaning the possibility that there will be some unintended beneficiaries. To reduce this risk, many programs implement some sort of take-up cost that could deter those who don't need the program from applying. For instance, in the Mexican emergency cash transfer program, applicants had to complete an online form, attend an interview, sign an affidavit declaring need, and commit to volunteer in the future if asked to do so. However, during an emergency, errors of inclusion are less important than errors of exclusion. A complicated application form or too much bureaucracy might deter those who are less literate or empowered to apply.⁷⁸ Digital approaches are promising, but many areas and individuals still lack adequate coverage. The rapid expansion of mobile phones in developing countries has opened new opportunities to reach people at scale and in a timely manner. The value of digital approaches has been increasingly clear during the pandemic, in which potential recipients of aid are able to be targeted, screened, and enrolled remotely. Mobile banking payments are attractive at a time when both speed and social distancing are key priorities. Additionally, digital approaches are preferred by beneficiaries who have mobility restrictions or are concerned with safety issues around receiving cash.^{79,80} However, digitalization is far from universal, and these approaches need to be complemented in ways that reduce the potential exclusion of vulnerable populations. Many countries lack mobile banking services, and even simple mobile phones are uncommon in some regions. Moreover, women might be particularly prone to exclusion, since they are less likely to own mobile phones in many countries.⁸¹

> COVID-19 has shown us the need to create more dynamic and responsive safety nets to prepare for future crises.

Building Resilient Systems: Beyond COVID-19

COVID-19 has shown us the need to create more dynamic and responsive safety nets to prepare for future crises. Governments can respond more quickly and effectively during emergencies if they prioritize building flexible administration and data management systems to scale programs up and down as needed. Some of the current challenges do not come as a surprise: even before the pandemic, many called for the adoption of social protection systems that are less dependent on formal employment.⁸²

There are several steps that countries can take to prepare for the future. First, expanding social registries beyond the poorest would allow them to understand who might be vulnerable to income shocks in a crisis and react accordingly. Second, improved data management and analysis and advances in machine learning have opened new opportunities to use a wide range of databases to target vulnerable populations and create early warning systems.⁸³ Developing ongoing ties with researchers, think tanks, and other experts could allow governments to utilize these tools and knowledge. Third, a government's ability to react to these situations is clearly dependent on its flexibility to rapidly scale services up and down as needed. Flexible systems enable governments to coordinate and transfer resources and human capital from different units and promote enhanced cooperation across bureaucracies. Finally, this pandemic has underlined the positive role that the internet, information and communication technologies, and complementary services like digital banking can play. Policymakers need to act to ensure even broader access. With more research, more lessons will emerge about how best to improve our responses. Understanding what worked and what didn't during the COVID-19 crisis will help create more resilient social protection systems in the future.

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Intelligence and National Security

Intelligence Lessons From COVID: Being "Right" Is Not Enough

J. PAUL POPE

n college campuses, developing new knowledge and insights are things of value in and of themselves. For intelligence officers (and for policy analysts, I would argue), value is achieved when facts and insights are persuasively communicated to policymakers, who then choose to act upon them. The faltering response to the pandemic at every level of decision making (national, state, local, and individual citizens) represents an intelligence failure of the first order, even if the facts that were reported to the government were generally correct. The consequences of this failure are so grave that it underlines how much students (and faculty) at public policy schools can stand to benefit from a better understanding of the role of intelligence, and provides important lessons that will help them avoid making the same mistakes when they become policymakers themselves. "

The faltering response to the pandemic at every level of decision making (national, state, local, and individual citizens) represents an intelligence failure of the first order.

Epidemiologists will use their models for years after the pandemic is over to examine how the panoply of national and state responses altered outcomes. The dependent variable in their analyses will be the numbers of Americans who died. Put another way, they will prove that **policy matters**. By extension, then, analytic support to policy matters. The inescapable truth with regard to the pandemic is that while it was inevitable that the virus would reach our shores to cause some loss of American lives, it was within our power to alter the equation. Had we acted upon the available information and analysis earlier, more effectively, with greater discipline, and with more unity, the number would have been a fraction of what it is—and eight months into the pandemic, the virus still shows no signs of abating. The biggest variable in terms of where we will end up along the spectrum will not be the availability of information but how individual decision makers used it.

Was COVID an "Intel Failure?"

Surprise, when it happens to a government, is likely to be a complicated, diffuse, bureaucratic thing. It includes...the alarm that fails to work, but also the alarm that has gone off so often it has been disconnected. It includes the unalert watchman, but also the one who knows he'll be chewed out by his superior if he gets higher authority out of bed...It includes, in addition, the inability of individual human beings to rise to the occasion until they are sure it is the occasion—which is usually too late....Finally, as at Pearl Harbor, surprise may include some measure of genuine novelty introduced by the enemy, and possibly some sheer bad luck.

–Thomas Schelling, in his foreword to *Pearl Harbor: Warning and Decision* by Roberta Wohlstetter⁸⁴

Experienced instructors at the "Farm" (where the CIA trains its officers in clandestine operations) sometimes say that their most common answers to students' questions are either "You're smart, figure it out" or "It depends." "It depends" sounds like a dodge but is often, in fact, the best answer. Cookie-cutter approaches don't work in complex and

nonlinear contexts like clandestine human operations or pandemic responses. But, as we told our instructors, this makes it important to explain clearly what "it depends" depends on and to articulate principles for grappling with the task or situation in question.

In the last seven months, I have been asked whether the US response to the pandemic represents an intelligence failure or a policy failure or both. The answer is clear: "It depends." Specifically, it depends on how one envisions the role of intelligence. The traditional, almost universally used "intelligence cycle" model visualizes intelligence as a continuous loop of "direction/guidance, collection, analysis, and dissemination."

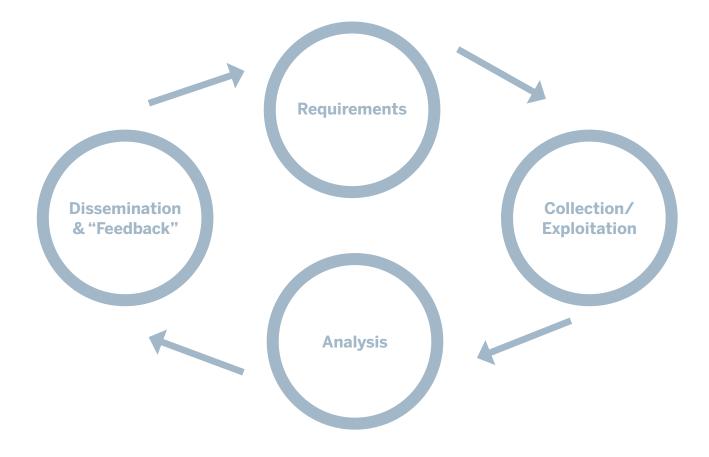


Figure 1: Traditional Intelligence Cycle

Using this near-universal visualization, the intelligence community, the CDC, and others can make a strong case that the failures in response to the pandemic were not with the intelligence itself. They can point to their repeated and clear warnings regarding the need to prepare for a pandemic originating in Asia, as well as their explicit tactical warnings about COVID-19. Using the traditional model of intelligence, their collection and analysis was "right," and it was properly "disseminated." The failures, accordingly, were failures of

policy and policy execution. This response, while perhaps accurate, doesn't offer many lessons about where the breakdowns actually occurred or practical advice about how to avoid similar failures in the future.

What Intelligence Can and Cannot Do

Every class on intelligence I've taught at UT includes this objective in its course description: "help students understand what intelligence can and cannot do." In each of these classes, I posed this question early on: "What memories haunt retired intelligence officers the most?" In each class (so far), some student will hesitantly ask, "Not being right?" or perhaps "Getting it wrong?"

It would be a mistake to use one model to parse blame for our poor response to the pandemic, given the complex interplay of national, state, local, and individual actors who make up our complicated political system.

At the end of the course, we return to the question. In every class so far, one or more students will confidently answer: "Failing to warn decision makers" or "Failing to inform policy." By now, they understand that one of the few things intelligence officers know with certainty is that they *cannot know the future*. As their response reveals, the students also understand that the best intelligence can do is *reduce uncertainty* for decision makers. Despite their self-awareness about their lack of clairvoyance, good intelligence officers are confident and optimistic not only that they *can* reduce uncertainty, but that this reduction contributes significantly to national security in the form of better and more timely decisions, whether these decisions relate to long-term strategy or crisis management. Returning to models of intelligence, then, it turns out that we get different answers and more useful insights to assessments of intelligence successes or failures when we use a model that 1) is based on performance in support of the policymaking process instead of the intelligence processes, and 2) that includes policymakers. In this model, policymakers are part of the intelligence enterprise with roles to play that go beyond levying requirements. Beyond the inclusion of policymakers, the biggest difference with this model is that it bakes in a principle: *intelligence can fail because intelligence officers got it wrong*, but it cannot succeed merely because they got it right. Using this model, in my view, we must conclude that in the case of COVID-19, our national warning system failed.

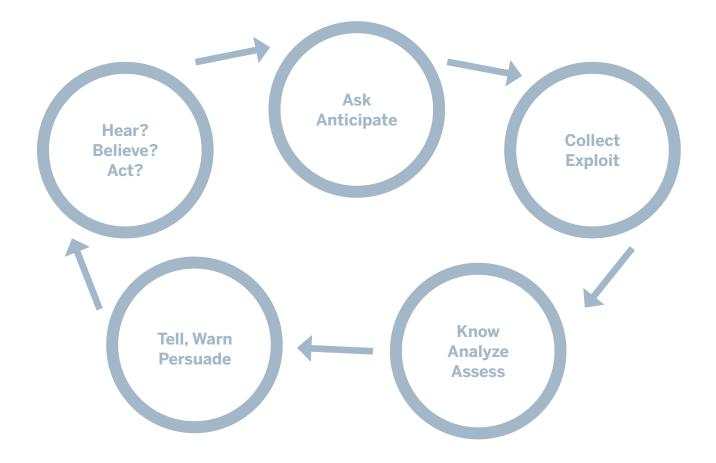


Figure 2: Intelligence Performance Cycle

This model is also depicted as a cycle that includes collection and analysis, but it emphasizes that effective performance by intelligence requires:

- Actively Asking and Anticipating. Policymakers and intelligence officers must aggressively seek to ask the right questions, and intelligence officers must also anticipate questions not yet asked by policymakers. In a large undergrad class in late January or early February of this year, I used an exercise on the COVID virus in Asia to illustrate this point. An imaginary policymaker asked the class whether it would come to the US and to identify the most important questions to answer. After a half-hour exercise, the answers produced were: "Yes, definitely," "How exactly does it spread?" and "How lethal is it?"
- **Persuading and Warning vs. Dissemination.** The word "dissemination" is much too passive to describe the importance and, sometimes, the urgency of getting intelligence to those who can act upon it and actively assessing whether they found it convincing. This is especially required when the aim is to warn, and it is even more true when the warning comes as an answer to questions they have not yet asked.

• Hearing? Believing? Acting? This is the part of the performance cycle that differs most from the traditional intelligence cycle because these are all expressed as questions about the attitudes and behaviors of policymakers. If they are too busy, too inert, too distracted, or too uninterested to even make time to read or hear the intelligence, no intelligence system can work. If they did read or hear it, to what extent did they find it persuasive? Did they engage and ask questions, for example? If they rejected it, was it for valid reasons, such as a lack of evidence, or because it was not consistent with their world view or it was politically inconvenient? Finally, to the extent that they were (even partially) persuaded, did they then take action in response?

We use this model because the interface between intelligence and policy is where most historical intelligence failures dwell. There are many explanatory pathologies to be examined in that space. One of the most common, which is relevant to the pandemic response (and also to 9/11), is when a warning *is* heard and *is* persuasive but the policymakers' response is to ask to be "kept informed" or to "come back as soon as you have more information." This response may be considered defensible at times, given the price of taking action, but it is, nevertheless, procrastination and wishful thinking about the ability to eliminate uncertainty. It almost invariably results in losing the advantages inherent in having even a little more time to prepare.

It would be a mistake to use one model to parse blame for our poor response to the pandemic, given the complex interplay of national, state, local, and individual actors who make up our complicated political system and the fact that we are still in the midst of the crisis. Such a rush to historical judgment would almost certainly result in more needless loss of life because it would further politicize the response. There will be time for that later. We need to reflect on the differences in the models above now for the same reason: because we are still in the pandemic and are making life and death decisions every day. Intelligence and expert analysis can only add value in this context if policymakers use it.

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The World That COVID Made: What Should American Foreign Policy Do?

WILLIAM INBODEN

OVID-19's long-term effects on the international system remain unknown, in part because the course of the disease remains unknown. Much still depends on factors such as potential new waves of infections as the northern hemisphere winter approaches, improved treatments, and especially the development of an effective vaccine.⁸⁵

At this point, some nine months into the plague, we do know that COVID-19 is *not* a geopolitical blip of little consequence. It has already inflicted a ghastly human toll and caused disastrous social and national dislocations. It is sharpening the key rivalry of the twenty-first century—the US-China competition—and highlighting strains that were already disordering the world.

But it is unlikely to cause a fundamental altering of the global system on par with what happened after World War II destroyed two leading great powers, Germany and Japan, catalyzed the collapse of the European colonial empires, and propelled the United States to international primacy. And the changes that it does cause may not make the international landscape dramatically more menacing. There is even a scenario in which the pandemic weakens autocracy and populism more than democracy, underscores America's structural power even as it temporarily damages its soft power, catalyzes a more formidable balancing coalition against China, and leads to a more realistic form of globalization as well as renewed cooperation between the world's democratic states.

