

ADVANCING AMERICA'S PROSPERITY

Foreword by

HENRY M. PAULSON, JR. and TIMOTHY F. GEITHNER

Edited by

MELISSA S. KEARNEY and LUKE PARDUE

Copyright © 2025 by The Aspen Institute

The Aspen Institute 2300 N Street, N.W. Suite 700

Washington, DC 20037

Published in the United States of America in 2025 by The Aspen Institute $\,$

All rights reserved Printed in the United States of America



ADVANCING AMERICA'S PROSPERITY

Foreword by
HENRY M. PAULSON, JR.
and TIMOTHY F. GEITHNER

Edited by

MELISSA S. KEARNEY

and LUKE PARDUE

DECEMBER 2025

Acknowledgements

We are grateful to the many individuals who were instrumental in the production of this volume. Members of the Aspen Economic Strategy Group provided thoughtful discussions that motivated the topics addressed in the volume. We thank the authors for their contributions to this volume and their commitment to informing the public policy conversation with rigorous research. We also thank the individuals and organizations whose generous support makes the work of the Aspen Economic Strategy Group possible.

Staff invested numerous hours in producing this volume, and we thank Ella Grant, Sean Scanlon, and Molly Griffith. We thank Jessica Wilson for her copyediting, Krista Martin Design for cover art and graphics, and Sogand Sepassi for book layout.

Henry M. Paulson, Jr. Timothy F. Geithner

Co-Chair Co-Chair

Melissa S. KearneyLuke PardueDirectorPolicy Director

This volume was produced to provide policy-relevant evidence about current challenges confronting the American economy. Authors are invited to share their views about policy issues, which do not necessarily represent those of the Aspen Institute, members of the Aspen Economic Strategy Group, or their affiliated organizations.

Table of Contents

| Foreword |
|---|
| Introduction |
| Part I: Domestic Policy Challenges |
| Current Evidence on Household Financial Well-Being |
| Beyond the Myths: A Clearer Path to Poverty Alleviation in America 32 Melissa S. Kearney and James Sullivan |
| Coverage Isn't Care: An Abundance Agenda for Medicaid |
| Improving Housing Affordability |
| Part II: America's Strategic Competitiveness |
| Aligning High-Skilled Immigration Policy with National Strategy 169 Jeremy Neufeld |
| An Energy Strategy for National Renewal |
| Author Biographies |
| Aspen Economic Strategy Group 2025 Membership |

Foreword

Henry M. Paulson, Jr. and Timothy F. Geithner

The Aspen Economic Strategy Group releases its 2025 policy volume focused on advancing America's prosperity.

We release this volume at a time of great economic policy uncertainty, driven by international and domestic economic policy actions, technological advances, and global developments. The current environment raises many challenges and questions about the economic strength of our nation, leading us to consider what policies are needed to bolster America's domestic economic prosperity and advance US global competitiveness.

This book examines these and related questions and offers evidence-based answers. Part I examines domestic policy challenges, including evidence-based approaches to address poverty, strengthen the health care safety net, and improve the affordability of housing for Americans. Part II discusses topics key to bolstering America's strategic competitiveness, including boosting US energy independence and attracting global talent through high-skilled immigration.

Our annual policy volumes are intended to apply the best current economic research to help develop policy solutions to make the US economy work better for everyone. They do not represent the consensus view of the Aspen Economic Strategy Group's members.

Introduction

Melissa S. Kearney* and Luke Pardue** September 2025

The United States stands at a pivotal moment in economic policymaking.

The Trump administration has profoundly reshaped America's approach to international economics, adopting a more confrontational stance on trade and retreating from long-standing multilateral agreements. In April 2025, the Trump administration announced tariffs on goods from every US trading partner, ranging from 11 to 50 percent, which were then reduced to 10 percent as countries negotiated bilateral trade agreements (White House 2025b). This bilateral, "deals-based" approach to trade negotiations further cements the end of an earlier era of engagement through multilateral institutions.

In addition, Congress has passed sweeping legislation that makes significant changes across a range of domestic policy areas. The recently passed One Big Beautiful Bill Act (OBBBA) extends expiring provisions in the 2017 Tax Cuts and Jobs Act (TCJA), introduces new tax cuts, reduces the generosity of Medicaid and SNAP, rolls back incentives for renewable-energy investments, eases financing requirements for low-income housing, bolsters national defense, and strengthens border security efforts, all while adding an estimated \$3.4 trillion to the federal deficit over the next ten years (CBO 2025). Questions abound about the economic implications of the bill's many provisions, including how the permanence of some TCJA provisions will affect business investment, how changes to Medicaid and SNAP will impact vulnerable populations, and how the increase in debt will drive up interest rates and affect the macroeconomy.

Meanwhile, rising geopolitical tensions and rapid advances in artificial intelligence are redefining the landscape for US strategic competitiveness. China is taking steps to advance its economic capacity and to boost its military capabilities, and Russia's continued invasion of Ukraine marks its clear ambitions of territorial expansion. The US faces these rising global tensions with eroded industrial capacity and a weaker recognition of the connection between commercial interests and the country's national interests that came to define prior decades.

^{*} Director, Aspen Economic Strategy Group; Gilbert F. Schafer Professor of Economics, University of Notre Dame

^{**} Policy director, Aspen Economic Strategy Group

All these developments have fueled a high degree of economic uncertainty about economic conditions, for both households and businesses. Measures of consumer sentiment remain well below levels in 2023 and 2024 (Economic Policy Uncertainty Index n.d. and University of Michigan 2025, respectively). These developments also raise urgent questions about how best to safeguard and advance America's prosperity and bolster America's strategic competitiveness.

This 2025 Aspen Economic Strategy Group (AESG) policy volume takes up these questions. The six chapters in this book, organized into two sections, consider the implications of these developments and evidence-based approaches to moving forward in a way that bolsters American economic prosperity.

I. Domestic Policy Challenges

In chapter 1, "Current Evidence on Household Financial Well-Being," Luke Pardue and Ella Grant bring clarity to the question of how American households are faring and attempt to reconcile often-heard conflicting claims about whether American households are thriving or barely surviving. The data show that American workers across the wage distribution are materially better off than they were in 1979. Over this period, wage growth has exceeded increases in the cost of living, even for the bottom 10 percent of workers. The phenomenon of wage stagnation of the middle and lower parts of the wage distribution largely ended in the mid-1990s. At the same time, the US tax-and-transfer system has become increasingly generous toward low- and middle-income Americans, further boosting household income.

However, disparities between the "haves" and "have-nots" are real and likely contribute to populist discontent. There remains a large wage and employment gap between workers with and without four-year college degrees, as reported in this set of facts. This report also shows that geographic income inequality has widened, as college-educated workers increasingly cluster in a small set of high-tech, expensive cities.

Furthermore, housing and healthcare costs are salient household expenses that have outpaced overall price growth in recent decades. Data on rental costs and home ownership reveal that indeed, housing costs are increasingly straining Americans' budgets across the country. Similarly, households are paying more for healthcare today, driven by rising prices of pharmaceutical drugs and physician care. A conversation about advancing America's prosperity must include a consideration of how to address these challenges.

In chapter 2, "Beyond the Myths: A Clearer Path to Poverty Alleviation in America," Melissa S. Kearney and James Sullivan take a broad look at poverty in America and our country's approach to addressing it. They argue that three persistent misconceptions have undermined the public understanding and policymaking around poverty: that poverty has not declined; that anti-poverty programs are ineffective; and that simply giving people cash will solve poverty.

First, the authors gather data from a range of indicators to make the case that US poverty has declined substantially since the 1980s, while household consumption and various measures of material well-being have improved. They explain how poverty measures with well-known flaws have been used by others to erroneously argue the contrary.

Second, contrary to claims of program ineffectiveness, expansions in anti-poverty programs have been central to poverty reduction over the past four decades. Comparing pre- and post-tax incomes of low-income households, they show that tax credits and in-kind transfers directly reduce the poverty rate by roughly two-thirds. They note that given how important government transfers are and have been to reducing poverty, a more ambitious approach to reducing poverty through increased economic self-sufficiency will require additional efforts. With this perspective, they emphasize that programs that alleviate current poverty for children are also investments in future poverty reduction. They describe evidence showing that transfers from anti-poverty programs like the Earned Income Tax Credit and SNAP not only provide short-term income support but also improve children's long-term health, educational attainment, and adult earnings, reducing the intergenerational transmission of poverty.

Finally, the authors challenge claims that America could eliminate poverty simply by giving people money. They argue that this solution conceives of the problem of poverty narrowly as a financial one, while in reality, the challenge of poverty is often much deeper. They argue that treating the underlying problems that cause poverty, rather than merely treating the symptom of limited income, requires designing institutions and policies that offer widespread opportunities for individuals to participate productively in society.

Guided by the facts and evidence they lay out, Kearney and Sullivan propose a comprehensive anti-poverty agenda for the country focused on making long-term investments in people and families. Their agenda focuses on advancing education and skills; building strong families; addressing individual barriers to flourishing; and boosting upward mobility for poor children through improved access to nutrition, healthcare, stable housing, and early childhood education. They emphasize that

their agenda is intended to complement, not supplant, efforts to promote and sustain strong economic growth and widespread opportunities for well-paid jobs.

Chapter 3, "Coverage Isn't Care: An Abundance Agenda for Medicaid," by Craig Garthwaite and Timothy Layton, provides a thoughtful overview of the Medicaid program in light of its tremendous growth and the general context of healthcare in America. The facts, evidence, and conceptual points raised in this paper provide a framework for evaluating the recent cuts to Medicaid that were included in the OBBBA and for considering reform options going forward.

Garthwaite and Layton describe how Medicaid has grown from a modest program serving a very small and targeted segment of the population to an extremely large program providing public health insurance to nearly one in four Americans. The program has been expanded over the decades in piecemeal, ad hoc ways, through state-level decisions, waiver programs, and federal incentives, resulting in a fragmented and inefficient structure. Given the expansiveness of the program today, it is now central to the financial and operational decisions of many healthcare providers and to state budgets.

The authors submit that there are many solid justifications for publicly providing health insurance and healthcare to economically disadvantaged individuals. They further acknowledge that the question of how expansive the program should be in terms of population coverage is fundamentally a political question, not a policy or economic one. Rather, the question they address is how Medicaid should be reformed, given that it is now a massive program serving multiple populations with different needs. The authors discuss the advantages and drawbacks of various incremental reforms that are frequently under consideration, including ones that were included in the recently passed reconciliation bill, but ultimately, they argue that Medicaid is in need of more fundamental reform.

With regard to incremental reforms, the authors discuss the impact and feasibility of three commonly proposed categories of Medicaid reforms. The first involves modifying the formula for federal matching of state spending (Federal Medical Assistance Percentage, or FMAP). The federal government has historically encouraged states to cover new populations through higher matching rates (as in the Affordable Care Act's expansion to individuals with incomes below 138 percent of the federal poverty line). In this way, reducing the FMAP would likely reduce Medicaid spending considerably, but it would do so entirely via decreased eligibility and enrollment, as states may no longer find covering the expansion populations optimal and/or feasible.

The second reform bucket includes work requirements for enrollees, as contained in the as contained in the OBBBA. Such requirements are intended to reduce costs

by decreasing enrollment among non-working, able-bodied (i.e., ineligible) adults, but a concern is that actual enrollment declines (and reduced costs) will come from disqualifying eligible individuals by imposing procedural hurdles on them. The third reform category involves a more substantive replacement of FMAP with block grants or annual limits on per-capita spending. The goal of this type of reform is to limit federal spending and encourage states to reduce costs. While this approach would likely reduce the prevalence of the "shenanigans" that states engage in to raise their federal match, it also would likely lead them to limit valuable services (through, for instance, prescription-drug caps).

Garthwaite and Layton argue that the Medicaid program today attempts to do two things simultaneously: provide widespread coverage through the mainstream medical care system while operating within a restrictive cost structure. As a result, according to the authors, the program does neither well. The authors suggest a more honest and efficient approach: explicitly acknowledging the two-tier structure in the current US healthcare system and designing a cost-efficient, high access "Medicaid tier" of care

To facilitate this lower tier of healthcare coverage, the authors propose a series of supply-side reforms designed to improve the quality and availability of care within the Medicaid tier. To contain costs while not sacrificing coverage, they propose reducing regulatory constraints on three core levers in the healthcare system. First, they propose relaxing restrictions that make it difficult for doctors trained abroad to practice in the US. Second, they propose relaxing "scope-of-practice" laws that limit the autonomy of mid-level care providers. Third, the authors advocate for increased adoption of AI in healthcare and integration of efficiency-improving technologies into daily healthcare practices. The supply-side changes proposed by the authors would bring down labor costs, which often account for 60–70 percent of operating expenses, and increase the pool of willing Medicaid providers.

Garthwaite and Layton argue that these changes move away from politically fraught debates over enrollment and eligibility and instead prioritize structural efficiency and targeted supply-side investments. By formalizing the implicit two-tier nature of Medicaid and building the infrastructure to support a well-functioning lower-cost tier, their proposal aims to deliver better care, greater access, and a more sustainable healthcare safety net for low-income Americans.

Ben Keys and Vincent Reina take up the topic of America's rising housing costs in chapter 4, "Improving Housing Affordability." They document how housing costs have risen across the renter and homeowner markets in recent decades. The share of renters paying more than 30 percent of their income toward rent, qualifying them as "rent-burdened," has risen from 35 percent to 50 percent between 1980 and 2023.

By 2023, 25 percent of renters were severely rent burdened, putting more than half of their income toward rent. They also document that homeownership has become increasingly less attainable; for instance, the ratio of median home sales price to median income increased from 2.4 in 1990 to 5 in 2023.

They argue that the housing affordability problem is fundamentally driven by the fact that the US does not produce enough housing to meet demand. They also argue that mortgage financing has been especially strict since the Great Recession, resulting in further barriers to homeownership.

Keys and Reina lay out a suite of policy options that would raise the affordability of housing for Americans. First, they argue, policymakers at the local, state, and federal levels must make it easier to build. Local zoning regulations, such as minimum lot sizes and parking requirements, have inhibited development and should be reviewed and reformed. Second, the federal government can help ensure that the financing exists to construct new housing—particularly in the multifamily housing market. The federal government could expand multifamily financing in a loan system that approximates the system in place for single-family lending. Applying these tools countercyclically, with automatic stabilizers that increase financing incentives when certain macroeconomic triggers are reached, would also dampen the cyclicality of housing construction.

Third, they propose reducing barriers to homeownership through the tax code—though they note that any proposals to stimulate demand must be paired with policies to raise supply. The current tax deduction on mortgage interest is highly regressive and poorly structured to incentivize homeownership. Congress could transition the mortgage interest deduction into a targeted first-time buyer credit. On the supply side, policymakers should examine a tax on imputed rent to encourage empty nesters to downsize their large homes.

Finally, Keys and Reina advocate for creating a stronger housing safety net to ensure that affordable shelter exists when households face a negative income shock. The United States lacks a comprehensive housing safety net, with many eligible households not receiving housing support due to limited resources. All low-income households should be eligible to receive housing assistance in the form of a voucher or voucher-equivalent rent benefit, they argue. This support can innovate on existing models to improve outcomes. For instance, direct rental assistance—where the tenant is given assistance directly, instead of being required to find an owner who will accept government rental assistance—has been shown to reduce evictions to a greater degree than existing models.

II. America's Strategic Competitiveness

The US faces rising tensions with China, Russia, and in the Middle East, with eroded industrial capacity. By conventional accounts, as the Cold War ended and as America's broader manufacturing industry shrank, the country's defense industrial base withered as well. Domestic capacity to build traditional military weapons, such as missiles and warships, has been severely reduced compared to prior decades. Delivery times for submarines, for instance, have grown from six to nine years (Ip 2023). At the same time, increased use of advanced technologies such as drones is upending measures of defense capabilities (Tromivov 2023).

The era of American global leadership began at the start of World War II, when private-sector leaders embraced the connection between commercial interests and the country's national interests, a trend that continued through the Cold War. Automobile manufacturers turned Detroit into the "Arsenal of Democracy" during World War II (Hyde 2013). In 1955, Chrysler Corporation began fabricating missiles (Cardenas 2019). Alex Karp and Nicholas Zamiska (2025) observe that that era has been followed by one marked by businesses, and particularly technology companies, eschewing American interests in exchange for building software in service of global consumers. As new technologies like AI come to define global competition, what is the proper role of US technology firms and their leaders in advancing US national interests today? Furthermore, what set of domestic and international economic policies will effectively allow the US to maintain global leadership?

Attracting top talent from around the world is a key lever to raising America's competitiveness. Toward the end of World War II and in the lead-up to the Cold War, American intelligence agencies identified top German engineers, scientists, and technicians to bring to the United States, in an effort known as "Project Paperclip" (Watkins 2014). These immigrants went on to lead the development of missile technology in the arms race with the Soviet Union, and later the development of the US space program. Such technological competition has parallels today in the race for dominance in AI technology—as does the imperative to ensure America remains a magnet for top scientists.

In chapter 5, "Aligning High-Skilled Immigration Policy with National Strategy," Jeremy Neufeld outlines how the United States' outdated high-skilled immigration system is undermining national competitiveness and innovation capacity. He highlights the critical contributions of immigrants, who have founded, for instance, 55 percent of billion-dollar startups and 60 percent of top AI companies. Today's immigration system, he points out, is hampered by outdated laws, restrictive quotas, and bureaucratic complexity, making it acutely difficult for the US to attract and retain high-skilled immigrants.

Neufeld discusses how the legal framework governing high-skilled immigration has not been substantially updated since the 1990s, and the primary employment-based pathways remain constrained by numerical caps and rigid eligibility criteria. Of the approximately one million green cards issued annually, only about 7 percent are awarded to individuals selected on the basis of their skills or employment; the remainder go to categories such as relatives of US citizens. Temporary visas like the F-1, J-1, and H-1B have become the de facto system for recruiting and retaining high-skilled immigrants, but these too are hampered by restrictive caps and lottery-based allocation that undermines strategic selection.

The consequences of this outdated system are becoming more severe. For example, by 2030, the estimated time it would take for an Indian national applying to receive an EB-2 visa (reserved for professionals with advanced degrees and those with exceptional ability) is projected to rise to 436 years, eliminating any realistic path to permanent residency. These extreme delays, combined with restrictive labor-market mobility tied to visa status, are resulting in wasted entrepreneurial potential. At the same time, immigration is becoming more competitive. Other countries, including Canada, Germany, Australia, and the United Kingdom, have seized upon America's stagnant system, implementing proactive, streamlined immigration policies that increasingly attract global talent.

Crucially, Neufeld argues, the US system also fails to prioritize selectivity. Green cards are distributed on a first-come, first-served basis, and H-1B visas are allocated through a random lottery, hampering the US's ability to select the highest-quality talent. This inefficiency encourages firms to flood the system with generic, replaceable applicants and discourages targeted, high-value matches. The result is a system that is neither large enough to meet labor market needs nor selective enough to maximize the value of the limited slots available.

Neufeld proposes a series of changes to modernize the US immigration system.

First, he argues, Congress should raise the caps on green cards and H-1Bs and exempt high-priority groups, such as STEM PhDs, individuals with high-wage job offers, and entrepreneurs, from these outdated limits.

Second, the existing system should be restructured to prioritize merit. Today's employment-based green-card categories ought to be reclassified to prioritize individuals with exceptional ability and extraordinary contributions. More broadly, Neufeld proposes the creation of a points-based green-card system. Applicants would be scored based on education, salary, job offers, language skills, and other indicators of likely success. Visas would be awarded to those with the highest scores, taking an economically strategic approach to immigrant selection and ensuring that the US receives the highest-quality talent.

Third, Neufeld's paper calls for a shift from passive to proactive talent recruitment. The US should shift away from employer- and university-driven pathways and instead give more power to federal agencies like the State Department or Department of Defense to identify and recruit top global talent. By investing in a modernized, merit-based, and strategically aligned immigration system, the United States can restore its edge as the world's premier magnet for global talent.

US energy policy is also returning to a place of strategic importance to US competitiveness. The country faces a much different energy landscape compared to just several years ago. Over the past two decades, the country experienced relatively constant energy demands, amid increasing energy efficiency and the structural economic transition from manufacturing to lower-emission service sectors.

Today, the US faces an environment of rapidly expanding demand, driven largely by strategic industries including AI data centers and advanced manufacturing (US EIA 2025). For instance, while AI datacenters consumed approximately 4 gigawatts of demand in 2024, that demand is projected to rise to between 50 to 84GW by 2030 (Smith et al. 2025). This new energy landscape is set in contrast to the highly uncertain US energy policy. The OBBBA phases out several subsidies for renewable energy sources, including ongoing wind and solar projects, included in the 2022 Inflation Reduction Act (see Uberti 2025). The bill also includes provisions aimed at stimulating energy production from fossil fuels on public lands. At the same time, the US Department of Energy has introduced rules aimed at speeding the new construction or reopening of nuclear power plants (Dabbs et al. 2025). How should policymakers approach US energy policy today? What is the role of abundant, reliable, affordable energy in our national competitiveness? Where do concerns for climate change and the impetus to continue the transition to low-carbon sources fit into today's strategy?

In chapter 6, "An Energy Strategy for National Renewal," author Joseph Majkut considers these questions. He highlights that America's current electricity grid is fundamentally unprepared for the scale of growth required to support artificial intelligence, rising domestic manufacturing, and electrification. He lays out a series of changes policymakers can implement to build out the necessary capacity rapidly, reliably, and cleanly, contending that the success of American economic and geopolitical strategic competitiveness hinges on ensuring abundant and affordable access to power.

Today's rising energy demand, he points out, is coming at a time when the grid possesses little spare capacity, given the relatively constant demand over the past two decades. In today's constrained environment, each new AI data center must

provide its own power supply, and every large manufacturing facility needs to be carefully integrated into the power system. Sizeable changes will be required to accommodate this rapid and concentrated increase in demand, while continuing to prioritize providing affordable and low-emission energy.

In the context of rising demand, Majkut notes that prioritizing low-carbon sources must remain a part of America's competitiveness strategy. As the EU, Japan, China, and other countries continue to implement carbon border measures and emissions-based trade rules, the absence of a credible US carbon accounting system risks putting American exporters at a disadvantage.

To meet this challenge, Majkut proposes four policy changes, emphasizing the need for firms, states, and the federal government to coordinate their disparate activities. First, he recommends expanding the development and deployment of nuclear energy. The federal government can help facilitate the vast capital investment needed to build new nuclear capacity through a direct procurement model in which the Department of Energy would purchase offtake rights from new nuclear projects.

Second, he emphasizes the importance of investing in grid enhancements, namely high-voltage interstate transmission, arguing that transmission infrastructure provides a foundation for economic growth and technological enhancement. Majkut notes that because individual states tend to underinvest in interregional transmission lines, federal investment is essential to increasing national grid capacity. Increased federal funding should focus on raising interstate transmission capacity, particularly to areas that are hosting strategic industries. Such funding can be paired with enhanced federal authority to site and promote these projects.

Third, Majkut proposes building new natural-gas plants today that will be equipped to later retrofit with carbon-capture and storage equipment. While natural gas will be necessary to meet rising demand, future emissions-reduction goals will require retrofitting many of these facilities. Designing plants today with future carbon capture in mind is a low-cost hedge that helps prioritize long-term climate progress. Finally, Majkut argues in favor of establishing rigorous carbon-accounting standards to ensure that American exporters remain competitive in international markets.

Majkut's paper highlights the pressing need to expand our domestic energy capacity and identifies a set of strategic reforms to do so. He argues that in this era of increasing global competition, climate goals can be effectively balanced with economic imperatives to meet rising energy demand. By investing in capacity, reducing emissions, and coordinating action across public and private sectors, US energy policy can serve as a pillar of long-term competitiveness.

References

- Blue Rose Research. 2025. 2024 Retrospective and Looking Forward. Blue Rose Research, March. https://data.blueroseresearch.org/hubfs/2024%2Blue%20Rose%20 Research%20 Retrospective.pdf?utm_medium=email&_hsenc=p2ANqtz-_nN83v PAC5k97OPDFIMRo 32IzMiYLtlEjivWEwUxpu 7Y5DsRqzM24RTdpokrQ2uLAuyLeQbFGmb1XNk5US9AZ AtI2t7OX3Y05PYtCmtVCAMdKtXiA&_hsmi=352433995&utm_content=352433995& utm_source=hs_automation.
- Cardenas, Edward. 2019. "Chrysler Helped Power NASA to the Moon." At the Wheel (blog), July 22. https://blog.stellantisnorthamerica.com/2019/07/22/chrysler-helped-power-nasa-to-the-moon/.
- Case, Anne, and Angus Deaton. 2020. Deaths of Despair and the Future of Capitalism. Princeton University Press.
- Congressional Budget Office (CBO). 2025. *Information Concerning the Budgetary Effects of H.R.* 1, as Passed by the Senate on July 1, 2025. Congressional Budget Office. https://www.cbo.gov/publication/61537.
- Dabbs, Brian, Francisco "A. J." Camacho, and Ian M. Stevenson. 2025. "Trump Admin Greases the Skids for Faster Energy Permitting." Politico Pro, July 1. https://subscriber.politicopro.com/article/eenews/2025/07/01/trump-admin-greases-the-skids-for-faster-energy-permitting-00434270.
- Economic Policy Uncertainty Index. n.d. "Economic Policy Uncertainty Index." PolicyUncertainty.com. Accessed July 8, 2025. https://www.policyuncertainty.com.
- Federal Reserve Bank of New York, Center for Microeconomic Data. 2025. "Short-Term Inflation Expectations Tick Down, Household Financial Expectations Improve." Press release, July 8. https://www.newyorkfed.org/newsevents/news/research/2025/20250708.
- Hyde, Charles K. 2103. Arsenal of Democracy: The American Automobile Industry in World War II. Wayne State University Press.
- Ip, Greg. 2023. "The U.S. Can Afford a Bigger Military. We Just Can't Build It." Wall Street Journal, December 6. https://www.wsj.com/economy/the-u-s-can-afford-a-bigger-military-we-just-cant-build-it-7edd0e74.
- Karp, Alexander C., and Nicholas W. Zamiska. 2025. The Technological Republic: Hard Power, Soft Belief, and the Future of the West. Penguin Random House.
- Kearney, Melissa. 2023. The Two-Parent Privilege: How Americans Stopped Getting Married and Started Falling Behind. University of Chicago Press.
- Smith, Karl, Joseph Majkut, Cy McGeady, and Barath Harithas. 2025. The AI Power Surge: Growth Scenarios for GenAI Datacenters Through 2030. Center for Strategic and International Studies, March 3. https://www.csis.org/analysis/ai-power-surge-growth-scenarios-genaidatacenters-through-2030.
- Tromivov, Yarislov. 2023. "Drones Everywhere: How the Technological Revolution on Ukraine Battlefields Is Reshaping Modern Warfare." Wall Street Journal, September 28. https://www.wsj.com/world/drones-everywhere-how-the-technological-revolution-on-ukraine-battlefields-is-reshaping-modern-warfare-bf5d531b?mod=article_inline.

- Uberti, David. 2025. "The Moment the Clean-Energy Boom Ran Into 'Drill, Baby, Drill." Wall Street Journal, July 5. https://www.wsj.com/business/energy-oil/us-energy-industry-gop-megabill-d74b.
- University of Michigan Survey Research Center. 2025. "The Index of Consumer Sentiment." Surveys of Consumers. https://www.sca.isr.umich.edu/files/chicsr.pdf.
- US Bureau of Economic Analysis (US BEA). 2025. "Personal Consumption Expenditures (PCE)." FRED, Federal Reserve Bank of St. Louis, last updated July 7. https://fred.stlouisfed.org/series/PCE.
- US Bureau of Labor Statistics (US BLS). 2025a. "All Employees: Total Nonfarm (PAYEMS)." FRED, Federal Reserve Bank of St. Louis, last updated July 3. https://fred.stlouisfed.org/series/PAYEMS.
- US Bureau of Labor Statistics (US BLS). 2025b. "Consumer Price Index for All Urban Consumers: All Items (CPIAUCSL)." FRED, Federal Reserve Bank of St. Louis, last updated July 15. https://fred.stlouisfed.org/series/CPIAUCSL
- US Bureau of Labor Statistics (US BLS). 2025c. "Unemployment Rate (UNRATE)." FRED, Federal Reserve Bank of St. Louis, last updated July 3. https://fred.stlouisfed.org/series/UNRATE.
- US Energy Information Administration (US EIA). 2025. "After More Than a Decade of Little Change, US Electricity Consumption Is Rising Again." Today in Energy, May 13. https://www.eia.gov/todayinenergy/detail.php?id=65264.
- Watkins, Jay. 2014. "Intelligence in Public Literature: Review of Operation Paperclip." Studies in Intelligence 58, no. 3 (September): 1–2. https://www.cia.gov/resources/csi/static/Review-Operation-Paperclip.pdf.
- White House. 2025a. "Fact Sheet: President Donald J. Trump Declares National Emergency to Increase Our Competitive Edge, Protect Our Sovereignty, and Strengthen Our National and Economic Security." White House, April 2. https://www.whitehouse.gov/fact-sheets/2025/04/fact-sheet-president-donald-j-trump-declares-national-emergency-to-increase-our-competitive-edge-protect-our-sovereignty-and-strengthen-our-national-and-economic-security/.
- White House. 2025b. "U.S. Trade Rep: Under President Trump, Our Manufacturing Renaissance Is Here." White House, April 3. https://www.whitehouse.gov/articles/2025/04/u-s-trade-rep-under-president-trump-our-manufacturing-renaissance-is-here/.

PART I

DOMESTIC POLICY CHALLENGES

Current Evidence on Household Financial Well-Being

Luke Pardue and Ella Grant

Beyond the Myths: A Clearer Path to Poverty Alleviation in America

Melissa S. Kearney and James Sullivan

Coverage Isn't Care: An Abundance Agenda for Medicaid

Craig Garthwaite and Timothy Layton

Improving Housing Affordability

Benjamin J. Keys and Vincent Reina

Current Evidence on Household Financial Well-Being

AUTHORS

Luke Pardue* and Ella Grant**

ABSTRACT

Despite strong economic conditions, survey data reveal substantial economic worry and discontent among Americans. Pew survey data from 2024 indicated that "strengthening the economy" was Americans' top policy priority, above "defending against terrorism," "reducing crime," and "dealing with immigration" (Pew 2024). A separate Pew survey from that same year found that only 53 percent of Americans believe that the "American Dream," defined as the idea that anyone can achieve success in the United States through hard work and determination, is still possible (Borelli 2024).

Advancing broad economic prosperity requires an understanding of the economic well-being of American households, as well as potential contributors to widespread economic malaise. With that goal, this piece highlights current evidence on household financial well-being through six facts and accompanying figures. First, we document trends in earnings and income growth across the wage distribution as well as by educational attainment, gender, and geography. Second, we highlight trends in the costs of two salient household budget items: housing and healthcare.

^{*} Policy Director, Aspen Economic Strategy Group.

^{**} Senior Research Assistant, Aspen Economic Strategy Group.

1. Compared to half a century ago, inflation-adjusted wages have risen across the income distribution.

The typical worker in the United States earned more in recent years than at any point over the past half century, after adjusting for the rising cost of living. Figure 1 shows

that median hourly wages increased by 33 percent from 1973 to 2023 and that wages increased across each earnings decile over that time. To be sure, wage growth has not been uniform across time or across the wage distribution. The lowest earners (the bottom 10 percent), for instance, experienced a sharp decline in real wages from 1979 through 1997. In the subsequent period, from 1997 to 2023, however, real wages have risen 48 percent among the bottom decile of earners—

"The typical worker in the United States earned more in recent years than at any point over the past half century, after adjusting for the rising cost of living."

compared to 33 percent for the median worker and 37 percent for the 80th percentile of earners. Thus, the overall story of the American worker is one of substantial wage growth over the past half century and particularly over the past 30 years.

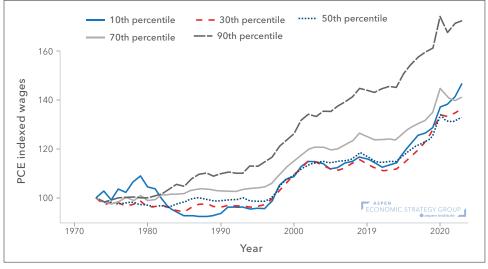


Figure 1: Wage growth by income decile, 1973-2023 (1973=100)

Note: Wages are adjusted for inflation using the Personal Consumption Expenditures (PCE) price index (US BEA 2025a).

Source: Authors' calculations using data from Economic Policy Institute 2024

¹ Throughout this paper, we adjust earnings and income data for the rising cost of living using the Personal Consumption Expenditures (PCE) price index. Researchers typically deflate such data using either the PCE or the CPI-U-RS, a version of the Consumer Price Index for all Urban Consumers (CPI-U) that incorporates improvements made to CPI calculation methods over time (BLS 2025). We prefer the PCE price index as it is a chain-type price index, meaning it incorporates consumers' substitution behaviors as the relative prices of goods change (BLS 2011).

Over the past four decades, household income has risen across the income distribution, reflecting both rising earnings and a more generous tax-and-transfer system.

While fact 1 concerns long-term trends in individual worker wages, examining trends in household income helps to shed light on how total resources have changed, taking into account changes in household structure and the tax-and-transfer system. Figure 2 plots changes in household income, showing both market income and total income, by income quintile. "Market income" consists of wages, along with additional labor income (such as employers' contributions for health insurance premiums), business income, and capital gains (CBO 2024). For all quintiles, both market income and household income increased between 1979 and 2019. For the lowest quintile of households, market income rose by 40 percent. Post-tax and transfer income of this group increased by 100 percent. As outlined by Kearney and Sullivan (2025), changes to the US tax-and-transfer system over this time, such as expansions to the Earned Income Tax Credit, have played a large role in raising the resources of low-income households.

125.6% Change in market income Change in post-tax-and-transfer income 120 Percentage change in household income 99.6% 100 80 70.3% 62.4% 60 55% 40 20 Second quintile Fourth quintile Fifth quintile Lowest quintile Third quintile ECONOMIC STRATEGY GROUP Income quintile

Figure 2: Percent change in average pre- and post-tax income, by income quintile, 1979-2019

Note: Post-tax-and-transfer income is measured as market income plus social insurance and means-tested transfers, minus federal taxes. Social insurance includes Social Security, Medicare, and unemployment insurance. Means-tested transfers include cash payments (such as Temporary Assistance for Needy Families) and in-kind services (such as Medicaid and housing assistance programs). For more details and methodology, see CBO 2024.

Source: Authors' calculations via CBO 2024

3. Labor market outcomes have been marked by an increased return to education and a decline in inflation-adjusted wages for men without college degrees.

Despite rising wages across the income distribution and broad growth in household income, certain groups have fared better than others over the past five decades. Indeed, breaking apart wage data by gender and education highlights two key economic trends. First, there has been a consistent rise in the return to education from 1973 to 2024. Both men and women with a college degree or higher, especially those with advanced degrees, have experienced the strongest real wage growth: From 1973 to 2024, wages for men and women with advanced degrees have risen 38.4 and 32.9 percent, respectively; wages for men and women with college degrees have risen 16.9 and 27.6 percent, respectively. Second, in contrast, men without college degrees have fared poorly in the labor market. Over this time, real wages declined 15.5 percent for men with only high school degrees and 7.8 percent for men without high school degrees.

The twin trends of widening inequality in wages by education groups and the decline in earnings among men without college degrees are largely a product of developments in prior decades, including automation and globalization. Advances in technology that began in the 1980s sparked a polarization in the labor market that increased the returns to education and shifted workers without college degrees into low-wage

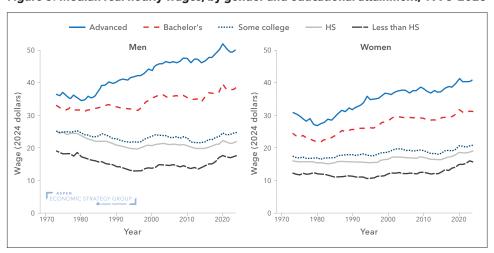


Figure 3: Median real hourly wages, by gender and educational attainment, 1973-2023

Note: Educational categories are mutually exclusive and represent the highest education level attained for all individuals ages 16 and older. For details on methodology, see Economic Policy Institute 2025.

Source: Authors' calculations using data from Economic Policy Institute 2025

jobs (Katz and Autor 1999). Men without college degrees saw wages stagnate in the first decade of the 2000s, as those who had been working manufacturing jobs that were eliminated due to rising global competition then moved into service-sector jobs (Autor et al. 2016). In the past decade, however, labor-market polarization has given way to general skill upgrading in the labor market, as Deming et al. (2024) describes, and real wages have risen across all education levels, including for men with less than a college degree.

4. Geographic income inequality has widened since 1980.

The dynamics described above tie directly into differences in economic growth that have emerged across geographies over this time. Figure 4 shows that from 1980 to 2023, per-capita real income (excluding government transfers) for the top 1 percent of counties rose by 165 percent, compared to 84 percent for the median county.

This divergence across cities reflects the dynamics of both labor markets and housing markets. The increased concentration of "knowledge workers" in cities fostered further growth, creating what Enrico Moretti (2004; 2012) has called the "Great Divergence" between highly educated, high-income, high-growth cities that attracted these workers and the areas that did not. Furthermore, as David Autor (2020) detailed, over this period, cities experienced a decline of middle-paying production or clerical jobs that a worker without a college degree might have once found there. From 1980 to 2015, the "urban wage premium" for workers with a college degree or greater rose by 50 percent, driven by the rise of high-paying professional and managerial jobs in cities.

At the same time, inelastic housing supply in these "superstar" cities caused house prices to rise to the point that living in such cities has become unaffordable for many low-wage service-sector workers (Gyourko, Mayer, and Sinai 2013). These developments have cut off a key mechanism of regional income convergence and individual economic mobility—a mechanism of which America's cities have historically served as a trademark (Glaeser et al. 2005; Glaeser 2011; Ganong and Shoag 2017).

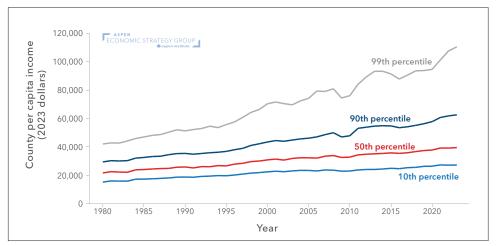


Figure 4: County-level, inflation-adjusted, per-capita income growth, excluding transfers, by percentile, 1980-2023

Note: Data in 2023 dollars. Income adjusted using PCE price index.

Source: Authors' calculations using US BEA 2025b

5. Rising housing costs have strained the budgets of many low-income Americans, making renting more burdensome and homeownership increasingly unattainable.

To be sure, rising housing costs are a concern not only in large cities but across the country, as Keys and Reina (2025) detail. Rent is consuming a larger share of household budgets, rising home prices are making home buying unaffordable, and

for recent homebuyers, high mortgage rates mean that mortgage payments consume a significantly higher share of monthly budgets than they did for prior cohorts.

Figure 5 shows that roughly half of US renters are now classified as rent-burdened, meaning they spend

"Roughly half of US renters are now classified as rent-burdened."

30 percent or more of their income on housing (US Census Bureau 2024). This burden is the largest for low-income households. In 2022, 83 percent of renters with incomes below \$30,000 spent at least 30 percent of their income on rent. The largest increases over time have been seen for middle-income renters: The share of households making between \$45,000 and \$75,000 who spent at least 30 percent of their income on rent has nearly doubled since 2001, reaching 45 percent in 2022 (Airgood Obrycki 2024).

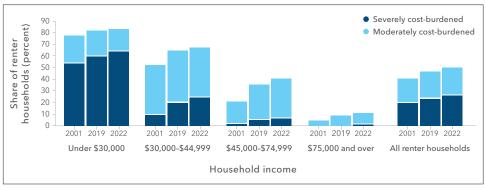


Figure 5: Share of renter households moderately or severely cost-burdened, by income quintile, 2001-2022

Note: Household incomes are adjusted for inflation using the CPI-U. Moderately (severely) cost-burdened households spend 30-50 percent (more than 50 percent) of income on rent and utilities. Households with zero or negative income are assumed to have severe burdens, while households that are not required to pay rent are assumed to be unburdened.

Source: Airgood Obrycki (2024) tabulations of American Community Survey one-year estimates

Likewise, high interest rates, tight lending standards, and constrained supply have made homeownership increasingly unaffordable for the typical American. Figure 6 shows the Federal Reserve Bank of Atlanta's estimate of the income needed if annual homeownership costs are to equal no more than 30 percent of annual income and plots it against the actual median income. From 2008 to 2019, that "qualified income" matched the median annual income. But from 2020 through 2023, the qualified income has risen to 1.5 times the median annual income.

Finally, for homebuyers able to obtain a mortgage since the pandemic, housing costs take up a substantially higher share of income compared to costs for homebuyers pre-pandemic, as shown in figure 7 below. For a buyer who obtained a mortgage in 2016, those payments consumed on average 15 percent of income in the first year; for a buyer in 2024, first-year mortgage payments made up 26 percent.

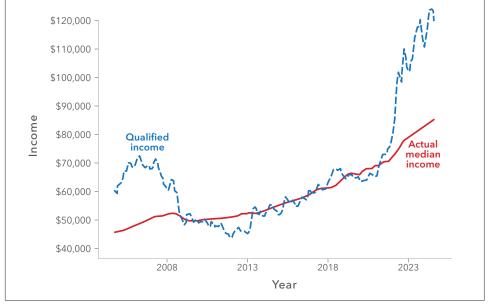


Figure 6: Median annual household income and qualified income

Note: Qualified income is defined as the income needed if annual homeownership costs are to equal no more than 30 percent of annual income.

Source: Federal Reserve Bank of Atlanta 2025

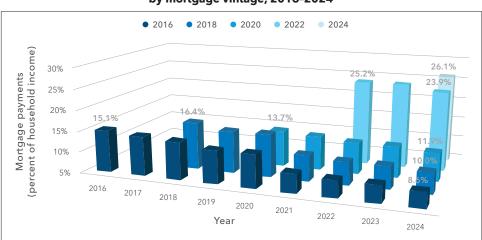


Figure 7: Mortgage payments as a share of household income, by mortgage vintage, 2016-2024

Source: Alloway and Weisenthal 2025

6. Healthcare costs are outpacing inflation.

Housing is not the only household necessity that has become increasingly expensive. Healthcare costs in the United States have grown steadily over the past several decades. Americans face high and rising out-of-pocket costs, which more than doubled from \$677 per person (inflation-adjusted) in 1970 to \$1,425 in 2022, as shown in figure 8. Importantly, out-of-pocket expenditures do not include spending on health insurance premiums, which have also risen substantially. In 1999, an average worker contributed \$1,564 in premiums for family health insurance (not including the employer's contribution); by 2024, that cost had more than quadrupled to \$6,393 (KFF 2024).

Research has found that healthcare costs are rising largely because prices—that is, the amount individuals pay for goods and services like pharmaceutical drugs, physician care, and hospital stays—have risen, as opposed to families consuming more healthcare and prices staying the same (Anderson et al. 2019). Figure 9 shows that while the overall consumer price index has risen 86 percent since 2000, the index for medical care has risen 121 percent.

While part of the rise in prices has been attributed to forces like hospital consolidation, high prices are also a result of valuable innovations that have led to new (and more expensive) drugs and treatments (Cooper et al. 2019). As Garthwaite and Starc (2023) lay out, high prices themselves serve as an incentive for firms to make costly investments in innovation, which increases access to new drugs and treatments in the future. In this way, reforms should focus on driving value in today's healthcare system—by, for example, improving transparency and competition at several points in the pharmaceutical drug supply chain, rather than strictly by lowering prices.

\$1,400 Out-of-pocket healthcare expenditures \$1,200 OOP spending per capita, 2022 dollars \$1,000 \$800 OOP spending per \$600 capita, unadjusted \$400 \$200 ASPEN
ECONOMIC STRATEGY GROUP \$0 1970 1980 1990 2000 2010 2020 Year

Figure 8: Annual per-capita out-of-pocket healthcare expenditures, 1970-2022

Source: Cox et al. 2024b

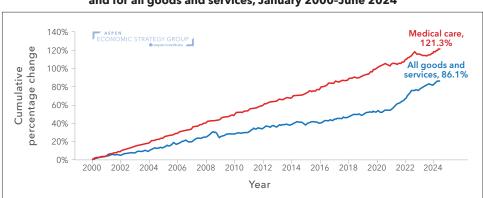


Figure 9: Cumulative percentage change in inflation for medical care and for all goods and services, January 2000-June 2024

Note: Data are not seasonally adjusted. Medical care includes medical services and commodities such as equipment and drugs.

Source: Cox et al. 2024a

Conclusion

Advancing widespread prosperity today requires a clear understanding of the current state and historical evolution of household economic well-being. Contrary to popular claims, American workers across the wage distribution are materially better off

"Contrary to popular claims, American workers across the wage distribution are materially better off now than they were in 1979."

now than they were in 1979. Wage growth has exceeded the increased cost of living even for the bottom 10 percent of workers—indeed, the story of wage stagnation is largely one that ended in the mid-1990s. The rise in household income has been even greater due to the increased generosity of the tax-and-transfer system.

However, automation and globalization have widened the gap in wage growth between those with college degrees or greater, who have seen

faster-than-average wage growth, and non-college workers, particularly men with high school degrees or less. These highly educated workers clustered in a small set of high-tech cities, and as housing supply failed to keep up with demand, such cities became too expensive for low-wage workers—driving a trend of widening geographic income inequality and cutting off mechanisms of economic mobility. Indeed, housing costs are increasingly straining renters' and many homeowners' budgets across the country. Along with housing, healthcare costs are a salient household expense that has outpaced overall price growth in recent decades.

References

- Airgood Obrycki, Whitney. 2024. "Renters' Affordability Challenges Worsened Last Year." Housing Perspectives (blog), Harvard Joint Center for Housing Studies, December 16. https://www.jchs.harvard.edu/blog/renters-affordability-challenges-worsened-last-year.
- Alloway, Tracy, and Joe Weisenthal. 2025. "Why Cracks in the American Consumer Are Spreading." Bloomberg Daily Newsletter, April 30. https://www.bloomberg.com/news/ newsletters/2025-04-30/why-cracks-in-the-american-consumer-are-spreading.
- Anderson, Gerard F., Peter Hussey, and Varduhi Petrosyan. 2019. "It's Still the Prices, Stupid: Why the US Spends So Much on Health Care." Health Affairs 38, no. 1 (January): 87-95. https://doi.org/10.1377/hlthaff.2018.05144.
- Autor, David. 2020. The Faltering Escalator of Urban Opportunity. Aspen Economic Strategy Group, July 8. https://live-aspen-economic-strategy-group.pantheonsite.io/wp-content/ uploads/2020/12/Autor_Urban-Opportunity.pdf.
- Autor, David, David Dorn, and Gordon H. Hanson. 2016. "The China Shock: Learning from Labor Market Adjustment to Large Changes in Trade." Annual Review of Economics 8, no. 1 (October): 205-40. https://doi.org/10.1146/annurev-economics-080315-015041.
- Borelli, Gabriel. 2024. "Americans Are Split over the State of the American Dream." Pew Research Center, July 2. https://www.pewresearch.org/short-reads/2024/07/02/americansare-split-over-the-state-of-the-american-dream/.
- Bureau of Labor Statistics (BLS). 2011. "Consumer Price Index: First Quarter 2011." Focus on Prices and Spending 2, no. 3 (May): 1-7. https://www.bls.gov/opub/btn/archive/differencesbetween-the-consumer-price-index-and-the-personal-consumption-expenditures-priceindex.pdf.
- Bureau of Labor Statistics (BLS). 2025. "Consumer Price Index: R- CPI U-RS Homepage." Bureau of Labor Statistics, last modified March 21. https://www.bls.gov/cpi/research-series/r cpi u rs home.htm.
- Congressional Budget Office (CBO). 2024. The Distribution of Household Income, 2021. Congressional Budget Office, September 11. https://www.cbo.gov/publication/60341.
- Cooper, Zach, Stuart V. Craig, Martin Gaynor, and John Van Reenen. 2019. "The Price Ain't Right? Hospital Prices and Health Spending on the Privately Insured." Quarterly Journal of Economics 134, no. 1 (February): 51-107. https://pubmed.ncbi.nlm.nih.gov/32981974/.
- Cox, Cynthia, Krutika Amin, and Rabah Kamal. 2024a. "How Does Medical Inflation Compare to Inflation in the Rest of the Economy?" Peterson-KFF Health System Tracker, July 2. https://www.healthsystemtracker.org/brief/how-does-medical-inflation-compare-toinflation-in-the-rest-of-the-economy/.
- Cox, Cynthia, Jared Ortaliza, Emma Wager, and Krutika Amin. 2024b. "Health Care Costs and Affordability." In Health Policy 101, edited by Drew Altman. Kaiser Family Foundation, May 28. https://www.kff.org/health-policy-101-health-care-costs-and-affordability/.

