Introduction

By Melissa S. Kearney and Amy Ganz

The United States is currently gripped by deep uncertainty and economic anxiety. At the time of this writing, the United States is six months into the COVID-19 pandemic. More than 190,000 Americans have died from COVID (CDC 2020); more than 13 million Americans remain unemployed (Bureau of Labor Statistics 2020); and tens of thousands of businesses remain closed (Grossman 2020). Meanwhile, protests against racial injustice continue across the country, and in a number of tragic instances, they have been overtaken by violence. Wildfires rage through the northern Pacific states. In Oregon, 40,000 people have been evacuated and more than 1,500 square miles have burned. California has already experienced three of the top four largest wildfires in its history in this year alone. Perhaps more than any time in recent memory, the economic future of our country feels uncertain.

The overarching theme of this book "Securing our Economic Future" and the specific topics therein—the economics of the middle class, geographic divergence and place-based economic development, and the global climate challenge and U.S. policy response—were chosen in early 2020, before the COVID pandemic and associated recession had taken hold of the nation. But the acute challenges before us make the goal of securing our economic future even more imperative. Today's alarming and immediate crises expose deep, structural weaknesses that have been building. The pandemic-induced recession has exposed the economic fragility of so many American households. The wildfires of historic proportion reveal the effects of environmental pressures. Bitter partisan and social divides that characterize the country during this Presidential campaign season reflects—among other things—increased economic divergence that often falls along geographic lines. These divides fall along racial lines as well, but those critical challenges are beyond the scope of this single volume.

By the time this volume appears in print, the election will have been decided. We fervently hope that the public health crisis will be abating, the labor market will be recovering, the wildfires will be under control, and that social change will progress peacefully. But without a doubt, the elected administration will face critical economic policy challenges. This volume focuses on three of the most important ones.

Part I focuses on the economic wellbeing of the American middle class. The chapters in this section evaluate—and call into question—the prevailing narrative of its decline. Chapter 1 documents facts about middle-class jobs and income. Chapter 2

explores how the middle class fares under the government's tax and transfer system. Chapter 3 presents new insights about the economic (in)security of the middle class. Part II focuses on geographic disparities in economic opportunity across the United States. Chapter 4 presents evidence that there is no longer an urban wage premium for non-college-educated workers, which calls into question the conventional wisdom that moving to economically vibrant cities offers an economic path forward for most workers. Chapter 5 discusses the pitfalls and promise of place-based economic policies. Chapter 6 presents a proposal for a federal emergency rental assistance program that addresses a critical gap in the nation's suite of housing policies. Part III focuses on the global climate and energy challenge and the U.S. policy response. Chapter 7 makes the case for a federal carbon tax and discusses implementation challenges. Chapter 8 highlights the role of technology policy in reducing carbon emissions and atmospheric concentrations. And finally, Chapter 9 describes the need for policies that help communities ameliorate threats from and improve resilience to climate change.

Part I: The Economics of the American Middle Class

Even in the booming pre-crisis economy, numerous news articles, policy reports, and political leaders asserted that middle-class Americans are struggling economically, more so than in earlier decades. The middle class, according to these reports, was "squeezed," "shrinking," "disappearing," and "dead."[1] Reports emphasized long-term stagnant wage growth, fewer job opportunities, and declining intergenerational economic mobility, painting a dire picture of middle-class wellbeing. The American public took note: In 2018 nearly two-thirds (61 percent) of respondents in a Pew Research Center poll said the federal government does too little to help the middle class. Politicians from both parties have made middle-class economics a centerpiece of their platform.