That depends, however, on what choices America makes in a post-COVID world. The COVID pandemic reminds us that "American leadership" is not a trite euphemism. It is arguably the single most important factor in whether the arc of history bends toward something better or something worse. America must soon recover the tradition of enlightened global leadership that it presently seems to have abandoned.

The fact that American dominance, the liberal order, and other aspects of the pre-COVID status quo continued for decades suggests that they possessed a higher degree of resilience than is often appreciated. Just as important, a closer look at some of the dynamics unleashed or highlighted by the crisis points to several opportunities for the US and our allies:

The pandemic leads not to de-globalization but to re-globalization along geopolitical lines.

The fundamental drivers of long-term globalization—technology that shrinks distances, the quest for economic growth that spurs trade, and the recognition that global problems do not recognize borders—have not been undone. If anything, they are underscored. For example, the need for growth to reduce the crushing debt burden created by the pandemic-generated recession will eventually produce a resurgence in global trade. In some ways, the crisis may create opportunities for deeper globalization. As individual nations and leaders wrestle with the next phases of the COVID response, particularly antiviral therapies, vaccine development, contact tracing, and mass immunity, it will become clear that no one nation-state will be able to develop these alone. The resulting networks—some evolving organically, and others reinforced by institutional mandates and incentives—will create a connective tissue that binds nation-states together rather than furthering their distance.

The crisis may create opportunities for deeper globalization.

The medium-term outlook could well be managed globalization along two discernible lines. First, supply chains will likely diversify, with the risk premium justifying the inefficiencies of redundancy. In most cases, the costs of entirely on-shoring production back to the US will be prohibitive. But savvy firms should be able to generate more resilient production chains without complete on-shoring, and those firms will have a competitive edge over others chasing the unicorn of autarky.

Second, globalization will increasingly occur within, rather than across, geopolitical lines. The quest for diversification and modest US-China decoupling will likely result in a diversion of trade and investment flows to other countries, particularly historic allies like Europe and Japan and other regions such as South and Southeast Asia, where states have their own incentives to minimize their vulnerabilities to Chinese coercion. Geopolitical logic will reinforce and accelerate this trend, since deeper trade and economic integration could strengthen the "free world" economy for competition with Beijing.

The pandemic does not result in dramatic, adverse shifts in the balance of power.

Even optimists would concede that America's geopolitical position has worsened somewhat as a result of the crisis. The fact that China seemed to gain the upper hand in its fight against the spread of COVID-19 just as the US and its major allies were slogging through the toughest phase of the lockdown reinforced the impression of waning Western and especially American power. It also enabled the Chinese Communist Party (CCP) to pursue its aims while Washington and its democratic allies were laid low; witness the tightened control over Hong Kong, increased repression in Xinjiang, and renewed belligerence toward Taiwan.

If the psychological balance of power shifted rapidly, however, the material balance did not shift in a decisive or enduring way. The pandemic damaged *every* major economy. Almost every geopolitical unit that has been touted at one time or another as a possible emerging disrupter of US primacy—the European Union, Russia, India, or Brazil—suffered a grievous economic wound. If anything, the flight of international investors *toward* the US in the middle of the crisis, along with the dollar's resilience as the global reserve currency, underscored the fundamental sources of the nation's structural strength.

The pandemic has also drawn attention to China's economic and political fragility. Beijing botched its initial response to the spread of the virus and then botched its attempt to cover up that fact with crude propaganda and gifts of defective PPE. While the CCP welcomed the pandemic's undermining of global and American domestic confidence in the United States, over the medium and long term it is unlikely that even this will redound to China's advantage.

While American soft power and diplomatic prestige often attach in the short term to the successes and failures of a particular leader, they tend to reset fairly quickly after the next electoral cycle. Previous declines in American soft power were followed by sharp bounce-backs, in some cases caused by nothing more than a change in the White House. If, a year from now, the US is seen to be acting more competently at home and abroad, the deeper sources of American soft power and prestige may reassert themselves. And if the United States leads in developing and distributing a working vaccine—a big "if," but one that the US is well-positioned to achieve—then the soft-power bounce-back could be substantial.

For China, by contrast, the long-term diplomatic trends seem more troubling. The fact that dozens of countries called for an international inquiry into the pandemic's origins, that international anger at China rose considerably on multiple continents, and that a number of countries that had previously accommodated China swung toward a harder line all suggest that Beijing may confront a more formidable balancing coalition in the years to come. Admittedly, forging an effective balancing coalition will require more skillful US diplomacy than it has exhibited of late. But it is quite possible that this pandemic will scathe China more than the United States.

The liberal order holds and is revitalized.

As poorly as the institutions of the liberal order performed during the initial stages of the pandemic, they still command more legitimacy in the rest of the world than any plausible alternative. The more likely scenario could be reform and innovative new institutions rather than collapse.

Lamentations over the weaknesses of international institutions often go in tandem with expressions of nostalgia for a past golden era of multilateral cooperation. But such an era never existed. International institutions have always faced geopolitical challenges and criticism for their failings. Yet they adapted and endured—and that could happen again.

What may emerge is a shift to a two-tiered order: one involving the world's democracies, with a higher level of cohesion and ambition, and the second a broader order with a larger number of countries but a lower level of cohesion and ambition, reserved only for transnational issues such as pandemics and climate change.

For example, the G-7 could evolve into a D-10 that includes the leading democracies committed to developing alternatives to technological dependence on China. The United Kingdom has already proposed such a reform. The EU is considering plans to deepen fiscal integration by making additional funds available to COVID-stricken economies. US military alliances are likely to prove even more relevant in the more competitive world that is now emerging. The imperative of decreasing economic dependence on autocracies

could lead over time to trade and investment agreements that focus on deepening ties between America and like-minded democracies. And if the United States commits to fighting harder for influence in obscure but important institutions that China has sought to corrupt, the effectiveness of those institutions could be restored.

The pandemic proves deadlier for autocrats and populists than for democrats.

Authoritarians and populists have short-term advantages in confronting a pandemic for example, in implementing draconian public health measures and exploiting the demagoguery that accompanies suffering. But several months into the pandemic, there does not seem to be a lasting dictator's dividend. The nations that displayed the most effective responses are liberal democracies, including South Korea, Japan, Taiwan, Denmark, New Zealand, and Germany. Singapore, a soft-authoritarian city-state, is the main example of a non-democracy that marshaled an effective response and is almost the exception that proves the rule.

The performance of the world's foremost authoritarian regimes was somewhere between mediocre and catastrophic. China's delayed response to the COVID-19 outbreak, once galvanized, drew on the advantages that authoritarianism offers, including mass lockdowns and mass surveillance. Yet that response was necessary because the authoritarian system had prevented a more effective earlier response, and the pandemic almost certainly caused much higher numbers of infections and deaths than its government has admitted. Iran, Russia, Turkmenistan, and North Korea also seem to have been hit very hard, with the damage obscured only by their lack of transparency. Of course, many democratic nations have also under-performed, especially the US. But the point is that neither type of political system has a monopoly on ineptitude in its initial response—and that democracies are still well positioned to win the governance challenge over the long term.

From a free press and an independent judiciary to opposition parties, decentralized governance, and elections, democracies possess an ecosystem of self-correction that provides warnings when policies aren't working, information channels for suggesting new approaches, policy laboratories for experimenting with different responses, and accountability channels for citizens to either reward or punish their elected leaders and the administrators who serve under them. Authoritarian systems, in contrast, eschew these mechanisms, any one of which could threaten the autocrat's monopoly on power. In the near term, admittedly, such crises can provide political cover for leaders to consolidate control; they can also create the anger and resentment on which populist leaders thrive. But authoritarians cannot indefinitely hide from the convergent pressures of disaffected citizens, dysfunctional health systems, eroding control, and economic stresses accentuated by the crisis, and their political systems tend to be more brittle

than democracies when confronted by such challenges. Witness the ongoing protests in Belarus as the latest example.

American policy may be the most important factor in determining which way the future breaks. If the United States commits its vast power and prestige to deepening cooperation and economic integration with the democracies, promoting a geopolitically informed globalization rather than a wholesale retreat from globalization, if it focuses on reforming and competing for influence within the institutions of the liberal order that underperformed or were corrupted by authoritarian influence and to developing the policies—not simply the rhetoric—of responsible competition with China, then the fluidity that the crisis has created may well redound to the advantage of America and the "free world."

But if the US chooses a course of narrow economic nationalism, gratuitous provocation of its closest allies, retreat from institutions in which it does not get its way, and continued downgrading of efforts to promote democracy and human rights, and if the country indefinitely flounders in discharging its responsibilities at home and abroad, then the future indeed looks grim.

Bringing about the better scenario will require better American leadership in myriad ways:

- Using its power to convene other nations for common goals;
- Setting the agenda for what issues to focus on, and how;
- Providing economic, personnel, and technological resources toward international challenges;
- Leading the gathering, analysis, and sharing of information on global problems;
- Pioneering innovative and creative solutions;
- Deploying leverage to induce or persuade those otherwise reluctant to make responsible choices;
- Serving as a moral exemplar;
- Demonstrating competence in policy design and implementation; and,
- Being willing to sacrifice narrow self-interest in favor of the enlightened self-interest that comes from pursuing a larger global good.

This list is an implicit indictment of all that was lacking in American statecraft as the pandemic spread, and a reminder of just how dramatically US performance will have to change to tip the balance from a dark future to a brighter one.

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Community Well-Being and **Public Health**

Healthy Communities Are Resilient Communities, Resilient Communities Are Healthy Communities

SHERRI R. GREENBERG, MICHAEL K. HOLE

n January 1964, President Lyndon B. Johnson declared an "unconditional war on poverty in America," unleashing a flurry of policies and programs to improve Americans' health and prosperity. LBJ well understood how poverty, among other social problems such as racism, hunger, and homelessness, makes people sick. Today, over five decades later, health experts agree: what happens outside America's health system also matters to Americans' health. A healthy community is a resilient community, and a resilient community is a healthy community.

Social and economic factors affect people's physical and mental health and resiliency. Some of these factors include their ability to pay for medicines and healthy food, their transportation options, their access to high-quality education and childcare, their jobs and financial resources, and their housing and environmental conditions. Hence, under-resourced populations generally are less healthy than more-advantaged ones. Strong evidence shows they have higher rates of chronic diseases, such as diabetes, hypertension, and heart disease, as well as other disparities in health outcomes, such as lower life expectancies. Disparities occur in many groups, including, but not limited to people with low incomes, people of color, people that live in the outskirts of urban areas and rural communities, people with disabilities, people in jail and prison, and people in the LGBTQIA community. We must find ways to bring people to services and services to people.

Unemployment, small business closures, and an economic recession amid the COVID-19 pandemic have been especially hard on under-resourced populations. Central Texas, and the entire nation, have seen startling statistics regarding health disparities during COVID-19. For instance, Austin Public Health reports that between mid-March and mid-October of 2020, fully 48 percent of the people hospitalized for COVID-19 in the five-county Austin metropolitan statistical area (Travis, Williamson, Hays, Bastrop, and Caldwell Counties) were Lantinx, and 10 percent were Black.

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But the crisis has yielded some positive changes, too. COVID-19 highlighted and exacerbated the long-standing need for remote and mobile services delivery in the Austin area, and it accelerated innovations in health care, social services, transportation, and other industries. Consider these five local examples:

- **Telemedicine and Telephonic Medicine.** During COVID-19, Central Health-affiliated CommUnityCare clinics in Travis County saw a tremendous increase in telemedicine and telephonic medicine: up to 70 percent of its health care appointments transitioned from in-person to remote.
- **Mobile COVID-19 Testing.** Central Health/CommUnityCare and Austin Public Health implemented mobile COVID-19 testing in Travis County, as did many other communities nationwide. Under-resourced populations received special consideration. For example, CommUnityCare's Mobile Team conducted COVID-19 testing for people living in shelters.

- Online Connection to Community Resources. The City of Austin COVID-19 website offers resources for individuals, health care providers, and businesses, ranging from a call center for high-risk workers to testing and recovery assistance. Likewise, the United Way for Greater Austin assembled robust resources on its ConnectATX website, including emergency food, housing, transportation, physical and mental health, benefits, childcare, and parenting.
- **Grocery Delivery.** Grocery delivery services, once a luxury for people with higher incomes, became available to people with lower incomes and helped high-risk individuals avoid grocery stores, food pantries, and public transportation, and, therefore, infection and hospitalization. For example, Good Apple, an Austin-based grocery delivery company, launched from The Impact Factory at UT Austin, leveraged partnerships with local farms, food banks and pantries, private transportation companies, city government, and philanthropies to deliver 650,000-plus pounds of healthy food directly to the doors of more than 21,000 older adults with low incomes and others at high-risk from COVID-19. This has saved untold lives and health care dollars since mid-March 2020.
- Video Calls for Mental Health. Video conferencing platforms, once a novelty, became commonplace and, for some, a tool to combat mental health issues exacerbated by shelter-in-place ordinances. For example, Big & Mini, another organization in the portfolio of The Impact Factory at UT Austin, is an online platform and smart phone application aimed at bridging generations and reducing social isolation and loneliness. Big & Mini has matched 600-plus pairs of seniors and teens in fifty states and twenty-two countries since early April 2020.