- Deming, David, Christopher Ong, and Lawrence H. Summers. 2024. "Technological Disruption in the US Labor Market." In Strengthening America's Economic Dynamism, edited by Melissa S. Kearney and Luke Pardue, 168–96. Aspen Institute. https://www.economicstrategygroup.org/wp-content/uploads/2024/10/Deming-Ong-Summers-AESG-2024.pdf.
- Economic Policy Institute. 2024. "Hourly Wage Percentiles—Real Hourly Wage (2024\$)." State of Working America Data Library. https://data.epi.org/wages/hourly_wage_percentiles/line/year/national/real_wage_2024/wage_percentile?timeStart=1973-01-01&timeEnd=2024-01-01&dateString=2024-01-01.
- Federal Reserve Bank of Atlanta. 2025. "Home Ownership Affordability Monitor." Federal Reserve Bank of Atlanta. https://www.atlantafed.org/research/data-and-tools/homeownership-affordability-monitor.
- Ganong, Peter and Daniel Shoag. 2017. "Why Has Regional Income Convergence in the U.S. Declined?" *Journal of Urban Economics* 102: 76–90.
- Garthwaite, Craig, and Amanda Starc. 2023. "Why Drug Pricing Reform Is Complicated: A Primer and Policy Guide to Pharmaceutical Prices in the U.S." In Building a More Resilient US Economy, edited by Melissa S. Kearney, Justin Schardin, and Luke Pardue, 73–128. Aspen Institute Economic Strategy Group, November 8. https://www.economicstrategygroup.org/publication/why-drug-pricing-reform-is-complicated-a-primer-and-policy-guide-to-pharmaceutical-prices-in-the-us/.
- Glaeser, Edward L. 2011. Triumph of the City. Penguin.
- Glaeser, Edward L., Joseph Gyourko, and Raven E. Saks. 2005. "Why Have Housing Prices Gone Up?" American Economic Review 95, no. 2: 329–33.
- Gyourko, Joseph, Christopher Mayer, and Todd Sinai. 2013. "Superstar Cities." American Economic Journal: Economic Policy 5, no. 4: 167–99.
- Kaiser Family Foundation (KFF). 2024. "Section 1: Cost of Health Insurance." In 2024 Employer Health Benefits Survey. Kaiser Family Foundation, October 9. https://www.kff.org/report-section/ehbs-2024-section-1-cost-of-health-insurance/.
- Katz, Lawrence F., and David Autor. 1999. "Changes in the Wage Structure and Earnings Inequality." In Handbook of Labor Economics, vol. 3A, edited by Orley Ashenfelter and David Card, 1463–555. Elsevier. https://economics.mit.edu/sites/default/files/publications/changes%20in%20the%20wage%20structure%201999.pdf.
- Kearney, Melissa, and Jim Sullivan. 2025. "Beyond the Myths: A Clearer Path to Poverty Alleviation in America." In Advancing America's Prosperity, edited by Melissa S. Kearney and Luke Pardue. Aspen Institute.
- Keys, Benjamin, and Vincent Reina. 2025. "Improving Housing Affordability." In Advancing America's Prosperity, edited by Melissa S. Kearney and Luke Pardue. Aspen Institute.
- Moretti, Enrico. 2004. "Human Capital Externalities in Cities." In Handbook of Urban and Regional Economics, edited by Andrés Rodríguez-Pose and Michel Storper, ch. 51, 2245–91. University of California, Berkeley. https://eml.berkeley.edu/~moretti/cities4.pdf.
- Moretti, Enrico. 2012. The New Geography of Jobs. Mariner Books.

- Pew Research Center. 2024. Americans' Top Policy Priority for 2024: Strengthening the Economy. Pew Research Center, February. https://www.pewresearch.org/politics/2024/02/29/americanstop-policy-priority-for-2024-strengthening-the-economy/.
- US Bureau of Economic Analysis (US BEA). 2025a. Personal Consumption Expenditures: Chain Type Price Index [PCEPI]. Federal Reserve Bank of St. Louis, last updated June 27. https://fred.stlouisfed.org/series/PCEPI.
- US Bureau of Economic Analysis (US BEA). 2025b. CAINC1: Annual Personal Income by County. US Department of Commerce, last updated July 2. https://www.bea.gov/news/2024/personalincome-county-and-metropolitan-area-2023.
- US Census Bureau. 2024. "Nearly Half of Renter Households Are Cost Burdened, Proportions Differ by Race." Press release no. CB24 150. US Census Bureau, September 12. https://www.census.gov/newsroom/press-releases/2024/renter-households-cost-burdenedrace.html.

Beyond the Myths: A Clearer Path to Poverty Alleviation in America

AUTHORS

Melissa S. Kearney* and James Sullivan**

ABSTRACT

We seek to reset the national conversation about poverty by dispelling persistent myths and defining a clear, evidence-based agenda for alleviation. Over the past four decades, poverty in America has fallen markedly, and anti-poverty policies have significantly improved the material well-being of vulnerable households. We document these gains using appropriately constructed measures of income, earnings, and consumption poverty, and other indicators of material conditions. We also describe evidence showing that major programs have improved long-term outcomes for poor children, helping to break intergenerational cycles of poverty. Yet much work remains. We reject the simplistic view that cash transfers alone can solve poverty. While income support is vital, such an approach fails to address poverty's deeper roots. To confront the complexity of poverty, we propose an agenda centered on equipping people to thrive—by strengthening their skills, building strong families, removing individual barriers to flourishing, and boosting mobility for children born into poverty. These priorities reflect the best available evidence of what works to empower people to provide for themselves and their families and to enable upward mobility and long-term self-sufficiency.

Acknowledgement: We thank Jason Furman and Luke Pardue for helpful comments and suggestions; Alden Barson and Grace Organ for their excellent research assistance; and Chris Wimer and Sophie Collyer for providing code and data to calculate Supplemental Poverty Measure poverty rates.

^{*} Director, Aspen Economic Strategy Group; Gilbert F. Schaefer Professor of Economics and Director of the Strengthening Families Research Initiative, University of Notre Dame.

^{**} Professor of Economics, University of Notre Dame; co-founder and director, Wilson Sheehan Lab for Economic Opportunities (LEO).

Introduction

The conversation about poverty in this country is often counterproductive due to persistent myths and misconceptions about what it is, how it has changed, and how effective efforts to fight it have been. These myths have resulted in a lack of clarity about what the goals of poverty alleviation should be and how to achieve those goals. We aim to advance the conversation by clarifying the most substantive misconceptions and by articulating a clear goal for poverty alleviation, distinguishing between the short-run goal of providing a safety net to ensure people can satisfy basic needs and the more ambitious goals of helping individuals become economically stable and self-sufficient and ensuring that future generations have an opportunity to flourish. We then outline a set of priorities for an evidence-based path to poverty alleviation in America.

Despite decades of research and measurable progress in domestic poverty reduction, several persistent misconceptions continue to shape public discourse and policy choices. These misconceptions include: (1) poverty has not declined; (2) anti-poverty programs are ineffective; and (3) just giving people money is a way to solve poverty. This paper refutes these claims, drawing on the most recent and compelling evidence.

Much of the confusion arises from a lack of common understanding about what we are talking about when we talk about "poverty." An important distinction exists between "poverty" as it is measured in official statistics, and what most people mean

when they talk about fighting poverty. First, the official poverty measure is outdated in a way that makes it meaningless for tracking changes over time and hard to interpret as a point-in-time measure. Alternative measures are more useful for understanding the extent of deprivation in this country and how it has changed over time. Second, beyond issues of measurement, policy discussions about poverty alleviation should do more than just aim to provide sufficient resources to meet basic needs. Rather, we should have a

"Poverty in this country has fallen significantly over the past half-century, and this decline is due, in no small part, to both expansions and reforms to the social safety net."

loftier, more affirmative goal—to help people achieve economic security and stability without needing to rely heavily on government assistance. This goal affirms people's dignity and economic value to society.

Our position on poverty in America can be summarized as follows: Poverty is widespread and complex. Poverty exacts a high toll on those living in it. It is bad for the country's moral and economic fiber and impedes both individual human flourishing and aggregate economic productivity. Poverty in this country has fallen

significantly over the past half-century, and this decline is due, in no small part, to both expansions and reforms to the social safety net. Since the early 1990s, economic self-sufficiency among economically disadvantaged groups has increased, in part because key anti-poverty programs have been reformed to encourage or even require work. Furthermore, our nation's anti-poverty programs have meaningfully improved the prospects for children born into poverty, thereby disrupting the intergenerational transmission of poverty. But there remains much more to do, as millions of Americans are unable to meet their economic needs without substantial government support, and as being born into a poor family greatly impedes economic prospects.

To eradicate poverty will require much more than just giving people money. It will require dedicated and often costly investments in people and families. In this paper, we propose an anti-poverty agenda that focuses on investing in people and families. To that end, we propose prioritizing advancing skills and education, building strong families, addressing individual barriers to flourishing, and boosting upward mobility for poor children. Importantly, this agenda is intended to complement, not supplant, efforts to promote and sustain strong economic growth and widespread opportunities for well-paid jobs.

1. Misconception 1: The US has made little progress at reducing poverty.

Policymakers and pundits have for many years claimed that poverty has not fallen. In his last State of the Union address in 1988, Ronald Reagan famously stated, "My friends, some years ago, the Federal Government declared war on poverty, and poverty won." Since then, many have echoed these sentiments about continued efforts to reduce poverty. Recently, sociologist Matthew Desmond, in his widely heralded 2023 book *Poverty, by America*, claimed that "when it comes to poverty reduction, we have had fifty years of nothing" (26).

The claim that poverty has not fallen is typically made to support an ideological or political position. Those on the right have followed Reagan's example by using the stubbornness of official poverty statistics to argue against the maintenance or expansion of government anti-poverty programs, claiming that the billions of dollars we have spent on expansions to Medicaid, the Supplemental Nutrition Assistance Program (SNAP), and the Earned Income Tax Credit (EITC) have not been effective at reducing poverty. For instance, Michael Tanner (2012) of the CATO Institute relies on the long-run patterns of the official poverty rate to argue that our anti-poverty programs are a failure.

On the left, claims that the economic conditions of the "have-nots" have not improved are used to support calls for fundamental reforms to our nation's capitalist system. For example, Desmond (2023b) uses this claim as motivation for his view that even

though we have increased spending on anti-poverty programs, poverty persists because "we have not confronted the unrelenting exploitation of the poor in the labor, housing and financial markets." According to Desmond, efforts to reduce poverty in America have failed because of a decline in unions and worker power, a proliferation of bank fees and predatory landlord practices, and Americans' choice to purchase cheap goods made by exploited labor. As Desmond sees it, many of us benefit from these conditions, so we choose to allow them to persist.

Claims that poverty has not fallen rely on faulty statistics based on the Official Poverty Measure (OPM), which for decades has remained stubbornly high. For example, the official poverty rate in 2014 was 14.8 percent, which is higher than the official rate in 1967. But this official measure is riddled with flaws that have been well understood for decades, and it is wholly inappropriate to use it as the basis for claims about poverty trends (see, for instance, Citro and Michael 1995; Blank 2008; Meyer and Sullivan 2012; and Renwick and Fox 2016).

In brief, three key limitations to the OPM make it useless for tracking progress over time:

First, by definition, when calculating household income, it includes cash transfers that are delivered through benefit programs, like TANF or unemployment insurance, but not in-kind transfers, including SNAP, housing subsidies, and Medicaid. It also fails to capture income received by households in the form of tax credits, including the EITC. Excluding these in-kind transfers and tax credits is particularly problematic because the delivery mechanism of redistributive transfers has shifted over time. In particular, the official measure fails to capture the material assistance delivered through the very tax-and-transfer programs that have been expanded over the past four decades. Second, by definition, the OPM imposes a changing standard of what it means to be poor over time, because the official poverty thresholds are adjusted each year using a price index that is known to overstate inflation (the Consumer Price Index for Urban Consumers, or CPI-U). Consequently, the official threshold for getting out of poverty is rising by more than true inflation (Meyer and Sullivan 2012). Third, the OPM income calculations rely on income as reported in household surveys, not in administrative data, and research has established that these survey data significantly underreport household income and that the underreporting has worsened over time. Underreporting is particularly pronounced for means-tested transfer programs (Meyer et al. 2015; Meyer and Mittag 2019).

Because of these issues, most academics, pundits, and policymakers give little credence to this outdated measure, turning instead to more accurate indicators of changes in poverty based on more comprehensive measures of income, as captured by the Census Bureau's Supplemental Poverty Measure (SPM) or by a measure of consumption poverty. We take this approach in the next section.

1.1 A more accurate picture reveals that poverty has declined over the past four decades.

In this section, we present evidence of US poverty trends over the past four decades using two measures of poverty—an anchored Supplemental Poverty Measure (SPM) based on reported income and a consumption poverty measure. Both measures more accurately capture household well-being than the OPM does, and their construction incorporates insights and lessons from research on poverty measurement.

The Census Bureau has been releasing an unanchored SPM since 2011, and this measure addresses many of the problems with the OPM. The SPM is based on a much more comprehensive definition of income that includes most of the largest non-cash benefits like SNAP (though it does not include Medicaid or other health-coverage programs). It is a post-tax measure of household income, so it includes income received through refundable tax credits like the EITC and CTC and subtracts taxes paid. We anchor the SPM to avoid "moving the goalposts" of the poverty thresholds. The census SPM is not an absolute measure of poverty. Rather, it is based on thresholds that are deliberately adjusted over time for changes in spending patterns, not just for inflation. We construct a version of the SPM that is anchored to 1980 and adjusted to match the official rate of 13 percent in that year. This approach allows us to track trends in poverty over time while keeping the goalposts constant in real terms.¹

Figure 1 plots annual rates of poverty between 1980 and 2023 for the anchored SPM, alongside the OPM for the sake of comparison. It also plots poverty rates based on a consumption poverty measure that we describe below. As can be seen clearly in figure 1, the anchored SPM indicates that US poverty has substantially fallen over the past four-plus decades, falling from 13 percent in 1980 (by construction) to 9.1 percent in 2000 to 6.1 percent in 2023.

We additionally track poverty using a consumption-based measure, because consumption is arguably a better measure of household economic well-being than even the anchored SPM. In terms of measurement, it is well understood that income is generally underreported in survey data. While consumption is also underreported

Anchoring the SPM in this way follows Wimer et al. (2016; 2024). We construct our anchored version by taking the 1980 SPM thresholds from Wimer et al. (2024) and multiplying these thresholds by a scale factor (0.946) to get the anchored SPM rate and the OPM rate that year to match. We then adjust these thresholds over time using the PCE (Personal Consumption Expenditures), which arguably is a more appropriate adjustment for inflation than either the CPI-U used in the OPM or the CPI-U-RS (Consumer Price Index Research Series) used by Wimer et al. (2016) (see Meyer and Sullivan 2012; Moulton 2018). Some readers might be curious about how different price indices would change the estimated trends, and in particular, about Jaravel (2024)'s observation that households in the bottom quintile face greater inflation than higher-income households because of different spending patterns. He estimates that the CPI-U for the bottom quintile increased by about 0.4 percentage points more on average than the overall CPI-U annually over the past four decades. Research implies that the overall CPI-U overstates actual inflation by 0.8 percentage points (Meyer and Sullivan 2012); a price index that was adjusted downward for this upward bias, but then adjusted upward for the higher rate of inflation for the bottom income quintile, would, on net, have grown by 0.4 percentage points less than the CPI-U over this period. Note that we use the PCE, which grew by 0.3 percentage points less than the CPI-U each year. All else equal, a higher estimated rate of inflation leads the estimated decline in poverty to be smaller in magnitude. Consequently, if we were to use the distribution-specific CPI-U proposed by Jaravel (2024) instead of the PCE, our estimated decline in poverty would be even greater.

in surveys, evidence indicates that for the most economically disadvantaged families, consumption is more accurately reported than income. Moreover, estimates of consumption poverty are more consistent with other indicators of economic wellbeing, both at a point in time as well as seen in changes over long periods (Fisher et al. 2009; Meyer and Sullivan 2003 and 2011).

Another reason that consumption is arguably a better measure of material well-being than income is because it captures the increases in consumption that are facilitated by in-kind transfers, either directly (say, the value of publicly provided housing) or by relaxing the family's budget constraint. It also reflects the insurance value of anti-poverty programs; for instance, by protecting families from large out-of-pocket medical spending, Medicaid enables them to consume other goods and services. Income also fails to reflect economic well-being for those who smooth consumption by relying on savings or by borrowing. This point is particularly important when income is fluctuating noticeably.² Our consumption-based measures of poverty come from the Consumption and Income Poverty Dashboard available at https://povertymeasurement.org/dashboard (Han et al. 2023).

As can be seen in figure 1, consumption poverty also fell substantially between 1980 and 2023, falling from 13 percent in 1980 (by construction) to 9 percent in 2000 and to 2.4 percent in 2010. In contrast, the official rate fell by less than 2 percentage points between 1980 and 2023, erroneously suggesting that long-run progress has been minimal.

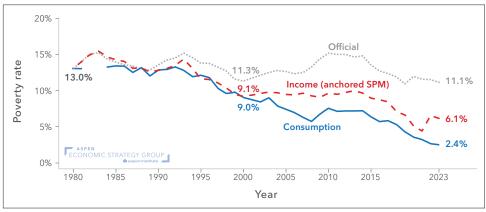


Figure 1: Income (official and SPM) and consumption poverty, 1980-2023

Notes: Income Poverty rates are an anchored version of the census's Supplemental Poverty Measure (SPM), based on data from IPUMS CPS (Flood et al. 2024) and Wimer et al. (2024). Consumption poverty is calculated using the Consumer Expenditure Survey. Both measures are anchored to the official rate in 1980, and thresholds are adjusted annually using the PCE. See text for more details.

² For more details on the conceptual benefits of consumption, see Cutler and Katz 1991; Poterba 1991; Slesnick 1993; and Meyer and Sullivan 2003, 2011, and 2012.

The narrative about poverty trends told by the anchored SPM and the consumption measure is very different than the misleading narrative suggested by the OPM. Since 1980, income poverty measured using the anchored SPM has fallen by 6.9 percentage points (53 percent) and consumption poverty has fallen by 10.6 percentage points (81 percent). A leading explanation for why consumption and income poverty diverged so noticeably after the early years of the first decade of the 2000s is that the underreporting of income seems to have gotten appreciably worse. If one were to account for this underreporting, the decline in income poverty would likely be even greater (Meyer and Sullivan 2012; Corinth et al. 2022). Consumption poverty rose much more noticeably than income poverty during the Great Recession, reflecting a correspondence between this measure of household economic well-being and the business cycle. These metrics also show that during the COVID pandemic, both income poverty (measured with the SPM, not OPM) and consumption poverty fell, on account of fiscal transfers. When those COVID-era transfers ended, income poverty rose, but consumption poverty did not. Han et al. (2024) show that this finding can be explained by household consumption smoothing—in 2021, savings increased among low-consumption households.

This evidence of declining poverty over the past four decades is not new; it has been shown in many recent academic studies (Meyer and Sullivan 2012; Burkhauser et al. 2024; Wimer et al. 2016) and has been highlighted in official reports (e.g., Duncan and Le Menestrel 2019). We also see a growing consensus among policymakers, from both sides of the aisle, that poverty has fallen. In fact, this long-run decline in poverty was highlighted in the *Economic Report of the President* under both Obama (Council of Economic Advisers 2014) and Trump (Council of Economic Advisers 2019).

Because policymakers often focus on levels of poverty, it is important to recognize that the levels of poverty reported in figure 1 for any given year are an artifact of which year we use to anchor the thresholds. We anchor the rates in 1980 so that they are the same for all measures initially, making it easier to see differences in the changes over the entire period. We are not advocating for a particular year of anchoring; rather, our intention is to be transparent and facilitate appropriate interpretation. To that end, note that because we are anchoring in 1980, we are fixing the standard for what it means to be poor based on the standard in 1980. When anchoring in 1980, we find that in 2023, 2.4 percent of all individuals in the US are consumption-poor and 6.1 percent are income-poor. If, however, we had anchored both measures to the official rate in 2023, poverty in that year would have been 11.1 percent, but poverty in previous years would have been much higher.

Again, the choice of anchoring seems like a technical point, but it is material to the claims that are often made about poverty in the US. For instance, Burkhauser et al. (2024) show that very little poverty in the US today is based on poverty estimates

produced by anchoring their "full-income poverty measure" to the official rate in 1963. They are calculating poverty by fixing the standard to the standard in 1963, so their poverty threshold for a family with two adults and two kids in 2023 is \$23,264, which is 25 percent lower than the official threshold for a family of four for that year.³ An appropriate interpretation of their finding is that very few people have extremely low income in the US today. And furthermore, even with a different base year of anchoring, the results from Burkhauser et al. reinforce the key takeaway from figure 1: Poverty in the US has fallen sharply over time.

Though the level of poverty differs across groups, a pronounced decline in poverty is evident for most demographic groups. In figure 2, we present poverty rates from 1980 to 2023 by age group for both income poverty (figure 2a) and consumption poverty (figure 2b). These results show that poverty

"Between 1980 and 2023, child poverty fell by more than 69 percent."

has declined noticeably for all age groups. For both measures, the percentage-point decline is greater for those over 65 and children than for working-age adults. Between 1980 and 2023, child poverty fell by more than 69 percent for both measures. The most noticeable difference across measures is for those 65 and over; income poverty for this group fell by 8.4 percentage points (54 percent), while consumption poverty fell by 16 percentage points (91 percent).

For both measures, we see a convergence of poverty rates across age groups. In 1980, the consumption poverty rate for those over 65 and for children was more than 6 percentage points greater than the rate for working-age adults. By 2023, consumption poverty for children was only 1.5 percentage points greater than that for working-age adults, and the rate for the elderly was lower than that for adults. This convergence in poverty across groups reflects how the social safety net has expanded—in particular, Social Security benefits that predominantly target the elderly have grown, as have tax-and-transfer programs that target families with children.

The largest decline in poverty over the past four decades has occurred for unmarried parents, the overwhelming majority being unmarried mothers. Figure 3 reports income poverty by family type. Among people living in unmarried-parent family, income poverty fell from 39 percent in 1980 to 10 percent in 2023. The percentage-point declines in poverty for other family types are quite modest in comparison, but these changes are off a much lower base. While poverty for those in unmarried-parent families fell throughout this period, the largest decline occurred during the 1990s, during the period of national welfare reform and large expansions in the Earned Income Tax Credit. It has been well documented that both of those efforts led to

³ For this calculation, we adjust the official nonfarm male head threshold in 1963 to 2023 dollars using the PCE.

increased employment among single mothers, a point we return to below. In addition, research has shown that the material circumstances of single-parent families, as measured by consumption, housing quality, health insurance coverage, and other indicators, improved significantly after welfare reform (Han et al. 2021).

Figure 2: Income (SPM) and consumption poverty by age group, 1980-2023

Figure 2a: Income (SPM) poverty

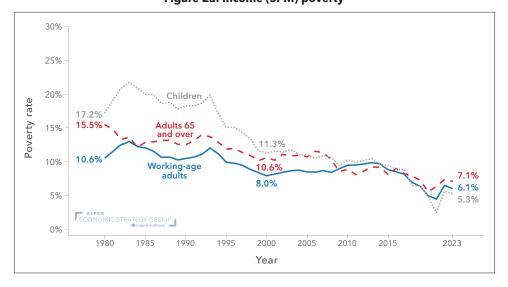
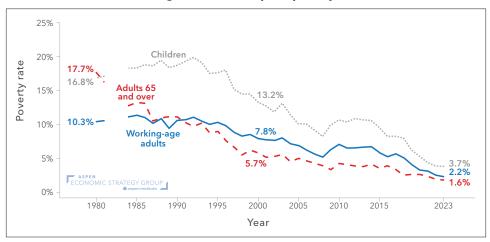


Figure 2b: Consumption poverty



Notes: See notes to figure 1. The break in the series in the 1980s is because consumption data are not available for 1982 and 1983 in the Consumer Expenditure Survey.

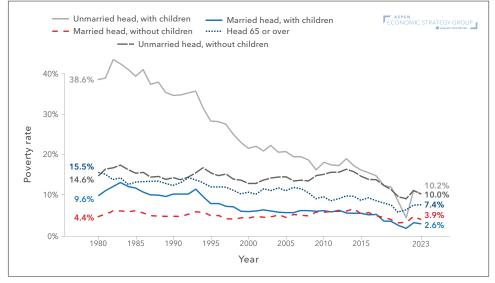


Figure 3: Income (anchored SPM) poverty by family type, 1980-2023

Notes: Poverty is calculated as in figure 1. Family types are determined by the presence of children and the marital status and age of the head of the SPM resource unit (which is technically a broader unit than a family since it includes unmarried or unrelated cohabiting adults and their children). The "married head" category includes heads with either present or absent spouses, and the "unmarried head" category includes both unpartnered and cohabiting heads. If the head is 65 or over, then the unit is included in the "head 65 or over" category regardless of marital status or presence of children.

1.2 Other metrics also show an improvement in material well-being.

The strong evidence of improved economic circumstances for disadvantaged individuals and families as indicated by poverty statistics is corroborated by other indicators of material well-being. Some of the clearest evidence comes from data on housing conditions, which have improved noticeably over the past four decades for those at the bottom of the income distribution.

In figure 4, we report changes in various indicators of living conditions of those in the bottom 20 percent of the income distribution, such as unit size, access to amenities, and indicators of poor conditions such as having a water leak.⁴ We also report these characteristics for the middle 20 percent of the income distribution for comparison. All seven indicators of housing conditions indicate improvements for low-income households between 1980 (or 1985 if 1980 data are not available) and 2021, and in nearly all cases the improvement is greater for those at the bottom than for the middle class. Square footage of the living units for those in the bottom 20 percent grew

⁴ These results are from Meyer and Sullivan 2024, which uses data from the American Housing Survey.

by 10 percent. The fraction of low-income families with central air conditioning more than quadrupled, and there were sharp increases in the presence of appliances such as dishwashers and clothes dryers. For this same period, there were sharp declines for low-income households in housing issues such as water leaks. For most of these

"Clear and compelling evidence shows that the economic circumstances of Americans at the bottom of the income distribution have improved over the past four and a half decades."

measures, the conditions for the bottom in 2021 were better than those for the middle class in 1980.

Finally, figure 4 reports vehicle ownership rates—another indicator of material circumstances, but one unrelated to housing. Here again we see evidence of improved material circumstances at the bottom, both in absolute terms and relative to the middle class. Between 1980 and 2021, vehicle ownership rates rose by 14 percentage points

for families in the bottom income quintile, while ownership remained steady for those in the middle quintile.

1.3 Takeaway: The US has made meaningful progress reducing poverty.

Clear and compelling evidence shows that the economic circumstances of Americans at the bottom of the income distribution have improved over the past four and a half decades. Despite this view now being widely held among scholars of US poverty, it remains important to highlight because some still make contrary claims in order to advance certain policy agendas. Any assessment of what has worked to improve outcomes for economically disadvantaged families in recent decades, and considerations of what needs to be done to continue to make progress, must acknowledge that although much more can and should be done, considerable progress has been made.

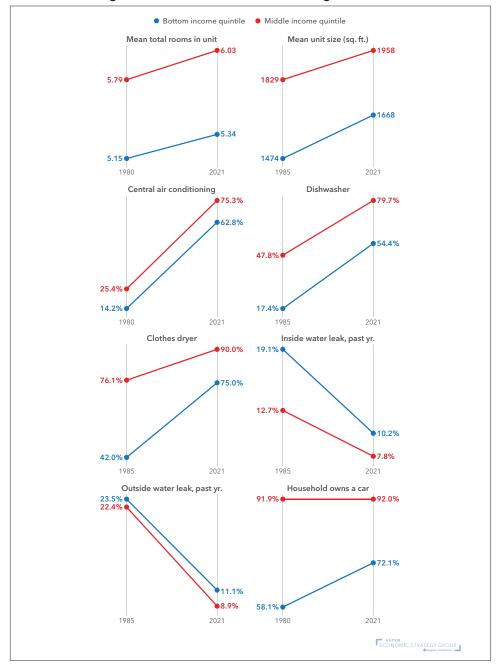


Figure 4: Indicators of material well-being, 1980-2021

Notes: Housing characteristics are from Meyer and Sullivan 2024, using data from the American Housing Survey. When 1980 rates are unavailable, rates are reported for 1985, the closest available year. Car ownership rates are based on the authors' calculations using data from the Consumer Expenditure Survey. Mean unit size is equivalence-scale adjusted to account for the fact that the average number of people in a unit has declined over time.

2. Misconception 2: Anti-poverty programs are ineffective.

The myth that poverty hasn't fallen has fed the view that anti-poverty programs are ineffective. But in fact poverty has fallen, and expansions and reforms in the social safety net over the past four decades have played an important role in this decline, as we show in this section.

2.1 Evidence shows that anti-poverty programs lift many out of poverty.

To highlight the important role that anti-poverty programs have played in the decline in poverty over the past four decades, we compare and contrast changes in poverty based on three income poverty measures: the anchored SPM described above, the anchored SPM without taxes and transfers included, and an earned-income poverty measure. The anchored SPM without taxes and transfers is constructed from data provided by Wimer et al. (2024). This measure reflects whether a family has sufficient resources (from earnings, investment income, retirement income, etc.), exclusive of government taxes and transfers, to put them over the poverty line. In addition, we construct a measure of earned-income poverty based entirely on wage-and-salary income, farm income, and self-employment income.⁵ Figure 5 plots these three series.

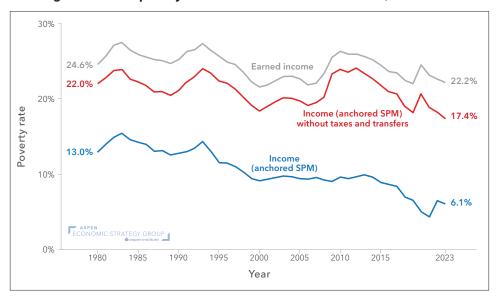


Figure 5: Income poverty with and without taxes and transfers, 1980-2023

Notes: The income (anchored SPM) poverty rates are calculated as explained in the notes to figure 1.

⁵ In addition to including unearned income, our net-of-taxes-and-transfers SPM also differs from the earned-income poverty measure because it subtracts from income childcare and out-of-pocket medical expenses, among other adjustments.

The data in figure 5 provide evidence of the direct role that tax-and-transfer programs have played in the decline in income poverty over time. Poverty calculated based on income without taxes and transfers is higher than total income poverty in any given year because the progressive tax-and-transfer system of the US increases income for low-income households.⁶ For example, in 2023 the pre-tax/pre-transfer poverty rate was 17.4 percent while the poverty rate based on total income was 6.1 percent, suggesting that the redistribution of resources through tax-and-transfer programs directly cut the poverty rate by 65 percent.

Between 1980 and 2023, income poverty fell by 6.9 percentage points, a decline of 53 percent. During this same period, the decline in pre-tax/pre-transfer poverty was much less pronounced—it fell by 4.6 percentage points or 21 percent, suggesting an important role for changes in taxes and transfers. These results also highlight the importance of taxes and transfers during recessions. The figure shows that income poverty did not rise during the Great Recession, but in the measure that excludes taxes and transfers, there is a noticeable rise in poverty. Overall trends in earnings poverty over time are very similar to trends in income poverty net of taxes and transfers, but as we show below, there are important differences for some groups.

Figure 6 plots these three series separately for children, working-age adults, and adults age 65 or older. Among children, income poverty fell by 11.9 percentage points during this period, while pre-tax/pre-transfer poverty fell by 9.2 percentage points and earned-income poverty fell by 8.8 percentage points. This finding shows the importance of increased earnings in driving down rates of child poverty, a point to which we will return below. For working-age adults, income poverty fell by more than net-of-tax-and-transfer income poverty (in both percentage-point and percent changes), revealing the importance of changes in taxes and transfers for this group. Among adults aged 65 or over, earnings poverty far exceeds income poverty because social security provides a large share of income to many elderly households. For this group, there were declines in both income and earnings poverty over this period.

Attributing the difference between the two measures to the effect of anti-poverty programs does not account for potential employment responses, either positive or negative, to these programs. Some policies that are conditional on having earnings, such as the EITC, have been shown to encourage work, in which case the poverty-reducing effect of the policy would be even greater than is implied by the comparison of poverty rates with and without the policy. On the other hand, other safety net programs, such as SNAP or Supplemental Security Income, could result in high marginal tax rates, potentially reducing recipients' work effort, suggesting that the net poverty-reducing effect could be smaller than what is implied by such comparisons. In terms of the net aggregate effect, an analysis by Ben-Shalom et al. (2011) concludes that the aggregate impact of these offsetting effects is very small and adjusting for them does not affect the magnitude of the aggregate poverty impact of the system.

Figure 6: Income poverty with and without taxes and transfers, by age group, 1980-2023

Figure 6a: Children

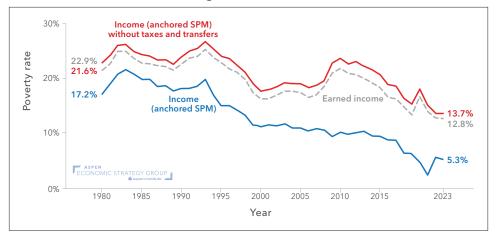
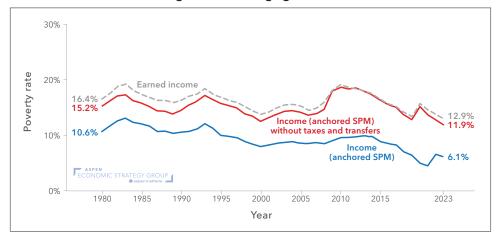


Figure 6b: Working-age adults



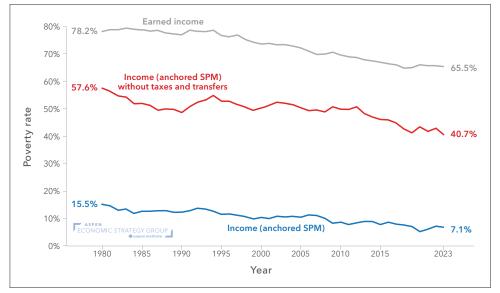


Figure 6c: Adults 65 or over

Notes: See notes to figure 5.

The largest declines in poverty over the past four decades were experienced by single-mother families, as noted above. Figure 7 reports poverty over this period for households with children according to income (anchored SPM) poverty, income-without-taxes-and-transfers poverty, and earned-income poverty. For those in unmarried-parent families, all three poverty measures fell by about 28 percentage points. This finding reveals that the decline in poverty among unmarried-parent families largely reflects a decline in earned-income poverty. In other words, poverty fell for single-mother families over the past four decades because of their increased earnings.

This decline in earnings poverty among single-mother families is consistent with a large literature showing that both welfare reform—which imposed time limits, work requirements, and lower implicit tax rates on earnings among welfare recipients—and EITC expansions led to an increase in employment and earnings among single mothers. See reviews of this extensive evidence provided by Blank (2002) and Nichols and Rothstein (2016).

By comparison, among married-parent families, the level of poverty is much lower, the gap between income poverty and earned-income poverty is much smaller, and the decline over this period is much less dramatic (shown in figure 7b). The data indicate that income poverty over this period fell for this group from 9.6 percent to 2.6 percent, while earned-income poverty fell a bit less, from 10.8 percent to 5.4 percent.

Figure 7: Income poverty with and without taxes and transfers and earned-income poverty for families with children, by marital status, 1980-2023

60% 52.7% 50% Income (anchored SPM) without taxes and transfers 40% 38.6% Poverty rate 30% Earned income 20% Income (anchored SPM) 10% 10.0% 0% 1995 1980 1985 1990 2000 2005 2010 2015 2023 Year

Figure 7a: Unmarried heads with children

Notes: See notes to figures 3 and 5.

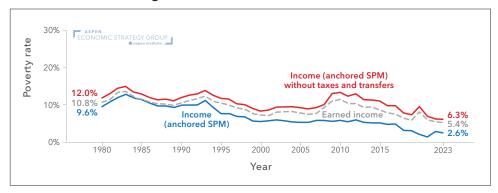


Figure 7b: Married heads with children

Notes: See notes to figures 3 and 5.

2.2 Anti-poverty programs that provide benefits to families with children also reduce the intergenerational persistence of poverty.

The discussion above focuses narrowly on the current anti-poverty effects of major anti-poverty programs and does not consider the impact on the intergenerational persistence of poverty. On this point, it is important to recognize that anti-poverty programs have long-term benefits for children and mitigate the intergenerational persistence of poverty.

Abundant evidence shows that targeted income and in-kind assistance to low-income children yields improvements in children's health and education outcomes into adulthood. We see this phenomenon in causal studies of the effects of the EITC on children's outcomes (e.g., Dahl and Lochner 2012; Bastian and Michelmore 2018; and Braga et al. 2020); of the Food Stamp Program, which is now called SNAP (e.g., Hoynes et al. 2016 and Bailey et al. 2024); and of Medicaid (e.g., Brown et al. 2020; Goodman-Bacon 2021; Cohodes et al. 2016; and Miller and Wherry 2018). There is also ample evidence of long-term benefits from Head Start and other early childhood education programs and spending (e.g., Thompson 2017; Johnson and Jackson 2019). This extensive body of evidence has been thoroughly reviewed elsewhere, including in Hendren and Sprung-Keyser (2020) and Kearney and Pardue (2023), and we return to this point below.

2.3 There are pros and cons to work requirements in safety net programs.

Since the early 1990s, reforms to the social safety net have increasingly emphasized work. The 1996 national welfare reform legislation (the Personal Responsibility and Work Opportunity Reconciliation Act) ended the entitlement to cash assistance for single mothers and their children and replaced the Aid to Families with Dependent Children (AFDC) with Temporary Assistance for Needy Families (TANF), which has work requirements and time limits. The Earned Income Tax Credit is the single largest source of cash support for low-income families, and that credit is contingent on positive earnings. This shift has been well documented elsewhere; for instance, Hoynes and Schanzenbach (2018) show that virtually all gains in spending on the social safety net for children since 1990 (defined to include Medicaid, EITC, CTC, SNAP, and AFDC/TANF) have gone to families with earnings and to families with income above the poverty line.

The issue of work requirements for social safety net programs continues to command the attention of policymakers. The recently passed legislation referred to as the One Big Beautiful Bill Act (OBBBA) includes work requirements for most childless adults for Medicaid and SNAP, as well as for adults with children who are 14 and older. Some early versions of the bill included these requirements for some adults with even younger children as well.

Evidence of the long-term benefits for children from access to SNAP and Medicaid makes a compelling case for not conditioning eligibility for these programs on parental work. To justify parental work requirements, one must place greater weight on the potential cost savings and the possibility of additional work from low-wage parents

than on the well-documented long-term benefits these programs have on children, including helping them to be healthier, more economically productive members of society. In other words, even if one's view is that society has no moral obligation to provide health insurance or nutritional support to children, the calculation from a long-term economics perspective almost surely favors providing these benefits to poor children even if doing so also creates a modest disincentive for parents to work.

But taking the political reality as it is, addressing contemporary poverty among children with the following combination of programs is a reasonable and mostly effective compromise: a generous Earned Income Tax Credit (EITC) to working, low-income parents; a generous Child Tax Credit to children whose parents have positive earnings, including very low earnings; and food assistance through SNAP, housing assistance through an expanded Housing Choice Voucher program, and health insurance through Medicaid, none of which require that parents have a minimum level of earnings to qualify. As we discussed above, our country's anti-poverty programs have meaningfully improved economic outcomes, including long-term outcomes for children.

The trade-offs around a policy of work requirements for SNAP and Medicaid for childless adults, as were recently written into law, are similar but less stark. On the one hand, these requirements might encourage work among childless adults, which is of particular concern given the growing detachment of prime-age males from the labor market—the fraction of men ages 25-54 who are not in the labor force has risen from 5.8 percent in 1976 to 11.4 percent in 2022 (Bengali et al. 2023). In addition, restrictions on eligibility for SNAP and Medicaid could lead to substantial cost savings for the federal government from people losing coverage (CBO 2025). On the other hand, these programs provide modest material support to a group of individuals who otherwise have very little safety net support, and some evidence suggests that these programs have important benefits. Many low-income workers have volatile employment and income, and access to SNAP helps smooth their food consumption during periods of nonemployment. With regard to Medicaid, a recent quasi-experimental study of 37 million low-income adults found that increased access to Medicaid through the Affordable Care Act reduced the mortality of low-income adults by 2.5 percent, or a 21 percent reduction for new Medicaid enrollees (Wyse and Meyer 2025). There is also evidence that expanded access to Medicaid meaningfully improves financial outcomes (Finkelstein et al. 2012).

When weighing these tradeoffs, it is important to note that little to no empirical evidence suggests that imposing work requirements for SNAP and Medicaid receipt will increase work. Schanzenbach's (2025) review of the evidence suggests that imposing additional work requirements for able-bodied childless adults to receive

SNAP, beyond those that already exist, is unlikely to lead to an increase in employment. To the best of our knowledge, the only direct evidence to date of the effect of Medicaid work requirements on employment is a study by Sommers et al. (2020) of the 2018 implementation of these requirements in Arkansas. The authors found no evidence of increased employment as a result, but they did find evidence of adverse financial consequences for people who lost their Medicaid coverage.

2.4 Takeaway: Existing anti-poverty programs provide meaningful support to low-income families and improve both short- and long-term outcomes for children.

Government redistributive efforts lift millions of people out of material poverty by increasing their material resources. However, expanding resources through a more generous social safety net is not the same as advancing widespread economic stability and security. In fact, many would argue that reliance on means-tested transfers is a symptom of poverty. Despite the progress we have made at reducing poverty, there is still much work to do to advance widespread economic stability and security that is not reliant on government transfers. Having said that, it is important to note that these anti-poverty programs are doing more than just increasing current-period resources to above a poverty threshold; when targeted at children, they improve child outcomes and reduce intergenerational poverty.

3. Misconception 3: Just giving people income will solve poverty.

Some observers argue that the most direct and effective way to address poverty in the US is simply to give people money through a guaranteed income or universal basic income (UBI). This idea has been championed by many writers and policy thinkers, including, perhaps most famously, Andrew Yang, who proposed a "Freedom Dividend" of \$1,000 per month for every American adult as part of his campaign for the 2020 Democratic presidential nomination (Yang 2020). Yang argued that this unconditional cash transfer would, among other benefits, reduce poverty and give individuals the ability to meet their basic needs. Progressive advocate Matt Bruenig of the People's Policy Project argued in a 2013 essay that simply giving people enough cash to raise all incomes above the poverty line would cost less than 1 percent of US GDP—a relatively modest sum, he claimed, that could effectively eliminate official poverty in America (Bruenig 2013). Matthew Desmond (2023a) cites this statistic and advances this argument in his 2023 book, referenced above. Other prominent advocates of the "just give people money" view in the United States include Facebook co-founder Chris Hughes, who argued for a guaranteed income of \$500 per month for Americans making under \$50,000 a year in his 2018 book Fair Shot, and the journalist Annie Lowrey, who advocates for a UBI in her 2018 book Give People Money.

This point of view narrowly conceives of poverty as a financial problem, and accordingly, suggests that the narrow solution of simply giving people money can solve it. Setting aside the enormous fiscal costs of a UBI, even a targeted one—as described in detail by Kearney and Mogstad (2019)—just giving people money very rarely solves the underlying problem of poverty, which is that too many Americans are unable to meet their basic material needs or adequately provide for their families without reliance on government redistribution. We make four main points to counter this misconception and support the view that just giving people income is not a sufficient response to the challenge of persistent poverty.

3.1 Just giving people money is a defeatist position.

First, an appeal to a universal or guaranteed income as the answer to persistent poverty is ultimately a defeatist position. It assumes that a sizable share of non-elderly adults are simply unable to participate meaningfully in the modern economy and earn enough to meet their own and their families' material needs. We contend that our societal goal should be to advance institutions, programs, and policies that maximize the share of people in our society who are able to participate productively in the economy and financially thrive without dependence on extensive government redistribution

Addressing the underlying problems that cause poverty, rather than superficially treating the symptoms, requires advancing a society that offers widespread opportunity for economic participation and invests in people to help them overcome the barriers they face to such participation. Those approaches are intertwined, and they require that we not give up on people. We must ensure that our economy continues to produce jobs and opportunities for the majority of adults, and we must simultaneously commit to developing the human capital of all children and adults so that they are in a position to participate in productive economic activity.

3.2 A temporary financial setback is not the same as persistent poverty.

Second, it is important to distinguish between the challenge of a temporary financial setback and a more persistent inability to economically provide for oneself and one's family. The challenge of poverty is typically only partially due to an immediate lack of money. When it is the case that someone is at risk of falling into deeper hardship because of a temporary lack of income or a one-time financial shock they do not have the resources to get through, then simply giving them money to make it through a transitory hardship might be the right answer.

One such instance is a financial setback such as a job loss or a large out-of-pocket expense that makes it difficult or impossible for someone to cover their rent or

mortgage. Two recent studies found that the provision of one-time financial assistance to people at imminent risk of homelessness greatly reduced the likelihood that they wound up homeless over the next year. Evans et al. (2016) used a quasi-experimental study design to establish a causal link between the receipt of financial assistance and subsequent spells of homelessness. They tracked administrative data on nearly 4,500 callers to the Chicago homelessness prevention hotline between 2010 and 2012. Those who happened to call when funding was available were 76 percent less likely to enter a homeless shelter over the next two years. A randomized-controlled-trial evaluation of a similar program that provided emergency financial assistance to those at risk of homelessness in Santa Clara County produced very similar results: assistance significantly reduced homelessness (Phillips and Sullivan 2024).

These homelessness prevention studies provide an important illustration of the type of circumstance that can be meaningfully addressed with a cash payment—a temporary financial shock that might otherwise lead to someone getting evicted. But even when it comes to the issue of homelessness, many people need much more than just a one-time cash payment. About one-third of the US homeless population is considered chronically homeless, meaning they have been homeless for more than 12 months or four times in the past three years and have disabling conditions (de Sousa and Henry 2024). Chronically homeless individuals often struggle with mental illness, substance use, and/or physical disabilities. Addressing these challenges requires much more than just cash assistance. In fact, research has demonstrated the effectiveness of permanent supportive housing with wraparound services for people with mental illness or substance abuse disorders (US Interagency Council on Homelessness 2019; Evans et al. 2021). The distinction between helping people avoid eviction with a one-time cash payment and helping the chronically homeless with much more intensive support is a useful one, and it has generalizable lessons beyond the homelessness context.

The point here is that transitory cases of financial distress can potentially be treated effectively with the provision of temporary cash assistance, but such cases should be distinguished from cases where an infusion of cash does not treat the underlying challenges that hold somebody back from economic stability and advancement. An example of the latter context comes from a study of emergency financial assistance aimed at helping low-income community college students at risk of dropping out. In the case of a community-college randomized-controlled-trial study conducted in 2013 and 2014, Evans et al. (2019) found no evidence that the provision of emergency cash assistance led to improved student outcomes. Rather, the availability of funds only led to an improvement in students' persistence and completion when paired with a case manager who helped students navigate the challenges that might lead

them to drop out of school; though even in that case, it's not clear whether the financial assistance was a necessary component of the supportive services.

3.3 The evidence on guaranteed-income programs is disappointing.

Third, more generally, the best evidence to date on guaranteed-income programs suggests that the provision of monthly income assistance does not result in recipients using the provided cash to make investments in their education or personal situation in ways that catapult them to economic self-sufficiency. The most compelling causal evidence to date on the likely effects of a guaranteed basic income in the US come from a pair of studies written in 2024 by a research team consisting of academic economists from four different universities and researchers from OpenResearch (Vivalt et al. 2024; Miller et al. 2024). These studies analyze the results of a large-scale randomized controlled trial (RCT)—the OpenResearch Unconditional Income Study (ORUS)—that ran between 2020 and 2023. As part of this RCT, three thousand low-income adults ages 21 to 40 in Illinois and Texas were randomly assigned into a treatment group of a thousand adults who received \$1,000 in unconditional cash per month for three years and a control group of two thousand participants who received a much more modest \$50 per month for three years.

The researchers found that the cash payment caused total individual income excluding the transfers to fall by about \$2,000 per year relative to the control group and a 3.9-percentage-point decrease in labor market participation. Participants reduced their work hours as a result of the transfers by 1–2 hours per week, and participants' partners reduced their work hours by a comparable amount. This finding is consistent with standard predictions of income effects in economics but at odds with claims by some UBI proponents that people would be unlikely to reduce their labor supply in response to income payments.

The results of this study are also at odds with suggestions by some UBI proponents that people would take advantage of the financial autonomy to engage in productive activities. The cash payment of \$1,000 per month led adults to increase the amount of time they spent in leisure. The reduction in work hours was not met by an increase in time spent taking care of family members, volunteering, or pursuing education or training, although the researchers found suggestive evidence that the transfers led to more education for younger individuals. The study also fails to provide evidence that the income allowed people to obtain more enjoyable work positions; the researchers found no impact on reported quality of employment, with statistical confidence intervals small enough to rule out even small improvements. In conclusion, this large-scale RCT demonstrated that the provision of a \$1,000 unconditional payment

per month for three years resulted in a moderate reduction in labor supply with no discernible increase in other productive activities.⁷

The other major study produced from this guaranteed income project investigated the causal effects on measures of recipients' health and healthcare usage. The researchers tested the hypothesis that the provision of income to low-income adults with no strings attached would lead to improved physical and mental health outcomes. The evidence rejects that hypothesis.⁸ The authors conclude that cash payments are an ineffective way to advance health outcomes among low-income adults, and that efforts should focus instead on more typical health interventions with documented evidence of effectiveness—including expanding access to health insurance, reducing the cost of prescription drugs, or facilitating appointments with primary-care physicians. This evidence bolsters our view that advancing institutions, programs, and policies that address underlying challenges are more effective at helping people thrive than is the simple approach of giving people money.

