Faster Growth, Fairer Growth

Policies for a HIGH ROAD, HIGH PERFORMANCE Economy

Brink Lindsey & Samuel Hammond

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Faster Growth, Fairer Growth

A NEW POLICY SYNTHESIS

PART I. A NEW POLICY SYNTHESIS

"To elevate the condition of men — to lift artificial weights from all shoulders, to clear the paths of laudable pursuit for all, to afford an unfettered start and a fair chance, in the race of life."

Abraham Lincoln
First Message to Congress
July 4, 1861

In December 2018, the Niskanen Center released a paper we co-authored with two colleagues entitled "The Center Can Hold: Public Policy in an Age of Extremes."[1] In that paper we sought to articulate a new and distinctive policy vision that combines and builds on the best ideas of conservatism and progressivism. While traditional ideological battle lines pit a "pro-market" right against a "pro-government" left, we reject this choice as a false dichotomy. In our view, addressing the daunting challenges facing the country today requires simultaneous moves in both directions. We need greater reliance on entrepreneurship and competition, *and* we need more robust provision of social insurance and other public goods. In other words, we need a "free-market welfare state."[2]

In this paper, we seek to translate this broad policy vision into a concrete, wide-ranging agenda for policy reform. We are not attempting to present a comprehensive program: Many pressing issues, from the opioid crisis and rising suicide rates to police violence and mass incarceration, lie beyond the scope of this effort. Our goal here is to apply our principles to the problem of restoring inclusive prosperity — revitalizing flagging economic dynamism while ensuring that the rewards of such dynamism are broadly shared. In other words, as the title says, faster

1 Brink Lindsey, Steven Teles, Will Wilkinson, and Samuel Hammond, "The Center Can Hold: Public Policy for an Age of Extremes," Niskanen Center Policy Essay, December 2018.

2 See Samuel Hammond, "The Free-Market Welfare State: Preserving Dynamism in a Volatile World," Niskanen Center Policy Essay, May 2018.

growth and fairer growth. And while the agenda outlined here does not exhaust the possible reforms that push in the desired direction, we believe that it represents a bold and well-targeted response to the challenge that confronts us.

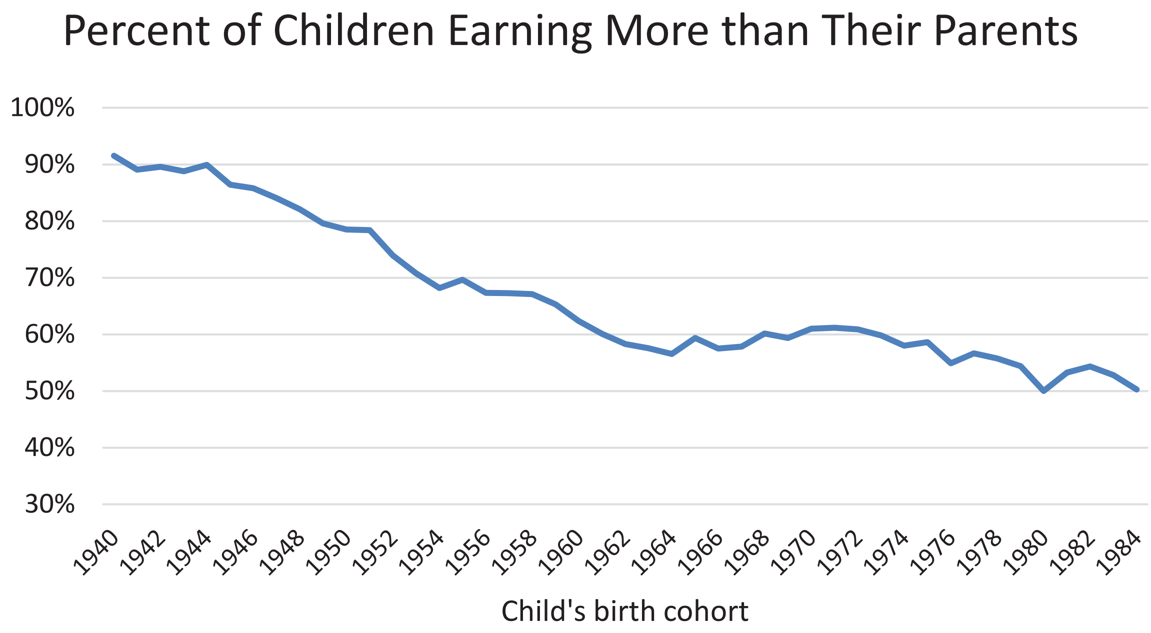
Although we started work on this paper last year, the project has taken on new importance in the wake of the COVID-19 pandemic. As one of us argued at length in a recent series of essays, the United States' tragic bungling of this public health emergency has simultaneously revealed the ongoing need for skepticism about government power and the great dangers of carrying that skepticism too far.[3] On the one hand, the FDA's foot-dragging on approving new tests, along with the slew of state and local regulations that had to be waived to avoid worsening the catastrophe, illustrate vividly that — even under these highly unusual circumstances when the case for sweeping government action is at its strongest — the problems of government overreach and heavy-handedness remain critical obstacles to good governance. Still, however, by far the most serious breakdowns in the government response to the pandemic have been sins of omission, not commission — in other words, the failure to perform the tasks that only government can manage. As when a lightning strike reveals that an apparently mighty oak is really just a rotten, hollow shell, the pandemic has exposed an alarming and ruinous deterioration in American state capacity.

Accordingly, we believe the case for the Niskanen policy synthesis — dedicated both to liberating the private sector from unnecessary restraints and to expanding and upgrading the public sector's capacity to provide social insurance and other public goods — has taken on new and critical urgency in light of the events of 2020. In the pages that follow, we will attempt to illustrate in detail how that synthesis can be applied so that our country can rebound from the current crisis stronger, more hopeful, and more united than before.

What Went Wrong

America's 21st-century malaise of dimming economic vitality and deepening social divisions has spurred a desperate search for radical alternatives to the status quo. But the way forward is not to be found in either the ideological fantasies of democratic socialists or the reactionary sputtering of neonationalists, integralists, and other assorted "post-liberals." The best hope for a brighter future in the 21st century lies in revising and updating the basic model that emerged as the clear

3 Brink Lindsey, "What the Pandemic Revealed," Niskanen Center, June 9, 2020; Brink Lindsey, "The Dead End of Small Government," Niskanen Center, June 16, 2020; Brink Lindsey, "Free Markets and Limited Government Reconceived," Niskanen Center, June 23, 2020.



Data source: Raj Chetty et al., "The Fading American Dream: Trends in Absolute Mobility since 1940," Science, Vol. 356 issue 6336, pp. 398-406, April 28, 2017.

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worldwide winner in the great ideological struggles of the 20th century: the liberal democratic capitalist welfare state. Whatever real and vexing problems they are experiencing today, the countries that have successfully adopted that model are the richest, healthiest, best educated, and freest societies that have ever existed. This is a legacy to be proud of and to build upon.

But long before the arrival of the novel coronavirus, something had clearly gone wrong. From 2000 through 2018, growth in real (i.e., inflation-adjusted) gross domestic product per capita — the best overall measure of economic output — averaged just a bit over 1 percent a year, down sharply from the 2 percent annual growth rate that persisted over the whole course of the 20th century. Meanwhile, the woes of this growth slowdown have been compounded by high levels of income inequality, with income gains at the top of the pay scale far outpacing those of everybody else. Put those two things together, and the result is that median household income peaked in 1999 and did not again exceed that peak until 2016, a full 17 years later. Research by Raj Chetty and others helps to put this stagnation in larger perspective: In 1970, over 90 percent of 30 year-olds were making more money than their parents; as of 2010, only 50 percent of 30 year-olds could still say the same.[4] For more and more of our fellow citizens, the American Dream is becoming a faded memory.

4 Raj Chetty et al., "The Fading American Dream: Trends in Absolute Mobility since 1940," Science, Vol. 356 issue 6336, pp. 398-406, April 28, 2017.

The same may be said for more and more parts of the country. Throughout much of the 20th century, different regions of the United States experienced economic convergence, with incomes in poorer areas rising faster than those in richer ones and gaps falling over time. This dynamic contributed significantly to the overall compression of incomes: Some one-third of the decline in hourly wage inequality between 1940 and 1980 was due to cross-state convergence. In recent decades, however, catch-up growth by lagging areas has broken down completely. Economic vitality is now increasingly concentrated in big cities, especially on the coasts. Since 2008, job gains in metro areas with populations over a million (53 metro areas out of a total of 384) accounted for nearly three-quarters of employment growth.[5] Meanwhile, 80 percent of U.S. counties, home to 149 million Americans, suffered outright decline in prime working-age population between 2007 and 2017, and 65 percent can expect to undergo further decline in the coming decade.[6]

"Over the past several decades, the American Dream has been caught in a pincer movement."

What happened to the land of opportunity? Over the past several decades, the American Dream has been caught in a pincer movement. On the one hand, deep-seated social forces have combined to slow down growth and accelerate inequality. At the same time, sustained and dramatic changes in public policy have worked not to counteract those forces, but to exacerbate them.

The growth slowdown reflects the progressive exhaustion of factors that propelled rising output and incomes in years past. First, the Baby Boom, together with rising rates of female participation in the paid work force, drove a steady increase in labor inputs over the last third of the 20th century: Average annual hours worked per capita rose 27 percent between 1964 and 2000. But the percentage of women in the work force plateaued at the end of the 1990s, and the overall labor force participation rate nosedived with the Great Recession. Despite some modest recovery recently, the LFPR at present is down at levels last seen in the late 1970s.[7]

Growth is powered not just by more workers, but by workers with more valuable skills — and skill levels soared in the 20th century thanks to huge investments in secondary and then postsecondary education. In 1900 only about 6 percent of American kids graduated high school; by 1970 that number had soared to 76 per-

5 Clara Hendrickson et al., "Countering the Geography of Discontent: Strategies for Left-Behind Places," Brookings Institution, November 2018; Richard Florida, "The Growing Inequality between America's Superstar Cities and the Rest," City Lab, November 19, 2018.

6 Adam Ozimek et al., "From Managing Decline to Building the Future: Could a Heartland Visa Help Struggling Regions?", Economic Innovation Group, April 2019.

7 See Brink Lindsey, "Why Growth Is Getting Harder," Cato Institute Policy Analysis no. 737, October 8, 2013.

cent. As of 1940 only 6 percent of young Americans had college degrees, but by 1980 the figure had quadrupled to 24 percent. Put these together, and average years of educational attainment for American workers rose from 9.01 in 1940 to 12.46 in 1980 — for an average increase of 0.81 percent a year. Since then, however, the growth motor of rising educational attainment has stalled. Between 1980 and 2005, the rate of increase was only 0.33 percent a year, and since then average years of schooling have been more or less flat.[8]

"The ultimate driver of long-term economic growth is rising productivity."

The ultimate driver of long-term economic growth is rising productivity: technological or organizational changes that increase the amount of output that can be produced from a given level of inputs — in other words, innovation and its diffusion. Measured growth in so-called total factor productivity surged during the quarter-century after World War II, but it slumped in the mid-1970s and — except for an Internet-fueled boom from the mid-1990s to the mid-2000s — has remained disappointingly sluggish ever since.

While the accuracy of productivity measurements is contested and the various determinants of rises and falls in productivity growth are difficult to pin down, there is good reason to think that output-expanding innovation is getting more and more difficult to accomplish. Economists from Stanford and M.I.T. make the case in a recent paper that the productivity of research itself is in long-term decline. As they put it in the title of their paper, good ideas are getting harder to find. One striking example illustrates the larger trend: The number of researchers needed today to fulfill another cycle of Moore's Law (which posits that the processing power of computer chips doubles every two years) is 18 times greater than the equivalent number back in the early 1970s.[9] Over the long term, then, innovation — and thus economic growth — appears to be a kind of Red Queen's race, where you must run ever faster just to get anywhere.

At the same time that the major factors expanding the economic pie were losing momentum, other powerful forces emerged that would push toward dividing the pie more unequally. The information technology revolution ushered in what economists call "skill-biased technological change," raising relative demand for highly skilled workers while thinning out jobs in the middle of the skill spectrum. The combination of IT and globalization, by vastly expanding the size of markets, created winner-take-all dynamics with windfall gains for top-performing "superstars."

8 See ibid.

9 Nicholas Bloom et al., "Are Ideas Getting Harder to Find?," National Bureau of Economic Research Working Paper no. 23782, September 2017.

Rising economic opportunities for women, in tandem with a trend toward assortative mating (i.e., marriages between partners with similar educational levels and earning potential), increased inequality yet further by putting two top earners in the same household. And the huge influx of less-skilled immigrants over the past several decades has increased the spread between incomes at the top and those in the middle by dragging down the median.

Here then is one half of the story. America's liberal democratic capitalist welfare state has faltered in fulfilling its promise because times have changed. The task of delivering inclusive prosperity has grown much more difficult.

The other half of the story is policy failure. In recent decades, boosting economic growth has been a cause largely associated with the political right. And from the Reagan to the Trump administrations, the main prescriptions have been tax cuts and rolling back health, safety, and environmental regulations. Back in the 1980s, this seemed like a plausible approach: The top marginal tax rate was very high at 70 percent, and the rapid expansion of social regulation in the 1970s had coincided with the collapse in productivity growth. But by now, it is clear that this policy agenda is more about paying off big donors than advancing the common weal. The connection between tax rates and incentives for innovation is modest at best, and in an economy dominated by services, the impact of regulations aimed mostly at heavy industry is likewise marginal. The energy and efforts of the "supply-side" movement and its successors have been largely misdirected.

" The task of delivering inclusive prosperity has grown much more difficult."

Meanwhile, policymakers from both parties — working at the federal, state, and local levels — have pushed for and defended policies that simultaneously worsened the growth slowdown by squelching or distorting competition *and* worsened inequality by artificially inflating income and wealth at the top. Here we are talking about the phenomenon of regulatory capture, in which privileged insiders manipulate the rules to benefit themselves at the expense of everybody else. Although barely noticed until quite recently, this insidious corruption of both democracy and capitalism has led to staggering misallocations of resources that deform the whole macro structure of the economy.

As we discuss in more detail in Part III of this paper, three important sectors of the economy have been badly distorted by insider manipulation: finance, housing, and health care. In all three, rules written for the benefit of a privileged few have inflicted enormous damage. The resources consumed by the financial sector have almost doubled, and the main thing we got to show for it was an economically and politically ruinous global financial crisis. The resources consumed by health care are nearly double what is the norm in other rich countries, yet our health outcomes lag badly behind theirs and we still can't provide reliable, affordable access for all. The resources consumed by housing are now far higher than they should be in many big metro areas, with the result that our most productive places cannot attract all the human resources they need to maximize their potential. In the first two cases, multiple percentage points of GDP are being misspent every year; in the last case, multiple percentage points of GDP have gone unproduced. And as a result, the distributions of income and wealth are now much more top-heavy than would otherwise be the case

This dismal record of regulatory capture and colossal waste is the major development in American political economy over the past generation. At a time when the headwinds impeding innovation and growth have been gathering force, and trends that pamper winners while narrowing opportunities downscale have been building momentum, the primary policy response has been to render the major structures of the U.S. economy even less dynamic, and even less equitable. Having wandered into a hole, our response has been to dig.

High Performance on the High Road

The Niskanen Center's vision for a free-market welfare state demands an ambitious, full-spectrum campaign of policy change to undo the damage caused by regulatory capture and counter the social forces pushing against inclusive prosperity. Our strategy is premised upon the deep complementarity between vigorous, market-mediated entrepreneurship and competition, on the one hand, and generous government provision of social insurance and other public goods on the other. What makes our approach so distinctive is that this complementarity remains widely ignored, if not actively denied, on both sides of the conventional left-right divide.

We start with the proposition that widespread prosperity and ongoing social progress are impossible in the modern world without a vibrant, innovative, competitive private sector. And the private sector functions at its best when it is organized around free markets — in other words, markets that feature free entry, free exit, free trade across national boundaries, freedom to hire and fire, freedom to take a job or quit, freedom to introduce new products or production methods without prior permission, and freedom to invest. These are the institutional arrangements that maximize the generation of potentially useful new ideas, provide for their rigorous testing, and ensure that better ideas are imitated while worse ideas are abandoned.

Unlike many others who embrace the cause of free markets, we recognize clearly that these institutional arrangements are neither self-executing nor self-sustaining. It's true, per Adam Smith, that trucking, bartering, and exchanging are natural human activities that occur just about everywhere. But the vast, impersonal markets that deliver modern economic growth are profoundly unnatural. They do not simply pop up in the absence of government. On the contrary, markets capable of mobilizing and sustaining large-scale, long-term investments and uniting vast numbers of complete strangers in organized, collaborative activity are elaborate social constructions and inseparable from the modern states that create and house them.

"The private sector functions at its best when it is enabled and supported by a strong, capable, effective public sector."

In other words, the private sector functions at its best when it is enabled and supported by a strong, capable, effective public sector. It needs government to write and enforce the rules that align private profit-seeking with the public welfare. It needs government to fund or supply the public goods — education, infrastructure, research and development — that enable people to participate in the marketplace at a high level and push the whole system to new heights by advancing the frontiers of knowledge and technology. It needs government to provide social insurance against various hazards of life — poverty, sickness, and joblessness — and thus protect well-being against downside risks, prevent the mass waste of human potential that would otherwise occur, and sustain support for economic dynamism even in the face of its incessant disruptions of people's plans and expectations.

To better understand our conception of combining energetic government with a free-market economy, it is useful to borrow an idea from labor markets — namely, the idea of "high road" versus "low road" employment strategies. "High road" employers invest heavily in training their workers and then pay well and offer a long-term career path in order to keep them in-house. "Low road" employers, on the other hand, pay as little as they can, offer only limited training and no clear career progression, and expect high turnover. The high road strategy, then, is to view workers as assets, to be invested in and carefully maintained. The low road strategy, by contrast, is to view workers as costs that need to be minimized.

In a big, diverse economy, there is a place for both strategies. High road employers will be more selective, looking for workers with stronger qualifications and higher perceived long-term potential. So for less-skilled workers who lack credentials and experience, the existence of low road employers creates accessible employment opportunities that otherwise wouldn't be there.[10]

But when we move from thinking about how private employers treat workers to thinking about how public policy treats citizens, both our liberal democratic values and our best reading of the evidence lead us to choose the high road. The foundational principle of republican self-government is the commitment to the equal moral significance of every individual: No one is born better or more deserving than any other, and therefore none are born to rule over others and none are born to labor for others' benefit. In this view, society is to be understood not as the instantiation of some immutable natural hierarchy, but as a common enterprise for mutual benefit. And the proper role of government is to advance the welfare of all, by supplying the conditions that allow free people to flourish in lives of their own choosing.

Liberal democracy thus amounts to a bet on the capacities of ordinary people — to shoulder the shared responsibilities of self-rule, and to thrive when given freedom and a fair chance to make their own way. This democratic confidence in ordinary people contrasts with autocratic and oligarchic contempt for and fear of the same: contempt for their supposed inferiority, fear of their greater numbers and the possibility that they could rise up and topple their rulers.

"Liberal democracy amounts to a bet on the capacities of ordinary people…"

Liberal democracy, in other words, takes the high road. It views all citizens as assets to the republic, potentially valuable contributors to the common enterprise of society — not as costs or burdens or threats to be minimized and contained. Liberal democracy, at its best, offers the politics of uplift — of expecting more from people and bringing out the best in them. In the words of America's greatest and wisest statesman, it is "that form and substance of government whose leading object is to elevate the condition of men — to lift artificial weights from all shoulders, to clear the paths of laudable pursuit for all, to afford an unfettered start and a fair chance, in the race of life."[11]

Moving from principles to practice, we believe that achieving the politics of uplift in 21st-century America requires expansive and energetic government. Just as a high road employer invests heavily in its workers, a government committed to the high road needs to make big investments in its citizens — investments in sound regula-

10 Although there is a role for both strategies, we prefer the high road strategy to be the rule rather than the exception, as it is more conducive to individual flourishing and social progress over the long term. We therefore see the apparently ongoing shift of American employers to a low road strategy as a troubling development. See Martin Baily and Barry Bosworth, "Explanations for Slow Long-Term Growth," in Brink Lindsey, ed., Understanding the Growth Slowdown (Washington, D.C.: Cato Institute, 2015), pp. 49-71.

11 Abraham Lincoln, Message to Congress, July 4, 1861.

tion, education, infrastructure, conservation, research and development, and social insurance, as well as national security and the criminal and civil justice system. Contrary to the wishful thinking of many libertarians and small-government conservatives, we cannot rely on private businesses and charities to make these investments at adequate levels.[12] Free markets are truly amazing, but they cannot supply their own enabling conditions. In the modern world of high social complexity and extreme interdependence, externalities, uninsurable risks, and other collective action problems are a widespread and unavoidable fact of life — and the only social agency capable of dealing with them properly is government.[13]

"To realize the promise of the high road, noble aspirations are not enough."

In employing the metaphor of the high road, embracing activist government, and describing government spending as investment, we recognize that we are using rhetoric with distinctly progressive connotations. So we must take pains to clarify that our vision of good government diverges sharply from progressive practice. In particular, we are acutely aware that lofty rhetoric and declarations of good intentions are not enough — and all too often serve as whitewash for government waste and dysfunction.

Consider California in 2019, before the pandemic struck. Here was a rich state with the Democratic Party and progressive cultural values utterly dominant. There was little ideological opposition to expansive government, and state and local government spending was high by national standards. Yet housing was unaffordable, homelessness was rampant, human feces littered the streets of San Francisco, teachers went on strike in Los Angeles to protest deteriorating conditions, out-of-control wildfires destroyed thousands of homes and forced tens of thousands of people to evacuate, and the electric utility left millions without power for days at a stretch in rolling preemptive blackouts. This is a picture of big government gone wrong. This is not the high road.

To realize the promise of the high road, noble aspirations are not enough. We must understand the pitfalls that come with expansive government and take proper measures to avoid them. To achieve the high road in real life, we must also insist on high performance for government.

Two big pitfalls in particular command our attention: capture and "kludgeocracy." The former, which we discussed in the previous section, is an ever-present risk. The powers of government are always vulnerable to being diverted from le-

12 See Samuel Hammond, "It (Still) Takes a Nation: Why Private Charity Will Never Replace the Welfare State," The Independent Review Vol. 23, no. 4, Spring 2019.

13 See Joseph Heath, "Three Normative Models of the Welfare State," Public Reason Vol. 3, no. 2, pp. 13-44, 2011.

gitimate public purposes and manipulated for private gain. These vulnerabilities skyrocket when policymakers try to address problems at excessive levels of complexity and detail (see, e.g., financial regulation), as they can easily get bamboozled by industry representatives who will almost always have superior knowledge of the relevant intricacies. Likewise, the risks of capture soar when decision-making venues are remote and inaccessible (see, e.g., local zoning hearings); it's much easier to roll other affected interests when they don't show up and aren't effectively represented.

Kludgeocracy, a malady of democracy diagnosed and named by our colleague Steven Teles, refers to the breakdown of policy coherence amidst a pileup of compromised, indirect approaches with unclearly shared responsibilities for execution.[14] See, for example, the welter of tax preferences and subsidized loan programs that ineptly substitute for straightforward taxes and transfers; the mind-numbingly byzantine rules that govern payments for physicians and hospitals; and the unadministrable mush of countless different education and social welfare programs.

"Small government is not the answer; what is needed is simpler, more legible government."

To take on the ambitions of the high road and translate them into high performance, we need big changes in how government manages its weighty responsibilities. Wherever possible, we need to maintain a dogged preference for simple, clear rules and standards over multifactor balancing tests; for big, blunt interventions over subtle nudges; for on-budget direct payments to beneficiaries over tax preferences and empowering bureaucratic intermediaries; and for decision-making venues that force rent-seeking insiders to face effective representation of the broader public. Small government is not the answer; what is needed is simpler, more legible government.

And although ensuring good processes is absolutely necessary, it is not remotely sufficient. We must make big, substantive shifts in policy as well as procedural overhauls, changing the "what" of government as well as the "how." In the sections that follow, we outline a wide-ranging agenda for reforming and redeeming the promise of the liberal democratic capitalist welfare state. To lift up America and create a high road, high performance economy, to expand opportunities for all Americans while also bolstering their security, we propose three major goals of policy change. First, to revive a healthy, vibrant labor market geared toward full employment by reforming monetary policy and overhauling our patchwork, byzantine social insurance system. Second, to unwind and dismantle the insidious struc-

14 Steven Teles, "Kludgeocracy in America," National Affairs, Fall 2013.

tures of insider privilege created by regulatory capture, liberating wasted resources to be redeployed to the betterment of all. And third, to reignite economic dynamism and innovation with a combination of public investment and regulatory reform.

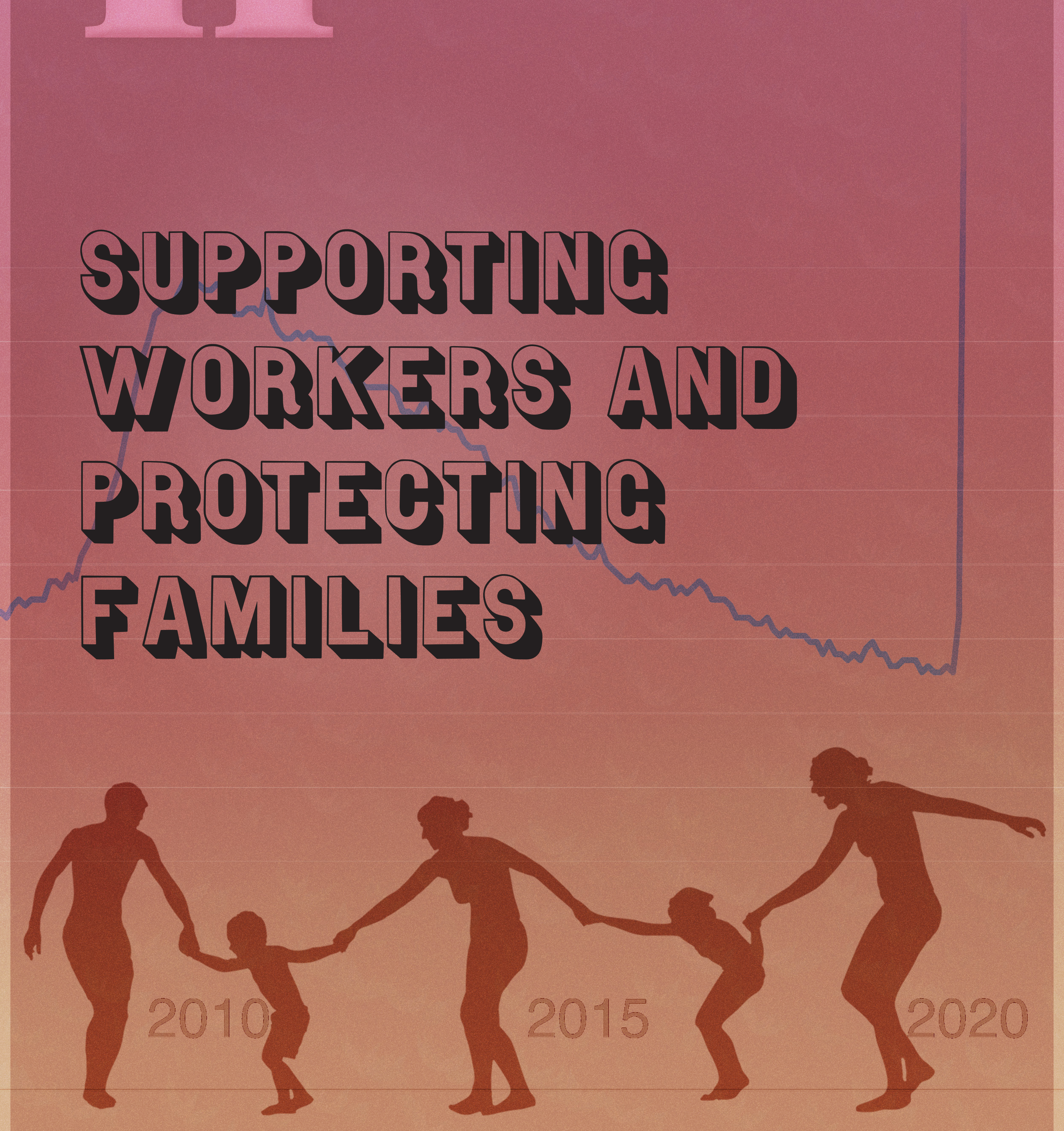
With the first goal, we aim to restore the American economy to the high road — by improving employment prospects for workers and upgrading social insurance to better protect families from downside risks. With the second and third goals, we seek to retool the economy for high performance —by wresting control of key economic sectors from rent-seeking insiders and correcting the huge misallocations of resources that their misrule has engineered, and by providing the public goods and rules of the road that encourage and incentivize innovation and dynamism.

This is our agenda for returning America to inclusive prosperity. A recurring feature of the reforms we propose below is that they tend to advance both aspects of this goal simultaneously — that is, they promote both greater equity *and* greater efficiency. Our proposals to improve social insurance bolster economic security in a way that encourages entrepreneurship and growth, while our proposals to unleash market competition also serve to roll back economic inequality. In other words, our proposals that aim for the high road also encourage high performance, while our proposals focused on eliciting high performance do so in a way that provides uplift to the high road. This is no accident, but rather evidence of the soundness of our underlying policy vision. As supporters of a free-market welfare state, it is our contention that a vibrant public sector and a vibrant private sector are not antagonists, but instead complement and reinforce each other. The policy agenda we offer here is an illustration of that principle at work.