COVID-19 also increased health systems' focus on population health, accelerating crosssector partnerships to slow the spread of disease. Consider these examples from the Austin area:

- **Rapid Distribution of PPE.** Travis County health care providers, nonprofits, faithbased entities, companies, and community groups partnered to enable drive-through distribution of personal protective equipment (PPE), such as masks and hand sanitizer, for under-resourced populations, as well as delivery of PPE to small businesses and apartment complexes.
- **Repurposing Space.** Many under-resourced populations are at high-risk for both acquiring and spreading infections. For example, people experiencing homelessness often have no place to shelter-in-place after testing positive. The City of Austin provided space in motels free of charge so people who needed to could isolate.
- **Data Visualization.** Many communities have developed COVID-19 tracking dashboards. The Austin Public Health Department collaborated with researchers at the University of Texas at Austin to provide data and visualizations on the City of Austin and Travis County websites that track COVID-19's spread by zip code and demography. Specific dashboards for long-term care facilities and community testing rates also

are available. Likewise, Central Health and CommUnityCare developed modeling and dashboards on their websites to identify COVID-19 hot spots and map testing and positivity rates by zip code, race, and ethnicity for the populations they serve.

Moving forward, policies aimed at reducing health disparities must prioritize cross-sector collaborations, improve insurance reimbursements for social services impacting health, work to achieve digital inclusion, and enable data sharing and evaluation to improve equity.

• Increasing Cross-Sector Collaborations. Tackling the social determinants of health and resolving health inequities and disparities require partnerships and pooling of resources across governments, businesses, nonprofits, academia, and others. The Central Health/CommUnityCare Southeast Health and Wellness Center in Austin offers free cooking and exercise classes on site and provides space where needed social services can co-locate, such as the Supplemental Nutrition Assistance Program (SNAP) and the Women, Infants, and Children (WIC) program. Foundation Communities, an Austin-based nonprofit developer of affordable housing, provides wraparound support services to residents of its developments, such as digital literacy, tax preparation, and on-site education for children.

Policymakers must build on successful existing collaborations while also forging new partnerships, and pursuing opportunities across sectors, from housing, transportation, and financial and economic counseling to health care, nutritious food, job training, and education. Outreach and engagement must include stakeholders and neighborhoods from the outset via surveys, social media, texting platforms, phone calls, emails, informal community events, and formal advisory boards so that appropriate services can be co-created.

- **Improved Reimbursement for Social Services.** The pandemic has drawn attention to the positive effects social services can have on health. Policies enabling more generous payments from insurance companies to social service providers align incentives between health care and other industries affecting the social determinants of health. More reimbursement would reward nonmedical providers for alleviating social problems affecting health and encourage further collaboration between health systems and nonmedical evidence-based programs.
- **Digital Inclusion.** As evidenced by increases in telehealth services, online job training, and virtual learning in K-12 and higher education, the pandemic shed light on both the need for and the power of online services to improve health and well-being. Policymakers must prioritize funding to provide universal access to high-speed broadband as an essential utility comparable to water, electricity, and sewers. In 1936, the US Congress passed the Rural Electrification Act; the time has come for Congress to pass the Universal Broadband Act.

• More Data Sharing and Evaluation. COVID-19 has illuminated the need for better platforms and policies to improve data sharing among local government entities and various community health care providers and hospitals. At the local, state, and national levels, the lack of consistent, coordinated data has hampered disease identification, tracking, and treatment. Additionally, good data must be accompanied by specific criteria and outcome measures to evaluate the effectiveness of health care, social services, and wraparound service programs. We cannot close the equity gap and eliminate disparities unless we have evidence-based, data-driven policies with standards and key performance indicators.

As America endures multiple crises, President Johnson's call to action is as urgent today as it's ever been.

As America endures multiple crises, President Johnson's call to action is as urgent today as it's ever been. The COVID-19 virus has killed more than 200,000 people, while a vaccine remains months away. Small businesses are shutting their doors permanently while more and more Americans lose jobs amid an economic recession. Under-resourced communities have been hit hardest.

May LBJ's example guide us as we push for long-overdue policies that can improve health and prosperity for all. Only then will we have the healthy and resilient communities we need.

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A Roadmap to Rebuilding an Early Childhood System Of Care

CYNTHIA OSBORNE

he prenatal period to age three is when the brain and body develop most rapidly; as such, it is the most sensitive and critical time in a child's development. Our brain is the only organ that is not fully formed at birth; it requires input from those around us to shape it. The science of the developing child is clear: children exposed to stimulating, warm, and secure environments in those first three years are set on a path of healthy brain development and life-long health and well-being, whereas children exposed to early and chronic adversity will struggle throughout the course of their lives.

Increasingly, state policy leaders recognize that investments in this early period yield substantial savings to education, health systems, and other social services over time. They are also aware that the failure to ensure that children get off to a strong start levies serious short- and long-term costs to children, families, and society.

Although the need to invest in this early period is clear, policy leaders lack clear, evidencedriven guidance as to what the smartest investments are to ensure that infants and toddlers thrive. The COVID-19 crisis makes these policy choices even more crucial: families with young children are struggling to maintain employment and care for their little ones. Huge increases in food insecurity, housing instability, and parental stress have devastating consequences for the developing child. Communities of color have borne the brunt of the crisis, exacerbating already deep and persistent racial and ethnic inequities in child and family well-being.

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The COVID-19 crisis makes these policy choices even more crucial: families with young children are struggling to maintain employment and care for their little ones.

The pandemic has exposed the need for a system of care to support families—no one institution can do it alone. Health, education, employment, social services, families, communities—each of these institutions must work together to ensure that healthy children are born to healthy parents, and that parents have the skills, resources, and institutional supports they need to work and care for their children's health and well-being and be the parents their children deserve.

The Prenatal-to-3 Policy Impact Center at the LBJ School of Public Affairs at The University of Texas at Austin developed a State Policy Roadmap to help decision makers as they seek to craft policies that enhance the well-being of infants, toddlers, and their parents. It identifies five effective state-level policies and six strategies. Rigorous reviews of the research confirm that each positively impacts prenatal-to-3 outcomes, and most reduce racial and ethnic disparities in outcomes and promote equity.

The pandemic has exposed the need for a system of care to support families—no one institution can do it alone.

The five policies are broad and promote greater health and economic resources within households:

- **Expansion of Income Eligibility for Health Insurance.** Expanding income eligibility for health insurance allows childless adults as well as parents to access health care. This is especially important for lower-income women because it provides them with access to medical care prior to conception and prenatal care when they need it.
- **Reduction of Administrative Burdens Surrounding Benefits and Services.** The reduction of administrative burdens ensures that people who are eligible for benefits and services receive them. This is the most straightforward policy that states can implement. Although adequate safeguards against fraud are required, it is costly to require in-person recertification for benefits at short intervals. States have made several modifications to their processes in response to COVID-19, and they should consider making them permanent so all families who are eligible for services receive them.
- **Paid Family Leave.** Now is also the time for states to implement a paid family leave policy, allowing parents to receive a portion of their incomes for at least six weeks while they stay at home with their newborns. Paid family leave not only allows time for parents to bond with their infants in the critical first months of life, but also increases the likelihood that they will return to their pre-birth employer, increasing employment over the long-run.
- Increasing State Minimum Wage and Creating a State Version of the Earned Income Tax Credit (EITC). Increasing the state minimum wage to at least \$10 per hour and offering a refundable state version of the Earned Income Tax Credit (EITC) that is at least 10 percent of the federal EITC are two additional policies that not only substantially increase household resources, but reduce adverse birth outcomes and promote health and well-being across early childhood.

The six strategies we recommend are also backed up by rigorous research, but we cannot provide clear guidance as to what states should do through policy or regulatory action to ensure the results found in the causal studies. These strategies include:

- **Implementing comprehensive screening and referral programs** to identify developmental delays in children and connect families with the resources they need to help them support their children
- Setting childcare subsidy reimbursement rates at levels that allow families to afford high-quality care
- **Funding group prenatal care programs** to enhance birth outcomes and improve the emotional well-being of mothers
- Offering home visiting programs to enhance parenting skills
- **Funding Early Head Start programs** to increase the number of eligible children participating in this effective two-generation program
- Setting broad eligibility criteria for intervention services that identify and address early developmental delays in infants and toddlers

No state is currently implementing all eleven of these solutions, but there are wide variations across states in the benefits and services that children and families have access to, which lead to huge variations in outcomes. As states attempt to rebuild their health, economic, child care, education, and social service systems, this roadmap can help them implement the policies that have the biggest impacts, benefiting families in the short term and leading to long-term gains for society as a whole.

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Correcting Corrections: Lessons for Prisons and Jails in a Post-COVID World

MICHELE DEITCH

he COVID crisis has been a wake-up call like no other for our nation's prisons and jails. Even for a government sector accustomed to making headlines for unflattering reasons, the virus has presented a string of unceasingly bad news. As of early September 2020, prisons and jails accounted for 44 of the top 50 coronavirus hotspots in the US.⁸⁶ Both their infection rate and their death rate far outpace those in the free community. In fact, a study published in the *Journal of the American Medical Association* found that people in US prisons are 550 percent more likely to contract COVID and 300 percent more likely to die from it than their free world counterparts.⁸⁷ What's more, the virus' toll in corrections facilities continues to grow, and the curve shows no signs of flattening.

We look to our corrections system as part of our nation's public safety network, yet it seems to be failing terribly at that mission. Not only are incarcerated people disproportionately elderly, Black, and with pre-existing medical conditions—getting infected and dying at unprecedented rates, but so are the people who work in these facilities.⁸⁸ And the coronavirus is spreading into nearby communities.⁸⁹ There have also been reports of violence and riots breaking out in facilities where the virus is prevalent and where stress levels run high.⁹⁰ Beyond these physical manifestations of harm, the COVID crisis has led to curtailment of rehabilitative programs inside facilities and reduced contact between incarcerated people and their families, both of which can contribute to higher recidivism rates.

All of this harm was entirely predictable. Experts warned early on that corrections facilities would be petri dishes—essentially, cruise ships on steroids. Prisons and jails are densely populated facilities where social distancing is all but impossible, with poor sanitary conditions and limited access to hygiene and cleaning supplies. They hold increasingly high numbers of elderly individuals and those with serious medical conditions. The high churn of people in local jails creates a constant risk of spread from the outside to the inside and vice versa, and the comings and goings of staff present an ongoing risk of exposure for people in custody. In short, incarcerated people are a very vulnerable population in a very risky environment, who are unable to protect themselves.

COVID laid bare a multitude of serious problems in our system of mass incarceration in this country.

COVID laid bare a multitude of serious problems in our system of mass incarceration in this country, including the gross racial inequities in who we lock up, the poverty that determines whether someone remains jailed or is released, our excessive thirst for punishment that requires people to remain incarcerated long past their crime-prone years, and the unhealthy and unsafe conditions of confinement in these institutions.

The Lessons

The pandemic has also driven home some critical lessons. First, there is no bright line between our correctional facilities and our communities. What happens behind the razor-wire fence doesn't stay behind the razor-wire fence. Unhealthy prisons and jails mean unhealthy communities. What happens inside these facilities matters—and should matter—to all of us. Prisons and jails need to be more transparent.

Second, both incarcerated people and staffs have a mutual interest in ensuring safe and healthy facilities. Viruses don't care which side of the metal bars you're on.

Third, the reason these facilities are so densely populated is that we lock up far too many people for far too long. We demand a pound of flesh, even when a person presents no further risk to the community or when social services such as mental health treatment, drug treatment, housing, or job training would be a better fit. Our deeply punitive policies—which also play out in the form of dehumanizing conditions behind bars—have stood in the way of more thoughtful, appropriate, and cost-effective measures that can save lives.

The COVID crisis offers us an opportunity to learn from these lessons and re-envision and transform our corrections system. We must work to create a model that incarcerates fewer people, that is fairer and more equitable, and that is less punitive, less traumatizing, safer, and healthier for people in custody and their staffs alike. We need to evaluate the operations of our prisons and jails through a public health lens and ask questions about how our policies and institutions affect the health and well-being of people who are incarcerated, as well as their families, their communities, and the staff who supervise them. Our goal must be to create more resilient individuals, families, and communities. Only in this way can we achieve the public safety mission to which our criminal justice system aspires.

⁴⁴ The COVID crisis offers us an opportunity to learn from these lessons and re-envision and transform our corrections system.

The Action Plan

Depopulate facilities and avoid unnecessary incarceration. To prevent a COVID catastrophe, the number one recommendation of every corrections expert was to depopulate prisons and jails to enable at least a modicum of social distancing and to better protect the most vulnerable people in custody. While some states and counties followed this guidance, most did not, and tragic results predictably followed.

As we look to a post-COVID world, we need to adhere to this public health guidance. The US incarcerates more people than any other country on the planet, and we gain very little public safety benefit from the disproportionately long sentences we impose. We should not be incarcerating people who do not present a significant risk to our communities. And for those we do incarcerate, we should impose shorter sentences and release them when they no longer pose risks to public safety. Above all, we need to invest in communities and make social services available to all so that our jails and prisons are not used as a substitute for a social safety net.