The results from the RCT study of Baby's First Years, a basic-income program aimed at low-income mothers funded by the National Institutes of Health (NIH) and a large consortium of private foundations, are also very disappointing. The multiple studies produced as part of this four-year project consistently report null effects of the unconditional monthly cash payment on a wide range of outcomes measuring child development. The Baby's First Years project recruited one thousand eligible mothers from hospitals in New York City, greater New Orleans, the Omaha metropolitan area, and Minneapolis and Saint Paul around the time they gave birth. Mothers were randomly assigned to receive a monthly unconditional large cash payment of \$333 per month or a small monthly payment of \$20 per month for the first 52 months of their child's life. Recruitment of study participants ran from May 2018 to June 2019, and outcomes were collected over the next four years.

The evidence of null effects from this large-scale RCT study of a guaranteed income is at odds with the widely reported promising evidence from the Stockton Economic Empowerment Demonstration (SEED) in Stockton, CA. SEED was a two-year pilot program that paid 125 low-income adult residents of Stockton \$500 a month between 2019 and 2020. To identify causal effects of the cash payment, researchers compared their outcomes to those of 200 people in a comparison group. News stories reported that the first-year effects of the program showed reductions in income volatility and financial distress and increases in full-time employment. However, the data reported by West and Castro (2023) from the end of the two-year pilot program are not broadly suggestive of statistically significant effects, and the reported one-year effects are very weak and based on narrow, subjective measures.

⁸ The researchers found that the cash payment led to short-lived reductions in stress and food insecurity, greater use of hospital and emergency-department care, and increased medical spending of about \$20 per month among people in the treatment group relative to people in the control group. They found no effect of the cash payment across several measures of physical health, including multiple well-validated survey measures and biomarkers derived from blood draws. The data allow the researchers to statistically rule out even very small improvements in physical health. They also found that the cash payment did not lead to improvements in mental health beyond the first year. The data allow the researchers to statistically rule out even very small improvements by year two. The researchers also found precise null effects on self-reported access to healthcare, physical activity, sleep, and several other measures related to preventive care and health behaviors. Specifically, the data indicated that participants in the treatment group were no more likely to use preventive care, such as vaccines or cancer screenings, or that they made more health investments by exercising or sleeping more. In fact, they can statistically reject the hypothesis of even small improvements in these measures.

Noble et al. (2025) report that after the first four years of the intervention, the data show no statistically significant impacts of the cash transfers on either primary child-development outcomes (language, executive function, social-emotional problems, and high-frequency brain activity) or on secondary outcomes (visual processing/spatial perception, preliteracy, maternal reports of developmental diagnoses). A caveat to generalizing from these null results is that the first year of this program overlapped with the US COVID pandemic, which complicates interpretation in light of the stress that pandemic period imposed on families and the shifting policy context. Still, families received the monthly cash payment long after the pandemic ended, and the null effects are statistically well-measured after four years. The researchers conclude (appropriately in our view) that their finding of null effects "may indicate that cash income alone does not have a causal effect on young children's development in the contemporary policy context."

Another study from this project investigated the hypothesis that four years of stable monthly income would, by virtue of increasing financial stability, enhance parental attention and self-control, consistent with research showing that financial stress impedes cognitive functioning (e.g., Mani et al. 2013). The analysis reported in Egan-Dailey et al. (2024) shows no differences in cognitive bandwidth (as measured by a commonly used executive-function assessment) of mothers after receiving the high-cash payment (\$333/month) versus the low-cash payment (\$20/month) for 48 months after childbirth. Magnuson et al. (2024) report that although the intervention produced a moderate increase in household income and reduced poverty, the data indicate no improvements in mothers' subjective reports of economic hardship or the quality of play with their infants. The authors further report some small, although mostly nonsignificant, increases in parental psychological distress and declines in the quality of mothers' relationships, contrary to the hypothesized effect.

Overall, the evidence from the Baby's First Year project unambiguously implies that a basic monthly payment amounting to \$4,000 a year for four years to low-income mothers with young children is not sufficient to meaningfully improve a mother's subjective feelings of economic hardship, maternal cognitive bandwidth, or child development outcomes. This finding does not argue against providing income support to low-income mothers with young children; rather, it argues against the view that lifting people out of poverty can be solved with a solution as simple as just giving people money.

Fourth, addressing poverty among the elderly, disabled, and children is different from addressing poverty among able-bodied prime-age adults, and for these more vulnerable groups, prioritizing the maintained provision of sufficient income support to meet material needs is entirely appropriate. The elderly and disabled should not be expected to have to work to meet their basic material needs, as our

country's implicit social contract has long recognized. The Social Security Old-Age, Survivors, and Disability Insurance (OASDI) program has been providing monthly cash payments to Americans above retirement age since 1935 and to adults with a qualifying disability since 1956. This program is widely credited with driving down rates of poverty among the elderly and disabled in this country (see, for instance, Engelhardt and Gruber 2006; Scholz et al. 2009; Meyer and Wu 2018). An analysis of administrative data by Meyer and Wu (2018) found that between 2008 and 2013, OASDI payments reduced the rate of poverty among elderly adults by 75 percent and among disabled adults by one-third. And, as we noted above, a significant fraction of the decline in income poverty for the elderly since 1980 is due to OASDI.

Our country does not have a similar commitment to providing for children. The standard argument against some type of cash entitlement for children is that unlike the elderly, who have paid into the system and are thus entitled to benefits in their retirement years, children have made no such down payment. Another standard line of opposition to a basic income guarantee for children is that such income would discourage their parents from working. A large literature that examines the employment response to welfare reform and expansions in the EITC shows that these changes led to a significant increase in work for unmarried mothers, suggesting that eliminating such work incentives with an income guarantee would have the opposite effect of leading to a decrease in work. Therein lies the trade-off: Providing sufficient income assistance to families with children so that children's material needs are met comes at the (likely) cost of some reduction in work effort among parents, as discussed above.

3.4 Takeaway: Just giving people income is not a sufficient response to the challenge of persistent poverty.

Addressing poverty in America requires more than just meeting people's immediate financial needs, because that approach does not adequately address the range of challenges many people experiencing poverty are dealing with. We explicitly favor helping non-elderly adults obtain useful skills and meaningful work, as opposed to relying on income guarantees. Evidence from recent guaranteed-income experiments in the US provides no indication that the provision of monthly cash assistance helps people achieve economic independence or improvements in their health.

Helping adults achieve economic independence requires doing more to help them address underlying challenges. We return to this point in the following section. As the richest nation in the history of the world, the US should not be satisfied with either a society where a few talented people earn high incomes and a large share rely on government redistribution, or a society in which a few talented people have dignified, high-paid work and a large share are required to toil in misery to make

ends meet. Given the dynamic nature of the US economy and the jobs it comprises, we are confident that those are not our country's only options.

4. Alleviating poverty requires investing in people.

Fighting poverty is hard work. The glib suggestion that our country could eliminate poverty by just giving people money or "out-hating it" does not sufficiently acknowledge the myriad challenges that millions of people endure as they work to be in a position to financially provide for themselves and their families, such as working to learn new skills, overcome personal trauma or addiction, build a business, and/or secure employment, among other challenges.

To truly alleviate poverty and break its intergenerational persistence requires investing in people and focusing our efforts upstream, rather than just treating the downstream effects of limited resources. We propose four specific areas of investment: advancing skills and educational attainment; building strong families; addressing individual barriers to flourishing; and boosting upward mobility among

"To truly alleviate poverty and break its intergenerational persistence requires investing in people."

poor children through investments in their nutrition, health, early childhood education, and housing.

We put forward this agenda as a set of guiding principles for both public and private spending on anti-poverty efforts. A commitment to advancing this agenda at a public level would involve maintaining critical safety-net programs

and, ideally, more targeted spending, funded either through an increase in tax revenues or a reprioritization of public spending toward investments in poverty alleviation. We acknowledge that there does not appear to be a major push from either major political party at the moment for increased spending on anti-poverty efforts. The recently enacted OBBBA, estimated to add \$4.1 trillion to the debt through Fiscal Year (FY) 2034, includes very little by way of spending directed toward poverty alleviation. But we are firm in our view that it is in our country's interest to continue our efforts to reduce poverty—both current and intergenerational—and that a set of guiding principles is necessary. We also acknowledge the hundreds of billions of dollars in philanthropic giving in the US each year. Many programs that would advance our proposed agenda could be funded and scaled with private dollars.

⁹ This phrase is a reference to one of Matthew Desmond's common talking points, which is also the final sentence of Desmond's 2023 book Poverty, by America: "We don't need to outsmart poverty. We just need to out-hate it" (189).

In addition to the anti-poverty agenda focused on investments in people and families that we outline below, macroeconomic policies that maintain a strong economy are critical to boosting employment and earnings among disadvantaged groups in particular, as discussed by Blank (2000) and Hoynes et al. (2006). As Blank (2000) so eloquently put it: "To the extent that policies can help maintain strong employment growth, low unemployment, and expanding wages among workers, these policies may matter as much or more than the dollars spent on targeted programs for the poor. If there are no job opportunities, or if wages are falling, it is much more expensive—both in terms of dollars and political capital—for government programs alone to lift people out of poverty." Sustained efforts are also needed to eliminate all forms of structural and systemic discrimination against racial and ethnic minorities and other vulnerable groups in the workplace, residential housing market, healthcare sector, and criminal justice system, so that economic opportunities and jobs are available to all.

4.1 Advancing skills and education

People with higher levels of education and skill are at much lower risk of poverty and have higher rates of employment and earnings. The poverty rates in 2023 among people with no high school degree, a high school degree, some college, or a four-year college degree were, respectively, 30.9 percent, 16.1 percent, 10.7 percent, and 5.9 percent. Median weekly earnings in 2024 for full-time workers with a bachelor's degree were approximately 65 percent higher than for those with only a high school diploma, and unemployment rates were substantially lower. Median usual weekly earnings were \$1,543 for workers with a bachelor's degree, \$1,099 for workers with an associate's degree, \$930 for workers with a high school diploma, and \$738 for workers without a high school diploma. Unemployment rates among workers with these education levels were 2.5 percent, 2.8 percent, 4.2 percent, and 6.2 percent, respectively (US BLS 2025).

Numerous studies have established that interventions and policies that lead people to obtain higher levels of education and skills causally lead to an improvement in their economic outcomes. With regard to associate's and bachelor's degree attainment in particular, there is evidence of causal effects (for example, Kane and Rouse 1995; Jepsen et al. 2014; and Zimmerman 2014; see Oreopoulos and Petronijevic 2013 for a review of this evidence). An empirical simulation exercise by Hershbein et al. (2020) produces an estimate of the likely impact of increasing rates of college attainment

¹⁰ These levels are based on the 2023 unanchored census SPM, as reported in Shrider 2024, appendix table B-4. These levels are higher than those in figure 1 because the trend data reported in figure 1 anchor poverty rates to 1980.

¹¹ See, for instance, the review chapter on the causal effect of education on earnings in Card 1999.

on a variety of measures of economic security. Using two different methodological approaches—one that shifts the earnings distribution according to observed distributional parameters and one that assigns causal increases in earnings based on existing causal estimates from credible studies—they find that realistically sized increases in the share of American adults with a bachelor's degree or an associate's degree would meaningfully reduce rates of poverty and near-poverty.

The data and evidence make a compelling case that boosting educational and skill attainment among less educated individuals would meaningfully reduce their risk of poverty and increase their potential for economic security. The question then is how to best do so. In a spirit similar to our claim above that just giving people money is often not sufficient to help them overcome their underlying barriers to economic self-sufficiency, we submit that simply expanding access to college—either through open-enrollment programs or expanded financial awards—is not enough to meaningfully increase educational and skill attainment for low-income individuals. However, evidence shows that well-designed, targeted approaches to meeting the particular needs of economically disadvantaged adults can be effective at boosting educational attainment and skills.

First, an emergent body of evidence points to the effectiveness of comprehensive student-service programs in increasing associate's degree completion among lowincome students

The fact that millions of students who start college in the US don't earn a degree highlights the reality that expanding access to college is not enough to ensure increased educational attainment. More than 40 percent of first time, full-time enrolled students in four-year institutions do not complete a bachelor's degree within six years, and more than two-thirds of those at community colleges do not complete an associate's degree within three years (Evans et al. 2020). Rates of non-completion are especially high among economically disadvantaged groups—and, to be sure, it is not the case that people are dropping out in high numbers to take well-paying jobs. In general, efforts to boost college persistence and completion rates by focusing on academic challenges alone have yielded disappointing results.

Encouragingly, RCT evaluations of ASAP, Stay the Course, and One Million Degrees have found evidence that these programs are effective at boosting the educational attainment of low-income students in community college settings (respectively, Scrivener and Weiss 2009; Evans et al. 2020; Hallberg et al. 2022). These programs offer

¹² The Accelerated Study in Associate Programs (ASAP) was developed by the City University of New York in 2007. Stay the Course™ was initially designed and implemented in 2013 as a research demonstration project, implemented by Catholic Charities Fort Worth at Tarrant County Community College in collaboration with a research team affiliated with the Wilson Sheehan Lab for Economic Opportunities. One Million Degrees is a nonprofit organization founded in 2006 to provide comprehensive support to community college students in Chicago.

comprehensive case management and coaching, providing students with individualized help overcoming a range of nonacademic and nonfinancial barriers that impede their educational progress (for a review of this evidence, see Fulcher Dawson et al. 2020). These kinds of interventions should be scaled and implemented around the country as part of an anti-poverty agenda focused on boosting education and skills.

Second, encouraging evidence also shows that high schools tailored toward the needs of adult learners are effective in boosting the educational attainment of adults without high school degrees. A recent quasi-experimental study of the effect of graduating from a Goodwill Excel Center—one of a network of tuition-free, public charter high schools in Indiana that support adult learners in completing their state-certified high school diploma—finds that five years after enrolling in one of these centers, the earnings of graduates are 38 percent higher than those of non-enrolling applicants, conditional on pre-application earnings. The analysis further finds that much of the wage gain can be accounted for by sectoral switching, as graduates of the Excel Center are much more likely than their peers to switch career industries after graduating, suggesting that they gained new skills that opened up new job opportunities (Brough et al. 2024). This approach to helping adult learners—namely, one that offers flexibility in scheduling, assistance with transportation, on-site childcare, and life coaching—should be scaled around the country.

Third, sectoral training programs have been shown to be effective at increasing skill attainment and earnings. Sectoral training programs are targeted workforce interventions that aim to train people for well-paying jobs in industries that have strong local demand and offer the opportunity for career advancement. These types of programs offer occupational skills training, which often leads to an industry-recognized credential or certification, along with professional skills development, support services, and job search assistance.

In the past decade or so, several RCT evaluations of such programs have found large, sustained increases in participants' earnings (Ratledge et al. 2023). Some examples include Per Scholas, a nonprofit information technology (IT) training and employment services provider in the Bronx, New York. MDRC's evaluation of the Per Scholas WorkAdvance program found that this 15-week program led to a sustained increase of \$6,000 a year in average earnings (Schaberg and Ibok 2022). The Year Up program provides young people with six months of training followed by a sixmonth internship in the IT and financial-operations fields. An MDRC evaluation of this program found that young people who participated were 21 percentage points more likely to work in these two sectors and saw an average earnings increase of 28 percent (Fein and Dastrup 2022). Project QUEST, which trains people for jobs in the healthcare sector, has been found to increase earnings for participants by more than \$5,000 annually for nine years after enrollment (Roder and Elliott 2019).

The workforce-development field has increasingly adopted the sectoral approach to training, and the Workforce Innovation and Opportunity Act of 2014 requires states to implement these strategies as part of their workforce efforts. The effectiveness of these programs demonstrates that an approach to training that is based on labor market realities and recognizes the varied needs of adults being served is a productive way to boost individual economic security.

It is worth noting here that programs like those described in this section that boost skills and education are beneficial not just to the individuals who experience an increase in their personal economic security but also to aggregate economic productivity and growth. These types of investments are good for the US economy. For instance, Bloom et al. (2024) find that across the US, the effect on local labor markets of the rise in Chinese import penetration in the first decade of the 2000s depended on local human capital. Local labor markets more exposed to the China shock experienced relatively larger losses in the manufacturing sector, but in areas that had more college-educated workers—including in the West Coast and large cities—there was substantial job reallocation from manufacturing to services, with net employment gains. In exposed areas highly dependent on manufacturing jobs with low shares of college graduates, including much of the Midwest and the South, there was limited job reallocation. The authors conclude that the China shock created winners and losers, not just across workers but also across regions, by reallocating jobs from the industrial heartland to the coasts and large cities. These findings lead us to the conclusion that investing in skills in education is therefore important to boost economic resilience not just at an individual level but also at a place-based or aggregate level.

Finally, our emphasis on the need to scale effective interventions aimed at boosting education and skills among young and mid-career adults should be understood as a complement to calls for improved K–12 education and expanded access to high-quality early childhood education. Below, we discuss investments in youth as an approach to breaking the intergenerational persistence of poverty.

4.2 Building strong families

Poverty is substantially higher among adults and children living outside a married couple family. US census statistics from 2023 indicate the following poverty rates by family type (based on the unanchored SPM): among people living in a married couple family, 8.0 percent; in a family unit headed by cohabiting partners, 13.2 percent; in a female-headed family with no spouse, 23.9 percent; in a male-headed family with no spouse, 14.9 percent; and in a household with no other family members, 22.6

percent.¹³ These numbers reflect both cause and effect—people in better financial positions are more likely to be married than others; and furthermore, people who are married are more likely to have the benefit of two adults bringing income and resources into a household. In general, median household income in married-parent households is 2.8 times as high as in single-mother households and 1.7 times as high as in single-father households.¹⁴ Even when statistical adjustments are made for confounding differences across households of different family types (including education and age), the general point holds: Households with a married couple tend to benefit from the income of two adults.

The link between poverty and family structure exists for all major racial and ethnic groups in the US, as can be seen in figure 8. Among children of White, Black, Hispanic, and Asian/Pacific Islander (PI) mothers, poverty rates are substantially higher for those whose mothers do not have a four-year college degree and for those who live with an unmarried or unpartnered mother.

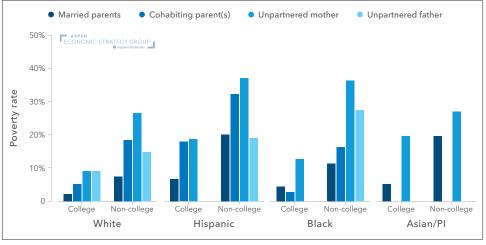


Figure 8: Child poverty rate by maternal education, race, and family type, 2023

Notes: Data from IPUMS CPS (Flood et al. 2024). Poverty rates are calculated using the census's SPM and are not anchored to the 1980 OPM as in other figures. "Race" refers to the mother's reported race except in the case of unpartnered fathers. Among children in the 2024 CPS living with their parents, the percentage of children who live with their mothers or unpartnered fathers of different racial and ethnic groups is as follows: 52.8 percent have White parents, 24.2 percent have Hispanic parents, 13.7 percent have Black parents, and 7.1 percent have Asian/Pl parents. All groups < 0.2 percent of the population and American Indians/Alaskan Natives are excluded.

¹³ These levels are based on the 2023 unanchored census SPM, as reported in Shrider 2024, appendix table B-4. These levels are higher than those in figure 1 because the trend data reported in figure 1 anchor poverty rates to 1980.

¹⁴ In 2023, median family income was approximately \$127,000 for married-parent families, as compared to \$45,010 for unpartnered-mother families, \$75,080 for unpartnered father families, and \$76,001 for a family unit headed by cohabiting partners. These statistics are based on calculations using 2024 Current Population Survey data.

Among children living with unpartnered mothers without a four-year college degree, poverty rates are 27 percent for those with White mothers, 37 percent for those with Hispanic mothers, 36 percent for those with Black mothers, and 27 percent for those with Asian/PI mothers.

These rates are uniformly higher than the rates of poverty among children of married mothers at the same education level for all racial and ethnic groups: 8 percent among those with White mothers, 20 percent among those with Hispanic mothers, 11 percent among those with Black mothers, and 20 percent among those with Asian/PI mothers.

The fact that families headed by unmarried adults are so much less economically secure than married-couple families makes the decline in marriage and marriedparent families deeply concerning. The share of US children living with married parents is now less than 60 percent among children whose mothers do not have four-year college degrees. The shares of children in married-parent households are especially low for the children of non-college-educated Black and Hispanic mothers. Eighty-eight percent of children of White, college-educated mothers are living with married parents; for children of White mothers without a four-year college degree, the figure is only 68 percent. The analogous shares are 75 percent and 57 percent for children of Hispanic mothers and 59 percent and 32 percent for children of Black mothers. Asian families provide a notable exception, with very high rates of marriedparent homes regardless of maternal education: 92 percent for those with collegeeducated mothers and 81 percent for those without a college degree. 15 These gaps in family structure contribute to class and racial/ethnic gaps in economic security and poverty. Furthermore, they threaten to cement the intergenerational persistence of economic status and poverty.

In terms of the implications of family structure for the intergenerational persistence of poverty, numerous studies have established that children growing up in married-parent households are more likely to avoid poverty, obtain higher levels of education, graduate from college, have higher earnings in adulthood, and be married as adults, even after statistically accounting for an array of parental characteristics and potential confounding factors. The higher level of household income that comes from having two parents in a household is a key driver of children's better outcomes, but it is far from the only one. Married-parent homes also tend to offer the benefits of more parental time, more nurturing parenting, and more stability, among other benefits. The evidence suggests that boys growing up in fatherless homes are at an especially high risk of behavioral problems and lower rates of educational attainment (Autor,

¹⁵ Author's calculations using data from the 2023 American Community Survey.

Figlio, et al. 2019; Bertrand and Pan 2013). The findings in the literature are consistent with the readily observed fact that managing a household and raising children as a solo provider is very difficult, burdening both the lone parent and the children. Conversely, having another adult in the household to help bring in income, take care of children, and undertake household tasks is very helpful. The research supports this commonsense view. (See Kearney 2023 for a review of the relevant evidence.)

The benefits of married-parent homes, and specifically father presence, potentially extend beyond one's own family. Research at the community level from the Opportunity Insights Lab, using data on millions of American households, has established that communities with higher shares of married-parent homes have higher rates of upward mobility (Chetty et al. 2014). Research from that lab has also documented that Black boys' outcomes are substantially improved when there are more Black fathers present in a neighborhood (Chetty et al. 2020).

For all these reasons, a policy agenda aimed at reducing poverty—both contemporary and intergenerational—should prioritize building strong families. Programs that provide income support to vulnerable families, including Medicaid, SNAP, and the EITC, are critically important to bolstering the material resources of single-mother families. In fact, data from the 2018 Survey of Income and Program Participation (SIPP) indicate that 71 percent of children in unpartnered-mother households receive benefits from Medicaid and 44 percent receive benefits from SNAP (US Census Bureau 2018).

But our country's approach to addressing the breakdown of the two-parent family cannot just be to expand and maintain programs that alleviate the immediate material need of single mothers and children. We as a country also need to address the reasons behind the high number of economically vulnerable single-mother households and aim to reduce the prevalence of this vulnerable family type. Doing so requires promoting the conditions that lead to stable and healthy marriages and strong families. The link between poverty and weakened families runs both ways, and intervening in this area would go a long way toward breaking that pernicious cycle.

Investing in strong families as part of an anti-poverty agenda requires a multi-pronged approach aimed at advancing marriage and family stability, improving outcomes for fragile and unmarried families, and reforming systems that work with vulnerable families. A critical element to promoting marriage and family stability is to bolster the economic position of men without college degrees, so as to address the economic reasons for the decline in marriage among this segment of the population. There is ample evidence that the widespread weakening of the economic situation of many American men without college degrees has contributed to the decline in

marriage and the rise in the share of children living with only their mother (Autor, Dorn, et al. 2019; Shenhav 2021; Anelli et al. 2021; Gould 2021).

Beyond addressing the economic struggles of less educated men, programs are needed that effectively boost engaged fatherhood and healthy co-parenting (see, for instance, Avellar and Shiferaw 2021). Figuring out how to help more men be good dads—many of whom did not grow up with positive father role models in their own lives—is crucial to breaking the intergenerational cycle of family disadvantage.

The federal government and state governments should also pursue policy reforms to alter features of safety net program eligibility and the personal income tax code to remove implicit marriage disincentives. For instance, for many low-income single mothers, marriage to an employed partner would lead to the loss of Medicaid, since the additional income would push the family above the income Medicaid threshold. A progressive system of taxes and transfers that bases taxes owed and transfer-program eligibility on pooled spousal income has the unfortunate effect of discouraging marriage, especially among low-income adults facing program benefit cliffs. Ilin et al. (2022) document a substantial "marriage tax" implicit in the US tax-and-transfer system, finding that the average marriage tax rate is twice as high for low-income individuals as for high-income individuals. They estimate that this marriage penalty has a small overall impact on rates of marriage but a substantial impact for low-income women with children.

In addition, systems that work with vulnerable families are in need of reform. Both the Child Protective Services system and the foster care system have many known weaknesses (Bald et al. 2022). Improving these systems with the goal of strengthening families and improving outcomes for the millions of adults and children involved with these systems should be part of our nation's approach to fighting intergenerational poverty.

4.3 Addressing individual barriers to flourishing

As noted above, in most cases additional resources are not enough to address poverty because, all too often, individuals and families who struggle to make ends meet face a complex web of barriers that prevent them from becoming economically stable. For instance, someone who has been unemployed for an extended period of time because their skills are no longer marketable (perhaps because of technology or competition from abroad) would likely benefit from additional resources, but redistribution is not likely to lead to economic self-sufficiency because these resources do not address the underlying causes. Moreover, because each person's circumstances are unique, one-size-fits-all solutions are not likely to work. In this example, a job training or reskilling program might not be effective if the individual is also experiencing

homelessness or escaping an abusive relationship; and providing housing may not address the issue if this person is now struggling with substance abuse or mental-health issues. Consequently, addressing poverty often requires providing assistance that is customized to the unique set of challenges that each individual or family faces.

The multifaceted nature of poverty is well documented. For instance, two-thirds of families with income below the federal poverty line report some material hardship; around one in five is behind on rent and/or facing high risk of eviction or foreclosure; and 7.5 percent report an opioid use disorder (Karpman et al. 2018; Dowell et al. 2024). A recent study of the low-income unemployed showed that a substantial fraction experienced significant barriers to work such as difficulty finding childcare (9 percent), being unable to drive (22 percent), limiting health conditions (11 percent), and having a felony conviction (22 percent), as well as other barriers (Barham et al. 2023). Sometimes these challenges are causes of poverty and sometimes they are symptoms of poverty, but either way, they make it harder for people to economically thrive.

Efforts to address the complicated set of barriers that confront individuals in poverty can take many forms. However, there is increasing recognition that, particularly for those facing multiple barriers, the most effective programs tend to be coordinated, multidimensional, holistic, and tailored to the individual. These comprehensive programs typically involve a case manager who coordinates a customized set of services across various domains and providers to help the individual achieve specific goals. Such programs have been implemented in a variety of settings including prisoner reentry, education and training, and—increasingly—poverty reduction initiatives. Through these comprehensive programs, social-service organizations around the country are working tirelessly to invest in people and help them overcome very real struggles—addiction, limited skills, trauma, and so forth—so that they can improve their circumstances and thrive without the need for government assistance.

A recent randomized-controlled-trial study of Padua, a comprehensive program implemented in Fort Worth, Texas, indicates that the program is effective at improving economic well-being (Evans et al. 2025). Padua is a holistic, individualized intervention in which a case manager helps an individual move toward greater economic security by working with them to devise an individualized service plan and supporting them with services (job training, housing assistance, immigration assistance, budgeting, financial literacy, mentoring, etc.), referrals, and flexible financial assistance needed to make progress on the service plan. The RCT results showed that the program significantly increased employment—those who were offered Padua were 25 percent more likely to work full time than those who were not. Among those who were initially unemployed, Padua increased employment by 67 percent.

Other results from Evans et al. (2025) demonstrate the importance of customizing services to meet one's current situation. For example, the program was particularly effective for those who were in a stable enough situation to work. For people who had stable living conditions (living in their own apartment or house) and were initially unemployed, Padua increased employment by 92 percent relative to those who were not offered Padua. In contrast, many of the clients in the Padua study were initially dealing with housing instability—they were homeless or did not have their own place to live. For this group, the Padua program did not improve employment outcomes. However, the program substantially improved their housing stability—the likelihood that they were stably housed increased by 64 percent.

A growing set of comprehensive programs are producing promising results comparable to those from Padua in other settings. One of the most promising areas is in college persistence and completion, as described in some detail above.

In summary, more often than not, individuals and families entrenched in poverty face many barriers to economic mobility. In response, many social-service organizations are turning to case management programs that explicitly aim to address the multifaceted barriers that these families face so they can thrive. These programs are often both time intensive and costly, but there is growing evidence that they promote economic security. Providing such programs on a much larger scale offers a promising path to self-sufficiency for some of the most vulnerable. The challenge for those committed to fighting poverty is finding ways to scale successful programs.

4.4 Boosting upward mobility for poor children

Research has consistently found that programs that address the nutrition, healthcare, early childhood education, and housing quality of children from low-income families lead to improved economic outcomes for children. Policies and programs that expand such efforts—whether funded through public or philanthropic dollars—should be part of our country's anti-poverty agenda. In this section we briefly review the evidence showing that such programs boost the human capital of served children and thereby constitute an effective way to break the intergenerational transmission of poverty.

First, evidence on the effects of access to SNAP and its predecessor, the Food Stamp Program, consistently shows that these programs improve both immediate and long-term outcomes for children from low-income families. For instance, Bond et al. (2022) show that low-income students who receive SNAP benefits in the weeks immediately before they take the SAT perform better on the high-stakes test than low-income students whose families are more likely to have exhausted their

monthly SNAP benefits (based on administrative data and disbursement dates). This study highlights the point that food insecurity impedes cognitive and educational performance in consequential ways and that children experiencing food insecurity are not able to perform in school or on tests as well as they otherwise could.

In terms of long-term effects, Bailey et al. (2024) find that children who gained access in their early years of life (ages zero to five) to Food Stamp Program benefits during the program's rollout between 1961 to 1975 experienced a significant increase in human capital and economic self-sufficiency in adulthood, as compared to similar children who were not exposed to the program rollout. Though a full accounting of the evidence is outside the scope of this paper, the evidence is clear that addressing childhood and adolescent food insecurity is an important mechanism for disrupting the persistence of economic insecurity across generations.

Second, economists have also documented the long-term benefits of childhood eligibility for the public health-insurance program Medicaid. Miller and Wherry (2018) and Wherry et al. (2018) document that infants and children who gained access to Medicaid during their childhood, or who had more years of childhood eligibility after policy changes, had better health and fewer hospitalizations as adults. Using data on over ten million children born in the early 1980s, Brown et al. (2020) find that children who gained eligibility for Medicaid during policy expansions in the 1980s and 1990s paid more in cumulative taxes and collected less in EITC payments by age 28, as compared to demographically similar children who did not. Goodman-Bacon (2021) uses administrative data on the original cohort of children who obtained access to Medicaid during its original introduction in the late 1960s and documents that early childhood Medicaid eligibility reduces later-life mortality and disability, increases employment, and reduces receipt of disability transfer programs up to 50 years later. To summarize a great deal of evidence, providing public health insurance to children from low-income families leads to improved economic outcomes well into adulthood

Third, research has also established the long-term educational benefits of targeted high-quality early childhood education programs. Many research studies using various credible approaches to causal identification find long-term benefits of exposure to Head Start for low-income children, including Deming 2009, Thompson 2017, and Johnson and Jackson 2019. Taking an even longer-term view, Barr and Gibbs (2022) find evidence of second-generation benefits of Head Start participation. They document improved outcomes for children whose mothers were exposed as young children to the initial rollout of the Head Start program in the 1960s and 1970s. In terms of mechanisms, they find suggestive evidence that mothers exposed as young children to Head Start showed improvements in parenting approaches and social-

emotional channels as adults. Expanding access to high-quality early childhood educational programs would improve educational and economic outcomes for low-income children and help break the cycle of poverty.

Fourth, evidence suggests that helping families with children move to a low-poverty neighborhood positively impacts the life trajectory of children. A critical piece of evidence on the intergenerational effects of neighborhood location comes from the Moving to Opportunity (MTO) experiment. The MTO experiment was launched in the mid-1990s in multiple US cities by the US Department of Housing and Urban Development as an RCT to study the causal effect of giving public-housing residents a voucher to move to a low-poverty neighborhood. The results from the first round of research on short-run effects were disappointing in that they indicated no causal effect of the vouchers and the move to low-poverty neighborhoods on adult earnings or employment, and little if any effect on the short-term academic outcomes of children (Kling et al. 2007). However, more recent evidence on the long-term outcomes for children who were part of the MTO experiment shows that children who moved before the age of 13 were ultimately more likely to attend college, have significantly higher income in their mid-20s, and be married as adults (Chetty et al. 2016). A study of movers by Chetty and Hendren (2018) also shows that children who move to low-poverty, higher-quality neighborhoods early in life have proportionately better outcomes than children who move at an older age. This pair of studies, along with other related evidence, implies that helping families with children access housing in higher-quality neighborhoods can meaningfully reduce the intergenerational persistence of poverty.

The policy lessons from this line of evidence are a bit nuanced. At an individual level, it is clear that children benefit from moving to low-poverty neighborhoods. But it is less clear how to scale such a policy at a national level, since moving large numbers of people to high-quality neighborhoods fundamentally changes the nature of neighborhoods. In other words, neighborhoods are not fixed places but rather, in many respects, they are a reflection of the people who live there. This consideration raises two points. First, it highlights the need for investments in distressed neighborhoods so that there are fewer places in the country characterized by high rates of poverty, joblessness, and crime. Unfortunately, the evidence about how to effectively make such investments is unclear. The evidence is mixed as to whether federally designated Enterprise Zones have created jobs and raised incomes for people in very-low-income neighborhoods (see the review in Neumark and Simpson 2015), and federal Opportunity Zones are not specifically targeted on high-poverty neighborhoods.

Second, the recognition that neighborhoods are in large part defined by the characteristics of the people who live there—their family structure, employment status, education level, and so forth—brings us back to the need to promote human flourishing. In fact, in the highly cited Chetty et al. (2014) paper about local area rates of upward mobility, the factors found to be most highly correlated with rates of upward mobility had more to do with the characteristics of the people who lived in a place than with any specific policies. That study found that the community-level factor with the highest correlation with the rate of upward mobility was the share of households headed by a single mother (the correlation being negative); the social-capital index and the fraction of religious inhabitants were also highly correlated. In contrast, contextual factors like state EITC exposure, tax progressivity, college tuition, and colleges per capita were not found to be highly predictive of upward-mobility rates. This finding leads us to think that it probably doesn't make much conceptual sense to try to think about investing in places as separable from investing directly in the people who live there.

From the perspective of designing an anti-poverty agenda, a general lesson from this evidence about neighborhood effects is that children who are growing up in distressed neighborhoods are at heightened risk of experiencing intergenerational poverty, and helping families with children afford to live in better neighborhoods is an investment in their future. One specific policy lever that is effective and scalable here is moving children out of high-poverty public-housing projects. Chyn (2018) shows how this type of move benefits children. Another straightforward policy lever is altering the formula for housing choice vouchers such that voucher amounts are more closely aligned with market prices. Collinson and Ganong (2018) empirically demonstrate that this element of voucher design is consequential. Specifically, they show that policies that make vouchers more generous across a metro area benefit landlords through increased rents, with minimal impact on the neighborhood and unit quality of voucher tenants. Moreover, they show that when the city of Dallas indexed rent ceilings to neighborhood rents, voucher holders moved into higherquality neighborhoods with lower crime, poverty, and unemployment. Taken as a whole, the evidence leads us to suggest expanding the availability of federal Housing Choice Vouchers through increased funding, and designing such vouchers with the goal of encouraging recipients to move to better neighborhoods.

Conclusion

Poverty imposes steep costs on our country—on the individuals burdened by it as well as on society more broadly. It undermines human potential, weakens social cohesion, and holds back national productivity. As we have demonstrated above, over the past four decades, our nation's anti-poverty policies have significantly improved material well-being for the most vulnerable, with measures of material well-being being noticeably higher today than in the 1980s. In addition, these programs have improved long-term outcomes for children born into poverty, helping to break the cycle across generations.

Yet the job is far from done. Millions of people rely on substantial government support to meet their and their family's basic needs, and children growing up in low-income families have many barriers to upward mobility.

In this paper we have proposed an anti-poverty agenda that focuses on investing in people and families to boost not just immediate material well-being but, more ambitiously, to advance people's ability to provide for themselves and their families and to really thrive. Our agenda prioritizes advancing skills and education, building strong families, addressing individual barriers to flourishing, and boosting upward mobility for poor children. The agenda we have proposed here is intended to complement, not supplant, efforts to promote and sustain strong economic growth and widespread opportunities for all.

We have argued that to eradicate poverty will require much more than just giving people money. It will require dedicated and often costly investments in people and families. It will require expanding and scaling programs and policies with evidence of effectiveness.

Poverty is a complex problem that demands a smart, evidence-based approach to fighting it. We can't just out-hate this problem. We need to outsmart it.

References

- Anelli, Massimo, Osea Giuntella, and Luca Stella. 2021. "Robots, Marriageable Men, Family, and Fertility." *Journal of Human Resources*, November 15: 1020–11223R1.
- Autor, David, David Dorn, and Gordon Hanson. 2019. "When Work Disappears: Manufacturing Decline and the Falling Marriage Market Value of Young Men." American Economic Review: Insights 1, no. 2 (September): 161–78. https://doi.org/10.1257/aeri.20180010.
- Autor, David, David Figlio, Krzysztof Karbownik, Jeffrey Roth, and Melanie Wasserman. 2019. "Family Disadvantage and the Gender Gap in Behavioral and Educational Outcomes." American Economic Journal: Applied Economics 11, no. 3: 338–81.
- Avellar, Sarah, and Leah Shiferaw. 2021. Supporting Fatherhood: Final Report on the 2015 Cohort of Responsible Fatherhood Grantees. OPRE report no. 2021-156. Office of Planning, Research, and Evaluation, Administration for Children and Families, US Department of Health and Human Services, September. https://www.acf.hhs.gov/sites/default/files/documents/opre/hmrf_-2015-final-report-fatherhood-grantees-oct-2021.pdf.
- Bailey, Martha J., Hilary Hoynes, Maya Rossin-Slater, and Reed Walker. 2024. "Is the Social Safety Net a Long-Term Investment? Large-Scale Evidence from the Food Stamps Program." Review of Economic Studies 91, no. 3: 1291–330. https://doi.org/10.1093/restud/rdad063.
- Bald, Anthony, Joseph J. Doyle, Max Gross, and Brian A. Jacob. 2022. "Economics of Foster Care." Journal of Economic Perspectives 36, no. 2: 223–46.
- Barham, Tania, Brian C. Cadena, and Patrick S. Turner. 2023. "Taking a Chance on Workers: Evidence on the Effects and Mechanisms of Subsidized Employment from an RCT." IZA Discussion Paper no. 16221. IZA Institute of Labor Economics. https://docs.iza.org/dp16221.pdf.
- Barr, Andrew, and Chloe R. Gibbs. 2022. "Breaking the Cycle? Intergenerational Effects of an Antipoverty Program in Early Childhood." *Journal of Political Economy* 130, no. 12 (December): 3253–85. https://www.journals.uchicago.edu/doi/full/10.1086/720764?journalCode=ipe.
- Bastian, Jacob, and Katherine Michelmore. 2018. "The Long-Term Impact of the Earned Income Tax Credit on Children's Education and Employment Outcomes." *Journal of Labor Economics* 36, no. 4 (October): 1127–63. https://www.journals.uchicago.edu/doi/full/10.1086/697477.
- Ben-Shalom, Yonatan, Robert Moffitt, and John Scholz. 2011. "An Assessment of the Effectiveness of Anti-Poverty Programs in the United States." Working paper no. 17042. National Bureau of Economic Research, May. https://www.nber.org/system/files/working_papers/w17042/w17042.pdf.
- Bengali, Leila, Evgeniya A. Duzhak, and Cindy Zhao. 2023. "Men's Falling Labor Force Participation Across Generations." FRBSF Economic Letter no. 2023-26. Federal Reserve Bank of San Francisco, October 10. https://www.frbsf.org/research-and-insights/publications/economic-letter/2023/10/mens-falling-labor-force-participation-across-generations/#toc_References.

- Bertrand, Marianne, and Jessica Pan. 2013. "The Trouble with Boys: Social Influences and the Gender Gap in Disruptive Behavior." American Economic Journal: Applied Economics 5, no. 1: 32-64.
- Blank, Rebecca M. 2000. "Fighting Poverty: Lessons from Recent U.S. History." Journal of Economic Perspectives 14, no. 2: 3–19.
- Blank, Rebecca M. 2002. "Evaluating Welfare Reform in the United States." Journal of Economic Literature 40. no. 4: 1105-66.
- Blank, Rebecca M. 2008. "Presidential Address: How to Improve Poverty Measurement in the United States." Journal of Policy Analysis and Management 27, no. 2: 233-54.
- Bloom, Nicholas, Kyle Handley, Andre Kurmann, and Philip Luck. 2024. "The China Shock Revisited: Job Reallocation and Industry Switching in U.S. Labor Markets." Working paper no. w33098. National Bureau of Economic Research, November. https://www.nber.org/ papers/w33098.
- Bond, Timothy N., Jillian B. Carr, Analisa Packham, and Jonathan Smith. 2022. "Hungry for Success? SNAP Timing, High-Stakes Exam Performance, and College Attendance." American Economic Journal: Economic Policy 14, no. 4: 51–79.
- Braga, Breno, Fredric Blavin, and Anuj Gangopadhyaya. 2020. "The Long-Term Effects of Childhood Exposure to the Earned Income Tax Credit on Health Outcomes." Journal of Public Economics 190: 104249. https://doi.org/10.1016/j.jpubeco.2020.104249.
- Brough, Rebecca, David C. Phillips, and Patrick S. Turner. 2024. "High Schools Tailored to Adults Can Help Them Complete a Traditional Diploma and Excel in the Labor Market." American Economic Journal: Economic Policy 16, no. 4 (November): 34-67. https://doi.org/10.1257/ pol.20230053.
- Brown, David, Amanda Kowalski, and Ithai Lurie. 2020. "Long-Term Impacts of Childhood Medicaid Expansions on Outcomes in Adulthood." Review of Economic Studies 87, no. 2 (March): 792-821.
- Bruenig, Matt. 2013. "How Much Money Would It Take to Eliminate Poverty in America? American Prospect, September 24. https://prospect.org/power/much-money-takeeliminate-poverty-america/.
- Burkhauser, Richard V., Kevin Corinth, James Elwell, and Jeff Larrimore. 2024. "Evaluating the Success of the War on Poverty Since 1963 Using an Absolute Full-Income Poverty Measure." Journal of Political Economy 132, no. 1 (January): 1–47. https://www.journals. uchicago.edu/doi/10.1086/725705.
- Card, David. 1999. "The Causal Effect of Education on Earnings." In Handbook of Labor Economics, vol. 3, edited by Orley Ashenfelter and David Card, 1801-63. Elsevier.
- Chetty, Raj, and Nathaniel Hendren. 2018. "The Impacts of Neighborhoods on Intergenerational Mobility I: Childhood Exposure Effects." Quarterly Journal of Economics 133, no. 3 (August): 1107-62. https://doi.org/10.1093/qje/qjy007.
- Chetty, Raj, Nathaniel Hendren, Maggie R. Jones, and Sonya R. Porter. 2020. "Race and Economic Opportunity in the United States: An Intergenerational Perspective." Quarterly Journal of Economics 135, no. 2 (May): 711-83. https://doi.org/10.1093/gje/gjz042.

- Chetty, Raj, Nathaniel Hendren, and Lawrence F. Katz. 2016. "The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment." American Economic Review 106, no. 4: 855–902.
- Chetty, Raj, Nathaniel Hendren, Patrick Kline, and Emmanuel Saez. 2014. "Where Is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States." Quarterly Journal of Economics 129, no. 4 (November): 1553–623.
- Chyn, Eric. 2018. "Moved to Opportunity: The Long-Run Effects of Public Housing Demolition on Children." American Economic Review 108, no. 10: 3028–56.
- Citro, Constance F., and Robert T. Michael, eds. 1995. Measuring Poverty: A New Approach. National Academy Press.
- Cohodes, Sarah R., Daniel S. Grossman, Samuel A. Kleiner, and Michael F. Lovenheim. 2016. "The Effect of Child Health Insurance Access on Schooling: Evidence from Public Insurance Expansions." *Journal of Human Resources* 51, no. 3 (2016): 727–59. http://www.jstor.org/stable/26449870.
- Collinson, Robert, and Peter Ganong. 2018. "How Do Changes in Housing Voucher Design Affect Rent and Neighborhood Quality?" American Economic Journal: Economic Policy 10, no. 2 (May): 62–89. https://www.aeaweb.org/articles?id=10.1257/pol.20150176.
- Congressional Budget Office (CBO). 2025. "Estimated Budgetary Effects of a Bill to Provide for Reconciliation Pursuant to Title II of H. Con. Res. 14, the One Big Beautiful Bill Act." May 20 cost estimate, as ordered reported by the House Committee on the Budget on May 18, 2025. https://www.cbo.gov/publication/61420.
- Corinth, Kevin, Bruce D. Meyer, and Derek Wu. 2022. "The Change in Poverty from 1995 to 2016 Among Single-Parent Families." American Economic Association Papers and Proceedings 112 (May): 345–50. https://www.aeaweb.org/articles?id=10.1257/pandp.20221043.
- Council of Economic Advisers, Executive Office of the President. 2014. Economic Report of the President: Together with the Annual Report of the Council of Economic Advisers. United States Government Printing Office. https://obamawhitehouse.archives.gov/sites/default/files/docs/full_2014_economic_report_of_the_president.pdf.
- Council of Economic Advisers, Executive Office of the President. 2019. Economic Report of the President, Together with the Annual Report of the Council of Economic Advisers. United States Government Printing Office. https://trumpwhitehouse.archives.gov/wp-content/uploads/2019/03/ERP-2019.pdf.
- Cutler, David M., and Laurence M. Katz. 1991. "Macroeconomic Performance and the Disadvantaged." Brookings Papers on Economic Activity 2: 1–74.
- Dahl, Gordon B., and Lance Lochner. 2012. "The Impact of Family Income on Child Achievement: Evidence from the Earned Income Tax Credit." *American Economic Review* 102, no. 5 (August): 1927–56.
- de Sousa, Tanya, and Meghan Henry. 2024. The 2024 Annual Homelessness Assessment Report (AHAR) to Congress. US Department of Housing and Urban Development, December. https://www.huduser.gov/portal/sites/default/files/pdf/2024-AHAR-Part-1.pdf.

- Deming, David. 2009. "Early Childhood Intervention and Life-Cycle Skill Development: Evidence from Head Start." American Economic Journal: Applied Economics 1, no. 3 (July): 111-34. http://www.jstor.org/stable/25760174.
- Desmond, Matthew. 2023a. Poverty, by America. Penguin Random House.
- Desmond, Matthew. 2023b. "Why Poverty Persists in America." New York Times Magazine, March 9. https://www.nytimes.com/2023/03/09/magazine/poverty-by-america-matthewdesmond.html.
- Dowell, Deborah, Samantha Brown, Shiromani Gyawali, Jennifer Hoenig, Jean Ko, Christina Mikosz, et al. 2024. "Treatment for Opioid Use Disorder: Population Estimates—United States, 2022." Morbidity and Mortality Weekly Report 73, no. 25 (June 27): 567-74. http:// dx.doi.org/10.15585/mmwr.mm7325a1.
- Duncan, Greg, and Suzanne Le Menestrel, eds. 2019. A Roadmap to Reducing Child Poverty. National Academies of Sciences, Engineering, and Medicine. https://doi. org/10.17226/25246.
- Egan-Dailey, Shannon, Lisa A. Gennetian, Greg Duncan, Nathan Fox, Katherine Magnuson, Kimberly Noble, et al. 2024. "Effects on Maternal Bandwidth of Monthly Unconditional Cash Starting at Birth Among U.S. Families with Low Income." Social Science Research Network, August 31. http://dx.doi.org/10.2139/ssrn.4940902.
- Engelhardt, Gary V., and Jonathan Gruber. 2006. "Social Security and the Evolution of Elderly Poverty." In Public Policy and the Income Distribution, edited by Alan Auerbach, David Card, and John Quigley, 259-87. Russell Sage Foundation.
- Evans, William N., Melissa S. Kearney, Brendan Perry, and James X. Sullivan. 2019. "A Cautionary Tale About Emergency Financial Assistance Without Services: Evidence from a Randomized Controlled Trial Evaluation at a Community College." AEA Papers and Proceedings 109: 218-22.
- Evans, William N., Melissa S. Kearney, Brendan Perry, and James X. Sullivan. 2020. "Increasing Community College Completion Rates Among Low-Income Students: Evidence from a Randomized Controlled Trial Evaluation of a Case Management Intervention." Journal of Policy Analysis and Management 39, no. 4: 930-65.
- Evans, William N., Shawna Kolka, James X. Sullivan, and Patrick S. Turner. 2025. "Fighting Poverty One Family at a Time: Experimental Evidence from an Intervention with Holistic, Individualized, Wraparound Services." American Economic Journal: Economic Policy 17, no. 1:
- Evans, William N., David C. Phillips, and Krista Ruffini. 2021. "Policies to Reduce and Prevent Homelessness: What We Know and Gaps in the Research." Journal of Policy Analysis and Management 40, no. 3 (Summer): 914-63. https://doi.org/10.1002/pam.22283.
- Evans, William N, James X. Sullivan, and Melanie Wallskog. 2016. "The Impact of Homelessness Prevention Programs on Homelessness." Science 353, no. 6300 (August 12): 694-99.
- Fein, David, and Samuel Dastrup. 2022. Benefits that Last: Long-Term Impact and Cost-Benefit Findings for Year Up. OPRE report no. 2022-77. Office of Planning, Research, and Evaluation, Administration for Children and Families, US Department of Health and Human Services, March. https://acf.gov/sites/default/files/documents/opre/year%20up%20long-term%20 impact%20report_apr2022.pdf.