II

Faster Growth, Fairer Growth

SUPPORTING WORKERS AND PROTECTING FAMILIES



PART II. SUPPORTING WORKERS AND PROTECTING FAMILIES

The Agenda

In January 2020, Taco Bell began advertising $100,000 salaries for general managers at certain locations.[1] The generous pay was an experiment driven by the tightest labor market in a generation, and a striking example of the boost full employment gives to workers' bargaining power. Business complaints about labor shortages were finally giving way to wage increases as the only way to attract and retain talent. And with the unemployment rate below 3.5 percent, wage growth within the bottom quarter of earners was the fastest seen in over a decade.[2]

How quickly things change. As a direct consequence of the COVID-19 public health crisis, quarantine orders and business shutdowns have pushed upwards of 30 million Americans into joblessness in the first eight weeks of lockdowns alone.[3] The April 2020 jobs report revealed an official unemployment rate of 14.7 percent, the highest on record since the Great Depression. The U6 unemployment rate, which includes discouraged and underemployed workers, reached a staggering 22.8 percent. Yet even this understates the severity of the situation, as a 2.5 percentage point contraction in the labor force pulled the participation rate to its lowest point

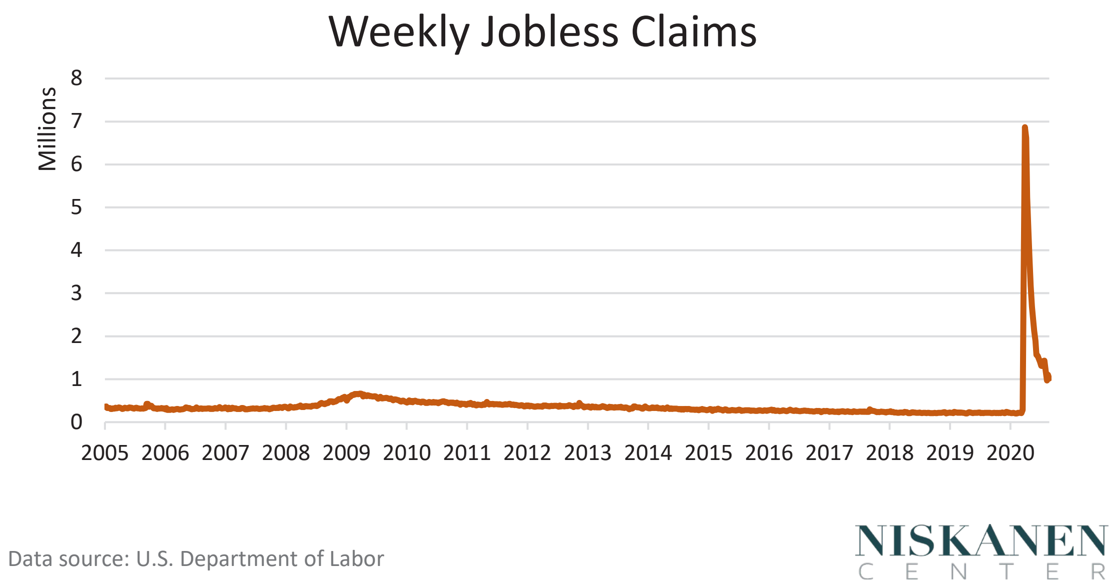
1 Derrick Taylor, "Taco Bell to Test Paying Managers $100,000 a Year," The New York Times, January 10 , 2020.

2 Jeffry Bartash, "At a 10-year high, wage growth for American workers likely to keep accelerating," MarketWatch, March 8, 2019.

3 Federal Reserve Bank of St. Louis, "U.S. Employment and Training Administration, Initial Claims [ICSA]," August 31, 2020.

since January 1973. [4]

Subsequent reports have indicated some job growth, however these overwhelmingly represent workers returning from temporary layoffs or furloughs as businesses begin to reopen.[5] Time will tell whether the surge in infections after Memorial Day, combined with the expiration of more generous relief spending, will render these apparent signs of recovery premature. Regardless, according to an analysis of the monthly Current Population Survey, the May 2020 unemployment rate among workers in occupations that pay $500 or less per week was 27 percent. This contrasts with the 6.9 and 4.8 percent unemployment rates within occupations earning $1,000–$1,500 per week and above $1,500 per week respectively. In other words, the Great Depression has arrived, it's just not evenly distributed.[6]



In the best-case scenario in which the virus is brought under control and quarantine measures subside, many of these predominantly low-wage service sector jobs will return. Many more workers, however, will reenter the labor market to find that their former employer has gone out of business, or that their particular job is simply no longer in demand.[7] It is hard to know in advance how many fall into that latter category. Nonetheless, a recent analysis by Bloomberg Economics suggests 30 percent of U.S. job losses from February to May were the result of a "reallocation

4 Federal Reserve Bank of St. Louis, "Labor Force Participation Rate," September 10, 2020.

5 Eli Rosenberg and Heather Long, "The U.S. economy added 4.8 million jobs in June, but fierce new headwinds have emerged," Washington Post, July 8, 2020

6 Robert Orr, "The Great Depression Has Arrived, It's Just Not Evenly Distributed," Niskanen Center, June 12, 2020.

7 Jose Berrero et al., "COVID-19 Is Also a Reallocation Shock," National Bureau of Economic Research Working Paper No. 27137, May 2020.

shock," meaning upwards of one in three of those newly out of work will need to retrain or relocate.[8] Federal Reserve Chair Jerome Powell expressed a similar concern in a June news conference when he noted that there may be "well into the millions of people who don't get to go back to their old job … In fact, there may not be a job in that industry for them for some time."[9]

If nothing is done to minimize the frictions associated with a labor reallocation of this magnitude, a substantial fraction of dislocated workers will eventually become discouraged and leave the labor market altogether. The rest will begin the costly process of job search and retraining, in a tango with employers whose business models will likewise need to reset around the new, uncertain normal. In lieu of finding a better job match in time to pay the bills, many workers may end up settling for a lower-paying job than they had before, worsening income inequality and productivity growth simultaneously.

"As the U.S. economy reopens, returning to full employment should be a top priority."

America's hot labor market may be gone, but it is not forgotten. As the U.S. economy reopens, returning to full employment should be a top priority. At the same time, the quality of the jobs created in the pandemic's wake matters just as much as the quantity. Creating millions of new low-wage jobs with minimal security or stability and few pathways for career advancement would be at best a Pyrrhic victory. Instead, now is the time to reexamine the policy choices that left so many low-wage workers vulnerable to dislocation in the first place, and enact the reforms necessary to put the U.S. economy on a high road, high performance path going forward.

Merely removing the work disincentives embedded in current policies will not be sufficient, either. While much ado has been made about pandemic unemployment assistance exceeding prior wages, for example, this is the least of our concerns.[10] The expansion is only temporary, and besides, the main tradeoff associated with larger and longer-lasting unemployment benefits is between budgetary cost and optimizing labor-market matches.

Spending more allows workers to take the time to search for the jobs that best match their skills; spending less risks forcing the unemployed to settle for any kind of paycheck.[11] A large reallocation shock like the one caused by the pandemic is

8 Olivia Rockeman and Jill Ward, "Millions of Job Losses Are at Risk of Becoming Permanent," Bloomberg, June 14, 2020.

9 Jeanna Smialek and Alan Rappeport, "Federal Reserve predicts years of high unemployment rates and economic uncertainty," Chicago Tribune, June 10, 2020.

10 Samuel Hammond, "Will Pandemic Jobless Benefits Make Recover Harder?," National Review, April 2, 2020.

11 Also known as the moral hazard, liquidity trade-off. Raj Chetty, "Moral Hazard versus Liquidity and Optimal

thus precisely the scenario under which the social cost of generous unemployment benefits is lowest. But more importantly, supply-side incentives are only half the equation. Ultimately, the dramatic collapse in employment during the pandemic stemmed from a collapse in labor demand, as entire swaths of the economy closed up shop. A robust recovery is therefore impossible without a strategy focused on restoring labor demand.

As we detail in the sections below, the road to full employment begins with a revamp of U.S. monetary policy, which for decades has been biased in favor of persistent labor market slack. Next, we argue for overdue modernizations to our existing social insurance systems, including aggressive Active Labor Market Policies (ALMPs) to smooth job transitions; child allowances to support families and sharply reduce childhood poverty; and universal catastrophic coverage to expand access to health care while constraining costs. With this combination of reforms, we can choose to make full employment the rule rather than the exception. We can exit this crisis with stronger labor market institutions than we had going in, moving forward on a new high road of broadly shared prosperity.

Shift to Level Targeting in Monetary Policy to Minimize Economic Slack

For any agenda to improve conditions for inclusive economic growth, monetary policy is a logical starting point because its effects are so pervasive. Mess it up, and that failure alone will sabotage everything else you do right.

What does it mean to do monetary policy well? The goal for central bankers is to keep growth going as fast as is consistent with the underlying endowments of population, technology, and the rest of public policy—in other words, to ensure that actual output aligns with potential output. Like a bidder on "The Price Is Right," you want to get as close as possible to your target without going over.

Good monetary policy, then, must navigate between risks on either side. If you undershoot and are too restrictive, you could stall the economy outright and induce a recession; alternatively, you could hobble economic performance well short of its potential, leaving employment opportunities and welfare gains on the table — and possibly degrading the economy's potential output in the process. If you overshoot and are too lax, you could overheat the economy and create bubbles followed by an inevitable bust, or you could unleash inflationary pressures that then are extremely costly to contain. It's no wonder, then, that allusions to Goldilocks crop up again

Unemployment Insurance," Journal of Political Economy, Volume 116, no. 2.

and again: You want your monetary policy not too hot, not too cold, but just right.

Unfortunately, in recent decades U.S. monetary policy has regularly erred on the side of excessive restrictiveness. The result has been millions of forgone jobs, a huge and lasting wipeout of personal wealth, and very possibly depressed dynamism and productivity growth.

This failure has been obscured by the very low interest rates we've experienced since the Great Recession. Given that the Federal Reserve's favored method of monetary stimulus is to target a reduction in the federal funds rate, the conventional wisdom associates low rates with easy money. That conventional wisdom, though, is flatly wrong. On the contrary, low rates are a sign that money has been tight (rates were very low during the Great Depression as well as now), while high rates are a sign that it has been too loose (rates were very high during the Great Inflation of the 1970s).[12]

Notwithstanding this confusion, the evidence of excessively tight money over the past decade is there for all to see. In particular, since the Great Recession, inflation has regularly fallen short of its target rate of 2 percent. This failure is not due to a lack of ammunition on the Fed's part; in fact, the Fed moved to raise rates repeatedly — that is, to tighten — nine times between December 2015 and December 2018. The Fed began raising rates after the unemployment rate first dipped below 5.1 percent, which at the time was considered the lowest level consistent with price stability. But unemployment kept falling, all the way to 3.5 percent, without any surge in inflation. The Fed has thus moved repeatedly to revise downward its estimate of the "natural" (lowest noninflationary) unemployment rate. In other words, the Fed made a mistake, tightening money in response to a nonexistent inflation threat. As Fed Chair Jerome Powell admitted, "policy was less accommodative than thought at the beginning of normalization." According to one estimate, the cost of that mistake as of August 2018 was between 0.4 and 0.8 percent of lost GDP and between 530,000 and 1 million lost jobs.[13]

Looking beyond the record of the current expansion, there is persuasive evidence that monetary policy has tended to be overly restrictive for decades now. Comparing the actual unemployment rate to the Congressional Budget Office's estimate of the natural rate, there has been slack in the U.S. labor market for roughly 70 percent of the quarters since 1980 — as compared to about a third of the quarters from 1949

12 Since misplaced fears that the Fed was too lax after the Great Recession were most pronounced on the free-market right, it is worth quoting Milton Friedman on this point: "Low interest rates are generally a sign that money has been tight, as in Japan; high interest rates, that money has been easy." Milton Friedman, "Rx for Japan: Back to the Future," Wall Street Journal, December 17, 1997.

13 Adam Ozimek and Michael Ferlez, "The Fed's Mistake," Moody's Analytics, November 20, 2018.

to 1980.[14] This bias toward tightness appears to be a case of generals' fighting the last war: After allowing inflation to get out of control in the 1970s, policymakers since then have tended to lean too far in the other direction.

But the American economy has changed dramatically since the days of disco and leisure suits, and the macroeconomic challenges we face now are altogether different. In February, the unemployment rate stood at 3.5 percent, and the annual federal budget deficit clocked in around 5 percent of GDP. From the perspective of the 1970s, or any other period of American economic history for that matter, these numbers suggest a white-hot economy overdosing on fiscal stimulus. Yet core inflation was still hovering around 2 percent, and the entire yield curve on government bonds — all the way out to 30 years — was, and remains, below 1 percent. Whether or not "secular stagnation" is the technically correct diagnosis, the fact is that demand has barely kept pace with the economy's productive potential even with a high degree of fiscal stimulus; and given rock-bottom interest rates, the conventional tools of monetary stimulus are running up against their limits. Indeed, despite the Fed being among the more competent government actors during the pandemic, the extraordinary measures it has taken have mostly served to prevent deflation and an all-out economic collapse. Thus, as of this writing, the bond market is forecasting inflation to average only 1.3 percent for at least the next 10 years.[15] Things could always be worse, but that is still well below target.

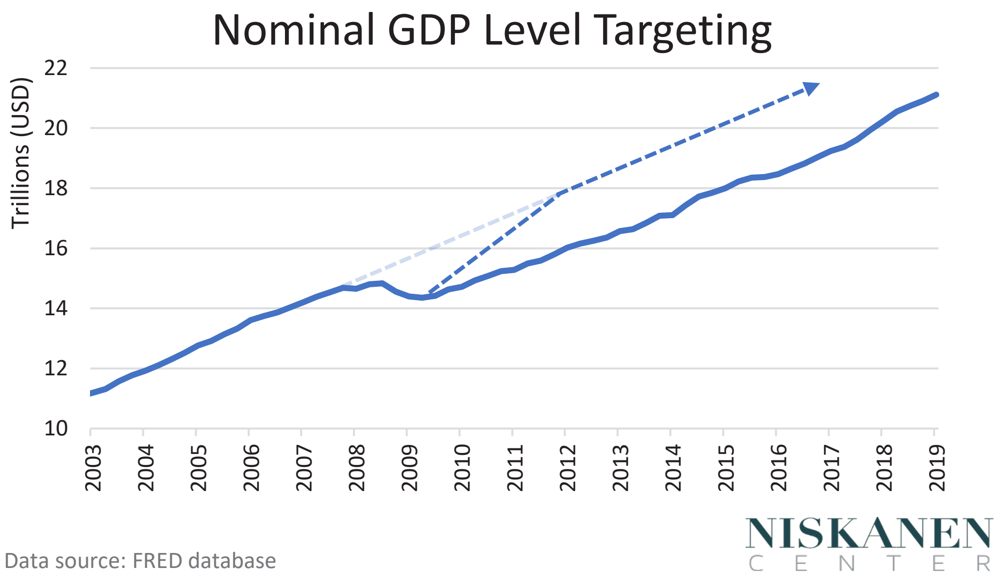
"After allowing inflation to get out of control in the 1970s, policymakers since then have tended to lean too far in the other direction."

Accordingly, we believe the time has come for a regime change in U.S. monetary policy. The current regime consists of inflation rate targeting (although in recent years that target has seemed like more of a ceiling) via moves in the federal funds rate; in its stead, we propose a shift to *level targeting*. In the current conditions of weak demand, level targeting is much more conducive to realizing the economy's actual productive potential than the present approach due to one key feature: It requires the Fed to make up for past mistakes. With inflation-rate targeting, if the Fed fails to meet the 2 percent target one quarter, it simply tries again the next quarter without doing anything to compensate for the prior shortfall. Consistent undershooting, as we saw in the aftermath of the Great Recession, leads to a growing gap between actual and potential output.

14 Jared Bernstein, "The Importance of Strong Labor Demand," Brookings Institution, The Hamilton Project, February 2018.

15 Federal Reserve Bank of Cleveland, "Ten-Year Expected Inflation and Real and Inflation Risk Premia, Inflation Expectations," August 31, 2020.

With level-targeting, by contrast, if the Fed falls short while targeting inflation of 2 percent a year, it will need to target a higher rate of inflation in the ensuing period to catch back up to the intended level-growth path. We note that the Fed's recent announcement of a policy shift to "average inflation targeting" represents a welcome step in this direction, giving the Fed flexibility to pursue higher inflation when it fails to meet its target in the prior period.[16] Whether and how much this flexibility will actually be used, however, remains to be seen. In our view, an explicit commitment to a price level target would be preferable.



Although a price level target would represent a big improvement over the status quo, we believe that nominal GDP (NGDP) targeting is a superior alternative over the longer term. This is because the price level can be affected by both demand shocks and supply shocks (either positive, as in the case of a surge in productivity, or negative, as in the case of an interruption in oil supplies). When central banks fail to differentiate between supply- and demand-driven shocks, they can be led astray. Tightening in the face of a spike in oil prices, or loosening in the face of a productivity surge, would be *procyclical*, exaggerating the effects of a negative supply shock in the former case and overheating the economy in the latter. Conversely, when the target is a rising level of total nominal spending, the need to sort out whether a supply or demand shock is driving the change in the price level is eliminated.[17]

16 Jerome H. Powell, "New Economic Challenges and the Fed's Monetary Policy Review," Board of Governors of the Federal Reserve System, August 27, 2020.

17 David Beckworth, "Facts, Fears, and Functionality of NGDP Level Targeting: A Guide to a Popular Framework for Monetary Policy," Mercatus Center, George Mason University, October 1, 2019.

For illustration, suppose the annual level target for NGDP was set at 4 percent (the exact number chosen is of secondary importance),[18] composed of a real component (GDP) and a nominal component (inflation). So long as the Fed remained committed to a 4 percent annual rise in NGDP, the split between NGDP's real and nominal components would be able to shift freely. In the presence of a negative oil supply shock, for example, real GDP would contract and inflation would rise, perhaps shifting from 2 percent each to 1 percent and 3 percent, respectively, thereby keeping aggregate spending stable. This feature of NGDP level targeting would be particularly useful in a recession like the one sparked by COVID-19, given the impossible challenge of decomposing a shock that affects supply and demand simultaneously.

An NGDP level target would also provide a superior anchor for long-run price stability consistent with full employment, making it an ideal match for the Fed's dual mandate. This is because many long-term contracts, such as home mortgages, are written in nominal dollar terms, e.g., "I will pay you X dollars for Y asset at some point in the future." Under the current inflation-rate targeting regime, one can be relatively certain that the overall price level will be roughly 2 percent higher in the following year, give or take several tenths of a percent. Yet those "give or takes" add up over time, effectively un-anchoring one's best estimate of the price level 20 or 30 years hence. With a price level target, in contrast, one only needs a back-of-the-envelope calculation to deduce the likely real value of a nominal contract indefinitely into the future.

"An NGDP level target would provide a superior anchor for long-run price stability consistent with full employment."

NGDP level targeting just extends this insight one step further, by noting that an economy's aggregate contractual obligations are ultimately met not in terms of prices, but in terms of total dollar income — the price level *times* the real underlying production. Here a "musical chairs" analogy illuminates the benefits of NGDP level targeting.[19] If the market as a whole implicitly expects total dollar incomes to roughly double in 20 years (given by the nominal value of contracts that will come due), allowing NGDP growth to fall short of expectations necessarily implies that somebody, somewhere in the future will have too few dollars to meet

18 We chose 4 percent for purely illustrative purposes, as the trade-offs from a slightly higher or lower target are trivial compared to the core benefits of a level target. Nevertheless, it is best when a monetary policy regime change does not deviate markedly from historical trends, and in the U.S. case, annual NGDP growth over the last twenty years has averaged around 4-5 percent. The main reason to favor a slightly higher target relates to the secular decline in interest rates. A higher NGDP target (say, 5 percent or 6 percent) would permit inflation to run higher, putting upward pressure on nominal interest rates, and ensuring the federal funds rate avoids the zero lower bound.

19 Scott Sumner, "Money and output (The musical chairs model)," The Money Illusion, April 6, 2013.

their obligations — as if the music stopped with several chairs removed.[20]

Through this lens, a demand-side recession is simply what happens when actual NGDP falls sharply relative to expectations, resulting in a sudden mismatch between aggregate income and promised wages. Were the Fed committed not just to meeting a target for nominal income growth over a given year, but also to making up for past mistakes, any deviation below the target NGDP growth rate — a signal of monetary tightening — would itself signal equal and opposite monetary easing over the year ahead. In that sense, level targeting represents the ultimate "automatic stabilizer."

"...level targeting could also improve the economy's long-term potential by boosting productivity growth."

A change in the monetary regime to level targeting should lead to much more rapid recovery from recessions than we have experienced of late, while ensuring that actual economic growth throughout an expansion lives up to the economy's productive potential. Since temporary shortfalls in output can translate into permanent shortfalls through hysteresis (e.g., workers lose skills during prolonged unemployment and thus are less productive when they eventually return to work), keeping output growth humming at full potential improves long-term growth prospects as well. Evidence is accumulating that the Great Recession and its aftermath caused a significant decline, not only in actual output, but in potential output as well.[21] Moving to level targeting would ensure that future recessions don't inflict this kind of permanent damage.

In addition to avoiding losses from hysteresis, level targeting could also improve the economy's long-term potential by boosting productivity growth. When appropriate monetary accommodation wrings slack out of the economy and keeps labor markets relatively tight, employers have sharpened incentives to invest in labor-saving — i.e., productivity-enhancing — innovations. By contrast, slack labor

20 As a stylized example, the "musical chairs" analogy only captures one of the ways inflation targeting distorts long-term contracts relative to a level target. More generally, as Nick Rowe notes, "inflation or price level targeting gives the creditor full insurance against unforeseen changes in future real GDP, and puts all the risk upon the debtor.... NGDP targeting provides a 50-50 aggregate sharing of aggregate risk between creditors and debtors. If real GDP falls 10 percent below what was expected, the price level rises 10 percent above what was expected. The real incomes of both creditors and debtors fall by the same 10 percent." Nick Rowe, "Three arguments for NGDP targeting," Worthwhile Canadian Initiative, April 28, 2012. The current asymmetric sharing of risk has real-world consequences. For example, since the real value of a fixed nominal mortgage payment declines over time with inflation, households are discouraged from rebalancing their portfolio (i.e. refinancing their mortgage) as frequently as they would otherwise. Joseph Nichols, "Nominal Mortgage Contracts and the Effects of Inflation on Portfolio Allocation," Finance and Economics Discussion Series, Federal Reserve Board, Washington, D.C., March 2007.

21 Dave Reifschneider et al., "Aggregate Supply in the United States: Recent Developments and Implications for the Conduct of Monetary Policy," International Monetary Fund, November 1, 2013; Laurence Ball, "The Great Recession's long-term damage," Vox EU, July 1, 2014.

markets depress wages and thereby encourage businesses to maintain or expand more labor-intensive ways of doing things. Keeping the economy at or near its potential in the short term may therefore also help to raise that potential over the long term.[22]

While promoting high performance through maximizing growth prospects, a level targeting regime would also provide high-road uplift through its distributional consequences. Tight labor markets are workers' best friend: wages are higher, wage growth is more rapid, and hours worked go up when the overhang of unemployed and discouraged workers is minimized. Moreover, the benefits of tight labor markets flow disproportionately to workers on the lower end of the pay scale.[23] Over the past several decades, the only times when the U.S. economy has seen significant wage growth for ordinary workers were the late 1990s and the past couple of years — which, not coincidentally, were periods of record-low unemployment. These episodes of widespread prosperity stand out as exceptional, but there is no reason they couldn't be the norm. Well-designed monetary policy can work to expand the economic pie while at the same time ensuring that workers get a bigger slice.

Comprehensive Social Insurance Modernization

The economic calamity facing workers and businesses amid the COVID-19 crisis is not unique to the United States. Most advanced countries are experiencing similar disruptions and have enacted relief measures of their own. Nor was the U.S. Congress particularly stingy in its response, at least at the outset. On the contrary, the relief measures enacted by Congress in the first months of the crisis were, at least in dollar terms, among the most aggressive in the world (even if one cannot say the same about our public health response).

Instead, what has set the U.S. economic response apart can largely be attributed to the failings of our existing social insurance infrastructure. In the earliest weeks of the crisis, for example, every Thursday smashed the pre-pandemic record for weekly jobless claims by an order of magnitude. With millions of people being laid off across the country, our labor market has never hemorrhaged jobs so quickly, and one prays that it never will again. Yet despite the generosity of the CARES Act's emergency relief provisions, implementation was hindered from the start by one

22 J.W. Mason, "What Recovery? The Case for Continues Expansionary Policy at the Fed," Roosevelt Institute, July 25, 2017; Neil Irwin, "Maybe We've Been Thinking About the Productivity Slump All Wrong," The New York Times, July 25, 2017.

23 Bernstein, "The Importance of Strong Labor Demand."

technological anachronism after another.[24] State unemployment offices were overrun by hundreds of thousands of applications, crashing websites and creating lines of (potentially contagious) workers that stretched around the block. As of mid-July, mere weeks before the original $600-per-week Pandemic Emergency Unemployment Compensation (PEUC) was set to expire, nine U.S. states had still not reported a single claim for benefits.[25]

The implementation of the Paycheck Protection Program (PPP) wasn't much better. The program enlists banks to provide businesses with fewer than 500 employees, as well as hotel and restaurant chains, with forgivable loans for 2.5 months of average payroll and some operating costs. While laudable in its ambition, PPP faced immediate technical difficulties. To apply for federally guaranteed loans, banks had to submit completed applications through an online portal called E-Tran for processing by the Small Business Administration (SBA).[26] Much like state UI systems, E-Tran was flooded by applications the day the program launched on April 3, causing outages that meant many banks — including more than a third of community banks — were unable to access the system at all. Given the "first-come, first-served" nature of the available funding, the program prompted a run *to* the banks that could access it, and thus ultimately favored lenders with the best IT departments and businesses with the savviest accountants. Access to E-Tran remained sporadic until the SBA enlisted Amazon Web Services to launch a new online gateway on April 8, about a week before the program initially ran out of money.[27] Between these technical barriers and design flaws inherent in the program itself, the industry with the least exposure to job losses — professional, scientific, and technical services — was ironically among the largest recipients of payroll relief.[28]

It is sometimes said that, whatever other problems plague the public sector, governments are at least efficient at cutting checks. If only that were the case in the United States. Indeed, while the CARES Act's $1,200 "Recovery Rebate" went out faster than many expected and with a phenomenally low error rate, the conceit that this transfer payment was really a "tax credit" stymied the Treasury Department's ability to reach the millions of low-income households that rarely file

24 In states like Florida, old technology is secondary to prior changes enacted deliberately to make applying for UI difficult. Gary Fineout and Marc Caputo, "'It's a sh—sandwich': Republicans rage as Florida becomes a nightmare for Trump," Politico, April 3, 2020.

25 As of the July 9 jobs report, states not reporting a single PEUC claim include: Colorado, Florida, Georgia, Hawaii, Kentucky, New Hampshire, Oregon, Virginia, and Wyoming. "Unemployment Insurance Weekly Claims," Seasonally adjusted data, Department of Labor, August 27, 2020.

26 Kylee Wooten, "Breaking Down SBA Lending: What is E-Tran?", Abrigo, April 1, 2020.

27 "SBA Unveils New Lender Gateway to Facilitate PPP Loans," ABA Banking Journal, April 7, 2020.

28 This was due to both the technical failures of PPP, but also the short loan duration and the restrictive use of funds. In particular, eligible non-payroll expenses were capped to only 25 percent of the loan amount, which made the program of limited value to hard-hit industries such as restaurants and food services. Lucas Kwan Peterson, "The PPP is letting our small restaurants and businesses die," Los Angeles Times, April 18, 2020.

federal tax returns.[29] Rather than link federal administrative data to state databases containing household information on Medicaid and SNAP recipients, allowing the majority of nonfilers to receive their payment automatically, Treasury instead took days building a buggy online application. As Marc Andreessen noted in his widely shared essay, "It's Time to Build," written in a bout of anger and frustration, "A government that collects money from all its citizens and businesses each year has never built a system to distribute money to us when it's needed most."[30]

How did we let this happen? Social insurance systems are ultimately a kind of public infrastructure, and much like our roads and bridges, they require continuous repair. Take America's federal-state UI system, which dates back to 1935. UI is supported by a combination of state and federal employment taxes, but the federal wage base is not indexed to inflation. Accordingly, appropriations for state UI administration reached a 30-year low in 2017,[31] even as the maintenance cost of state UI programs escalated. Most state UI programs run on architecture constructed in the 1960s using Fortran and COBOL programming languages created for the "punch card" era of early mainframe computing. Such programming languages work perfectly fine and even have some benefits — until you need to change them.[32] The UI expansion under the CARES Act thus set off a hunt to find any of the dwindling number of coders fluent in the programming equivalent of Latin: a dying language kept alive due to its niche, if potentially salvific, applications.

"Social insurance systems are ultimately a kind of public infrastructure, and much like our roads and bridges, they require continuous repair."

A depressingly similar story applies throughout the U.S. government. Where we chose to support payrolls through a Rube Goldberg device of forgivable small-business loans, many countries opted to subsidize payrolls directly, including Denmark, Germany, the Netherlands, the U.K., and Canada. Proposals to do the same here, advanced by Republican Sen. Josh Hawley and Democratic Rep. Pramila Jayapal, were shot down as too radical, despite amounting to a cleaner version of what was adopted instead.[33] The choice to embed a transfer program in a financial product ultimately gives credence to the tradeoff between

29 Robert Greenstein and Samuel Hammond, "CBPP & Niskanen Center: Joint Recommendations to Strengthen Senate Republican COVID-19 Economic Response Proposal," Niskanen Center, March 23, 2020.

30 Marc Andreessen, "It's Time to Build," a16z, April 18, 2020.

31 Jim Van Erden et al., "Unemployment Insurance Administrative Funding," National Association of State Workforce Agencies, June 2017.

32 Makena Kelly, "Unemployment Checks are Being Help Up By a Coding Language Almost Nobody Knows," The Verge, April 14, 2020.

33 Burgess Everett, "Josh Hawley sets up potential clash in GOP with coronavirus push," Politico, April 6, 2020.

social insurance and financialization proposed by sociologist Monica Prasad.[34] In the aftermath of World War II, the United States diverged from Europe by promoting easy credit over more direct systems of social insurance. Both models resulted in a substantial middle-class welfare state, with the main difference being the degree to which America's redistributive policies are subterranean — a legacy that can be seen to this day in our limited social expenditures relative to household indebtedness.[35] These back-door mechanisms of social support are also incredibly difficult to navigate, both for beneficiaries and administrators — a problem that even the best technology will not solve, and sadly, one that opponents of the robust welfare state repeatedly seek to exploit.

Thus, in the quest to build a high performance social insurance system, modern IT infrastructure is only a necessary, not sufficient, condition. Consider that Florida is among the 16 states that have "fully modernized" their UI programs in terms of IT, but was nonetheless one of the most problematic states in terms of CARES Act implementation.[36] This is because Florida's previous government saw modernization as a means of reducing the growth in UI rolls following the Great Recession, and thus deliberately redesigned the program to make filing claims a bureaucratic nightmare. A parallel story occurred in Michigan, where modernization was used to flag and penalize fraud at unprecedented levels through a system called MiDAS. As National Employment Law Project Executive Director Rebecca Dixon noted in recent testimony before the House Budget Committee,

> The MiDAS system flagged more than 40,000 workers for fraud, and it was 93 percent inaccurate. The penalty for fraud in Michigan is four times the amount paid, plus 12 percent interest. As a result of these false flags, innocent claimants lost everything, including homes, and in severe cases, lives.[37]

Michigan subsequently shifted course to become "one of the fastest states in terms of payment processing."[38] Nonetheless, these examples show that the success of IT modernization depends on the orientation of underlying policies and a willingness to iterate on program design.

Modernizing our social insurance systems has the potential to save money in the long run while reducing a variety of administrative burdens. But just as important,

34 Monica Prasad, "The Trade-Off between Social Insurance and Financialization: Is There a Better Way?", Niskanen Center, August 20, 2019.