To help reduce the populations of prisons and jails (and save taxpayers' money in the process), every jurisdiction should implement these policies at a minimum:

- Law enforcement should expand use of "citation and release" practices to avoid jailing people charged with minor offenses.
- Courts should expand the use of personal bonds so no one remains in jail solely because they cannot afford to make bail.
- Prosecutors should seek, and judges should impose, significantly shorter sentences; sentences of more than twenty years should be reserved for the most extreme cases and many more individuals should receive non-custodial sanctions.
- Legislatures should establish routine processes that allow for the early release of individuals who no longer present a risk to the community due to their age, health condition, or rehabilitation, with no exclusions due to the nature of the crime.
- People approved for parole should be released quickly, rather than being required at that point to begin and complete programs prior to their actual release. Such programs should be offered at an earlier stage of incarceration, not at the tail end, which simply delays release and increases costs for taxpayers. If more programming is necessary after the release decision is made, those programs can be completed in the community rather than in prison.
- Legislatures should expand compassionate release programs, including options for releasing individuals who are medically vulnerable during a pandemic, with no exclusions due to the nature of the crime.

Improve conditions of confinement. Improving conditions in our nation's prisons and jails is no easy task, but we must begin by recognizing the immense harm and trauma caused to people who live and work in places that are unhealthy, unsanitary, crowded, dangerous, and dehumanizing. The goal of public safety is undermined when people emerge from these settings worse than when they entered. We must shift from the punitive mindset that says that people should suffer while incarcerated to the perspective that separation from the community is punishment enough, and the focus during that time should be on building wellness and resiliency. Most immediately, though, the objective is harm reduction through the following measures:

- Ensure that incarcerated people have easy access to hygiene and cleaning supplies, and that both residents and staff have sufficient PPE.
- Provide more single cell housing, offer privacy partitions in dorms, and eliminate crowded congregate housing areas.
- Provide higher-quality, healthier food, including fresh fruit and vegetables, in sufficient quantities.
- Recognize the different needs of women in custody and develop separate programs, services, and policies to address their needs.
- Eliminate the use of long-term solitary confinement, which has been shown to

exacerbate mental health problems.

- Offer work opportunities that teach meaningful skills, and pay incarcerated people for their work so they can contribute to their families and save money for their release.
- Provide staff with better working conditions and sufficient pay so they feel safe, do not need to work overtime to make up for understaffing, and do not feel tempted to engage in illicit activities on behalf of residents.
- Work toward a culture shift that values more normalized, helpful, and traumainformed interactions between staff and residents rather than the control-oriented and dehumanizing dynamics that mark most correctional environments.
- Expand access to education and the arts, including theatre and music programs; establish creative and healthy outlets for residents; and develop programs that provide residents with increasing levels of responsibility.

Strengthen relationships between incarcerated people and their families. Successful

reentry so often relies on healthy family relationships. Yet the barriers to maintaining family ties are immense: long distances for families to travel to the facilities for visits, massively expensive phone calls, facility lockdowns, bureaucratic restrictions, and suspension of visitation due to COVID. To help build the resiliency of families and promote public safety, corrections officials should:

- Offer video visitation as a supplement to in-person visitation or as an alternative while COVID restrictions are in place.
- Provide increased access to phones for people in custody, including those in restricted housing.
- Prohibit predatory pricing for all methods of communication between incarcerated people and their families.
- Provide families with routine information about what is happening in the facilities and any changes to operational policies that affect their loved ones.

Use technology to expand delivery of programs and services to people in custody.

COVID restrictions led to the suspension of most programs and many services in prisons and jails. Not only does this suspension deny incarcerated people the education and treatment programs they need to reduce their likelihood of recidivism, but idleness in custody is a recipe for increased misconduct, tension, and violence. Technology offers the opportunity to expand these offerings, even after COVID restrictions are lifted, increasing safety and security in the facilities and improving the resiliency of people who are incarcerated. Corrections officials should explore the potential to:

- Provide residents with computer tablets (with all necessary security precautions installed) to enable personalized educational and rehabilitative programming.
- Expand access to health care and mental health care through telehealth and telemental health services.

Enhance transparency of prisons and jails. Prisons and jails are extraordinarily opaque institutions that exercise enormous control over the lives of the people inside them. Shining a spotlight on what happens behind bars helps protect incarcerated people, provides critical information to policymakers and the media, and helps spread guidance about best practices. The American Bar Association has called on every jurisdiction to establish independent government bodies to conduct routine monitoring of prisons and jails, and has detailed the key elements of effectiveness.⁹¹ Yet in contrast to other Western nations, the US has few examples of robust independent correctional oversight bodies.⁹² Beyond this lack of oversight, we do not even require the reporting of key indicators of safety and health behind bars.

To help ensure safer and healthier prisons and jails, policymakers should:

- Establish one or more independent oversight bodies in every state to conduct routine preventive inspections of prisons and jails, and report publicly on the treatment of people in custody.
- Require the collection and public reporting of data about health and safety issues in prisons and jails.

The ultimate lesson of the COVID crisis in our prisons and jails is this: addressing the issues it has surfaced is not just a good idea, it is a moral imperative. We need to have the vision and courage to correct corrections and work toward a system that is more worthy of our values and ideals—one that uses a public health lens to help build resiliency. For that is the true underpinning of a safer community.

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Cultivating Community Resilience Through Nonprofit Connections

SYDNEY WILBURN, ALYSSA STUDER, MOIRA PORTER, DAVID W. SPRINGER

he RGK Center for Philanthropy and Community Service, an academic and research center in theLBJ School of Public Affairs at The University of Texas at Austin, recently released the Austin Area Sustainability Indicators annual *Austin Futures Report* focused on community and climate resilience. In it, researchers posed the question: "Instead of normalizing and valorizing herculean efforts of historically disadvantaged communities, how can resilience interrogate and change inequitable societal structures?"⁹³

To prepare for the report, researchers surveyed thirteen Austin-area nonprofit organizations. While each organization defined "resilience" differently, all understood the interconnected nature of the nine *Austin Area Sustainability Indicators*, including climate and community resilience.⁹⁴ The nonprofit sector operates in all of these areas, and often across more than one at a time. In their responses, all of them stressed the importance of collaboration.

Nonprofits are, at their core and out of necessity, spaces that foster experimentation and innovation. As such, they are the perfect sandbox for identifying and addressing potential solutions for the inequitable societal structures that crises such as COVID-19 exacerbate. Communities in which individuals and nonprofits work together and understand each other build robust social networks that serve different populations and collaborate on society's most challenging problems. Successful collaborations between organizations and community members (or among different nonprofit organizations) acknowledge the strengths and weaknesses of each group, as well as the power that community members and groups close to the ground have to recognize problems and to build and deliver joint and innovative solutions.

These social networks should be well-maintained even in normal times, so when communities inevitably face unforeseen hardships, relationships are already in place to nimbly respond. To build these strong networks, nonprofits and other organizations should actively look for opportunities to collaborate with others that share their values and mission, as well as the skills, materials, and knowledge that are needed to fill gaps in services. Networks built on shared values and strong trust "allow more holistic, coordinated, timely, and realistic solutions to rise to the surface," a critical element in addressing crises such as the COVID-19 pandemic.⁹⁵

Nonprofits are, at their core and out of necessity, spaces that foster experimentation and innovation.

Though it is impossible to prepare for every potential crisis, communities in which nonprofits have built strong networks can more easily support the individuals who utilize their services and each other. This is especially important today, when so many of the nonprofits that serve the individuals and communities that are the most impacted by COVID-19 are facing financial strains themselves.

Go Austin! Vamos Austin! (GAVA) is a nonprofit that organizes and mobilizes community power to reduce barriers to health while increasing institutional capacities to respond to the people most impacted by historic inequities. GAVA has invested significant resources into the development of a framework and community resilience tool. Its work with the University of Texas at Austin, community members, and other local organizations demonstrate the power of building and maintaining a variety of relationships within a social network. Connections GAVA built over the years with community organizations, such as the Austin Together Fund, the Dell Medical School, and the City of Austin RISE program, helped them quickly provide cash assistance to residents hit hardest by the COVID-19 crisis in some of Austin's lowest-income areas. As a grassroots organization deeply embedded in the community in which it works, GAVA incorporates its members' experiences, ideas, and values into its programs and services. When the COVID-19 crisis hit, GAVA worked with a community member who had food handling experience and another local nonprofit, Urban Roots, to quickly respond to the need for food relief, delivering fresh produce to thirty households. By incorporating key principles, such as using a strengths-based approach to their work, recognizing structural inequity, prioritizing the interests of residents, and building a broad base of community stakeholders, GAVA has woven a safety net for the East Austin area.⁹⁶ GAVA operates off the People's Institute principle that everyone in a community is a gatekeeper of a unique set of information and resources.⁹⁷ Based in transparency and common interests, those relationships allow it to leverage resources and build authentic leadership and social power.

To build these strong networks, nonprofits and other organizations should actively look for opportunities to collaborate with others that share their values and mission, as well as the skills, materials, and knowledge.

Drawing on both our survey and the broader lessons learned from the COVID-19 crisis, our report underlines some of the most important efforts that stakeholders such as UT Austin and the nonprofit community at large should undertake going forward. These include the need to:

• Establish and maintain open channels of communication and encourage collaboration between institutions of higher education and their local nonprofit community. Establish programs or structures to identify skilled students and alumni and match them with nonprofits in the community. As natural community hubs and accelerators of talent, our Texas higher education institutions are well-connected to talented individuals and are uniquely positioned to match them with nonprofits that have needs in areas such as data and financial management, research, grant writing and fundraising, and strategic planning.

- **Direct funding toward data collection, management, and analysis projects.** Nonprofits often have difficulty securing adequate funding to support data projects due to their high demands on personnel and the low initial ROI. Over time, however, quality data collection and analysis help nonprofits better understand their communities and the impacts of their services, as well as their existing gaps in services.
- Listen to communities to develop and implement plans for restructuring, rebuilding, and revitalizing in the light of a crisis. Grassroots organizers and community-led organizations know the territory: be sure to engage them when preparing for and responding to crises, and when working to revitalize and heal afterwards.
- Build relationships and networks with nonprofits that serve rural populations. The Greater Austin area recognizes thousands of 501(c)(3) nonprofits, ranging from small, one-staff operations to local branches of national organizations. Nonprofits in urban areas have more opportunities to build networks with each other, institutions of higher education, and corporate partners than those that operate in rural areas. The Texas nonprofit community will become more robust and sustainable to the extent that it brings rural nonprofits into its networks. Organizations can learn from each other, share resources and best practices, and help build a statewide network to protect communities and regions that may be harder hit by crises such as the COVID-19 pandemic.

A recent series of case studies from the RGK Center and other community partners highlighted the impact that nonprofits have on local economies. One case study found that a nonprofit organization investing in workforce development in Southeast Texas successfully trained more than 1,000 previously unemployed individuals and placed many in jobs within the local oil and gas sector.⁹⁸ This emphasis on human and community development leads to more successful economic development—a critical aspect of Texas communities' efforts to rebuild and bounce back in the midst of the COVID-19 crisis.

To the extent that nonprofits strengthen their networks with each other and the communities they work with, they can redouble their impacts, interrogating and changing inequitable social structures for the better.

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Inclusion and Economic Development

Increasing Community Resilience Through Immigrant Incorporation

RUTH ELLEN WASEM

oreign-born residents of the United States, a record 44.8 million of them as of 2018, make up 14.5 percent of the US population and 17.4 percent of the labor force—fully 28.4 million workers. According to Joint Economic Committee statistics, immigrants⁹⁹ and their children account for more than half of the growth of the US workforce over the past two decades.¹⁰⁰

Immigrants fuel prosperity and enrich America's cultural life, making the nation more vibrant and more resilient. Policies that support immigrant incorporation would not only strengthen the US, but would also help it rebound faster from the COVID health emergency and ensuing economic recession.

Disproportionate Impact of COVID on Immigrants

Recently published analysis finds that foreign-born workers are more likely than nativeborn workers to be employed in "essential critical infrastructure" sectors as designated by the Department of Homeland Security, 69 percent and 65 percent, respectively. They are primarily found in two critical sectors: health care providers and the food supply chain. Foreign-born workers account for 38 percent of home health aides, 29 percent of physicians, and 23 percent of pharmacists. About 22 percent of workers involved in the US food supply chain, approximately 2.1 million of them, are also foreign-born. These include 37 percent of meat processing workers, 30 percent of workers in commercial bakeries, and 30 percent of agricultural workers. About three-quarters of unauthorized foreign nationals in the labor force are classified as essential.¹⁰¹

Immigrants are over-represented in the biomedical sector, making up 22 percent of scientific researchers in fields that pertain to treatments and vaccines for COVID-19. As of 2018, almost 40 percent of US medical and life scientists were foreign-born, as were nearly 30 percent of chemists and material scientists. From 2010 to 2019, the US Department of Labor approved more than 11,000 hires of temporary foreign workers at the eight major US companies researching coronavirus cures and treatments.¹⁰²

A growing body of research finds that immigrant incorporation increases social cohesion, yielding positive outcomes for both native- and foreign-born residents.