- Finkelstein, Amy, Sarah Taubman, Bill Wright, Mira Bernstein, Jonathan Gruber, Joseph P. Newhouse, et al. 2012. "The Oregon Health Insurance Experiment: Evidence from the First Year." Quarterly Journal of Economics 127, no. 3 (August): 1057–106.
- Fisher, Jonathan D., David S. Johnson, Joseph T. Marchand, Timothy M. Smeeding, and Barbara B. Torrey. 2009. "Identifying the Poorest Older Americans." *Journal of Gerontology: Social Sciences* 64B, no. 6: 758–66.
- Flood, Sarah, Miriam King, Renae Rodgers, Steven Ruggles, J. Robert Warren, Daniel Backman, Annie Chen, Grace Cooper, Stephanie Richards, Megan Schouweiler, and Michael Westberry. 2024. IPUMS CPS: Version 12.0 [dataset]. IPUMS. https://doi.org/10.18128/D030.V12.0.
- Fulcher Dawson, Rachel, Melissa S. Kearney, and James X. Sullivan. 2020. "Comprehensive Approaches to Increasing Student Completion in Higher Education: A Survey of the Landscape." Working paper no. 28046. National Bureau of Economic Research, November; revised February 2021. https://www.nber.org/papers/w28046.
- Goodman-Bacon, Andrew. 2021. "The Long-Run Effects of Childhood Insurance Coverage: Medicaid Implementation, Adult Health and Labor Market Outcomes." American Economic Review 111, no. 8: 2550-93.
- Gould, Eric. 2021. "Torn Apart? The Impact of Manufacturing Employment Decline on Black and White Americans." *Review of Economics and Statistics* 103, no. 4: 770–85.
- Hallberg, Kelly, Kenny Hofmeister, Marianne Bertrand, and Brittany Morgan. 2022. "Supporting Community College Student Success: Evidence from a Randomized Controlled Trial."

 Journal of Research on Educational Effectiveness 16, no. 1: 63–81. https://doi.org/10.1080/19345 747.2022.2074929.
- Han, Jeehoon, Bruce D. Meyer, and James X. Sullivan. 2021. "The Consumption, Income, and Well-Being of Single Mother–Headed Families 25 Years After Welfare Reform." National Tax Journal 74, no. 3 (September): 791–824. https://doi.org/10.1086/716242.
- Han, Jeehoon, Bruce D. Meyer, and James X. Sullivan. 2023. Annual Report on U.S. Consumption Poverty: 2022. University of Chicago and University of Notre Dame, October 20. https://sites.nd.edu/james-sullivan/files/2023/10/2022-Consumption-Poverty-Report_10_20_2023.pdf.
- Han, Jeehoon, Bruce D. Meyer, and James X. Sullivan. 2024. "Poverty, Hardship, and Government Transfers." Working paper no. 33052. National Bureau of Economic Research, October. https://www.nber.org/papers/w33052.
- Hendren, Nathaniel, and Ben Sprung-Keyser. 2020. "A Unified Welfare Analysis of Government Policies." Quarterly Journal of Economics 135, no. 3 (August): 1209–318.
- Hershbein, Brad, Melissa S. Kearney, and Luke W. Pardue. 2020. "College Attainment, Income Inequality, and Economic Security: A Simulation Exercise." AEA Papers and Proceedings 110 (May): 352–55.
- Hoynes, Hilary, Marianne Page, and Ann Huff Stevens (2006). "Poverty in America: Trends and Explanations." *Journal of Economic Perspectives* 20, no. 1: 47–68.
- Hoynes, Hilary W., and Diane Whitmore Schanzenbach. 2018. "Safety Net Investments in Children." Brookings Papers on Economic Activity (Spring): 89–150. https://www.brookings.edu/articles/safety-net-investments-in-children/.

- Hoynes, Hilary, Diane Whitmore Schanzenbach, and Douglas Almond. 2016. "Long-Run Impacts of Childhood Access to the Safety Net." *American Economic Review* 106, no. 4: 903–34.
- Hughes, Chris. 2018. Fair Shot: Rethinking Inequality and How We Earn. St. Martin's Press.
- Ilin, Elias, Laurence J. Kotlikoff, and Melinda Pitts. 2022. "Is Our Fiscal System Discouraging Marriage? A New Look at the Marriage Tax." Working paper no. 30159. National Bureau of Economic Research, June; revised October. https://www.nber.org/papers/w30159.
- Jaravel, Xavier. 2024., "Distributional Consumer Price Indices." Discussion paper no. DP19802. Centre for Economic Policy Research, March. https://cepr.org/publications/dp19802.
- Jepsen, Christopher, Kenneth Troske, and Paul Coomes. 2014. "The Labor-Market Returns to Community College Degrees, Diplomas, and Certificates." *Journal of Labor Economics* 32, no. 1 (January): 95–121.
- Johnson, Rucker, and C. Kirabo Jackson. 2019. "Reducing Inequality Through Dynamic Complementarity: Evidence from Head Start and Public School Spending." American Economic Journal: Economic Policy 11, no. 4: 310–49.
- Kane, Thomas K., and Cecilia Elena Rouse. 1995. "Labor-Market Returns to Two- and Four-Year College." *American Economic Review* 85, no. 3 (June): 600–14.
- Karpman, Michael, Stephen Zuckerman, and Dulce Gonzalez. 2018. Material Hardship Among Nonelderly Adults and Their Families in 2017: Implications for the Safety Net. Urban Institute, August 28. https://www.urban.org/sites/default/files/publication/98918/material_hardship_among_nonelderly_adults_and_their_families_in_2017_0.pdf.
- Kearney, Melissa S. 2023. The Two-Parent Privilege. University of Chicago Press.
- Kearney, Melissa S., and Magne Mogstad. 2019. "Universal Basic Income (UBI) as a Policy Response to Current Challenges." Aspen Institute, November 21. https://www.economicstrategygroup.org/publication/universal-basic-income-ubi-as-a-policy-response-to-current-challenges/.
- Kearney, Melissa S., and Luke Pardue. 2023. "The Economic Case for Smart Investing in America's Youth." In Building a More Resilient US Economy, edited by Melissa S. Kearney, Justin Schardin, and Luke Pardue. Aspen Institute.
- Kling, Jeffrey R., Jeffrey B. Liebman, and Lawrence F. Katz. 2007. "Experimental Analysis of Neighborhood Effects." *Econometrica* 75, no. 1: 83–119. https://scholar.harvard.edu/files/lkatz/files/experimental_analysis_of_neighborhood_effects.pdf.
- Lowrey, Annie. 2018. Give People Money: How a Universal Basic Income Would End Poverty, Revolutionize Work, and Remake the World. Penguin Random House.
- Magnuson, Katherine, Greg Duncan, Hirokazu Yoshikawa, Paul Yoo, Sangdo Han, Lisa A. Gennetian, et al. 2024. "Can Cash Transfers Improve Maternal Well-Being and Family Processes Among Families with Young Children? An Experimental Analysis." Social Science Research Network, October 22. https://ssrn.com/abstract=4955765.
- Mani, Anandi, Sendhil Mullainathan, Eldar Shafir, and Jiaying Zhao. 2013. "Poverty Impedes Cognitive Function." Science 341, no. 6149 (August): 976–80. https://www.science.org/doi/10.1126/science.1238041.

- Meyer, Bruce D., and Nikolas Mittag. 2019. "Using Linked Survey and Administrative Data to Better Measure Income: Implications for Poverty, Program Effectiveness, and Holes in the Safety Net." American Economic Journal: Applied Economics 11 (2): 176–204. https://doi.org/10.1257/app.20170478.
- Meyer, Bruce D., Wallace K. C. Mok, and James X. Sullivan. 2015. "Household Surveys in Crisis." Working paper no. 21399. National Bureau of Economic Research, July. https://www.nber.org/papers/w21399.
- Meyer, Bruce D., and James X. Sullivan. 2003. "Measuring the Well-Being of the Poor Using Income and Consumption." *Journal of Human Resources* 38 (supplement): 1180–220.
- Meyer, Bruce D., and James X. Sullivan. 2011. "Further Results on Measuring the Well-Being of the Poor Using Income and Consumption." *Canadian Journal of Economics* 44, no. 1: 52–87.
- Meyer, Bruce D., and James X. Sullivan. 2012. "Winning the War: Poverty from the Great Society to the Great Recession." *Brookings Papers on Economic Activity* (Fall): 133–83.
- Meyer, Bruce D., and James X. Sullivan. 2024. "The Material Well-Being of the Poor and Middle Class." Working paper.
- Meyer, Bruce D., and Derek Wu. 2018. "The Poverty Reduction of Social Security and Means-Tested Transfers." *ILR Review 71*, no. 5: 1106–53.
- Miller, Sarah, Elizabeth Rhodes, Alexander W. Bartik, David E. Broockman, Patrick K. Krause, and Eva Vivalt. 2024. "Does Income Affect Health? Evidence from a Randomized Controlled Trial of a Guaranteed Income." Working paper no. 32711, National Bureau of Economic Research, July; revised September 2024. https://www.nber.org/papers/w32711.
- Miller, Sarah, and Laura R. Wherry. 2018. "The Long-Term Effects of Early Life Medicaid Coverage." *Journal of Human Resources* 54, no. 3: 785–824.
- Moulton, Brent R. 2018. The Measurement of Output, Prices, and Productivity. Brookings Institution, July 25. https://www.brookings.edu/articles/the-measurement-of-output-prices-and-productivity/.
- Neumark, David, and Helen Simpson. 2015. "Place-Based Policies." In Handbook of Regional and Urban Economics, vol. 5, edited by Gilles Duranton, J. Vernon Henderson, and William C. Strange, 1197–287. Elsevier.
- Nichols, Austin, and Jesse Rothstein. 2016. "The Earned Income Tax Credit." In Economics of Means-Tested Transfer Programs in the United States, vol. 1, edited by Robert Moffitt. University of Chicago Press.
- Noble, Kimberly, Katherine Magnuson, Greg Duncan, Lisa Gennetian, Hirokazu Yoshikawa, Nathan Fox, et al. 2025. "The Effect of a Monthly Unconditional Cash Transfer on Children's Development at Four Years of Age: A Randomized Controlled Trial in the U.S." Working paper no. 33844. National Bureau of Economic Research, May. https://www.nber.org/papers/w33844.
- Oreopoulos, Philip, and Uros Petronijevic. 2013. "Making College Worth It: A Review of Research on the Returns to Higher Education." Working paper no. 19053. National Bureau of Economic Research, May. http://www.nber.org/papers/w19053.

- Phillips, David C., and James X. Sullivan. 2024. "Personalizing Homelessness Prevention: Evidence from a Randomized Controlled Trial." *Journal of Policy Analysis and Management* 43: 1101–28. https://doi.org/10.1002/pam.22547.
- Poterba, James M. 1991. "Is the Gasoline Tax Regressive?" Tax Policy and the Economy 5. https://www.journals.uchicago.edu/doi/abs/10.1086/tpe.5.20061803.
- Ratledge, Alyssa, Cynthia Miller, and Kelsey Schaberg. 2023. Sector Strategies for Workforce Development: A Synthesis of the Research for Employers and Local Governments. MDRC, July.
- Reagan, Ronald. 1988. "Address Before a Joint Session of Congress on the State of the Union—1988." State of the Union address. Ronald Reagan Presidential Library and Museum, January 25. https://www.reaganlibrary.gov/archives/speech/address-joint-session-congress-state-union-1988.
- Renwick, Trudi, and Liana Fox. 2016. The Supplemental Poverty Measure: 2015. Report no. P60-258. US Census Bureau, September 13. https://www.census.gov/library/publications/2016/demo/p60-258.html.
- Roder, Anne, and Mark Elliott. 2019. Nine Year Gains: Project QUEST's Continuing Impact. Economic Mobility Corporation, April. https://economicmobilitycorp.org/wp-content/uploads/2019/04/NineYearGains_web.pdf.
- Schaberg, Kelsey, and Affiong Ibok. 2022. Career Paths for Entry-Level IT Workers: Findings from the Per Scholas WorkAdvance Program. OPRE report no. 2022-25. Office of Planning, Research, and Evaluation, Administration for Children and Families, US Department of Health and Human Services, March. https://www.mdrc.org/sites/default/files/bees-workadvance-report-mar2022.pdf.
- Schanzenbach, Diane. 2025. "The Power of Work: Expanding Opportunity Through SNAP." Testimony before the US House of Representatives Committee on Agriculture, April 8. https://static1.squarespace.com/static/6060e0217a82692d70473c12/t/67f83437eb9a5b4bb b8c777c/1744319543936/schanzenbach_snap_20250408.pdf.
- Scholz, John Karl, Robert Moffitt, and Benjamin Cowan. 2009. "Trends in Income Support." In Changing Poverty, Changing Policies, edited by Maria Cancian and Sheldon Danziger, 203–41. Russell Sage Foundation.
- Scrivener, Susan, and Michael J. Weiss. 2009. More Guidance, Better Results? Three-Year Effects of an Enhanced Student Services Program at Two Community Colleges. MDRC, August.
- Shenhav, Na'ama. 2021. "Lowering Standards to Wed? Spouse Quality, Marriage, and Labor Market Responses to the Gender Wage Gap." Review of Economics and Statistics 103, no. 2: 265–79.
- Shrider, Emily A. 2024. Poverty in the United States: 2023. United States Census Bureau, Current Population Reports, September. https://www2.census.gov/library/publications/2024/demo/p60-283.pdf.
- Slesnick, Daniel T. 1993. "Gaining Ground: Poverty in the Postwar United States." *Journal of Political Economy* 101, no. 1 (February): 1–38. https://www.journals.uchicago.edu/doi/abs/10.1086/261864.
- Sommers, B. D., L. Chen, R. J. Blendon, E. J. Orav, and A. M. Epstein. 2020. "Medicaid Work Requirements in Arkansas: Two-Year Impacts on Coverage, Employment, and Affordability of Care." *Health Affairs* 39, no. 9: 1522–30.

- Tanner, Michael. 2012. "The American Welfare State: How We Spend Nearly \$1 Trillion a Year Fighting Poverty—and Fail." Cato Institute Policy Analysis 694 (April 11): 1–24. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2226525.
- Thompson, Owen. 2017. "Head Start's Long-Run Impact: Evidence from the Program's Introduction." *Journal of Human Resources* (November 21): 0216–7735r1. https://doi.org/10.3368/jhr.53.4.0216.7735R1.
- Wimer, Christopher, Liana Fox, Sophie Collyer, Irwin Garfinkel, Neeraj Kaushal, Jennifer Laird, et al. 2024. Historical Supplemental Poverty Measure Data 1967–2023. Center on Poverty and Social Policy, Columbia University. www.povertycenter.columbia.edu/historical-spm-data.
- Wimer, Christopher, JaeHyun Nam, Jane Waldfogel, and Liana Fox. 2016. "Trends in Child Poverty Using an Improved Measure of Poverty." *Academic Pediatrics* 16, no. 3, supplement (April): S60–66. https://doi.org/10.1016/j.acap.2016.01.007.
- West, Stacia, and Amy Castro. 2023. "Impact of Guaranteed Income on Health, Finances, and Agency: Findings from the Stockton Randomized Controlled Trial." *Journal of Urban Health* 100, no. 2 (April): 227–44. https://doi.org/10.1007/s11524-023-00723-0.
- US Bureau of Labor Statistics (BLS). 2025. "Employment Projections, Table 5.1: Unemployment Rates and Earnings by Educational Attainment, 2024." Bureau of Labor Statistics, last updated April 18. https://www.bls.gov/emp/tables/unemployment-earnings-education.htm.
- US Census Bureau. 2018. "Survey of Income and Program Participation (SIPP): 2018 SIPP Data." Census Bureau. https://www.census.gov/programs-surveys/sipp/data/datasets/2018-data/2018.html.
- US Interagency Council on Homelessness. 2019. The Evidence Behind Approaches That Drive an End to Homelessness. US Interagency Council on Homelessness, September. https://www.usich.gov/sites/default/files/document/Evidence-Behind-Approaches-That-End-Homelessness-Brief-2019.pdf.
- Vivalt, Eva, Elizabeth Rhodes, Alexander W. Bartik, David E. Broockman, Patrick Krause, and Sarah Miller. 2024. "The Employment Effects of a Guaranteed Income: Experimental Evidence from Two U.S. States." Working paper no. 32719. National Bureau of Economic Research, July; revised January 2025. https://www.nber.org/papers/w32719.
- Wherry, Laura R., Sarah Miller, Robert Kaestner, and Bruce D. Meyer. 2018. "Childhood Medicaid Coverage and Later-Life Health Care Utilization." Review of Economics and Statistics 100, no. 2 (May): 287–302. https://doi.org/10.1162/REST_a_00677.
- Wyse, Angela, and Bruce D. Meyer. 2025. "Saved by Medicaid: New Evidence on Health Insurance and Mortality from the Universe of Low-Income Adults." Working paper no. 33719. National Bureau of Economic Research, May. https://www.nber.org/papers/w33719.
- Yang, Andrew. 2020. "The Freedom Dividend, Defined." Yang 2020. https://2020.yang2020.com/what-is-freedom-dividend-faq/.
- Zimmerman, Seth. 2014. "The Returns to College Admission for Academically Marginal Students." *Journal of Labor Economics* 32, no. 4 (October): 711–54.

Coverage Isn't Care: An Abundance Agenda for Medicaid

AUTHORS

Craig Garthwaite* and Timothy Layton**

ABSTRACT

This paper provides a broad discussion of efforts to reform Medicaid not simply in size but also in its very construction, with a focus on maximizing the efficiency of this program. We begin with a high-level overview of the current structure of America's healthcare safety net for the poor and disabled, including Medicaid, noting that the piecemeal nature of Medicaid's evolution has created a complex program bringing together various populations, providers, operating models, and revenue streams. We then briefly examine implications of recently proposed reforms to this system, which largely hold the structure of the program fixed and focus on marginal changes to financing and eligibility. In the final part of the paper, we propose a broader and more fundamental set of reforms that acknowledge that Medicaid's contemporary size and scope require a different structure than those of its smaller historical predecessors. We propose policies that foster lower-cost-structure business models for safety-net healthcare providers in order to expand the number of these providers and more aggressively steer Medicaid patients to them. The goal is to use Medicaid's existing funding to provide easy access to basic healthcare services provided by a more abundant supply of safety-net healthcare facilities that work exclusively (or almost exclusively) with patients from this program.

^{*} Herman Smith Research Professor in hospital and health services management and director of the Healthcare at Kellogg program, Northwestern Kellogg School of Management.

^{**} Associate professor of public policy and economics, Frank Batten School of Leadership and Public Policy, University of Virginia.

Introduction

Medicaid has grown remarkably from a small, inexpensive program in the years following its introduction in 1965 into a major national health-insurance program, covering nearly one in four Americans. To place its size in perspective, Medicaid is now one of the largest public health-insurance programs in the world, enrolling more people than Medicare and more people than the public, social health-insurance programs of the United Kingdom, Germany, or France. Spending on Medicare in 2024 was still larger than Medicaid at nearly \$1 trillion, but Medicaid was quite close, with nearly \$880 billion in combined federal and state expenditures in that year (KFF n.d.b).

Unlike Medicare, which is a fully federally funded program that provides a uniform national health-insurance benefit to all elderly Americans, Medicaid is jointly financed by state and federal tax dollars while being designed and administered by each state. This setup leads to remarkable variation in the program's structure across the country. Perhaps more importantly, it means that the federal government's spending on the program is an incomplete metric of the funds necessary for access and coverage. The program's growth in size and scale means that it now comprises a substantial fraction of state budgets, with the average state spending almost one-third of its budget on Medicaid (Sigritz et al. 2024). Thus, while the program is jointly

funded, states are extremely constrained in their ability to take on additional Medicaid costs, limiting their ability to fill in the gaps generated by any cuts to federal funding of the program.

Medicaid's evolution from small, niche safetynet program to major national health insurer has been piecemeal; it has expanded gradually from a program of categorical eligibility, restricted to specific low-income groups (such as pregnant "Medicaid's evolution from small, niche safetynet program to major national health insurer has been piecemeal."

women or the disabled), to—with the passing of the Affordable Care Act (ACA)—a broad-based entitlement for nearly all low-income adults. This growth has been coupled with a structural shift, with roughly 75 percent of beneficiaries now receiving care through private managed-care organizations rather than government-operated insurance programs. These firms include familiar names from other health insurance markets such as United, Aetna, Humana, and Centene, making the modern version of Medicaid quite different from the classic perception of a safety-net healthcare program run and operated by legions of government bureaucrats.

In its current form, Medicaid is vastly different from the plans of its original creators. The piecemeal nature of the various reforms and expansions has created a Frankenstein-like program bringing together various populations, providers, operating models, and revenue streams. Much like Mary Shelley's eponymous character, the program today has remarkable strength in some ways but is otherwise unstable and largely misunderstood by all who encounter it. This state of affairs has meaningful effects on policy and on the debate about potential reforms.

At least some of this confusion and instability results from the diversity of populations covered through the program. The contemporary Medicaid population involves children, pregnant women, the disabled, dual-eligible seniors, and those needing long-term care. Medicaid both pays for 41 percent of births in the US and is the largest single payer for long-term care services in the US. It is the nation's only true cradle-to-grave insurer. The medical requirements of these many different types of beneficiaries are meaningfully different, and it is therefore likely that the optimal insurance design differs, perhaps greatly, across these groups.

Despite this fact, the program largely takes a one-size-fits-all approach and attempts to provide a single comprehensive set of benefits to all enrollees. Unfortunately, this approach results in a series of square pegs jammed into round holes, with the basic design often trying to cater to various niche subgroups of enrollees (aged, blind, disabled, etc.) rather than to the group that now makes up the bulk of Medicaid enrollment: low-income Americans of all ages. Such a focus on niche subgroups rather than on the more mainstream Medicaid enrollee is not surprising given the history of the program. However, the program's shift toward providing coverage for large groups of mainstream low-income Americans likely necessitates a second, parallel shift: away from catering primarily to highly complex, specialized health problems and toward providing easy access to basic healthcare services (perhaps with carve-outs for these smaller, more complex groups).

Even with this complex and diverse population, Medicaid involves relatively little expenditure per enrollee.² Medicaid accomplishes this feat by paying very low rates to all medical providers. This frugality does not come without meaningful consequences for enrollees. Many providers simply refuse to accept Medicaid enrollees. Others consider treating these patients as a form of charity care. For example, many hospitals declare "underpayments" from Medicaid as part of their contribution to the public good. In recognition of these concerns, Medicaid directly funds some limited infrastructure through a series of additional payment streams to hospitals known as "provider-directed payments."

¹ Dual eligibles are low-income seniors who qualify for coverage under both Medicaid and Medicare. For these individuals, Medicare is the primary insurer responsible for most medical costs while Medicaid provides coverage for cost-sharing payments and for services—such as long-term care—that are not covered by Medicare.

² Given the variety of populations covered by Medicaid, simple comparisons of per-enrollee spending can be deceptive. However, several studies have examined risk-adjusted spending between Medicaid and commercial plans, documenting higher expenditures for those in the commercial market (Allen et al. 2021).

Taken together, Medicaid payments not only provide insurance for enrollees but also serve as a form of insurance for some facilities exposed to the costs of providing care for those without the financial means to fully pay for their services. However, as we discuss below, the size of these payments remains quite small, and their targeting is likely far from optimal. As a result, even in a world with Medicaid serving as an insurer for providers, many hospitals are hesitant to treat Medicaid patients. This hesitation increases as Medicaid recipients become a large fraction of the patient population. Compounding problems, payments to fund infrastructure and other fixed costs are generally not available to non-hospital providers—which are an important part of any definition of basic healthcare services.

Medicaid's multiple roles in the US healthcare system mean that it addresses important needs while leaving a wide array of actors in the system quite frustrated. This frustration often manifests as political controversy about the program's design and at times its very existence. The resulting debates largely focus solely on eligibility and spending levels—with little consideration of actual access or economic efficiency. Traditionally, Democrats have sought to expand eligibility and take-up of the program. In contrast, Republicans have typically attempted to limit the scope of eligibility expansions and ensure that those who receive Medicaid coverage are those they define as "truly" having the greatest need.

More recently, Medicaid's increasing electoral popularity and enrollment across numerous politically red states have shifted the debate. Republicans now focus less on explicitly paring back eligibility and more on decreasing federal spending on the program. This shift in focus is perhaps best exemplified by the recent budget bill debated extensively in the House and Senate and ultimately signed into law by President Trump. The bill includes no explicit cuts to eligibility for Medicaid, something that now appears to be a political nonstarter, but that as recently as during the previous Trump administration was a major goal of Republicans seeking to repeal the Affordable Care Act. Instead, the bill reduces Medicaid expenditures by cutting enrollment largely via more opaque administrative burdens and work requirements, plus other opaque funding cuts unrelated to enrollment and intended to shift costs away from the federal government and onto states. Such reductions in federal support are meaningful, as they leave policymakers in states, which have a requirement to balance their budgets, to decide whether to fill the funding gap via increased state expenditures or to instead reduce spending. Of course, the tools available to state policymakers for lower spending largely include those traditionally discussed at the federal level, namely, limiting eligibility and enrollment. But, at least at the federal level, the politics of Medicaid have changed to a point where both parties see value in the program but one party wishes for it to take up a smaller share of the federal budget.

In this paper, we thus move beyond the typical debates over Medicaid's size and cost to examine its very construction, focusing on reforms that could maximize the value of its substantial expenditures, a goal that both parties should be able to agree on. We begin by providing the essential economic and historical context of the healthcare safety net, explaining how Medicaid evolved into its complex current form. We then analyze the fundamental limitations of recent reform proposals, which largely focus on relatively marginal changes to eligibility and financing without addressing the program's core structural flaws. In the final section, we outline a more fundamental reform agenda. We argue that policymakers interested in a truly effective safety net operating at the scale of today's Medicaid program must go beyond the standard focus on subsidizing demand for healthcare services and begin to pay attention to the supply of these services to Medicaid patients. We outline a vision for how this type of supply-side effort could make the program deliver more for enrollees without costing taxpayers any more than it already does.

This effort should begin by explicitly acknowledging the existence of an implicit two-tiered system whereby Medicaid beneficiaries have coverage but lack access to high-quality medical care. Productive reforms should focus on a redesigned program that fosters an abundant supply of providers of basic care for the Medicaid tier. Our proposal focuses on targeted regulatory relief and the integration of new artificial-intelligence technologies (AI) to create lower-cost, sustainable business models for providers who primarily serve Medicaid patients, with the goal of ensuring abundant access to basic care. While some might argue that these types of reforms provide a lower standard of care for low-income Americans and confine them to lower-quality healthcare services, we emphasize that the goal is not to diminish the quality of care received by Medicaid enrollees. Instead, our proposals aim to help the large number of Medicaid patients who currently have access to no care (or very limited care) under the current system to have easy and abundant access to (at least) basic healthcare services.

The economic rationale for a healthcare safety net and the history of Medicaid

In the United States, Medicaid serves as the largest funding source among a variety of programs and initiatives that comprise a safety net or social-insurance system for healthcare. In considering the optimality of such a system, it is important to be clear about the economic rationale for its existence. From an economic perspective, the primary purpose of social insurance is to provide resources to individuals for whom particularly bad states of the world have been realized and for whom market-based coverage is not available. While the decision to provide social insurance can be driven by many factors, in healthcare a primary motivation is a broadly held

social concern about equity in and access to specific services. The existence of this social concern for equity can be seen across a range of policies where healthcare receives special consideration.³

It should not be surprising that an optimal healthcare safety net provides the most benefit to those who (1) are poor and (2) are sick (or could potentially become sick). In some sense, these beneficiaries have simultaneously been hit with two negative shocks, one affecting their income and the other affecting their health. Because negative health shocks come with expensive treatments, the health shock can be thought of as a reduction in the household budget, akin to the consequences of the negative income shock. These beneficiaries are thus in a precarious financial situation, and a safety-net healthcare program can provide them with important insurance value by offering resources when they are needed most.

Ideally, the government could simply provide cash transfers to these individuals, but this approach is not feasible. There is tremendous ex ante uncertainty about how much money would be required to make a person "whole" after a health shock, especially given the rapid pace of technological change in medicine. Furthermore, conditioning financial aid on a specific diagnosis would create incentives for such conditions to be overdiagnosed.⁴ For these reasons, healthcare safety-net programs generally operate via in-kind transfers, providing medical care at little or no cost to beneficiaries.⁵ This method still meets the core insurance goal, as beneficiaries with the greatest medical needs receive the most resources.

In addition to providing insurance, these in-kind transfers also stimulate demand for healthcare services, which can be economically efficient for several reasons. While economists once viewed the additional consumption spurred by insurance as inefficient "moral hazard," a more recent view recognizes that individuals often under-consume healthcare (Baicker et al. 2015; Chandra et al. 2021). This underconsumption occurs because patients may not fully recognize or internalize the value of certain services (particularly preventive care), and because high prices and liquidity constraints can prevent them from accessing even cost-effective treatments (Besanko et al. 2020). These factors are especially pronounced for low-

³ For example, the Emergency Medical Treatment and Active Labor Act (EMTALA) requires that all hospitals that accept Medicare and have an emergency room must provide treatment to patients in emergent conditions without considering the ability of the patient to pay for such services. This law was driven in part by a practice of "patient dumping," where critically ill patients were denied care at one hospital and transferred to another to receive treatment.

⁴ Potential concerns also arise about incentives for innovation if lump-sum payments represent the cost of today's level of care and not the potential benefits from treatments that have not yet been developed.

⁵ This use of in-kind transfers is also a feature of commercial health-insurance markets—which suffer from many of the problems described above. An important difference is in the financing and costs of the program. Commercial health insurance is financed through premiums from enrollees that are paid through a mixture of direct payments and foregone wages. In addition, commercial health insurance involves additional cost-sharing payments.

income individuals. Subsidizing healthcare for this group can therefore correct for this under-consumption and increase demand toward a more efficient level. Further, in the absence of a healthcare safety net, low-income individuals still receive care; hospitals and providers are simply often not compensated for providing it. This uncompensated cost can be seen as a negative externality imposed on providers or on paying customers—who may have a more difficult time finding healthcare providers because the fixed costs of operating a hospital (which include treating the uninsured) are higher, potentially leading to fewer hospitals. This type of negative externality can provide an additional rationale for the government stepping in and explicitly subsidizing medical care for this group via a healthcare safety net.

An important distinction here (relative to other sectors of the economy) is that the provision of medical care often involves economically meaningful fixed costs rather than simply variable costs that can more easily be subsidized on the margin. Clinics and hospitals are integral parts of a healthcare safety net, and they often require large, fixed, up-front investments to provide the services beneficiaries need. The size and nature of these investments can impact the quality of care across a variety of dimensions (Garthwaite et al. 2022). This distinction is particularly important when services are provided at facilities that treat enrollees both from the healthcare safety net and the broader commercial market—two populations that may demand different levels of quality and compositions of services and that come with different levels of resources to finance these services.

The importance of the distinction grows when you consider that the quality created by these fixed costs is difficult to tailor to specific patients within a facility. This consideration brings up two potential concerns. First, the quality demanded by patients in the commercial market may exceed the level necessary to meet society's definition of basic equitable access (which the healthcare safety net is meant to provide). Second, optimal healthcare for low-income patients may require a very different type of infrastructure than other patients, especially when it comes to the location of that infrastructure. At given spending levels, facilities may not find it attractive to make the necessary investments for low-income patients (such as facilities in low-income neighborhoods) when they could simply profitably serve commercial patients. This problem is exacerbated by the limited supply of physicians, the only individuals legally allowed to directly provide medical care or, in some cases, supervise the provision of medical care by other (lower-cost) types of providers with less extensive and specialized training.

⁶ It should be noted that there are limits to the extent of this theory both in magnitude and type of service. Not all services are under-consumed when unsubsidized, and the complete subsidy provided by the current system could lead to the overconsumption of some services.

Both these factors imply that an optimal healthcare safety net cannot simply focus on subsidizing demand for healthcare but must also seriously contend more directly with supply. Doing so could involve fixed-cost investments in facilities for Medicaid populations; such a recognition also implies that an efficient healthcare safety net may involve investments specific to facilities for low-income patients, such as true safety-net hospitals and community health centers and other healthcare providers that (almost) exclusively treat Medicaid patients. We note that these facilities have long had a role in the broader healthcare safety net. However, discussions about these facilities are largely separate from policy discussions of the optimal size and scope of Medicaid. We argue that the development of an abundant supply of providers targeted to Medicaid patients (both in location and in cost structure and quality) should be a key component of any true Medicaid reform. Such development likely requires a more direct subsidization of supply (beyond existing direct-provider payments), which could result in a more efficient healthcare safety net that does more with the same level of funding.

1.1 The History of Medicaid

Lyndon Johnson's "War on Poverty" included two sets of policies that are the basis of today's safety net: The creation of Medicaid, and the opening of the first Community Health Center (CHC). In many ways, these two policies represent markedly different yet potentially complementary policies to address the provision of healthcare to low-income Americans. Despite the potential for independent and complementary effects, for a variety of political and practical reasons the policy discussion has largely focused on the former over the latter. This focus is perhaps understandable: Providing insurance for patients to access the current system certainly means less direct government involvement in the provision of services and a greater reliance on the private market. This policy route has long been preferred—though it suffers from the fact that markets focus more on efficiency than equity. In addition, the primary beneficiaries of Medicaid and its subsequent expansions have been incumbent medical providers—which have long been a powerful political lobby. In contrast, developing new infrastructure (like CHCs) primarily for safety-net beneficiaries provides more of an appearance of a government takeover of the healthcare system and also potentially introduces more competitors for the politically powerful incumbents

Medicaid was created in 1965 as a voluntary program, where states could choose to participate or not, but choosing to participate meant complying with federal program requirements related to eligibility, benefits, and so forth. At the time of its enactment, Medicaid was a relatively small program, and eligibility was generally tied

to eligibility for cash assistance programs, namely Aid to Families with Dependent Children (AFDC, now TANF) and the Supplemental Security Income (SSI) program (Rudowitz et al. 2024).

The enrollment requirements of these programs were often highly restrictive and required unemployment or incapacitation of parents in a household or incapacitation of individual beneficiaries. Therefore, this linkage restricted enrollment in the program to two "categorically needy" groups: the aged, blind, and disabled (SSI) population and very-low-income families with dependent children. Outside these groups, states were also allowed to provide Medicaid to "medically needy" parents and children with higher incomes but with very high medical expenses (Paradise et al. 2015). Thus, the original set of Medicaid enrollees were those who had experienced either extreme labor-market shocks, resulting in exceptionally low incomes, or those with moderate labor-market shocks plus major health shocks, leading to low incomes and high healthcare costs.

The highly restrictive eligibility rules initially kept the program quite small (even after all states were participating), with enrollment holding steady around 20 million through around 1990 and spending generally falling below \$50 billion (in 2020 dollars) through the same date (MACPAC n.d.a.). The small size and highly restrictive nature of the program likely reflected society's views at the time about who should gain access to indigent care: that is, only the "truly" needy.

When setting up Medicaid, policymakers faced a few options for structuring the funding and design of the program. Perhaps most obviously, they could have chosen to structure the program similar to the Medicare program they were contemporaneously creating—that is, it would be designed, funded, and operated at the federal level. Alternatively, they could have completely delegated the program to the states through a grant-based program where states were allocated a fixed amount per enrollee and then left to decide the best way to spend those dollars (potentially conditional on meeting certain federal requirements). Third, the federal government could provide matching funds for every dollar of state funding but allow the states relatively broad latitude as to the breadth and scale of the program.

This third option was selected for a variety of reasons. A primary nonpolitical motivation was an attempt to generate a balance between incentives to develop a broader safety net while also maintaining pressure to limit growth. It was clear from the revealed preferences of state policymakers that without some additional incentives many states would not provide (or at least would under-provide) access to indigent care. This state of affairs suggested a clear role for new federal spending to support the safety net.

However, a new and entirely federal program faced pushback on several dimensions. The first was a practical problem: Such an effort would at least partially replace successful programs already operated and financed by a number of states. A more philosophical reason was a justifiable concern that a federal program faced the risk of less controlled and rising spending because of limited incentives to balance the federal budget. States, on the other hand, generally must balance their budgets every year. This obligation forces policymakers to weigh the benefits of providing a large enough safety net against the necessity of keeping taxes low in order to attract residents and firms to the area. Given that the populations served by safety net programs typically have limited political power (a trend that was especially true for early Medicaid enrollees, given their demographics), states had much to gain by keeping safety net spending and taxes low and little to gain from allowing overly generous programs. For this reason, state-financed safety net programs have long exhibited more fiscal discipline than federal programs.

Therefore, a financing scheme where the federal government matches state spending had the potential to provide the appropriate incentives for a "Goldilocks" safety net that was neither too stingy nor too generous. It also had potential to provide each state with the flexibility to design a program addressing its specific needs. Such flexibility was believed to be particularly important for a safety net program because the specific reasons why people need safety net care and the type of care they require can vary greatly in a country that is as geographically and economically as diverse as America.

As is the case with many great theories, the economic reality turned out to be a bit different than predicted. Unlimited matching funds, even when they require states to put in some money of their own, can encourage state legislators to engage in wasteful spending in order to bring more federal dollars into their economies. The incentives here are a function of the size of the match rate (with larger federal rates weakening incentives for states to restrain spending) and whether there are ways for states to game the matching payments to ramp up federal contributions while limiting state expenditures. At different time periods, Medicaid has offered conditions for states to structure programs to extract federal revenue. State lawmakers have proven particularly adept at identifying opportunities to game this structure.

The match rate for each state was determined by a formula called the Federal Medical Assistance Percentage (FMAP). FMAPs were a function of the state's per-capita income relative to the national per-capita income, with a lower bound of a 1:1 federal-to-state match (50 percent FMAP) and an upper bound of an almost 5:1 federal-to-state match. Thus, states with the lowest incomes received very generous federal matching funds and required relatively little state investment to run their programs.

Despite these relatively generous matching payments, states still generally sought to keep Medicaid spending low. They did so partially because healthcare costs were growing rapidly, and even with generous matching rates, Medicaid spending quickly started eating up a substantial share of state budgets. Three tools are generally available to limit spending in an insurance program: limiting enrollment, limiting covered services, or paying providers low rates for services.

The federal government has generally been fairly strict about dictating the set of required covered services, leaving little room for states to refuse coverage for specific types of medical care. States were therefore left with the options of either limiting enrollment or paying providers low rates. States generally opted for both strategies, with some differentiation between "blue" states, which tended to provide generous eligibility criteria and very low provider payment rates, and "red" states, which tended to provide highly restricted eligibility criteria and modestly higher provider-payment rates. But overall, Medicaid payment rates have always been quite low, far below commercial rates and even below Medicare rates.

The story for pharmaceuticals is largely similar but is more uniform across the country. In the beginning, Medicaid generally paid typical prices for drugs, not necessarily receiving much of a discount relative to other payers. But, as with provider payments, eventually prices for drugs were targeted as a source of Medicaid savings. In 1990, the Medicaid Drug Rebate Program was initiated, which made drugs like other services by (1) offering state Medicaid programs the "best price" offered by a drug manufacturer to any commercial insurers in the market and (2) simultaneously requiring states participating in the rebate program to cover all drugs approved by the FDA. While limits on the breadth of coverage in terms of drug types were generally not allowed, quantity limits (such as prescription drug caps) were widely used to further ration access and limit costs (Layton et al. 2022).

Ultimately, all these regulations and design choices resulted in a Medicaid program that varied widely based on state preferences for overall funding and based on the distribution of that funding between generous eligibility versus generous (or, more accurately, not-as-stingy) provider payments. In all states, however, patients' medical-care consumption was generally fully subsidized from the point of view of the patient, as required by federal rules, and spending was kept in check via the restrictions on the supply side, either via explicit quantity limits, or, more often, through paying low provider-payment rates and relying on the upward-sloping supply curves of providers.

⁷ Technically, states got either the lowest price paid by any commercial entity or a flat discount off the list price—whichever was lower.

Medicaid enrollees are thus generally fully covered for pretty much anything the healthcare system provides, as long as they can find someone willing to treat them. This last caveat has been a growing problem for enrollees.

One place that Medicaid enrollees (and the uninsured) have always been able to get care is Community Health Centers, now known as Federally Qualified Health Centers (FQHCs). Created in 1965 along with Medicaid, these facilities represent an alternative approach to building a healthcare safety net, providing a range of primary-care and social-support services directly to low-income patients rather than just subsidizing access to existing mainstream medical facilities like Medicaid does. In many ways, this alternative approach has been highly successful but remains largely overlooked by policymakers. Following expansions in the 1970s that brought centers to hundreds of mostly rural counties and additional funding through the ACA, FQHCs have proven to be a cost-effective model for care (Bailey and Goodman-Bacon 2015). Research shows that FQHCs provide high-quality basic care more efficiently than other settings do-with their patients having fewer specialist visits and lower rates of hospital admission—and that their initial rollout led to meaningful reductions in mortality (Nocon et al. 2016; Bailey and Goodman-Bacon 2015). Despite this record of success, FQHCs remain a secondary component of the healthcare safety net; the majority of Medicaid spending continues to flow to higher-cost care settings, demonstrating how the system has consistently prioritized subsidizing demand over directly building supply, but also providing motivation for our proposal to experiment more with supply-side policy.

1.2 Growth of Medicaid

Between its enactment in 1965 and today, Medicaid has evolved substantially. The most salient piece of that evolution is its growth. Take-up of the program by states was fairly rapid after enactment. Most of the growth was instead driven by expanded eligibility rules. Figure 1 shows that in the initial two decades after enactment, enrollment was steady at around 20 million, despite steady population growth during that period.

1.2.1 History of enrollment growth

Enrollment growth began in the early 1990s and was led by eligibility expansions for higher-income (but still quite poor) pregnant women and children. Concerns about high infant mortality rates led Congress to seek ways to improve access to care for these groups. In the late 1980s and early 1990s, the federal government required states to cover pregnant women and children under 6 with incomes up

to 133 percent of the federal poverty line (FPL) and school-age children (age 6-18) up to 100 percent of the FPL (Paradise et al. 2015). Combined with other policies, this requirement made Medicaid an entitlement for all low-income children and pregnant women across the country.

In 1997, further expansion took place via the introduction of the State Children's Health Insurance Program (CHIP), which was separate from Medicaid but very closely linked. CHIP expanded coverage by providing generous federal matching payments (higher than the typical match rate) to states that chose to expand coverage to children with incomes above the national Medicaid eligibility levels. Because the federal matching payments were so generous, many states expanded eligibility to children with incomes much higher than 100 percent of the FPL, with many states setting eligibility around 200 percent of the FPL. This expansion led to substantial enrollment growth throughout the first decade of the 2000s. Today, CHIP income limits are as high as 405 percent of the FPL in New York and as low as 190 percent in Idaho (Peter G. Peterson Foundation 2024).

After the CHIP expansions, policymakers intent on bringing down the stubbornly high uninsurance rate (generally ranging from 16 to 18 percent throughout the 1990s and the first decade of the 2000s) homed in on low-income adults as the last group of low-income individuals ineligible for Medicaid coverage (CDC 2024), ultimately leading to the most recent Medicaid expansions as part of the Affordable Care Act of 2010. While the ACA used a combination of public (Medicaid) and subsidized private (ACA Marketplaces) coverage to bring down the uninsurance rate, Medicaid expansions were significant, making all adults (with or without children) with incomes below 138 percent of the FPL eligible for the program.

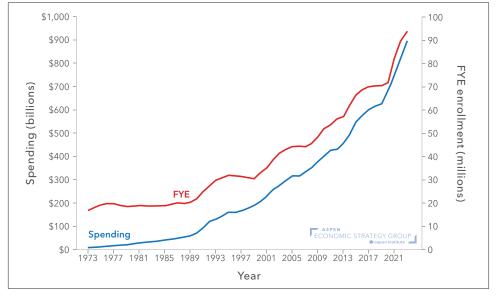


Figure 1: Medicaid enrollment and spending, 1970-2020

Notes: FY is fiscal year. FYE is full-year equivalent, which also may be referred to as average monthly enrollment. All numbers exclude CHIP-financed coverage. Data prior to FY 1977 have been adjusted to the current federal fiscal-year basis (October 1 to September 30). The amounts shown in this exhibit may differ from those published elsewhere due to slight differences in the timing of data and the treatment of certain adjustments. The amounts may also differ from prior versions of MACStats due to changes in methodology by the CMS Office of the Actuary (OACT). Spending consists of federal and state Medicaid expenditures for benefits and administration, excluding the Vaccines for Children program. Enrollment counts are FYEs and, for fiscal years prior to FY 1990, have been estimated from counts of persons served (see MACPAC's "Technical Guide to MACStats," Macpac.gov, 2025, https://www.macpac.gov/macstats/data-sources-and-methods/ for a discussion of how enrollees are counted). Enrollment data for FYs 2013-2020 are projected. Enrollment for FYs 1999-2020 include estimates for the territories.

Source: MACPAC 2015

Initially, the ACA Medicaid expansion was designed to be mandatory. To lessen the impact on state budgets, it was paired with a perpetual 90 percent federal matching rate. However, the Supreme Court ruled in 2012 that the federal government could not make expansion mandatory, creating an option for states to adopt (or not) the expansion (Perkins 2013). Nevertheless, given the high federal matching payments, most states took up the option to expand initially, and many of the remaining states have slowly trickled into expansion as well, either via legislative action or, in some cases, via popular referenda.⁸

Thus, outside the states that have not expanded, the program has become an entitlement for all low-income Americans, not just for pregnant women, children,

⁸ As of the writing of this paper, ten states have not adopted the ACA Medicaid expansion. They are Alabama, Florida, Georgia, Kansas, Mississippi, South Carolina, Tennessee, Texas, Wisconsin, and Wyoming.

and the disabled, ending categorical eligibility for good. These expansions resulted in Medicaid enrollment surpassing 70 million for the first time in 2019, more than triple its original enrollment of around 20 million during the first decades of the program. In more recent years, enrollment had by December 2024 reached a steady state of around 78.5 million, or almost one-fourth of the US population (KFF 2025).

1.2.2 History of spending growth

During its initial decades, Medicaid was a relatively inexpensive program, with spending remaining below \$25 billion until the mid-1980s and below \$100 billion until the early 1990s. Spending then took off throughout the 1990s and has continued to grow rapidly up to the present. Spending has also grown as a share of federal outlays, starting at around 1.4 percent in 1970 and reaching almost 10 percent by 2015. This rapid growth in spending corresponds to equally rapid growth in enrollment, but enrollment growth isn't the entire story of spending growth in the program.

In his history of Medicaid spending, John Klemm (2000) divides the pre-2000 period into eight "eras" of spending growth. These eras and their effects can provide insight into current reform efforts—many of which match at least one historical effort. Some of the eras correspond to times of eligibility expansion, but others correspond to increases in medical inflation and other changes in the Medicaid program.

One of the "eras" of particular interest to this paper was the "retrenchment" era from 1982 to 1984. What at that time appeared to be rapid growth in Medicaid costs led to efforts to slow Medicaid spending. A primary effort to cut spending consisted of the federal government reducing federal matching payments for states with high growth rates. Simultaneously, states were granted important new flexibilities in program design to allow them to adjust to funding cuts in ways that matched their local conditions. This era was the beginning of state experimentation with Medicaid managed care, where states would pay a fixed capitation rate to a health maintenance organization (HMO) to provide Medicaid benefits to enrollees. It was also the beginning of home-and-community-based service (HCBS) waivers that would allow states to provide home-based care in an attempt to keep enrollees out of expensive nursing homes. Both managed care and HCBS would go on to play major roles in the Medicaid program for decades to come.

⁹ While the ACA also expanded coverage via other routes, estimates suggest that the majority of the increase in insurance take-up came via Medicaid, though around half the increase attributed to Medicaid is estimated to have come from "woodwork" effects of enrolling individuals who were actually eligible for the program prior to expansion but were not enrolled.