However, a careful look at the data presents a much more nuanced picture. Data on middle-class jobs and income show that the rise in income inequality and the "hollowing out" of the middle has been associated with more middle-class households moving *up* in the income distribution, as opposed to down, and being more likely than previous generations to have higher markers of consumption. Evidence on

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1 See for example: Rose, Stephen. 2020. "Squeezing the Middle Class." The Brookings Institution. https://www.brookings.edu/research/squeezing-the-middle-class/; Pew Research Center. 2016. "America's Shrinking Middle Class: A Close Look at Changes Within Metropolitan Areas." https://www.pewsocialtrends.org/2016/05/11/americas-shrinking-middle-class-a-close-look-at-changes-within-metropolitan-areas/ ; Morris, Alex. 2018. "American Middle Class: Why Is It Disappearing?" *Rolling Stone*, Novem ber 13, 2018. https://www.rollingstone.com/culture/culture-features/american-middle-class-disappearing-754735/ ; Matthews, Chris. 2016. "Here's Why the Middle Class Is Disappearing All Around the World." *Fortune*, July 13, 2016. https://fortune.com/2016/07/13/middle-class-death/.

household responses to income volatility shows that American households use a variety of low-cost approaches to respond to volatility, revealing a degree of financial resilience that is often overlooked in discussions about promoting savings among such households.

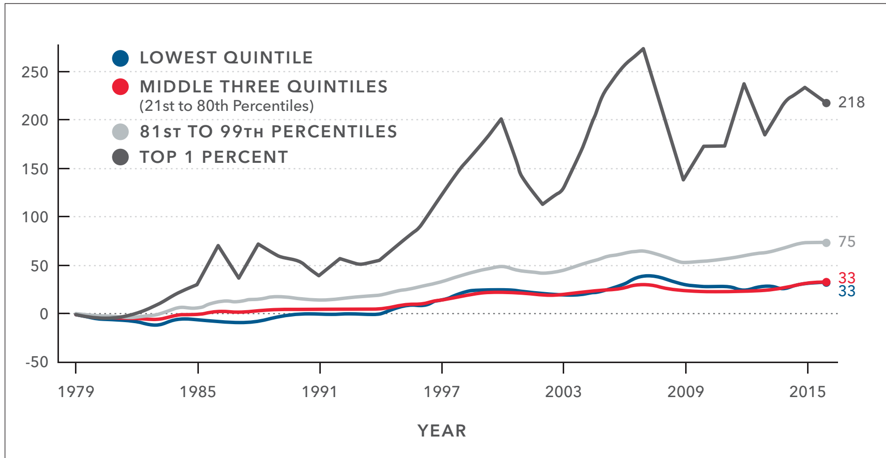
Should the federal government be spending more to bolster the income of middle-class households? Data on government tax receipts and transfer payments show that federal policy has become *more* generous toward the middle class in recent decades. The Congressional Budget Office (CBO) reports that American households in the middle three quintiles of the income distribution experienced cumulative market income growth of 33 percent between 1979 and 2016. After accounting for most federal taxes and transfers, cumulative income growth increases to 47 percent over the same period (as shown in Figure 1). In part, this is the result of tax policy changes that benefitted middle-income households. The average federal tax rate fell from 19 percent to 15 percent for households in the middle three quintiles between 1979 and 2016.

In Chapter 1, Professor Bruce Sacerdote of Dartmouth College documents that over the past 30 years, middle-class Americans have experienced slower pre-tax income growth relative to past decades and as compared to those in the top decile. However, Sacerdote argues that claims about a vanishing middle class are not well-founded. Because the income distribution has widened over time, the number of households falling within a given income range has also declined. However, these trends do not necessarily result in a "hollowed out" middle class, in which there are poor households, rich households, and no one in the middle. Sacerdote documents that middle-income households have become more likely to transition into the upper part of the income distribution over time than they are to move lower in the distribution. As a result, Sacerdote finds that key measures of consumption, such as the likelihood of owning a home, having two cars, or sending a child to college, have increased among households at all income levels including the middle class, which he defines as those in the middle 60 percent of the distribution. However, despite these positive indicators of middle-class economic well-being, rising inequality and slower economic growth have led to lower rates of intergenerational mobility, while advances in global trade and automation have disproportionately negatively affected many longstanding middle-class occupations.