COVID-19 has had a disproportionate impact on immigrants when it comes to job losses. Historically, immigrant males were more likely to be employed than native males. This changed in April 2020, when service occupations, in which foreign-born workers are overrepresented, reached unemployment rates of 27 percent, the highest of any occupational category.¹⁰³

Foreign-born residents who are not naturalized US citizens—that is, lawful permanent residents, legal temporary residents, and unauthorized residents—have long faced legal and practical barriers to receiving health insurance, supportive services, and public assistance. Recent regulations promulgated by the Trump Administration have had a chilling effect on immigrants seeking benefits, such as Medicaid, for which they are eligible. Some did not apply for them, lest they draw attention to family members who are unauthorized residents. Concerns that immigrants would not seek testing and needed

medical care were such that the US District Court of New York enjoined implementation of this new rule during the pandemic.¹⁰⁴

COVID relief legislation—the Cares Act of 2020—expressly barred immigrant families with an unauthorized family member from receiving stimulus payments. An estimated 6.2 million essential workers (with 3.8 million children who are US citizens) were denied payments under this rule because they either were unauthorized or were filing jointly with one of the estimated 5.5 million unauthorized residents who work in jobs deemed essential.¹⁰⁵

Immigrant Incorporation Is Key to Resilience

A growing body of research finds that immigrant incorporation increases social cohesion, yielding positive outcomes for both native- and foreign-born residents. How well immigrants adapt to this is highly dependent on their starting points—the racial and ethnic groups they belong to, their legal status, social class, and the geographic area into which they integrate. Both native- and foreign-born residents participate in the societal dynamic of incorporation, and governmental policies can support or limit immigrants' feelings of acceptance and belonging.¹⁰⁶

Overall, the impact of immigration is a net positive for job creation and economic growth, although the wages of US workers may flatten in some instances. Concerns that immigrants displace native workers are countered by research showing immigrant workers are more often complementary than they are competitors. A quarter of new US businesses are started by immigrants. Nationwide, three million immigrant entrepreneurs employ almost eight million American workers. Immigrants' spending power—estimated to be \$9.3 billion in 2014—helps fuel aggregate demand and economic growth.¹⁰⁷

A growing body of research reveals the many ways immigrants have revitalized American cities and towns since the 1965 Immigration Act removed the racial and national quotas that had been in effect since the 1920s. Immigrants have repopulated abandoned neighborhoods and reopened storefront businesses in dormant commercial areas. After years of crippling divestment, job loss, and crime, large American cities are once again hubs for the national economy, with lower crime rates and prime real estate. Some attributed this revitalization to an elite, creative class of young professionals, who began returning to cities in significant numbers in the 1990s. A.K. Sandoval-Strausz's case studies of Chicago and Dallas, however, found this reversal is largely due to Latin American immigrants. Jackelyn Hwang's analysis of twenty-three major US cities found that Asian and Hispanic immigrants formed "global neighborhoods" that spurred gentrification in some neighborhoods and ethnic enclaves in others.¹⁰⁸

Federal law controls the legal landscape of immigration, but the particulars of a locale

often drive immigrant incorporation. Abigail Fisher Williamson explores why and how local governments across the country are taking steps to accommodate immigrants, sometimes in the face of formidable opposition. Manuel Pastor and John Mollenkopf also emphasize the importance of local leadership in shaping attitudes and responses to immigrants.¹⁰⁹

Civic engagement is a core component of immigrant incorporation that is promoted by interactions with elected officials and helpful neighbors, volunteer work with community groups, and discussions of political topics with family, friends, and colleagues. Michael Jones Correa has done several studies of immigrant integration; his most recent found that immigrants were more civically engaged in 2017 than in earlier years. The penultimate of civic engagement is naturalization, and then voting. Naturalization produces a host of positive results, such as increased wages, better job opportunities, and an enhanced sense of security.¹¹⁰

Key Policy Reform Is Needed at the Federal and Local Levels

To ensure successful immigrant incorporation, efforts should be made at both the federal and the local levels. Only the federal government, specifically the US Congress, has the power to remedy the issues pertaining to immigrants' legal statuses, authorization to work in the United States, eligibility for federal services, and criteria for naturalization. Local governments are better situated to improve the social integration of the immigrants, ensure access to educational assets (e.g., schools, libraries, and community centers), and encourage naturalization.

Although comprehensive immigration reform is the mantra across the coalition of immigration advocates who work in ethnic communities, business groups, labor unions, and religious organizations, the experience of the COVID pandemic has lifted several policy options to the top of the list. The first would be to offer lawful immigration status to unauthorized foreign nationals who worked in essential jobs during the national health emergency. The second would be to relax the bars that prevent lawful permanent residents from receiving means-tested federal assistance. Both options are imperfect and fail to address the extent of the problems with current immigration law, but they would be strategic starting points to move comprehensive immigration reform forward.

Two other important immigration reform provisions are "low-hanging fruit" for lawmakers supporting immigrant incorporation. One would provide lawful permanent residence to foreign nationals brought to the United States without legal status as children (also known as DACA) who meet specified conditions. The other would enable certain international students who graduated from US institutions with advanced degrees in the sciences, technology, engineering, and mathematics to qualify for lawful permanent residence.

Civic engagement is a core component of immigrant incorporation that is promoted by interactions with elected officials and helpful neighbors, volunteer work with community groups, and discussions of political topics with family, friends, and colleagues.

An option that would certainly foster immigrant incorporation would be the elimination of the \$1,600 fee that lawful permanent residents must pay to apply for naturalization. Encouraging and supporting naturalization is clearly in the national interest. Using appropriated funds to cover the adjudication costs of citizenship applications is a straightforward way to support naturalization.¹¹¹

At the local level, there is much that municipal governments and community organizations can do to foster immigration incorporation. Research I led with LBJ graduate students in Dallas, Texas, resulted in three recommendations for local policy-makers:

- To exercise leadership on immigrant incorporation
- To promote policies fostering economic development and civic engagement among immigrants
- To support programs that enhance education outcomes, neighborhood livability, and access to legal, health and human services for immigrant communities.¹¹²

In sum, the public policies that aim to incorporate immigrants boost resiliency for all residents, native- and foreign-born.

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Toward a More Inclusive and Resilient Economic Development Paradigm

STEVEN W. PEDIGO

he economic development field has never faced bigger challenges—or higher stakes. With the coronavirus pandemic still raging out of control, unemployment remains stubbornly high, local governments are rapidly running out of money, and small businesses are closing in droves. Meanwhile, our hyper-polarized political climate, renewed awareness of racial inequality, and the increasingly frequent and severe wildfires, hurricanes, storms, and other natural disasters are heightening tensions across society. America's deep inequities and vulnerabilities are as raw and exposed as they've ever been.

As business activity resumes, we can no longer push these problems under the rug while debating or denying their existence. Our communities, our way of life, and our economy are being reshaped by these forces, whether we like it or not. The most obvious and immediate changes we are experiencing stem from the rise of remote work and the shifting economic geography it is creating: some people will be drawn to rural and suburban areas for more private space, while others will be more attracted to central cities, which are all of a sudden more affordable. The question now is whether community and business leaders can leverage these changes for resilient and inclusive growth.

For too long, the word "resilience" has been used solely in the context of environmental disasters or unnatural catastrophes, like terrorism or toxic oil spills. But resilience needs to be considered more expansively, as a place's capacity to weather economic and public health threats, and even more broadly, "as the capacity of residents, communities, institutions, businesses, and systems to survive, adapt, and grow," no matter what kinds of chronic stresses and acute shocks they experience.¹¹³ The more resilience a community has, the less likely it is to break under pressure—and the faster and more completely it can rebound from crisis.

Achieving a more resilient and equitable future won't be easy, but there are strategies and actions that economic development leaders can adopt that will set that process in motion. Among these new "plays":

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The more resilience a community has, the less likely it is to break under pressure—and the faster and more completely it can rebound from crisis.

Expand cooperation among government jurisdictions, businesses, and community organizations. As economic geographies are reshuffled, cities in affected regions will need to more closely align their provision of services, including transportation, education, and health care. Public-private relationships that developed during the pandemic to provide testing and PPE can be strengthened and redirected toward other goals, including workforce development, traffic demand management, and other public health initiatives. Anchor institutions like hospitals and universities can expand their leadership by partnering with governments, local businesses, and community groups to fulfill regional economic and social needs. Successful collaborations shouldn't end once a vaccine becomes widely available.

Rethink the role of commercial and entertainment districts. With many companies saying they will be leasing less office space in the future, and lingering anxiety about public transit and large public gathering places, the neighborhoods where these

activities take place will need to diversify their offerings. Encouraging mixed-use development in downtown office cores, satellite office parks, and entertainment districts will help keep these neighborhoods vibrant even if their core functions are diminished. Zoning restrictions could be loosened and financial incentives provided for residential conversions. Economic development officials should also consider diversifying the business clusters that exist in their cities, so that if one sector is particularly hard-hit, the whole regional economy will not be devastated.

Foster resilience through economic inclusion and diversification. Small businesses in particular need extra help during this uncertain time. Too often, city regulations hamper small businesses through onerous permitting processes; many cities are beginning to strip those processes away. Governments, anchor institutions, and large businesses can also develop targeted investment programs to help historically marginalized and underserved businesses, similar to anchor collaboratives and local purchasing programs. While business attraction is always important, economic development officials also need to look at ways to retain and expand existing businesses. This can be done through the framework of collaboration and partnership described above.

Invest in the skills of all residents. Cities need to align economic development and workforce priorities, creating new pipelines of workers into strategic, talent-hungry sectors. Job training and workforce development should leverage the latest technologies to ensure workers are being trained for the jobs of the future. Likewise, these programs should provide wraparound services, including childcare and mentoring, all in the same location, to make it easier for the people who need them the most to take full advantage of them.

Support essential workers to address inequities. While they've always been essential, it's now clear to everyone just how important "essential workers" are to the functioning of society. These workers need to be treated with dignity and supported so they can bring their best to the job. Safety nets like paid sick leave, living wages, and childcare will help fill labor shortages and improve worker performance, as well as serving as social well-being indicators. Cities, businesses, and anchor institutions should consider the "good jobs strategy" developed by Zeynep Ton at MIT and pursued by successful companies like H-E-B, Costco, and Trader Joes, in which low-paid service jobs are transformed into viable careers to the benefit of both employees and employers.¹¹⁴

Increase health care investments for economic development. As the pandemic has demonstrated, health care is a vital form of economic development. Cities and states should accept federal dollars for Medicaid expansion and invest them in new clinics and health care jobs. Health care facilities and systems will likely need to change a great deal to accommodate tele-health and other post-pandemic realities, so investments in infrastructure and IT will be essential. There will be major opportunities for the

companies—and regions—that invest in these technologies. There will also be many more job opportunities in the health care field, meaning job-training and workforce development initiatives should target their efforts in that direction.

Promote growth in smaller and rural communities. A select few rural communities and small towns have become magnets for remote workers, causing the problems that come along with prosperity, like rapidly rising housing prices and strains on local services. However, far more rural communities and small towns have weak economies with few prospects for growth. A broader, more regional focus would help these communities establish better infrastructure, and educational, economic, and health care links to nearby cities and towns. Regions should plan for export sectors that could suit rural areas that have cheap, abundant land, and develop talent initiatives that encourage young people who've sought opportunity elsewhere to return home.

As important and urgent as it is for local leaders to get our communities up and running again, the ultimate challenge is to make them stronger, more resilient, and more equitable

Invest in equitable placemaking centered on well-being. The pandemic is transforming our public spaces. Many of the temporary changes cities have adopted, including outdoor dining and shared streets, should be made permanent. Streets (and neighbors) can adapt more quickly and seamlessly than previously imagined, so cities should be bold about prioritizing the most enjoyable, environmentally friendly, healthy, and economically vibrant uses for public space. These spaces are essential for bridging differences across society, celebrating different cultures and communities, and bringing diverse groups together as one. The economic challenges posed by the pandemic also highlight the need to keep cities affordable for the working class. Community land trusts and land banks are another creative way that cities can increase public space in the name of affordability and equity.

As important and urgent as it is for local leaders to get our communities up and running again, the ultimate challenge is to make them stronger, more resilient, and more equitable than they have been in the past. COVID-19 and other recent events have exposed our existing weaknesses and blind spots, but they also point us to a better way forward. Economic development leaders now have an incredible opportunity to make their cities and regions more resilient in the face of future shocks. Cities that don't act now will be left behind—not if, but when the next crisis strikes.

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Climate Change

Bouncing Forward: How Lessons From the Pandemic Can Help Us Adapt to Climate Change

R. PATRICK BIXLER, PAOLA PASSALACQUA, REGINA M. BUONO

s decision makers and communities struggle with the impacts of the COVID-19 pandemic, the very meaning of recovery has come into question. Is the aim simply to return to normal (i.e., to bounce back)? Or can we think about bouncing forward to a new and better normal? If so, how can we transform our policies, practices, and systems to be more equitable and resilient? The answers to these questions point the way toward what we need to do to prepare for the inevitable climate disasters that are to come.

The pandemic's impacts have been unequally distributed across neighborhoods, communities, and social groups.¹¹⁵ Infection, hospitalization, and death rates are significantly higher in Black, Hispanic, and resource-poor communities. Blacks have been infected at almost four times the rate of whites, have 4.2 times as many hospitalizations, and twice as many deaths. The hospitalization rate for Latinx persons is approximately

4.4 times that of non-Hispanic persons,¹¹⁶ and Hispanic Americans saw the steepest employment losses and have the most ground to make up to reach pre-pandemic employment levels.¹¹⁷ The COVID recession is the most unequal in modern US history. Millions of low-paid service workers were exposed to the virus in their work or lost their jobs because of the lockdown, while professionals have been able to work at home, and the stock market has continued to climb.