¹⁰ During the pandemic, enrollment was even higher, reaching over 90 million in June 2023. However, much of this growth was driven by suspensions to eligibility redeterminations during the pandemic (eligibility is typically determined annually, but during this period there were no redeterminations).

1.2.3 Medicaid's first forays into supporting healthcare supply

Another important era of spending growth unrelated to enrollment was what Klemm refers to as the "Taxes and Donations and DSH" era. During the 1980s, Medicaid introduced a new feature of the program: Disproportionate Share, or DSH, payments. These payments were made directly to hospitals that bore a greater burden from serving low-income patients (Applied Policy 2024). Unlike traditional Medicaid payments, DSH payments were not tied to specific services provided and were therefore more similar to lump-sum transfers that covered the fixed costs of being a safety net provider. Ostensibly these payments were meant to subsidize the provision of uncompensated care, but they also were intended to "make hospitals whole" for treating large numbers of Medicaid patients, for whom fee-for-service payment rates were often seen as falling below the *average* cost of providing care. For hospitals with greater exposure to Medicaid, the average cost of treating these patients is a bigger economic long-run consideration for ongoing operations and strategic decisions.

DSH payments were Medicaid's first shift away from purely subsidizing demand for healthcare and into the business of subsidizing the *supply* of safety net healthcare. However, these payments also inadvertently opened a new door through which states could develop schemes to extract additional federal dollars to fund their Medicaid programs. First, states could allocate larger DSH payments to hospitals, which would formulaically trigger increased federal matching payments. The state could then recoup these new federal dollars from the hospitals via provider taxes and "donations" from the hospitals to the state. If states didn't claw back all the additional federal dollars, such schemes could leave both hospitals and the state better off, although federal taxpayers in other states were obviously left footing the bill.

Such systems were often appropriately derided as "shenanigans" and were largely responsible for increasing DSH expenditures from \$1 billion in 1990 to more than \$17 billion in 1992 (Baicker and Staiger 2005). This sum constituted about 15 percent of total Medicaid medical assistance expenditures in that year. Given the abuse of these programs, estimates of the health effects of the DSH program varied across settings. When these payments actually remained with hospitals, they reduced mortality. However, when the federal payments were expropriated by states, they had no effect on mortality (Baicker and Staiger 2005).

Over time, the federal government placed limits on DSH spending to try to combat these schemes, limiting total state DSH payments to 12 percent of that state's total Medicaid expenditures (Mitchell 2023). With the implementation of these limits, DSH payments as a percentage of spending have declined substantially over time, making up only 2 percent of total Medicaid expenditures in 2022 (Applied Policy

2024). This outcome has shifted Medicaid once again away from subsidizing supply and back toward primarily subsidizing demand.

The decline of the role of DSH payments as a subsidy for facilities has not limited states' fiscal shenanigans. Instead, states have simply shifted toward using provider taxes as the mechanism. Under these schemes, states raise rates paid to providers in order to extract additional matching funds from the federal government—but they then tax those providers to bring those additional federal dollars into state coffers, without the need for the state to contribute any of its own funds. In more recent years, this tactic has been expanded to also include managed-care taxes. Higher FMAPs for new coverage populations can also be used to extract additional federal dollars, by shifting as many enrollees as possible out of traditional eligibility categories and into new categories with higher match rates.

Such efforts at extracting greater federal support are perhaps not surprising. Medicaid has largely enjoyed slower per-enrollee growth than all other healthcare programs (figure 2). That said, despite this slower growth, each year the fraction of the state budget captured by Medicaid increases. In the early decades of the program, Medicaid accounted for less than 10 percent of state spending. By the early years of the first decade of the 2000s, it had grown to almost 20 percent. Today, Medicaid accounts for almost 30 percent of total state expenditures, making it the single largest spending category in most states, finally surpassing K–12 education spending (Sigritz et al. 2024). Medicaid thus looms large for state policymakers. Policymakers may thus also have limited options for adjusting to a shift of federal financial responsibility to the state level.

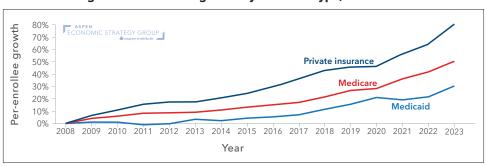


Figure 2: Per-enrollee growth by insurance type, 2008-2023

Source: McGough et al. 2024

1.2.4 Medicaid managed care (MMC)

As discussed briefly above, a major change in Medicaid occurred in the 1980s when states were given the flexibility to experiment with providing Medicaid via private managed-care plans (HMOs). Under this model, states could pay a single "capitated" per-person per-month (PMPM) fee to a private managed-care plan, and that managed-care plan would then be responsible for providing all medical services to those enrollees. The important economic incentives of these contracts stem from the fact that a managed-care plan can retain any savings they achieved below the PMPM rate but must also "eat" any losses from spending above that rate.

States like California and Arizona adopted managed care relatively early, in the 1970s and 1980s, but adoption really took off around the country in the 1990s. At that time, the federal government allowed states to adopt MMC statewide (rather than only locally), allowed states to require subgroups of Medicaid beneficiaries to enroll in MCOs, and allowed insurers to have Medicaid-specific plans (Bradford and Costanza 2023). These changes, along with a more general shift to managed care across other segments of the health insurance market, led to rapid growth in MMC penetration during the 1990s. In 1991, MMC penetration was just under 10 percent. By 1998, penetration surpassed 50 percent.

While the rest of the country faced a managed-care backlash in the late 1990s, no such backlash occurred in Medicaid. Instead, Medicaid managed care continued to grow. In a 2018 report, the Congressional Budget Office estimated that managed-care penetration grew from 63 percent in 1999 to 89 percent in 2012, though not all the individuals they counted were enrolled in *comprehensive* managed-care plans (Burns and Layton 2018).

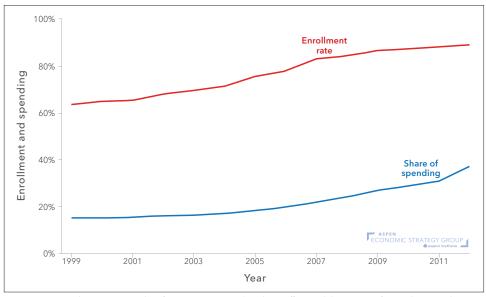


Figure 3: Medicaid managed-care enrollment and spending, as a percentage of total Medicaid enrollment and spending, 1999-2012

Source: Burns and Layton 2018; data from Congressional Budget Office and the Centers for Medicare and Medicaid Services Analytic extracts for 1999 to 2012.

Importantly, however, the same CBO report points out that the percentage of Medicaid spending going to managed care remained quite low relative to the level of managed care enrollment (see figure 3). In 1999, MMC accounted for just 15 percent of Medicaid spending, versus over 60 percent of enrollment. This number ticked up somewhat by 2012, reaching 37 percent by that year, but its share of spending was still significantly below its share of enrollment of 89 percent at that time (Burns and Layton 2018). This low spending level was largely due to the fact that the initial growth of MMC was concentrated almost entirely among young, relatively healthy populations—children and pregnant women. Sicker, more expensive populations, such as the elderly and disabled, were initially carved out of MMC due to concerns that private plans might stint on care for these populations. As these populations made up most of the spending in Medicaid, MMC plans only received a relatively small share of Medicaid dollars for some time. More recently, however, this disconnect between managed care's share of enrollment and its share of spending has begun to change, with states increasingly enrolling disabled populations into MMC, starting managed long-term care programs, and experimenting with comprehensive private managed-care plans for dual eligibles that provide both Medicaid and Medicare services.

1.2.5 Contract structure and the market for Medicaid MCOs

A state's choice to use Medicaid managed care (MMC) is ultimately a decision to outsource the provision of social insurance, with the goal of leveraging private firms to control spending and improve care coordination. The structure of this outsourcing relationship, however, is complex. States typically contract with multiple managed-care organizations (MCOs) for three- to five-year periods, but capitation payments are set administratively rather than through competitive bidding. Federal rules require these payments to be "actuarially fair," meaning they are based on projections of past spending. This requirement creates a dynamic-incentive problem: If an MCO reduces costs today, it will likely receive lower payments tomorrow, limiting its willingness to make significant investments in efficiency. This market has also evolved significantly. Initially populated by local nonprofit plans, the MMC landscape is now increasingly dominated by large, national for-profit insurers, such as Centene, which have grown by acquiring smaller, local plans (Li and Layton 2025).

The MMC program has thus not only expanded significantly since its inception, but it has also become much more commercialized. While MCOs started and owned by local safety-net hospitals still play a major role in Medicaid, making up just under 20 percent of MMC enrollment throughout the first two decades of the 2000s, and while MCOs still differentiate this health insurance market from others, every year the Medicaid market looks more and more like commercial markets, with large, national for-profit insurers (now, often with presence in the individual and Medicare Advantage markets) increasingly competing for, and winning, state contracts (Li and Layton 2025).

1.2.6 Effects of the shift to managed care on program finances and enrollee health

The motivations for states to shift to managed care are complex, extending beyond simple cost savings. States value the greater budget predictability that comes from outsourcing risk to private plans, which is particularly important for states with balanced-budget requirements, though in practice states often retain significant risk by carving out the sickest populations (Perez 2018). States also turn to MCOs for improved care management and coordination, as private plans can provide established provider networks and care management tools that state-run programs often lack the capacity or expertise to develop. Finally, MCOs are often perceived as being more efficient and possessing greater freedom to innovate in care delivery than state bureaucracies, a belief that can make increased Medicaid funding more politically palatable and allow for benefit expansions that might not otherwise occur (Layton et al. 2019).

Ultimately, however, the evidence on the actual effects of managed care on program costs and beneficiary health is fairly mixed. With respect to program costs, there is little evidence that managed care saves states (or the federal government) money; early work indicated that initial shifts to managed care led to higher spending (Duggan and Hayford 2013), and more recent work has produced similar findings (Layton and Politzer 2024). Evidence also indicates little effect of managed care on budget predictability (Perez 2018). Estimates of effects on access to care have also been mixed, with studies finding that managed care improves access in some cases, reduces it in others, and has little effect in still other instances (Layton et al. 2019; Sparer 2012; Montoya et al. 2020). Recent work leveraging random assignment of beneficiaries, however, sheds some light on these questions. This work indicates that managed care does reduce spending on healthcare—with savings coming from pharmacy utilization management and lower prices for outpatient services—but these cost reductions were modest and appeared to come at the cost of quality and consumer satisfaction (Agafiev Macambira et al. 2022). Further evidence from random assignment to different managed-care plans indicates that all plans are not created equal, with spending differing by more than 20 percent from one plan to another; again, lower spending comes largely via rationing and at the cost of patient satisfaction (Geruso et al. 2023). These results provide some insight into why overall findings are so mixed: Not only do state MMC programs differ substantially, but important variation also exists even within programs across plans.

In the end, the effects of MMC are thus unclear and vary substantially across settings; existing evidence provides little guidance as to the wisdom of shifting enrollments to MMCs. We know that doing so does not seem to lower program costs on average, so if cost reduction is the primary motivation, the strategy is probably going to disappoint. But it may lower healthcare costs and limit low-value care, and it could improve access for beneficiaries, at least under certain circumstances. But, in the end, states have shown via revealed preference that they like managed care better than the alternative, and it is thus likely here to stay as a key component of the Medicaid program.

Medicaid at 60: Who and what does Medicaid cover today? How might that change?

As described above, Medicaid today looks very different than Medicaid of the early years. This is true across many dimensions that impact optimal program design.

2.1 Enrollment and spending

Today's Medicaid is almost a tale of two programs based on whether you are discussing enrollment or spending. For example, the largest enrollment group is children, who make up nearly 40 percent of all enrollees. However, kids are relatively inexpensive and account for only 16 percent of spending (Baumrucker et al. 2025). Similarly, while expansion and non-expansion adults respectively account for 23 percent and 16 percent of enrollment, they are only responsible for 11 percent and 19 percent of spending. In contrast, individuals with disabilities and the elderly are responsible for much more spending than their enrollment shares would predict. Individuals with disabilities make up only 12 percent of enrollees but account for a full 33 percent of spending. The elderly make up 10 percent of enrollees but account for a full 22 percent of spending. Even this number is deceptive, as the vast majority of individuals in this group also have Medicare coverage for most standard healthcare services, meaning that they account for this large share of Medicaid spending even though Medicaid only covers a sliver of their healthcare costs.

Another way to consider Medicaid's role in the healthcare economy is to ask how much particular demographic groups depend on it. This perspective could be important as these groups require different investments in supply. For example, only 16 percent of all non-elderly adults are enrolled in the program compared to 39 percent of children. Medicaid pays for more than 40 percent of all births and provides insurance for 44 percent of non-elderly individuals with disabilities. Medicaid covers only 16 percent of white Americans but 35 percent of Black Americans and 40 percent of American Indians/Alaska Natives. Perhaps one of the most important groups of Medicaid enrollees is nursing-home residents, of whom Medicaid covers over 60 percent. Indeed, while only around 5 percent of Medicaid enrollees use long-term services and supports (LTSS), those individuals accounted for almost 30 percent of Medicaid spending. These figures demonstrate Medicaid's outsize role affecting strategies of firms providing long-term care.

Medicaid's importance also varies significantly across states—a point that may have meaningful implications for the politics of Medicaid reform. For example, over 30 percent of individuals in Louisiana and New Mexico are enrolled in the program, while only 11 percent of individuals in Utah are enrolled, and fewer than 15 percent of individuals in North Dakota, Wyoming, New Hampshire, South Dakota, and Kansas are enrolled in the program (Rudowitz et al. 2024). Importantly, in recent years Medicaid growth has been high in traditionally red congressional districts, with particularly high growth in rural, poor, and white congressional Republican districts, making the politics of cutting this program much more complicated than they have been in the past (Geruso et al. 2025).

Another final way to consider beneficiaries is to examine where Medicaid spending ultimately ends up—that is, at medical providers. The burden of serving Medicaid patients is not evenly spread across providers and therefore neither is the program's

impact. In particular, hospitals often find themselves treating a disproportionate number of Medicaid patients. This disproportion arises partly because hospitals are required to treat patients entering through the emergency room and thus often become the provider of last resort when access is limited. Research has shown that when the share of uninsured residents increases in a market, so does uncompensated care at local hospitals. Hospitals are unable to recoup these funds from other sources and instead suffer economic losses. It is for this reason that the ACA Medicaid expansions had some benefits for hospital finances (Dranove et al. 2016). It is also likely for this reason that hospitals are such strong supporters of Medicaid and the ACA. It is unclear whether the emergency room is the most appropriate site of care for these patients and/or whether earlier access to care could reduce the severity of their medical conditions.

2.2 Financing

Financing for the traditional Medicaid population has remained largely consistent over time. Despite the creation of a ceiling and a floor, the same general FMAP rules laid out at the start of the program remain in operation today.

The biggest changes to the FMAP system have occurred for each of the various expansion populations. For example, the CHIP program expanding Medicaid coverage to children with modestly higher incomes included an "enhanced" FMAP to encourage states to cover more children. These FMAPs have a floor at 65 percent (i.e., the federal government pays 65 percent of Medicaid costs) instead of the standard 50 percent floor, and they go up as high as 85 percent depending on a state's income.

The FMAP was further expanded for the ACA Medicaid expansion—which is almost entirely paid for with federal dollars. This high match rate turned out to be critical when the Supreme Court made the ACA Medicaid expansion optional instead of mandatory, as many, if not most, states likely would not have opted to expand Medicaid with typical FMAP rates. Indeed, recent proposals to cut Medicaid spending by lowering the ACA expansion FMAP from 90 percent down to the standard rates have been met with outcry from many groups concerned that states would react to this shift by dropping the expansion population altogether (Williams et al. 2025). Some states even have specifically built in automatic exits from the expansion if FMAPs decrease

Beyond modifications to the FMAP system, states have also been able to boost federal matching funds via other methods discussed above. Through a combination of various provider-tax systems, states have increased the share of the program paid for with federal dollars. In 2024, the CBO estimated that the elimination of Medicaid provider taxes would save the federal government over \$600 billion over ten years

(CBO 2024), implying that states bring in substantial federal dollars via these schemes. In some states, matching payments from provider taxes amount to over one-third of total Medicaid program finances (Sanger-Katz and Kliff 2025). States also use other loopholes, such as transfer payments from publicly owned nursing homes and hospitals, to achieve similar flows of federal matching payments.

All these changes combine to make actual effective FMAPs somewhat higher than the intended matching payments, though comprehensive estimates of the actual difference between intended FMAP and actual FMAP are hard to come by, but we do know the overall state-versus-federal split, with the federal government paying around 69 percent of the total Medicaid bill in 2023 (Burns et al. 2025). Ultimately, however, the simple fact is that today the federal government subsidizes state Medicaid spending on the margin at a much higher rate than it originally did at the beginning of the program or likely than is intended under current regulations. However, that spending also represents real payments to providers that would need to be accounted for if these systems were limited.

2.3 Scope of coverage and provider payment rates

As in the beginning of the program, federal rules still generally require states to cover most medical services, with limited flexibility allowed for excluding services from coverage. Eligibility rules have also become more standardized and determined at the federal level. As a result, states are left with limited means to control Medicaid spending, other than by paying very low rates to providers. Low rates keep spending down both in that providers are paid less for the same services and due to upward-sloping supply curves, as few providers are willing to accept the low rates and so less care is available to Medicaid enrollees in the first place.

The Kaiser Family Foundation estimates that on average, across the country, Medicaid pays rates equal to about 72 percent of Medicare rates (KFF n.d.a.). Rates tend to be higher for obstetric care and lower for primary care. They also vary significantly across states, with rates near or above Medicare rates in some states (South Carolina, North Dakota, Nebraska, Alaska, Montana, Delaware) and with rates below 60 percent of Medicare in other states (Illinois, Florida, New Hampshire, New York, New Jersey, Rhode Island). As in the past, provider payment rates don't closely track politics, with some blue states having some of the lowest rates. Historically, this outcome had reflected blue states prioritizing generous eligibility rules over payment rates, but as eligibility has become more standardized nationwide, rates have not meaningfully converged.

These generally low rates have led to a situation where Medicaid patients have a much harder time finding a doctor than other patients do. Data from 2017

show that while around 96 percent and 88 percent of physicians were accepting new commercial and Medicare patients, respectively, only around 74 percent of physicians were accepting new Medicaid patients (MACPAC 2021). "Secret shopper" studies put Medicaid acceptance even lower, around 60 percent, relative to 86 percent for private insurance (Polsky et al. 2015). Even after getting an appointment and arriving at the office, Medicaid patients wait longer to be seen (Oostrom et al. 2017). Overall Medicaid acceptance rates varied substantially across specialties, with high acceptance rates among pediatricians, surgeons, and OB/GYNs and particularly low acceptance rates among dermatologists and psychiatrists. Acceptance rates also varied significantly across states, with rates as low as 42 percent of providers in New Jersey and 55 percent in Florida—and rates essentially at parity with commercial acceptance rates in North Dakota and Minnesota (Hest 2022).

Solid evidence suggests a causal link between low provider-payment rates and low Medicaid acceptance rates. A natural experiment where Medicaid rates increased temporarily nationwide resulted in an increase in physicians willing to see Medicaid patients (Alexander and Schnell 2024; Polsky et al. 2015). These results suggest that setting Medicaid payment rates close to commercial rates would "reduce more than half of disparities in access among adults and would eliminate such disparities among children" (Alexander and Schnell 2024). Similar evidence shows that Medicaid payment rates also matter for access to care for those dually enrolled in Medicaid and Medicare (Cabral et al. 2025).

Beyond payment rates, state Medicaid programs also often make it fairly difficult for providers to actually get paid. Data suggests that fee-for-service (FFS) Medicaid is the biggest denier of bills from providers, with a "denial rate 17.8 percentage points higher than fee-for-service Medicare" (Gottlieb et al. 2018). Medicaid managed care is the second-most likely to deny, denying just under 10 percent of bills and challenging around 13 percent. Both FFS and managed-care Medicaid also have much longer times to payment, making working with Medicaid a much bigger hassle for providers than working with Medicare or commercial insurers. Solid evidence suggests a causal relationship between these hassles and physicians' willingness to accept Medicaid patients (Dunn et al. 2024).

For drugs, states are also still required to cover most drugs if they want to participate in the federal rebate program and receive the "best price" for their drugs. In recent years, states have started to experiment with formularies that restrict use of some drugs via prior authorization rules, but outright exclusion is generally not allowed. States still use quantity limits on drugs, though those have become less prevalent over time.

2.4 Effects of Medicaid on beneficiaries

Given its relatively stingy nature, many have questioned whether Medicaid actually benefits enrollees. These questions are also driven by evidence that the uninsured actually pay only very little of their medical bills. Evidence indicates that out-of-pocket costs for an uninsured individual actually appear quite similar to out-of-pocket costs for an individual on a high-deductible plan, with the uninsured only really ending up on the hook for a relatively small portion of their total healthcare bills: Out-of-pocket payments for uninsured individuals with charges higher than \$50,000 rarely surpass \$10,000 (Mahoney 2015). Recent evidence from a large randomized trial has also shown that paying off an individual's medical debt has only limited impacts on those individuals across a wide variety of outcomes, suggesting that the consequences for not paying medical bills are quite limited and raising questions about the value of insurance to beneficiaries (Kluender et al. 2025)

This ambiguity regarding the benefits of Medicaid for beneficiaries has led to a large academic literature estimating the effects of Medicaid coverage on beneficiaries, including a large-scale randomized trial, the "Oregon Health Insurance Experiment" (Finkelstein et al. 2012). This literature generally focuses on expansion populations rather than on the initial categorically eligible groups. Overall, the results indicate that Medicaid clearly provides real benefits to these enrollees—albeit with mixed evidence across studies on the exact nature of the benefits.

First, there is solid quasi-experimental evidence that Medicaid coverage is beneficial for children. Kids who were eligible for Medicaid for more years due to a policy change were less likely to have hospitalizations and ED visits during adulthood and also saw a decline in disease-related mortality later in life (Wherry et al. 2018; Wherry and Meyer 2016). Medicaid coverage during childhood has also been shown to lead to higher incomes later in life, thereby generating enough additional tax revenue to offset 58 cents of each dollar spent on childhood Medicaid coverage (Brown et al. 2020).

Second, solid evidence indicates that expansions to cover pregnant women and infants also achieved important improvements in outcomes. Quasi-experimental studies show that Medicaid coverage of pregnant women decreases infant mortality and leads to fewer low-birth-weight births (Currie and Gruber 1996). Research also indicates that coverage of pregnant women leads the children of those women to have lower rates of chronic conditions and fewer hospitalizations as adults, with some evidence also indicating higher high school graduation rates for these children (Miller and Wherry 2019).

Finally, more recent work has focused on effects for ACA expansion populations, primarily low-income adults. This is the population studied by the Oregon Health

Insurance Experiment. This experiment leveraged the fact that, prior to the ACA, the state of Oregon had additional funds to expand eligibility but insufficient funds to provide coverage to all who desired it. The state thus decided to allocate coverage via a randomized lottery among those who applied, generating the opportunity to estimate the effects of Medicaid coverage using the gold-standard method of a randomized trial, typically reserved for testing the effects of new pharmaceuticals. The state-by-state roll-out of the expansion has also led to a significant body of quasi-experimental work focusing on this population. The Oregon experiment showed clear increases in healthcare utilization and clear improvements in financial health and self-reported physical and mental health (Finkelstein et al. 2012). The Oregon experiment also investigated biomarkers of health but did not find statistically significant improvements, at least partially due to relatively small sample sizes. Quasi-experimental work has also shown clear health benefits for enrollees, including reductions in mortality (Sommers et al. 2012; Wyse and Meyer 2025; Miller et al. 2021). This work has also validated the Oregon results on improved financial and self-reported health (Hu et al. 2018). Overall, this body of work has put to rest the idea that Medicaid does not improve the lives of beneficiaries, both in terms of their health and also in terms of broader well-being.

Despite the clear benefits for enrollees, evidence also indicates that a substantial share of the benefit of Medicaid coverage does not accrue to the enrollees themselves but instead accrues to healthcare providers. This finding should not be surprising given the evidence that the uninsured actually pay very little of their medical bills. Indeed, the Oregon study showed that, setting health benefits aside, for every \$1 of Medicaid spending, beneficiaries only get between 20 and 40 cents in welfare benefit (Finkelstein et al. 2019). Healthcare providers, on the other hand, receive around 60 cents of benefit for every \$1 of Medicaid spending. Quasi-experimental work backs this finding up, showing that in the absence of Medicaid, hospitals act as "insurers of last resort" absorbing a piece of the cost of uncompensated care (Garthwaite et al. 2018). The "incidence" of Medicaid is thus roughly evenly split between beneficiaries and providers, with each receiving substantial benefits from expansion of the program. Ultimately, these results indicate that Medicaid is a major transfer to providers, and the success of the efficiency of the program depends at least partially on how those transfers are used.

2.5 Most-common Medicaid reform proposals

Medicaid reform is in constant discussion among policymakers and politicians, and it played a major role in the recent budget bill passed by the House and Senate and recently signed into law by President Trump. While a variety of specific proposals have been put forth over the years, they broadly fall into three economic buckets.

First, there are reforms that modify the current FMAP rates to decrease the share of federal spending. Second, there are reforms that impose various administrative burdens and work requirements on beneficiaries in an attempt to (1) better target Medicaid enrollment to particularly needy groups and encourage labor force participation and (2) potentially use administrative hassles to decrease enrollment and thus costs. Third, there are reforms that essentially abandon the existing FMAP system altogether and replace it with either caps on total federal dollars going to states or pre-specified block grants and broader state-policy flexibility.

Beginning with the first bucket, the most commonly discussed FMAP reform is a reduction of the ACA expansion rate from 90 percent. This higher FMAP obviously makes expansion more attractive to states, but it also imposes high costs on the federal government. Beyond increasing enrollment, the higher FMAP provides states with an incentive to increase per-enrollee spending because of the higher marginal subsidy. Indeed, evidence suggests that the higher-expansion FMAP led to a higher level of per-enrollee spending (Bundorf and Kessler 2022).

Proposed reforms have ranged from modest decreases in the expansion FMAP (i.e., moving from 90 percent to 80 percent) to equalizing the expansion FMAP to the standard FMAP. There are also some revenue-neutral discussions of equalizing the FMAP to a single rate across all expansion groups—which would have disparate impacts across states based on the distribution of enrollees across expansion populations. These FMAP reductions could have substantial impacts on Medicaid coverage, as a number of states opted for expansion primarily because of the higher matching rate and thus may no longer find these policies optimal and/or feasible. As a testament to this point, some states even included automatic exit clauses that are triggered if the FMAP is lowered below the 90 percent level. Thus, this type of reform would likely reduce overall Medicaid spending substantially, but entirely via decreased eligibility and enrollment. Even without exiting entirely, states may be forced to make changes to eligibility generosity as they lack the revenue to replace the decreased federal funds

A more subtle reform to the FMAP system involves restrictions on the types of "fiscal shenanigans" states engage in to exploit the federal matching payments. As discussed above, these "shenanigans" include provider (and managed-care plan) taxes, transfer payments with public providers, and more. All these schemes act to increase the effective federal match rate. Though such schemes are not intended by the FMAP system, almost all states engage in them, and many states are highly reliant on the revenues that they generate for funding their Medicaid programs (Sanger-Katz and Kliff 2025).

For many years, reforms restricting these types of schemes have been proposed. The CBO frequently scores these proposals, finding that eliminating them could save at least \$600 billion over ten years (CBO 2024). Given many states' (including red states) reliance on these schemes, reform has been politically difficult, though the recent budget bill does impose some modest restrictions on these schemes. Note that while these schemes increase effective matching rates above the intended matching formulas, they bring real federal dollars to state Medicaid programs—dollars that, if lost, would either have to be replaced with additional state revenue or that would result in cuts to Medicaid benefits in one form or another. The latter is more likely than the former in most cases, (as we discussed earlier) Medicaid already eats up a substantial portion of state budgets, and there is limited room or appetite for additional Medicaid spending at the state level.

The second bucket of reforms involves administrative burdens and work requirements. While work requirements are framed as promoting work and ensuring program integrity, evidence suggests that they have little impact on labor supply but do significantly reduce enrollment, largely by creating administrative burdens that cause even eligible individuals to lose coverage (Sommers et al. 2019; Gray et al. 2023; CBO 2023). Similarly, more-frequent eligibility redeterminations may screen out currently ineligible individuals, but they also screen out those who are eligible but neglect to go through the redetermination process due to competing demands for attention, the complexities of the process, or simply forgetting. Importantly, these reforms achieve cost savings almost entirely by reducing the number of people covered, rather than by making the program more efficient or improving access for those who remain. They are policies of rationing, not structural improvement. They can result in a less-expensive Medicaid program that is better-targeted to the neediest individuals (though these burdens can easily screen out needy individuals as well [Finkelstein and Notowidigdo 2019])—but at the cost of increasing the number of Americans who are uninsured.

The last bucket of reforms involves an end, or major modification, to the very existence of the FMAP system. For many years, Republicans have proposed shifting Medicaid financing to a "block grant" model where states receive a fixed amount of money every year to finance their Medicaid programs. While in the past, proposals did not scale block grants with enrollment, most proposals today involve perenrollee payments. This new model would mark an end to the existing program structure where the federal government subsidizes state Medicaid spending on the margin. Instead, states would be responsible for all spending above the block grant. The motivation for this type of proposal is to encourage states to make their programs efficient, end "waste, fraud, and abuse," and put an end to all types of "fiscal shenanigans" that exploit the FMAP system to bring in more federal dollars.

The major difficulty with this type of proposal is determining a formula for a state's block grant. Obviously, states are very different, and the cost of providing care to a Medicaid enrollee in New York City is very different from the cost of providing care to a Medicaid enrollee in rural Alaska. Many proposals set block grants based on current spending, but that type of system tends to favor blue states that spend more on their programs and disfavor red states with more stingy programs, making the politics of these types of proposals difficult. In contrast, a proposal that is more uniform across states might appear more politically fair but could ignore important differences in the costs of local healthcare markets.

Beyond politics, a major concern with this type of system is that states face pressure to keep taxes low and safety net programs stingy in order to attract higher-income residents and businesses. This pressure can lead to a "race to the bottom" in safety net coverage and Medicaid program generosity. Some subsidy on the margin can limit this race to the bottom and achieve a reasonably generous safety net while still maintaining an incentive for states to restrain program costs. In fact, as discussed above, this tradeoff was a primary motivation for the existing structure of the program.

Partially because of these issues, the most commonly discussed reforms in this area are more often described as "per-capita spending caps." These reforms generally consist of normal FMAP federal matching payments up to a cap, where the cap is set based on past spending plus medical inflation or medical inflation minus some fixed amount. The idea behind these caps is to still use the matching system but to end the unlimited nature of the match and put some constraint on future state spending. This type of cap would likely decrease "fiscal shenanigans" substantially, as states would only be reimbursed for these schemes up to a point. It would also encourage states to identify efficiencies. But it could also lead states to limit valuable services via prescription drug caps, lower provider payment rates, and the dropping of optional benefits like dental coverage. Lawmakers discussed including these types of per-capita caps in the recent budget bill, but the final bill did not include them.

Importantly, unlike the other buckets of reforms, this bucket does not focus on cost savings from reduced enrollment. It instead shifts state incentives and the financing model. For this reason, in most cases, we might expect this type of reform to maintain enrollment levels but make Medicaid a less generous program. In the next section, we discuss a broader reform that would attempt to do something similar, though via different methods

3. A roadmap for discussing broader Medicaid reforms: An abundance agenda for Medicaid

To date, debates about Medicaid reforms have primarily focused on changes to generosity that keep the existing program structure intact. However, as discussed above, this structure was originally developed for a program with a far smaller scale and breadth. At that scale, the safety net had less impact on providers, many of which were willing to treat the relatively small number of patients per provider for little return as a form of a contribution to the general public good (either because of implicit tax-status obligations or provider altruism). For this reason, it seemed optimal to primarily finance the provision of care and leverage the existing supply infrastructure.

It is perhaps not surprising that the program was structured in this manner. After all, this made it similar to nearly all other forms of social insurance (including the simultaneously created Medicare program) that have little reason to contend with the supply side of services. Consider programs such as unemployment insurance, SNAP (i.e., food stamps), or WIC (women, infants, and children). In these programs, debates about optimal policy are similar to today's Medicaid conversation—that is, they largely revolve around the generosity of benefits and perhaps the scope of beneficiary freedom (i.e., which products can be bought in food security programs). However, little thought is given to directly influencing the existence or structure of the market for goods and services.

As described above, Medicaid now covers one in four Americans, meaning it no longer accounts for only a trivial share of providers' business. It is thus now very different from safety net programs like SNAP and WIC, where beneficiaries of those programs make up a very small share of grocery store customers. In addition, in these other in-kind social-insurance programs, providers are compensated at market rates, whereas Medicaid pays rates well below the commercial level. As Medicaid grows as a fraction of the market, its focus on paying very little for care on the margin has greater implications for the strategy of providers. Many find that they now must either limit exposure to Medicaid or change their fixed-cost investments—which can have negative impact on commercially insured patients. This financial precarity of providers that opt to treat Medicaid patients suggests that a new focus of Medicaid policymakers on the supply side could help improve the program for beneficiaries. Many have begun to push for a shift of focus of health policy, energy policy, and housing policy more generally from subsidizing demand to fostering an abundance of supply (Mansell 2024; Klein and Thompson 2025). We argue that a specific shift in focus for Medicaid policy is also needed.

3.1 An analogy to housing policy

Despite its clear differences from other social-insurance programs, some other safety net programs, housing programs in particular, may provide some insight into how a more supply-focused Medicaid might be optimally designed—at the very least as a thought exercise. In particular, these programs may be further along in the evolution of government policy that more explicitly considers the impact of program design on the supply side, even though they face more-extreme funding constraints than healthcare programs like Medicaid do.

Reforms in housing policy provide a useful, if imperfect, analogy for how to think about reforming Medicaid. Like Medicaid, federal housing assistance has traditionally focused on subsidizing demand, primarily through rental vouchers that function much like an insurance card. However, policymakers learned that subsidizing demand was insufficient to create an adequate supply of affordable units, as landlords often had little financial incentive to serve voucher holders. In response, policy evolved to more directly subsidize the supply of affordable housing through tools like project-based rental assistance (PBRA) and the Low-Income Housing Tax Credit (LIHTC), which provide direct support to developers who, in exchange, restrict their properties to low-income households (though much more support appears to be needed to solve current housing problems). While such a policy explicitly fosters a two-tiered system of housing quality that some may find objectionable, it confronts the reality that the alternative for many voucher holders is not higher-quality housing but no housing at all. This state of affairs mirrors the situation in healthcare, where an implicitly two-tiered system already exists; many Medicaid beneficiaries have coverage on paper but struggle to find providers willing to see them. Therefore, a reform that explicitly supports the supply of a dedicated tier of Medicaid providers—even if it differs from the commercial tier—may be superior to the current system, as it would ensure abundant access to adequate care rather than rationed access to none. In the same way that the return of boarding houses could improve the lives of many on the margin of homelessness (Yglesias 2021), a new (or expanded) tier of very basic healthcare services and providers could improve the lives of Medicaid beneficiaries who currently have difficulty accessing any healthcare at all.

The fundamental economics of any safety-net business, whether housing or healthcare, are the same: They are low-margin enterprises that, to be cost-efficient for government budgets, must provide a product at a different quality standard than the private market. To encourage an abundant supply of these services, policy must do two things: guarantee a high volume of customers so providers can be profitable

at scale, and subsidize the high fixed costs required to build capacity. Healthcare is no different. It is a rivalrous good with clear quality variation across providers (Doyle et al. 2015; Garthwaite et al. 2022; Cooper et al. 2022). Yet applying these economic principles is complicated by a unique feature of medical care: It is difficult for a single facility to offer different tiers of service, as physicians generally treat all patients who walk through their door with the same standard of care.

This inability to screen on quality within a facility creates an untenable dilemma for providers now that Medicaid covers a quarter of the population. Providers who treat both commercial and Medicaid patients cannot set a single quality-and-cost structure that is simultaneously attractive to high-paying commercial customers and financially viable for their large number of low-paying Medicaid patients. The result is predictable: Providers opt out of Medicaid or severely limit access, creating the current crisis. Even for providers who do specialize in Medicaid, the low reimbursement rates are often insufficient to cover the high fixed costs of healthcare infrastructure. Existing fixed-cost subsidies like DSH payments are opaque, poorly targeted, and do little to support the development of crucial non-hospital services (Dranove et al. 2016). A successful reform agenda must therefore move beyond subsidizing demand and directly confront these supply-side realities by creating a system where an abundant number of providers can operate sustainably.

3.2 Embracing the existing two-tiered healthcare system

A meaningful reform of Medicaid must begin from a new premise: The goal is to provide abundant, cost-efficient access to basic healthcare, not to prop up an existing system that fails to deliver. The current program is defined by a stark economic tension—it promises access to the mainstream medical system while only providing the funding that can support a two-tiered one. This contradiction was manageable when Medicaid was a small program, but now that it covers a quarter

"An honest assessment reveals that an implicit and dysfunctional—twotiered system is already the reality."

of Americans, there is potential for an access crisis. Policymakers must therefore confront a fundamental choice: Continue to chase the mirage of equal access, or build a system that delivers abundant care to all Medicaid beneficiaries within its budget.

We argue for the latter. An honest assessment reveals that an implicit—and dysfunctional—

two-tiered system is already the reality. The promise of equal access is belied by the fact that a small fraction of physicians provide the vast majority of care for Medicaid patients; for example, just 25 percent of primary-care physicians and

psychiatrists handle 80 percent of Medicaid claims (Ludimorsky et al. 2022). For many beneficiaries, the alternative to this concentrated, lower-cost tier is not care from a top-tier hospital or a highly demanded primary-care physician but no care at all. Our core proposal is to explicitly "own" this two-tiered structure. This approach means shifting Medicaid's focus from subsidizing demand for a system that won't serve its patients to directly stimulating the supply of a dedicated tier of lower-cost providers that will. The goal is to create an abundance of basic care by lowering costs and improving the business model for providers who commit to the Medicaid population, a strategy that prioritizes real access over rhetorical equity.

3.3 Targeted relaxation of quality regulations and regulatory burdens for the Medicaid tier

Our proposal is to lower the cost of providing basic care by strategically relaxing regulations on the most expensive input: clinical labor. Regulators face a fundamental trade-off: A single, high quality-floor for all providers can be so expensive to meet that it pushes low-income consumers out of the market entirely, leaving them with no care at all. For Medicaid, this trade-off means that the effect of quality regulation is a shift from lower-cost basic care to no care, not from basic care to high-quality specialized care. We propose creating a specific, less burdensome regulatory environment for providers who commit to the Medicaid tier, allowing them to build sustainable, lower-cost business models. This approach has two core, interconnected components: (1) expanding the clinical workforce of Medicaid providers, and (2) augmentation of this expanded workforce with artificial intelligence (AI).

Expanding the clinical workforce of Medicaid providers: First, providers who commit to this Medicaid tier should be given relief from many healthcare regulations and ex-ante relief from a variety of forms of litigation. A variety of licensing requirements and scope-of-practice laws make it difficult to expand the supply of low-cost medical care. Further, health insurers, public and private, are often sued when they try to implement cost-cutting reforms. Obviously, providers and insurers should still be accountable for gross negligence and other forms of obvious medical malpractice, but healthcare litigation also often holds providers and insurers responsible for not providing or covering expensive services whose value is quite low relative to the cost. Such care often does not fit the socially held belief in access to basic healthcare for all. Indeed, it is this type of litigation that has at least partially led to the very wide scope of coverage required by the Medicaid program today. Medicaid providers should be relieved from the risk of this type of litigation, with cost being a valid legal reason for not providing certain services (at least up to some limit).

We argue that all healthcare quality regulations should be examined for this type of "tiering," but here we point to two areas that might be particularly fruitful in the short run:

- 1. Policies related to the supply of international medical-school graduates (IMGs)
- 2. Scope of practice laws for mid-level providers

Consider first the question of IMGs. A number of regulatory hurdles make it difficult for these highly trained individuals to practice in the US. Two important features are residency requirements and visa restrictions. Both of these features could be modified—and have historically been loosened for doctors who deal with underserved areas. For example, the "Conrad 30" waiver program allows visa holders who otherwise would be required to return home for a period of two years to work instead in underserved markets in the US for a period of time. Such programs could be expanded to include waivers of residency requirements entirely for sufficiently trained international medical graduates willing to work at particular facilities serving Medicaid patients. An expanded tranche of visas could also be offered with the condition that these providers only treat Medicaid patients or work at facilities that treat a high percentage of Medicaid patients and the requirement that they must treat a certain number of patients for a certain number of years to maintain residency. Evidence suggests that even modest financial incentives can induce domestically trained physicians to practice in areas that they otherwise wouldn't choose to practice in, so it seems likely that these types of programs could be effective at boosting supply for Medicaid patients (Davis et al. 2023).

The second set of highly trained providers are often described as "mid-level providers" or "advanced-practice clinicians." While these individuals do not receive the exact same level of education or training as physicians, they do have advanced degrees and meaningful amounts of clinical training. However, the ability of these individuals to provide healthcare is governed by "scope-of-practice" laws that dictate how much autonomy these providers enjoy. Our proposal is to relax these laws when these providers are treating Medicaid patients or working in facilities that treat high percentages of Medicaid enrollees. This type of targeted increase in flexibility and freedom could even have the impact of increasing the attractiveness of these types of credentials and positions. Importantly, there are many fewer constraints on the expansion of training programs for these types of providers, meaning that it is possible that an increase in demand for these types of providers and an increase in the freedom and attractiveness of these types of jobs could actually be met with an increase in supply, something that is not as feasible for an increase in demand for MDs

While there is meaningful ongoing debate about the clinical-care quality offered by mid-level providers, a number of high-quality studies show that granting more autonomy to these providers increases access to care without overall negative health impacts. For example, McMichael (2023) finds that great autonomy for NPs and PA reduced mortality. This reduction was particularly pronounced in rural areas where supply could be especially constrained (McMichael 2023). Alexander and Schnell (2019) find that greater prescribing authority for mid-level providers increases population-wide mental health. Even setting this evidence aside, again it is important to note that for the Medicaid population the correct comparison may not be to fully-fledged physicians but instead to no care at all.

Augmenting the expanded workforce with AI: To address concerns about quality variations from an expanded workforce of International Medical Graduates (IMGs) and mid-level providers, our proposal pairs the expanded use of these clinicians with the broad adoption of artificial intelligence. While the commercial market has been slow to implement AI tools due to litigation fears and patient reluctance, the Medicaid tier provides a unique and valuable opportunity for innovation. For a beneficiary whose alternative is no access to care, the use of a new, well-designed technology is a clear improvement. Loosening regulations to allow for AI-augmented care in healthcare safety-net facilities creates a safe harbor to experiment and learn, which is crucial given that some evidence suggesting that AI alone can outperform the combination of AI and human judgment in certain tasks (Agarwal et al. 2023). With a good enough AI-enabled system, one might even imagine other large groups of providers, like social workers, EMTs (where training can take just weeks or months), or even a brand-new class of low-cost AI-augmented providers, being able to step in and provide basic healthcare diagnostic services.

This synergy—a larger, lower-cost workforce amplified by technology—is the key to creating an abundant supply of high-quality basic care. The vision is a functional two-tiered system where the Medicaid tier is characterized by broad access to IMGs and mid-level providers who are augmented by AI tools. These tools, trained on the actions of elite physicians in the commercial market, would create a virtuous cycle, allowing the expertise of top specialists to be scaled efficiently across the entire system. This approach allows all clinicians to practice at the top of their license and enables new, more efficient business models to emerge. Ultimately, it creates a true "abundance agenda" for the healthcare safety net, shifting the focus from rationing high-cost care to delivering accessible, high-quality basic services to all who need them.

3.4 Which facilities can gain access to these new safety-net policies?

A question remains as to which providers and facilities would be subject to the less stringent set of regulations. As discussed above with the analogy to housing, the types of reforms we propose are most likely to benefit Medicaid patients if they are restricted to providers who treat Medicaid patients, and if benefits are not allowed to "spill over" to non-Medicaid patients. Such spillovers could lead higher-income patients with weak preferences for quality to also desire to use this low-quality but easy-access tier of providers, potentially crowding out Medicaid patients and shifting the incidence of supply-side subsidies away from the intended low-income patients and toward less-needy, higher-income groups who are capable of covering these costs on their own. One option would be to say that these regulatory relaxations apply only when treating Medicaid patients. However, the relaxations are generally provider-focused, and it is difficult for a single provider to treat different patients differently. This point will not be a problem if the healthcare system rapidly becomes a truly two-tiered system where providers either treat only Medicaid patients or only non-Medicaid patients. But such a complete tiering seems unlikely, at least in the short term, implying that some other provider-level rule must determine eligibility for regulatory relaxations, one that recognizes that providers treat both Medicaid and non-Medicaid patients.

Here, we suggest that geography plays a major role. When it comes to healthcare utilization, physical location is a driving factor, if not the decisive factor, in determining the selection of medical providers. As such, travel distances for healthcare are relatively short—with a median for hospital care of only six miles (Weiss et al. 2021).

Much as in the old saying about politics, all healthcare is local. The microgeography of healthcare matters immensely for access and availability. As a result, the economics of a provider's local area can dictate their strategy. It is perhaps not surprising that given existing reimbursement policies, markets dominated by patients who are on Medicaid and uninsured require specific strategies to be able to succeed financially. This state of affairs would suggest that a starting place for discussion is the creation of a set of place-based policies and supply-side subsidies that facilitate the construction of new facilities. Creating such policies would involve targeting relatively small geographic areas that either (a) are underserved or (b) have a large proportion of patients eligible for Medicaid.

One could imagine that a place-based relaxation of the regulations discussed above could cause the construction (or conversion) of a set of safety-net facilities in underserved areas. Such facilities would be allowed more flexibility in staffing and scope of practice regulations, thereby enabling a basic set of services to be provided in a cost-efficient manner.

3.5 Revenue-based policies

Regulatory relief alone is likely not enough; to foster an abundant supply of providers for the Medicaid tier, policy must also reform how they are paid. The current fee-for-service model is insufficient to cover the high fixed costs—for facilities, technology, and staff—required to enter the market. Therefore, we propose that providers who commit to the Medicaid tier gain access to new revenue opportunities that directly subsidize these fixed costs. Such opportunities could include state or national investments in AI tools that are then provided to all Medicaid-tier clinicians, or direct grants to support the construction and operational costs of new facilities. Such subsidies would ensure that providers who make the strategic decision to serve the Medicaid population can operate sustainably, earning profits through high volume rather than high per-service margins.

However, simply subsidizing the fixed costs of a new, lower-cost tier of providers is not sufficient to guarantee their success. A market failure arises from the demand side: If Medicaid beneficiaries, whose care is fully subsidized, are free to choose any provider, they have little incentive to select the most cost-efficient option. Some may instead seek care from higher-cost, higher-quality providers, leaving the new Medicaid-tier facilities without the patient volume necessary to achieve economies of scale and remain financially viable. Because taxpayer dollars are financing this system, the government has a clear role and a strong incentive to intervene. It must actively manage the market it is creating to ensure that the cost-effective providers it fosters can succeed.

This government intervention should focus on ensuring patient volume for the designated Medicaid tier. A direct approach, common in the national health systems of other developed countries, is for the government to actively steer patients. It can do so by creating restrictive networks for certain services or by implementing higher cost-sharing for patients who choose to receive basic care outside the designated Medicaid tier. This approach guarantees a stable customer base for Medicaid-tier providers, making their business model viable and ensuring that public funds are spent efficiently.

Evidence from FQHCs demonstrates the promise of this supply-focused funding model. Studies show that when FQHCs receive direct grant funding—a form of fixed-cost subsidy—they increase primary-care access for low-income patients and reduce inefficient, non-emergent use of the emergency department (Lo Sasso and Byck 2010; Myong et al. 2020). Importantly, these lump-sum payments also give facilities the flexibility to offer services that are not traditionally reimbursed but are often crucial for the Medicaid population, such as behavioral-health and social-work support. This evidence proves that moving beyond a simple fee-for-service system and directly funding supply can lead to more efficient, effective, and holistic care.

3.6 How could these policies be financed?

This supply-focused reform does not necessarily require new spending. Instead, it can be financed by repurposing funds from the two largest existing—and deeply inefficient—supply-side subsidy programs: direct provider payments like the Disproportionate Share Hospital (DSH) program, and the indirect subsidies provided by the 340B Drug Pricing Program. Both programs channel billions of dollars to providers but do so in opaque and poorly targeted ways. Reforming and redirecting these funds can provide the capital needed to build a new, abundant supply of care for the Medicaid tier.

First, consider DSH and other state-directed payments. These programs already function as fixed-cost subsidies, intended to compensate providers for the high cost of uncompensated and Medicaid care. However, they are notoriously opaque, are subject to fiscal gamesmanship by states, and do little to encourage the development of new, efficient models of care, particularly outside the hospital setting. These billions in existing payments should be repurposed into transparent, targeted grants to subsidize the actual fixed costs of building the Medicaid tier, such as facility construction, rent, and the adoption of new AI technologies.