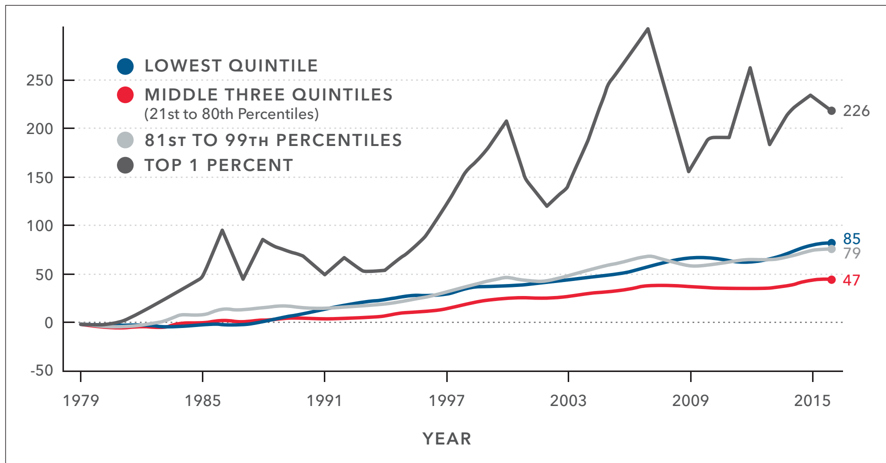
In Chapter 2, Adam Looney, Visiting Professor of Economics at the David Eccles School of Business at the University of Utah, David Splinter, Economist for the Joint Committee on Taxation, and Jeff Larrimore, Chief of Consumer and Community Development Research at the Federal Reserve Board of Governors, dig deep into measures of after tax and transfer incomes of the middle class. They refine CBO estimates of pre- and post-tax and transfer income growth (shown above

Figure 1. Cumulative Growth in Average Income, by Income Group, 1979–2016

(a) Before Tax and Transfers



(b) After Tax and Transfers



Source: Congressional Budget Office (2019) "The Distribution of Household Income."

in Figure 1) to incorporate additional measures of income and social insurance benefits that are excluded from the CBO statistics, including undistributed income earned in retirement accounts, imputed rent of owner-occupied housing, and the employee insurance contributions that are excluded from taxable wages. This more comprehensive measure of income implies higher cumulative growth in market

income and post-tax/post-transfer income among middle-class households than do the CBO statistics. Among non-elderly individuals in the middle three quintiles, they find market income per person increased 39 percent between 1979 and 2016, and by 57 percent over the same period after accounting for taxes and transfers.

Additionally, the chapter by Looney, Splinter, and Larrimore reveals that this level of government income support to middle-class households is a relatively new phenomenon. The after-tax, after-transfer income and market income of the middle class trended together between 1979 and the 1990s but diverged after 2000. Since 2000, middle-class income after taxes and transfers grew three times faster than market income.

Increased generosity toward the middle class has also changed the composition of means-tested transfer recipients. The authors find that the share of means-tested transfers going to middle-class households increased from 27 percent to 49 percent between 1979 and 2016 and the share of federal taxes paid fell from 45 to 31 percent. This dramatic reversal of the middle class from net-contributors to net-beneficiaries was financed in part by reductions in defense spending and in part by deficit spending. This raises questions about the sustainability of current levels of redistribution and, in particular, whether it is possible to further finance redistribution to the middle class by raising new revenues from the top quintile. The authors review various scenarios in which taxes are increased on high-income households in order to reduce the tax burden on or finance new benefits for low- and middle-income households and demonstrate the limitations of this approach.

Chapter 3 takes up the issue of household economic insecurity with a focus on how middle-class households respond to income volatility. Dan Silverman, Professor and Rondthaler Chair of Economics at the W.P. Carey School of Business at Arizona State University, observes that many middle-class families are badly insecure, living paycheck to paycheck while maintaining insufficient savings to weather unexpected income or expense shocks. However, new administrative data reveal that households are surprisingly resilient in the face of such shocks, often rearranging obligations and dramatically reducing consumption in order to get by. Households respond in similar ways in the face of both predictable and unpredictable changes in income, suggesting that many prefer to rearrange future spending rather than reducing current consumption to accumulate a savings buffer. As a result, Silverman recommends that policy aim to insure households against income risk rather than promoting self-insurance through increased savings.