All this speaks to the notion of social vulnerability, which is well-understood in climaterelated hazards research. For example, the Social Vulnerability Index (SVI) and its variants combine multiple socio-demographic dimensions to generate a spatially explicit index that indicates the places most susceptible to the impacts of shocks like wildfire, extreme heat, drought, hurricanes, and flooding (to see Texas-specific estimates at the Census Tracts and Census Block Group visit: https://tmo.utexas.edu/texas-social-vulnerability). As with the pandemic, those stressors have unequal impacts across society. Policies and programmatic interventions can be designed to build community resilience in three broad ways, by:

- Reducing sensitivities
- Reducing hazard exposure
- Increasing adaptive capacity

Increasing resilience across a range of multiple hazards requires researchers, policymakers, and community leaders to work together in ways that are problem-focused and solution-based and aimed at equitably reducing disaster loss and promoting collective well-being. A resilient Texas— from neighborhoods to cities and across vastly different geographies—will be dependent on an enhanced understanding of the complex and nonlinear interactions of natural and social systems and the mechanisms to translate these new scientific discoveries to actionable and policy-relevant practices.

Given that the COVID-19 crisis has affected these same social and economic systems, what insights can we generate from the experience that might better help us prepare for the coming climate crisis? Below, we identify and discuss four key issues:

Social and Spatial Inequality

As previously mentioned, a prominent feature of climate hazards research is the different sensitivities of populations to shocks or stressors, referred to in shorthand as their "social vulnerability." If past is prologue, socially vulnerable neighborhoods and communities in Texas and beyond will be the first and hardest-hit by consequences of climate change, just as they were by COVID-19.

Economic and social policy that seeks to address historical and systemic inequality can reduce vulnerability in low resource groups. Municipal and state policy can also direct infrastructure investment, both gray and green, to these communities in ways that reduce their exposure to hazards. For example, improved drainage and enhancements to the natural absorption capacity of cityscapes can reduce acute flooding in socially vulnerable places. Additionally, policies and programs that build social capital—the networks, norms, and social cohesion of households and neighborhoods—should be advocated and promoted because they increase the capacity for households and neighborhoods to adapt. The City of Austin's climate ambassador program provides one innovative approach for building social capital.¹¹⁸

Improved Preparation and Response

COVID-19 and climate change have similar nonlinear and temporal impact dynamics that are best understood through scientific modeling. Such models allow us to prepare for disasters and take proactive steps to mitigate them, potentially reducing their economic and human costs. Such models are hard for the public and even policymakers to understand, as they frequently challenge short-term thinking and interests. So, scientists can help catalyze strong and early action by improving their models provides one innovative approach for building social capital—particularly in ways that better integrate technical and social dimensions—and increasing the public's trust in those models.

For example, flooding preparation and response are limited because the flood and risk maps in general use typically do not account for the interactions of pluvial, fluvial, terrain, and transportation "layers" that interact with each other, causing significant losses and displacements. Also, there are few, if any, established methodologies or workflows to link technical models to social dynamics. Combining social "layers" with technical modeling can significantly enhance the ability of state agencies and local communities to plan, respond, and adapt effectively to evolving risks, using accurate, accessible, and evidence-based tools.

Critically, we must improve the trust and actionability of new scientific insights and discoveries. One approach for doing this is knowledge co-production and collaborative/ participatory modeling. Co-production—a process that iteratively connects ways of knowing and acting, including ideas, norms, practices, and discourses—involves multiple participants (scientists, policymakers, community groups, and residents) to produce new knowledge and new ways of integrating knowledge into decision-making and action. Fine-resolution flood models can serve as a focal point for stakeholders across multiple levels as they build useful knowledge and tools to address flooding and other hazards.

Strengthened Multilevel Governance Mechanisms

COVID-19 is the first crisis in the current era of globalization in which nations across the world, and states within the US, are competing directly for the same limited resources. From Western Europe's closed borders, to mandated quarantines for out-of-region residents entering New York to the closure of Interstate 10 at the Texas/Louisiana border, institutions that have long thrived on integration show signs of fragmentation. Climate change will bring a repeat of this scenario, but at a potentially greater scale. Increasingly frequent extreme weather events and food and water shortages within the US and beyond will cause competition for resources, and mass migration will test the limits of global integration.

The fragmentation of governance during COVID-19 can provide insights into the need to strengthen multilevel risk governance networks. Understanding and managing risk are embedded in a multilevel governance context in which decision making at local scales is enabled and constrained by policy decisions and institutions at regional and national scales. Investments that build and strengthen these networks will make our communities, cities, and states more resilient.

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Soon, we will have 'recovered' from the COVID-19 pandemic, but will we have transformed the policies, practices, and systems that were responsible for our flawed response?

System Transformation

Disasters occur at the interface of social, natural, and technical (or built) environments. Researchers approach the modeling of hazard events (pandemic, flood, heat, drought) through different disciplines and technical approaches; however, increasing resilience across a range of multiple hazards demands a transdisciplinary effort that facilitates cross-hazard-type learning across the disaster life-cycle of preparedness, response, recovery, and transformation. Soon, we will have "recovered" from the COVID-19 pandemic, but will we have transformed the policies, practices, and systems that were responsible for our flawed response? Will we have replaced it with one that reduces social vulnerability, improves the actionability of science, and strengthens multilevel governance? Definitions of transformation vary but generally they share one basic idea: a fundamental change in a system and its form, structure, meaning, or relationships.

Bouncing Forward

The Covid-19 crisis showed us how a shock can lead to global disruption. And COVID wasn't 2020's only shock: the year has seen a record number of wildfires in Australia and the US, a record number of hurricanes in the Atlantic basin, extreme heat across the American Southwest, and what looks to be record global temperatures. We need effective policies that help cities, communities, and households adapt to climate change. Transformative adaptation requires a long-term vision of what is resilient. We can use the COVID-19 crisis to bounce forward and implement strategies that reduce social vulnerability, improve preparation and response, strengthen multilevel networks and institutions, and otherwise guide a system-wide transformation.

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An Action Plan for Protecting the Sustainability of Engineered Rivers in Arid Lands

JURGEN SCHMANDT, GEORGE WARD

system—natural or social—is *resilient* if it can recover from illness, change, or misfortune. A system is *sustainable* if it can function successfully after natural or social conditions have changed. The two terms have similar meanings. We can say, "A system is sustainable if it is resilient," or "A resilient system is sustainable." In the work reported here, we focus on the sustainability of engineered hydrological systems in arid environments—the challenges they face and how to protect and restore their sustainability.

Twenty years ago, we convened a team of Mexican and US experts to assess the future of the Lower Rio Grande (Figure 1), the 1,000-kilometer-long river segment on the US-Mexico border, which supports intensive irrigated agriculture.¹¹⁹

Major changes in laws, technology, and management are needed to cope with a predicted 30 percent loss of available water by 2030. The main reasons for water loss are:

- **Sedimentation**, which reduces the storage volume of reservoirs
- **Climate change**, which lessens rainfall and increases evaporation
- **Outdated irrigation technologies**, which use too much water
- Broken distribution systems, which cause massive water losses



Figure 1: Hydrological and Impact Region in the Lower Rio Grande

To cope with these challenges, we recommended that irrigation districts and farmers, the key actors in the impact region, adopt less water-intensive irrigation technologies and shift to less water-demanding crops. This would maintain economic sustainability. Environmental sustainability, on the other hand, would require additional actions.

In 2014, with funding from the Mitchell Foundation, we convened a workshop in Austin to find out whether other rivers worldwide face similar problems. Experts from different continents attended, reported on the challenges faced in their river basins, and expressed interest in joining an international project to define appropriate response strategies.

The resulting project, Sustainability of Engineered Rivers in Arid Lands—SERIDAS, brought together an expert for each of ten rivers, as well as specialists studying key factors that impact river hydrology. The name SERIDAS is inspired by ARIDAS, an earlier project which studied the devastating impacts of droughts in Northeast Brazil. Antonio Magalhães directed ARIDAS. Schmandt participated in his project and Magalhães became a founding member of SERIDAS.

The SERIDAS team met for additional workshops in Germany, supported by the Volkswagen Foundation, and Italy, supported by the Rockefeller Foundation. Two policy research projects at the LBJ School of Public Affairs at The University of Texas at Austin also contributed to the project.¹²⁰ We published preliminary results in 2017.¹²¹ In June 2020, we submitted a nineteen-chapter manuscript to Cambridge University Press. We expect the book to be published in 2021.¹²² In the following pages we summarize our findings and recommendations.

The rivers included in the project are Nile, Euphrates-Tigris, Yellow, Murray-Darling, São Francisco, Limari, Colorado, Rio Grande, and Jucar (Figure 2). They are representative of irrigation-intensive rivers worldwide (Figure 3). According to the UN Food and Agriculture Organization, irrigation from rivers and aquifers accounts for 40 percent of global crop production.¹²³

Major changes in laws, technology, and management are needed to cope with a predicted 30 percent loss of available water by 2030.

The physical systems of the ten rivers share important characteristics. Mountainous headwaters (Himalaya, Andes, Rocky Mountains, etc.) provide reliable river flow from glaciers, snowpack, or rainfall. Hundreds of kilometers downstream, the local climate is arid or semi-arid, but the soil is fertile as a result of millennia of sediment accumulation from annual spring floods. Irrigated agriculture has long taken advantage of these conditions, in the process giving birth to ancient civilizations—Mesopotamia, Egypt, China, and the Americas—that flourished over thousands of years.

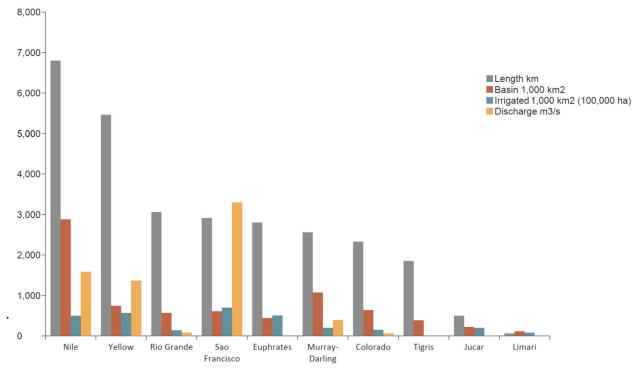
Over the course of the last century, large-scale engineering enhanced this age-old system. Dams, bypass canals, and distribution channels were built to generate electricity, increase food production, control flooding, and supply water to riverine cities. The first engineered dam, completed in 1902, was built on the Nile. This was followed by two dams on the Rio Grande, opened in 1914 and 1916. Since then, all of the SERIDAS rivers followed suit, building one or several modern reservoirs.

This brought multiple benefits to farmers, cities, and the world. Yet engineered rivers in arid lands face serious challenges. Climate change reduces the timing and volume of snowpack. Climate variability increases the frequency and severity of droughts. Higher temperatures increase water evaporation. Fertile sediment no longer reaches agricultural land. Instead, siltation reduces the storage volume of reservoirs. Chemical fertilizers and urban runoff impair water quality. Overwatering increases soil salinity. Native species suffer from reduced river flow and modifications in the river hydrograph.



Figure 2: The SERIDAS Rivers

The best response to these challenges requires changes in water management. Managers, using the longest period of record available, should determine how engineered rivers in arid regions have met social and environmental needs during periods of low river flow or drought. This dependable yield—a mathematical construct based on the constant volume of withdrawn water that can be met without failure—serves as the single most important management tool for controlling reservoir performance and is often used as a basis for allocation of water from a reservoir system.¹²⁴ It should be carefully monitored and recalculated whenever natural or social conditions in the basin reduce water supply or increase water use. Based on the concept of dependable yield we propose this action plan for protecting or restoring the sustainability of reservoir-dominated rivers in arid lands:¹²⁵





- Water managers determine that nature's water supply, averaged over the period of the most severe drought experienced in the historical record, delivers a dependable yield sufficient to meet human and ecological needs in the basin.
- If this is not the case, water managers and users proactively search for ways to use water more efficiently.
- Whenever observed or projected changes in the natural system or human actions modify river flow, the dependable yield is redetermined, and water managers—after consultation with water stakeholders—adjust existing rules for water allocation and water use to match the new level of dependable yield.
- Further adjustments are made to maintain/restore an ecologically prudent level of instream flow.

We conclude with three sobering comments to remind us of the big obstacles that stand in the way of meeting these sustainability goals:

Management Practices. Each of our four recommendations calls for a departure from the usual management practices in most river basins. We invite river managers to adjust their views and procedures so that sustainability becomes their principle goal.

Conjunctive Management. Sustainable water management requires a consideration of the connections between river water and groundwater. Existing law in some river regions, for example the Texas part of the Rio Grande basin, makes this goal difficult to reach. We urge movement toward conjunctive management of surface and groundwater.

44 Sustainable water management requires a consideration of the connections between river water and groundwater.

Water Conflicts. Where water becomes the core of, the trigger to, and a weapon in active conflict, the goal of sustainable water supply and demand is unattainable. For example, sub-state level conflicts and illegal control of water resources and water infrastructure deprive people from access to sufficient clean water, energy, and food resources in the Euphrates-Tigris region. The lack of water undermines the search for sustainable development and causes agricultural, economic, and political decline. Sustainability in a river basin requires stability as well as participatory, transparent, inclusive, and accountable governance structures.

Only when these issues are addressed can rivers cope with the looming problems of water scarcity, climate change and variation, reservoir sedimentation, population growth, economic losses, food security, and ecological damage.

The SERIDAS project did not address the impact of the corona virus on water resources, but a European study suggests the following connections:

- Conventional drinking water treatment should be effective, via common disinfectants used in the Water Sector (which already target viruses).
- Conventional wastewater treatment is *likely not* fully effective, since chemical disinfection, like chlorination or ultraviolet light, is necessary to eliminate viruses.
- Presence/survival of viruses in surface waters is moderate to low because sunlight, oxidative chemicals, and predation by microorganisms threaten the survival of viruses in the natural state. But treatment is recommended for drinking water.