The second, larger source of funds is the 340B program. While not a direct government outlay, 340B functions as a massive indirect subsidy, funded by what is effectively a tax on pharmaceutical manufacturers passed on to commercially insured patients. The program allows eligible hospitals and clinics to purchase drugs at exceptionally low prices and generate large margins by selling them to commercially insured patients. Originally intended to help a small number of safety-net facilities, the program has exploded in size, yet there is little evidence that these windfalls are used to expand care for the poor; indeed, newer participants provide even less charity care than the original ones (Nikpay et al. 2020; AIR 340B 2023).

Given its scale and inefficiencies, the 340B program is ripe for reform. Instead of simply generating untargeted profits for hospitals, access to 340B discounts could be explicitly tied to a provider's commitment to the healthcare safety net. For example, the size of a hospital's 340B discount could be directly proportional to the share of its patients covered by Medicaid. This approach would transform the program from an opaque cross-subsidy into a powerful and direct financial incentive for providers to build and expand capacity for the Medicaid tier, effectively using a market-based mechanism to solve the supply crisis.

Conclusion

Medicaid is, by many measures, a remarkable policy success. It has grown from a niche program into one of the largest public health insurers in the world, providing essential coverage that improves the health and financial well-being of nearly a quarter of all Americans. Medicaid does amazing things for beneficiaries, improving health, finances, and well-being. It has proven itself a good investment when given to children. Increasing numbers of Americans depend on it and approve of its expansion.

Yet this success is shadowed by a fundamental design flaw. The program's core tension—promising access to mainstream care while paying rates too low for most mainstream providers to accept—has created a crisis of access. For millions of beneficiaries, Medicaid is an insurance card that provides comprehensive coverage for care they cannot find.

With its dramatic growth in size and scope, Medicaid requires a re-evaluation of its core design. We argue that reform efforts should shift from the traditional focus on eligibility and financing to the more fundamental challenge of supply. This paper proposes an "abundance agenda" for the healthcare safety net. We explicitly recognize that an implicit two-tiered system already exists, and we argue for making that system functional. By relaxing specific regulations and leveraging technology, we can foster a dedicated tier of providers who can operate sustainably at Medicaid's price point. The goal is to transform the program's promise from rationed access to high-quality care into abundant access to basic care, ensuring that the program's resources deliver the greatest possible value to the people it is meant to serve.

References

- ACU and Capital Link. 2018. Identifying Workforce and Financial Characteristics of High-Performing Health Centers. Association of Clinicians for the Underserved and Capital Link. Identifying_ Workforce_and_Financial_Characteristics_at_High_Performing_Health_Cente.pdf.
- Agafiev Macambira, Danil, Michael Geruso, Anthony Lollo, Chima D. Ndumele, and Jacob Wallace. 2022. "The Private Provision of Public Services: Evidence from Random Assignment in Medicaid." Working paper no. 30390. National Bureau of Economic Research, August; revised January 2025. https://doi.org/10.3386/w30390.
- Agarwal, Nikhil, Alex Moehring, Pranav Rajpurkar, and Tobias Salz. 2023. "Combining Human Expertise with Artificial Intelligence: Experimental Evidence from Radiology." Working paper no. 31422. National Bureau of Economic Research, July; revised March 2024. https://doi.org/10.3386/w31422.
- AIR 340B. 2023. Charity Care at 340B Hospitals Is on a Downward Trend. Alliance for Integrity and Reform, October. 2023-Charity-Care-Report-Final-1.pdf.
- Alexander, Diane, and Molly Schnell. 2019. "Just What the Nurse Practitioner Ordered: Independent Prescriptive Authority and Population Mental Health." Journal of Health Economics 66: 145-62.
- Alexander, Diane, and Molly Schnell. 2024. "The Impacts of Physician Payments on Patient Access, Use, and Health." American Economic Journal: Applied Economics 16, no. 3 (July): 142-77. https://doi.org/10.1257/app.20210227.
- Allen, Heidi, Sarah H. Gordon, Dennis Lee, Aditi Bhanja, and Benjamin D. Sommers. 2021. "Comparison of Utilization, Costs, and Quality of Medicaid vs Subsidized Private Health Insurance for Low-Income Adults." JAMA Network Open 4, no. 1: e2032669. https://doi.org/10.1001/jamanetworkopen.2020.32669.
- Applied Policy. 2024. "The Medicaid DSH Program." Applied Policy (blog), April 2. https://www.appliedpolicy.com/the-medicaid-dsh-program/.
- Baicker, Katherine, and Douglas Staiger. 2005. "Fiscal Shenanigans, Targeted Federal Health Care Funds, and Patient Mortality." Quarterly Journal of Economics 120, no. 1 (February): 345-86. https://doi.org/10.1162/0033553053327461.
- Bailey, Martha J., and Andrew Goodman-Bacon. 2015. "The War on Poverty's Experiment in Public Medicine: Community Health Centers and the Mortality of Older Americans." American Economic Review 105, no. 3 (March): 1067-104. https://doi.org/10.1257/ aer.20120070.
- Baumrucker, Evelyne P., Sarah K. Braun, Alison Mitchell, Angela Napili, and Varun Saraswathula. 2025. Medicaid: An Overview. Report no. R43357. Congressional Research Service, April 30. https://www.congress.gov/crs-product/R43357.
- Besanko, David, David Dranove, and Craig Garthwaite. 2020. "Insurance Access and Demand Response: Pricing and Welfare Implications." Journal of Health Economics 73 (September): 102329. https://doi.org/10.1016/j.jhealeco.2020.102329.
- Bradford, Kate, and Kathryn Costanza. 2023. "Medicaid Managed Care 101." National Conference of State Legislators, updated September 21. https://www.ncsl.org/health/ medicaid-managed-care-101.

- Brown, David W., Amanda E. Kowalski, and Ithai Z. Lurie. 2020. "Long-Term Impacts of Childhood Medicaid Expansions on Outcomes in Adulthood." Review of Economic Studies 87, no. 2 (March): 792–821. https://doi.org/10.1093/restud/rdz039.
- Bundorf, M. Kate, and Daniel P. Kessler. 2022. "The Responsiveness of Medicaid Spending to the Federal Subsidy." *National Tax Journal* 75, no. 4 (December): 661–80. https://doi.org/10.1086/721912.
- Burns, Alice, Elizabeth Hinton, Robin Rudowitz, and Maiss Mohamed. 2025. "10 Things to Know About Medicaid." KFF (blog), February 18. https://www.kff.org/medicaid/issue-brief/10-things-to-know-about-medicaid/.
- Burns, Alice, and Benjamin Layton. 2018. Exploring the Growth of Medicaid Managed Care. Congressional Budget Office, August 7. https://www.cbo.gov/publication/54235.
- Cabral, Marika, Colleen Carey, and Sarah Miller. 2025. "The Impact of Provider Payments on Health Care Utilization of Low-Income Individuals: Evidence from Medicare and Medicaid." American Economic Journal: Economic Policy 17, no. 1 (February): 106–43. https://doi.org/10.1257/pol.20220775.
- Center for Disease Control (CDC). 2024. "NHIS Health Insurance Data." National Health Interview Survey, November 21. https://www.cdc.gov/nchs/nhis/health-insurance/index.html.
- Chandra, Amitabh, Evan Flack, and Ziad Obermeyer. 2021. "The Health Costs of Cost-Sharing." Working paper no. 28439. National Bureau of Economic Research, February; revised February 2024. https://doi.org/10.3386/w28439.
- "Community Health Center Chartbook 2024: Analysis of 2022 UDS Data." n.d. NACHC (blog). Accessed June 23, 2025. https://www.nachc.org/resource/community-health-center-chartbook/.
- Congressional Budget Office (CBO). 2023. "CBO's Estimate of the Budgetary Effects of H.R. 2811, the Limit, Save, Grow Act of 2023." Congressional Budget Office, April 25. https://www.cbo.gov/publication/59102.
- Congressional Budget Office (CBO). 2024. "Limit State Taxes on Health Care Providers." Congressional Budget Office, December 12. https://www.cbo.gov/budget-options/60897.
- Cooper Jr., Zack, Joseph J. Doyle, John A. Graves, and Jonathan Gruber. 2022. "Do Higher-Priced Hospitals Deliver Higher-Quality Care?" Working paper no. 29809. National Bureau of Economic Research, February; revised January 2023. https://doi.org/10.3386/w29809.
- Currie, Janet, and Jonathan Gruber. 1996. "Saving Babies: The Efficacy and Cost of Recent Changes in the Medicaid Eligibility of Pregnant Women." *Journal of Political Economy* 104, no. 6 (December): 1263–96. https://doi.org/10.1086/262059.
- Davis, Caitlin, Lars Peterson, and Andrew Bazemore. 2023. "Healthcare Workforce Implications of Physician Student Loan Repayment Funding." Annals of Family Medicine 21: 4221.
- Doyle, Joseph, John Graves, Jonathan Gruber, and Samuel Kleiner. 2015. "Measuring Returns to Hospital Care: Evidence from Ambulance Referral Patterns." *Journal of Political Economy* 123. no. 1 (February): 170–214. https://doi.org/10.1086/677756.

- Dranove, David, Craig Garthwaite, and Christopher Ody. 2016. "Uncompensated Care Decreased at Hospitals in Medicaid Expansion States but Not at Hospitals in Nonexpansion States." Health Affairs (Project Hope) 35, no. 8 (August): 1471–79. https://doi.org/10.1377/hlthaff.2015.1344.
- Duggan, Mark, and Tamara Hayford. 2013. "Has the Shift to Managed Care Reduced Medicaid Expenditures? Evidence from State and Local-Level Mandates." Journal of Policy Analysis and Management 32, no. 3: 505-35. https://doi.org/10.1002/pam.21693.
- Dunn, Abe, Joshua D. Gottlieb, Adam Hale Shapiro, Daniel J. Sonnenstuhl, and Pietro Tebaldi. 2024. "A Denial a Day Keeps the Doctor Away." Quarterly Journal of Economics 139, no. 1 (February): 187-233. https://doi.org/10.1093/qje/qjad035.
- Einay, Liran, and Amy Finkelstein. 2023. We've Got You Covered: Rebooting American Health Care. Portfolio/Penguin.
- Finkelstein, Amy, Nathaniel Hendren, and Erzo F. P. Luttmer. 2019. "The Value of Medicaid: Interpreting Results from the Oregon Health Insurance Experiment." Journal of Political Economy 127, no. 6 (December): 2836-74. https://doi.org/10.1086/702238.
- Finkelstein, Amy, and Matthew Notowidigdo. 2019. "Take-Up and Targeting: Experimental Evidence from SNAP." Quarterly Journal of Economics 134, no. 3: 1505-56.
- Finkelstein, Amy, Sarah Taubman, Bill Wright, Mira Bernstein, Jonathan Gruber, Joseph P. Newhouse, et al. 2012. "The Oregon Health Insurance Experiment: Evidence from the First Year." Quarterly Journal of Economics 127, no. 3 (August): 1057-106. https://doi.org/10.1093/qje/qjs020.
- Garthwaite, Craig, Tal Gross, and Matthew J. Notowidigdo. 2018. "Hospitals as Insurers of Last Resort." American Economic Journal: Applied Economics 10, no. 1: 1–39. https://doi.org/10.1257/app.20150581.
- Garthwaite, Craig, Christopher Ody, and Amanda Starc. 2022. "Endogenous Quality Investments in the U.S. Hospital Market." Journal of Health Economics 84 (July): 102636. https://doi.org/10.1016/j.jhealeco.2022.102636.
- Geruso, Michael, Timothy J. Layton, and Jacob Wallace. 2023. "What Difference Does a Health Plan Make? Evidence from Random Plan Assignment in Medicaid." American Economic Journal: Applied Economics 15, no. 3: 341-79. https://doi.org/10.1257/app.20210843.
- Geruso, Michael, Neale Mahoney, and Daniel Posthumus. 2025. "Cutting Medicaid Is a Risky Move for Republicans." Briefing Book, April 14. https://www.briefingbook.info/p/cuttingmedicaid-is-a-risky-move.
- Gottlieb, Joshua D., Adam Hale Shapiro, and Abe Dunn. 2018. "The Complexity of Billing and Paying for Physician Care." Health Affairs 37, no. 4 (April): 619–26. https://doi.org/10.1377/ hlthaff.2017.1325.
- Gray, Colin, Adam Leive, Elena Prager, Kelsey Pukelis, and Mary Zaki. 2023. "Employed in a SNAP? The Impact of Work Requirements on Program Participation and Labor Supply." American Economic Journal: Economic Policy 15, no. 1 (February): 306-41. https://doi.org/10.1257/pol.20200561.

- Hest, Robert. 2022. "Assessing Physician Acceptance of Medicaid Patients Using State Health Compare." State Health Access Data Assistance Center, August 25. https://www.shadac.org/news/14-17-physician-Mcaid-SHC.
- Hu, Luojia, Robert Kaestner, Bhashkar Mazumder, Sarah Miller, and Ashley Wong. 2018. "The Effect of the Affordable Care Act Medicaid Expansions on Financial Wellbeing." *Journal of Public Economics* 163 (July): 99–112. https://doi.org/10.1016/j.jpubeco.2018.04.009.
- Kaiser Family Foundation (KFF). n.d.a. "Medicaid-to-Medicare Fee Index." KFF (blog). Accessed June 23, 2025. https://www.kff.org/medicaid/state-indicator/medicaid-to-medicare-fee-index/.
- Kaiser Family Foundation (KFF). n.d.b. "Total Medicaid Spending." n.d. KFF (blog). Accessed June 23, 2025. https://www.kff.org/medicaid/state-indicator/total-medicaid-spending/.
- Kaiser Family Foundation (KFF). 2025. "Medicaid Enrollment and Unwinding Tracker: Enrollment Data." KFF (blog), June 2. https://www.kff.org/report-section/medicaid-enrollment-and-unwinding-tracker-enrollment-data/.
- Klein, Ezra, and Derek Thompson. 2025. Abundance. Simon and Schuster.
- Klemm, John D. 2000. "Medicaid Spending: A Brief History." Health Care Financing Review 22, no. 1 (Fall): 105–12. https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/HealthCareFinancingReview/downloads/00fallpg105.pdf.
- Kluender, Raymond, Neale Mahoney, Francis Wong, and Wesley Yin. 2025. "The Effects of Medical Debt Relief: Evidence from Two Randomized Experiments." Quarterly Journal of Economics 140, no. 2 (May): 1187–241. https://doi.org/10.1093/qje/qjae045.
- Layton, Timothy J., Nicole Maestas, Daniel Prinz, and Boris Vabson. 2019. "Private vs. Public Provision of Social Insurance: Evidence from Medicaid." Working paper no. 26042. National Bureau of Economic Research, July. https://doi.org/10.3386/w26042.
- Layton, Timothy J., Nicole Maestas, Daniel Prinz, and Boris Vabson. 2022. "Health Care Rationing in Public Insurance Programs: Evidence from Medicaid." American Economic Journal: Economic Policy 14, no. 4: 397–431. https://doi.org/10.1257/pol.20190628.
- Layton, Timothy, and Eran Politzer. 2024. "The Dynamic Fiscal Costs of Outsourcing Health Insurance—Evidence from Medicaid." Working paper no. 33302. National Bureau of Economic Research, December. https://doi.org/10.3386/w33302.
- Li, Bohan, and Timothy Layton. 2025. "Medicaid Managed Care: Substantial Shifts in Market Landscape and Acquisitions, 2006–2020." Health Affairs (Project Hope) 44, no. 7.
- Lo Sasso, Anthony T., and Gayle R. Byck. 2010. "Funding Growth Drives Community Health Center Services." *Health Affairs (Project Hope)* 29, no. 2 (February): 289–96. https://doi.org/10.1377/hlthaff.2008.0265.
- Mahoney, Neale. 2015. "Bankruptcy as Implicit Health Insurance." *American Economic Review* 105, no. 2 (February): 710–46. https://doi.org/10.1257/aer.20131408.
- Mansell, Lawson. 2024. "Healthcare Abundance: An Agenda to Strengthen Healthcare Supply." Niskanen Center, October. https://www.niskanencenter.org/healthcare-abundance-anagenda-to-strengthen-healthcare-supply/.

- McGough, Matthew, Emma Wager, Aubrey Winger, Nirmita Panchal, and Lynne Cotter. 2024. "How Has U.S. Spending on Healthcare Changed over Time?" Health System Tracker, December 20. https://www.healthsystemtracker.org/chart-collection/u-s-spendinghealthcare-changed-time/.
- McMichael, Benjamin J. 2023. "Supply-Side Health Policy: The Impact of Scope-of-Practice Laws on Mortality." Journal of Public Economics 222 (June): 104901. https://doi.org/10.1016/j. jpubeco.2023.104901.
- McMorrow, Stacey, and Stephen Zuckerman. 2014. "Expanding Federal Funding to Community Health Centers Slows Decline in Access for Low-Income Adults." Health Services Research 49, no. 3 (June): 992-1010.
- Medicaid and CHIP Payment and Access Commission (MACPAC). n.d.a. "MACStats." Medicaid and CHIP Payment and Access Commission. Accessed June 23, 2025. https://www.macpac. gov/macstats/.
- Medicaid and CHIP Payment and Access Commission (MACPAC). n.d.b. "Managed Care." Medicaid and CHIP Payment and Access Commission. Accessed June 23, 2025. https://www.macpac.gov/topic/managed-care/.
- Medicaid and CHIP Payment and Access Commission (MACPAC). 2015. "Exhibit 8: Medicaid Enrollment and Spending, FYs 1970-2020." In MACStats: Medicaid and CHIP Data Book, 25. Medicaid and CHIP Payment and Access Commission, December. https://www.macpac.gov/ wp-content/uploads/2020/07/MACStats-Medicaid-and-CHIP-Data-Book-December-2015.pdf.
- Medicaid and CHIP Payment and Access Commission (MACPAC). 2021. "Physician Acceptance of New Medicaid Patients: Findings from the National Electronic Health Records Survey." Medicaid and CHIP Payment and Access Commission fact sheet, June. https://www.macpac.gov/wp-content/uploads/2021/06/Physician-Acceptance-of-New-Medicaid-Patients-Findings-from-the-National-Electronic-Health-Records-Survey.pdf.
- Miller, Sarah, Norman Johnson, and Laura R. Wherry. 2021. "Medicaid and Mortality: New Evidence from Linked Survey and Administrative Data." Quarterly Journal of Economics 136, no. 3 (August): 1783-829. https://doi.org/10.1093/qje/qjab004.
- Miller, Sarah, and Laura R. Wherry. 2019. "The Long-Term Effects of Early Life Medicaid Coverage." Journal of Human Resources 54, no. 3 (July): 785-824. https://doi.org/10.3368/ jhr.54.3.0816.8173R1.
- Mitchell, Alison. 2023 Medicaid Disproportionate Share Hospital Payments. Report no. R42865. Congressional Research Service, November 20. https://www.congress.gov/crs-product/ R42865.
- Montoya, Daniela Franco, Puneet Kaur Chehal, and E. Kathleen Adams. 2020. "Medicaid Managed Care's Effects on Costs, Access, and Quality: An Update." Annual Review of Public Health 41 (April): 537-49. https://doi.org/10.1146/annurev-publhealth-040119-094345.
- Myong, Catherine, Peter Hull, Mary Price, John Hsu, Joseph P. Newhouse, and Vicki Fung. 2020. "The Impact of Funding for Federally Qualified Health Centers on Utilization and Emergency Department Visits in Massachusetts." PloS One 15, no. 12 (December): e0243279. https://doi.org/10.1371/journal.pone.0243279.

- Nikpay, Sayeh S., Melinda B. Buntin, and Rena M. Conti. 2020. "Relationship Between Initiation of 340B Participation and Hospital Safety-Net Engagement." *Health Services Research* 55, no. 2 (March): 157–69. https://doi.org/10.1111/1475-6773.13278.
- Nocon, Robert S., Sang Mee Lee, Ravi Sharma, Quyen Ngo-Metzger, Dana B. Mukamel, Yue Gao, et al. 2016. "Health Care Use and Spending for Medicaid Enrollees in Federally Qualified Health Centers Versus Other Primary Care Settings." American Journal of Public Health 106, no. 11: 1981–89. https://doi.org/10.2105/AJPH.2016.303341.
- Oostrom, Tamar, Liran Einav, and Amy Finkelstein. 2017. "Outpatient Office Wait Times and Quality of Care for Medicaid Patients." Health Affairs 36, no. 5.
- Paradise, Julia, Barbara Lyons, and Diane Rowland. 2015. "Low-Income Pregnant Women, Children and Families, and Childless Adults." In *Medicaid at* 50. KFF, May 6. https://www.kff.org/report-section/medicaid-at-50-low-income-pregnant-women-children-and-families-and-childless-adults/.
- Perez, Victoria. 2018. "Does Capitated Managed Care Affect Budget Predictability? Evidence from Medicaid Programs." International Journal of Health Economics and Management 18, no. 2: 123–52. https://doi.org/10.1007/s10754-017-9227-7.
- Perkins, Jane. 2013. "Fact Sheet: The Supreme Court's ACA Decision and Its Implications for Medicaid." National Health Law Program (blog), April 15. https://healthlaw.org/resource/fact-sheet-the-supreme-courts-aca-decision-its-implications-for-medicaid/?issue_area=public-health.
- Peter G. Peterson Foundation. 2024. "Three Key Things to Know about CHIP." PGPF.org, last updated December 23. https://www.pgpf.org/article/three-key-things-to-know-about-chip/.
- Polsky, Daniel, Michael Richards, Simon Basseyn, Douglas Wissoker, Genevieve Kenney, Stephen Zuckerman, et al.. 2015. "Appointment Availability After Increases in Medicaid Payments for Primary Care." New England Journal of Medicine 372, no. 6: 537–45.
- Robezniek, Andis. 2019. "Medicare-Only Oak Street Health Isn't Shy About Taking Big Risks." American Medical Association, July 23. https://www.ama-assn.org/practice-management/payment-delivery-models/medicare-only-oak-street-health-isn-t-shy-about-taking.
- Rudowitz, Robin, Jennifer Tolbert, Alice Burns, Elizabeth Hinton, and Anna Mudumala. 2024. "Medicaid 101." In *Health Policy* 101, edited by Drew Altman. KFF (blog), May 28. https://www.kff.org/health-policy-101-medicaid/.
- Sanger-Katz, Margot, and Sarah Kliff. 2025. "G.O.P. Targets a Medicaid Loophole Used by 49 States to Grab Federal Money." New York Times, May 6. https://www.nytimes.com/2025/05/06/upshot/medicaid-hospitals-republicans-cuts.html.
- Sigritz, Brian, Kathryn White, and Leah Wavrunek. 2024. 2024 State Expenditure Report.

 National Association of State Budget Officers. https://www.nasbo.org/reports-data/state-expenditure-report.
- Sommers, Benjamin, Katherine Baicker, and Arnold Epstein. 2012. "Mortality and Access to Care Among Adults After State Medicaid Expansions." New England Journal of Medicine, vol. 367: 1025–34.

- Sommers, Benjamin, Anna Goldman, Robert Blendon, John Orav, and Arnold Epstein. 2019. "Medicaid Work Requirements—Results from the First Year in Arkansas." New England Journal of Medicine 381, no. 11: 1073-82.
- Sparer, Michael. 2012. Medicaid Managed Care: Costs, Access, and Quality of Care. Robert Wood Johnson Foundation. https://catalog.nlm.nih.gov/discovery/fulldisplay/ alma9915989403406676/01NLM_INST:01NLM_INST.
- US Government Accountability Office. 2024. Health Centers: Revenue, Grant Funding, and Methods for Meeting Certain Access-to-Care Requirements. Report no. GAO-24-106815. Government Accountability Office, March 7. https://www.gao.gov/products/gao-24-106815.
- Weiss, A. J., G. Pickens, and M. Roemer. 2021. Methods for Calculating Patient Travel Distance to Hospital in HCUP Data. HCUP Methods Series report no. 2021-02. US Agency for Healthcare Research and Quality, December 6. www.hcup-us.ahrq.gov/reports/methods/methods.jsp.
- Wherry, Laura R., and Bruce D. Meyer. 2016. "Saving Teens: Using a Policy Discontinuity to Estimate the Effects of Medicaid Eligibility." Journal of Human Resources 51, no. 3 (August): 556-88. https://doi.org/10.3368/jhr.51.3.0913-5918R1.
- Wherry, Laura R., Sarah Miller, Robert Kaestner, and Bruce D. Meyer. 2018. "Childhood Medicaid Coverage and Later-Life Health Care Utilization." Review of Economics and Statistics 100, no. 2 (May): 287-302. https://direct.mit.edu/rest/articleabstract/100/2/287/58444/Childhood-Medicaid-Coverage-and-Later-Life-Health.
- Williams, Elizabeth, Alice Burns, Rhiannon Euhus, and Robin Rudowitz. 2025. "Eliminating the Medicaid Expansion Federal Match Rate: State-by-State Estimates." KFF (blog), February 13. https://www.kff.org/medicaid/issue-brief/eliminating-the-medicaid-expansionfederal-match-rate-state-by-state-estimates/.
- Wyse, Angela, and Bruce D. Meyer. 2025. "Saved by Medicaid: New Evidence on Health Insurance and Mortality from the Universe of Low-Income Adults." Working paper no. 33719. National Bureau of Economic Research, May. https://www.nber.org/papers/w33719.
- Yglesias, Matthew. 2021. "Homelessness Is About Housing." Slow Boring (blog), May 17. https://www.slowboring.com/p/homelessness-housing.

Improving Housing Affordability

AUTHORS

Benjamin J. Keys* and Vincent Reina**

ABSTRACT

US households face unprecedented challenges related to the high cost of housing. In this paper, we characterize the affordability crisis, assess the primary drivers of unaffordable housing, and offer potential policy solutions. We argue that several distinct housing-market challenges—including financing gaps, local restrictions that make it difficult and/or costly to build, and a lack of an entitlement program present distinct challenges to both an adequate and an affordable housing supply. Importantly, though, the impact of these features becomes more dramatic during economic downturns. Our current national housing challenges are a product of longstanding structural challenges that were amplified by an unprecedented lack of building after the 2008 financial crisis. As a result, the policy recommendations sit within a broader series of reforms and policy solutions that ensure that housing supply meets demand, and that affordability is not compromised, during all periods of the economic cycle.

Acknowledgement: We thank Joshua Boyd and Sarah Curry for exceptional research assistance, as well as Joseph Gyourko, Mark Willis, Chi-Hyun Kim, and Kyle Arbuckle for sharing feedback on the draft of this paper. We thank Melissa S. Kearney, Luke Pardue, and Ella Grant for their feedback and edits, as well as all of the attendees of the 2025 Aspen Economic Strategy Group Annual Meeting. Keys thanks the research sponsors of the Zell/Lurie Real Estate Center for support. Any errors are our own

^{*} Rowan Family Foundation Professor of Real Estate and Finance, University of Pennsylvania Wharton School; research associate, NBER

^{**} Professor, Department of City and Regional Planning, and founder and faculty director of the Housing Initiative, University of Pennsylvania

Introduction

Housing affordability is a priority for American policymakers at every level of government. Households currently face some of the highest burdens of housing costs relative to income on record (JCHS 2024b). For the macroeconomic outlook, shelter costs continue to be a leading driver of inflation (BLS 2025).

While there are multiple dimensions of affordability challenges, in this paper, we focus on two: an insufficient housing supply, particularly of housing that is affordable and habitable; and barriers to homeownership, including high entry costs and interest rate fluctuations, that keep homeownership out of reach for younger generations and put further pressure on rental markets. Beyond the gains associated with housing access and affordability, research shows the effects of expanding access to credit in the mid-twentieth century on population growth (Dettling and Kearney 2025) and the important role housing supply plays in promoting local and macroeconomic growth (Duranton and Puga 2023; Hsieh and Moretti 2019). We discuss how evolving challenges have redefined the need to increase supply and propose ways to address them across short- and long-term horizons.

Given current supply constraints, policies that support and solely stimulate demand can exacerbate housing affordability issues, as can policies that artificially increase construction costs, such as materials tariffs (LaJeunesse 2025), restrictive immigration policies affecting labor supply (Howard et al. 2024), and excessive regulatory requirements.¹

The solution to the current shortage is to build, while ensuring that we also address current and future affordability needs. The need to build has been embraced by the growing "Yes In My Backyard" (YIMBY) movement, along with calls by politicians and the popular press to make it easier to build.² In aggressively expanding housing construction, however,

"Given current supply constraints, policies that support and solely stimulate demand can exacerbate housing affordability issues."

much needs to be reconsidered about the mechanisms and financing tools used to mitigate that shortage—a scope that includes how, where, and what we build, and how to ensure we are building affordable units.

To that end, in this paper, we first present a set of illustrative facts regarding rising housing costs and the challenges both renters and owners face. Next, we describe some key drivers of the current affordability crisis. We then offer a series of steps

¹ For an overview of these issues, see Baum-Snow and Duranton 2025.

² See, for instance, Klein and Thompson 2025 and Appelbaum 2025 as prominent examples.

that policymakers can take to address the current and structural problems that impair the ability to build, especially during economic downturns.

We conclude that the affordability crisis can only be solved through coordinated efforts at the federal, state, and local levels, including comprehensive zoning reform, expanded financing options, and the creation of a true housing safety net. In the longer term, reducing the cyclicality of housing construction through stable financing sources will make the housing market less susceptible to future shortfalls. Developing a richer toolkit for addressing housing needs will also make the market more dynamic and flexible in responding to shocks and changing demographics.

1. Some facts about affordability

The current housing context is unprecedented across multiple dimensions. The serious lack of adequate housing supply that has persisted for well over a decade is a product of multiple factors, including insufficient construction during periods of economic downturn despite household growth and barriers that make building difficult even during economically favorable conditions (Dong and Hansz 2019; Knaap et al. 2007). When we combine that context with other underlying realities of our housing market, including longstanding underinvestment in some areas, an aging housing stock and aging households (Myers and Ryu 2008), and a lack of a comprehensive housing safety net, we end up with a historically and increasingly unaffordable housing market that is both financially unsustainable and economically inefficient. Some key examples of these dynamics include:

1.1 The median rent has increased dramatically since 1980, with a wholesale loss of the nation's most affordable rental units, as demand pressure incentivizes landlords to raise rents and reposition units upmarket.

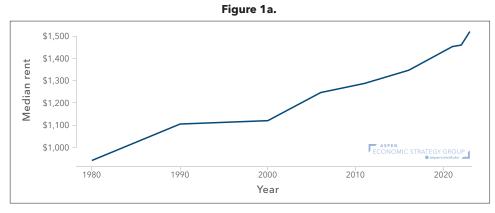
When looking at affordability, it is important to look at the housing stock first and then to focus on the stock relative to income. Here we look at stock in two ways, first in aggregate and then focusing specifically on lower price points.

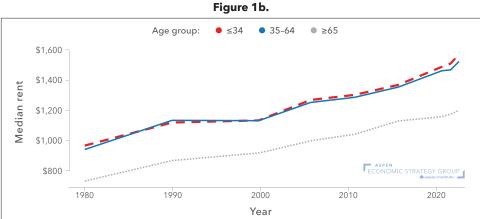
First, using microdata from the US census and the American Community Survey (ACS) from 1980 to 2023, we document the rising cost of rental housing in the US in real dollars (see figure 1a). In fact, Americans have seen a near-doubling of median rent in real dollars over the last 43 years, with the median rent in the US increasing (in 2023 dollars) from less than \$950 per month in 1980 to \$1,700 per month in 2023.3 Figure 1b shows that these increases have been quite consistent across age groups, with rising rents across the age distribution.

³ We deflate all nominal series to 2023 dollars using the Consumer Price Index for All Urban Consumers (CPI-U).

Next, it is important to narrow down on trends in units with the most affordable rents. Traditionally, cities rely on lower-cost rental units to serve as affordable-housing options. The units are often referred to as "naturally occurring" affordable housing because they are owned and operated by private actors and often lack any form of direct federal or local housing assistance. Here we focus on rents at or below \$1,000 in 1980 (in 2023 dollars), given that the median rent was roughly that amount at the time, as well as roughly half the median rent in 1980 (\$500). Figure 2 shows that in 1980, over 55 percent of the nation's rental stock rented for less than \$1,000 (not surprising given the median was \$950), and over 10 percent rented for less than \$500. Today, just over 20 percent of the nation's rental stock has rents under \$1,000, and less than 5 percent have rents below \$500 (see figure 2). There has been a nearly 45 percent reduction in units renting below roughly \$1,000 since 1980, and a more than 50 percent drop in those below \$500.

Figure 1: Median rent, 1980-2023 (2023 dollars)





Source: US Census Bureau, American Community Survey, 1980-2023

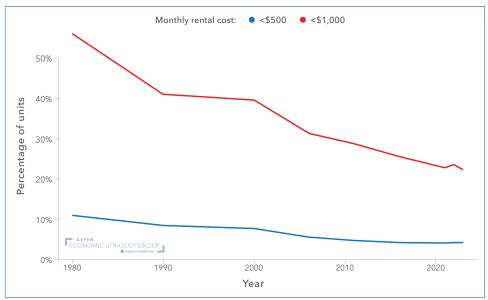


Figure 2: Percentage of monthly rental costs under \$500 or under \$1,000, 1980-2023 (2023 dollars)

Source: US Census Bureau, American Community Survey, 1980-2023

1.2 Households are spending a higher share of their income on rent than they did in 1980.

While looking at rent levels is important, we know that rent prices are a function of many factors, including income. Therefore, we must also look at rents relative to income. Figure 3 shows that by 2023, almost 50 percent of all renters were paying more than 30 percent of their income toward rent, qualifying them as "rent-burdened." This rent-burdened share is up from 35 percent in 1980. At the same time, almost 25 percent of renters pay more than 50 percent of their income toward rent, making them "severely rent-burdened" (see figure 3). These burdens are present across the country (see figure 4). Studies show that households with the lowest incomes are consistently exposed to both rent burdens and severe rent burdens, though the share of households facing such burdens has increased across the income spectrum (e.g., JCHS 2024a).

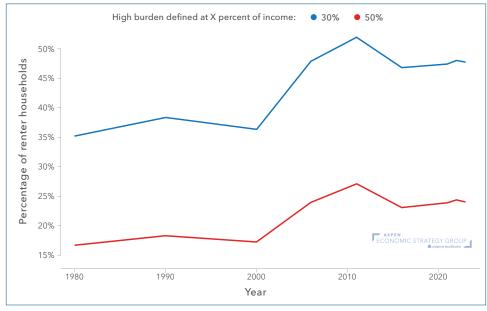


Figure 3: Percentage of renter households with high rent burdens, 1980-2023

Source: US Census Bureau, American Community Survey, 1980-2023

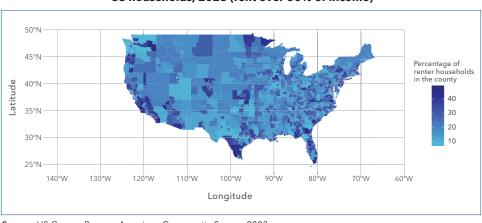


Figure 4: Geographic distribution of severely rent-burdened US households, 2023 (rent over 50% of income)

Source: US Census Bureau, American Community Survey, 2023

1.3 Homeownership is less attainable now than it was 30 years ago.

The ratio of median sales price to median income increased from 2.4 in 1990 to 5 in 2023, surpassing the prior high at the peak of the housing boom in the first decade of the 2000s (see figure 5). Attainability of homeownership depends on both home prices and financing conditions. In 2020, the median home-sale price was affordable to those at or below the median income in over two-thirds of the 98 most expensive metro areas in the country (based on calculations from Zillow comparing income to principal, interest, taxes, and insurance). By 2024, with the combination of high home prices and 30-year mortgage rates over 7 percent, that was true for just over 10 percent of those metro areas (see figure 6).

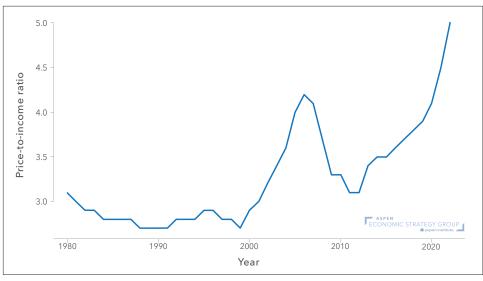


Figure 5: Ratio of median home prices to median incomes in US metro areas, 1990-2023

Source: JCHS 2024b

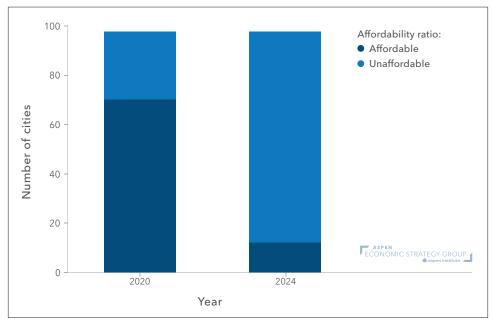


Figure 6: Number of cities where the median home is affordable at the median income (for the 98 largest metro areas)

Source: ResiClub Analytics, Zillow 2024

Compounding the problem was a COVID-induced boom in local housing markets. COVID-era remote-work also led to a sharp increase in demand for suburban and rural properties and pulled many home transactions forward in time as many near-retirees decided to retire and move to warmer climes. These buyers put sharp upward pressure on house prices in suburban markets and popular retiree destinations, but broader economic forces created bidding wars in many markets. Buyers were further supported by the cheapest mortgages in US history, a pause on student-loan debt payments, and other government income supports to help pandemic-affected households. The net effect of these factors was a massive demand shock, leading national average home prices to rise more than 40 percent above their 2020 levels by 2024 (calculated from the Freddie Mac House Price Index).⁴

^{4 &}quot;Freddie Mac House Price Index," Freddie Mac, accessed September 19, 2025, https://www.freddiemac.com/research/indices/house-price-index.

1.4 First-time homebuyers are getting older.

The combined effect of higher house prices and higher interest rates is that homebuyers need more resources to buy their first house. One way to see this effect is through the trend in the median age of first-time homeowners. The age of first-time homebuyers has increased from 29 in 1980 to 38 in 2024 (see figure 7), with a sharp uptick since 2020. Importantly, research initially speculated that lower homeownership rates for younger households reflected their preference for renting, while more recent scholarship has highlighted that this trend was in fact always a function of housing cost and other financial constraints (Choi et al. 2018). Calculating the prevalence of first-time home buyers as a share of housing transactions suggests a dramatic reduction in first-time buyer involvement in the market: In 2024, 24 percent of all housing purchases were made by first-time buyers, down from 50 percent in 2010 (Slok et al. 2025).

Taking an even longer view, there has been a considerable shift in homeownership rates across age cohorts in the last 55 years (see figure 8). In 1970, households where the head was 45-54 had the highest homeownership rate, followed by those 55-64 and those 35-44. Those age cohorts remained homeowners as they aged, which means that by 2009, those 65 and over had the highest homeownership rate, and that rate remains the highest to date. Conversely, the two youngest brackets, those 25-34 and 35-44, have seen their homeownership rates drop dramatically during the same period. Stated differently, in 1970, households over 65 owned roughly 23 percent of all the single-family homes in America, and by 2025, they owned roughly 35 percent of the stock. Thus, an increasingly older population remains in homes that may not be designed or well-suited for their needs as they age.

With mortgage rates hitting historic lows in 2021, buyers and existing homeowners were able to lock in long-term debt at rates below 3 percent. With many homeowners locked into their extremely cheap mortgage credit as current rates hover around 7 percent, homeowners are not moving up the property ladder but are instead staying put. Over half of all outstanding mortgages are locked below 4 percent, and 70 percent have rates below 5 percent, well below today's prevailing rates (FHFA National Mortgage Database 2025). This disconnect between current rates and locked-in rates has led to a substantial deficit in homes for sale, with the spring 2025 selling season offering 20 percent fewer listings than the 2017-2019 average, a substantial improvement from the last few years but still well below pre-pandemic levels (see ICE Mortgage Monitor 2025). This deficit affects the available stock of purchasable housing both for households looking to buy a home and for those looking to trade up in housing.

In sum, these pandemic impacts have amplified an underlying housing supply shortage that was over a decade in the making. In the end, the root of this problem is a lack of housing production that has fueled dramatic increases in rents and made homeownership unattainable for many. Therefore, solutions to the affordability crisis need to focus on supply, though in a much more nuanced way than in the past, first by understanding the critical drivers of undersupply.

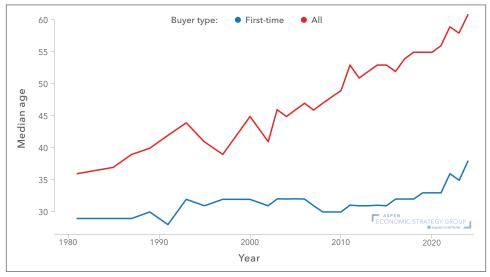


Figure 7: Median age of first-time and all buyers, 1981-2024

Source: National Association of Realtors 2024

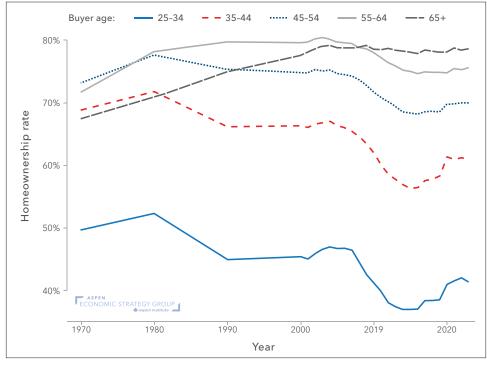


Figure 8: Homeownership rate by age group, 1970-2023

Source: US Census Bureau, American Community Survey, 1970-2023

2. Drivers of affordability challenges

In this section, we provide a brief overview of some key drivers of current housingaffordability challenges identified in existing literature, and thoughts on other areas where scholarship is needed.⁵ In general, much of the literature has focused on the challenges developers face with building, largely through land-use and zoning restrictions; demographic and other factors affecting access to homeownership; and the ways in which the US housing safety net is incomplete. Much less research has focused on the challenges both owners and developers face in accessing financing for the development and rehabilitation of housing, particularly for older housing and areas experiencing longstanding lack of investment.

⁵ For a full review of key drivers of housing affordability, please see Lee et al. 2022.

2.1 A lack of housing supply

Multiple studies document and estimate the current housing-supply gap, using a variety of approaches (Matlack and Vigdor 2008). The most basic method for estimating the gap is to compare the actual number of housing units in the US to a counterfactual based on demographics, historical rates of household formation, and "natural" rates of housing vacancy.

Regardless of their specific assumptions, all studies concur that a supply gap exists, though the size of the gap varies based on the specifics of the estimation approach. For example, one estimate suggests that there are as many as 7.1 million housing units needed in the market (see Patel et al. 2024), another study reaches a shortage of 3 million (see First American Data and Analytics 2025), and the median assessment from eight recent estimates is 4.2 million (authors' calculation). Importantly, though, these estimates are often less specific about what kind of housing needs to be built (rental or ownership), how many bedrooms per unit are needed, and at what price points (Tyvimaa and Kamruzzaman 2019). A good example is increasing demand for housing, and specifically affordable housing, for the elderly, which comes with its own set of design and location needs (JCHS 2023; Reina and Aiken 2022). While directionally there is a clear signal to build, these estimates should not be construed as a call to simply build millions of units of anything anywhere. Instead, they should motivate a deeper analysis of what is and isn't working in the housing market, and an eye to meeting housing affordability needs.

2.2 Challenges to building

A broad set of literature focuses on the negative relationship between land use and zoning laws and housing supply and affordability (Glaeser and Gyourko 2003; Glaeser and Ward 2009; Green et al. 2005; Landis and Reina 2021; Mayer and Somerville 2000; Pollakowski and Wachter 1990; Gyourko et al. 2021; Gyourko et al. 2013; Bartik et al. 2025; D'Amico et al. 2014; Baum-Snow and Duranton 2025). This literature first documents the prevalence of local land-use and zoning laws that restrict the amount and types of housing that can be built, and the negative impact such restrictions tend to have on the elasticity of housing supply in response to housing demand (Saiz 2010; Baum-Snow and Han 2024; Gorback and Keys 2020; Duranton and Puga 2023; Bertaud and Brueckner 2005). Further recent research finds that even areas that historically produced a large amount of new housing, such as Sun Belt cities like Atlanta, Dallas, and Phoenix, have sharply decreased construction (Glaeser and Gyourko 2025). And while land-use and zoning laws artificially restrict buildable land, many cities have existing structures on most lots, with some vacant lots poorly configured or in need of remediation. These conditions further limit, or increase the cost of, buildable land that is accessible to jobs and other amenities like public transit.

Research has also shown that the process around approvals and permitting for the construction and completion of housing units creates uncertainty and causes delays in the development process—both increasing the overall cost of development and sometimes making development financially unviable (Brysch and Czischke 2021). Greater fixed costs of construction encourage development of high-end projects, which may lead to further supply constraints in the low end (Handbury et al. 2025). The net effect of these land-use and zoning laws has been a decrease in the rate of new housing construction, an increase in housing costs, and a decrease in housing affordability.

2.3 Barriers to homeownership

One key barrier to homeownership is access to credit. First-time homeowners rely heavily on high-LTV, fixed-rate, 30-year mortgages, regardless of whether there is a housing supply constraint or not, and lending standards to obtain these mortgages have increased since the global financial crisis. For instance, Loewenstein and Meyer (2024) report that average FICO scores for newly originated purchase mortgages have increased from 705 in 2006 to 740 in 2022. Lenders also require more income and asset documentation. In addition, mortgage credit is largely provided by Fannie Mae, Freddie Mac, and the Federal Housing Administration, and these entities have not been open to the kind of innovation in contract types that might create more opportunities for affordable credit access, for instance through shared-appreciation mortgages (e.g., Mian and Sufi 2014) or automatically indexed mortgages (Piskorski and Seru 2018).

Households face well-documented challenges in accessing credit, including the aforementioned tighter credit standards; student-loan debt levels affecting younger households' ability to borrow; racial bias in property appraisals affecting the level of home equity that Black and Brown households can leverage; and disproportionate mortgage-denial rates for minority households affecting credit access at all, amongst others. These realities have only been made worse by a perfect storm of other factors.

Notably, housing demand has increased as a large cohort of millennials has entered the housing market, while at the same time, household sizes have decreased. For example, household sizes fell from 3.33 in 1960 to 2.55 in 2020 (Myers et al. 2025). Combined, these factors increased the number of actors looking for housing. Moreover, people are living longer, and older households have become more likely to remain in their existing homes, which means that fewer existing homeownership units are entering the sales market. As previously discussed, because many existing owners were able to access some of the cheapest interest rates, and because the cost of homes that are on the market is so high, a lock-in effect is making it more financially rational for owners

to remain in their existing unit rather than selling (Fonseca and Liu 2024). As a result of these demand drivers and limited listings, housing prices are rising in the absence of sufficient production of new housing units.

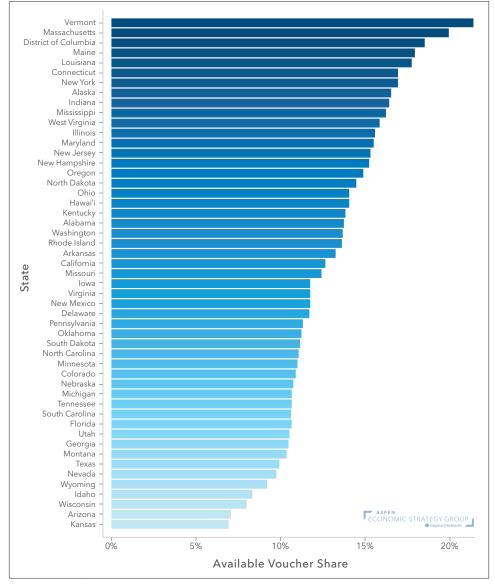
That said, other important factors also affect homeownership opportunities. Research has pointed to the mortgage lock-in effect described above as limiting the number of homes for sale (Fonseca et al. 2025). Increasing research has focused on the impact that investors' purchasing single-family homes and converting them to rental properties has had on homeownership opportunities and housing stability (e.g., Coven 2025; Hanson 2024; Gorback et al. 2025; Raymond et al. 2016). While investors are by no means a monolith, some housing markets or submarkets are asymmetrical such that firms with easy access to financing or sufficient cash on hand can outbid households looking to purchase homes, forcing those households to then rent the same or equivalent units rather than purchase them. This imbalance can be further exacerbated by an aging housing stock, necessitating property repair needs that only people with access to credit can afford to make.

2.4 A lack of a housing entitlement program

The United States has never had a housing safety net for renters or owners. A primary example of this point is that for every one household that receives a housing choice voucher, which is the largest federal rental-assistance program that subsidizes rent payments for low-income households, as many as four other households are eligible (Reina et al. 2021). Figure 8 presents the gap between the number of renter households with very low incomes (defined as <50 percent of area median income) and the number of available housing-choice vouchers (HCVs). This gap is consistently large across the whole country, though highest in places like Arizona and Kansas (see figure 9). Beyond this gap, research shows the abundance of administrative barriers associated with using existing rental assistance programs (Reina et al. 2024; Aiken et al. 2023; Ellen et al. 2021).