35 Monica Prasad, The Land of Too Much: American Abundance and the Paradox of Poverty, (Cambridge, MA: Harvard University Press, 2012).

36 Fineout and Caputo, "'It's a sh—sandwich."

37 Rebecca Dixon, "Software Update Required: COVID-19 Exposes Need for Federal Investments in Technology," Hearing before U.S. House of Representatives, National Employment Law Project, July 15, 2020.

38 Ibid.

superior technology will enable the implementation of different kinds of policy designs, from the mundane to the experimental. The CARES Act, for example, set pandemic unemployment compensation at $600 per week because pegging the benefit to 100 percent of prior wages was technologically infeasible for most states. Modern systems would make such design choices trivially easy to implement, while expanding the horizons for innovative ideas such as return-to-work bonuses, as we discuss in the next section. Similarly, the U.S. Treasury has existing financial pipes to virtually every employer in the country, given employer obligations to record and remit federal payroll taxes on a monthly or biweekly basis. There is nothing that prevents those pipes from being put in reverse in order to advance payroll rebates directly to employers, particularly if they use any of the large payroll processing firms. It would take some effort, but with far less arbitrariness and complexity than what went into the PPP.

“Funding for IT modernization will be of little use if the federal government is unable to hire the best people for the job.”

Going forward, we support an all-of-government effort to modernize our outdated social insurance systems. This will require comprehensive reforms at multiple levels, along with a major boost to the federal government’s paltry Technology Modernization Fund (TMF). Created in 2017, the TMF provides flexible funding for IT modernization proposals submitted by other federal agencies.[39] Proposals are rigorously evaluated but can be quickly approved, with follow-on funding tied to delivery on project milestones. But with only $25 million in resources for fiscal year 2019, the fund is woefully undercapitalized given the sheer size of the U.S. government. Virginia Rep. Gerry Connolly has proposed boosting the fund to at least a billion dollars, which to us sounds about right.[40]

Nevertheless, funding for IT modernization will be of little use if the federal government is unable to hire the best people for the job. Take the IRS, which is already engaged in a multiyear modernization initiative, but whose progress reports have been lacking. Disturbingly, an internal team of programmers was on the cusp of migrating the IRS’s all-important Individual Master File (the system used to store and process tax submissions) from impenetrable assembly code into a modern programming language, until they inadvertently allowed the chief engineer’s employment contract to lapse in 2018.[41] As was reported at the time, the software engineer in question had been “working under streamlined critical pay authority

39 The Technology Modernization Fund.

40 Tom Temin, “Congressman argues for boosting Technology Modernization Fund by 40x,” Federal News Network, May 21, 2020.

41 Tom Temin, “IRS programming mystery continues,” Federal News Network, January 7, 2020.

the agency has had since its landmark 1998 restructuring."[42] The authority provided the IRS with 40 slots under which it could pay temporary, full-time employees with salaries that exceed the pay scale used for career employees — until Congress failed to reauthorize the slots in 2013. Stories like this do not make the nightly news, and yet they are critical to understanding the roots of America's diminished state capacity.

Fortunately, the IRS's critical pay authority was finally renewed as part of the 2019 Taxpayer First Act.[43] Unfortunately, the bill only passed once a provision was added to enshrine the IRS's Free File system, which allows most Americans to file for free — but only through private tax preparation companies like Intuit and H&R Block.[44] Preventing the IRS from creating its own tax-preparation service itself represents a tax on the American public, as the vast majority of taxpayers have returns that require minimal preparation.[45] Indeed, the IRS has all the information it needs to calculate most of our taxes, send out a pre-populated return, and let us decide whether to pay the bill or file an alternative.[46] On the path towards a 21st-century tax and transfer system, it seems the United States took one step forward, but two steps back.

Employment Security and Workforce Development

In the previous section, we made the case for modernizing our systems of social insurance through an analogy to other kinds of public infrastructure. That need has only become more urgent as COVID-19 pushes existing systems to their breaking point, like a congested bridge on the verge of collapse. Yet with new infrastructure come new possibilities. A crumbling highway can be repaired, or it can be rebuilt with greater structural integrity and new lanes added. The same is true of our social insurance system, and of Unemployment Insurance in particular.

42 Tom Temin, "IRS clutches its modernization holy grail," Federal News Network, January 2, 2018.

43 "Taxpayer First Act – IRS Modernization," Internal Revenue Service, August 18, 2020.

44 Bob Bryan and Joe Perticone, "The House passed a bill that could bar the IRS from creating a 'free' tax-preparation software like TurboTax – here's what it means for you," Business Insider, April 20, 2019.

45 Justin Elliot, "Congress Is About to Ban the Government From Offering Free Online Tax Filing. Thank TurboTax," ProPublica, April 9, 2019.

46 As Vox's Dylan Matthews has noted, "Denmark, Sweden, Estonia, Chile, and Spain already offer 'pre-populated returns.' In a number of countries, like Japan and the UK, the vast majority of people don't have to file tax returns at all, pre-populated or otherwise. Instead, through a system known as 'precision withholding,' the government takes exactly the right amount out of every paycheck. If they find that a mistake was made — not accounting for a charitable donation or mortgage interest, for example — they find that mistake in charity and bank records, and they fix it for you." Dylan Matthews, "Elizabeth Warren has a great idea for making Tax Day less painful," Vox, April 14, 2018.

Consider paid sick leave. Being able to take paid time off work when you're sick is one of the many perks of being a salaried worker. Yet as the COVID-19 crisis has underscored, sick leave is not merely a nice thing to have, but also a critical form of public health infrastructure for reducing the transmission of contagious diseases among one's co-workers and the broader public. Within the U.S. civilian labor force, the Pew Research Center estimates that 33.6 million workers lack access to any form of paid sick leave.[47] While almost universally available to high-income workers, paid sick leave is provided to only one in two workers in the bottom quarter of the wage distribution, and to just 43 percent of all civilian part-time workers. Ironically, these also tend to be the workers for whom every paycheck goes toward affording rent and other necessities, making unpaid leave either untenable or, at the very least, an option that's only reluctantly taken after symptoms worsen. This is bad enough in normal times, but in the context of a pandemic it's unconscionable.

"With a modernized UI system, we could guarantee baseline paid leave for every worker in the country, while minimizing the impact on businesses."

Recognizing the problem, Congress mandated private employers with fewer than 500 employees to provide two weeks of paid sick leave in the Families First Coronavirus Response Act. Unfortunately, the only partially funded mandate had the unintended consequence of incentivizing layoffs in advance of its enactment. Utah Sen. Mike Lee opposed the bill for this reason, arguing that sick leave could be more efficiently provided through UI.[48] We agree: With a modernized UI system, we could guarantee baseline paid leave for every worker in the country, while minimizing the impact on businesses.

A modern UI system would further enable work-sharing programs to reach their full potential. Work-sharing helps employers avoid layoffs during a temporary downturn by letting workers offset reduced pay or hours with a partial UI benefit.[49] The norm across much of Europe, work-sharing has allowed many countries to avoid the enormous COVID-19 induced layoffs seen in the United States.[50] And while many U.S. states have work-sharing programs in place, employer participation is undermined by administrative complexity and taxes that discourage its use — two

47 Drew Desilver, "As coronavirus spreads, which U.S. workers have paid sick leave – and which don't?", Pew Research Center, March 12, 2020.

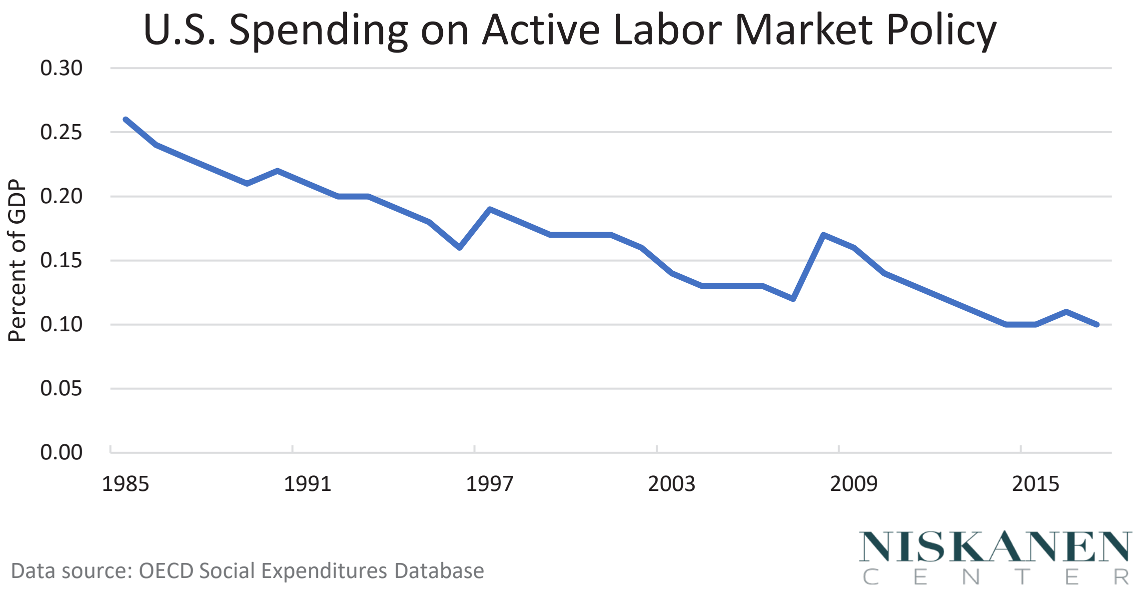
48 Brian Mullahy, "Utah Sen. Mike Lee defends 'no' vote on coronavirus bill," KUTV, March 19, 2020.

49 Katharine Abraham and Susan Houseman, "Proposal 12: Encouraging Work Sharing to Reduce Unemployment," Brookings Institution, The Hamilton Project, June 19, 2014.

50 Alison Griswold, "Europe is turning to an age-old German work scheme to protect jobs from Covid-19," Quartz, April 30, 2020.

things modernization could address.[51]

Indeed, with millions of people out of work, a large fraction of the unemployed will need to retrain or relocate. Better fiscal and monetary policy can help, but only so much, as a "reallocation shock" ultimately requires costly adjustments within the real economy.[52] A well designed UI system should be designed to help, rather than hinder, those adjustments — to ease frictions rather than create new frictions where they needn't exist.



In particular, the United States lags far behind the rest of the developed world in its use of active labor market policy (ALMP). ALMPs serve to boost labor force participation and support for workers through job transitions, and encompass everything from retraining programs to job search services. According to the OECD, the United States spends only 0.10 percent of GDP on ALMPs, the lowest of any OECD country after Mexico. Anglophone countries like Canada and Australia expend much less on ALMPs than European social democracies, but still double what the U.S. does. The United States would need to increase spending on ALMPs by nearly $100 billion per year just to match the OECD average of 0.52% of GDP.[53]

As the Council of Economic Advisers noted in a 2015 report, our low expenditure on ALMPs is the result of a steady erosion that began in the 1980s, and it correlates

51 "Work Sharing: An Alternative to Layoffs," National Employment Law Project, Center for Law and Social Policy, July 6, 2016.

52 Jose Barrero et al, "COVID-19 Is Also a Reallocation Shock," National Bureau of Economic Research Working Paper No. 27137, May 2020.

53 "Public expenditure and participant stocks on LMP," OECD Social Expenditure Statistics (database), 2020.

with a subsequent decline in prime-age labor force participation.[54] In his book, Failure To Adjust, Edward Alden attributes our underinvestment in ALMPs to the historical dominance of the U.S. economy relative to the rest of the world.[55] The size of the U.S. internal market provided an intrinsic buffer against external shocks, but also a high degree of geographical and economic diversification, making it difficult for the shocks that did occur to garner the political recognition needed to motivate comprehensive reforms. In contrast, a small, open economy like Denmark spends over 1.9 percent of GDP on ALMPs because its greater exposure to external shocks creates broad support for programs that retrain and reallocate labor on a continuous basis.

As of 2017, America's ad hoc approach to reemployment has resulted in the proliferation of at least 43 distinct but largely duplicative federal employment and training (E&T) programs.[56] The largest such program is Trade Adjustment Assistance (TAA), which was historically expanded in the context of new trade agreements. TAA singles out for reemployment support only those workers who can demonstrate that their job was destroyed due to international competition or outsourcing. Of course, establishing that kind of causation is a challenge for the world's top econometricians, much less your typical blue-collar worker.[57] Consequently, administrative data show that every trade-displaced worker accepted into TAA is associated with two lost jobs overall, implying America's single largest retraining program is barely covering its own relatively narrow remit.[58]

More important, the economic rationale for reemployment support is independent of *why* a given labor market shock occurred, whether due to trade, technology, a recession, or for that matter a pandemic. Indeed, as economists are fond of noting, international trade is in key respects indistinguishable from a "black box" technology that lets you magically turn American corn into Japanese cars.[59] America's employment and training system should be just as agnostic to the causes of labor market disruption, and thus available to the universe of dislocated workers through a comprehensive workforce development system that interfaces with UI.

What would such a system look like? To start with, state UI programs should be

54 Council of Economic Advisers, "Active Labor Market Policies: Theory and Evidence for What Works," Issue Brief, December, 2016.

55 Edward Alden, Failure to Adjust: How Americans Got Left Behind in the Global Economy, (Lanham, MD: Rowman & Littlefield Publishers, 2016).

56 "Employment and Training Programs: Department of Labor Should Assess Efforts to Coordinate Services Across Programs," U.S. Government Accountability Office, March 28, 2019.

57 Samuel Hammond, "On Workforce Investment," American Compass, June 9, 2020.

58 Illenin Kondo, "Trade Displacement Multipliers: Theory and Evidence Using the U.S. Trade Adjustment Assistance," National Bureau of Economic Research, September 2017.

59 Bryan Caplan, "Free Trade Lets Us Turn Corn into Cars," Foundation for Economic Education, February 21, 2018.

required to replace at least 75 percent of lost wages up to the median wage. This would require standardization of how each state calculates weekly benefits[60] and would bring U.S. benefit levels closer to the OECD norm. In 2019, for instance, the average UI recipient nationwide received $378 in weekly benefits, replacing just shy of 50 percent of prior wages. Yet this average is skewed upward by the policies of the most generous states. In many states, average replacement rates are closer to one-third of prior wages and have further eroded following the Great Recession as multiple states cut their UI programs to close budget gaps. In a 2013 reform, for example, North Carolina cut its *maximum* unemployment compensation to just $350 a week, while shortening the maximum duration from 26 weeks to just 12 weeks.[61] As a result, the rate at which recipients exhausted their benefits before finding new employment rose dramatically. This is obviously short-sighted. Rather than promote work, small benefits and restrictive eligibility can cause dislocated workers to become discouraged and exit the labor force altogether. Worse still, some may fall back onto programs like disability insurance that condition benefits on *not working*, as occurred in labor markets affected by the China Shock.[62] A high wage-replacement rate, in contrast, serves to smooth household consumption following a shock, while ensuring the path of least resistance for dislocated workers is a system that keeps them attached to the labor force.

"Rather than promote work, small benefits and restrictive eligibility can cause dislocated workers to become discouraged and exit the labor force altogether."

A high wage-replacement rate must be balanced with activation policies — conditions requiring the unemployed to prepare for returning to work — that limit abuse, as well as a strategy for triaging employment and training services to those who need them most. In a normal year, some 7 million jobs are both created and destroyed in the United States every quarter. That balance of creation and destruction ensures the vast majority of laid-off workers are able to find suitable employment all on their own. And for the fraction that turn to UI, the median duration is less than 10 weeks, with a third of workers finding a new job in under five weeks.[63] This cohort typically requires minimal activation beyond standard work search requirements, and only basic supportive services like help preparing a resume or

60 How each state calculates UI benefits is extraordinary variable and complex, as this Twitter thread highlights: Matt Darling, Twitter post, Jul 25, 2020, 6:41 pm, https://twitter.com/besttrousers/status/1287171101395746816

61 "Unemployment Insurance: Consequences of Changes in State Unemployment Compensation Laws," Congressional Research Service, October 23, 2019.

62 David Autor et al., "The China Shock: Learning from Labor-Market Adjustment to Large Changes in Trade," Annual Review of Economics, Vol. 8, pp.205-420, August 8, 2016.

63 "Unemployed persons by duration of unemployment," Economic News Release, U.S. Bureau of Labor Statistics.

navigating a job bank.

Stricter benefit conditionality begins to make sense beyond 5-10 weeks of unsuccessful job search, beginning with an in-person interview. In Nevada, for instance, UI recipients are eventually required to meet with trained staff at "One Stop" job centers located across the state for what's known as a Reemployment and Eligibility Assessment (REA). During the assessment, claimants are provided with labor market information and develop an individual reemployment plan. If it makes sense in the individual's case, the same caseworker can also provide a referral for reemployment services, training, or a job placement. A Spanish speaker, for instance, may simply need language services, while a single parent may need help finding child care. This modest requirement thus helps Nevada triage resources more effectively, while generating net savings through reduced UI payments. In a rigorous evaluation, Nevada's REA program was even found to increase earnings per claimant by 15—18 percent over the study's 18- to 36-month follow-up period.[64]

"Subsidized job placements facilitate quick transitions out of unemployment by offsetting several months of an employer's wage- and on-the-job training costs."

Most states have an REA-type program in place, supported by grants from the federal Department of Labor.[65] We support building on the program to ensure every state reemployment program is adequately funded, following best practices, and fully integrated with local workforce-investment boards. In many states, for instance, REA programs are used to direct workers into growing industries, thereby contributing to regional economic development.[66] Nonetheless, these simple interventions will still leave some workers behind, including those facing structural barriers to employment and skilled workers whose industry is in decline. These cases require more concentrated support, whether in the form of subsidized job placements, retraining, or both.

While classroom-based retraining programs are notoriously ineffective, state and local workforce boards can work with large employers to develop programs that reflect in-demand skills. Subsidized job placements go a step further, facilitating quick transitions out of unemployment by offsetting several months of an employer's wage- and on-the-job training costs. Subsidized employment programs were piloted throughout the country following the Great Recession, and were found to be

64 "Nevada's Reemployment and Eligibility Assessment Program," Social Programs That Work, May 27, 2020.

65 "Reemployment Services and Eligibility Assessment Grant," Employment and Training Administration, U.S. Department of Labor.

66 "How States Are Using Reemployment Services and Eligibility Assessments (RESEA)," National Association of State Workforce Agencies, March 27, 2019.

highly effective at promoting high-quality job creation and retention — particularly when an employer's eligibility for subsidies depends on providing decent wages and working conditions.[67] We therefore favor replacing the myriad federal retraining programs with a new Employment and Training title to the Social Security Act, providing states with dedicated funding to scale up subsidized employment and retraining programs with a solid evidence base. In line with the ELEVATE Act introduced by Oregon Sen. Ron Wyden in 2019, the level of federal funding could even be pegged to a state's unemployment rate, thus creating aggressive and fast-acting "automatic stabilizers" that directly target labor demand.[68]

In simple economic models, workers disrupted by trade or automation are instantly reallocated from declining industries to ones on the rise. Yet that is rarely if ever the case in the real world. Labor markets are highly complex institutions, riddled with frictions created by geography, social networks, discrimination, and regulations that vary from place to place. In a world where nothing ever changes, this wouldn't be a big problem. Yet in a dynamic, growing economy, change is the rule. America deserves a workforce development system that reflects that basic reality.

Strengthen Families with Child Allowances

Our vision for a high-wage, high-performance economy would be incomplete without an agenda for supporting strong families and healthy children. It may be cliché, but family truly is the foundation of society. Rich or poor, big or small, traditional or modern, families are responsible for nurturing the next generation.

Unfortunately, of the four million children born in the United States every year, one in six begins life in poverty. Indeed, the United States has one of the highest rates of child poverty in the developed world. When one looks across the OECD, the reason why becomes obvious: our lack of direct expenditures on families and children.[69]

The United States spends only 0.7 percent of GDP on family social expenditures, of which the share devoted to cash benefits, 0.1 percent, is the lowest of any OECD country.[70] The United States would need to increase cash transfers to families by

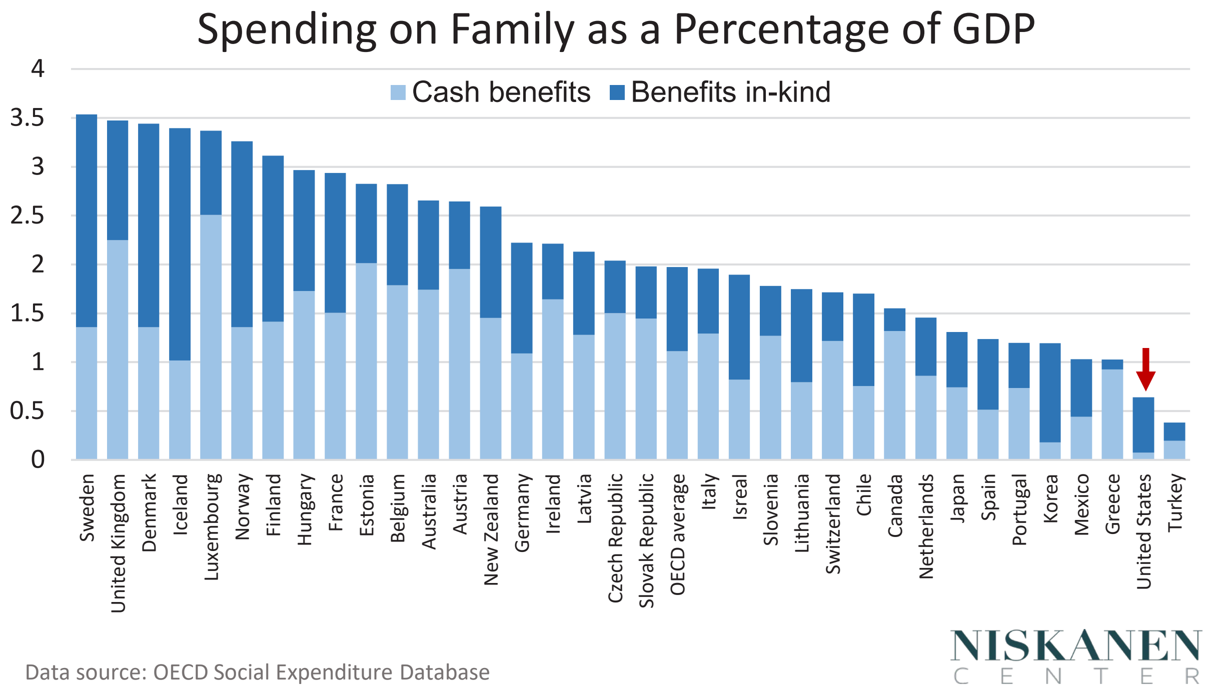
67 Indivar Dutta-Gupta et al., "Lessons Learned From 40 Years of Subsidized Employment Programs," Center on Poverty and Inequality, Georgetown Law School, Spring 2016.

68 Samuel Hammond, "The ELEVATE Act Explained: A 'Job Guarantee' That Can Actually Work," Niskanen Center, January 24, 2019.

69 Samuel Hammond, "Reducing Child Poverty Requires Closing the Cash Benefit Gap," Niskanen Center, August 4, 2017.

70 "Social Expenditure Database (SOCX)", OECD.

approximately $200 billion per year simply to match the cash portion of the OECD average. Accordingly, increasing direct cash transfers to households with children is far and away the lowest hanging fruit when it comes to reducing child poverty.



This is why we are strong supporters of the American Family Act — a proposal to transform the existing Child Tax Credit (CTC) into a bona fide child allowance.[71] Since its enactment in 1997, the CTC has become an essential tool for supporting the well-being of children and working-class families. And yet, because it is only partially refundable, the full credit remains out of reach for the poorest families. The American Family Act would change that, both by increasing the size of the credit and by making it "fully refundable" to include families without federal tax liabilities.

Specifically, the act would provide families with $300 per month ($3,600 per year) for each child under the age of six, and $250 per month ($3,000 per year) for each child under the age of 17, while slowly phasing out benefits for households with six-figure incomes. With such a system in place, we estimate that the number of children in poverty would decline by 4.5 million — a 40 percent reduction — while "deep" child poverty (defined as 50 percent of the poverty line) would be cut in half.[72]

71 "American Family Act," Sen. Michael Bennet.

72 Samuel Hammond and Robert Orr, "The American Family Act: An Analysis of the Bennet-Brown Child Allowance," Expand the Child Tax Credit, Niskanen Center.

Child allowances solve for a number of pernicious market failures common in any modern economy. In particular, while an individual typically reaches their peak earnings in their 40s and 50s, fertility peaks in one's 20s and 30s. This gap means that most families face the extra costs of raising a child at precisely the point in their life cycle when money is tightest. In a competitive market, a childless worker and a single mom with two kids will be paid the same wage for the same job. As result, having a child is itself a risk factor for falling into poverty.[73] A child allowance solves this problem by, in essence, transferring one's future earning potential to the present in order to supplement household income in proportion to the number of child dependents who cannot generate income of their own.

As the Niskanen Center's Joshua McCabe has argued, the logic of income supplementation was invoked in most countries with child allowances. In the U.S., in contrast, the CTC was explicitly created according to the logic of "tax relief."[74] This has made expanding the credit to those without a federal tax liability an uphill battle — and long overdue.

"Child allowances solve for a number of pernicious market failures common in any modern economy."

While a child allowance seems novel in the American context, similar policies are commonplace across the industrialized world. Defined as any periodic, per-child cash transfer to households, child allowances have also been endorsed and enacted by governments across the ideological spectrum. Canada's generous Child Benefit, for example, was originally enacted by a Conservative government as a nonbureaucratic way to support families. Since its expansion in 2016, Canadian families now receive monthly allowances equivalent to roughly $5,000 U.S. dollars per child, per year.[75]

For all the conservative fears of unconditional benefits reducing the incentive to work, studies of Canada's child benefit show it actually *increased* total employment. This is because, as a flat benefit, a dollar earned is a dollar kept, unlike in traditional welfare programs in which benefits are abruptly clawed back.[76] Among low-income, unmarried households, for example, parents appear to use the benefit to afford child care and increase their labor force participation.[77] Following its 2016

73 Sophia Addy et al., "Basic Facts About Low-Income Children," National Center for Children in Poverty, January 2013.

74 Joshua McCabe, The Fiscalization of Social Policy (New York: Oxford University Press, 2018).

75 Sophie Collyer et al., "What a Child Allowance Like Canada's Would Do for Child Poverty in America," The Century Foundation, July 21, 2020.

76 Samuel Hammond, "Bad Arguments Against a Child Allowance," Niskanen Center, May 11, 2017.

77 Tammy Schirle, "The effect of universal child benefits on labor supply," Canadian Journal of Economics, Vol. 48, issue 2, pp. 437-463, 2015 (March 2014 draft).

expansion, the Bank of Canada even reported that the Canada Child Benefit helped move our neighbor to the north closer to full employment.[78]

With few or no conditions on how the money can be used, parents end up making surprising — and surprisingly effective — choices. A study of the Canadian program, for example, found child allowances increase spending on direct inputs like education or pediatric health care, as well as so-called "household stability items."[79] These include routine bills and other household goods that help to dramatically reduce parental stress and create an overall healthier household. Indeed, the same research found Canadian parents reduced their spending on alcohol and tobacco by six cents on the dollar, presumably because they were less stressed financially. A child allowance thus embodies the motto "leave paternalism to the parents": Rather than micromanage parental choices, or promote one ideal of how a family should be structured, child allowances empower parents to harness their local knowledge and direct scarce resources to their highest valued use.

> *"Poor parents are forced to navigate a complex welfare bureaucracy, while middle-class parents receive a simple tax credit."*

Under the status quo, the U.S. federal government spends over $320 billion per year on children — no small amount. And yet its effectiveness is diluted across more than 100 fragmentary programs. While adult social insurance is overwhelmingly in the form of income support or medical reimbursements, federal spending on children is largely in-kind, including subsidized school lunches, diaper vouchers, baby formula, and a lot of administrative overhead. The result is a convoluted, bureaucratic mess bloated by rent-seeking and waste, whether due to industry interests or politicians trying to leave a legacy. Poor parents, in turn, are forced to navigate a complex welfare bureaucracy, while middle-class parents receive a simple tax credit. Enacting a universal child allowance would thus be an opportunity not only to consolidate these wasteful programs, but also to bring low-income families and children into a common system that treats them with equal dignity and respect.[80]

Imagine, for a moment, that Congress decided to partition Old Age Social Security into various targeted programs. Rather than receive a fixed income to supplement their retirement savings, older adults would instead receive vouchers for qualified nursing homes, food delivered through a special nutritional program, and so on

78 "Liberal government to boost Canada child benefit payments," CBC News, October 23, 2017.

79 Kevin Milligan and Mark Stabile, "Do Child Tax Benefits Affect the Well-Bring of Children? Evidence from Canadian Child Benefit Expansions," American Economic Journal: Economic Policy, Vol. 3, No. 3, pp. 175-205, August 2011.

80 Samuel Hammond and Robert Orr, "Toward a Universal Child Benefit," Niskanen Center, October 25, 2016.

and so forth. The AARP and other advocacy groups would surely deride the change as wasteful and needlessly paternalistic. How, they would argue, could legislators and bureaucrats ever administer in-kind programs that adequately account for the enormous diversity of older people's needs? And yet children are no less heterogeneous, and likely face an even greater diversity of life challenges that our current system doesn't adequately take into account. The only difference is their relative lack of voice.[81]

"…studies suggest roughly half of every dollar subsidizing child care passes through to higher prices."

Consider any of the various proposals for federally funded universal day care. While each proposal differs in important ways, they share a common vision of greater federal involvement in child care, regulations that impose national quality standards, and federal subsidies to make formal day care centers either free or heavily subsidized. Typically left off the agenda is any support for home- and family-based models that remain the dominant source of child care in the United States — and the one that surveys find most parents prefer.[82]

Seen through the lens of the working parent, the pursuit of higher child care "quality" — be it in the form of stronger licensing requirements or mandatory curriculum standards — is actively counterproductive.[83] In fact, empirical studies suggest roughly half of every dollar subsidizing child care passes through to higher prices.[84] Child care choice and affordability can instead be tackled simultaneously by relaxing regulations on home and formal day care centers and, in urban areas, reducing restrictions on land use that push up the price of real estate. With appropriate cash benefits to parents and a legal framework to expand lower-cost child care options, there is simply no argument for favoring universal day care outside of social engineering.

COVID-19 has only made the case for a child allowance more urgent. Many families have seen their incomes disappear or become more volatile, while the diversity of household circumstances has dramatically increased. Many schools are going remote, meaning fewer kids have access to in-kind benefits like free or reduced-price school lunches. And with day care centers either closed or at reduced

81 Samuel Hammond, "What Libertarians and Conservatives See in a Child Allowance," Spotlight on Poverty & Opportunity, May 31, 2017.