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Introduction

¹Sonny S. Patel, M. Brooke Rogers, Richard Amlôt, G. James Rubin, "<u>What Do We Mean by 'Community Resilience</u>'? A Systematic Literature Review of How It Is Defined in the Literature," National Institutes of Health (NIH), PLoS Current, February 1, 2017.

² John W. Kingdon, Agendas, Alternatives, and Public Policies (Boston: Little, Brown, 1984).

Community Resilience: Doing Better at Figuring Out Who Does What

³Mortality in the Most Affected Countries, Johns Hopkins Coronavirus Research Center.

⁴Martha Derthick, "Keeping the Compound Republic: Essays on American Federalism," Brookings, September 1, 2001.

⁵ Robert C. Tucker, *Politics as Leadership* (Columbia: University of Missouri Press, 1995).

⁶Donald F. Kettl, "<u>A Federal Data Failure Is Making It Hard to Talk About COVID</u>," Government Executive, July 17, 2020.

⁷Laura Wamsley, "Fired Florida Data Scientist Launches a Coronavirus Dashboard of Her Own," NPR, June 14, 2020.

⁸COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE), Johns Hopkins University.

COVID-19 Resources, Institute for Health Metrics and Evaluation (IHME).

⁹Coronavirus Virus Tracker, Washington Post.

¹⁰ Andrew Soergel, "States Competing in 'Global Jungle' for PPE," U.S. News and World Report, April 7, 2020.

¹¹ Lauren Feiner, "States Are Bidding Against Each Other and the Federal Government for Important Medical Supplies—And It's Driving <u>Up Prices</u>," CNBC, April 11, 2020.

¹² <u>Health Equity Considerations and Racial and Ethnic Minority Groups</u>, Centers for Disease Control and Prevention (CDC), Updated July 24, 2020.

¹³COVID-19 Hospitalization and Death by Race/Ethnicity, CDC, Updated August 18, 2020.

¹⁴ Donald F. Kettl, "What COVID Teaches Us About Community," IBM Center for The Business of Government, July 23, 2020.

UNDERSTANDING DISTRIBUTIONAL IMPACTS IS KEY TO COMMUNITY RESILIENCE

¹⁵ Mayor Steve Adler, <u>Stay Home—Work Safe Declaration of Disaster</u>, City of Austin, April 13, 2020.

The Case for Revenue Sharing: Fiscal Equalization and the COVID-19 Recession

¹⁶ Elizabeth McNichol, Michael Leachman, "<u>States Continue to Face Large Shortfalls Due to COVID-19 Effects</u>," Center on Budget and Policy Priorities, July 7, 2020.

¹⁷"States Grappling With Hit to Tax Collections," Center on Budget and Policy Priorities, July 29, 2020.

¹⁸ Lauren Fox, "<u>As Congress Mulls More Stimulus Spending, Local Officials Struggle With How to Spend What They Already Have</u>," CNN, July 20, 2020.

¹⁹ Reese Oxner, Juan Pablo Garnham, "<u>Facing Budget Shortfalls, Nearly 100 Texas Mayors Plead With Congress for Coronavirus Relief</u> <u>Funding</u>," *Texas Tribune*, July 21, 2020.

²⁰ Hansjörg Blöchliger, Olaf Merk, Claire Charbit, Lee Mizell, "<u>Fiscal Equalisation in OECD Countries</u>," Working Paper No. 4, OECD Network on Fiscal Relations Across Levels of Government, 2007.

²¹ Bev Dahlby, "The Canadian Federal-Provincial Fiscal Equalization System," CESifo DICE Report, January 2008.

²² James M. Cannon, "<u>Federal Revenue-Sharing: Born 1972. Died 1986. R.I.P</u>," *New York Times*, October 10, 1986. According to a 1979 study, the GRS Program allowed some cities to spend more on public goods and services without raising local taxes, including highly regressive property taxes. See Patrick D. Larkey, <u>Evaluating Public Programs: The Impact of General Revenue Sharing on Municipal <u>Government</u> (Princeton: Princeton University Press, 1979), p. 163.</u> ²³ Jared Walczak, "State and Local Funding Totals Under the CARES Act," Tax Foundation, April 1, 2020.

Minimizing the Financial Risks to State and Local Governments Through Asset-Liability Management

²⁴ "Professional Actuarial Specialty Guide: Asset-Liability Management," Society of Actuaries, 2003.

²⁵ <u>The Massachusetts ALM Program</u>, June 2014.

²⁶ In the 2007–2008 recession and during the onset of COVID-19 pandemic in March 2020, short-term floating interest rates did rise above fixed rates for a relatively short period of time. However, this was followed by an extensive period of lower short-term rates compared to the pre-recession and pre-pandemic market environments.

²⁷ "Using Variable Rate Debt Instruments," Government Finance Officers Association, 2015.

²⁸ The Massachusetts ALM Program, June 2014.

²⁹ Maria E. Freire, Mihaly Kopanyi, "Asset and Debt Management for Cities," International Growth Centre, June 2018.

The New Debt Trap: COVID-19 and Global Development

³⁰ COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE), Johns Hopkins University.

³¹ "<u>COVID-19 Is Undoing Years of Progress in Curbing Global Poverty</u>," *The Economist*, May 23, 2020.

³² "ILO Warns of Massive Unemployment," DW News, April 30, 2020.

³³ "From the Great Lockdown to the Great Meltdown: Developing Country Debt in the Time of COVID-19," UNCTAD, April 23, 2020.

³⁴ "The Global Food Supply Chain Is Passing a Severe Test," The Economist, May 29, 2020.

³⁵ Peter S. Goodman, Abdi Latif Dahir, Karan Deep Singh, "<u>The Other Way COVID Will Kill: Hunger</u>," *New York Times*, September 11, 2020.

³⁶"Food Security and COVID-19," World Bank, October 15, 2020.

³⁷ "COVID-19 Level 3 Emergency: External Situation Report #13," World Food Programme, August 20, 2020.

³⁸ "Are Children Able to Continue Learning During School Closures? A Global Analysis of the Potential Reach of Remote Learning Policies," UNICEF, August 2020.

³⁹ Emma Batha, "'COVID Generation' Risks Child Marriage, Forced Labour, Ex-Leaders Warn," Reuters, August 17, 2020.

⁴⁰ Amy Lieberman, "<u>COVID-19 Will Push 130 Million into Poverty by 2030, UN Report Shows</u>," Devex, May 14, 2020.

⁴¹Andy Sumner, Chris Hoy, Eduardo Ortiz-Juarez, "Estimates of the Impact of COVID-19 on Global Poverty," United Nations University-WIDER, April 2020.

⁴² David Laborde, Will John Martin, Rob Vos, "<u>Estimating the Poverty Impact of COVID-19: The MIRAGRODEP and POVANA Frameworks</u> <u>1</u>," ResearchGate, June 1, 2020.

⁴³ Masood Ahmed, "<u>Act Now to Preserve Development Gains in a Post-COVID World</u>," Center for Global Development, September 14, 2020.

⁴⁴ "UN/DESA Policy Brief #78: Achieving the SDGs Through the COVID-19 Response and Recovery," United Nations, June 11, 2020.

⁴⁵ Kevin Watkins, "Can We Avoid a Lost Decade of Development?" Brookings, July 9, 2020.

⁴⁶ "2020 Financing for Sustainable Development," United Nations Department of Economic and Social Affairs, April 9, 2020.

⁴⁷ Kristalina Georgieva, Ceyla Pazarbasioglu, Rhoda Weeks-Brown, "<u>Reform of the International Debt Architecture Is Urgently Needed</u>," International Monetary Fund (IMF), October 1, 2020. ⁴⁸ Rabah Arezki, Shanta Devarajan, "<u>Fiscal Policy for COVID-19 and Beyond</u>," Brookings, May 29, 2020. See also Amy Dodd, Rob Tew, and Anna Hope, "<u>COVID-18 and Financing Projections for Developing Countries</u>," Development Initiatives, June 4, 2020.

⁴⁹ Alexander Kentikelenis, Daniela Gabor, Isabel Ortiz, Thomas Stubbs, Martin McKee, David Stuckler, "<u>Softening the Blow of the</u> <u>Pandemic: Will the International Monetary Fund and World Bank Make Things Worse?</u>" Lancet Global Health, April 9, 2020.

⁵⁰ Moses Owori, "Socioeconomic Impact of COVID-19 in Uganda: How Has the Government Allocated Public Expenditure for <u>FY2020/21?</u>" Development Initiatives, August 12, 2020.

⁵¹ "A Universal Truth: No Health Without a Workforce," World Health Organization Workforce Alliance, 2014.

⁵² "<u>Nursing and Midwifery: WHO Global Strategic Directions for Strengthening Nursing and Midwifery 2016–2020</u>," World Health Organization.

⁵³ "UN Calls for Comprehensive Debt Standstill in All Developing Countries," United Nations Development Programme, October 15, 2020.

⁵⁴ "2020 Financing for Sustainable Development," United Nations Department of Economic and Social Affairs, April 9, 2020.

⁵⁵"Africa: External Debt Complicates Africa's Post-COVID-19 Recovery, but Mitigating Efforts Underway," AllAfrica, July 31, 2020.

⁵⁶ Rebecca M. Nelson, Martin A. Weiss, "<u>COVID-19: Role of International Financial Institutions</u>," Congressional Research Service R46342, May 4, 2020. See also Thomas Stubbs, William Kring, Christina Laskaridis, Alexander Kentikelenis, and Kevin Gallagher, "<u>Whatever It</u> <u>Takes? The Global Financial Safety Net, COVID-19, and Developing Countries</u>," Science Direct, Coming January 2021, and Julian Duggan, Scott Morris, Justin Sandefur, and George Yang, "<u>New Data Show the World Bank's Response is Too Small and Too Slow</u>," Center for Global Development, October 12, October 2020.

⁵⁷ Stephanie Segal, Olivia Negus, "<u>International Financial Institutions' Ongoing Response to the COVID-19 Crisis</u>," Center for Strategic International Studies (CSIS), August 24, 2020.

⁵⁸ Thomas Stubbs, William Kring, Christina Laskaridis, Alexander Kentikelenis, Kevin Gallagher, "<u>Whatever It Takes? The Global Financial</u> <u>Safety Net, COVID-19, and Developing Countries</u>," *Science Direct*, Coming January 2021.

⁵⁹ Nancy Lee, Scott Morris, Alysha Gardner, Asad Sami, "<u>Calling All Official Bilateral Countries: Switch to IDA Concessional Terms as Part</u> of COVID-19 Response," Center for Global Development, April 8, 2020.

⁶⁰ Vasuki Shastry, Jeremy Mark, "Credit Rating Agencies Could Resolve African Debt Impasse," Atlantic Council, September 8, 2020.

⁶¹ Marc Jones, "Debt Relief for Poorest Countries Will Not Penalize MDB's 'Preferred Creditor' Status—Moody's," Reuters, May 14, 2020.

⁶² Mitu Gulati, "<u>Born Out of Necessity: A Debt Standstill for COVID-19</u>," Harvard Law School Forum on Corporate Governance, May 13, 2020.

⁶³ Jevans Nyabiage, "<u>Coronavirus: China Under Pressure to Detail Debt Relief Before G20 Talks</u>," *South China Morning Post*, August 22, 2020.

⁶⁴ "China Announces Suspension of Debt Repayment for 77 Developing Nations Due to COVID-19," China Banking News, June 8, 2020.

⁶⁵ Jevans Nyabiage, "<u>China's Promise of Loan Write-Offs for Distressed African Nations Barely Dents a Much Bigger Debt Crisis</u>," *South China Morning Post*, June 20 2020.

⁶⁶ Mercy A. Kuo, "<u>COVID-19: The Impact on China-Africa Debt</u>," *The Diplomat*, June 2, 2020.

⁶⁷ Yun Sun, "China's Debt Relief for Africa: Emerging Deliberations," Brookings, June 9, 2020.

Emergency Cash Transfers During COVID-19: Implementation Lessons for the Global South

⁶⁸ "<u>159 Million Economic Impact Payments Processed; Low-Income People and Others Who Aren't Required to File Tax Returns Can Quickly Register for Payment With IRS Non-Filers Tool," IRS, June 30, 2020.</u>

⁶⁹ "Supporting Livelihoods During the COVID-19 Crisis: Closing the Gaps in Safety Nets," OECD, May 20, 2020.

⁷⁰ Ugo Gentilini, Mohamed Almenfi, Pamela Dale, Robert Palacios, Harish Natarajan, Guillermo Alfonso Galicia Rabadan, Yuko Okamura, John Blomquist, Miglena Abels, Gustavo Demarco, Indhira Santos, "<u>Social Protection and Jobs Responses to COVID-19: A Real-Time</u> <u>Review of Country Measures</u>," World Bank, September 8, 2020.

¹¹ Sarah Bailey, Paul Harvey, "State of Evidence on Humanitarian Cash Transfers," ALNAP, March 2015.

⁷² Francesca Bastagli, Jessica Hagen-Zanker, Luke Harman, Valentina Barca, Georgina Sturge, Tanja Schmidt, Luca Pellerano, "<u>Cash</u> <u>Transfers: What Does the Evidence Say? A Rigorous Review of Programme Impact and the Role of Design and Implementation Features</u>," Overseas Development Institute (ODI), July 2016.

⁷³ Abhijit Banerjee, Michael Faye, Alan Krueger, Paul Niehaus, Tavneet Suri, "<u>Effects of a Universal Basic Income During the Pandemic</u>," Innovations for Poverty Action, September 2, 2020.