During the pandemic, the federal government took unprecedented steps to stabilize renters through a host of programs, including the creation of a \$46 billion emergency rental-assistance program (see Aiken et al. 2022) aimed at helping households who owe back rent to avoid eviction, but such programs have not existed at scale outside of that setting. This lack of assistance means there is no consistent source of funding to support low-income renters facing housing affordability challenges, nor are there programs aimed at ensuring that a systemic or idiosyncratic housing shock does not force renters into homelessness. Research shows that rental assistance reduces evictions and exposure to homelessness and can increase housing stability and the overall economic well-being of households (Reina and Fowle et al, 2025; Pollakowski et al. 2022; Lundberg et al. 2021; Mills et al. 2006).

Figure 9. Share of available housing-choice vouchers relative to the total households with incomes below 50 percent of state median income who are potentially eligible, 2020



Source: Reina et al. 2021

Note: Anchorage MSA data used to represent Alaska data.

Relatedly, few federal tools are aimed at increasing the overall supply of affordable rental housing. Public housing is often the most well-known form of government-financed affordable housing, though this portfolio makes up less than 2 percent of the rental housing units in the country. Currently, the Low Income Housing Tax Credit (LIHTC) program is the largest federal financing tool aimed at increasing the supply of affordable housing, but even this program only produces about 110,000 units per year on average. Also, LIHTC units often have rents affordable to households making 50 or 60 percent of the area median income, which means that, on its own, LIHTC is not well structured to assist households below 30 percent of the area median income. In addition, neither the number of available subsidized housing units nor the number of housing choice vouchers issued varies with the business cycle or the level of need, unlike unemployment insurance or SNAP benefits, which adjust based on need. This lack of cyclicality further exacerbates housing-related distress during economic downturns (Collinson et al. 2022).

Similarly, during the pandemic, the federal government developed a series of forbearance policies aimed at keeping owners in their homes. These programs helped minimize foreclosures and avoid the disruptions to the housing market experienced during the financial crisis (Goodman and Zhu 2024). While there were programs to support homeowners during the 2008 financial crisis, they were not timely or generous enough to avoid roughly four million foreclosures nationwide. Beyond these emergency measures that provided much-needed stability, homeowners generally do not have a safety net that can keep them in their homes when households face income shocks. Instead, they are dependent on their servicer's willingness to privately extend forbearance or other workout options. Thus, both owners and renters face the risk of housing insecurity during periods of macroeconomic strength, and the magnitude and nature of policy responses vary during periods of macroeconomic distress.

2.5 Financing construction and repairs

Much less research exists on barriers that developers and owners face when trying to finance development, which affects the supply of new units being built, and on rehabilitation, affecting the ability of units to stay in the housing stock. While much research has focused on access to credit for purchasing a home, much less has focused on credit constraints and equity gaps that developers face for the

⁶ According to HUD's publicly available data, nearly nine hundred thousand public-housing units are available. Data can be found at "Assisted Housing: National and Local," HUD Office of Policy Development and Research, accessed September 20, 2025, https://www.huduser.gov/portal/datasets/assthsg.html.

^{7 &}quot;Low-Income Housing Tax Credits and Long-Term Affordability," Bipartisan Policy Center online event, May 19, 2023, https://bipartisanpolicy.org/event/low-income-housing-tax-credits/.

acquisition, construction, and ongoing operations of properties. Moreover, there is limited research on the constraints that landlords of smaller properties and homeowners face when trying to access credit to repair existing properties. Despite historically low foreclosure rates for both single- and multifamily housing, financial institutions have pointed to tighter credit standards since 2015 (Board of Governors of the Federal Reserve System 2025c). That credit standards have been tightening since 2015 raises the concern that lending standards have been too tight for the last ten years, making it difficult to finance new development and the rehabilitation of existing units, and for people to access credit to purchase or repair a home.

Other important market dynamics

Despite how much we know about housing, little research has focused on key trends around housing production cycles, though here are few important ones for understanding current housing needs.

We have a production cycle problem. Historically, housing production has been highly cyclical, but the depth and duration of the downcycle following the foreclosure crisis exceeded those of any prior cycle (as shown in figure 10), dramatically exacerbating any existing housing shortfall. Demographic trends such as the aging of millennials into their home-buying years warranted the creation of far more units during the post-foreclosure crisis downcycle than were created. The number of potential households continued to grow after the macroeconomic collapse because of underlying demographic and household formation trends, which called for a quicker, larger rebound than there actually was (Myers et al. 2025), thus highlighting a mismatch between the cyclical stability of housing demand and the highly cyclical market response.

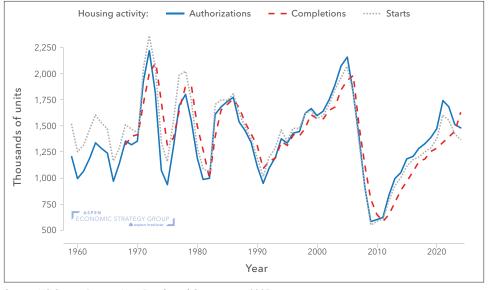


Figure 10: Stages of residential construction, 1959-2024

Source: US Census Bureau, New Residential Construction 2025

Part of the production problem is a permitting one. The most recent peak in housing permits, which are issued at the local level, was both lower than historic permitting highs and less than needed, based on the supply shortfall (see figure 10). In 2009, we saw the lowest number of annual permits since at least the 1960s (Glaeser and Ward 2009). And while permits went on to reach a peak of 1.7 million in 2021, that peak was 420,000 units fewer than the peak of 2005, and lower than the three peaks prior to that between 1970 and 2010. In sum, the dips in permitting decreased to an unprecedented level, and the peaks did not sufficiently correct for them. This pattern is even more striking when we consider that the US population essentially doubled since 1960 (179 million then, compared to roughly 340 million today), and a large millennial cohort came of age for housing consumption post-2010.

We also have a housing completion problem. Permitting is consistently higher than both construction starts and completions. In figure 11, we plot the difference between the starts and completions series from the US Census New Residential Construction data shown in figure 10, shifting starts with a two-year lag. The average gap between

⁸ It is important to note that 2005 was directly before the 2008 financial crisis, and while homes may have been temporarily overbuilt at this point, the underlying housing dynamics have changed such that the optimal amount of housing to keep up with household formation is substantially more than being currently produced. We further note that the durability of housing means that a future population decline would require actively reducing or right-sizing the number of units.

units permitted and completed has been over a hundred thousand since 2000, with two large spikes around the financial crisis and then recently after COVID. The gap between permits and completions points to challenges in the construction pipeline after planning, which may include issues related to financing.

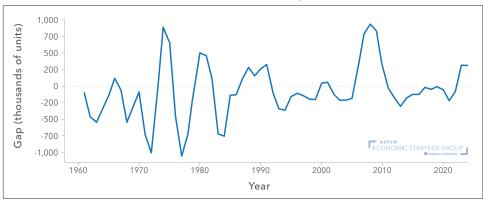


Figure 11: Gap between authorized (two-year lag) and started constructions (1961-present)

Source: US Census Bureau, New Residential Construction 2025

Foreclosure rates have been consistently low since the 2008 financial crisis. Overall, foreclosure rates for both single-family and multifamily housing have remained low (see figure 12). Since the early 1990s, multifamily loans have generally had low delinquency rates (MBA n.d.; see figure 13). Similarly, after the financial crisis, the foreclosure rate for single-family loans has also decreased and remained relatively low. Given that the risk of making loans varies dramatically across the lending cycles, this period of sustained house-price growth and strong loan-repayment rates reflects a missed opportunity to lend more during safe times.

The nation's housing stock is aging. The median age of a house in the US is now 40 years old, up from around 30 years old early in the first decade of the 2000s (ACS 2023). Going forward, the need for investments in existing housing stock is increasing, particularly in segments of the housing stock that have had more challenging access to financing. In other words, our housing supply challenges are increasingly about both the development of new units and the preservation of existing ones that run the risk of exiting the housing stock. This combination of challenges is particularly acute in cities with an older housing stock, like Philadelphia, Baltimore, and Cleveland. Importantly, given that many of these older properties need investment, they are often priced lower, which means that much of the housing stock priced more affordably faces greater housing-quality challenges and is at a larger risk of exiting the housing stock.

Figure 12: Foreclosure rate, 2005-2022 (percentage of all housing units)

Source: ATTOM 2023

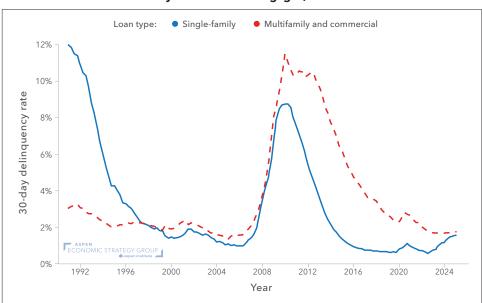


Figure 13: Delinquency rates for single-family and multifamily/commercial mortgages, 1991-2025

Source: Board of Governors of the Federal Reserve System 2025a, 2025b

Improving housing affordability

Next, we propose four key themes for policy solutions: 1) making it easier to build; 2) ensuring homeownership is attainable; 3) creating a stronger and more complete

> housing safety net; and 4) ensuring financing is available through the cycle.

"Policymakers at every level of government can take meaningful steps to accelerate production, reduce barriers, and incentivize smart and sensible additional density in both cities and suburbs at each stage of the development process."

4.1 Making it easier to build

The significant housing-supply gap across the nation has wiped out the longstanding stock of lower-cost rental units and homes for purchase. Barring a supply response that induces a crash in rents (which we should neither expect nor want to happen), there is substantial need to build many more units and particularly build more subsidized, affordable units that unsubsidized builders cannot otherwise produce.

Policymakers at every level of government can take meaningful steps to accelerate production, reduce barriers, and incentivize smart and sensible additional density in both cities and suburbs at each stage of the development process.

Development begins with land acquisition and land-use rules and regulations. Local zoning restrictions that have inhibited development should be reviewed and reformed, with some low-hanging fruit being to reduce minimum lot size and minimum parking requirements and to allow accessory dwelling units and denser building opportunities near public transit. States can take a larger role in encouraging development through carrots and sticks. Some states, like New York and California, are already pursuing such options.

Given that housing markets are regional, and there are negative financial incentives for one locality to expand its supply if others are only further constraining it, actions at higher levels of government are often important for coordinating supply expansion. That said, given these same nuanced realities, any state or federal response is substantially more complicated. It seems naïve in a world where housing and housing research are underfunded to expect governments to be able to both establish and adjust in real time, regulations that are reflective of local opportunities and constraints as well as responsive to local needs.

The federal government can create the conditions for states and localities to be knowledgeable and responsive in these ways. This goal was pursued through the "carrot" approach during the Biden-Harris administration, where incentives for land use reform were included in billions of dollars of competition funding across federal agencies. Some argue, though, that there is a need for more "sticks"—meaning mandates for such reforms—if a larger state and local response is to occur. The federal government can influence local policy by attaching restrictions on other sources of fiscal transfers—through tax policy to incentivize development and through credit policy to finance more development.

In addition, available land is at a premium. Federal and state public-land disposition should be conducted on an expedited basis, especially in metro areas with existing unmet demand. What constitutes viable and efficient land for sale, though, is critical. For example, recent proposals to sell large swathes of protected land far from urban areas do not address the need to develop housing where there is demand. Instead, a more appropriate example would be expanding the federal pilot leveraging United States Postal Service properties. The land under thousands of centrally located postal-service properties can be repurposed for housing development either through direct sale or via a joint venture with the USPS, resulting in the redevelopment of post offices with housing above or around them or in wholesale conversion to housing. Other federal, state, or local government—owned properties could be redeveloped and densified, with housing units added on top of courthouses, schools, libraries, and other public buildings.

Once land is acquired, developers need materials and labor. Tariff policies that raise the cost of these materials and immigration policies that raise the cost of labor will undoubtedly raise the cost of housing. Instead, policymakers should incentivize innovative methods and models for development and seek new ways to drive down the cost of key inputs in the development process. Additionally, they should expand local expertise and build capacity by supporting trade schools, apprenticeships, and other training programs to broaden the pool of skilled tradespeople.

Governments have a variety of incentive-based tools through subsidized financing and the tax code to influence development decisions. A prime example is the Department of Transportation loan programs, such as those offered through the Transportation Infrastructure Finance and Innovation Act, which incentivize development through large-scale, low-cost loans. Similarly, the federal government can create new loan or financing programs, including a supply accelerator fund. The fund can offer new, federally insured loans at expedited review times.

Given the emergency nature of the growing cost burden, we further recommend learning from the examples of Operation Warp Speed and the recent rebuilding of

I-95 in Philadelphia, both of which have demonstrated that building can be quick when red tape is removed. While it is unclear what form a broader red-tape removal would take, some form of legislation that temporarily streamlines the process around development seems essential.9

Such a streamlining could include some temporary review acceleration, or exemption from National Environmental Policy Act reviews, or other forms of regulatory relief for development projects that add affordable housing and meet other guidelines in terms of location, design, and target tenant population. One recent example is that the State of California passed a bill saying that housing built around other housing, known as urban infill development, is now exempt from California Environmental Quality Act (CEQA) review. This bill will prevent anti-development groups from leveraging environmental protection policy to stall or block infill development (Christopher 2025).

In the end, though, the ability to build also relies on the existence of a competitive pool of developers engaging in the development process. Just as land-use and zoning laws restrict what can be built, they also limit who can build (see Schmitz 2020 and Quintero 2023 on increased concentration among homebuilders). As a result, increasing the pool of developers by expanding investments that train skilled builders and help entrepreneurs get started is important. Ideally, these developers will work across sectors, including the nonprofit sector, to produce housing units across the cost spectrum.

One additional opportunity is to support recent efforts by Public Housing Authorities to expand their housing portfolios. A prime example is in Montgomery County, Maryland, where the housing authority has created new loan products and is leveraging its land to create new, affordable mixed-income housing developments. This program includes a \$100 million revolving construction-loan fund that allows the agency to leverage public-private partnerships while still retaining public ownership of developments.¹⁰ Similarly, places like Atlanta have established public urban-development corporations. 11 These public entities present an interesting model because they can leverage existing public resources, and they can serve as active developers during periods when the private market is less active despite demand.

Finally, it is important to acknowledge that our current housing-supply problem is not just about stock; it is also about the affordability of that stock. Thus, it is critical

⁹ See Liscow 2024 for a discussion of barriers to developing infrastructure and Shroyer 2025 for a discussion on ways to address barriers created by the National Environmental Policy Act to increase housing supply.

^{10 &}quot;Housing Production Fund," Housing Opportunities Commission of Montgomery County, accessed September 20, 2025, https://www.hocmc.org/about-us/innovations/housing-production-fund/.

¹¹ See, for example, "About Us," Atlanta Urban Development Corporation, accessed September 20, 2025, https://www.atlurbdevco.com/about.

to ensure that the actions mentioned in this section and the prior one are coupled with strategies and subsidies ensuring that some of the housing being produced can be offered well below market prices. If land is being disposed of effectively, reviews are being conducted efficiently, and financing is available and low-cost, through means discussed here, such a goal seems feasible. Simply put, the private market does not produce truly affordable housing on its own and never has: affordable units are produced only through government support during both development (e.g., subsidized financing) and operations (e.g., rent vouchers). Given the dramatic loss of the lowest-priced units for rentals and owners across the country, and the long-term and imperfect nature of filtering, the production of housing units at market-rate prices alone will not adequately address the nation's needs.

A natural concern is that zoning reforms could go too far in the other direction and excessively limit residents' ability to alter or deter housing development projects that damage the environment, or that produce other large negative externalities on existing community residents. We recognize that some development ideas are not appropriate for certain locations and that certain historic structures and environmentally sensitive areas should be protected. There are solutions, though, that balance these concerns with the need for all Americans to have affordable shelter. Clearly, we are currently out of balance on the national scale and must focus on sensible reforms that pursue both affordability and those broader goals.

4.2 Addressing barriers to homeownership

The challenge for making homeownership more achievable is that stimulating demand alone may simply drive up housing costs. Thus, any reforms need to balance this consideration with the gains for new entrants to the housing market. For instance, an evaluation of the first-time homebuyer credit issued to new buyers during the Great Recession found that while house prices rose by 1 percent, homebuying was accelerated for those saving for a down payment by three years on average. This tradeoff is the key policy parameter, and stimulating housing demand in different market conditions will lead to different outcomes—this program was notably enacted in response to the financial crisis, so the market response would be quite different in a booming housing market (Berger et al. 2020).

One crucial area to focus on to make homeownership more achievable is the tax code. Federal income taxes provide benefits to homeownership first in the form of the mortgage interest deduction, which is highly regressive and poorly structured to incentivize homeownership (Glaeser and Shapiro 2003; Sommer and Sullivan 2018). Reforming the mortgage interest deduction into a targeted first-time buyer credit would better align incentives to purchase housing.

A more ambitious tax reform would examine a tax on imputed rent to encourage empty nesters to downsize their large homes for smaller ones that fit their current needs. Instead, many states are enacting exemptions on property tax increases for longtime homeowners, in the style of California's Proposition 13, which creates a wedge between the tax burdens of current owners and new prospective buyers. These tax incentives make it more difficult for new buyers to enter the market. Given the tax benefits accruing to some longtime homeowners and the powerful effects of mortgage lock-in, it may be desirable to offer tax relief to some home sellers in addition to first-time homebuyers to increase the inventory of starter homes for sale

Another approach to addressing lock-in would be to create new financing options that make existing mortgages assumable or portable, thereby allowing locked-in homeowners to either sell their cheap mortgage along with the house or take it with them. These features would unlock homeowners who are attached to their homes through their mortgages. On the other hand, changing the portability of mortgage credit would have ripple effects through mortgage durations and the pricing of associated mortgage-backed securities, which would need to be addressed in any type of reform along these lines.

Investors in the housing market also have numerous tax advantages relative to homeowners. Investors in income-producing real estate can deduct operating expenses, take depreciation on the structure and capital improvements, and adjust their portfolios using tax-free exchanges (e.g., 1031) in ways that homeowners cannot.¹² If policymakers aim to encourage more homeownership and to transition single-family rental properties back to homeowners, the tax code could be altered along these margins to make it more generous to individual owner-occupiers instead of institutional and other real estate investors. Local governments have taken steps to limit the number of investor-owned properties for rent in various areas, thereby preserving homeownership. Investors may be more efficient owners of certain types of properties due to the lower cost of capital and economies of scale in maintenance, negotiating insurance coverage, and so forth—so tradeoffs in the policy goal of shifting more investor-owned properties to owner-occupied properties deserve further empirical and theoretical exploration.

New tax-credit programs, such as the Neighborhood Homes Tax Credit, have been proposed and are worth pursuing. Such programs would subsidize the development

¹² Homeowners benefit from the mortgage interest deduction, which has become less relevant since the 2017 Tax Cuts and Jobs Act effectively doubled the standard deduction, and from receiving the first \$250k (single)/\$500k (married) of capital gains on the primary residence tax-free. The capital gains considerations may be relevant for longtime owners who have benefited from substantial appreciation but are unlikely to impact new first-time buyers. Note that investors also deduct their mortgage interest.

of new for-sale housing opportunities, particularly for first-time homebuyers. This credit could stimulate the development and redevelopment of properties, increasing ownership options. It would also likely have a much larger supply impact than other credit programs like Opportunity Zones, which research has found are often poorly targeted (Green and Shi 2022) and provide tax benefits to investments that would have largely happened anyway (Corinth and Fieldman 2024). If these programs were then tied to sensible policies that increase access to credit, like counting timely rental payments as a part of a person's credit score, we could see a meaningful increase in access to homeownership.

We acknowledge the concern that in some markets, investors can play a crucial role in acquiring and rehabbing properties during the housing bust, bringing communities back faster than if they were blocked from doing so. However, we reiterate that it is a policy choice what the mix of investor-owned and owner-occupied units is in a community and across the country more generally. Therefore, policymakers must acknowledge and address policy decisions that directly, or inadvertently, crowd out first-time homebuyers or homeowners more generally from the market and even lock them into paying higher rents for a unit they would have otherwise owned.

4.3 Ensuring we have a stronger and more complete housing safety net

Our final area of policy solutions is to provide a housing safety net that is comparable to the safety net in place for unemployment insurance or nutrition assistance. Currently, housing support is rationed despite need, with far fewer rental subsidies

available than households eligible for them. This shortage means that households cannot access housing support when they need it, further hurting their housing and economic outcomes. Further, if someone is fortunate enough to receive assistance, they risk never getting it again if they leave the program.

All low-income households should be eligible to receive housing assistance in the form of a voucher

"All low-income households should be eligible to receive housing assistance in the form of a voucher or voucherequivalent rent benefit."

or voucher-equivalent rent benefit. This gap in the safety net is straightforward to fix but requires spending more on helping low-income families afford housing. If operationalized, this rental assistance can be leveraged to increase housing supply. Separately, if owners know they can access that rent payment security, they can both develop housing serving low-income households and invest in existing properties, the latter generating an important supply response as well.

Importantly, much space exists to broaden the spectrum of the forms of rental assistance, including providing direct rental assistance and creating tools that increase housing stability, such as national emergency rental assistance. 13 Research has shown that emergency rental assistance (ERA), which is short-term assistance offered to households who are facing a housing or economic shock, reduces homelessness (Phillips and Sullivan 2025). During the pandemic, the federal government funded ERA nationally, though that assistance was for a longer period and for a much larger sum of money than a traditional ERA program (Reina et al. 2024).

While evidence shows some positive impact of the pandemic federal ERA programs on reducing rent debt (Collinson et al. 2024; Reina and Lee 2024) and homelessness (Nelson et al. 2024), it was an imperfect housing solution, partially because ERA is most effective when serving households facing idiosyncratic shocks. Localities like Philadelphia are testing direct rental-assistance models, where instead of requiring a tenant to find an owner who will accept government rental assistance, the tenant is given the assistance directly (Reina et al. 2024). These models aim to address the administrative burden embedded in rental assistance programs, affecting tenants, owners, and government agencies and reducing overall access and the potential positive outcomes associated with the benefit (Aiken et al. 2023; Barnes 2021). Preliminary findings show that this program reduced forced moves and homelessness and increased access to higher-quality housing (Reina, Fowle et al. 2025). As a result, we are at a moment where we can acknowledge that funding longstanding rental-assistance models is still important, but that these models should not be the only available means of assistance.

4.4 Ensuring financing is available through the cycle

To address the extreme cyclicality of housing shortfalls and the gap between permits and completions, the federal government can play a pivotal role in providing steadier financing for the development of housing. The specific design may vary based on institutional capabilities and existing efforts, but more aggressively and countercyclically subsidizing the financing of housing at both the construction phase and the stabilized permanent phase would smooth out the volatile series of completions shown above. While these challenges in financing development through the cycle are present for both single-family and multifamily construction, we focus on multifamily financing needs given the goal of increasing density to address affordability. It is important to note here that multifamily housing includes more than just rental properties. The ideas and principles here should be applied to multifamily ownership opportunities, such as condos and co-ops, as well.

¹³ For a full discussion of such potential policies, see Reina, O'Regan et al. 2025. See also Kearney and Sullivan 2025 for a discussion of financial assistance and poverty alleviation.

One promising approach, described in the Biden White House Housing Supply Action Plan (White House 2022), is to expand multifamily financing in a loan system that approximates the system in place for single-family lending. Fannie Mae and Freddie Mac could be empowered to insure multifamily construction loans as well as stabilized properties, providing much-needed countercyclical liquidity to construction financing markets. Furthermore, Fannie and Freddie should create innovative new financing tools such as mezzanine debt or preferred-equity arrangements to fill the "equity gap" when first liens are insufficient to cover the high costs of building affordable housing.¹⁴

These tools should be applied countercyclically to keep the flow of multifamily financing stable through the business cycle, ideally with automatic stabilizers that increase financing incentives when construction falls below a certain threshold or when other macroeconomic triggers are reached. By addressing the cyclicality of financing, multifamily developers and operators would be able to plan ahead, maintain continuous employment to smooth out the cyclicality of construction labor, and reduce the overall cyclical risk in the system, keeping it in line with the single-family market.

One pragmatic concern is when such a stabilizer would kick in. There are points where the private market can, in fact, overbuild, and this overbuilding could be national or specific to submarkets. In addition, demographic responses to housing and other costs could have immediate and lagged effects, meaning that if recent housing-affordability challenges reduce birth rates, and national policy limits immigration, the US may experience an aggregate population decline in the coming decades. Given that population trends are dynamic and responsive, and housing is durable, the discussion of a stabilizer should consider both current and future housing demand so as not to promote excessive overbuilding.

More generally, the commercial-mortgage financing toolkit can be applied ambitiously to affordable-housing construction, renovation, and unit retention. Federal, state, and local entities should explore the use of equity sharing arrangements, land leases, convertible mortgages, and other financing structures that share risk between lenders and borrowers in different ways and in different states of the world to achieve lower cost of capital and greater entry into development. These products can fill an important gap in removing some of the perceived or actual risk of development. For example, the federal-financing risk share program—which was reinstituted and extended indefinitely under the Biden-Harris administration—provides mortgage insurance to state housing-finance agencies, providing financing

¹⁴ See Williams 2024 for one thoughtful proposal on this topic.

for the development of multifamily housing, with states taking on 50 percent of the project risk. 15 Multifamily builders and investors would give up some of the upside in equity appreciation in exchange for lower up-front interest costs—costs that often dictate whether a project is feasible.

In a world with enormous housing shortfalls and loan delinquency rates below 1 percent, one can argue that insufficient risk is being taken in the lending market. Some lenders have pointed to increasingly complex regulation through Dodd-Frank and Basel III that especially targets high-volatility commercial real-estate loans (see NMHC 2016). Regional banks have historically been large players in this market but have faced challenges in the wake of the collapse of Silicon Valley Bank and the broader swing in interest rates. Debt funds and other less conventional options may have sufficient capital on hand but expect high returns.

If the private market is seeking too high a return on its investment, then the public sector should expand its risk-return appetite and experiment with more-generous financing options. Interest rates and terms should still be reflective of risk; at the same time, bringing the same type of subsidized credit environment from the single-family market to the multifamily market, with the same standardization in contracts and bundling for the secondary market, will generate efficiencies.

The government's multifamily lending market is often an afterthought, with lending caps imposed year-over-year with no relation to need, and the primary-secondary market infrastructure treated as temporary, as though the private market will soon return to take back market share. If anything, the lesson from the last ten years is that affordable-housing development is increasingly challenging, with greater fixed development costs, and therefore needs even more consistent public support.

Thus, existing programs that finance both construction and permanent operations of affordable multifamily housing should be expanded and strengthened, with faster and more generous financing available, while still delivering an appropriate risk-adjusted return in line with single-family lending programs. By improving underwriting speed, increasing leverage and generosity during credit crunches, and innovating on financing design by learning from the private sector, governments can ensure that multifamily financing is available for construction, purchase, and refinancing through volatile market conditions.

Two natural concerns are whether more government involvement in multifamily construction and operations would crowd out private investment, and whether

¹⁵ See the National Council of State Housing Agencies for more details: https://www.ncsha.org/advocacy-issues/fha-hfarisk-share-program/.

it would potentially set off a credit bubble that would lead to price appreciation and a boom-bust cycle. Regarding crowd-out, the presence of a housing shortage suggests that private-sector lending is currently not happening in sufficient volume, especially when it comes to developing affordable units. Naturally, the generosity of financing can be reassessed if the private market develops more appetite for extending credit. Regarding price appreciation and the threat of a price cycle, the extreme cyclicality of construction suggests the need for countercyclical financing support, which would not amplify construction during booms when private credit is widely available.

Another key area of opportunity is financing for property and home repair. Owners of small multifamily properties often face difficulty accessing financing to make repairs, potentially affecting both the quality and affordability of those units. Local programs like the Rental Improvement Fund in Philadelphia have provided loan guarantees or subsidies that reduce the cost of lending to owners of small multifamily properties to make needed repairs. Such programs have the potential to be scaled at a federal level through existing multifamily loan insurance programs, such as the 221d3 program at the US Department of Housing and Urban Development. Further, these programs can be paired with affordability restrictions that ensure long-term affordability.

Further, localities have initiated a broad set of home repair programs for low-income homeowners, with one notable example being the Whole Homes Repair program in Pennsylvania. These programs are similar and provide direct or subsidized loans to owners, and sometimes additional grants to make home repairs. Creating a similar federal program could encourage investments that allow homeowners to remain in their homes, while ensuring that existing ownerships are not simply converted to rental properties by investors benefiting from credit asymmetry. Supporting repairs would enable further filtering to occur as properties depreciate over time (see, e.g., Rosenthal 2014; Spader 2024; Mense 2025).

Conclusion

What is creating the housing affordability crisis? In short, an imbalance between supply and demand. While the clear answer is that we need more housing, we emphasize the need to also focus on affordability. Fortunately, federal and local governments can make it easier to build, increase access to homeownership, and address our nation's lack of a safety net, which, combined, would address our current housing needs. Regardless, though, the ideas here tie into a broader theme, which is to ensure that the housing market works across cycles and for everyone, and to ensure that the market creates the space for innovation.

References

- Aiken, Claudia, Ingrid Gould Ellen, Isabel Harner, Tyler Haupert, Vincent Reina, and Rebecca Yae. 2022. "Can Emergency Rental Assistance Be Designed to Prevent Homelessness? Learning from Emergency Rental Assistance Programs." Housing Policy Debate 32, no. 6: 896-914.
- Aiken, Claudia, Ingrid Gould Ellen, and Vincent Reina. 2023. "Administrative Burdens in Emergency Rental Assistance Programs." RSF: The Russell Sage Foundation Journal of the Social Sciences 9, no. 5: 100-21.
- Appelbaum, Yoni. 2025. Stuck. Random House.
- ATTOM. 2023. "Year-End 2022 U.S. Foreclosure Market Report." Market report published online in ATTOM. https://www.attomdata.com/news/market-trends/foreclosures/attom-yearend-2022-u-s-foreclosure-market-report/
- Barnes, Carolyn Y. 2021. "'It Takes a While to Get Used to': The Costs of Redeeming Public Benefits." Journal of Public Administration Research and Theory 31, no. 2: 295-310.
- Bartik, Alexander, Arpit Gupta, and Daniel Milo. 2025. "The Costs of Housing Regulation: Evidence from Generative Regulatory Measurement." Social Science Research Network, revised August 19. https://dx.doi.org/10.2139/ssrn.4627587.
- Baum-Snow, Nathaniel, and Gilles Duranton. 2025. "Housing Supply and Housing Affordability." Working paper no. 33694. National Bureau of Economic Research, April. https://www.nber.org/papers/w33694.
- Baum-Snow, Nathaniel, and Lu Han. 2024. "The Microgeography of Housing Supply." Journal of Political Economy 132, no. 6: 1897-946.
- Berger, David, Nicholas Turner, and Eric Zwick. 2020. "Stimulating Housing Markets." Journal of Finance 75, no. 1 (February): 277-321. https://doi.org/10.1111/jofi.12847.
- Bertaud, Alain, and Jan K. Brueckner. 2005. "Analyzing Building-Height Restrictions: Predicted Impacts and Welfare Costs." Regional Science and Urban Economics 35, no. 2: 109–25.
- Board of Governors of the Federal Reserve System. 2025a. Delinquency Rate on Commercial Real Estate Loans (Excluding Farmland), Booked in Domestic Offices, All Commercial Banks (DRCRELEXFACBS). Federal Reserve Economic Data (FRED). https://fred.stlouisfed. org/series/DRCRELEXFACBS.
- Board of Governors of the Federal Reserve System. 2025b. Delinquency Rate on Single-Family Residential Mortgages, Booked in Domestic Offices, All Commercial Banks (DRSFRMACBS). Federal Reserve Economic Data (FRED). https://fred.stlouisfed.org/series/ DRSFRMACBS.
- Board of Governors of the Federal Reserve System. 2025c. Senior Loan Officer Opinion Survey on Bank Lending Practices. Washington, DC. Federal Reserve Economic Data (FRED). https://www.federalreserve.gov/data/sloos.htm.
- Brysch, Sara Lia, and Darinka Czischke. 2021. "Affordability Through Design: The Role of Building Costs in Collaborative Housing." Housing Studies 37, no. 10: 1800–20. https://doi.org/10.1080/02673037.2021.2009778...

- Bureau of Labor Statistics (BLS). 2025. "Consumer Price Index Summary." News release.

 Bureau of Labor Statistics, September 11. https://www.bls.gov/news.release/cpi.nr0.htm.
- Choi, Jung Hyun, Jun Zhu, Laurie Goodman, Bhargavi Ganesh, and Sarah Strochak. 2018.

 Millennial Homeownership: Trends, Barriers, and Policy Recommendations. Urban Institute, July 11. https://www.urban.org/research/publication/millennial-homeownership.
- Christopher, Ben. 2025. "One of the Biggest Obstacles to Building New CA Housing Has Now Vanished." CalMatters, June 30. https://calmatters.org/housing/2025/06/ceqa-urban-development-infill-budget/.
- Collinson, Robert, Anthony DeFusco, John Eric Humphries, Benjamin J. Keys, David Phillips, Vincent Reina, Patrick S. Turner, Winnie van Dijk. 2024. "The Effects of Emergency Rental Assistance During the Pandemic: Evidence from Four Cities." Working paper no. 32463. National Bureau of Economic Research, May; revised March 2025. https://www.nber.org/system/files/working_papers/w32463/w32463.pdf.
- Collinson, Robert, John Eric Humphries, Nicholas S. Mader, Davin K. Reed, Daniel I. Tannenbaum, and Winnie van Dijk. 2022. "Eviction and Poverty in American Cities." Working paper no. 30382. National Bureau of Economic Research, August, revised July 2023. https://www.nber.org/system/files/working_papers/w30382/w30382.
- Corinth, Kevin, and Naomi Feldman. 2024. "Are Opportunity Zones an Effective Place-Based Policy?" *Journal of Economic Perspectives* 38, no. 3: 113–36.
- Coven, Joshua. 2025. "The Impact of Institutional Investors on Homeownership and Neighborhood Access." Social Science Research Network, revised May 13. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4554831.
- D'Amico, Leonardo, Edward L. Glaeser, Joseph Gyourko, William Kerr, and Giacomo A. M. Ponzetto. 2024. "Why Has Construction Productivity Stagnated? The Role of Land-Use Regulation." Working paper no. 33188. National Bureau of Economic Research, November. https://www.nber.org/papers/w33188.
- Dettling, Lisa J., and Melissa Schettini Kearney. 2025. "Did the Modern Mortgage Set the Stage for the US Baby Boom?" Working paper no. 33446. National Bureau of Economic Research, February. https://www.nber.org/papers/w33446.
- Dong, Hongwei, and J. Andy Hansz. 2019. "Zoning, Density, and Rising Housing Prices: A Case Study in Portland, Oregon." *Urban Studies* 56, no. 16: 3486–503. https://doi.org/10.1177/0042098018813251.
- Duranton, Gilles, and Diego Puga. 2023. "Urban Growth and Its Aggregate Implications." Econometrica 91, no. 6: 2219–59.
- Ellen, Ingrid Gould, Katherine O'Regan, and Sarah Strochak. 2021. "Using HUD Administrative Data to Estimate Success Rates and Search Durations for New Voucher Recipients." Washington: US Department of Housing and Urban Development. Accessed March 4 (2021): 2024.
- FHFA National Mortgage Database. 2025. https://www.fhfa.gov/data/national-mortgage-database-aggregate-statistics.
- First American Data and Analytics. 2025. "2025 Housing Market Outlook: Will the Freeze Finally Thaw?" DataDriven Insights (blog), March 6. https://dna.firstam.com/insights-blog/2025-housing-market-outlook-will-the-freeze-finally-thaw.

- Fonseca, Julia, and Lu Liu. 2024. "Mortgage Lock-In, Mobility, and Labor Reallocation." The Journal of Finance 79, no. 6: 3729-3772.
- Fonseca, Julia, Lu Liu, and Pierre Mabille. 2025. "Unlocking Mortgage Lock-In: Evidence from a Spatial Housing Ladder Model." Social Science Research Network, revised April 4. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4874654.
- Glaeser, Edward L., and Joseph Gyourko. 2003. "The Impact of Building Restrictions on Housing Affordability." Federal Reserve Bank of New York Economic Policy Review (June): 21-39. https://www.newyorkfed.org/medialibrary/media/research/epr/03v09n2/0306glae.pdf.
- Glaeser, Edward L., and Joseph Gyourko. 2025. "America's Housing Supply Problem: The Closing of the Suburban Frontier?" Working paper no. 33876. National Bureau of Economic Research, May. https://www.nber.org/papers/w33876.
- Glaeser, Edward L., and Jesse Shapiro. 2003. "The Benefits of the Home Mortgage Interest Deduction." In Tax Policy and the Economy, vol. 17, edited by James M. Poterba, 37–82. MIT Press.
- Glaeser, Edward L., and Bryce A. Ward. 2009. "The Causes and Consequences of Land Use Regulation: Evidence from Greater Boston." Journal of Urban Economics 65, no. 3 (May): 265-78. https://doi.org/10.1016/j.jue.2008.06.003.
- Goodman, Laurie, and Jun Zhu. 2024. Estimated Number of Loans Saved During the COVID-19 Pandemic Attributable to Improved Loss Mitigation. Urban Institute, July 30. https://www.urban.org/sites/default/files/2024-07/Estimated_Number_of_Loans_Saved_ during_the_COVID-19_Pandemic.pdf.
- Gorback, Caitlin, and Benjamin J. Keys. 2020. "Global Capital and Local Assets: House Prices, Quantities, and Elasticities." Working paper no. 27370. National Bureau of Economic Research, June. https://www.nber.org/papers/w27370.
- Gorback, Caitlin, Franklin Qian, and Zipei Zhu. 2025. "Impact of Institutional Owners on Housing Markets." Social Science Research Network, revised April 8. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5160602.
- Green, Jamaal, and Wei Shi. 2022. "Classifying Opportunity Zones—A Model-Based Clustering Approach." Cityscape 24, no. 1: 117-32.
- Green, Richard K., Stephen Malpezzi, and Stephen K. Mayo. 2005. "Metropolitan-Specific Estimates of the Price Elasticity of Supply of Housing, and Their Sources." American Economic Review 95, no. 2 (May): 334-39. https://www.jstor.org/stable/4132843.
- Gyourko, Joseph, Jonathan S. Hartley, and Jacob Krimmel. 2021. "The Local Residential Land Use Regulatory Environment Across U.S. Housing Markets: Evidence from a New Wharton Index." Journal of Urban Economics 124 (July): 103337.
- Gyourko, Joseph, Christopher Mayer, and Todd Sinai. 2013. "Superstar Cities." American Economic Journal: Economic Policy 5, no. 4 (November): 167–99.
- Handbury, Jessie, Samuel Hughes, and Benjamin J. Keys. 2025. "Segmentation and Returns to Rental Housing." University of Pennsylvania working paper.
- Hanson, Sebastian. 2024. "Institutional Investors in the Market for Single-Family Housing: Where did They Come From, Where did They Go?" Social Science Research Network, revised November 19. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4268640.

- Howard, Troup, Menqi Wang, and Dayin Zhang. 2024. "Cracking Down, Pricing Up: Housing Supply in the Wake of Mass Deportation." Social Science Research Network, February 16. http://www.trouphoward.com/uploads/1/2/7/7/127764736/howard_wang_zhang_cracking_down_pricing_up_ssrn_nov_2024.pdf.
- Hsieh, Chang-Tai, and Enrico Moretti. 2019. "Housing Constraints and Spatial Misallocation." American Economic Journal: Macroeconomics 11, no. 2: 1–39.
- ICE Mortgage Monitor. 2025. Mortgage Monitor Report: July 2025. ICE Mortgage Monitor, July. https://mortgagetech.ice.com/publicdocs/mortgage/imt-july-2025-mortgage-monitor-report-sMm33rhnRWDK.pdf.
- Joint Center for Housing Studies of Harvard University (JCHS). 2023. Housing America's Older Adults. Joint Center for Housing Studies of Harvard University. https://www.jchs.harvard.edu/sites/default/files/reports/files/Harvard_JCHS_Housing_Americas_Older_Adults_2023_ Revised_040424.pdf.
- JCHS. 2024a. "Figure 22: Cost Burdens Continued to Increase Across Incomes During the Pandemic." In America's Rental Housing 2024, 37. Joint Center for Housing Studies of Harvard University. https://www.jchs.harvard.edu/sites/default/files/reports/files/Harvard_JCHS_Americas_Rental_Housing_2024.pdf.
- JCHS. 2024b. "Cost Burdens High Across the Country." Interactive map published online in conjunction with The State of the Nation's Housing 2024. Joint Center for Housing Studies of Harvard University. https://www.jchs.harvard.edu/son-2024-cost-burdens-map.
- Kearney, Melissa S., and James Sullivan. 2025. "Beyond the Myths: A Clearer Path to Poverty Alleviation in America." In Advancing America's Prosperity, edited by Melissa S. Kearney and Luke Pardue. Washington, DC: Aspen Institute.
- Klein, Ezra, and Derek Thompson. 2025. Abundance. Simon and Schuster.
- Knaap, Gerrit-Jan, Stuart Meck, Terry Moore, and Robert Parker. 2007. "Do We Know Regulatory Barriers When We See Them? An Exploration Using Zoning and Development Indicators." Housing Policy Debate 18, no. 4: 711–49. https://doi.org/10.1080/10511482.2007. 9521619.
- LaJeunesse, Elizabeth. 2025. "First Take: How New Tariffs Could Raise Housing Costs." John Burns Research and Consulting, April 10. https://jbrec.com/insights/how-new-tariffs-could-raise-housing-costs/.
- Landis, John, and Vincent J. Reina. 2021. "Do Restrictive Land Use Regulations Make Housing More Expensive Everywhere?" Economic Development Quarterly 35, no. 4: 305–24. https://doi.org/10.1177/08912424211043500.
- Lee, Yeonhwa, Peter A. Kemp, and Vincent J. Reina. 2022. "Drivers of Housing (Un)Affordability in the Advanced Economies: A Review and New Evidence." Housing Studies 37, no. 10: 1739–752. https://doi.org/10.1080/02673037.2022.2123623.
- Liscow, Zachary. 2024. "State Capacity for Building Infrastructure." In Strengthening America's Economic Dynamism, edited by Melissa S. Kearney and Luke Pardue, 96–135. Aspen Institute. https://doi.org/10.5281/zenodo.14036826.

- Loewenstein, Lara, and Jason Meyer. 2024. "Comparing Two House-Price Booms." Federal Reserve Bank of Cleveland. Economic Commentary 2024-04 (February 27): 1-9. https://www.clevelandfed.org/-/media/project/clevelandfedtenant/clevelandfedsite/ publications/economic-commentary/2024/ec-202404-comparing-two-house-pricebooms/ec202404.pdf.
- Lundberg, Ian, Sarah L. Gold, Louis Donnelly, Jeanne Brooks-Gunn, and Sarah S. McLanahan. 2021. "Government Assistance Protects Low-Income Families from Eviction." Journal of Policy Analysis and Management 40, no. 1: 107-27.
- Matlack, Janna L., and Jacob L. Vigdor. 2008. "Do Rising Tides Lift All Prices? Income Inequality and Housing Affordability." Journal of Housing Economics 17, no. 3: 212-24. https://doi.org/10.1016/j.jhe.2008.06.004.
- Mayer, Christopher J., and C. Tsuriel Somerville. 2000. "Land Use Regulation and New Construction." Regional Science and Urban Economics 30, no. 6 (December): 639-62. https://doi.org/10.1016/S0166-0462(00)00055-7.
- Mense, Andreas. 2025. "The Impact of New Housing Supply on the Distribution of Rents." Journal of Political Economy Macroeconomics 3, no. 1: 1-42. https://ideas.repec.org/a/ucp/ jpemac/doi10.1086-733977.html.
- Mian, Atif and Amir Sufi. 2014. House of Debt: How They (and You) Caused the Great Recession, and How We can Prevent it from Happening Again. University of Chicago Press.
- Mills, Gregory, Daniel Gubits, Larry Orr, David Long, Judie Feins, Bulbul Kaul, et al. 2006. Effects of Housing Vouchers on Welfare Families. US Department of Housing and Urban Development, Office of Policy Development and Research, September. https://www.huduser.gov/publications/pdf/hsgvouchers_1_2011.pdf.
- Mortgage Bankers Association (MBA). n.d. "Quarterly Commercial/Multifamily Mortgage Delinquency Rates." Mortgage Bankers Association. Accessed July 2, 2025. https://www.mba.org/news-and-research/research-and-economics/commercialmultifamily-research/commercial-multifamily-mortgage-delinquency-rates.
- Myers, Dowell, Hyojung Lee, and JoHung Park. 2025. "Misalignment of Housing Growth and Population Trends: Cohort Size and Lagging Measurements Through Recession and Recovery." RSF: The Russell Sage Foundation Journal of the Social Sciences 11, no. 1 (January): 86-109. https://www.rsfjournal.org/content/11/1/86.
- Myers, Dowell, and SungHo Ryu. 2008. "Aging Baby Boomers and the Generational Housing Bubble: Foresight and Mitigation of an Epic Transition." Journal of the American Planning Association 74, no. 1: 17-33. https://doi.org/10.1080/01944360701802006.
- National Association of Realtors (NAR). 2024. "Highlights from the Profile of Home Buyers and Sellers." Research reports of the National Association of REALTORS. https://www.nar.realtor/research-and-statistics/research-reports/highlights-from-theprofile-of-home-buyers-and-sellers.
- National Multifamily Housing Council (NMHC). 2016. "Banks Tap the Brakes on Multifamily Construction Loans." National Multifamily Housing Council, March 21. https://www.nmhc.org/news/nmhc-news/2000-2016/banks-tap-the-brakes-onmultifamily-construction-loans.

- Nelson, Katherine, Chi-Hyun Kim, Rebecca Yae, and Vincent Reina. 2024. "Emergency Rental Assistance and Pandemic Protections in Los Angeles and Philadelphia: Assessing Impact on Eviction, Forced Moves and Homelessness." Paper presented at the Association for Public Policy Analysis and Management Fall Research Conference, November 22, National Harbor, MD. https://www.appam.org/assets/1/6/_2024_APPAM_Program_-_Printable.pdf.
- Patel, Elena, Aastha Rajan, and Natalie Tomeh. 2024. "Make It Count: Measuring Our Housing Supply Shortage." Brookings Institution, November 26. https://www.brookings.edu/articles/make-it-count-measuring-our-housing-supply-shortage/.
- Phillips, David C., and James X. Sullivan. 2025. "Do Homelessness Prevention Programs Prevent Homelessness? Evidence from a Randomized Controlled Trial." Review of Economics and Statistics (May): 1–30. http://dx.doi.org/10.1162/rest_a_01344.
- Piskorski, T. and Seru, A., 2018. "Mortgage Market Design: Lessons from the Great Recession." Brookings Papers on Economic Activity, 2018(1), pp.429-513.
- Pollakowski, Henry O., and Susan M. Wachter. 1990. "The Effects of Land-Use Constraints on Housing Prices." Land Economics 66, no. 3 (August): 315–24. https://doi.org/10.2307/3146732.
- Pollakowski, Henry O., Daniel H. Weinberg, Fredrik Andersson, John C. Haltiwanger, Giordano Palloni, and Mark J. Kutzbach. 2022. "Childhood Housing and Adult Outcomes: A Between-Siblings Analysis of Housing Vouchers and Public Housing." American Economic Journal: Economic Policy 14, no. 3: 235–72.
- Quintero, Luis. 2023. "Fewer Players, Fewer Homes: Concentration and the New Dynamics of Housing Supply." Research paper no. 18-18. Johns Hopkins Carey Business School, last revised August 30. https://papers.srn.com/sol3/papers.cfm?abstract_id=3303984.
- Raymond, Elora L., Richard Duckworth, Benjamin Miller, Michael Lucas, and Shiraj Pokharel. 2016. "Corporate Landlords, Institutional Investors, and Displacement: Eviction Rates in Single Family Rentals." Community and Economic Development Discussion Paper no. 2016-4. Federal Reserve Bank of Atlanta, December 1. https://ssrn.com/abstract=2893552.
- Reina, Vincent, and Claudia Aiken. 2022. "Moving to Opportunity, or Aging in Place? The Changing Profile of Low Income and Subsidized Households and Where They Live." *Urban Affairs Review* 58, no. 2: 454–92.
- Reina, Vincent, Claudia Aiken, and Jenna Epstein. 2021. Exploring a Universal Housing Voucher. Interactive report. Housing Initiative at Penn, September 21. https://www.housinginitiative.org/universal-voucher.html.
- Reina, Vincent J., Matthew Z. Fowle, Sara R. Jaffee, Rachel Mulbry, and Miranda Fortenberry. 2024. "The Future of Rental Assistance." Cityscape 26, no. 2: 293–308. https://bpb-us-w2.wpmucdn.com/web.sas.upenn.edu/dist/9/1022/files/2024/10/Reina-FutureRentalAssistance-2024.pdf.
- Reina, Vincent J., Matthew Z. Fowle, Mimi Tanski, Rachel Mulbry, Miranda Fortenberry, and Sara R. Jaffee. 2025. "Cash and Vouchers: The Impact of Different Forms of Rental Assistance on Housing Insecurity". Working paper. University of Pennsylvania Housing Initiative, August. https://www.housinginitiative.org/uploads/1/3/2/9/132946414/hip_phlh_cashandvouchers_impactonhousinginsecurity.pdf.