82 Samuel Hammond, "The False Promise of Universal Child Care," Institute for Family Studies, February 28, 2019.

83 Samuel Hammond, "Cash is Superior to Child Care," Niskanen Center, June 26, 2017.

84 Luke Rodgers, "Give credit where? The incidence of child care credits," Journal of Urban Economics, Vol. 108, pp. 51–71, November 2018.

capacity, more parents are turning to friends, family, and home-based child care arrangements as a flexible alternative.

With so many families on the edge of survival, what has long festered as a chronic problem now takes on special urgency. The time for action is now.

Fix Health Insurance with Universal Catastrophic Care

Ensuring access to affordable, high-quality health care is a top priority for reformers across the political spectrum, yet there is little agreement over how to proceed. The layoffs induced by COVID-19 have made reform all the more imperative. Assuming a peak unemployment rate of 20 percent, the Urban Institute estimates that 25 to 43 million people will lose or have already lost their employer-sponsored health insurance.[85] While many of these workers will obtain insurance through Medicaid or the individual marketplace, the Urban Institute's baseline scenario nonetheless forecasts 29 percent of the newly unemployed remaining uninsured — and up to 40 percent in states that haven't expanded Medicaid.

Elsewhere in this paper, we argue that the ultimate key to making American health care both accessible and affordable lies in dismantling the numerous and interconnected barriers to competition that make prices here much higher than elsewhere in the world. But even with the removal of all those barriers (a very tall order, indeed, given the lobbying muscle of doctors, hospitals, and drug companies), improvements to the nation's kludgy, wasteful health insurance system are still needed to expand access and improve affordability.

We believe the goal of universal health coverage should, at this point, be beyond the scope of reasonable debate.[86] The $3.6 trillion question is to figure out how to make it work, and in a way that satisfies the goals of the left and the right. On the left, the basic problem with U.S. health care is characterized in terms of a broken payment system. With payers fragmented into multiple public and private insurers, we forgo the efficiencies of scale that would be achieved through a "single payer" system and create coverage gaps that leave many without access to quality care. On the right, meanwhile, the American health care system is seen as falling far short from the "free market" ideal, and only made worse by the patchwork of government interventions. In particular, third-party payers, cost-shifting, and a lack of

85 Garret B. and Gangopadhyaya A., "How the COVID-19 Recession Could Affect Health Insurance Coverage," Robert Wood Johnson Foundation, May 4, 2020.

86 Ed Dolan, "Universal Healthcare Access is Coming. Stop Fighting It and Start Figuring Out How to Make it Work," Niskanen Center, March 28, 2017.

price transparency are believed to erode the incentive of consumers to shop for reasonably priced services, while supply-side regulations stifle competition, block entry by would-be innovators, and protect the interests of providers.

Single-payer advocates and free-market reformers tend to talk past one another, but as the Niskanen Center's Ed Dolan has observed, they may have more in common than it first appears. By and large, the right recognizes that, even under the most market-oriented reforms, there would still be a need for some kind of social insurance to assure the very poor and very sick have access to care. And on the left, most would agree that whatever is done about the payment system, there is a need for more transparency, competition, and innovation than the current system seems able to deliver. The two perspectives can therefore be reconciled, at least in theory. But what does that look like in practice?

"UCC would achieve universal coverage in a way that is conducive to consumer choice and supply-side reform."

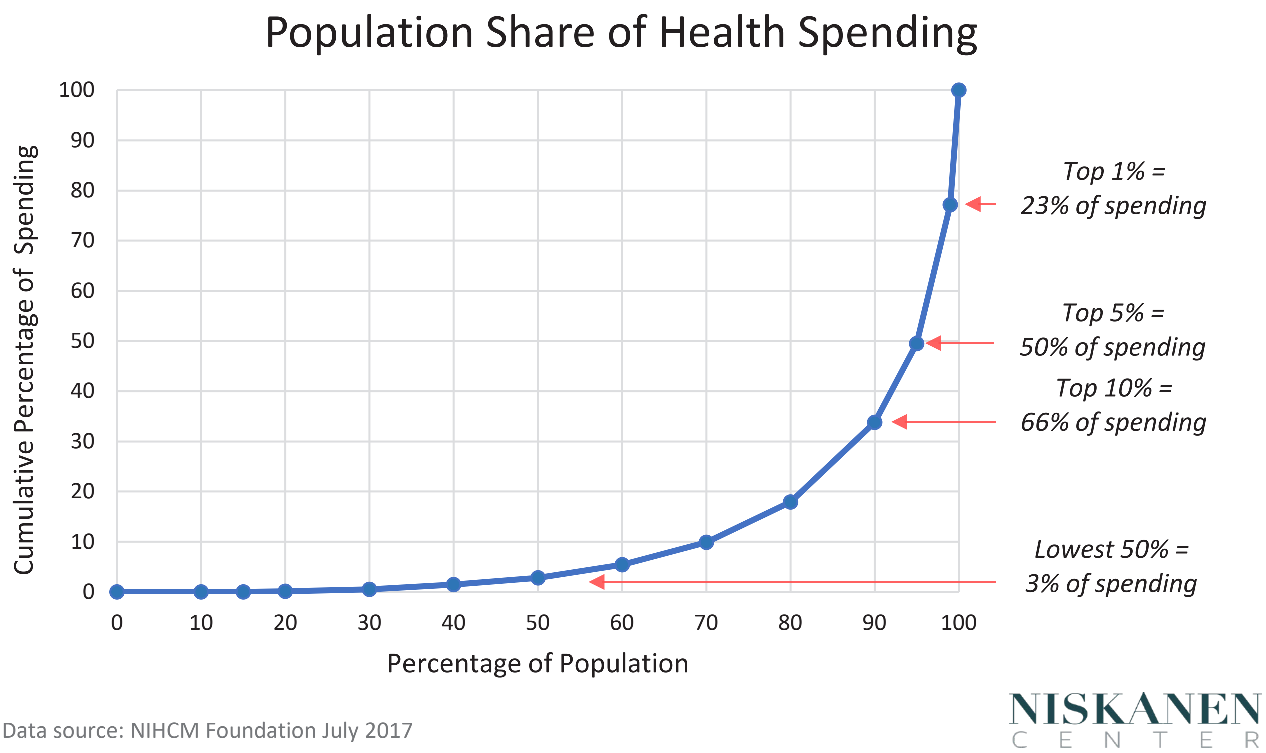
We support an approach known as Universal Catastrophic Coverage (UCC).[87] As we describe below, UCC would reduce the fragmentation of our existing system, enable a transition away from our employer-based model, and achieve universal coverage in a way that is conducive to consumer choice and supply-side reform. More of a framework than a specific set of reforms, UCC starts by recognizing the core problem any social insurance program exists to address: financially ruinous but uninsurable risks.

For risks to be insurable by commercial providers, they must be unpredictable. Yet in a study by the Kaiser Family Foundation, 53 percent of Americans reported that they, or someone else in their household, had a preexisting condition that would cause a private insurance company to decline their coverage according to the underwriting practices predating the Affordable Care Act (ACA).[88] This includes chronic conditions like diabetes or heart disease as well as genetic predispositions that make seemingly healthy people a ticking time bomb for insurers.

The second standard for commercial insurability is the affordability of an actuarially fair premium, i.e., one high enough to cover the expected value of total claims. In the U.S., however, the healthiest half of the population accounts for just 3 percent of all personal health care expenditure, 5 percent of the population accounts for half of all spending, and just 1 percent for more than a fifth of all spending.

87 Ed Dolan, "Universal Catastrophic Coverage: Principles for Bipartisan Health Care Reform," Niskanen Center, June 25, 2019.

88 Gary Claxton et. al. "Pre-existing Conditions and Medical Underwriting in the Individual Insurance Market Prior to the ACA," Kaiser Family Foundation, December 12, 2016.



Because medical expenses are distributed so unevenly, an actuarially fair premium would exceed the entire income of many people with preexisting conditions.

The ACA attempted to solve the insurability problem through a series of regulations. "Guaranteed issue" and "guaranteed renewal" require private insurers to accept and maintain coverage of all applicants, regardless of their preexisting conditions. "Community rating" goes a step further, by requiring insurers to charge the same premium, based on average claims, to everyone in a general category regardless of their health status. These mechanisms make it possible for people to buy health insurance for a premium that is fixed regardless of their preexisting conditions, but in doing so they rendered the U.S. insurance market vulnerable to adverse selection. Given guaranteed issue, healthy people can avoid paying premiums by simply going uninsured, only to buy into the system when they become ill. As more healthy people dropped out of the market, premiums for those who remained in the pool rose higher and higher, until they became unaffordable. The individual mandate was meant to prevent this problem, but it was likely too weak to be effective with or without the political controversy surrounding it.

Under UCC, by contrast, the insurability problem is addressed head-on by creating a universal tier of coverage for catastrophic health care expenses. The simplest version of UCC needs just two parameters: a low-income threshold for first-dollar coverage, and a deductible that increases as a function of a household's income.

Deductibles under UCC serve a different function than in conventional "high deductible" insurance plans.[89] While there would be nothing to prevent someone from using the catastrophic tier as their only source of health insurance, they would be required to pay for all of their subcatastrophic expenses out of pocket. In practice, however, the existence of a catastrophic tier would provide a permanent solution to the insurability problem, and thus make supplemental private insurance for expenses within the deductible range far more affordable. Indeed, with a universal backstop for financially ruinous medical expenses, many of the regulations imposed on the private insurance market would become redundant, enabling a broad deregulation of the insurance market and the flourishing of innovative models such as health sharing plans.[90]

More realistic versions of UCC feature additional parameters, including cost-sharing through copays and coinsurance, and exemptions for preventative treatments known to save money in the long run. A full discussion of these and other details are outside the scope of this agenda paper but can be found in Ed Dolan's white paper on the subject.[91]

"Detailed cost estimates of UCC suggest a baseline version could be implemented in the United States without increasing total spending…"

For now, it's worth thinking of UCC as related to high-risk pools or reinsurance, but in a way that makes up for their respective shortcomings. To date, attempts at creating high-risk pools have suffered from underfunding and barriers to enrollment. Identifying who qualifies as high-risk in advance is itself a challenge. A more serious problem for both high-risk pools and reinsurance is the fact that they treat all households equally, regardless of income. As a result, even if such programs succeeded in lowering average premiums, many low- and middle-income consumers would likely find that health coverage remains unaffordable.

UCC addresses both of these problems. Because payments for catastrophic expenses are made retrospectively, UCC would avoid the need to screen for health risks. And because out-of-pocket costs would be scaled to income, UCC would be affordable for everyone. UCC can therefore be thought of as a form of retrospective reinsurance for which the threshold above which private insurers are reimbursed by the federal government (what's known in reinsurance as the "attachment point") comes in the form of a deductible, scaled in proportion to household income.

89 Rajender Agarwal et al., "High-Deductible Health Plans Reduce Health Care Cost And Utilization, Including Use Of Needed Preventive Services," Health Affairs, Vol. 36, No. 10., October 2017.

90 For an overview of health sharing plans, see John Goodman, "Alternatives to Obamacare," Forbes, January 30, 2019.

91 Ed Dolan, "The Role of Prevention in Health Care Reform," Niskanen Center, May 4, 2018.

Conservatives may prefer implementing UCC as a form of federal reinsurance for private insurers, while progressives may favor a modified public option that achieves the equivalent outcome.[92] Regardless of how it's administered, UCC provides the only realistic strategy for reducing the fragmentation of American health care once and for all.

Detailed cost estimates of UCC suggest a baseline version could be implemented in the United States without increasing total spending by households, government, or employers.[93] With a robust cost-saving package, UCC could even stand to reduce consumer outlays on health care and create overall savings for the federal budget. In short, UCC posits a robust role for the government as a provider of social insurance where needed while creating space for market mechanisms where they have the best chance of working.

92 Ed Dolan, "Medicare for America: A Health Care Plan Worth a Closer Look," Niskanen Center, June 13, 2019.

93 Ed Dolan, "Could We Afford Universal Catastrophic Health Coverage?" Niskanen Center, June 5, 2018.

III

Faster Growth, Fairer Growth

LIBERATING THE CAPTURED ECONOMY

PART III. LIBERATING THE CAPTURED ECONOMY

The Agenda

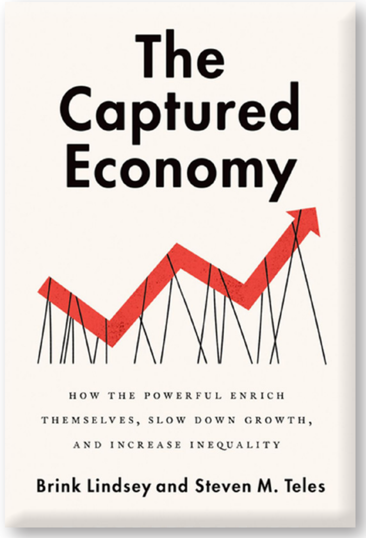
In the previous section, we set forth an agenda for structural reform of the labor market. There, our commitment to a high road economy took center stage, as we made the case for a robust system of social insurance that invests in ordinary citizens' capabilities and shields them from downside risks. At the same time, our distinctive approach prioritizes high performance, by reducing the frictions that depress workforce participation and slow down the transitions and reallocations necessitated by creative destruction.

While the previous section focused mainly on upgrading the public sector, in this section and the one that follows we shift our attention to a reform agenda for the private sector. Here the concern in the foreground is moving toward high performance — restoring the American economy's dynamism, boosting innovation, and restoring vibrant growth in productivity and output. Meanwhile, though, the agenda we put forward also aims to lift us onto the high road, by fighting back against ill-gotten gains at the top and promoting dynamism that is both socioeconomically and geographically inclusive.

In the section that follows this one, we propose policy changes to improve the functioning of American capitalism — by providing necessary public goods, and sharpening incentives for entrepreneurship, competition, and innovation. But before we get to that, we must first attend to the grimier task of rooting out dysfunction. The object of reform here is reversing regulatory capture in key policymaking domains and unwinding the massive misallocations of resources that such capture has produced.

The Scale of the Problem

Before proceeding to policy recommendations, we want to begin by providing a better sense of the scale of the problem. Over the past few decades — at a time when American-style capitalism was widely touted as the model for the rest of the world to follow — the gap between that model and policy reality here in the United States was growing ever larger. The model was one of freewheeling, wide-open competition and creative destruction spurred by vigorous, unrestrained entrepreneurship; the emerging policy reality was one in which powerful insider interests progressively twisted the rules in their favor, inflating their own incomes by limiting and distorting competition and blocking entry by potential rivals.



The scale of the mismatch between model and reality can be seen in huge misallocations of resources afflicting vital sectors of the economy. We will focus here on what has gone wrong in three important sectors: finance, health care, and housing.

Finance

The U.S. financial sector has ballooned in recent decades: Its share of GDP rose from 4.9 percent in 1980 to 8.3 percent in 2006.[1] Although the sector took a big hit during the financial crisis, it has largely rebounded since. Meanwhile, the sector's share of corporate profits spiked from around 10 percent in 1980 to 40 percent in the early 2000s; now it stands at around 30 percent.[2] During the run-up of "financialization," this growth was attributed to razzle-dazzle financial innovation and widely portrayed as a major American success story. Then came the collapse of the housing bubble and a financial meltdown that nearly cratered the global economy.

In the ensuing decade of disillusionment, evidence has mounted that the rapid growth of finance has been a colossal waste of resources. First, of course, there is the cost of the financial crisis. According to one Federal Reserve Bank estimate, the long-term price tag of the crisis in terms of reduced output ranges from $6 trillion to $14 trillion.[3] In terms of the needless suffering from mass foreclosures and job losses, and the subsequent derangement of politics by the rise of authoritarian pop-

1 Robin Greenwood and David Scharfstein, "The Growth of Finance," Journal of Economic Perspectives, Vol. 2, no. 2, pp. 3-28, Spring 2013.

2 Jordan Weissmann, "How Wall Street Devoured Corporate America," The Atlantic, March 5, 2013.

3 David Luttrell et al., "Assessing the Costs and Consequences of the 2007-09 Financial Crisis and Its Aftermath," Federal Reserve Bank of Dallas Economic Letter, Vol. 8 no. 7, September 2013.

ulism, the larger price tag is incalculable. Meanwhile, cross-country research shows that when financial sectors grow too large (private credit in excess of 100 percent of GDP), there is a chronic drain on productivity and output growth due to misallocation of resources.[4] The United States stands well on the wrong side of that threshold, with private domestic credit close to 200 percent of GDP.

"Financial executives and professionals comprise 14 percent of the top 1 percent of earners, and 18 percent of the top 0.1 percent."

Although it's a drag on the overall economy, financialization has been very good for people in finance. Back in 1980, workers with equivalent skills were making the same in finance as in other industries, but by 2006 jobs in finance were paying 50 percent more and top executives were making 250 percent more than their peers in other sectors.[5] Financial executives and professionals comprise 14 percent of the top 1 percent of earners, and 18 percent of the top 0.1 percent.[6]

The hypertrophy of finance was fueled by massive subsidies: subsidies for borrowing (e.g., the deductibility of interest payments), subsidies for saving (e.g., 401(k) and 529 plans), and most importantly, subsidies for financial institutions in the form of an elaborate safety net, both formal (access to the Fed discount window, deposit insurance) and informal (ad hoc bailouts). Financialization is typically portrayed as the result of deregulation, and it's true that removing interest rate caps and branching restrictions on banks did allow and encourage expansion and financial "innovation." But allowing financial institutions to move into new activities and run greater risks within a larger regulatory framework of crisis-prone leverage and safety-net-induced moral hazard is emphatically not a move in a pro-market direction. On the contrary, it's an engraved invitation to gamble with taxpayers' money.[7]

Health care

The U.S. health care system is notorious for its runaway spending, now accounting for just under 18 percent of GDP. By way of comparison, health expenditures in

4 Stephen G. Cecchetti and Enisse Kharroubi, "Reassessing the Impact of Finance on Growth," Bank of International Settlements Working Paper no. 381, July 2012.

5 Thomas Philippon and Ariell Reshef, "Wages and Human Capital in the U.S. Financial Industry: 1909-2006," Quarterly Journal of Economics, Vol. 127, no. 4, pp. 1551-1609, November 2012.

6 Jon Bakija et al., "Jobs and Income Growth of Top Earners and the Causes of Changing Income Inequality: Evidence from U.S. Tax Return Data," April 2012.

7 See Brink Lindsey and Steven Teles, The Captured Economy: How the Powerful Enrich Themselves, Slow Down Growth, and Increase Inequality (New York: Oxford University Press, 2017), pp. 35-63; Brink Lindsey and Steven Teles, "The Regulatory Subsidy for Extreme Leverage: A Reply to Mike Konczal," Niskanen Center, January 23, 2018.

other rich democracies typically comprise around 10 or 11 percent of GDP — with treatment outcomes generally comparable to those here, and with average life expectancies years longer than ours. It should come as no surprise, then, that America's profligate health care system includes enormous amounts of waste — spending that is either ineffective or affirmatively counterproductive in advancing patient welfare. According to the most recent in-depth study, the amount of money wasted every year ranges from $760 to $935 billion — or roughly 25 percent of total spending.[8] Earlier studies found waste ranging from 30 to 35 percent of the total.[9]

"The health care system's fundamental design flaw is that it was designed by physicians to maximize their professional autonomy and incomes..."

This prodigious waste works out very well for doctors, as they constitute nearly 16 percent of the top 1 percent of earners.[10] Among American physicians and surgeons, some 31 percent make it into the top 1 percent — the best odds of any of the 480 occupational categories for which records are kept.[11]

The health care system's fundamental design flaw is that it was designed by physicians to maximize their professional autonomy and incomes rather than high-quality and cost-effective care for patients. Decades before the federal government began paying for health care through Medicare and Medicaid, state governments were busy regulating it — at the behest and for the benefit of doctors. State licensing laws gave the medical profession numerous mechanisms for boosting physicians' incomes by limiting supply: first, requiring doctors to complete four years of college and then four years of medical school (in many advanced countries you can save two years by getting a six-year medical degree immediately after high school); second, limiting the number of medical schools through the American Medical Association's authority to grant accreditation; third, requiring completion of a U.S. residency (many other advanced countries recognize residencies completed abroad); fourth, requiring would-be doctors to pass a state licensing exam; and finally, defining the scope of medical practice so broadly as to give doctors a monopoly over many tasks that do not remotely require such rigorous training and

8 William Shrank et al., "Waste in the US Health Care System: Estimated Costs and Potential for Savings," JAMA, Vol. 322, no. 15, pp. 1501-1509, October 15, 2019.

9 See Donald Berwick and Andrew Hackbarth, "Eliminating Waste in US Health Care," JAMA Vol. 307, no. 14, pp. 1513-1516, April 11, 2012 (waste estimated at 35 percent of total spending); The Healthcare Imperative: Lowering Costs and Improving Outcomes: Workshop Series Summary (Washington, DC: Institute of Medicine of the National Academies, 2010) (waste estimated at 31 percent of total spending).

10 Bakija et al., "Jobs and Income Growth of Top Earners."

11 See Jonathan Rockwell, A Republic of Equals: A Manifesto for a Just Society (Princeton, N.J.: Princeton University Press, 2019), pp. 244-245..

screening.[12]

Not satisfied with controlling supply, the medical profession succeeded during the middle decades of the 20th century in systematically suppressing the emergence of group practices in which doctors were paid fixed salaries and patients charged flat annual fees. Further, they succeeded in getting almost all states to ban the corporate practice of medicine — that is, to make it illegal for nonphysicians to manage doctors in the practice of medicine. The medical profession thus succeeded in preserving the fee-for-service payment model that is at the root of so much unnecessary and ineffective medical treatment.[13]

"Drug makers are able to game the U.S. patent system to extend patent monopolies far beyond their normal 20-year terms."

As medical progress yielded an ongoing proliferation of new, useful, and highly expensive treatments, third-party payment — first by private insurance companies, and then by the federal government — gradually assumed the central role in financing health care. But since the health care system that was the beneficiary of these new sources of funding was organized to systematically suppress incentives for cost-effectiveness, the result has been double-barreled dysfunction. First, of course, health care spending has skyrocketed — increasing six-fold on an inflation-adjusted, per capita basis since 1970, and rising from under 7 percent of GDP back then to nearly 18 percent today. Second, a big and growing chunk of that spending goes to never-ending administrative warfare between insurance companies trying to contain costs from the outside and providers bent on maximizing payments. American consumers and taxpayers now spend nearly five times as much per capita on health care administrative costs as do the citizens of other rich democracies, as keeping up with the blizzard of paperwork now employs one billing professional for every two doctors.[14]

Another important source of wasteful health care spending and unjust enrichment at the top can be found in the pharmaceutical industry. Drug makers are able to game the U.S. patent system to extend patent monopolies far beyond their normal 20-year terms. A study of the nation's 12 top-selling drugs reveals an average of 71 patents granted per drug and 38 years of attempted patent protection. Prices for these drugs have shot up by 68 percent on average since 2012.[15] Pharma-

12 See Lindsey and Teles, The Captured Economy, pp. 100-105; Robert Orr, "U.S. Health Care Licensing: Pervasive, Expensive, and Restrictive," Niskanen Center, May 12, 2020.

13 See Rockwell, A Republic of Equals, pp. 251-253.

14 See ibid., p. 254.

15 "Overpatented, Overpriced: How Excessive Pharmaceutical Patenting Is Extending Monopolies and Driving Up Drug Prices," I-MAK, August 2018.

ceutical companies also exploit cumbersome FDA regulations on approving generic drugs to exclude competition and jack up prices — recall the recent scandals over Martin Shkreli and Daraprim, and Mylan's extortionate price hikes for EpiPens. Big Pharma's skill at regulatory capture translates into abnormally high returns, with profit margins for the industry averaging above 17 percent.[16]

Housing

A third gross distortion of the U.S. economy brought about by regulatory capture involves housing. Here the sacrifice of economic sanity has taken the form of death by a thousand cuts. Local control over zoning and land use, and the capture of that control by "NIMBY" ("not in my back yard") interests opposed to new housing construction, have resulted in a housing availability crisis in many American cities — as well as environmentally noxious sprawl and morally noxious racial and socio-economic segregation.

"Local control over zoning and land use, and the capture of that control by NIMBY interests opposed to new housing construction, have resulted in a housing availability crisis in many American cities..."

Zoning has been widespread in the United States for the better part of a century, and its exclusionary effects have been central to its political appeal from the outset. Until recently, though, zoning's major impact was in determining where housing would be located in a given metro area — not how much of it would be built. Since the 1970s, though, tighter limits on land use combined with exhausted opportunities for sprawl have imposed an increasingly restrictive constraint on new housing supply, especially in big coastal cities, resulting in a dramatic run-up in housing prices. Artificial scarcity created by withholding permission to build now accounts for some 20 percent of the price of housing in Washington, D.C., and Boston; 30 percent in Los Angeles and Oakland; and 50 percent in San Francisco, San Jose, and Manhattan.[17]

Just as this dynamic got underway, these same big coastal cities became the engines of America's information economy. Attracting increasingly high concentrations of college-educated workers, these "human capital hubs" now boast the country's highest incomes and fastest productivity growth. Yet because of sky-high housing prices, many people who would otherwise have moved there — and who could have bettered their condition considerably by doing so — have not. The result

16 U.S. Government Accountability Office, "Drug Industry Profits, Research and Development Spending, and Merger and Acquisition Deals," November 2017.

17 See Lindsey and Teles, The Captured Economy, pp. 109-123; Edward Glaeser et al., "Why Is Manhattan So Expensive? Regulation and the Rise of Housing Prices," Journal of Law and Economics Vol. 48, no. 2, pp. 331-69, October 2005.

has been the breakdown of regional economic convergence and the emergence of stark geographic inequality, especially along the urban-rural divide. And this breakdown, in turn, has led to a growing spatial misallocation of America's population — not enough people in the country's most dynamic and productive places. The cost of this spatial mismatch is staggering — several percentage points of GDP, according to various estimates.[18]

Here again, what's bad for the country as a whole has been immensely beneficial for a narrow group of insiders — in this case, incumbent homeowners in high-price markets. Windfall gains created by regulatory moats around the most desirable places to live have been an important driver of rising wealth inequality.[19] Indeed, there is strong evidence to suggest that the rise in capital's share of national income is due entirely to zoning-fueled appreciation of housing wealth.[20]

The brief case studies provided above suffice to demonstrate just how serious the problem of regulatory capture has become, and it should be noted that the problem crops up in many other sectors as well. To liberate the captured economy and restore free and open competition where it has been systematically twisted and squelched, we propose here a four-part agenda: (1) shrink the bloated financial sector; (2) roll back "intellectual property" excesses; (3) improve access to health care through supply-side reforms to boost competition; and (4) reduce regulatory barriers to new housing.

Shrink the Bloated Financial Sector

Prior to the financial crisis, the rapid growth of finance was widely heralded — by policymakers, economists, and of course industry representatives — as a glittering success story. Supporting that assessment was an impressive body of economic scholarship showing a strong correlation between the size of a country's financial sector and the size and growth rate of its overall economy.[21]

In the aftermath of the economic ruin and political convulsions that followed

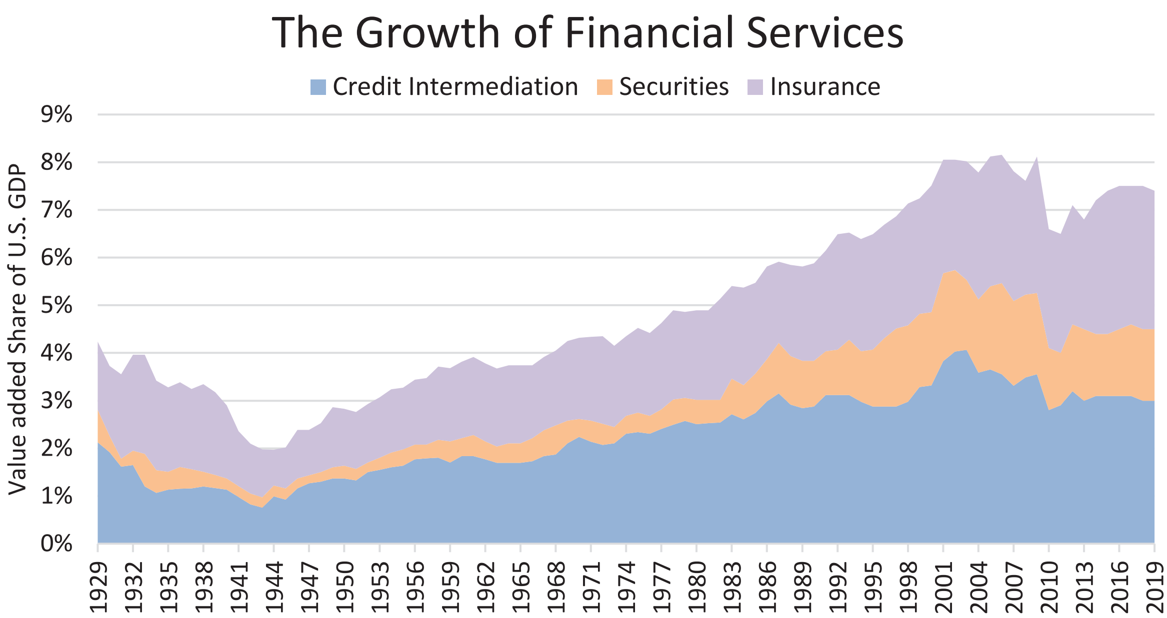
18 See Edward Glaeser and Joseph Gyourko, "The Economic Implications of Housing Supply," Journal of Economic Perspectives Vol. 32, no.1, pp. 3-30, Winter 2018; Kyle Herkenhoff et al., "Tarnishing the Golden and Empire States: Land-Use Restrictions and the U.S. Economic Slowdown," National Bureau of Economic Research Working Paper no. 23790, September 2017; Enrico Moretti and Chiang-Tai Hsieh, "Housing Constraints and Spatial Misallocation," National Bureau of Economic Research Working Paper no. 21154, May 2017.

19 See David Abouy and Mike Zabek, "Housing Inequality," National Bureau of Economic Research Working Paper no. 21916, January 2016.

20 Matthew Rognlie, "Deciphering the Fall and Rise of the Net Capital Share," Brookings Papers on Economic Activity, Spring 2015; Peter Ganong and Daniel Shoag, "Why Has Regional Income Covergence in the U.S. Declined?," Journal of Urban Economics, Vol. 102, pp. 76-90, November 2017.