Part II. Geographic Disparities in Economic Opportunity

In recent decades, income convergence across U.S. regions has slowed or even reversed (Moretti 2011). According to Ganong and Shoag (2017), incomes across the U.S. converged at an average rate of 1.8 percent per year between 1880 and 1980. However, in the subsequent three decades, this trend weakened dramatically. They find the rate of income convergence between 1990 to 2010 was less than half the historical norm. At the same time, they document a decade-long decline in migration from low to high-income regions. These trends have led to renewed interest in place-based policies, among both economists and policy makers (for instance, see Austin, Glaeser, and Summers 2019). The Economic Strategy Group's February 2019 volume *Expanding Economic Opportunity For More Americans* took up these issues. The volume featured a chapter by economist James Ziliak (2019) highlighting the rural/urban divide in employment rates and economic prosperity. His chapter showed that less-educated, rural workers are further behind their urban counterparts today than they were fifty years ago, and put forward a set of proposals to address rural employment challenges, arguing for both people-based and place-based policy approaches. The volume also included a chapter by economist Joshua Gottlieb (2019) examining the indirect role that housing supply constraints may have on productivity and wage growth by restricting the flow of human capital. This volume builds on that work and revisits these topics with new insights.

Given the large variation across places in income and economic opportunities, it has been a standard view in economic and policy discussions that fostering migration from low to high productivity places would improve economic outcomes for individuals, and lead to economic convergence across places. If the decline in mobility over recent decades reflects barriers to migration — for example, limited information or the high cost of housing in productive areas — a reasonable policy response would be to address those barriers. But what if the reduction in migration actually reflects an erosion of "pull" factors, such as fewer good-paying job opportunities, as opposed to an increase in "push" factors, such as high housing costs? That is precisely what chapter 4 by David Autor, the Ford Professor of Economics at the Massachusetts Institute of Technology (MIT) and director of the MIT Work of the Future Initiative, addresses. Autor presents detailed data on wages and job opportunities in urban areas and shows that in a great reversal from earlier decades, there is no longer an urban wage premium for workers without a bachelor's degree. That means that moving to cities no longer confers an economic benefit for workers without a four-year college degree.

Autor's analyses show that urban workers without four-year college degrees are relegated to less specialized roles commanding lower wages, as compared to their counterparts in earlier decades. He further documents that this disappearance

of middle-skill work among non-college workers—what he calls "occupational polarization"—has been more pronounced among non-white workers. Middle-skill employment among non-college Hispanic workers has receded the most, followed by Black workers, while the trend has been more moderate among whites. Alarmingly, Autor also finds that employment shares of black male college graduates in mid-paying occupations has fallen substantially and the share in low-paying occupations has risen, contrasting with the increase among college graduates in all other race/ethnicity and gender groups.

The revelation that even in highly productive cities, labor market outcomes are weak among workers without a bachelor's degree further enhances calls for dedicated investments in places in order to increase job opportunities for all workers and bolster widespread economic prosperity. It is becoming increasingly clear that policies to encourage migration away from distressed U.S. places to more prosperous ones is not a very promising approach to the challenges of economic malaise affecting certain groups of workers and certain parts of the country.

In chapter 5, Timothy Bartik, a Senior Economist at W.E. Upjohn Institute, explores the current landscape of state and local economic development policies in the United States and offers several proposals that would improve the cost-effectiveness of local economic development initiatives. Bartik argues for better targeting of local economic development policies on distressed areas, with an emphasis on achieving lasting job creation. He proposes that policies should be evaluated based on the cost per job created, and that by this metric, cash and tax incentives for businesses tend to be the least cost-effective, as they are often expensive and poorly targeted. But, of the roughly $50 billion spent by state and local governments on economic development each year, 95 percent of this total is in the form of tax or other cash incentives for firms. Bartik argues that such incentive packages should be discouraged, and that instead, state and local development programs should focus on providing businesses with customized public services, such as job training partnerships with community colleges and infrastructure development.