⁷⁴ Christian Bodewig, Stephane Hallegatte, "Building Back Better After COVID-19: How Social Protection Can Help Countries Prepare for the Impacts of Climate Change," World Bank Blogs, July 14, 2020.

⁷⁵ "<u>Margarita Cedeño Informa Integrarán Más Sectores Informales a Quédate en Casa</u>," Presidencia de la Republica Dominicana Sistema único de Beneficiarios, April 23, 2020.

⁷⁶ Sarah Bailey, Paul Harvey, "State of Evidence on Humanitarian Cash Transfers," ODI, March 2015.

⁷⁷ Rema Hanna, Benjamin Olken, "<u>Universal Basic Incomes Versus Targeted Transfers: Anti-Poverty Programs in Developing Countries</u>," American Economic Association, Fall 2018.

⁷⁸ Sarika Gupta, "<u>Perils of the Paperwork: The Impact of Information and Application Assistance on Welfare Program Take-Up in India</u>," Innovations for Poverty Action, November 15, 2017.

⁷⁹ "Cash-Based Assistance Programmes for Internally Displaced Persons in the Kabul Informal Settlements: An Evaluation for WHH and <u>DRC</u>," Samuel Hall, May 2014.

⁸⁰ Jenny Aker, "<u>Cash or Coupons? Testing the Impacts of Cash Versus Vouchers in the Democratic Republic of Congo</u>," Center for Global Development, March 26, 2013.

⁸¹ Leora Klapper, "Mobile Phones Are Key to Economic Development: Are Women Missing Out?" Brookings, April 10, 2019.

⁸² Truman Packard, Ugo Gentilini, Margaret Grosh, Philip O'Keefe, Robert Palacios, David Robalino, Indhira Santos, "<u>Protecting All: Risk</u> <u>Sharing for a Diverse and Diversifying World of Work</u>," World Bank, 2019.

⁸³ Kate Glynn-Broderick, "<u>Giving People Cash During COVID: A Look at What We're Working On</u>," Innovations for Poverty Action, September 3, 2020.

Intelligence Lessons from COVID: Being "Right" Is Not Enough

⁸⁴ Thomas C. Schelling's foreword to Robert Wohlstetter's <u>*Pearl Harbor: Warning and Decision*</u> (Stanford: Stanford University Press, 1962).

The World that COVID Made: What Should American Foreign Policy Do?

⁸⁵ This paper is a condensed and updated version of a research project undertaken for the National Intelligence Council and the chapter that I co-authored with Hal Brands and Peter Feaver, "<u>Maybe It Won't Be So Bad: A Modestly Optimistic Take on COVID and World Order</u>," in Hal Brands and Francis Gavin, eds., <u>COVID-19 and World Order: The Future of Conflict, Competition, and Cooperation</u> (Baltimore: Johns Hopkins University Press, 2020).

Correcting Corrections: Lessons for Prisons and Jails in a Post-COVID World

⁸⁶ Coronavirus in the US: Latest Map and Case Count, New York Times.

⁸⁷ Brendan Saloner, Kalind Parish, Julie A. Ward, Grace DiLaura, Sharon Dolovich, "<u>COVID-19 Cases and Deaths in Federal and State</u> <u>Prisons</u>," JAMA Network, July 8, 2020. 88"National COVID-19 Statistics," COVID Prison Project.

⁸⁹ Michael Ollove, "How COVID-19 in Jails and Prisons Threatens Nearby Communities," Pew Charitable Trusts, July 1, 2020.

⁹⁰ Keri Blakinger, "<u>Coronavirus Restrictions Stoke Tensions in Lock-Ups Across US</u>," Marshall Project, April 4, 2020.

⁹¹ "Key Requirements for the Effective Monitoring of Correctional and Detention Facilities 1," American Bar Association, Criminal Justice Section, August 2008.

⁹² Michele Deitch, "But Who Oversees the Overseers? The Status of Prison and Jail Oversight in the United States," 47(2) American Journal of Criminal Law, Coming 2020.

Cultivating Community Resilience Through Nonprofit Connections

⁹³ "Community & Climate Resilience. Austin Futures 2020: An Annual Report by the Austin Area Sustainability Indicators."

- 94 "Explore the Indicators," Austin Area Sustainability Indicators.
- ⁹⁵ Jane Wei-Skillern, Nora Silver, "Four Network Principles for Collaboration Success," The Foundation Review, 5(1), 2013.
- 96 "Our Model," Go Austin! Vamos Austin!
- ⁹⁷ "Our Principles of Practice," Go Austin! Vamos Austin!

⁹⁸Lindsey Harbison, "<u>The Impact and Opportunity of Our Nonprofit Sector: A Case Study Analysis</u>," The Impact and Opportunity of Our Nonprofit Sector: A Case Study Analysis.

Increasing Community Resilience Through Immigrant Incorporation

⁹⁹ In this essay, the term immigrant is used generically to include foreign-born people who are lawfully permanent residents, legal temporary residents, and unauthorized residents.

¹⁰⁰ "Immigrants, the Economy, and the COVID-19 Outbreak," Joint Economic Committee, US Congress, June 30, 2020.

¹⁰¹ Donald Kerwin, Robert Warren, "<u>US Foreign-Born Workers in the Global Pandemic: Essential and Marginalized</u>," Center for Migration Studies, September 2020.

¹⁰² David J. Bier, "Immigrants Aid America During COVID-19 Crisis," Cato Institute, March 23, 2020.

Julia Gelatt, "Immigrant Workers: Vital to the U.S. COVID-19 Response, Disproportionately Vulnerable," Migration Policy Institute, April 2020.

¹⁰³George J. Borjas, Hugh Cassidy, "<u>The Adverse Effect of the COVID-19 Labor Market Shock on Immigrant Employment</u>," IZA Institute of Labor Economics Discussion Paper 13277, May 2020.

¹⁰⁴ Ruth Ellen Wasem, "<u>Noncitizen Eligibility for Federal Public Assistance: Policy Overview and Trends</u>" US House Ways and Means Committee Greenbook, September 24, 2014.

Hamutal Bernstein, Jorge González, Dulce Gonzalez, Jahnavi Jagannath, "<u>Immigrant-Serving Organizations' Perspectives on the COVID-19 Crisis</u>," Urban Institute, August 2020.

Samantha Artiga, Matthew Rae, "<u>Health and Financial Risks for Noncitizen Immigrants Due to the COVID-19 Pandemic</u>," KFF Issue Brief, August 18, 2020.

¹⁰⁵ Donald Kerwin, Robert Warren, "<u>US Foreign-Born Workers in the Global Pandemic: Essential and Marginalized</u>," Center for Migration Studies, September 2020.

¹⁰⁶ Mary C. Waters, Marisa Gerstein Pineau, *The Integration of Immigrants into American Society*, National Academies of Sciences, Engineering, and Medicine (Washington, DC: National Academies Press, 2015).

¹⁰⁷ Francine D. Blau, Christopher Mackie, *The Economic and Fiscal Consequences of Immigration*, National Academies of Sciences, Engineering, and Medicine (Washington, DC: National Academies Press, 2017).

"Immigrants, the Economy, and the COVID-19 Outbreak," Joint Economic Committee, US Congress, June 30, 2020.

"Taxes and Spending Power," New American Economy.

¹⁰⁸ Richard Florida, *The Rise of the Creative Class* (New York: Basic Books, 2002).

John H. Mollenkopf, Manuel Pastor, "<u>The Ethnic Mosaic: Immigrant Integration at the Metropolitan Scale</u>," *Unsettled Americans: Metropolitan Context and Civic Leadership for Immigrant Integration* (Ithaca: Cornell University Press, 2016).

A. K. Sandoval-Strausz, Barrio America: How Latino Immigrants Saved the American City (New York: Basic Books, 2019).

Jackelyn Hwang. "Pioneers of Gentrification: Transformation in Global Neighborhoods in Urban America in the Late Twentieth Century," Demography, v. 53, n.1, February 2016.

¹⁰⁹ Abigail Fisher-Williamson, <u>Welcoming New Americans? Local Governments and Immigrant Incorporation</u> (Chicago: University of Chicago Press, 2018).

John H. Mollenkopf, Manuel Pastor, "<u>The Ethnic Mosaic: Immigrant Integration at the Metropolitan Scale</u>," *Unsettled Americans: Metropolitan Context and Civic Leadership for Immigrant Integration* (Ithaca: Cornell University Press, 2016).

¹¹⁰ Micheal Jones-Correa, "<u>The Kindness of Strangers: Ambivalent Reception in Charlotte, North Carolina</u>," *Unsettled Americans: Metropolitan Context and Civic Leadership for Immigrant Integration* (Ithaca: Cornell University Press, 2016).

James A. McCann, Michael Jones-Correa, *Holding Fast: Resilience and Civic Engagement Among Latino Immigrants* (New York: Russell Sage Foundation, 2020).

¹¹¹ Thai V. Le, Manuel Pastor, Justin Scoggins, Dalia Gonzals, Blanca Ramirez, "<u>Paths to Citizenship: Using Data to Understand and</u> <u>Promote Naturalization</u>," USC Dornsife Center for the Study of Immigrant Integration, January 2019.

Jens Hainmueller, Dominik Hangartner, Giuseppe Pietrantuono, "<u>Naturalization Fosters the Long-Term Political Integration of</u> <u>Immigrants</u>," PNAS 112, no. 41, October 2015.

¹¹² Els de Graauw, Irene Bloemraad, "<u>Working Together: Building Successful Policy and Program Partnerships for Immigrant Integration</u>," Journal of Migration and Human Security, August 18, 2018.

Ruth Ellen Wasem, "Welcoming Communities: Immigrant Incorporation in Dallas, Texas," University of Texas at Austin, August 2020.

Toward a More Inclusive And Resilient Economic Development Paradigm

¹¹³ Judith Rodin, "The Next Big Idea for the Next Decade: The Resilience Dividend," Rockefeller Foundation, August 21, 2014.

¹¹⁴ Zeynep Ton, "The Case for Good Jobs," Harvard Business Review, November 30, 2017.

BOUNCING FORWARD: HOW LESSONS FROM THE PANDEMIC CAN HELP US ADAPT TO CLIMATE CHANGE

¹¹⁵ Don Bambino Geno Tai, Aditya Shah, Chyke A. Doubeni, Irene G. Sia, Mark L. Wieland, "<u>The Disproportionate Impact of COVID-19 on</u> <u>Racial and Ethnic Minorities in the United States</u>," Clinical Infectious Diseases, ciaa815, June 20, 2020.

¹¹⁶ COVIDView: A Weekly Surveillance Summary of US COVID-19 Activity, Centers for Disease Control and Prevention (CDC).

¹¹⁷ Heather Long, Andrew Van Damm, Alyssa Fowers, Leslie Shapiro, "<u>The COVID Recession is the Most Unequal in Modern US History</u>," *Washington Post*, September 30, 2020.

¹¹⁸ The City of Austin <u>Community Climate Ambassadors</u> seek to gather and share information about climate issues with their community. Topics include but are not limited to energy, transportation, food, and access to nature.

An Action Plan for Protecting the Sustainability of Engineered Rivers in Arid Lands

¹¹⁹ Jurgen Schmandt, Jose de Jesus Navar-Chaidez, Enrique Vogel, George Ward, Ismael Aguilar-Barajas, Jared Hazelton, Liliana Chapa-Almena, Mitchel Mathis, Neal Armstrong, Robert Edwards, Salvador Contreras-Balderas, "<u>Final Report: Water and Sustainable</u> <u>Development in the Binational Lower Rio Grande/Rio Bravo Basin</u>," EPA/NSF STAR Program (Grant No. R824799-01-0), January 1998. ¹²⁰ Aysegül Kibaroglu, Jurgen Schmandt, "<u>Sustainability of Engineered Rivers in Arid Lands: Euphrates-Tigris and Rio Grande/Bravo</u>," LBJ School of Public Affairs at The University of Texas at Austin, Policy Research Project 190, 2016.

Jurgen Schmandt, Chandler Stolp, 12 graduate students, "<u>Sustainable River Management on the US/Mexico Border: Recommendations</u> for the Paso del Norte," LBJ School of Public Affairs at The University of Texas at Austin, Policy Research Project Report 202, Spring 2018.

¹²¹ Aysegül Kibaroglu, Jurgen Schmandt, George Ward, "<u>Engineered Rivers in Arid Lands: Searching For Sustainability in Theory and</u> <u>Practice</u>," Water International, Volume 42, Number 3, November 28, 2016.

¹²² Aysegül Kibaroglu, Jurgen Schmandt, with assistance by LBJ students R. Buono and S. Thomas (forthcoming), *Sustainability of Engineered Rivers in Arid Lands: Challenge and Response* (New York: Cambridge University Press, UNESCO Hydrology Series, 2021).

¹²³ Nikos Alexandratos Jelle Bruinsma, "World Agriculture Towards 2030/2050: The 2012 Revision," FAO, June 2012.

¹²⁴ Ray K. Linsley, Joseph B. Franzini, J., *Water Resources Engineering* (New York: McGraw-Hill, 1964).

¹²⁵ Jurgen Schmandt, Gerald North, George Ward, "<u>How Sustainable Are Engineered Rivers in Arid Lands?</u>" DOI, 2013, pp. 78–93.



"While LBJ couched his dream in the metaphors of battle and transcendence, the word that best describes our society's need today is resilience."