21 See, e.g., Ross Levine, "Financial Development and Economic Growth: Views and Agenda," Journal of Economic Literature, Vol. 35, pp. 688-726, June 1997.

the crisis, we now know that those earlier findings are in need of a critical qualification. Namely, they emerged from analysis that focused largely on poorer, less developed economies. In those countries, deliberate financial repression through interest rate caps along with unreliable legal systems combine to stymie financial development and prevent the fertile union of money and good ideas. But this state of affairs is dramatically different from conditions in rich countries like ours: In the world's lowest-income countries, private bank lending amounts to only 11 percent of GDP, compared to 87 percent in the highest-income countries.



Based on Figure 1 in Robin Greenwood and David Scharfstein. 2013. "The Growth of Finance." *Journal of Economic Perspectives*, 27 (2): 3-28.

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This earlier literature does confirm that financial sectors can indeed be too small. But what has become clear since the collapse of the housing bubble is that advanced economies can face the opposite problem: financial sectors that are excessively large. Recent research reveals that, across the span of economic development, the relationship between financial sector size and economic performance is shaped like an inverted U. According to one estimate, once total private credit goes past the sweet spot of around 100 percent of GDP, further expansion starts to become counterproductive.[22] In the United States, that ratio is now above 185 percent — down only slightly from its 2007 peak, when it surpassed 200 percent.[23]

Moving past this aggregated analysis and looking at the details of U.S. financial

22 Cecchetti and Kharroubi, "Reassessing the Impact of Finance on Growth."
23 "Domestic credit to private sector (% of GDP) — United States," The World Bank.

sector growth only strengthens the conclusion that this growth has been excessive. The main drivers of U.S. financial sector expansion were dramatic run-ups in (1) household credit, in particular residential mortgages, and (2) assets under active management.[24] The former, of course, ended in disaster, and there is strong evidence more generally, in research looking at dozens of countries over a 50-year period, that rising household debt is a harbinger of reduced GDP growth and higher unemployment.[25] In particular, the diversion of resources into mortgage-financed single-family housing not only carries the risk of financial meltdown, but also sustains and deepens a misbegotten dependence on home ownership for wealth-building, and with it a host of social ills — among them, environmentally harmful sprawl, racial and socioeconomic segregation, runaway housing prices in much of the country, and elevated wealth inequality.[26] As to the latter, the sizeable fees extracted from investors are inevitably a collective waste of money, as they are premised on promises to beat the market that cannot be realized for the market as a whole. Yes, deep and liquid credit and capital markets are vital fuel for economic progress — but not this kind of credit, not these kinds of markets.

"America's bloated, crisis-prone financial sector is sustained by massive government subsidies..."

America's bloated, crisis-prone financial sector is sustained by massive government subsidies — including tax preferences for debt, tax preferences for savers that disproportionately benefit the well-off while boosting business for asset managers (e.g., 401(k) retirement plans and 529 college savings plans), and a raft of subsidized loan programs. But the biggest and most pernicious subsidy is inherent in the basic design of the U.S. financial regulatory system.

At the root of the problem is financial institutions' extreme reliance on debt financing, with debt-to-asset ratios well in excess of 90 percent as the industry norm. This level of debt dependency is inherently destabilizing, making financial firms highly vulnerable to both liquidity and insolvency crises. Unfortunately, the regulatory system is premised on the assumption that extreme leverage is natural, unavoidable, and even desirable. So rather than eliminating this fundamental cause of financial instability, policymakers have chosen to try to regulate around it with detailed controls on the risks that financial institutions can take. Over the long run, such regulation resembles putting a lid on a pot while leaving the burner on high:

24 Greenwood and Scharfstein, "The Growth of Finance."

25 Atif Mian et al., "Household Debt and Business Cycles Worldwide," National Bureau of Economic Research Working Paper No. 21581, July 2016.

26 "Home ownership is the West's biggest economic-policy mistake," The Economist, January 16, 2020.

Sooner or later, the lid will get knocked off and the pot will boil over.[27]

To rein in our run-amok financial sector and steer the economy away from debt dependency and chronic misallocations of resources, we need to unwind the subsidies that have brought us to this pass. To that end, the highest priority is to impose strong capital requirements on financial institutions. There are many attractive reform proposals in circulation[28], but the necessary elements of effective reform include (1) a requirement that banks hold equity capital equal to at least 20 percent of assets, and (2) anti-circumvention rules that either tax or ban outright the use of short-term debt financing by nonbank or "shadow" financial institutions.

"...a public banking option would be a boon for the 25 percent of U.S. households who are now unbanked or underbanked."

At the same time as we are trying to limit leverage within the financial system, we should be undertaking reforms that reduce debt dependency in the rest of the economy and constrict the flow of funds into a volatile system whose excessive size contributes to its undue and destructive influence over policymaking. The most obvious step toward this end is to eliminate, or reduce as much as possible, both the general tax preference for debt and the specific tax preference for mortgage debt.

Beyond that, there is a strong case to be made for some kind of public option for savings and checking accounts. One promising proposal, advanced by Vanderbilt University law professor Morgan Ricks, is to allow individuals, businesses, and other private institutions to maintain bank accounts with the Federal Reserve.[29] As Ricks and co-authors point out, banks currently hold such accounts, which pay higher interest than commercial banks and allow for instantaneous clearance of payments. Considerations of horizontal equity thus favor extending this advantageous privilege, now exclusively enjoyed by banks, to the rest of us. Beyond leveling the playing field, a public banking option would be a boon for the 25 percent of U.S. households who are now unbanked or underbanked.[30] Access to central bank accounts with no fees and no minimum balances would give these households

27 Lindsey and Teles, "The Regulatory Subsidy for Extreme Leverage."; Anat Admati and Martin Hellweg, The Bankers' New Clothes: What's Wrong with Banking and What to Do about It, (Princeton, NJ: Princeton University Press, 2014).

28 Admati and Hellweg, The Bankers' New Clothes, pp. 176-191; "Federal Reserve announces plan to develop a new round-the-clock real-time payment and settlement service to support faster payments," Board of Governors of the Federal Reserve System, August 5, 2019; John Cochrane, "Toward a run-free financial system," SSRN, April 16, 2014.

29 Morgan Ricks et al., "FedAccounts: Digital Dollars," SSRN, July 16, 2020.

30 "2017 FDIC National Survey of Unbanked and Underbanked Households," Federal Deposit Insurance Corporation.

the conveniences and advantages of banking that the rest of us take for granted, thereby helping to integrate them better into the market economy.

Finally, there are important considerations of political economy at play here. One important reason for the financial lobby's outsized political influence is commercial banking's inextricable connection to the payments system on which the day-to-day functioning of the American economy depends. A public option, with terms that commercial banks would find difficult to match, would reduce deposits with commercial banks, thereby serving to attenuate the systemic risks posed by bank failures and thus the leverage that the financial lobby has to demand bailouts and other subsidies.

Roll Back "Intellectual Property" Excesses

Protection of patents and copyrights in this country dates back to the dawn of the republic. "To promote the progress of science and the useful arts," the Constitution expressly authorizes Congress to "secur[e] for limited times to authors and inventors the exclusive right to their respective writings and inventions." Congress moved quickly to exercise that authority, enacting both the first Patent Act and first Copyright Act in 1790. For nearly two centuries, these laws provided modest protections that allowed authors and artists to make a living from their work and encouraged inventors to bring new products to market and, through disclosure requirements, share their innovations with the public.

In the past few decades, however, patent and copyright laws have been transformed beyond recognition. Longstanding limits on the scope and duration of the exclusive rights they provide have been systematically shredded. For copyright, terms have now been extended for generations past the life of the author; the elimination of registration requirements and other formalities means that everything written down is now copyrighted; and digital anti-circumvention rules have gutted the preexisting right to fair use. For patents, expanding definitions of what can be patented and increasingly lax standards for granting patents have boosted the annual number of patents granted nearly fivefold since the early 1980s. The results of these dramatic changes are an utter perversion of the laws' original purposes. Far from incentivizing creative works and technological innovation, the primary effects of these laws at present are to generate massive windfalls for giant corporations in heavily concentrated industries, legal uncertainty for actual artists and innovators, and exposure to maddening and expensive shakedowns for purchasers and users of copyrighted and patented products.

The reckless mission gallop at work here has been greatly aided by the simultaneous rise in popularity of the term "intellectual property" to describe patents and copyrights. This rhetorical coup allows interest groups seeking what amount to legally enforced (if temporary) monopolies to grab an undeserved moral high ground. They are able to claim that they are merely defending their rightful due against "theft" and "piracy," while portraying any effort to push back against their rent-seeking as an attack on the very institution of private property itself.

"Patent and copyright laws in their current state have pushed monopoly privileges far past sufficiency and into wretched excess."

But the argument that patents and copyrights are analogous to private property in physical objects is extremely weak. Physical property is an elegant and extremely robust solution to an unavoidable problem: how to allocate rights over scarce goods whose use, consumption, and control are inherently rivalrous. Ideas, by contrast, are nonrivalrous: If I use a recipe to bake a cake, or a formula to solve an equation, or sheet music to play a song, I have done nothing to diminish others' ability to do likewise. Accordingly, creating exclusive rights over ideas, rather than allocating naturally occurring scarcity, creates artificial scarcity where none existed before. For other types of this kind of "property," think taxi medallions — or the old robber barons of the Rhine, who strung big cables across the river to stop passing ships and hold them up for tolls.

Another way of saying that patents and copyrights create artificial scarcity is that they make everybody poorer — specifically, by depriving them of access to things that would otherwise be freely available. The only justification for doing this is that it provides some larger public benefit. And indeed, that justification can apply to patents and copyrights: Without exclusive rights, artists and inventors would sometimes be unable to earn sufficient returns from even commercially successful products to recoup their investments and make their efforts economically viable. The promise of patents and copyrights, then, is a greater level of artistic creation and technological innovation than would otherwise be the case.

But this promise holds only under quite narrow circumstances — when considerations of commercial gain (as opposed to, say, artistic self-expression) predominate, when the costs of innovation are relatively high but the costs of imitation are relatively low, and when other methods of monetizing one's work (e.g., through live concerts for recording artists, or service contracts for software developers) are insufficient. Remember, all that is needed to solve the incentive problem is sufficient returns to justify the effort; anything beyond that is, in economists' parlance, a rent. Patent and copyright laws in their current state, having pushed monopoly privileges far past sufficiency and well into wretched excess, are thus paradigmatic cases of rent-seeking.

The harms caused by patent and copyright overreach are widespread and substantial. In the case of pharmaceuticals, drug companies game the system by piling up patents for trivial and therapeutically irrelevant "innovations," allowing them to extend monopoly privileges — and the ability to raise prices — well beyond the intended 20-year term.[31] For software, the direct costs every year of defending infringement suits from so-called "nonpracticing entities" — better known as patent trolls — come to more than 10 percent of total annual R&D spending by all U.S. businesses.[32] Copyright law, which is supposed to give us more creative works to enjoy, regularly suppresses and blocks them: To cite just one jarring example, Amazon offers more books from the 1850s than from the 1950s, because copyright keeps so many of the latter out of print.[33] Meanwhile, anti-circumvention rules hinder everyone from farmers to soldiers in making needed repairs to equipment with copyrighted software.[34]

Over the long term, the stakes will only get higher. The defining feature of today's knowledge economy is that ideas and know-how have supplanted land and physical plant and equipment as the predominant and most important form of wealth. Continuing the trend we are now on, and locking up ever greater shares of this wealth to be exploited by a privileged few at the expense of the rest of us, is a recipe for stagnation and plutocracy. It is imperative that we reverse course.

Doing so will not be easy. Patent and copyright lobbies have succeeded not only in perverting U.S. law, but in enshrining those perversions in multiple treaties and international agreements. But however difficult the path, here are some of the most important steps toward restoring sanity to this area of the law:

- End the patentability of software and business methods. Such patents suffer a fundamental defect, in that the scope of what is protected is necessarily described by abstract language whose extent cannot be known ahead of litigation. A system of "property" where nobody knows where the boundaries are is not a system at all; it is chaos. The muddle we have today may be great for patent trolls and their lawyers, but it's bad for everybody else.

31 "Overpatented, Overpriced."

32 James Bessen and Michael Meurer, "The Direct Costs from NPE Disputes," Cornell Law Review, Vol. 99, Issue 2, Article 3, January 2014.

33 Rebecca Rosen, "The Missing 20th Century: How Copyright Protection Makes Books Vanish," The Atlantic, March 30, 2012.

34 Jason Koebler, "Why American Farmers Are Hacking Their Tractors With Ukranian Firmware," Vice, March 21, 2017; Elle Ekman, "Here's One Reason the U.S. Military Can't Fix Its Own Equipment," New York Times, November 20, 2019.

- Require that new pharmaceutical patents can be granted only for drugs that represent a substantial therapeutic advance over existing medicines. This would end the current practice of creating patent thickets for trivial improvements (e.g., a one-a-day pill instead of a two-a-day pill, a capsule instead of a tablet) that work to extend monopoly privileges beyond the intended 20-year term.
- Remove financial incentives for lowering patent standards. The U.S. Patent and Trademark Office is a fee-funded agency, which means that it receives more revenues for issuing more patents. These unhealthy incentives need to be eliminated by making the USPTO's funding independent of patenting activity. At the same time, there is a need for healthy budget increases for USPTO, as current underfunding means too few examiners and thus the inability to scrutinize applications appropriately.
- Dramatically shorten copyright terms. The original U.S. law provided for a 14-year term with the option for a single 14-year extension. Research shows that the incentive benefits of anything longer than this are minimal.
- Restore copyright registration requirements to eliminate the problem of orphan works. As an alternative, institute a system of nominal copyright taxes under which failure to pay leads to reversion to the public domain.
- Revoke the Digital Millennium Copyright Act's anti-circumvention rules. At the very least, modify those rules to guarantee the right of owners to repair products as they see fit.

Supply-Side Reforms to Boost Competition in Health Care

The decades-long national debate over improving access to health care has focused overwhelmingly on the issue of financing — in other words, on who pays the bills. Progressives, for whom accessible health care has long been a priority, have concentrated their efforts on making sure more people have insurance coverage — in particular, by expanding the government's provision of such insurance.

Along the way, there has been much less attention to why the bills are so high. Or rather, that question has been treated as subsidiary to the more fundamental issue of who pays. The progressive assumption has been that a larger government role in providing health insurance will also solve the problem of high prices and runaway spending, first by eliminating duplicative administrative costs, and second by using government's monopsony power to bargain down prices and refuse payment for treatments that aren't cost-effective. The flimsiness of that assumption, though, is revealed by even a quick glance at the relevant history. After all, the United States has had single-payer health care for Americans 65 and older for more than a half-century now — precisely the period over which medical prices and spending have exploded. Recall, in particular, the annual spectacle of the "doc fix" earlier this century. As Medicare spending regularly exceeded the "Sustainable Growth Rate" set to tie spending increases to the rate of GDP growth, Congress would dutifully rush in to appropriate extra money instead of allowing cuts in payments for physician services.

"American doctors earn dramatically more than their peers in other countries, and it is perhaps not coincidental that there are too few of them."

Here then is the lesson of experience: If health care providers have captured the system for determining how medical care is paid for, expanding the government's role in paying the bills will not succeed in getting those bills under control, and indeed will undermine the case for social insurance because of the hemorrhaging red ink it leads to.

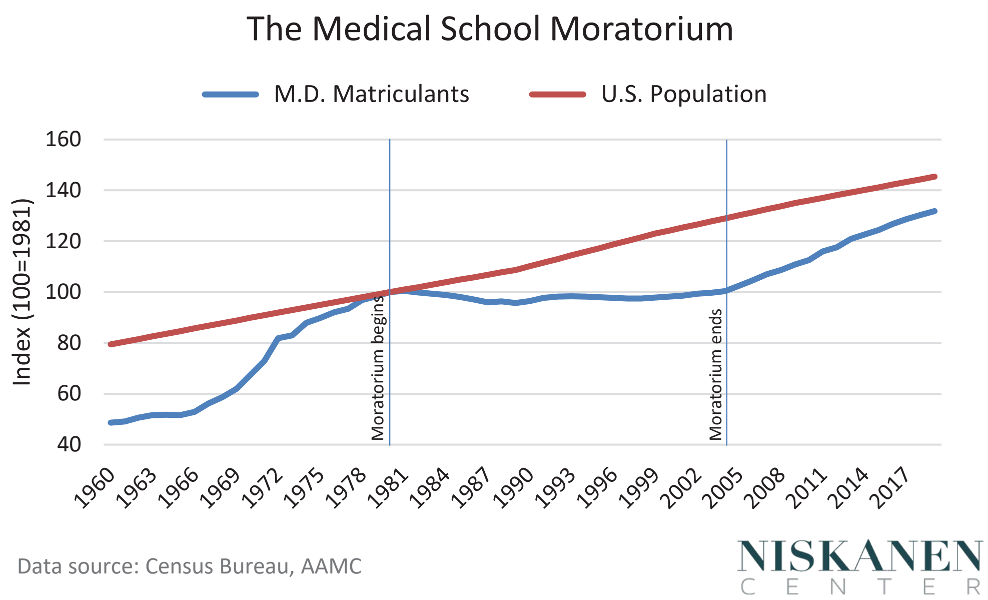
As discussed earlier in this paper, we support a robust system of public health insurance that delivers universal access to health care. We do not believe, however, that it is either necessary or advisable for government to fully supplant private health insurance. Most well-functioning health systems around the world guarantee universal access without resorting to a single-payer model; and in the United States, with medical care organized as it currently is, a single-payer system would be fiscally disastrous. Our preferred approach, universal catastrophic coverage, focuses the government role on handling big-ticket expenses while allowing private insurance to deal with more routine items. This division of labor between the private and public sectors allows each to operate where it is most effective.

In our view, though, the most pressing priority in health care reform is putting downward pressure on the bills, not changing who pays them. Prices are too high, and too much of the care that is provided is wasteful. To address these ills, the most effective approach is to unleash competition — which health care providers have systematically throttled in order to pad their incomes. And where competition remains artificially weak, government must use its powers as purchaser and regulator to keep prices and spending from spinning out of control.

American doctors earn dramatically more than their peers in other countries,[35] and it is perhaps not coincidental that there are too few of them. There are 2.6

35 Miriam Laugesen and Sherry Glied, "Higher Fees Paid to US Physicians Drive Higher Spending For Physician Services Compared To Other Countries," Health Affairs, Vol. 30, no. 9, September 2011.

doctors per 1,000 people in the United States, as compared to 3.6 in Australia, 3.2 in France, 4.2 in Germany, and 4.2 in Switzerland.[36] The U.S. shortfall is no accident, but rather the result of deliberate policy: In particular, in response to bogus fears of a looming "physician surplus," the United States imposed a moratorium on expanding the number of medical school slots from 1980 to 2005.[37] Meanwhile, the Association of American Medical Colleges forecasts a growing shortfall of doctors relative to demand that could exceed 120,000 by 2032.[38] Against this background, it should be screamingly obvious that one promising way to make health care more affordable is to increase the supply of health care providers.



That supply is artificially suppressed by medical licensing laws. Under those laws, completion of a U.S. residency is with very few exceptions required before one can obtain a medical license. However, the number of residency slots funded through Medicare has been frozen for more than 20 years, so that available residencies have increased only 1 percent a year since 2002 even as the number of medical school slots has grown 52 percent over the same period.[39] The misguided freeze on residencies should be ended, but so too should the U.S. residency requirement. Canada, for example, allows residency training in select other countries — including Australia, Hong Kong, Singapore, Ireland, Switzerland, the United Kingdom,

36 "Physicians (per 1,000 people)," World Health Organization's Global Health Workforce Statistics, The World Bank. It should be noted that Canada and the United Kingdom are comparable to the United States.

37 Robert Orr, "The Planning of U.S. Physician Shortages," Niskanen Center, September 8, 2020.

38 Tim Dall et al., "The Complexities of Physician Supply and Demand: Projections from 2017 to 2032," Association of American Medical Colleges, April 2019.

39 Joanne Finnegan, "More medical students than ever, but more residency slots needed to solve physician shortage, AAMC says," Fierce Healthcare, July 26, 2019.

New Zealand, South Africa, and the United States — to substitute for completion of a Canadian residency for purposes of obtaining a medical license.[40] The United States should move in the same direction.

"Numerous regulatory barriers thwart the realization of telemedicine's potential..."

The available supply of health care providers can also be expanded by facilitating the delivery of services across state and national borders. Telemedicine holds out considerable promise for increased convenience and expanded treatment options, eliminating unnecessary and time-consuming office visits and extending high-quality care to patients in remote areas. Numerous regulatory barriers, however, thwart the realization of telemedicine's potential, including state-based licensing that prevents a doctor from serving patients in other states and in some cases requires in-person meetings with patients. These barriers need to be eliminated, and the federal government can play a constructive role in encouraging mutual recognition of licenses and repeal of anti-competitive restrictions.

Access to cost-competitive outside suppliers could also be improved by allowing private insurers and Medicare to establish reference pricing that pays patients to travel out of state to receive less expensive care or else apply that lower reimbursement amount plus the travel allowance to the cost of local care. This same system could be extended internationally to encourage medical travel abroad to appropriately certified facilities.[41]

Of all options to expand supply and increase competition in the provision of health care services, probably the lowest-hanging fruit is to end state-level scope-of-practice restrictions that prevent mid-level health care professionals — nurse practitioners, dental hygienists, optometrists, midwives — from operating independently.[42] Here the main responsibility for reform lies with the states, but federal authorities can use funding levers to push states in the right direction.

Hospital care is currently the single biggest item in the U.S. health care budget, accounting for 33 percent of total spending.[43] Here again, prices in the United States

40 Ruth Campbell-Page et al., "Foreign-trained medical professionals: Wanted or not? A case study of Canada," Journal of Global Health, Vol. 3, no. 2, December 2013.

41 Avik Roy, "Affordable Hospital Care Through Competition and Price Transparency," FREOPP, January 31, 2020.

42 Lusine Poghosyan, "Here's an easy way to increase access to high-quality, affordable health care," Washington Post, January 2, 2020; Morris Kleiner and Kyoung Park, "Battles Among Licensed Occupations: Analyzing Government Regulations on Labor Market Outcomes for Dentists and Hygienists," National Bureau of Economic Research Working Paper No. 16560, November 2010; Bill Kekevian, "Expanding Scope of Practice: Lessons and Leverage," Review of Optometry, October 15, 2018; Brittany Ranchoff and Eugene Declercq, "The Scope of Midwifery Practice Regulations and the Availability of the Certified Nurse-Midwifery and Certified Midwifery Workforce, 2012-2016," Journal of Midwifery & Women's Health, Vol. 65, Issue 1, pp. 119-130, January 2020.

43 "National Health Expenditures 2017 Highlights," Centers for Medicare & Medicaid Services.

are abnormally high: According to one recent estimate, the average cost per day of hospital stays is 2.6 times higher than the OECD average.[44] And once more, problems of weakened and suppressed competition play a big role in jacking up prices and spending.

A merger wave that took off in the 1990s and then never stopped has produced a highly concentrated industry led by regional hospital chains with considerable market power. The median market's Herfindahl-Hirschman Index (a leading measure of market concentration) as of 2013 stood at 2,800 and rising, up from 1,600 in 1990. According to the Federal Trade Commission, industries with an HHI score of 2,500 or above are considered highly concentrated. This growing market power translates into higher prices: A 2011 study found that prices for six widely used procedures averaged 44 percent higher in more concentrated hospital markets.[45]

The market power gained through mergers has been consolidated and buttressed by various anti-competitive laws at the state level. Certificate-of-need laws inhibit the building of new hospitals, while "any willing provider" and "network adequacy" laws force insurers to contract with hospitals regardless of how much they charge — thus undermining insurers' bargaining power over prices.

"A merger wave that took off in the 1990s and then never stopped has produced a highly concentrated industry led by regional hospital chains with considerable market power."

The first step in bringing competition back to the hospital sector is to make further mergers much more difficult. Doing so will require substantial additions to the Federal Trade Commission's staff and resources. Although necessary, closing the barn door alone is insufficient when so much of the herd has already escaped. Accordingly, we need something along the lines of a proposal advanced by the Foundation for Research on Equal Opportunity: Hospital chains in markets above some threshold of market concentration would be required either to divest holdings to bring concentration below that threshold or else have payments capped at the median rate paid by a Medicare Advantage plan in that region. In addition, the federal government should use its funding leverage to encouragschare states to repeal the anti-competitive laws that prop up hospitals' market power.[46]

Drug makers, like physicians and hospitals, are too often able to overcharge because of restrictions on competition. Earlier in this paper we addressed the major

44 Roy, "Affordable Hospital Care."
45 Ibid.
46 Ibid.

barrier to competition in pharmaceuticals — patents and the temporary monopolies they confer — and suggested reforms that could mitigate problems of patent abuse. But even when drugs go off-patent, the Food and Drug Administration grants additional monopolies to producers of generic drugs under certain circumstances — for example, in the case of "orphan drugs" for rare diseases and drugs that were originally on the market before the FDA's regulatory authority kicked in. And sometimes surrounding patents on the manufacturing process or drug delivery device continue to inhibit competition from new suppliers. Although in general the U.S. generic drug market is a big health-policy success story (between 80 and 90 percent of all U.S. prescriptions are now for generic drugs at significantly lower prices than the branded competition), regulatory barriers do cause big problems in certain cases — recall the outrageous price hikes for Daraprim by Martin Shkreli's Turing Pharmaceuticals and for EpiPens by Mylan. Meanwhile, the relatively straightforward process for approving generic small-molecule drugs does not exist in the case of large-molecule biologics. Approval for generic "biosimilar" alternatives requires extremely expensive Phase III clinical trials not needed for small-molecule generics. As a result, biosimilars typically sell for only a modest 10-20 percent discount, while the introduction of small-molecule generics regularly leads to price declines of 80 percent.[47]

"Insurance companies make for much more inviting political targets than doctors, hospitals, and drug makers."

Although there are various tweaks that could improve the FDA's regulation of generics and biosimilars, by far the most effective policy response would be to allow importation and sale of any drugs approved in other advanced countries.[48] Full-fledged reciprocity is the cleanest and best approach, but a more modest move in the right direction would be to permit importation only in designated circumstances — specifically, when U.S. drug prices exceed certain thresholds.

There is no way to sugarcoat the political difficulty of actually delivering on the kinds of supply-side reforms discussed here. It is probably no accident that most of the energy in health care reform has been directed toward financing: Insurance companies make for much more inviting political targets than doctors, hospitals, and drug makers. Doctors regularly top polls as the most admired profession in the country; hospitals are large and fast-growing employers who frequently serve as anchors for local economies; drug makers may not enjoy the popular support that doctors and hospitals can count on, but they do have very deep pockets and long

47 Avik Roy, "The Competition Prescription: A Market-Based Plan for Affordable Drugs," FREOPP, May 16, 2017.
48 Greg Ip, "A Cure for Swelling Drug Prices: Competition," Wall Street Journal, August 31, 2016.

experience in playing the Washington game. Accordingly, providers' lobbies have a great deal of political muscle, and over the years they have made clear they are willing to flex it with ferocity. But however daunting the challenge that confronts us, there is simply no alternative to making the effort. The only way to restore sanity to the American health care system is to somehow make it through the buzz saw of provider opposition.

Reduce Regulatory Barriers to New Housing

Regulatory restrictions on the construction of new housing are typically imposed at the local level, but their effects scale up to a series of serious nationwide problems. Housing affordability is a major concern[49] across extensive stretches of the country: The home ownership rate for young adults is at the lowest point in decades[50]; roughly two-fifths of renters pay 50 percent or more of their income for housing[51]; and homelessness is on the rise again in recent years, driven by a surge in California.[52] Misallocation of the population away from the country's most productive cities is reducing total U.S. economic output by multiple percentage points every year.[53] Land use restrictions contribute to racial and socioeconomic segregation[54] and limit access to high quality public schools,[55] reducing opportunities and discouraging upward mobility for minorities and other disadvantaged groups. Finally, zoning's artificial restrictions on density exacerbate urban sprawl, thereby worsening the problems of climate change by increasing transit-related carbon emissions.[56]

It is tempting to moralize the land use issue by blaming everything on existing homeowners and their narrow-minded "NIMBY" ("not in my back yard") attitudes. After all, the strong bias of homeowners against new construction nearby

49 Conor Dougherty, "California's Housing Crisis: How a Bureaucrat Pushed to Build," New York Times, February 13, 2020.

50 "Locked Out? Are Rising Housing Costs Barring Young Adults from Buying their First Homes?", Freddie Mac, June 28, 2018.

51 "America's Rental Housing 2020," Joint Center for Housing Studies of Harvard University, 2020.

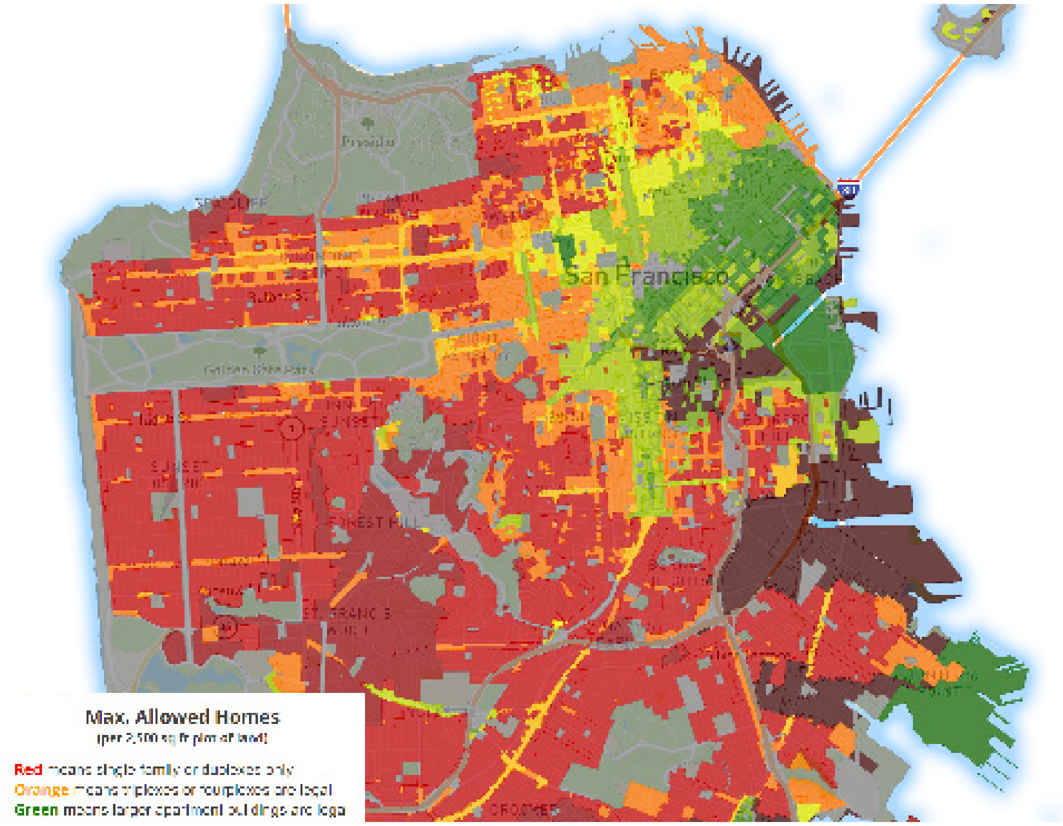
52 Hannah Knowles, "Homelessness in the U.S. rose for a third year, driven by a surge in California, HUD says," Washington Post, December 21, 2019.