A thorough consideration of placed-based economics inevitably, and appropriately, must contend with the issue of housing costs. As noted above, high housing costs in economically productive areas was an issue we considered in our February 2019 volume. We turn to the issue of housing again in this volume, but this time we focus on the burden of housing costs for low-income renters. This is a distinct (albeit related) issue to the challenge of high housing costs more generally. The current COVID-19 pandemic and associated recession has served to highlight the extent of eviction and housing insecurity in America. Today, roughly half of all renter households are considered "rent burdened," defined as paying more than 30 percent

of income in rent, while a quarter of all renter households are considered "extremely rent burdened," paying more than 50 percent of income in rent. The share of renters paying more than 30 and more than 50 percent of income in rent have both doubled since the 1960s (Ellen, Lubell, and Willis 2020).

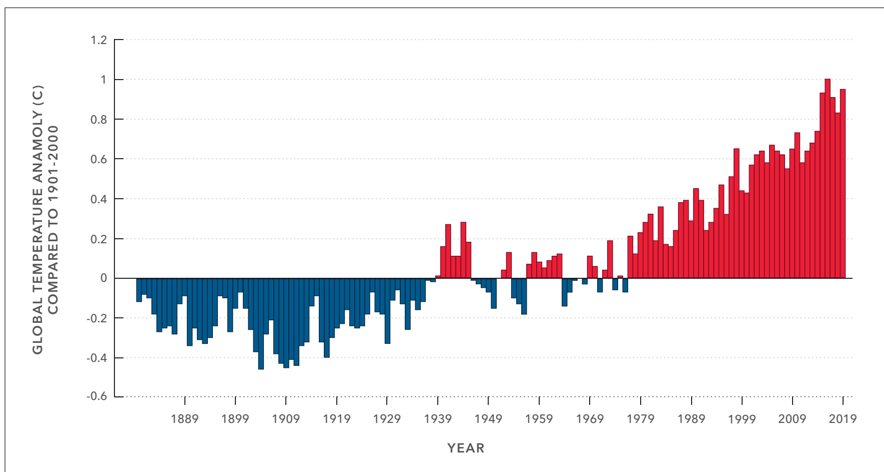
Renters, who are disproportionately concentrated in urban areas, are especially sensitive to rapidly rising rents, greater income volatility, and weak protections against eviction-caused homelessness. Chapter 6 of this volume, co-authored by Ingrid Gould Ellen, Paulette Goddard Professor of Urban Policy and Planning at the NYU Wagner School of Public Service and Faculty Director of the NYU Furman Center, Amy Ganz, Economic Strategy Group Deputy Director, and Katherine O'Regan, Professor of Public Policy and Planning at NYU Wagner and Faculty Director of the NYU Furman Center describe these challenges and offer a policy proposal to address them. The authors propose a federal program that provides one-time emergency financial assistance covering rent, utilities, and other qualifying costs in order to protect households against forced moves and evictions in the face of unexpected income shocks, both of which pose high costs to renters and to society more broadly. Their proposal complements current federal housing programs, which provide long-term rental assistance to a small share of eligible, low-income households, and are ill suited for addressing these one-time financial shocks. Emergency assistance is also far more cost effective at helping families maintain their housing, especially relative to long-term assistance programs.

Part III. The Geopolitics of the Climate and Energy Challenge and the U.S. Policy Response

In the United States and around the world, the cost of inaction on climate change continues to mount, with potentially catastrophic consequences. More frequent heat waves and wildfires, more extreme weather events, and global climate instability threaten to exacerbate economic inequality and reduce human health and prosperity. But the cost of addressing the challenge is daunting, and differences in risks, priorities, and cost-benefit tradeoffs across regions hinder coordinated action. Addressing the challenge is politically complicated by the fact that the costs of taking action will be borne long before the benefits of such investments are realized. But, a majority of Americans today report believing that the federal government needs to do more to address the effects of global climate change (Funk and Kennedy 2020). The final three chapters in this volume describe a multi-pronged approach the United States could pursue, including a market-based carbon tax, scientifically-backed risk control mechanisms, and investments in adaption and resilience strategies.