53 See Glaeser and Gyourko, "Economic Implications of Housing Supply"; Herkenhoff et al., "Tarnishing the Golden and Empire States"; Hsieh and Moretti, "Housing Constraints and Spatial Misallocation."

54 Jessica Trounstine, "The Geography of Inequality: How Land Use Regulation Produces Segregation," American Political Science Review, Vol. 114, Issue 2, pp. 443-455, May 2020; Michael Lens and Paavo Monkkonen, "Do Strict Land Use Regulations Make Metropolitan Areas More Segregated by Income?" Journal of the American Planning Association, Volume 82, Issue 1, pp. 6-21, December 28, 2015.

55 "Zoned Out: How School and Residential Zoning Limit Educational Opportunity," United States Congress Joint Economic Committee, November 12, 2019.

56 Patrick Sisson, "As cities confront climate change, is density the answer?", Curbed, December 11, 2018.



Apartment buildings are illegal to build in 76% of San Francisco.
SFzoning.deapthoughts.com

— because of concerns over the disruptions of construction, increased congestion, and effects on neighborhood amenities and property values — is the primary political force in opposition to new housing, and its formidable muscle all too often carries the day. But although homeowners' attitudes may sometimes be tainted by unsavory preferences for racial and socioeconomic exclusivity, by and large their anti-construction bias is completely understandable. For most homeowning households, their residence is their largest single asset and comprises the vast bulk of their net worth; and for all of them, it's home, a place freighted with personal meaning and family significance. It is to be expected, therefore, for homeowners to take a skeptical view of any changes that could negatively impact their financial position and broader well-being.

The problem isn't the narrowness of homeowners' interests. The problem, rather, is that the current structure of land use decision-making gives massively disproportionate influence to those narrow interests. Local control over land use, combined with the hyperlocal (i.e., plot by plot) basis on which decisions to permit or prohibit new construction are typically made, ensures that NIMBY concerns are greatly overweighted relative to all the other interests that are affected. The solution, therefore, is to shift the locus of decision-making upward — from hyperlocal to metro-wide, from city to state, and even from the state level to the federal level.

This general principle suggests reform possibilities at all levels of government. At the municipal level, Minneapolis has led the way with pathbreaking reform. With its "Minneapolis 2040" plan, initially approved in December 2018, the city has taken the bold step of eliminating single-family zoning throughout the city. Of course, this does not mean that single-family homes are no longer allowed — far from it. Rather, it means there are no longer lots on which only single-family homes can be built; duplexes and triplexes are now permitted citywide. In addition, the plan opens the way for greater density by allowing three- to six-floor apartment buildings near transit stops while also eliminating off-street minimum parking requirements that work to jack up housing costs.[57]

"The solution is to shift the locus of decision-making upward..."

At the state level, Oregon followed Minneapolis's lead in July 2019 with legislation to end exclusive single-family zoning throughout the state. In cities with more than 25,000 people, the law allows duplexes, triplexes, fourplexes, and "cottage clusters" to be built on lots previously reserved for single-family homes; duplexes are now allowed in cities between 10,000 and 25,000 people.[58] Similar bills have also been introduced recently in Virginia and Maryland.[59] Under the leadership of state Sen. Scott Wiener, a major bill in California to allow greater density near transit and in affluent areas has thus far failed to make it through the legislature but has attracted significant support and made increasing headway over time.[60] Meanwhile, more modest reforms — to allow auxiliary dwelling units (otherwise known as "ADUs" or "mother-in-law flats") and to speed up permitting of new construction — have passed in California.[61]

Although Washington has traditionally deferred to states and localities on issues of municipal land use, that deference is now being actively reconsidered — to which we say, the sooner the better. It has become clear in recent years that local land use policy has important ramifications at the national level for GDP growth,

57 Richard Kahlenberg, "How Minneapolis Ended Single-Family Zoning," The Century Foundation, October 24, 2019.

58 Laura Bliss, "Oregon's Single-Family Zoning Ban Was a 'Long Time Coming'," Bloomberg CityLab, July 2, 2019.

59 Kriston Capps, "With New Democratic Majority, Virginia Sees a Push for Denser Housing," Bloomberg CityLab, December 20, 2019; Kriston Capps, "Denser Housing Is Gaining Traction on America's East Coast," Bloomberg CityLab, January 3, 2020.

60 Elijah Chiland, "SB 50 didn't pass. But California is still considering these housing bills.", Curbed Los Angeles, February 6, 2020.

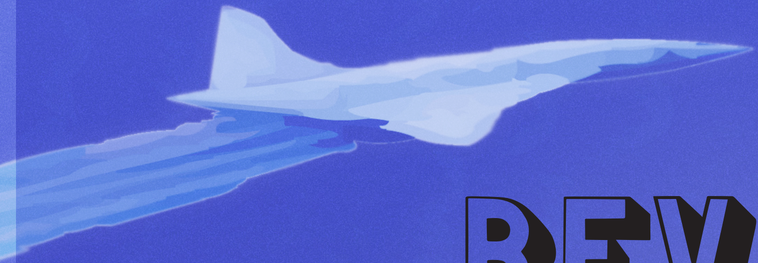
61 Patrick Sisson, "Will California's new ADU laws create a backyard building boom?", Curbed, October 11, 2019; Marisa Kendall, "Is California's most controversial new housing production law working?", Orange County Register, November 26, 2019.

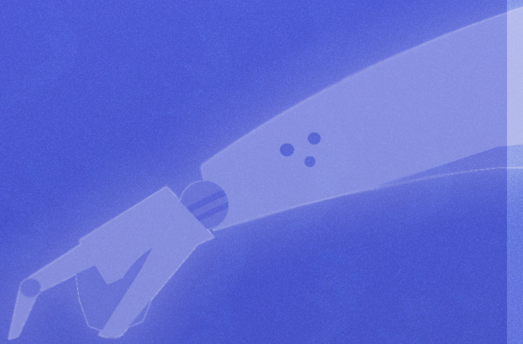
wealth inequality, and prospects for upward mobility — and at the global level for carbon emissions and climate change. Accordingly, the federal government can no longer afford to sit idly by as unchecked NIMBYism undermines the national interest on multiple fronts.

The most straightforward way for federal policy to encourage more liberal rules for new housing is through leveraging funding for urban development. This is the approach taken in the bipartisan Yes In My Back Yard (YIMBY) Act introduced in both houses of Congress in 2019. This bill would condition eligibility for federal Community Development Block Grant funding on local governments' identifying and eliminating zoning and permitting policies that hinder new construction. This basic approach could be followed in various permutations to incentivize needed reforms at the local level.

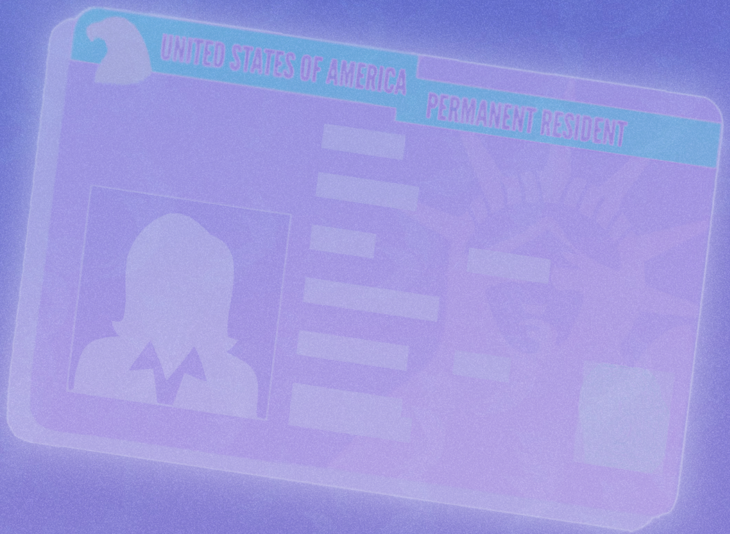
IV

Faster Growth, Fairer Growth





REVIVING INNOVATION AND DYNAMISM

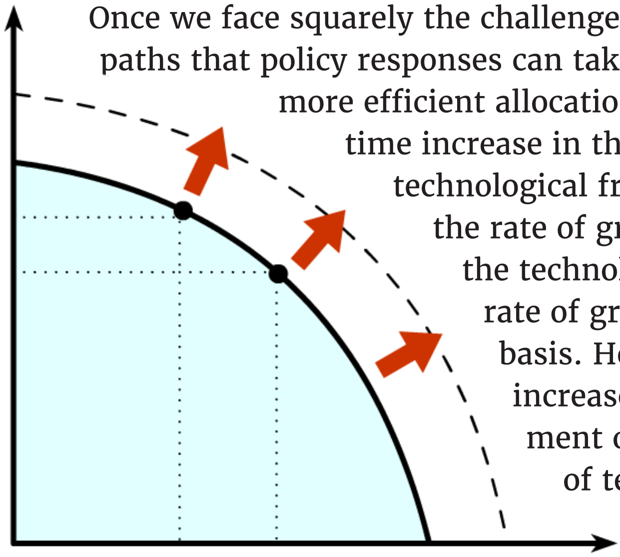


PART IV. REVIVING INNOVATION AND DYNAMISM

The Agenda

Any serious effort to upgrade American capitalism's capacity for innovation and dynamism must begin with the recognition that powerful forces are pushing the other way. As we discussed earlier in the paper, declining population growth, relatively high levels of labor force participation and educational attainment, and a century-plus of harvesting the lowest-hanging fruit of organized, systematic research and development mean that various opportunities for continued increases in output per capita are narrowing or closing altogether. Advances on the horizon may soon change that, from machine learning to genetic engineering. But for now, the unpleasant but undeniable fact is that economic growth is getting harder, and therefore the path of least resistance is toward a steady sapping of America's wealth-creating vigor. Policymakers will need to up their game to resist, much less overcome, the headwinds that now confront us.

Rising to the challenge will require a decided shift in attitudes, as politicians typically care much more about dividing the economic pie than growing it. This is obvious with progressives, as their emphasis on protecting the less well-off is premised on the idea that the immense productive power of American capitalism is up to the task: What is missing are the redistribution and regulations needed to channel that power in more egalitarian ways. Conservatives, by contrast, talk much more about growth and the "supply side," but the policy prescriptions most associated with this rhetoric make clear that their concerns are predominantly distributional as well — in the other direction. Their favorite nostrums for boosting growth, notwithstanding how poorly designed they are to accomplish their aim, are invariably cuts in top tax rates and reductions in health, safety, and environmental regulations — in other words, remedies that will directly improve the individual and corporate bottom lines of the well-to-do constituencies of the right but do little to spur fundamental innovation.



Once we face squarely the challenge of slowing growth, there are two broad paths that policy responses can take. First, we can take steps to achieve a more efficient allocation of resources, thereby producing a one-time increase in the level of output — a movement along the technological frontier and thus a temporary increase in the rate of growth. Second, we can take steps to extend the technological frontier itself, thereby raising the rate of growth indefinitely — i.e., on an ongoing basis. Here, there are only two practicable options: increase the rate of innovation, or the development of useful new ideas; and increase the rate of technology diffusion, or the reallocation of resources that results from the adoption of useful new ideas.

Although there is a clear analytical distinction between changes in the level of output and changes in the rate of output growth, in practice measures that accomplish the former will frequently be helpful in achieving the latter as well. This is true because the kinds of policies that result in significant misallocations of resources — whose reform will lead to a more efficient allocation — also tend to distort the incentives to innovate and adopt new ways of doing things. In other words, moving along the technological frontier will make it easier to also push that frontier outward.

Thus, in the previous section on liberating the captured economy, we advocated policy reforms to eliminate rents created by the regulation of finance, intellectual property, health care, and housing, thereby correcting massive misallocations of resources. These reforms would lead the U.S. economy to a higher level of output by eliminating grossly wasteful spending and redirecting it to higher, better uses; in addition, reducing the artificial scarcity of housing in the nation's most productive cities would raise the level of output by enabling workers to move to the parts of the country with the best opportunities. Consequently, these reforms would boost the economy's growth rate during the transition to a new, higher output level.

At the same time, our proposals to reverse regulatory capture would also work to improve the incentives to innovate and diffuse new technologies, thus holding out the promise of an accelerating growth rate. Our excessively large financial sector, for example, draws in significant amounts of human capital, up to and including many would-be theoretical physicists, only to employ that quantitative genius toward winning zero-sum games involving the exploitation of small discrepancies in asset prices. Accordingly, shrinking the sector will not only produce a one-time improvement in resource allocation; it stands to boost the rate of productivity growth rate itself, shifting talent into sectors that push out, rather than merely move along, the technological frontier. Similarly, restoring patent and copyright protections to something like their traditional confines will reduce rents for law firms and patent trolls, but also speed the diffusion of innovation by narrowing monopoly privileges and accelerating their expiration, while preserving incentives for those who need the temporary protection they afford. Increasing competition in the health sector should likewise sharpen incentives to innovate, especially in how medicine is organized. And lastly, scaling back barriers to building new housing will facilitate a more efficient allocation of labor around the country — but also increase the rate of productivity growth thanks to the increasing returns of urban agglomeration.

> *"…the kinds of policies that result in significant misallocations of resources also tend to distort the incentives to innovate and adopt new ways of doing things."*

Accordingly, our proposals to fight back against regulatory capture constitute, on their own, an ambitious pro-growth agenda. In this section, we round out that agenda with a further package of reforms aimed at improving prospects for growth through a mix of output-level and growth-rate changes. A vigorous response to the problem of climate change, with a carbon tax as its centerpiece, is a necessary element of any larger strategy to encourage innovation, as decarbonization is one of the most important innovation challenges now facing the United States and the world. Robust levels of immigration directly boost output by increasing labor inputs; in addition, immigrants are a vital contributor to new firm formation, especially in high tech sectors, and immigration encourages innovation more generally by supporting population growth. Reversing the decades-long slide in public R&D spending, coupled with changes in how public dollars are awarded, can help to revitalize America's innovation system. Economic development policies to diversify America's productive capacity, foster excellence in engineering and manufacturing, and encourage greater regional balance in economic output can simultaneously boost dynamism while reducing skill- and geography-based economic polarization. In conjunction with liberalizing new housing construction, reducing other barriers to geographic mobility can facilitate the reallocation of labor to the places that can best make use of it. And streamlining the environmental review process can not only clear the way for productivity-enhancing investments in infrastructure, but also facilitate all innovation and diffusion that requires moving atoms around on a large scale.

The reform proposals discussed in this section round out our agenda for creating a high road, high performance American economy for the 21st century. We understand that this agenda diverges in important ways from the predominant thinking in both the Republican and Democratic parties. We realize further that, even were this agenda to be endorsed fully by powerful political actors on this side or that, or some combination of actors on both sides, it is a highly ambitious program of deep and extensive structural change that would tax the capabilities of any political system, let alone one as plagued by polarization and dysfunction as our own. In particular, many elements of this agenda would encounter ferocious opposition from powerful and well-organized interest groups with a stake in maintaining the status quo or moving in a different direction.

We are therefore fully cognizant of the tremendous obstacles that stand between the articulation of this policy vision and its implementation. Nevertheless, we believe that simply articulating a new way forward, one that attempts to blend the best ideas from the left and the right into a new synthesis, is itself an important step. As the saying goes, the best time to plant a tree was 20 years ago, but the second-best time is now.

Pursue Decarbonization for Long-Term Prosperity and Well-Being

In formulating proposals to stimulate innovation and dynamism, we must never lose sight of the fact that economic growth is not an end in itself. We seek rising levels of specialization and exchange, conventionally measured in terms of real GDP per capita, because increases in economic output generally track with an upward trajectory for living standards and well-being.

Such tracking, though, cannot be assumed in cases when economic activity generates negative externalities. When some industry's output causes harmful side-effects whose costs fall on others, that industry's expansion may be good for the GDP statistics that year but bad for society overall (and, indeed, bad for GDP in the long run). Accordingly, rules that limit and discourage incidental harms caused by economic activity are vital to proper market functioning. Regulations to reduce air and water pollution, ban unsafe products, and the like are not in any way "anti-market"; on the contrary, they are an essential part of the Invisible Hand, helping to ensure ongoing correspondence between private profit-seeking and the public good.

One ubiquitous side-effect of modern economic activity now threatens harms on a planetary scale: climate change caused by human-produced emissions of carbon and other greenhouse gases. To date, greenhouse gas emissions have increased atmospheric CO_2 levels by about 45 percent and global temperatures have increased about 1 degree Celsius since the middle of the 19th century. Such warming is projected to continue until greenhouse gas emissions can be brought to zero and will carry with it significant changes to the climate of nearly every region of the planet, along with intensified weather extremes and sea level rise. Those changes will disturb natural and human systems and pose significant risks in the coming decades and centuries.

"...there is only one responsible course of action: Move as quickly as politically practicable to cut carbon emissions and transition to clean energy sources."

Climate change is a massive risk management problem, with a range of possible outcomes from decisions about how much greenhouse gases should be emitted. Despite the solid consensus about the human effect on the climate and the dangers it poses, there is a great deal of uncertainty about future levels of warming, the effect of warming on regional climates, and the effects on economic activity. The remaining physical uncertainty in climate projections — a doubling of preindustrial CO_2 can be expected to raise average temperatures somewhere between 1.5 and 4.5 degrees Celsius — leaves room for the effects of climate change to range from manageably bad to catastrophic. As to the resulting economic damage, best estimates predict that such warming will reduce global income by up to 5 percent, but uncertainty permits much larger losses.[1] For instance, if the effects of climate change reduce the rate of economic growth or cause economic shocks[2], the losses could be much larger than expected. And as we have just learned the hard way with the coronavirus outbreak, failing to manage long-term risks because they seem distant and abstract is a recipe for disaster.

Under the circumstances, there is only one responsible course of action: Move

1 Richard Tol, "The impact of climate change and the social cost of carbon," Working Paper Series 1318, Department of Economics, University of Sussex Business School, 2018.

2 Noah Diffenbaugh and Marshall Burke, "Global warming has increased global inequality," *PNAS*, Vol. 116, no. 20, pp. 9808-9813, April 22, 2019; Jonathan Woetzel et al., "Climate risk and response: Physical hazards and socioeconomic impacts," McKinsey & Company, January 16, 2020.

as quickly as politically practicable to cut carbon emissions and transition to clean energy sources.[3] Today the generally accepted goal for global climate policy is to keep likely warming below 2 degrees Celsius, which would require emissions to reach zero in the second part of the 21st century. Meeting that goal does not guarantee that catastrophic consequences, either localized or systemic, will be avoided altogether, but the risks will be less. Given that there is a rock-solid relationship between reducing the risks of climate change and reducing total emissions, rapid decarbonization is warranted even if specific temperature goals are practically impossible to achieve.[4]

"Carbon pricing is the centerpiece of any well-designed policy response to climate change because of its unparalleled ability to align incentives properly for economic actors across the board..."

And the most efficient, least costly way to pursue this goal is by putting a price on carbon via a tax on carbon emissions. Rather than micromanaging the energy transition through command-and-control regulations, it is far better to allow market actors to decide for themselves how, when, and where cutting emissions makes the most economic sense. A carbon tax gives them the incentive to do precisely that. A carbon tax also raises government revenue, which can be used to reduce the burdens of the new tax on lower-income people, to reduce other taxes, or to support research and development of clean technology.

How high should the tax be? Although the theoretical challenges involved in estimating an optimal tax rate are daunting, as a practical matter the correct path is straightforward: Make the rate as high as politically possible and set the rate to increase above inflation. Furthermore, some kind of border tax adjustment is needed to level the playing field between domestic and foreign producers and avoid creating incentives for companies to shift production to carbon tax shelters. Where

3 While reducing the significant risks to wellbeing posed by climate change, standing alone, provides a decisive rationale for accelerated decarbonization of the economy, there are other compelling reasons for action as well. In addition to avoiding harms threatened by climate change, decarbonization can deliver sizeable affirmative improvements to wellbeing by cutting air pollution. Such pollution, especially in the form of fine particulate matter, is responsible for an estimated 100,000 premature deaths in the United States every year due to respiratory infections, lung cancer, stroke, and cardiopulmonary disease. Andrew Goodkind et al., "Fine-scale damage estimates of particulate matter air pollution reveal opportunities for location-specific mitigation of emissions," PNAS, Vol. 116, no. 18, pp. 8775-8780, April 30, 2019. These effects have been well known for some time, but in addition recent research is pointing to disturbing links between dirty air and harm to cognitive function: Chess players make more mistakes, baseball umpires blow more calls, and politicians' speeches show a decline in verbal complexity on days when air quality is poor. Matthew Yglesias, "Air pollution is much more harmful than you know," Vox, December 11, 2019; Patrick Collison, "Air pollution is a very big deal." Accordingly, decarbonization holds out the promise of big public health benefits as well as containing the costs of climate change. See Erik Olson, "In Climate Action, Don't Neglect Air Pollution," The Breakthrough, October 7, 2019.

4 Joseph Makjut, "Reducing Emissions, Reducing Climate Risks," Niskanen Center, March 23, 2016.

the new tax creates duplicative efforts with existing regulatory authority in the United States, then it is reasonable to supersede those regulations or to pause the implementation of new regulations while emissions fall due to the carbon tax.

Carbon pricing is the centerpiece of any well-designed policy response to climate change because of its unparalleled ability to align incentives properly for economic actors across the board, encouraging both energy producers to innovate and energy consumers to conserve. But since these incentives are most potent, and least disruptive, to the extent that economically viable clean-energy alternatives to fossil fuels are available, taxing carbon alone is not enough. In addition, a direct assault on the technical and policy problems that limit the availability of cost-competitive clean-energy sources is necessary.

"Accelerating the development and availability of cheaper clean energy will require policy measures that go beyond what is typically regarded as R&D."

To that end, we advocate a major increase in federal support for clean energy R&D. In a later section we will detail our broader proposals to revive public R&D more generally after a decades-long slump. While mission-oriented R&D initiatives and programs to promote diffusion and adoption can help to accelerate progress and productivity across a range of emerging technologies — including artificial intelligence, quantum computing, nanotechnology, biotechnology, new materials, 3D printing, and automated vehicles — nowhere is the need greater than in the energy field. Renewable energy, nuclear power, batteries, low-carbon fuels, clean manufacturing, clean aviation, clean agriculture, carbon capture, and geoengineering — further work is urgently needed on all these fronts, through a combination of grants, prizes, dedicated research centers, extension services, and ARPA-style initiatives.

Accelerating the development and availability of cheaper clean energy will require policy measures that go beyond what is typically regarded as R&D. After all, the goal here is not *technical* viability as demonstrated in a laboratory and measured in terms of performance benchmarks, but rather *economic* viability as demonstrated in the field and measured in accounting data. And the path from technical to economic viability is traversed through the steady, gradual accumulation of countless incremental improvements in the production process — in other words, through learning by doing. Fortunately, we know that this path exists: The phenomenon of the learning curve, in which production costs fall at a predictable rate as cumulative production totals rise, has been documented in industry after industry and is one of the most well-established regularities found in the study of business. And indeed, we are presently witnessing heartening progress along the learning curve for clean energy technologies: The cost of electricity from solar power drops 25-30 percent with every doubling of production, the cost of wind power drops 15-20 percent, and battery costs drop 20-30 percent.[5] To reach our clean-energy future before the harms caused and threatened by climate change grow too severe, we need to speed up these moves down the learning curve.

All of this puts renewables mandates, clean energy standards, and subsidies for clean energy deployment in a very different light. Ignoring the effect of the learning curve, these policies look like classic command-and-control regulation of the type that supporters of markets can usually be expected to roundly condemn. But given the existence of learning-curve effects, and their proven relevance to cost structures for clean energy, policies that accelerate cumulative production totals are better seen as a nontraditional form of R&D support: It is the development of new technologies to the point of cost-competitiveness that these policies support, and they do it better and faster than any known alternative. Accordingly, we endorse well-designed mandates and subsidies that accelerate the deployment of clean technologies as an important additional component of sound climate policy. Furthermore, public financing of supporting infrastructure for clean energy deployment — for example, electric vehicle chargers and CO_2 pipelines — can also help to accelerate the rollout of new technology and associated learning-curve effects.

Fuel Growth with Expanded Immigration

Of all the possible ways to spur faster growth, none is more obvious and straightforward than expanding immigration. Since economic output is a function of two main inputs, labor and capital, increasing those inputs is the easiest path to higher output. (Increasing output per unit of input, otherwise known as productivity, is a considerably trickier challenge — one that absorbs much of our attention throughout this paper.) And since large numbers of people around the world are eager and willing to move to the United States, increasing the size of the American labor force requires only that we stop turning so many of them away.

Expanding immigration can help to compensate for demographic trends that are highly unfavorable for growth. Declining birthrates since the end of the Baby Boom have paced a decades-long decline in population growth: The rate of increase in 2019 was the slowest for the United States in a century, since World War I and the global influenza pandemic combined to cause the population to actually dip slightly

5 Ramez Naam, "How to decarbonize America — and the world," Tech Crunch, February 15, 2019.

in 1918.[6] Falling fertility, together with a plateauing of women's entry into paid work, have produced a corresponding decline in labor force growth: Averaging 1.6 percent a year between 1950 and 2000, annual labor force growth then dipped to 1.1 percent in the first decade of the 21st century before plunging to 0.5 percent since then, with further growth projected to continue at the current low rate.[7]

The slowdown in population and labor force growth exerts strong downward pressure on American GDP growth. Absent an unexpected productivity-growth miracle, this slide will keep going and the size of the overall U.S. economy relative to that of faster-growing countries (most notably, China) will continue to shrink. This relative decline has important implications for national security, as American primacy in military strength and "soft power" have been anchored in economic primacy. Robust immigration is the best bet for slowing or arresting this decline.

While immigration surely can boost aggregate U.S. output, what about the per capita output on which living standards depend? Adding more people to the economy increases both the numerator (GDP) and the denominator (population), so the effect on the ratio between the two is not obvious.

It is clear enough, though, that at least high-skill immigration raises productivity and thus output per capita. Most obviously, immigrants with higher education attainment and earnings potential than native-born workers raise the skill level, and thus the productivity, of the overall workforce. Already, immigrants are more likely to have graduate degrees than native-born Americans (at the same time, though, immigrants are overrepresented at the low end of the skill spectrum as well); shifts in the composition of immigration toward higher skills could amplify this boost to America's human capital endowment.

In addition, for decades now, studies have been documenting the disproportionate role of immigrants in founding America's biggest and most innovative companies. According to a 2018 survey, 55 percent of U.S. startups valued at over a billion dollars have at least one immigrant founder. [8] The rise of Silicon Valley, and the dominant U.S. role in leading the information technology and Internet revolutions, are simply unimaginable without the myriad contributions made by people born all over the world — and the relative U.S. openness that made those contributions possible. Alas, we have no idea what world-changing companies we missed out on because their would-be founders were not allowed to come here, or were forced to

6 David Welna, "U.S. Population Growth in 2019 Is Slowest In A Century," NPR, December 31, 2019.

7 Mitra Toossi, "A century of change: the U.S. labor force, 1950-2050," Bureau of Labor Statistics, May 2002; "Annual Growth Rate of the Population, Labor Fore, and Employment, by Decade, 1998 to Projected 2028," Bureau of Labor Statistics.

8 Stuart Anderson, "Immigrants and Billion-Dollar Companies," National Foundation for American Policy, October 2018.

leave after graduate school.

While the role of high-skill immigrants in spurring American innovation is inarguable, the connection between immigration and innovation is unlikely to stop there. According to important new research, there are good reasons to believe that boosting aggregate immigration across all skill levels is also a boon for productivity growth. Namely, it is becomingly increasingly clear that the slowdown in population (and labor force) growth, and with it the aging of the population, are very bad for innovation and productivity. A 2016 study found that a 10 percent increase in the share of the population 60 years or older reduces growth in GDP per capita by 5.5 percent; a 2018 study followed up to estimate that between a quarter- and a full percentage point of the recent decline in productivity growth is attributable to aging.[9] Meanwhile, another 2018 study found that a drop in population growth leads to a fall in the rate of new firm formation, a critical component of the creative destruction that drives innovation.[10]

"...expanding immigration, regardless of skill level, can promote dynamism and innovation by pushing back against demographic headwinds..."

These studies suggest that growth per capita, not just aggregate growth, hinges on the overall population's age structure and rate of increase. It follows that expanding immigration, regardless of skill level, can promote dynamism and innovation by pushing back against demographic headwinds affecting the native-born population.

Unfortunately, we are not taking advantage of our country's attractiveness to would-be migrants. As a result of the Trump administration's travel bans, clampdown on granting asylum to refugees, and general hostility to immigration, net international migration to the United States fell to 595,000 in 2019 — down sharply from 1,047,000 in 2016 in the final year of the Obama administration. This is a move in the wrong direction: In our view, the recent historical norm of 1 million green cards granted annually should be seen as a floor to build on, not a ceiling we struggle to reach.

The Niskanen Center has been a leading voice for sound, well-designed, and politically sustainable immigration policy across a wide range of different issues. We

9 Nicole Maestas et al., "The Effect of Population Aging on Economic Growth, the Labor Force and Productivity," National Bureau of Economic Research Working Paper No. 22452, July 2016; Adam Ozimek et al., "Aging and the Productivity Puzzle," Moody's Analytics, September 4, 2018.

10 Hugo Hopenhayn et al., "From Population Growth to Firm Demographies: Implications for Concentration, Entrepreneurship and the Labor Share," National Bureau of Economic Research Working Paper No. 25382, December 2018.

understand that immigration policy implicates many concerns beyond productivity and economic growth, and that good policy must balance those competing concerns as well as reconcile sharply clashing perspectives within the electorate.[11] For present purposes, though, we want to identify a few broad principles of immigration reform that would align policy with the needs of a high road, high performance economy.

Specifically, we believe that a reform package with the following three basic components could provide the basis for a workable new consensus: 1) a healthy increase in annual legal immigration; 2) a shift in the composition of legal immigration to reflect a greater emphasis on potential economic contributions; and 3) a well-functioning system of visa tracking (to identify and locate overstayers) and workplace enforcement based on national identification cards. Of course, the devil is in the details, and there are a great number of details to work through. But reforms that incorporate these basic elements can preserve America's heritage as a haven for immigrants and leverage that heritage to improve long-term growth prospects, while at the same time addressing legitimate concerns about the actual and perceived shortcomings of current policy.

Double Down on Science and R&D

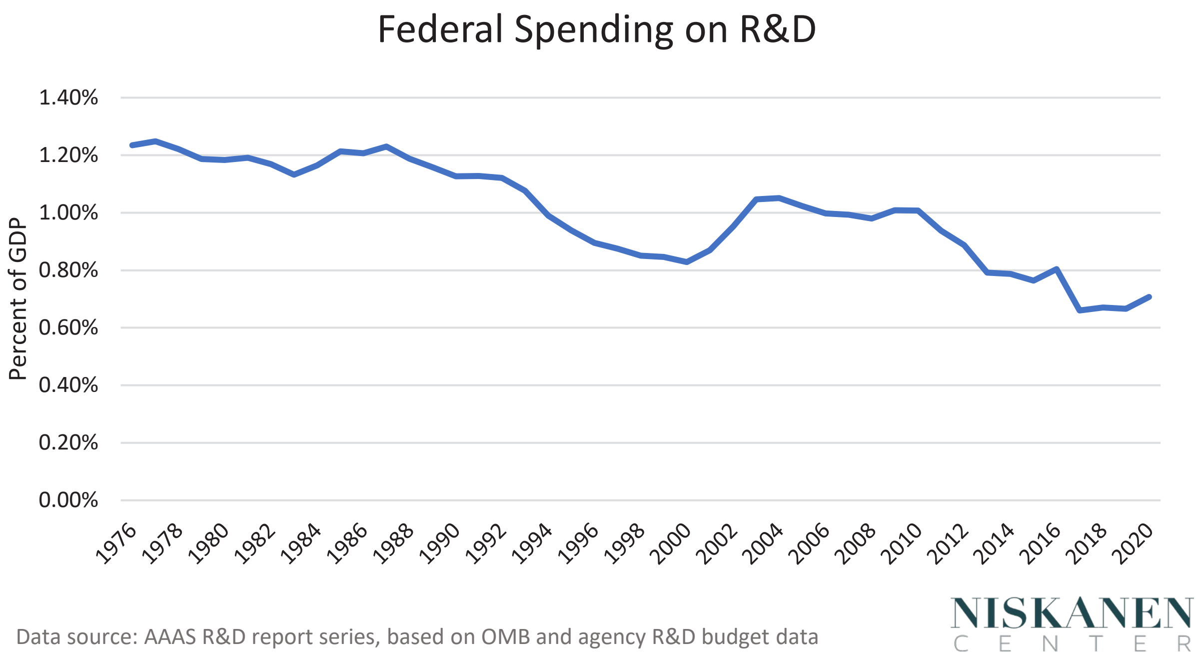
Science built the modern world. From the light bulb to the microchip, the wealth of our civilization owes itself to the curiosity of our species, and thus the drive of countless tinkerers and experimentalists who merely sought a better understanding of how the world works. Science will also be what ultimately resolves the COVID-19 crisis. As the pandemic wreaks havoc on our lives and the economy, researchers are working at a breakneck pace to understand the virus from top to bottom, and to apply those insights in the development of vaccines and treatments.

The United States plays a central role in these and most other scientific pursuits. As host to the world's top research institutions, and through our broad institutional support for entrepreneurship and innovation, our nation is uniquely well positioned to push outward along the scientific frontier and find out if it's truly endless.

Yet while the societal benefits of robust federal investments in science and technology are large and compounding, the fruits from any particular project can take years to materialize. As a result, policymakers often look to cut critical research programs to shore up discretionary spending, trading long-term gains for short-term savings. Our Global Positioning System, for example, began as a DARPA research project within the U.S. Department of Defense. It was primarily conceived

11 Niskanen Center, "Immigration."

of as a weapons support system and no one could have predicted that 50 years hence, a constellation of satellites whirling around Earth would revolutionize navigation and communications the world over. On the contrary: In 1979 the fledgling GPS program faced a massive setback when its budget was cut by $500 million, or roughly 30 percent, forcing multiple satellites to be dropped and new capabilities to be delayed. The program's budget was zeroed out from 1980 to 1982, and ultimately survived only because of strong internal advocacy from the Office of the Secretary of Defense.[12]



Stories like this can be found throughout the recent history of U.S. federal R&D programs. In fact, federal spending on basic research has fallen nearly 35 percent over the last 40 years as a fraction of GDP.[13] Private sector R&D has filled the gap, leaving our economy's total research effort roughly constant. But while private R&D is important, it tends to be focused on producing proprietary knowledge and techniques with near-term commercial viability. The public sector, by contrast, is unique in its ability to take the long view — to support the foundational investments in science and technology that may be unprofitable now, but which promise to transform our society generations later.

As federal research funding has become scarce, it has also become increasingly

12 The full GPS constellation wasn't restored to its original configuration of 24 satellites until 1988, representing a decade-long setback. See footnote 20: Carnegie Mellon University, "GPS History, Chronology, and Budgets," Appendix B.

13 American Association for the Advancement of Science, "Historical Trends in Federal R&D."

competitive. Funding rates for grant applications have steadily declined since the 1970s, when it was common for every other grant application to secure support. Today, in contrast, approval rates at the National Science Foundation (NSF) and National Institutes for Health (NIH) run as low as 10 to 20 percent.

In 2014, for example, the NIH's National Institute of Allergy and Infectious Diseases (NIAID) awarded funding to only 9 percent of submitted research projects.[14] Ten meticulously prepared proposals were thus rejected for every one that was successful, representing an enormous waste of researchers' time. Fortunately, one of the lucky winners was a project called "Understanding the Risk of Bat Coronavirus Emergence," which produced a series of prescient studies of the origins and dynamics of viruses like COVID-19 at a cost of about $3.7 million over five years.[15] Unfortunately, the project was suddenly terminated in April 2020 for seemingly political reasons, while a new proposal from the same investigator was rejected.[16] What potential insights into this or the next pandemic have been lost to the NIAID's cutting room floor, we'll never know.

The increasingly zero-sum competition for grant funding has had perverse effects on the culture of academia more broadly. The imperative to demonstrate near-term results in peer-reviewed publications rewards those who can make incremental progress within an existing scientific program, at the expense of heterodox or truly novel ideas. Meanwhile, young researchers can pour hundreds of hours into perfecting a grant application, only to be beaten out by established teams at more prestigious institutions. At the NIH, for instance, just 2 percent of NIH-supported institutions receive 53 percent of all research project grants.[17] And as Daniel Bier has noted, "In 1980, the National Institutes of Health (NIH) funded twice as many researchers under 40 as those over 50. Now, five times as many grants go to those over 50."[18] In turn, the typical American scientist no longer gets to direct their own major project until they're gray in the hair, despite substantial evidence that scientific creativity peaks quite early in one's career.[19]

The grant-making process itself creates enormous barriers to scientific progress. Principal investigators of federally sponsored research report that they spend over

14 National Institute of Allergy and Infectious Diseases, "Archive of Final NIAID Paylines by Fiscal Year," September 18, 2019.

15 U.S. Department of Health & Human Services, "Understanding the Risk of Bat Coronavirus Emergence," Tracking Accountability in Government Grants System.

16 Meredith Wadman and Jon Cohen, "NIH's axing of bat coronavirus grant a 'horrible precedent' and might break rules, critics say," Science Mag, April 30, 2020.

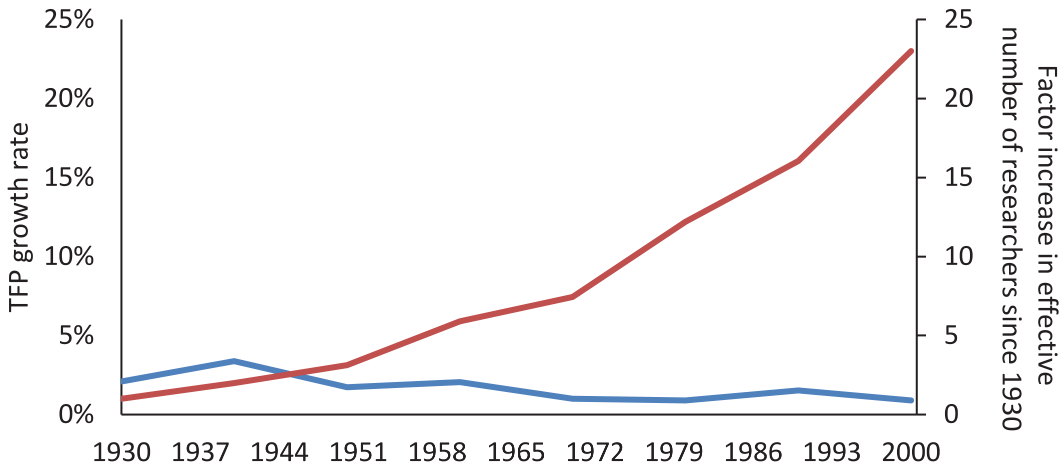
17 Wayne Wahls, "Opinion: The National Institutes of Health needs to better balance funding distributions among US institutions," PNAS, Vol. 116, Issue 27, pp. 13150-13154, July 2, 2019.

18 Daniel Bier, "Science Funding Is Wasting Young Careers, Here's How to Fix It," Freethink, March 12, 2019.

19 Benjamin Jones et al., "Age and Scientific Genius," National Bureau of Economic Research Working Paper No. 19866, January 2014.

40 percent of their time on administrative tasks associated with compliance.[20] On the financial reporting side alone, federal grants typically require every expenditure to be tracked and justified in detail, no matter how minor, and impose arbitrary purchasing restrictions on basic supplies. These administrative tasks often fall on the investigators, as the very same rules limit their ability to flexibly hire support personnel. Compliance effort, it's important to stress, does not necessarily correlate with better compliance outcomes. Past a point of diminishing returns, the effort put into ensuring resources are used effectively can itself become the dominant source of waste in the system.

Increasing Research Effort behind New Ideas



Nicholas Bloom & Charles I. Jones & John Van Reenen & Michael Webb, 2020. "Are Ideas Getting Harder to Find?," American Economic Review, vol 110(4), 1104-1144.

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Yet the real bureaucratic nightmare is reserved for studies involving human subjects, which are required by federal law to earn approval from one or more Institutional Review Boards (IRBs). IRBs are independent committees designed to ensure a study protocol meets the highest ethical standards and established in 1974 in response to the appalling Tuskegee Syphilis Study in which Black men with syphilis were misled about their condition to study the untreated progression of the disease — years after penicillin was known to be a cure. Human experimentation of this sort is a moral abomination and has no place in our society. Today, however, IRB supervision, and the voluminous informed consent forms that accompany it, are routinely triggered for studies where the risks to human subjects are trivial or

20 Sandra Schneider, "2012 Faculty Workload Survey: Research Report," Federal Demonstration Partnership, April 2014.

nonexistent, including simple surveys or studies involving archival data.[21] While this often involves a time-consuming risk-benefit analysis, the relative risks and benefits of bureaucratizing the research process — an involuntary human experiment in its own right — is treated as beyond reproach. Indeed, as Carl Schneider persuasively documents in *The Censor's Hand: The Misregulation of Human-Subject Research*, the mission creep of the IRB process has systematically undermined America's research capacity, and very likely costs thousands of lives every year through delayed and diverted research in the biomedical setting alone.[22]

In short, federal spending on basic science and R&D has both declined relative to our economy's size and become much less efficient per dollar spent. And this retreat has occurred even as — due to the progressive exhaustion of lower-hanging fruit — finding important new ideas is getting ever harder and therefore requires ongoing intensification of research effort.[23]

> *"...the mission creep of the IRB process has systematically undermined America's research capacity, and very likely costs thousands of lives every year..."*

We're living the consequences. Multifactor productivity growth (the type associated with new ideas) has stagnated since the early 1970s, contributing to middle-class wage stagnation. The evidence suggests that a dramatic slowdown in the rate of scientific discovery per dollar spent is at least part of the explanation. "That evidence demands a large-scale institutional response," Patrick Collison and Michael Nielsen write. "It should be a major subject in public policy, and at grant agencies and universities. Better understanding the cause of this phenomenon is important, and identifying ways to reverse it is one of the greatest opportunities to improve our future."[24]

The alternative is to succumb to what technologist J. Storrs Hall has dubbed the scientific establishment's "failure of nerve" and "failure of imagination." Failures of nerve occur when the basic ingredients for a technological breakthrough are known but working out the details is discouraged because it has been preemptively declared impossible. Heavier-than-air flying machines, for example, were

21 Omri Ben-Shahar, "Reforming the IRB in Experimental Fashion," The Regulatory Review, December 2, 2019.

22 To give just one example, the multinational study that established blood thinners like aspirin were highly effective at reducing the risk of heart attack was delayed in the U.S. by six months due to IRB review, resulting in an estimated 6,500 preventable deaths. Carl Schneider, The Censor's Hand: The Misregulation of Human-Subject Research (Cambridge, MA: MIT Press, 2015), p. 65.

23 Nicholas Bloom et al., "Are Ideas Getting Harder to Find?," National Bureau of Economic Research Working Paper no. 23782, September 2017.

24 Patrick Collison and Michael Nielsen, "Science Is Getting Less Bang for Its Buck," The Atlantic, November 16, 2018.

unanimously dismissed as impossible by the scientific community until the Wright brothers had the nerve to combine existing engineering and physics and prove them wrong. Failures of imagination, meanwhile, are harder to diagnose, but no less consequential. As Hall notes, "If the *fin de siecle* pundits had been pooh-poohing transitors and lasers instead of airplanes, we would not fault them to the same degree, because quantum mechanics was not understood — but they would have been wrong just the same."[25]

"Fixing the way we fund science will itself require a scientific approach."

Doubling down on federal support for research and development has the potential to break us out of this stagnation. Yet without deeper reforms to the federal grant-making process, new funding won't get the appropriate bang for its buck and would risk papering over the institutional sclerosis at the heart of America's waning scientific productivity.

Fixing the way we fund science will itself require a scientific approach. Rather than be beholden to any one model, Congress should provide a waiver authority to the heads of NSF and NIH and require they set aside a substantial portion of their annual budget — say, 10 percent — to conduct head-to-head experiments in alternative models of grant-making. Half of the allotment could be constrained to iterations on existing processes, including tweaks to peer review, how submissions are ranked, or the required length of proposals, holding everything else constant. Under the status quo, in contrast, such modest changes often require a drawn-out rulemaking process, making trial-and-error impossible. The remaining 5 percent, meanwhile, could be reserved for genuinely experimental models trialed over a multiyear period.

Kevin Gross and Carl Bergstrom, for example, have proposed replacing the existing process with a partial lottery.[26] Proposals would be evaluated as worthy of funding or not, as usual, but with awards allocated randomly to a subset of the highest-ranking proposals. Using the economic theory of contests, they argue this would lower the bar that applicants must clear to have a chance at funding, and thus reduce the time wasted writing and rewriting proposals. In 2013, New Zealand's Health Research Council became the first major science funding agency to use a lottery system, setting aside 2 percent of its annual budget to award "Explorer Grants" for proposals that promise to be "transformative, innovative, exploratory or unconventional, and have potential for major impact." Seven years on, and New

25 J. Storrs Hall, *Where Is My Flying Car?: A Memoir of Future Past* (2018).

26 Kevin Gross and Carl Bergstrom, "Contest models highlight the inherent inefficiencies of scientific funding competitions," *PLOS Biology*, Vol. 17, no. 1, January 2, 2019.

Zealand's Explorer Grants program has proven quite popular among Kiwi scientists.[27] Whether a lottery system ultimately makes sense for U.S. science funding is beside the point. We should instead be setting aside the resources to continuously test a variety of approaches against objective performance indicators — from alternative allocation schemes to no-strings-attached grants for promising young researchers.

> *"…establishing new technology hubs beyond the Boston and Bay Area corridors is an idea whose time has come."*

We support the Endless Frontier Act as a step in the right direction, at least in terms of the scale of its ambition.[28] Introduced by Sens. Chuck Schumer and Todd Young and Reps. Ro Khanna and Mike Gallagher, the Act would rename the NSF the National Science and Technology Foundation, and establish a new Technology Directorate with a $100 billion budget over five years. An additional $10 billion would be directed toward the creation of 10 technology hubs throughout the country, with the twin goals of spurring regional economic development while diversifying access to federal R&D investments.[29] Sen. Chris Coons and Sen. Dick Durbin's Innovation Centers Acceleration Act of 2020 proposes something similar, namely a national competition to identify nine up-and-coming metro areas as new "American Innovation Centers" eligible for a suite of public R&D investments.[30] As MIT economists Jonathan Gruber and Simon Johnson argued in their recent book *Jump-Starting America*, establishing new technology hubs beyond the Boston and Bay Area corridors is an idea whose time has come.[31]

With a focus on technologies such as advanced manufacturing, applied machine learning, and synthetic biology, the Endless Frontier Act would represent a major departure from the NSF's traditional focus on basic science. Nevertheless, the Act's most important innovation is the broad, DARPA-like authority it provides to the program managers selected by the Technology Directorate to issue grants, prizes, and contracts to academic institutions, individual investigators, private research groups, industry consortia, and more. Institutional flexibility of that sort, combined with a broader decentralization of the research endeavor, is precisely what's needed

27 Mengyao Liu et al., "The acceptability of using a lottery to allocate research funding: a survey of applicants," *Research Integrity and Peer Review*, Vol. 5, no. 3, February 3, 2020.

28 Todd Young, "Young, Schumer Unveil Endless Frontier Act to Bolster U.S. Tech Leadership and Combat China," May 27, 2020.

29 Jonathan Gruber and Simon Johnson, "We need new research hubs — but not on the coasts. Here's how we get them.," Washington Post, December 6, 2019.

30 Chris Coons, "Sens. Coons, Durbin announce legislation to expand federal R&D, extend tech economy to more cities across America," August 19, 2020.

31 Jonathan Gruber and Simon Johnson, *Jump-Starting America: How Breakthrough Science Can Revive Economic Growth and the American Dream* (New York: PublicAffairs, 2019).

to jump-start scientific and technological progress, test new ideas, and ensure that research supported by U.S. taxpayers is ultimately commercialized by U.S. companies.

"Attempts to clone the DARPA model that don't appreciate the high trust and autonomy provided to PMs are doomed to underwhelm."

It is often remarked that the key to DARPA's history of success "lies with its program managers,"[32] but it's worth unpacking exactly what that means. DARPA's director has unusually flexible hiring authority, but in exchange the internal program is kept quite small at around 100 program managers and a couple dozen support staff. PMs are hired on the basis of their talent and self-motivation and have at least one area of deep technical expertise — the sort of driven, abstract thinkers one could see founding a successful start-up company. A PM's tenure lasts only four to five years, during which they design and pitch a program concept and, once approved, execute the program with limited oversight. DARPA's exploratory tranche, for example, provides PMs with about $1.5 million to spend on "seedling projects" that acid-test whether an idea is even possible. This includes the ability to award research grants without preapproval or peer review, as well the ability to pull grants to redeploy resources elsewhere. As Ben Reinhardt notes, "Restrictions on spending money happen when you reach trust limits, so this low-oversight spending is another reason why DARPA depends on high trust in badass PMs."[33]

Attempts to clone the DARPA model that don't appreciate the high trust and autonomy provided to PMs are doomed to underwhelm.[34] And indeed, in so many ways, the bureaucratization of American science — from risk-averse grant-making to the IRB's mission creep — is symbolic of our institutional lack of trust in researchers and program officers alike. The Endless Frontier Act seeks to change this by not only boosting our investment in science and technology across the board, but by doing so in a way that puts trust in American scientists front and center.

Whether it's restoring robust wage growth or tackling global challenges like climate change and COVID-19, the need for massive federal investments in research and development has never been greater. But without trust, our research institutions will fail to move fast and take the risks necessary for truly big rewards. Structural reform of how we fund and regulate science is thus imperative. A scientific

32 Congressional Research Service, "Defense Advanced Research Projects Agency: Overview and Issues for Congress," March 17, 2020.

33 Ben Reinhardt, "Why does DARPA work?", June 2020.

34 Erica Fuchs, "Cloning DARPA Successfully," *Issues in Science and Technology*, Vol. 26, no. 1, pp. 65-70, Fall 2009.

and technological renaissance could be on the horizon. With the right policies in place, the United States can lead the way.

Promote Diversified Economic Development

Once-vibrant regions across the United States are grappling with deindustrialization, population decline, and shrinking tax bases. Meanwhile, prosperous cities have failed to properly absorb newcomers in search of opportunity, driving up rents and exacerbating urban inequality. These seemingly distinct issues may have quite different short-run policy implications, but what if they are two sides of the same phenomenon?

We don't normally think of the rural, working-class Trump-voter as having much in common with the metropolitan millennial who became radicalized in their struggle to afford a studio apartment. Yet they needn't be friends in the making to have their relative precarity linked by some common set of factors. In particular, the last two decades have borne witness to both the accelerated loss of American manufacturing jobs to offshoring and underinvestment, and to the rise of "knowledge work" that sorts college educated professionals into a handful of magnet cities. Both were the result of underlying trends in technology and globalization that combined to accentuate America's comparative advantage in college-educated labor — what trade economists would call our "abundant factor" — at the expense of other forms of human capital.[35]

This shift is captured in the college wage premium, which can be interpreted as reflecting either the increased returns to higher education or the deterioration of labor market opportunities for the two-thirds of working-age Americans without a college degree. Seeing only the first interpretation, policymakers have tended to promote "college for all," rather than fill the void of alternative modes of skill acquisition. As a result, college programs have experienced substantial grade inflation,[36] producing a glut of college graduates with modest career prospects despite substantial student loan debt. The college wage premium has thus stopped rising, and shifted to those with post-secondary degrees.[37]

Sluggish wage growth is a widely recognized phenomenon, but a focus on the

35 Samuel Hammond, "The China Shock Doctrine," National Affairs, Fall 2019.

36 Stuart Rojstaczer & Christopher Healy, "Where A Is Ordinary: The Evolution of American College and University Grading, 1940-2009," Teachers College Record, 2012.

37 William Rmmons et al., "Is College Still Worth It? The New Calculus of Falling Returns," *Federal Reserve Bank of St. Louis Review*, Vol. 101, Issue 4, pp. 297-329, Fourth Quarter 2019.

median worker doesn't tell the full story. In the background, rising *job polarization*[38] has hollowed out the availability of "middle skill" occupations, creating bifurcated labor markets in which "high skill" professionals live side-by-side with "low skill" service sector workers just barely scraping by.[39] We put "skill" in scare quotes here because economists don't measure skill directly, but instead use educational attainment as a proxy. Being skilled and having a college diploma are clearly not synonymous; nor does skill map onto a one-dimensional spectrum that runs from "low" to "high." Instead, human capital displays as much heterogeneity as the goods and services it goes into producing. An electrician and a plumber may both be categorized as "middle-skill," for example, but one cannot do the job of the other. America's college-tracked education system systematically fails to account for this heterogeneity of interests and aptitudes and has thus done little to provided non-college-educated workers with pathways to the middle-class.

> *"...job polarization has hollowed out the availability of 'middle skill' occupations, creating bifurcated labor markets..."*

These same forces can also help explain rising political polarization. As Will Wilkinson has observed, the propensity of college-educated liberals to self-sort into cities, while those with conservative temperaments stay rooted to home, has made population density the single best predictor of a location's partisan bent.[40] Dense, liberal places have become more uniformly Democratic, while rural, conservative places have become more uniformly Republican. The homogeneity of local electorates thus undermines the traditional political advantages enjoyed by moderates and rewards politicians for their ideological purity, pulling the Democratic and Republican Parties as a whole to their respective extremes.

In other words, unbalanced economic development creates unbalanced politics. Developing countries provide many examples of this dynamic that the United States can learn from. Left to their own devices, market forces can lead an emerging economy to overspecialize in its abundant factor, be it natural resources or low-wage labor. The former gives rise to petro states and the Dutch disease, whereby currency appreciation suppresses the development of productive export sectors, and turns politics into a zero-sum conflict over resource rents. The latter gives rise to the so-called "middle-income trap," whereby a country specialized in labor-inten-

38 Michael Boehm, "Job polarization and the decline of middle-class workers' wages," VoxEU, February 8, 2014.

39 Maria Canon and Elise Marifian, "Job Polarization Leaves Middle-Skilled Workers Out in the Cold," Federal Reserve Bank of St. Louis, January 1, 2013.

40 Will Wilkinson, "The Density Divide: Urbanization, Polarization, and Populist Backlash," Niskanen Center, June 26, 2019.

sive production underinvests in the capital, technology, and education necessary to transition to a high-wage equilibrium, and so enters a developmental cul-de-sac.[41]

Both the Dutch disease and the middle-income trap stem from the failure of an economy to properly *diversify*, and in many ways the contemporary U.S. economy exhibits symptoms of each. Following the collapse of the Soviet Union, the U.S. adopted an explicit strong-dollar policy, only rather than export oil, we exported the safety and stability of dollar-denominated assets like Treasury securities. The U.S. dollar now denominates two-thirds of international foreign currency reserves, 90 percent of foreign-exchange trades, and trillions of dollars in private assets held abroad.[42] This makes the U.S. the most attractive economy in the world to park one's excess savings, which we absorb in the form of our ever greater public and household debt.[43] Where a petro state might invest in pipelines and refineries, the U.S. invested in Wall Street — the de facto pipes of global finance. In the mid-1990s, the U.S. corporate sector thus transitioned from being a net borrower to being a net lender, while aggregate investment in tangible assets like structures and equipment withered on the vine.[44]

"We reject the misleading distinction between developing and developed countries, as if the United States has reached some kind of end-state."

And while the U.S. is no doubt a high-income country, our specialization in a particular kind of college-educated knowledge production — buttressed by financialization and the growth of intangible assets like intellectual property — puts us at risk of walking down a developmental cul-de-sac of our own.[45] We therefore reject the misleading distinction between *developing* and *developed* countries, as if the United States has reached some kind of end-state. On the contrary, economic development is a process that never ends, and without proactive diversification, even frontier economies can fall short of their full growth potential.

Unfortunately, the U.S. lacks any coherent economic development policy to speak of. At the state and local level, policymakers tend to focus on firm-specific tax incentives, designed to attract major businesses and create jobs for a region.[46]

41 Eva Paus, "Escaping the Middle-Income Trap: Innovate or Perish," ADB Institute, Working Paper no. 685, March 2017.

42 Brendan Greeley, "How to diagnose your own Dutch disease," Financial Times, March 13, 2019.

43 Michael Pettis, "The U.S. Trade Deficit Isn't Caused by Low American Savings," Carnegie Endowment for International Peace, August 8, 2018.

44 Samuel Hammond, "Rethinking American Investment In An Intangible Age," The American Conservative, June 6, 2019.

45 Samuel Hammond, "How to Escape the Two-Income Trap," The American Conservative, May 16, 2019.

46 Struggling Regions Initiative, "The corrosive effects of bad development policy," Niskanen Center.

This forces jurisdictions into a zero-sum competition that favors companies with political connections and places that are already prospering. For poorer states and cities to compete, business incentives can even come at the expense of investments in human capital and public infrastructure, jeopardizing development in the longer run.

The contest over the site location for Amazon's next headquarters, known as HQ2, was a perfect illustration. More than 200 cities across North America submitted proposals, each offering more outlandish inducements than the last. In essence, state and local governments were stuck in a collective action problem, which Amazon exploited to extract the largest possible rents in the form of income and property tax abatements and other bespoke incentives.

> *"Caddo Parish alone, population 254,969, exempted more corporate property taxes in 2016 than the entire state of Texas."*

Yet Amazon is just the tip of the iceberg. Consider Louisiana's Industrial Tax Exemption Program (ITEP), the largest state corporate subsidy program in the nation. ITEP is unique in providing a state-level board with the authority to exempt businesses from locally administered property taxes. From 1998 to 2016, the board rubber-stamped 99.95 percent of all ITEP applications, resulting in roughly $2,800 in annual corporate subsidies per Louisiana resident — 10 times the national average. Across the entire state, between 66 percent and 99 percent of industrial property is exempted from property taxes in perpetuity.[47] Local governments forego tax revenues equal to about 20 percent of total state and local school funding. Caddo Parish alone, population 254,969, exempted more corporate property taxes in 2016 than the entire state of Texas.[48]

Recent reforms to give municipalities a say in ITEP approvals have been stymied.[49] Thanks to corporate lobbying, the majority of existing exemptions were grandfathered in, and in 2019 the governor added a favorable appeals process for industries that lost their tax break. With local governments unable to invest in basic public goods, Louisiana thus presents a paradox. The state is a bona fide Silicon Valley for the petrochemical industry, and consistently ranks first in the nation for foreign direct investment. At the same time, Louisiana ranks last or near last across a wide variety of socioeconomic indicators, including health and life expectancy,

47 "Wealth, Poverty and Property Taxes," Together Baton Rouge, Civic Academy Series, August 2018.

48 Luana Munoz and Bill Fuller, "Caddo faring better after reforms to Industry Tax Exemption Program," KTBS, January 2, 2020.

49 Sam Karlin, "Change to state's largest tax break would give companies ability to appeal rejections by locals," The Advocate, February 20, 2020.

math and reading scores, and household income.[50] Location and firm-specific tax incentives do little to create good-paying jobs under the best of circumstances.[51] But when the target industries are oil refineries and salt mines — production that's literally tied to the ground — they represent little more than a blank check for those polluting the air that impoverished Louisianans are forced to breathe on a daily basis.[52]

The conventional policy arsenal that local governments use for investment promotion, from beggar-thy-neighbor tax incentives to outright corporate welfare, points to the need for a new coordinating institution. As Niskanen Center Senior Fellow Nathan Jensen has shown,[53] transparency rules can help bring sunlight to the degree of corruption, but do little to change politicians' basic "incentive to pander."[54] Likewise, an interstate compact can promote a ceasefire in the site selection bidding war, but it wouldn't address corporate subsidies for companies already within a state's borders. "There is no easy solution to reforming economic development, but any solution must acknowledge that asking people to simply be better isn't scalable or sustainable," writes Jensen. "Economic development reforms will most likely require some action by the federal government."[55]

The opportunity for reform is ripe. In 2015, the Government Accounting Standards Board began requiring state and local governments to disclose information about tax abatements and similar subsidy arrangements.[56] Similar disclosure rules are scheduled to come into effect for the business sector as well.[57] As these new accounting practices come into effect, Congress could use the window into firm-specific subsidies to withhold federal grants to states that poach jobs from neighboring states[58] or discourage the use of subterranean development incentives by other means.[59]

50 "Best States Rankings: Measuring outcomes for citizens using more than 70 metrics," U.S. News & World Report.

51 Timothy Bartik, "A New Panel Database on Business Incentives for Economic Development Offered by State and Local Governments in the United States," W.E. Upjohn Institute for Employment Research, January 1, 2017.

52 James Pasley, "Inside Louisiana's horrifying 'Cancer Alley,' an 85-mile stretch of pollution and environmental racism that's now dealing with some of the highest coronavirus deaths in the country," Business Insider, April 9, 2020.