Part III includes three chapters about the U.S. policy response to climate change. In chapter 7, Trevor Houser of the Rhodium Group documents the many ways that rapid growth in carbon dioxide concentrations have already changed the Earth's climate by increasing average temperatures (shown in Figure 4) and the frequency and severity of extreme events. He also notes that the magnitude of future costs have become more clear, largely thanks to advances in econometric modeling of the economic impact of climate change. Houser reviews the state of this science and emphasizes the substantial variation in estimates of the negative impact of climate change across places, with poor individuals and countries experiencing greater economic and health losses. These inequities occur in both cause and effect: as wealthy countries contribute the most to global carbon emissions, they have the greatest ability and resources to adapt to climate-related risks and mitigate the worst harms.

Figure 2. History of Global Surface Temperature since 1880



Source: Lindsey and Dahlman (2020)

Regardless of what progress is made on reducing GHG emissions, Houser argues that U.S. policy should focus on improving resilience, both domestically and abroad. Within the United States he emphasizes several priorities, including making coastal communities more resilient to rising sea levels, making low-income households and individuals with co-morbidities less vulnerable to more frequent heat waves, supporting agricultural communities in the South and lower Midwest where climate change threatens traditional crops, and reducing wildfire risk in the western United States. Houser also argues the United States has a moral obligation to help

ameliorate climate damages in the lower income countries that are most affected. As climate change increases forced human displacement around the world, he argues it is also within the United States' best interest to reduce causes of permanent human displacement, which increases refugee flows and, as a result, the likelihood of geopolitical conflict.

In chapter 8, Gilbert Metcalf, the John DiBiaggio Professor of Citizenship and Public Service and Professor of Economics at Tufts University, argues that a U.S. carbon tax should be the centerpiece of a federal climate policy agenda, but also acknowledges that a carbon tax alone is not sufficient to achieve a zero-carbon economy. He addresses two common concerns about carbon tax implementation: (1) the potential impact on trade competitiveness and (2) whether it would achieve desired emissions reductions. To the first, he proposes a border carbon tax adjustment. To the second, he describes how an Emissions Assurance Mechanism—through which established carbon prices could be dynamically adjusted over time to achieve desired emissions reductions—could be used to address environmental concerns. Finally, Metcalf discusses the macroeconomic impact of a federal carbon tax, which would lead to significant changes in the composition of jobs in the economy, but need not reduce total U.S. economic growth or job creation.

The final chapter of this volume moves beyond market-based approaches to climate policy and describes a role for climate risk control mechanisms. The chapter is co-authored by David Keith, the Gordon McKay Professor of Applied Physics at Harvard University and Professor of Public Policy at the Harvard Kennedy School, and John Deutch, emeritus Institute Professor in the Department of Chemistry at MIT and former U.S. Director of Central Intelligence as well as former U.S. Deputy Secretary of Defense, argue for four climate risk control mechanisms for the United States to address the climate challenge: (1) lowering the carbon intensity of energy; (2) increased investment in carbon dioxide removal (CDR) technologies; (3) policies and programs that protect communities, commerce, and the environment from adverse impacts; and (4) solar radiation modification (SRM) which deploys new technologies to reduce the intensity of solar radiation in the atmosphere. The authors model the deployment of these four policy proposals, compare potential welfare outcomes, and discuss central governance issues related to each mechanism. They also emphasize that developing new innovations at scale will require unprecedented mobilization and coordination of federal, state, local, and private sector organizations. Thus, the authors recommend the adoption of a multi-year program governed by a single federal agency. They further propose that the program be overseen by a single joint congressional climate action committee that could appropriate a multi-year climate budget.

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