53 Calvin Thrall and Nathan Jensen, "Does Transparency Improve Public Policy? Causal Evidence from a Tax Incentive Transparency Initiative," June 2020.

54 Nathan Jensen and Edmund Malesky, *Incentives to Pander: How Politicians Use Corporate Welfare for Political Gain* (New York: Cambridge University Press, 2018).

55 Nathan Jensen, "Mumblings of Reform," Site Selection, November 2019.

56 "GASB Statement Requires Governments to Disclose Information on Tax Abatements," Government Accounting Standards Board, News Release, August 14, 2015.

57 "Tax Incentive — or Government Giveaway?" Weaver, May 22, 2019.

58 Greg Leroy et al., "Ending the Economic War among the States: A Strategic Proposal," Good Jobs First, February 2019.

59 Mark Funkhouser, "How to Stop the Economic Development Wars," Governing, November 25, 2013.

Looking forward, we believe the federal government is in a far better position to coordinate economic development across the 50 states. But rather than lean into existing industries, or dubious forms of development like real estate, strategic federal investments should focus on spurring the creation of new markets and capacities, with the complementary goals of jump-starting productivity growth and reversing regional decline. Ideally, this would be achieved through a dedicated agency — an Office of Regional Development — that would bring our multifarious development programs under one roof.[60]

Consider the U.S. manufacturing sector. At first glance it seems healthy, with manufacturing output near an all-time high. Yet look beneath the surface, and one sees that essentially all the net growth in U.S. manufacturing output since the early 2000s derives from a single subindustry: semiconductors.[61] Indeed, for all the worries of robots taking our jobs, American manufacturing productivity has been stagnant or declining for over two decades.[62]

International trade can be a powerful tool for pushing domestic industries to level up their capabilities to compete on a global stage. In a globalized world, however, this often requires substantial public support lest firms discover the path of least resistance is to move production abroad or shut down altogether. The Manufacturing Extension Partnership program exists for precisely this reason, and every year provides grants and technical resources to small and medium manufacturers looking to upgrade their processes.[63] Yet with an annual budget of only $140 million, the MEP is roughly two-thirds the size of the equivalent program in Canada, a country with one-tenth our population. Germany's Fraunhofer Institutes, meanwhile, receive over $1 billion annually to support domestic manufacturers through grants, contracts, and publicly financed research projects, contributing to one of the most competitive manufacturing sectors in the world. The U.S. MEP program should be at least as big. Note $1 billion is only half of what Louisiana's local governments lose to tax abatements every year.

"For all the worries of robots taking our jobs, American manufacturing productivity has been stagnant or declining for over two decades."

With such feeble public support, one U.S. industry after another has embraced offshoring as the path of least resistance. As a result, the United States has experi-

60 Struggling Regions Initiative, "Toward an Office of Struggling Regions," Niskanen Center.

61 Susan Houseman, "Is American Manufacturing in Decline?," W.E. Upjohn Institute.

62 Michael Brill et al., "Multifactor productivity slowdown in U.S. manufacturing," Monthly Labor Review, U.S. Bureau of Labor Statistics, July 2018.

63 Congressional Research Service, "The Manufacturing Extension Partnership Program," September 9, 2019.

enced a troubling erosion in what Stephen Cohen and Brad DeLong call "communities of engineering and technological practice" — those vital clusters of technical knowledge, know-how, collaboration, and competition that are the fountainhead whose spillovers drive technological and material progress.[64]

Of course, not all manufacturing jobs are made equal, nor is manufacturing somehow more noble than the service sector. Yet as a rule of thumb, high value-added manufacturers produce the very sort of "middle skill" labor market opportunities that have otherwise evaporated. The postwar manufacturing boom, for example, helped lift less educated Irish and Italian immigrants into the middle class. The same was beginning to be true for African Americans, from Flint, Michigan, to St. Louis, Missouri, with Black high school graduation rates finally converging with those of whites around 1970. Tragically, however, the 1970s were the same decade in which U.S. manufacturing employment peaked. [65]

> *"Even the legacy of slavery can be understood through the lens of deindustrialization."*

Even the legacy of slavery can be understood through the lens of deindustrialization.[66] After all, plantations in the Cotton Belt treated human beings as literal machines, reducing the need for the South to industrialize as fast as the North. This "specialization" in labor-intensive production persisted long after the formal end of slavery. Without the necessary catch-up investments in productivity-enhancing technology and infrastructure, emancipation was thus in a deeper sense incomplete.

Of course, given the forward march of automation and global economic development since then, there is no possibility of a return to mass employment in labor-intensive manufacturing that the U.S. economy experienced during the middle decades of the 20th century. Nevertheless, there is no law of nature that compels the extent of labor market polarization that has occurred in more recent decades. The structure of economic production, and therefore the structure of employment, can be and is heavily influenced by policy choices. With better choices, a more diversified economy and a more balanced labor market are both possible.

A robust national economic development strategy therefore promises to boost our national productivity while also promoting inclusive growth for those who've been left behind. Whatever the sector, the focus should be on enabling new industries

64 Stephen Cohen and Bradford DeLong, *Concrete Economics: The Hamilton Approach to Economic Growth and Policy* (Boston: Harvard Business Review Press, 2016), p. 122.

65 Anuska Jain and Samuel Hammond, "Deindustrialization Isn't (Just) a White Working-Class Problem," The Bulwark, November 12, 2019.

66 Samuel Hammond, "The Hamiltonian Approach to Reparations," Niskanen Center, April 29, 2019.

to rise as others fall, while pushing existing industries to innovate, invest, and compete in global markets,[67] not chase tax cuts or trade protections. In the case of manufacturing, for example, policymakers should focus on ensuring the next generation of high-tech manufacturers have the capital they need to scale;[68] promote the transfer and commercialization of the sorts of basic research we discussed in the previous section; and invest in comprehensive employment and training programs so those disrupted by trade or technological change don't have their existing skills go to waste.

Historically, the term for rebalancing an economy away from a half-dozen lucrative cities and professions is "industrial policy."[69] Since, in this country at least, that term has become so associated with corporate welfare for politically powerful but declining or never-to-rise industries, we offer the term "development policy" as an alternative — one that appropriately signals that healthy economic development is an ongoing and never-ending challenge for rich and poor countries alike. Whatever the label affixed to them, policies aimed at reviving meaningful, well-paid work in rural regions and smaller cities would create the kind of jobs in the kind of places that are most conducive to family life. At the same time, a more diversified economy would lessen the demand surge in magnet cities by expanding labor market opportunities for those most likely to be net losers in the professional class's place-based bidding war. If we're lucky, our hyperpolarized politics could even moderate in the process.

In an era of wage stagnation and two-tiered labor markets, we simply reject the notion that deindustrialization is inevitable. But rather than attempt to turn back the clock, our leaders must rediscover the definite optimism required to invent the high-wage industries of the future. The late Andy Grove put it best: "If we want to remain a leading economy, we change on our own, or change will continue to be forced upon us."[70]

Reduce Barriers to Geographic and Labor Mobility

We have already discussed how policies that discourage new housing construction are responsible for an enormous misallocation of resources. Millions of Americans

67 U.S. Senate Committee on Small Business and Entrepreneurship, "Rubio Reauthorization of The Small Business Act Receives Support from Leading Experts on Innovation," Press Release, July 10, 2019.

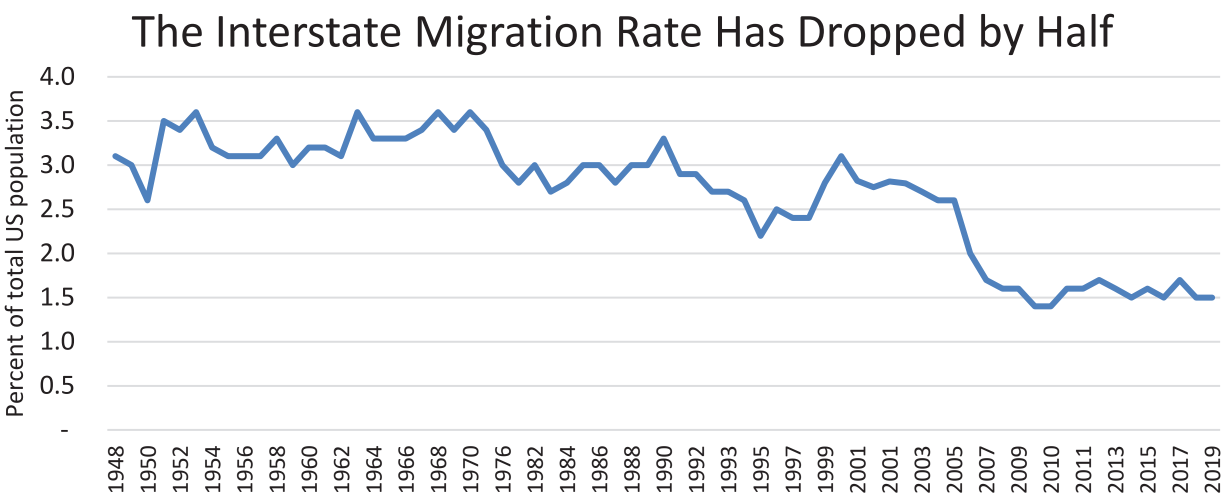
68 Niskanen Center, "Press Release: Bipartisan group applauds landmark reforms to Small Business Investment Companies in Phase IV relief bill," July 27, 2020.

69 Samuel Hammond, "The Struggling Regions Newsletter," Issue 1, July 9, 2019.

70 Andy Grove, "How America Can Create Jobs," Bloomberg, July 1, 2010.

who want to move to and work in the country's most productive cities are prevented from doing so by high housing prices caused by artificial supply constraints. As a result, those Americans excluded from opportunity are not as productive as they could be, and overall economic output suffers significantly as a result.

Restrictions on new housing, though, are not the only major barrier to geographic mobility. And the cost of these barriers is not limited to a one-off hit to output due to resource misallocation. Here we will address two other obstacles to freedom of movement: state-based occupational licensing, and variations in the levels and application procedures for state benefit programs. Together with land use restrictions, these obstacles to mobility exact an ongoing toll on productivity growth by hindering the ability of people to move to opportunity and into occupations that best match their skills.



Source: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement 1948-2019

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Here it is worth recalling that productivity growth does not spring automatically and frictionlessly from innovation. The origination of new, superior ways of doing things is only the first step in the process; what must follow is technology diffusion, or the restructuring of production to take full advantage of that innovation. For example, from the development of electric arc furnaces to make steel from scrap came the first steel "minimills"; that breakthrough eventually enabled a massive reduction in the number of worker-hours needed to make a ton of steel, but only after many years in which new minimills proliferated and the range of steel products they could make expanded, gradually ramping up minimill market share and the percentage of total steel produced by the new, less-labor-intensive methods.

Technology diffusion thus consists of the reallocation of resources so that an innovation's full productive potential can be realized — and those reallocated resources include labor as well as capital. For new, more productive firms and industries to rise and old, less productive firms and industries to shrink, it is frequently necessary for large numbers of people to move from one area of the country to another — as it often happens that sunrise and sunset sectors are located in different places. Accordingly, geographic mobility is a prerequisite for robust creative destruction.

Unfortunately, geographic mobility in the United States has declined considerably in recent decades: The percentage of Americans who move across state lines over the course of a year is now about half what it was 30 years ago.[71] To some extent, the waning of American wanderlust reflects appropriate responsiveness to changed circumstances — namely, a drop in the geographic variation in employment opportunities, combined with improved ability to learn about other places (whether online or through inexpensive travel) without moving there.[72] On the other hand, for many Americans the financial incentives to relocate are actually up sharply. Research by Scott Winship shows that the income gap between people who have moved across state lines at least once and those who haven't has grown significantly since the 1970s — and the difference is especially stark for people who grew up in low-income households.[73]

While many different economic and noneconomic factors influence the willingness to move, one important contributor to reduced geographic mobility is public policy. As discussed previously, land use regulations that discourage the construction of new housing are a major deterrent to moving, as they effectively build moats around the country's richest, most productive cities. These moats, in the form of artificially inflated housing prices, are especially effective at screening out less-educated workers. Knowledge workers with college or graduate degrees typically earn big enough wage premiums in big-city human capital hubs to come out ahead even with higher rent or mortgage payments, but for workers without a college degree the extra pay isn't enough to compensate for more expensive housing.[74]

Land use restrictions are not the only policy-created barriers to mobility that have worsened over time. Here we will mention two other important examples:

71 U.S. Census Bureau, "CPS Historical Migration/ Geographic Mobility Tables," November 2019.

72 Greg Kaplan and Sam Schulhofer-Wohl, "Understanding the Long-Run Decline in Interstate Migration," National Bureau of Economic Research Working Paper no. 18507, November 2012.

73 Scott Winship, "When Moving Matters: Residential and Economic Mobility Trends in America, 1880-2010," Manhattan Institute, November 10, 2015.

74 Peter Ganong and David Shoag, "Why has regional income convergence in the U.S. declined?," *Journal of Urban Economics,* Vol. 102, pp. 76-90, November 2017.

state-based occupational licensing and differences in state benefit programs.[75] We have already discussed problems caused by the licensing of doctors and other health care workers, but the scope of licensing extends far more broadly: The share of American workers in occupations subject to state licensing has jumped from around 10 percent in 1970 to almost one quarter today.[76] Although such licensing is typically justified on the grounds of consumer protection, there is little evidence that it actually improves service or effectively screens out bad actors. On the other hand, there is ample evidence that licensing benefits incumbent service providers in licensed occupations by limiting the number of would-be competitors. These artificial restrictions on supply have a number of unfortunate consequences — higher prices, less consumer choice, fewer occupational options for workers deterred by licensing — but for present purposes the key point is that they discourage interstate migration because of the need to get relicensed. Although workers in licensed occupations move just as frequently as other workers, they are 24 percent less likely to move across state lines.[77]

The rise of occupational licensing is yet another baleful instance, all too common in recent American political economy, of rent-seeking run amok.[78] In almost all cases, the goal of consumer protection could be achieved more effectively — and without the unjust enrichment and collateral damage to consumers — through programs of voluntary certification. As to the specific problem of licensing interfering with mobility, the most direct reforms are ones that either harmonize licensing requirements across states or else — whether through state legislation or interstate compacts — recognize licenses granted in other states as valid. New York State's temporary suspension of restrictions on health care professionals licensed out of state during the COVID-19 crisis should point the way to permanent reforms along similar lines.[79] And more generally, Arizona's recently signed universal licensing-recognition law, the first state legislation in the country to unilaterally extend recognition to out-of-state licenses, offers a promising path that we urge other states to follow.[80] For its part, the federal government can facilitate reform by encouraging new interstate compacts, wider participation in existing ones, and adoption of universal recognition laws like Arizona's.

75 For a more comprehensive review of policy barriers to mobility, see David Schleicher, "Stuck! The Law and Economics of Residential Stagnation," *Yale Law Journal*, Vol. 127, no. 1, October 2017.

76 Ryan Nunn, "Occupational licensing and American workers," Brookings Institution, June 21, 2016.

77 Jason Furman and Laura Giuliano, "New Data Show that Roughly One-Quarter of U.S. Workers Hold an Occupational License," The White House, June 17, 2016.

78 See Lindsey and Teles, *The Captured Economy*, Ch. 5, pp. 90-108.

79 Robert Orr, "States Are Temporarily Letting Doctors Chase COVID-19 Across State Lines. Make it Permanent," Niskanen Center, April 6, 2020.

80 Doug Ducey,"Arizona — First in the Nation: Universal Licensing Recognition."

The wide variation among states regarding eligibility criteria and benefit levels for social welfare programs constitutes another significant impediment to interstate migration. Since the 1980s, the general trend in welfare policy has been to expand states' operational control over the provision of benefits.[81] Alas, this decentralization has not been accompanied by any parallel effort to equalize resources at the state level through federal intergovernmental transfers; indeed, the only program that extended unconditional federal assistance to the states — revenue sharing — was terminated in 1986.[82] The result has been a big increase in eligibility and benefit differences across states, a state of affairs that naturally discourages moves from richer, high-benefit states to poorer, low-benefit ones. In addition to its other benefits, overhauling federal grants to the states to promote fiscal equalization, as proposed by Joshua McCabe[83], would help to promote interstate mobility by reducing the state-level policy variations that currently discourage it.

"Overhauling federal grants to the states to promote fiscal equalization would help to promote interstate mobility..."

Related to the trend of declining mobility among places is a parallel trend of declining mobility among jobs. Employment churn — or worker flows in and out of existing jobs — has fallen by more than a quarter during the 21st century, along with the pace of job creation and destruction.[84] This slowdown in labor market turnover is a broader phenomenon than the drop in interstate mobility, since job changes can and frequently do occur locally. As with falling geographic mobility, the reasons for this decline are not fully understood. But to the extent that artificial barriers play a role, the implications for economic dynamism are clearly negative: Anything that blocks the redeployment of labor resources from less-productive to more-productive positions is bad for technology diffusion and productivity growth.

One potentially significant barrier to labor mobility that has received increasing scrutiny in recent years is the rise in noncompete agreements imposed on workers by their employers. These agreements, which aim to prevent employees from going to work for a rival company for some specified period of time, now affect almost one-fifth of all workers.[85] Such contracts are justified as necessary for protecting

81 Shleicher, "Stuck!"

82 Joshua McCabe, "Rich State, Poor State: The Case For Reforming Federal Grants," Niskanen Center, December 2019.

83 *Ibid*.

84 Steven Davis and John Haltiwanger, "Labor Market Fluidity and Economic Performance," National Bureau of Economic Research Working Paper no. 20479, September 2014; John Haltiwanger, "Top Ten Signs of Declining Business Dynamism and Entrepreneurship in the U.S.," August 2015.

85 Evan Starr, "The Use, Abuse, and Enforceability of Non-Compete and No-Poach Agreements: A Brief Review

trade secrets and recouping investment in worker training, but their use is much more extensive than such relatively narrow concerns would warrant, covering many low-wage occupations.

In higher wage sectors, the ability of skilled workers to take their industry know-how to the competitor next door is a key ingredient to building a strong innovation economy. Most famously, the unenforceability of noncompete provisions in California contributed to the rise of Silicon Valley, as frequent job switching enabled knowledge about nascent best practices to diffuse across the broader ecosystem. Thus, even in an occupational category where the standard justifications for noncompete agreements seem to apply, their value fundamentally derives from a collective action problem: Employers rationally wish to hoard the knowledge and skill of employees, but when their competitors do the same their behavior is collectively self-defeating, and the industry as a whole suffers.[86]

Besides California, Oklahoma and North Dakota are the only other states that refuse to enforce noncompete provisions. All other states enforce them to at least some extent. However, momentum for reform is growing: In 2019, Maine, New Hampshire, and Maryland all moved to prohibit noncompete agreements with low-wage workers, while Sens. Chris Murphy and Todd Young introduced the Workplace Mobility Act to restrict the use of noncompetes across the board.[87] We support reforms along these lines to expand worker choice and liberalize labor market flows.

Overhaul Environmental Review to Bring Down Sky-High Infrastructure Costs

America was once famous for its can-do spirit and "Yankee ingenuity." That spirit was most obviously and spectacularly visible in the American capacity to build — bigger, faster, and better than anywhere else. The transcontinental railroad, the Panama Canal, the Golden Gate Bridge, Hoover Dam, the New York City skyline: All are iconic manifestations of America's once unmatched ability to remake the physical environment to serve human ends.

of the Theory, Evidence, and Recent Reform Efforts," Economic Innovation Group, February 2019; Ryan Nunn, "Non-compete contracts: Potential justifications and the relevant evidence," Brookings Institution, February 4, 2020; Matt Warx, "Reforming Non-Competes to Support Workers," Brookings Institution, The Hamilton Project, February 2018.

86 Ronald Gilson, "The Legal Infrastructure of High Technology Industrial Districts: Silicon Valley, Route 128, and Covenants Not to Compete," Stanford Law School, John M. Olin Program in Law and Economics, Working Paper no. 163, September 24, 1998.

87 Economic Innovation Group, "EIG Applauds Introduction of Bipartisan Legislation to Limit Non-Compete Agreements, Boost Worker Mobility," Press Release, October 17, 2019.

The United States today remains an outlier when it comes to construction and infrastructure — but now its exceptionalism runs in the other direction. Where once American building projects stood apart in the scale of their ambition and the speed of their completion, now they set records for stratospheric costs, interminable delays, and bureaucratic bloat.

"Infrastructure spending as a percentage of GDP has been falling consistently since 1970 — an alarming trend not seen in other countries."

For a glimpse at the new American exceptionalism, consider the first phase of New York City's Second Avenue subway project, completed in 2017 (five years after the originally scheduled completion date) at a cost of $1.7 billion per kilometer — compared to around $250 million per kilometer for recent, comparable projects in Paris, Copenhagen, and Berlin.[88] However bad that seems, at least something was actually completed. In California, meanwhile, Gov. Gavin Newsom announced in February 2019 that he was pulling the plug on most of the project to build high-speed rail from Anaheim to San Francisco, following a decade-plus of spiraling cost estimates and lengthening delays. And if you think the problem is confined to complex megaprojects, think again. The 232-foot Anderson Memorial Bridge, which connects Boston and Harvard Square, took 11 months to build in 1912; repairs during the past decade dragged on more than four times as long.[89]

Rising infrastructure costs are matched by shrinking investment and declining quality. Infrastructure spending as a percentage of GDP has been falling consistently since 1970 — an alarming trend not seen in other countries.[90] According to the World Economic Forum's most recent Global Competitiveness Report, the United States ranks 13th in the world for overall infrastructure quality — down from 5th place in 2002.[91] The U.S. Department of Transportation, meanwhile, has found that 47,000 bridges are structurally deficient, or in need of repair, while almost one-fifth of all passenger rail lines are in poor condition.[92]

Well-developed infrastructure is essential for supporting and promoting economic growth. This is perhaps easiest to see when we consider the negative effects of poor infrastructure: Excessive transportation expenses, delays that render supply

88 Matthew Yglesias, "Someone killed a congressional inquiry into America's sky-high transit construction costs," Vox, May 24, 2017; "US Rail Construction Costs," Pedestrian Observations, May 16, 2011.

89 Lawrence Summers and Rachel Lipson, "A lesson on infrastructure from the Anderson Bridge fiasco," Boston Globe, May 25, 2016.

90 Ray Fair, "U.S. Infrastructure: 1929-2017," December 2019.

91 Klaus Schwab, "The Global Competitiveness Report," World Economic Forum, 2019; James McBride and Jessica Moss, "The State of U.S. Infrastructure," Council on Foreign Relations, September 1, 2020.

92 Samatha Raphelson, "Report Finds More Than 47,000 'Structurally Deficient' Bridges In The U.S.," NPR, April 5, 2019; McBride and Moss, "The State of U.S. Infrastructure."

chains unreliable, traffic congestion that puts potential workers and customers out of reach, and intermittent blackouts all undermine productivity by adding frictions that inflate the costs of production and distribution. Looking ahead, enormous investments in new infrastructure will be needed as we face perhaps the greatest innovation challenge of the 21st century: negotiating the transition to a carbon-free energy future. There is simply no way we can rise to that challenge in a timely and efficient manner without major overhauls in our dysfunctional infrastructure construction process.[93]

What's wrong with the American way of building? In a word, everything. As economic columnist Noah Smith puts it, "U.S. costs are high due to general inefficiency — inefficient project management, an inefficient government contracting process, and inefficient regulation."[94] In other words, as is the case in the health care sector, Americans are plagued by a system run for the benefit of providers rather than users — and a complacency that deems paying through the nose preferable to rooting out waste and abuse.

"What's wrong with the American way of building? In a word, everything."

One policy shift in particular, though, appears to have played a crucial role in the United States' transformation from leader to laggard on infrastructure: what Harvard economist and former Secretary of the Treasury Lawrence Summers has called the "promiscuous distribution of the power to hold things up."[95] In the 1960s and '70s, in reaction to the neighborhood-destroying and city-blighting excesses of "urban renewal," progressive reformers instituted reforms to greatly expand public voice and input regarding changes to the built environment. In doing so, they ended up exchanging one species of dysfunction for another: We have gone from high-handed and unaccountable urban planners, exemplified by Robert Moses in New York, to so many Gullivers pinioned under webs of Lilliputian restraints.

In a recent paper for the Brookings Institution, Leah Brooks and Zachary Liscow document the policy sea change and its consequences. Specifically, they find that spending per mile on interstate highway construction *tripled* between the 1960s and 1980s, with an inflection point in the early 1970s — that is, just as the new "citizen voice" reforms were starting to take effect.[96] In a recent in-depth piece for *Politico*, the exasperating tale of the three-decades-and-counting effort to renovate and up-

93 James Temple, "Climate change means the US must start building big things again," MIT Technology Review, January 15, 2020.

94 Noah Smith, "The U.S. Has Forgotten How to Do Infrastructure," Bloomberg Opinion, May 31, 2017.

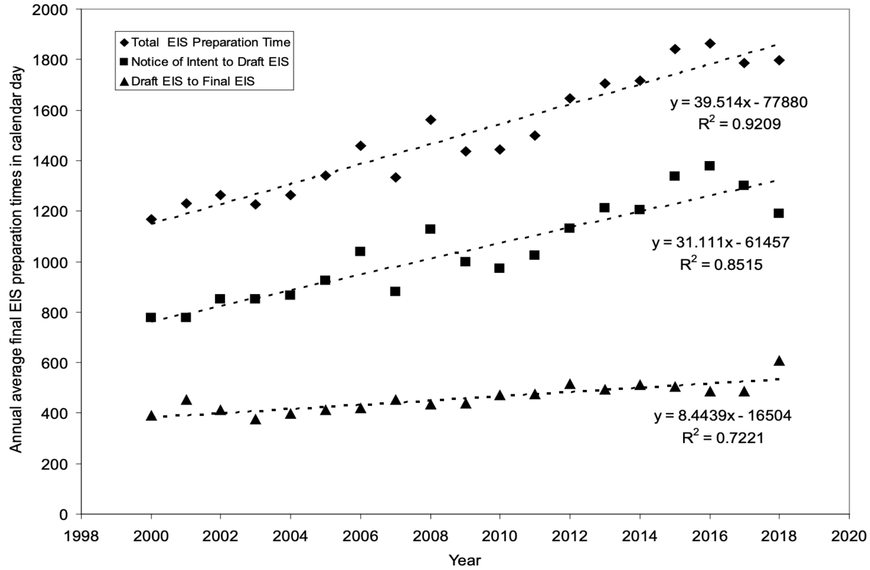
95 Sumners and Lipson, "A lesson on infrastructure."

96 Leah Brooks and Zachary Liscow, "Infrastructure Costs," Brookings Institution, Hutchins Center Working Paper no. 54, August 2019.

grade Penn Station in New York City brings home the unforeseen consequences of those well-intended reforms — namely, the mad proliferation of veto points in the planning and construction process and the resulting paralysis and stagnation. "The project to diffuse power to the public has succeeded," the author concludes, "[b]ut the pendulum has swung too far in the other direction. The left's zeal to hamstring government has helped to burnish the right's argument that government would mess up a one-car parade."[97]

Average Annual Preparation Times for Economic Impact Statements

National Association of Environmental Professionals
2018 Annual NEPA Report



At the center of the miscarried "citizen voice" revolution is one particular piece of federal legislation: the 1970 National Environmental Policy Act, which requires "environmental impact statements" for "major federal actions" that could "significantly affect" the environment. Projects that do not meet this threshold must still be accompanied by an "environmental assessment" that establishes that an EIS is not needed. It is important to note that NEPA imposes no substantive environmental standards; if a court holds up a project because the EIS is deemed insufficient, the cure is to add a section to the EIS, and the agency is legally able to proceed with the project even if negative impacts are found.

In the early days, NEPA's procedural requirements were modest: An EIS could be as short as 10 pages, and the legislation didn't provide for a private right of action. Courts soon declared a private right of action, though, and under the pressure of litigation the law's demands grew ever more onerous: Today the average EIS runs

97 Marc Dunkelman, "This Is Why Your Holiday Travel Is Awful," Politico, November 29, 2019

more than 600 pages, plus appendices that typically exceed 1,000 pages. The average EIS now takes 4.5 years to complete; between 2010 and 2017, four such statements were completed after delays of 17 years or more. And remember, no ground can be broken on a project until the EIS has made it through the legal gauntlet — and this includes both federal projects and private projects that require a federal permit. Meanwhile, the far more numerous environmental assessments (the federal government performs more than 12,000 of them a year, compared to 20-something Environmental Impact Statements) have likewise become much lengthier and more time-consuming to complete.[98]

"NEPA's chilling effect on investment extends well beyond the obvious case of physical infrastructure."

NEPA's chilling effect on investment extends well beyond the obvious case of physical infrastructure. In 1973, for example, the FAA issued a preemptive ban on civil supersonic flights overland due to concerns that the Concorde heralded a new era of faster-than-sound aviation. The primary concern was the potential noise pollution generated by sonic booms, and yet with advances in carbon fiber manufacturing and computer-optimized designs it is now theoretically possible to design supersonic jets with a "low boom" noise profile.[99] But how quiet is quiet enough? The answer to that question is clearly needed for any aerospace company to invest in a quiet supersonic jet. And yet the FAA has kept the ban in place because without real-world noise data they are unable to complete a proper environment assessment. NASA is thus funding a "low boom demonstration project" just to get around a NEPA-created Catch-22.[100]

Earlier this year the Trump administration proposed changes to NEPA's implementing regulations that would try to rein in the excesses of environmental review: Environmental assessments would need to be no longer than 75 pages and completed within a year, while an EIS would be limited to 150 pages and finished within two years. These presumptions, however, could be overridden — and therefore, in all likelihood, would be. After all, before this latest effort, the Clinton, Bush, and Obama administrations all made previous — and unavailing — attempts to find some administrative fix for NEPA's problems

To really tame the NEPA monster and chasten the distribution of veto power, we believe that legislation will be needed. An appropriately overhauled review

98 Eli Dourado, "Why are we so slow today?," Medium, March 12; Philip K. Howard, "Modernizing NEPA for the 21st Century," Common Good, November 29, 2017.

99 Eli Dourado and Samuel Hammond, "Make America Boom Again: How to Bring Back Supersonic Transport," Mercatus Center at George Mason University, October 2016.

100 Sara Carioscia et al., "Commercial Development of Civilian Supersonic Aircraft," Institute for Defense Analyses, August 2019.

process would include (1) binding deadlines and page limits; (2) consolidation of decision-making, with federal preemption of permitting authority on all interstate projects and ultimate permitting authority clearly vested in specific agencies for specific kinds of projects; and (3) a significant narrowing of the scope of judicial review.[101]

101 Philip K. Howard, "Two Years Not Ten Years: Redesigning Infrastructure Approvals," Common Good, September 2015.

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