- Reina, Vincent J., and Yeonhwa Lee. 2023. "COVID-19 and Emergency Rental Assistance: Impact on Rent Arrears, Debt, and the Well-Being of Renters in Philadelphia." RSF: The Russell Sage Foundation Journal of the Social Sciences 9, no. 3: 208–29. https://www.rsfjournal. org/content/rsfjss/9/3/208.full.pdf.
- Reina, Vincent J., Katherine O'Regan, Christine Jang-Trettien, and Haydar Kurban. 2025. "Expanding Access to Rental Assistance: What Do We Know and Where Do We Go from Here?" Housing Policy Debate 35, no. 3: 552-68.
- ResiClub, Zillow. 2024. "Zillow: Income Needed to Comfortably Afford a Home is Up 80% since 2020." Newsletter post published online in ResiClub. https://www.resiclubanalytics. com/p/zillow-income-needed-comfortably-afford-home-80-since-2020.
- Rosenthal, Stuart S. 2014. "Are Private Markets and Filtering a Viable Source of Low-Income Housing? Estimates from a 'Repeat Income' Model." American Economic Review 104, no. 2 (February): 687-706.
- Saiz, Albert. 2010. "The Geographic Determinants of Housing Supply." Quarterly Journal of Economics 125, no. 3 (August): 1253-96.
- Schmitz, James A. 2020. "Solving the Housing Crisis will Require Fighting Monopolies in Construction." Working paper no. 773. Federal Reserve Bank of Minneapolis, December 11. https://www.minneapolisfed.org/research/wp/wp773.pdf.
- Shroyer, Aaron. 2025. Infill Nation: Reforming NEPA to Build More Housing. Center for Public Enterprise, July 8. https://publicenterprise.org/report/infill-nation/.
- Slok, Torsten, Rajvi Shah, and Shruti Galwankar. 2025. US Housing Outlook. Apollo Global Management, May. https://www.apolloacademy.com/wp-content/uploads/2025/05/US-Housing-Outlook_May-2025.pdf.
- Sommer, Kamila, and Paul Sullivan. 2018. "Implications of US Tax Policy for House Prices, Rents, and Homeownership." American Economic Review 108, no. 2: 241-74.
- Spader, Jonathan. 2024. "Has Housing Filtering Stalled? Heterogeneous Outcomes in the American Housing Survey, 1985–2021." Housing Policy Debate 34, no. 1: 3–25.
- Tyvimaa, Tanja, and Md. Kamruzzaman. 2019. "The Effect of Young, Single Person Households on Apartment Prices: An Instrument Variable Approach." Journal of Housing and the Built Environment 34: 91-109. https://doi.org/10.1007/s10901-018-9618-1.
- U.S. Census Bureau. 2025. New Residential Construction 2025. (127th edition). Washington, DC. Table 12.
- White House. 2022. "President Biden Announces New Actions to Ease the Burden of Housing Costs." White House Briefing Room statement, May 16. https://bidenwhitehouse.archives. gov/briefing-room/statements-releases/2022/05/16/president-biden-announces-newactions-to-ease-the-burden-of-housing-costs/.
- Williams, Paul E. 2024. "How the Federal Financing Bank Supports Multifamily Construction." Center for Public Enterprise, August 13. https://publicenterprise.org/how-the-federalfinancing-bank-supports-housing-construction.

PART II

AMERICA'S STRATEGIC COMPETITIVENESS

Aligning High-Skilled Immigration Policy with National Strategy

Jeremy Neufeld

An Energy Strategy for National Renewal Joseph Majkut

Aligning High-Skilled Immigration Policy with National Strategy

AUTHOR

Jeremy Neufeld*

ABSTRACT

The United States' innovation edge rests on its ability to draw on the best talent from around the world. Yet, the laws that govern high-skilled immigration have barely moved since 1990 for permanent residency and since 2000 for temporary work visas, leaving them misaligned with the size and needs of today's economy. Employers register for more than three times as many H-1Bs as are available each year, which are then awarded at random rather than on the basis of merit. For permanent residency, just 140,000 employment-based green cards are issued annually, most of which go to spouses and children rather than to workers themselves. The resulting backlogs now exceed one million, leaving many workers stuck in less productive jobs and discouraging future talent from coming to the US altogether. This paper charts the alphabet soup of high-skilled immigration pathways—F-1/OPT, J-1, H-1B, O-1A, EB-1, EB-2, and EB-3—demonstrating how inflexible and outdated rules have undermined the scale, selectivity, and retention of global talent. It proposes reforms to make immigration a renewed national strength: expanding green cards, piloting a pointsbased system for permanent residency, and launching a government talent-scouting arm. Together, these steps would realign US immigration policy with national ambition and restore its role in fueling American innovation and economic leadership.

^{*} Director of Immigration Policy, Institute for Progress.

Introduction

America's current immigration system for high-skilled talent was codified in the analog era before the internet, updated during the dot-com boom, and has remained untouched since. Today, it acts less as a nimble conduit for top minds than a maze that deters and immobilizes them.

The talent who have managed to navigate the immigration labyrinth have accomplished great things. Immigrants founded 55 percent of our billion-dollar startups and 60 percent of America's top AI startups. Immigrants have produced 28 percent of our high-quality patents and won 38 percent of our Nobel Prizes in science. But static quotas and restrictive rules translate into growing waits and uncertainty, threatening to sabotage this source of strength.

Given the outsized role of superstar immigrant talent in developing new technologies, where that talent ends up has ramifications of macroeconomic and geopolitical proportions.

Consider: mRNA vaccine technology was developed in the United States because biochemistry pioneer Katalin Karikó was allowed to come to the country in 1985, before the institution of rules in 1990 and 1998 that would have made it much less likely for her to have been able to successfully immigrate. In the years since, 5G was developed in China because Huawei was able to commercialize the research of Erdal Arikan, the Turkish scientist whose breakthroughs on polar codes provided the basis for the technology. Arikan was an international student who studied in the United States, graduating from the California Institute of Technology and the Massachusetts Institute of Technology. He wanted to stay in the United States and only returned to Turkey when he could not secure a green card. Had he faced the immigration system that Karikó faced, he would be a proud American citizen today. Immigration policy thereby seeded a vaccine revolution. Today's immigration policy exported 5G to Shenzhen.

The great threat is that a sclerotic and static system can no longer achieve national goals. The danger is not necessarily an abrupt collapse (although some policy moves under consideration do risk an abrupt collapse, such as the proposal (and stated wish of the U.S. Citizenship and Immigration Services' nominee director) to discontinue work authorizations for international students graduating from US universities) but a steady disintegration, one by which the country that once served as the almost automatic destination for global scientific ambition becomes one option among several, and eventually, as the most bureaucratically capricious, less preferred.

Permanent residence is rationed severely yet promised liberally, the system abrogating the hard decision of allocating scarce slots by merit, market need, or any

other factor that would offer predictability and prevent the growth of interminable queues. Only about sixty thousand green cards are issued every year on the basis of workers' skills and jobs. But the pool of approved petitions for those slots now stands at over a million and is growing without end in sight, leaving skilled immigrants and their employers, not to mention their spouses and children, waiting interminably in professional and legal limbo. Further per-country caps applied with unthinking impartiality alike to India and Iceland, China and Fiji, mean that Chinese and Indian immigrants bear the disproportionate burden of the system's failures. Many Indian engineers enter a line knowing they will die before ever reaching the front, with the vague faith that lawmakers can't allow a system so perverse to persist.

With green cards a distant and elusive hope, high-skilled immigrants sweat over acquiring a long succession of temporary statuses to stay in line. The most common route begins with a student visa limited to one or three years of postgraduation work, in which they will get a few chances at the lottery for an H-1B visa, whose odds have dipped below one in three. The lucky ones will renew their H-1B once, securing

"There is a grave mismatch between the scale of America's national ambitions for technological leadership and the way it governs high-skilled immigration, its single most reliable comparative advantage."

them an additional three years; and, after that, if they can get their employer to sponsor a green card, they will then routinely apply every year for an extension until they finally reach the front of the green card line. The result is a professionally immobilized cohort, blocked from risk-taking in the very years where they could be making their largest contributions to American innovation. Universities, exempt from the H-1B cap (and thus able to sponsor work visas without needing to go through the lottery system), assume the role of default sanctuary, where the reliable promise of a visa deters immigrants from joining the private

sector, transferring from research to commercialization, or following the science where it takes them. Even in the private sector, visa restrictions impose real costs on anyone trying to switch jobs, let alone found companies.

There is a grave mismatch between the scale of America's national ambitions for technological leadership and the way it governs high-skilled immigration, its single most reliable comparative advantage. The US has just 4 percent of the world's population, a quarter of that of China, its greatest adversary. But America's superpower is that it can augment its own citizens with the best and brightest from anywhere, who have historically been attracted to the United States by its scientific institutions, quality of life, and freedom. Unless Congress confronts that mismatch, the status quo is on track to forfeit the advantage.

The prognosis, though stark, is not irrevocable. Caps can be raised; lotteries and first-come, first-served systems can be replaced with merit-based selection; and processing can be modernized and made efficient, predictable, and even welcoming.

The remainder of the paper is structured as follows: Section 2 describes the rules that govern high-skilled immigration to the United States today. Section 3 covers the domestic threats posed by complacency over the status quo: flagging recruitment and retention rates, concerning trends in the changing composition and activities of new immigrant cohorts, and heightened foreign competition for talent. Section 4 describes potential policy changes to the US immigration system that would increase high-skilled immigration and make the immigration system the national strength it could be. These proposed changes include using more green cards to better retain talent, adopting merit-based criteria to better select from the available pool of talent, and piloting new pathways for talent who are likely to make major contributions but who are currently being lost.

1. How does high-skilled immigration work today in the United States?

For a republic that touts itself as the world's talent magnet, the United States admits remarkably little talent on purpose. Immigration based on skills and employment represents a small fraction of the US immigration system. Immigrants to the United States are more likely to be low-skilled than natives are (Bennett 2020). In this respect, the United States is an outlier among OECD countries, which on average admit a much higher share of their permanent residents on the basis of employment: 20 percent in the US, including skilled immigrants' accompanying family members, compared to the OECD average of more than 45 percent.

The law governing the US immigration system passed in the 1960s, and the most recent major statutory changes took place in the 1990s. The Immigration Act of 1990 established many of the major immigration categories, as well as establishing immigration quotas. The American Competitiveness in the 21st Century Act of 2000 updated rules around the H-1B program and set the final caps on that program (temporarily increasing the caps and then reducing them for 2003 to today's level)—caps that we still use today. In short, high-skilled immigration is governed by laws and quotas decades old.

1.1 High-skilled immigration is capped by green-card limits.

High-skilled immigration is not a central priority of America's immigration system. The United States issues about a million green cards—the term for lawful permanent resident status—per year, affording immigrants the right to stay permanently in the United States and work if they choose to. Of those, only about 7 percent are awarded

to people on the basis of their skills or job offers. The rest of the green cards go to other categories.

The largest "major class" of immigrants are immediate relatives of US citizens, defined as the citizens' spouses and minor children, for whom there is no limit on the number of green cards that may be issued each year. There is also no numerical limit on the number of green cards that go to asylees, although the population receiving status by asylum each year tends to be small. Most other major immigration categories are capped. Refugee resettlement is subject to a numerical limit set by the president each year. Congress imposes a numerical limit of approximately 50,000 on green cards to winners of the Diversity Visa lottery, a program intended to make immigration available to countries that do not have high rates of immigration to the United States. The largest capped category, however, is "family preference," which allocates about 226,0001 green cards each year to the immediate families of green card holders (who don't have access to the uncapped pool of green cards available to citizens) and to some more distant relatives, specifically adult children, parents, and siblings (along with those siblings' own spouses and minor children).

By contrast, only approximately 140,000² green cards are issued each year under employment-based categories. Because spouses of minor children of the so-called principal beneficiaries count toward the cap, most of the 140,000 green cards do not go to the selected high-skilled workers themselves, although it must be noted that the spouses often are high-skilled as well, and their children, too, often tend to enter the workforce in high-skilled occupations.

Furthermore, of the five employment-based categories, only three categories select people on the basis of their skills or employment; the other two are for special religious workers and investors.

The three skill-based categories are:

- EB-1s, which comprise:
 - o EB-1As for extraordinary ability
 - o EB-1Bs for outstanding professors
 - o EB-1Cs for certain multinational managers and executives
- EB-2, for professionals with advanced degrees and those with exceptional ability
- EB-3, for skilled workers, professionals, and unskilled workers

¹ Congress sets the limitation on family-preference green cards by a formula that technically allows fluctuations between 226,000 and 480,000 based on factors like the number of immediate-relative green cards. However, because of the rate of immediate-relative immigration, the family preference cap has long been consistently set at 226,000 each year.

² The numerical limit on employment-based green cards is also set by a formula that reallocates numbers from unused family-preference green cards the previous year to the employment-based categories, which allows for some fluctuation from year to year. During COVID-19, when many numbers went unused, this practice led to a temporary increase in employment-based numbers. The formula does not take into account market conditions, demand, or any other factors other than allowing for some zero-sum reallocation across categories.

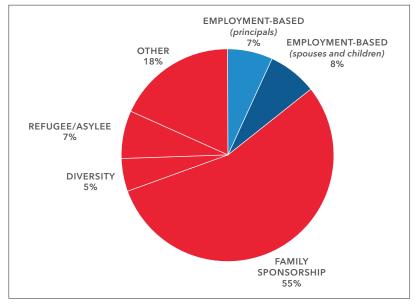


Figure 1: Persons obtaining green cards in FY2023, by type

Source: Department of Homeland Security 2024

The US awards approximately 40,000 green cards every year in each of these three categories. Of those 120,000 green cards, fewer than half go to principals, with the rest going to principals' spouses and minor children. This means that only about 7 percent of the total green cards issued each year are awarded on the basis of skills and employment.

US Citizenship and Immigration Services (USCIS) receives and approves far more eligible petitions for green cards from high-skilled immigrants each year than the number of green cards Congress has authorized. The result? Queues with long and increasing wait times. However, there is not one queue or even one queue for each green card category.

In addition to the numerical limit on each category, a per-country cap further limits the number of green cards that may be issued to nationals of any given country in a year. Thus, immigrants face different wait times depending on what country they are from. Indians face the longest expected wait times, stretching to over 100 years for EB-2s, meaning that approved petitions are unlikely to ever result in a green card. Chinese face the next longest waits. I will discuss the growing backlogs and the evolution of wait times more in section 3.

The overwhelming majority of employment-based green cards go to people already lawfully present in the United States on another status, usually a temporary work visa like an H-1B. In 2023, 75% of employment-based green cards were "adjustments of status" granted to individuals already here, rather than going to new arrivals to the United States (Department of Homeland Security 2024). Permanent residency affords recipients greater flexibility in changing jobs and starting new enterprises, but it should not be thought of as a means by which the United States gets new highskilled immigrants who would otherwise not be in the country.

In other words, employment-based green cards are the primary mechanism by which high-skilled immigrants can stay in the United States, but they are not a major recruitment tool for new talent.

1.2 High-skilled recruitment starts with temporary visas.

Employment-based green cards function primarily for retention of high-skilled talent, not for recruitment. By contrast, US recruitment of high-skilled workers relies on temporary programs that are known as "nonimmigrant" programs because they do not afford the privileges of lawful permanent resident status.

The particular terms and eligibility for nonimmigrant status vary widely across nonimmigrant categories, but they do not afford the privileges of lawful permanent resident status, meaning that immigrants cannot use such status to permanently stay in the United States or to securely afford their spouses and children status in the United States. For example, if a nonimmigrant moves to the US with a minor child but a green card is not available by the time the child is 21, the child will lose their legal status in the United States. Nonimmigrant status also tends to impose restrictions on the kinds of employment and activities the nonimmigrant can take relative to permanent residency. Furthermore, nonimmigrant status is usually limited in duration. All these restrictions mean that while most high-skilled immigrants start their immigration journeys on nonimmigrant visas, green cards remain necessary for retaining talent.

Table 1 below summarizes the main nonimmigrant visa pathways for high-skilled talent.

International education is the primary recruitment pathway for global talent into the United States. The F-1 visa offers visiting students the opportunity to study at US institutions of higher education. Upon graduation, about half of students choose to participate in optional practical training (OPT), which allows graduates one year of work authorization (or three years for STEM graduates) for on-the-job training. OPT allows recent graduates the opportunity to enter the US labor force and acts as a bridge to other visas.

The J-1 exchange visitor program offers status to about 300,000 new visitors each year, one-third of whom are in high-skilled J-1 categories, including scholars, professors, and researchers. Research is one of the largest J-1 categories because nearly all US-based postdocs hold J-1 status. Historically, J-1 researchers have been hosted primarily at universities, and the program has not been used much by companies who would be eligible by their R&D activity. A minority of J-1 participants are subject to a requirement obligating them to return home for two years before getting another visa.

Who is it for? Category Number Duration F-1 (and OPT) ~300,000 per year Uncapped Students For the duration of the student's course of study, including optional practical training (OPT). ~100,000 per year in high-skilled Exchange program participants including Uncapped Up to five years, depending on the particular J-1 program J-1 scholars, professors, and categories researchers. Most postdocs are on J-1s. Three years, renewable once H-1B ~120,000 per year Cap of 85,000 for Workers in specialty the private sector occupations requiring a without an approved green bachelor's degree or card petition. After six years of status, an H-1B can be renewed higher. in one-year increments if the beneficiary has an approved green card petition. O-1A ~10,000 per year Uncapped Individuals demonstrating Three years, renewable in extraordinary ability in the one-year increments. sciences, education, business, or athletics.

Table 1: The US's high-skilled recruitment pathways

ECONOMIC STRATEGY GROUP

The flagship high-skilled visa in the United States is the H-1B. Most H-1Bs are filed by employers on behalf of students and others already in the United States.³ Put differently, the H-1B is at least as much for retention as recruitment. The H-1B is valid for an initial period of three years that can be renewed once. After that, an H-1B can be renewed indefinitely in one-year increments if the beneficiary is waiting in line for a green card with an approved petition. While approximately 120,000 H-1Bs are issued annually in total, the program is capped at 85,000 for the private sector, with 20,000 of those visas reserved for those with a master's degree or higher from a US institution. The program is uncapped for institutions of higher education, government research institutions, and nonprofit research institutions.

³ After students, the next most common transition to H-1Bs comes from L-1 holders (intracompany transfers), who switch to H-1Bs to get eligibility for indefinite renewals while they wait for a green card to become available.

Each year, employers register for far more than the number of cap-subject visas that are available—in the spring of 2025 employers registered for over 358,000 H-1Bs. The 85,000 are awarded by lottery.

Finally, about 10,000 O-1A visas are issued yearly. The O-1A is for individuals with demonstrated records of extraordinary ability in their fields. The visa lasts for three years and may be renewed indefinitely in one-year increments. There is no cap on the number of O-1As that can be issued.

Ultimately, the talent pipeline is a large funnel, accepting far more recruits at the top than there are available green cards at the bottom. At the top of the funnel, student and exchange visitor programs recruit the overwhelming majority of new talent, with a small share of new talent going directly into H-1B or O-1A, and an even

"Thus, the country that won the space race and built the atom bomb by importing brains now asks them to draw lots for the right to wait."

smaller share (bordering on trivial) going directly into EB categories. Transitioning to an H-1B or an O-1A presents the first choke point, with many new graduates who want to stay unable to secure a visa in time. The green card caps impose the final bottleneck

Thus, the country that won the space race and built the atom bomb by importing brains now asks them to draw lots for the right to wait.

The growing costs of complacency

Growing wait times, as shown in table 2, pose a mounting toll on innovation, economic growth, and security. Accumulating backlogs and existing rules are deterring an increasing share of talent from coming in the first place and are also leading to falling retention of the people whom we do manage to recruit. Top researchers, engineers, and entrepreneurs increasingly avoid the US altogether, especially those from China and India. Further, top talent is increasingly crowded out by lowerskilled individuals. Exacerbating the situation is increased competition from other countries that have seen US complacency as an opportunity to streamline their own systems and recruit talent that the US is increasingly forfeiting.

2.1 Recruitment and retention are flagging

The US remains a major destination for talent, but recruitment and retention both face headwinds. The OECD benchmarks countries' ability to attract and retain talent with the Indicators of Talent Attractiveness Index. Concerningly, the OECD benchmarks show US attractiveness in decline between 2019 and 2023 while being leapfrogged by countries like the UK and Norway. As we will see, other countries are capitalizing on falling US attractiveness.

The two most important metrics for measuring the effectiveness of our high-skilled talent pipeline are the recruitment and retention rates, both of which show troubling signs (Neufeld and Kaushik 2024).

Table 2: Estimated and projected employment-based green card wait times, in years, by nationality, 2020 and 2030

| | 2020 | 2030 |
|---------------|------|------|
| EB-1 | | |
| India | 8 | 18 |
| China | 5 | 15 |
| Rest of world | 1 | 1 |
| EB-2 | | |
| India | 195 | 436 |
| China | 18 | 51 |
| Rest of world | 0 | 1 |
| EB-3 | | |
| India | 27 | 48 |
| China | 5 | 17 |
| Philippines | 2 | 2 |
| Rest of world | 0 | 5 |



Source: Kandel 2020

Stagnating recruitment is not surprising when we consider the fact that caps for H-1Bs have not been changed since 2003 and the cap for employment-based green cards has not been modified since 1990. What growth has occurred must be attributable therefore to smaller, uncapped high-skilled immigration categories that allow for work authorization—like cap-exempt H-1Bs, O-1As, J-1s, and F-1 OPT and increased high-skilled immigration through pathways not intended to facilitate high-skilled immigration.

Retention poses an even more troubling picture.

As we've seen, international education is the country's primary recruitment pathway, but we fail to retain most of the students we train. Only about 37 percent of international students who graduate from US schools stay in the United States longterm. Retention is especially low for those with lower degrees. Table 3 displays the share of international students who graduated between 2012 and 2021 still residing in the US as of 2023. Fewer than one in five international bachelor's-degree graduates stay. Meanwhile, retention of doctoral graduates is much higher, with stay rates for PhDs of up to 80 percent.4 Extending the period of OPT for STEM graduates from one year to three years has increased the retention of graduates, but the gains have been eroded as competition for H-1Bs has subsequently increased (Olszewski et al. 2024).

Table 3. Long-term US retention of international student graduates

| Degree level | Stay rate |
|--------------|-----------|
| Bachelor's | 18% |
| Master's | 43% |
| Doctoral | 80% |
| Total | 37% |



Note: "Stay rate" is defined as the share of international students who graduated between 2012 and 2021 still residing in the US as

Source: O'Brien 2025

⁴ This estimate is likely optimistic, given other evidence that the stay rate falls over longer time horizons. Finn and Pennington (2018) found that the stay rate for PhDs in science and engineering fields falls from 72-77 percent for a five-year time horizon to 67–71 percent over a ten-year time horizon. A study by the Center for Security and Emerging Technology (Corrigan, Dunham, and Zwetsloot 2022) found science and engineering PhD stay rates of 77 percent.

From 2018 to 2023, only 61,145 students requested changes of status each year, despite approximately 250,000 students graduating each year (USCIS n.d.). According to an analysis of National Survey of College Graduates and IPED data by the Economic Innovation Group, from 2012 to 2020 "American universities trained more than 1.1 million students who later left the country" (O'Brien 2024). That number is growing. Some of this growth is simply caused by enrollment trends. If enrollment increases and stay rates remain constant, we'd expect the number of graduates who are leaving to increase. Instead, enrollment is stagnating while retention is falling (Neufeld and Kaushik 2024).

Retention has been in a long decline. According to data from the Student and Exchange Visitor Information System (SEVIS), the system that Immigration and Customs Enforcement (ICE) uses to track status of F-1s and J-1s, the share of F-1 students requesting another status (H-1B, O-1A, J-1, or another nonimmigrant visa) peaked in 2007 at 22 percent and has since fallen by more than a third (Neufeld and Kaushik 2024). The decline is largely driven by falling retention of graduates at the bachelor's and master's levels. Because universities are exempt from H-1B caps, PhD retention has remained relatively stable, although as we'll see, these dynamics have led to PhDs increasingly becoming locked in academia at the same time as R&D has shifted to the private sector (National Center for Science and Engineering Statistics 2025).

The empirical literature shows that the growing green card backlog is a significant drag on retention. Khosla (2018) uses data from the Survey of Earned Doctorates and the Survey of Doctoral Recipients to track doctoral recipients after graduation, finding that each year of additional wait time for a green card decreases the retention rate of a new PhD by over 5 percentage points. The importance of delays to retention is echoed by Kahn and MacGarvie (2020), who find that the deterrent effect varies by country (at least in part because of differences in rates of marriage with citizens and the attractiveness of countries of origin).

These results suggest that growing backlogs will exacerbate retention problems. The Congressional Research Service projects that from 2020 to 2030, projected EB-2 waits will grow by centuries for Indians and decades for Chinese. EB-3s are also expected to grow significantly. Perhaps most concerningly—because the category is for the highest-skilled talent—wait times for Indian and Chinese EB-1s are both projected to grow by ten years (Kandel 2020). While we might expect the effect on retention to reach some asymptote as waits get ever longer, all evidence suggests that the growing backlogs will increasingly drag down retention numbers.

⁵ Students who return home temporarily may stay without requesting a change of status, but this data is the best currently available on the transition rate from F-1 to another status.

2.2 The immigration system is getting less selective.

In countries with merit-based immigration systems, a tradeoff exists between scarcity and quality. If a country selects only the best would-be migrants, then it can't expand immigration without sacrificing standards.

However, the US immigration system prioritizes neither scale nor selectivity, imposing tight numerical caps without effective selection mechanisms, undermining both the quantity and quality of talent admitted. H-1Bs are allocated by random selection. Employment-based green cards are offered on a first-come, first-served basis. Both admission categories have caps set well below the number of people who are both eligible and want to immigrate. When demand for a fixed supply of visas keeps rising, the formal eligibility rules stay the same, but they cease to screen effectively: far more people now meet the thresholds than can be admitted. In other words, the de facto selectivity of the system falls. So not only are the quotas forcing us to lose talent, but we are using the slots we do have less and less efficiently.

Take the H-1B. From 2018 to 2023, the wages promised to the lottery winners of new H-1Bs increased by 23 percent. However, the wages promised to the top 85,000 workers entering the lottery (i.e., enough to fill the cap) increased by 41 percent. By the same token, in 2018, relying on random chance brought workers paid 29 percent less on average than the average wage of the top workers we could have selected from the same pool with the same number of slots. By 2023, random chance brought us workers paid 38 percent less (Neufeld 2025b).

Put simply, the H-1B program has become much less selective over time.

This is not necessarily the immigration system anybody desired or intentionally designed. When Congress set H-1B quotas, for example, the program was not oversubscribed. When worldwide and per-country green card caps were set, there were no green card backlogs. But as demographic and economic conditions have changed, the rigid system has failed to sufficiently respond.

Some small changes to the order of two H-1B lotteries in 2020 have modestly improved allocation (20,000 H-1Bs are reserved for graduates of advanced degree programs at US schools, so ensuring that they can also be considered with the best chance during the lottery for everyone can have a mild positive effect on selection) but have not been sufficient to reverse the dominant trend of declining selectivity. As Pathak, Rees-Jones, and Sönmez (2025) show, the current order is optimal, meaning no more can be gained by further reforms along similar lines.

Still worse, the lottery has reduced the quality of the talent pool itself at many stages of the US talent pipeline.

First, starting with international education at the top of the funnel, Kato and Sparber (2013) demonstrate that H-1B visa restrictions have reduced the selectivity of the US higher-education system by discouraging high-ability international students from applying to US schools in the first place. Exploiting a natural experiment when the H-1B cap fell from 195,000 to 65,000 and comparing countries affected by the cap to those exempt via trade agreements allows Kato and Sparber to isolate the effect of visa policy on selectivity. Their findings are clear: The reduced odds of securing an H-1B after graduation discouraged the most academically qualified international students from applying, leading to a 10–20-point decline in the SAT scores of prospective international students. The drop was not evenly distributed across the ability spectrum but was driven by a decline in the number of high-scoring applicants, not by an influx of lower-scoring ones, indicating that the highest-ability students are more sensitive to visa restrictions (perhaps because they have better outside opportunities).

Second, the lottery has also eroded the quality of the H-1B applicant pool. The H-1B lottery system has significantly shifted incentives away from high-value matches and toward bulk applications by intermediaries. Because employers cannot reliably expect to secure H-1B status for the individuals they want to hire, many have rationally reduced their efforts to identify and sponsor the most uniquely qualified candidates through the program. Instead, the system rewards business models that treat visa petitions as lottery tickets for more-or-less replaceable workers whom they can contract out to third parties. This state of affairs has led to a rise in outsourcing firms that face lower costs in sourcing visa applicants and use their scale to secure a predictable number of lottery wins for more-or-less replaceable workers, often in IT.

Furthermore, Sharma and Sparber (2024) show how each registration submitted by one firm reduces the chances for others, prompting a competitive arms race of oversubscription. Bespoke, high-skill matches that fill a unique niche are the very kinds of matches that are hardest to scale when the incentives favor scrambling to find workers fit to fill generic roles with which to flood the system. Sharma and Sparber estimate that the dynamic imposes externalities costing over \$1 billion a year in recent years.

Finally, at the bottom of the funnel, the same staffing companies that have specialized in flooding the H-1B program with relatively lower-skilled workers are crowding out workers in the EB-1 category, intended to be the highest-skilled category for green cards. The EB-1C category is available to executives and managers at multinationals, and EB-1s are increasingly being sponsored on behalf of managers at staffing companies like Infosys and Cognizant—workers who are not likely to be significantly contributing to high-growth innovative companies as the category was supposed

to facilitate. The EB-1C category has subsequently grown in importance within the EB-1 category, contributing to the fact that EB-1As for extraordinary ability and EB-1Bs for outstanding professors from India and China now face backlogs.

2.3 Visa restrictions squander the potential of the immigrants we do recruit.

Of the immigrants we do manage to recruit and retain, immigration rules all too frequently deter and bar them from contributing their full potential.

First, many restrictions are associated with changing jobs. While policy changes have reduced the major legal obstacles to changing jobs, there remain significant costs that make these transitions much costlier for immigrants than for natives. The new employer needs to file paperwork, go through a lengthy labor-certification process, and pay all the associated fees as if the worker were newly arrived in the country. Founding a new company poses even more challenges. H-1B holders are required to be "employees" who don't have sole decision-making authority. The O-1 is more flexible, but many company founders can only qualify for an O-1 after their startup is successful, creating a catch-22 that stops them from launching in the first place.

Second, the backlog means that immigrants spend relatively more years restricted in their ability to make career moves in service of innovation and entrepreneurship. This rigidity is especially costly as R&D activity increasingly takes place in the private sector, which operates under stricter visa constraints than academia or nonprofit research institutions. Because of academia's greater access to visas, researchers find themselves increasingly trapped in academic positions if they want to stay in the country. Amuedo-Dorantes and Furtado (2019) show that the introduction of binding H-1B visa caps in 2004 significantly increased the likelihood that international graduates work in academia, even outside their field of study. This evidence suggests a reallocation of talent driven by immigration constraints rather than career preferences—as the authors put it, top talent is forced to "settle for academia."

Finally, the scarcity of green cards has become a direct threat to national security. Green card backlogs have proven a major constraint on the Department of Defense's ability to harness the talents of foreign-born professionals already living and working in the United States. The DoD has long treated high-skilled talent as an asset, and over 100,000 immigrants work on DoD-funded projects today (Miles et al. 2024). However, because of the sensitive nature of much defense work, security clearances are often required and are generally restricted to US citizens. Hence, 85 percent of high-skilled immigrants currently working on DoD-funded projects are naturalized citizens (Miles et al. 2024).

However, growing green-card backlogs are significantly delaying naturalization, which in turn delays or outright prevents otherwise-eligible individuals from naturalizing and obtaining clearances. These are individuals who have already been approved for permanent residence and who in past decades when backlogs were shorter would have become citizens and been cleared long ago. As a result, a highly qualified Indian graduate who has lived and worked in the US for over a decade may be unable to obtain a clearance—not because of any security concern but because of an outdated quota system. Meanwhile, someone from a less backlogged country with less time in the US may be able to naturalize and access clearance-restricted roles much sooner. This arbitrary bottleneck prevents the DoD from tapping into a large, vetted pool of STEM talent already on US soil and ready to serve.

In sum, the immigration system is funneling skilled workers into roles where immigration requirements are easier to navigate, but which are not necessarily the best fit for those workers' expertise or for the country's priorities.

2.4 International competition for talent has heightened.

Global competition for talent has escalated dramatically, meaning that the United States is no longer the default destination for global talent as was the case historically. Not only is this shift bad for the United States, but it is bad for the world since moving to the United States makes immigrants more productive than they would be if they moved elsewhere—even to another economically advanced country. Agarwal et al. (2023) find that budding migrant mathematics researchers of the same ability are two to three times more productive in the US than they are in Canada.

Other countries, including Canada, Germany, Australia, and the United Kingdom, have seized upon America's immigration inertia, implementing proactive, streamlined immigration policies that increasingly attract global talent. In recent years, the UK has adopted two new visa programs for top talent: the Global Talent visa and the High Potential Individual visa. Even as the Labour government is proposing cuts to total immigration after a recent surge, they still plan on expanding their use of the new Global Talent and High Potential Individual programs (Home Office 2025). Canada, meanwhile, unveiled a Tech Talent Attraction Strategy that included self-described aggressive moves to poach ten thousand high-skilled immigrants stuck in the backlog in the United States. All the slots were requested within 48 hours.

Since 2015, international student enrollment in the United States has stagnated, while other OECD countries have stepped up their efforts to attract global talent. OECD data shows that the US share of international students among OECD destinations has been declining since 2016, as countries like Canada and Germany have expanded their foothold in the global education market at US expense. From

2013 to 2021, the United States increased its total international enrollment by just 8 percent. In contrast, Germany more than doubled its international student population over the same period—raising it by 109 percent, not including American students (Neufeld and Kaushik 2024). Surveys suggest that Canada has surpassed the United States as the top preferred destination for skilled workers (Kovács-Ondrejkovic et al. 2021).

China is also becoming serious about talent recruitment. As incomes improve and quality scientific institutions proliferate, the country has proven to be a contender. With programs such as the Thousand Talents Plan and its successor, Qiming, China actively recruits international and expatriate talent. Originally focused on getting people from China to return, in 2021 China's official strategic plans clearly articulated growing ambitions to expand its recruitment globally. President Xi announced to the CCP that the nation's goal is to prove competitive to the US in talent acquisition by 2035. Chinese leadership explicitly recognizes that reform in US immigration policies could threaten its strategic goals (Zwetsloot 2021).

Aligning policy with national goals

The preceding analysis paints a stark picture of a system at odds with national goals. But the immigration system, while ossified, can be changed. Concrete, politically feasible reforms can restore the United States's ability to attract, select, and retain the world's most promising minds. The US has done it before, achieving world-historical accomplishments like the Manhattan Project and the Apollo Program by bringing the world's best minds to the world's top research organizations. It can do it again.

Doing so will take more high-skilled immigration and better selection. Both are policy choices.

3.1 The United States needs more high-skilled immigration.

The central bottleneck in the current system is not a lack of interest or talent—it is an outdated cap. Only 140,000 employment-based green cards are issued each year, with most going not to workers themselves but to their spouses and children. These caps, set in 1990, are woefully misaligned with the size and needs of today's economy.

New green cards. Congress should authorize additional green cards for qualified foreign-born experts working in critical emerging-technology fields. One simple way to operationalize this authorization could be to simply exempt STEM PhDs from green-card caps, as well as individuals who have valid job offers with salaries paying more than some threshold, say \$200,000. EB-1As for extraordinary ability could also

be made exempt. Entrepreneurs who have secured sufficient investment could also be given a unique category, as startup founders do not currently have any designated pathway to a US visa, whereas such pathways already exist in some other countries, which offer successful-startup visas.

A new pool of green cards could also be made available each year on a points-based allocation, awarding green cards to those with the most points, awarded for characteristics associated with success. Designing a points system raises many questions that I discuss more in the following section on improving selection.

The danger of stapling a green card to all diplomas. One proposal—to which I'm sympathetic but which ultimately falls short—is the oft-repeated idea of "stapling a green card to a diploma." The appeal is understandable: If retaining international students is a problem, then we should simply retain them. Stapling a green card to STEM PhDs is probably fine, given the costs associated with obtaining PhDs. However, automatically offering green cards with lower levels of education would likely introduce severe distortions. It would create powerful incentives for low-quality institutions, so-called degree mills, to expand or proliferate in order to cash in on demand from students motivated primarily by immigration, not education. Both the UK (in its Deliveroo visa scandal) and Canada faced this problem, seeing declining immigrant quality associated with similar policies. Criteria should instead be based on less gameable features like salary.

The drawbacks of eliminating per-country caps outright. Another proposal that overpromises is eliminating the per-country caps. This approach avoids the political problems associated with raising the worldwide cap, but it does so at an extreme cost. It improves things for the people currently treated the worst, but only by gumming up the rest of the system. For example, in Kandel (2020), the Congressional Research Service projects that eliminating per-country caps would grow the expected EB-2 backlog in 2030 for most countries from just one year to 37 years. Given that the deterrent effect for Indians and Chinese is likely attenuated at very long waits, such a strategy would do little to improve retention for Indians and Chinese, while significantly reducing recruitment and retention for all other immigrants. Without increasing the worldwide numerical cap, the per-country caps, however unfair, keep the worst of the backlog cancer from spreading through the rest of the employment-based system.

Scaling existing underleveraged pathways. There are also ways to better use the current system. The private sector can better use existing, underleveraged pathways. Universities and other institutions can recruit more today by scaling up their use of uncapped pathways like J1s and cap-exempt H1Bs. This approach to recruitment is

worth taking, but ultimately congressional action will be required to address the most important bottlenecks: the decades-old caps.

3.2 Merit-based policies should better select from the pool of available talent.

The United States must also allocate whatever slots it does have more intelligently. Today's system distributes green cards and H-1Bs with little regard to the quality or strategic value of applicants. H-1Bs are awarded by lottery. Employment-based green cards are distributed largely in the order petitions are filed, subject to arbitrary caps. This approach is neither meritocratic nor strategic.

End the H-1B lottery and award H-1Bs by compensation. Merit-based reform should begin by scrapping the H-1B lottery, which wastes valuable slots on lowerquality matches, favors outsourcing companies specializing in lower-paying roles, discourages employers from identifying and recruiting top talent, and encourages employers to waste efforts seeking far more workers than there are available slots. Replacing the H-1B lottery with a compensation-based allocation, without changing the number of slots, is estimated to increase the economic value of the program by 88 percent over ten years by raising the quality of the cohorts receiving visas (Neufeld 2025b). Adjusting the compensation by age to account for the expected lifetime contribution of beneficiaries would further improve the long-term economic and fiscal contribution.

Reprioritizing employment-based preference categories. In line with these reforms, the employment-based green card categories themselves should be restructured. The EB-2 National Interest Waiver category, which allows individuals to self-petition if their work benefits the United States broadly, should be moved to the EB-1 tier and prioritized accordingly. Meanwhile, EB-1C petitions, increasingly used for lower-paid multinational managers, should be constrained more narrowly to actual C-suite roles; other managers, where appropriate, could be reclassified under EB-2 or EB-3. This approach would preserve the EB-1 category's original intent: to serve the highest-talent individuals with exceptional ability and extraordinary contributions.

Adopt a points-based system for green cards. The US can also adopt a pointsbased system to rationalize its system for permanent residence. Many countries have justifiably popular points-based systems to guide their selection processes. These models assign applicants scores based on factors associated with success like education, SAT scores, salary, language proficiency, and job offers. Visas are then awarded to the applicants with the highest scores. Unlike the US system, such models create a transparent and flexible method for prioritizing applicants based on economic contribution and potential. The US could stand to learn from this model.

However, other countries' experiences provide a number of important lessons the US would do well to learn.

First, many points-based systems tend to over-index on education, which encourages degree mills that reduce the quality of the talent pool over time. It can also encourage immigrants to overinvest in education to increase their chances of securing a visa. Second, many points systems focus more on acute labor shortages than on maximizing innovative potential. Third, countries have found that existing job offers are important for labor market success. Both Canada and Australia's points systems did not originally include job offers but added them when immigrants showed poor labor-market integration.

In adopting a more merit-based approach, policymakers should also think carefully about how it interacts with the rest of the immigration pipeline. For example, diverting green cards from existing categories into a new points-based system can decrease total immigration if it replaces categories that have a high rate of new arrivals with a category that is predominantly used for retention. The RAISE Act, a prominent US proposal for merit-based immigration, also reduced total immigration by cutting categories altogether—such that the average skill level of immigrants increased, but the level of immigrants fell sufficiently that economic growth projections were significantly reduced. If well-planned, a shift toward a more merit-based allocation can improve the economic outlook. The Penn Wharton Budget Model found that shifting 10 percent of future low-skilled immigration toward high-skilled STEM workers would increase growth and reduce deficits by \$152.6 billion over ten years (PWBM 2025).

Proactive talent recruitment by the US government. Finally, the United States can do much more to be proactive in identifying and recruiting talent. The current system of

decentralized recruitment has allowed the United States to make use of the diffuse networks of its employers, universities, and other institutions, but relying almost exclusively on these organizations has let their interests dictate immigrant selection. Universities have little incentive to bring in the most promising individuals if those students can't afford to pay full tuition. By the same token, companies have little incentive to recruit individuals whose benefits come mostly in the form of spillovers. And while programs like the O-1 work well for those with a demonstrated track

"Done right, merit-based immigration means selecting more wisely, offering immigrants more certainty, and giving the United States a significant edge."

record of success, they are inadequate as a tool for individuals with high potential to make future contributions. With this gap, the US government can step in to

proactively identify and recruit talent. Talent scouts at the State Department and Department of Defense could experiment with identifying and recruiting winners of math and science olympiads, winners of scientific prizes, budding entrepreneurs, and top young scientists.

At the end of World War II, the US ran Project Paperclip, in which the national security community identified the top foreign scientists who should be exfiltrated from Europe to work on defense-related projects in the United States. While we did not recruit as many scientists as the Soviets did, we won the Space Race in large part because we recruited better scientists and integrated them fully into the US scientific enterprise. With the return of great power competition, it is time to dust off this model of proactive recruitment and bring it back online (see Neufeld 2025a).

Done right, merit-based immigration means selecting more wisely, offering immigrants more certainty, and giving the United States a significant edge.

Conclusion

The United States remains the most preferred destination for top talent from across the globe. No other country has been as successful at turning ambition into achievement or outsiders into insiders. But that advantage, long assumed to be

permanent, is now slipping through neglect.

"At every stage, the pipeline narrows for reasons that have little to do with merit. The result is a compounding loss: of talent who never come. discoveries that never get made, and innovations that never take place."

High-skilled immigration policy is shaped less by strategy than by complacency and habit. It reflects the period when it was written, when the internet was new, China was poor, and American dominance in science and technology was taken for granted. That world no longer exists. Yet the laws and quotas remain untouched.

What has emerged in its place is a system that calls for excellence but allocates opportunity by chance and recruits talent it refuses to retain. At every stage, the pipeline narrows for reasons that have little to do with merit. The result is a

compounding loss: of talent who never come, discoveries that never get made, and innovations that never take place.

The United States still possesses the institutions and talent clusters to make it the most fertile ground for ambition. What it lacks is policy worthy of its potential.

References

- Agarwal, Ruchir, Ina Ganguli, Patrick Gaulé, and Geoff Smith. 2023. "Why U.S. immigration matters for the global advancement of science." *Research Policy* 52, no. 1 (January): 104659. https://doi.org/10.1016/j.respol.2022.104659.
- Amuedo-Dorantes, Catalina, and Delia Furtado. 2019. "Settling for Academia? H-1B Visas and the Career Choices of International Students in the United States." *Journal of Human Resources* 54, no. 2 (March): 401–29. https://jhr.uwpress.org/content/54/2/401.
- Bennett, Jesse. 2020. "The Share of Immigrant Workers in High-Skill Jobs Is Rising in the U.S." Pew Research Center, February 24. https://www.pewresearch.org/short-reads/2020/02/24/the-share-of-immigrant-workers-in-high-skill-jobs-is-rising-in-the-u-s/.
- Corrigan, Jack, James Dunham, and Remco Zwetsloot. 2022. "The Long-Term Stay Rates of International STEM PhD Graduates." Center for Security and Emerging Technology, April. https://cset.georgetown.edu/wp-content/uploads/CSET-The-Long-Term-Stay-Rates-of-International-STEM-PhD-Graduates.pdf.
- Department of Homeland Security. 2024. 2023 Yearbook of Immigration Statistics. Office of Homeland Security Statistics. https://ohss.dhs.gov/topics/immigration/yearbook/2023.
- Finn, Michael G., and Leigh Ann Pennington. 2018. "Stay Rates of Foreign Doctorate Recipients from U.S. Universities, 2013." Oak Ridge Institute for Science and Education, January. https://www.osti.gov/servlets/purl/1425458.
- Home Office. 2025. "Restoring Control over the Immigration System." White paper. Gov.uk, June 6. https://www.gov.uk/government/publications/restoring-control-over-the-immigration-system-white-paper/restoring-control-over-the-immigration-system-accessible.
- Kahn, Shulamit, and Megan MacGarvie. 2020. "The Impact of Permanent Residency Delays for STEM PhDs: Who Leaves and Why." Research Policy 49, no. 9 (November): 103879. https://www.sciencedirect.com/science/article/abs/pii/S0048733319301982.
- Kandel, William A. 2020. The Employment-Based Immigration Backlog. CRS report no. R46291. Congressional Research Service, March 26. https://www.congress.gov/crs-product/R46291.
- Kato, Takao, and Chad Sparber. 2013. "Quotas and Quality: The Effect of H-1B Visa Restrictions on the Pool of Prospective Undergraduate Students from Abroad." Review of Economics and Statistics 95, no. 1 (March): 109–26. https://www.jstor.org/stable/23355654.
- Khosla, Pooja. 2018. "Wait Time for Permanent Residency and the Retention of Immigrant Doctoral Recipients in the U.S." *Economic Analysis and Policy* 57 (March): 33–43. https://www.sciencedirect.com/science/article/abs/pii/S0313592617301182.
- Kovács-Ondrejkovic, Orsolya, Rainer Strack, Jens Baier, Pierre Antebi, Kate Kavanagh, and Ana López Gobernado. 2021. Decoding Global Talent, Onsite and Virtual. BCG, March 4. https://www.bcg.com/publications/2021/virtual-mobility-in-the-global-workforce.
- Miles, Wilson, Jeremy Neufeld, and Jordan Chase. 2024. High-Skilled Immigration: Strengthening the National Security Innovation Base Requires International STEM Talent. NDIA Emerging Technologies Institute, Institute for Progress, December. https://www.emergingtechnologiesinstitute.org/-/media/ndia-eti/reports/high-skills-immigration/hsi_report_v8.pdf.

- National Center for Science and Engineering Statistics. 2025. "National Patterns of R&D Resources: 2022-2023 Data Update." NSF 25-326. https://ncses.nsf.gov/data-collections/ national-patterns/2022-2023#data.
- Neufeld, Jeremy. 2025a. Launching Project Paperclip 2.0 to Recruit Top Scientists. Foundation for American Innovation, American Compass, Institute for Progress, NAIA Foundation. https://www.rebuilding.tech/posts/launching-project-paperclip-2-0-to-recruit-topscientists
- Neufeld, Jeremy. 2025b. "Talent Recruitment Roulette: Replacing the H-1B Lottery." Institute for Progress, January 17. https://ifp.org/h1b/.
- Neufeld, Jeremy, and Divyansh Kaushik. 2024. "International Talent Flows to the United States." Paper commissioned for the National Academies of Sciences, Engineering, and Medicine's "International Talent Programs in the Changing Global Environment" consensus study, February 20. https://nap.nationalacademies.org/resource/27787/ Neufeld_and_Kaushik_ITP_Commissioned_Paper.pdf.
- Neufeld, Jeremy, and Hamidah Oderinwake. 2024. "The Talent Scout State: How the U.S. Can Proactively Recruit High-Potential Immigrants." Institute for Progress, May 1. https://ifp.org/the-talent-scout-state/.
- O'Brien, Connor. 2024. "Most International Graduates of American Universities Ultimately Leave the U.S." Economic Innovation Group, June 27. https://eig.org/immigrant-retentionestimates/.
- O'Brien, Connor. 2025. "The U.S. Loses Most International Graduates It Trains. That Problem Is About to Get Worse." Economic Innovation Group, May 30. https://eig.org/us-loses-mostinternational-graduates/.
- Olszewski, Thomas D., John E. Sabatini, Hannah L. Kirk, Gabriella G. Hazan, and Irina Liu. 2024. Characterizing the Loss of Talent from the U.S. STEM Ecosystem. IDA product no. 3001891. Institute for Defense Analyses Science and Technology Policy Institute, February. https:// www.ida.org/-/media/feature/publications/C/Ch/Characterizing-the-Loss-of-Talent-From-the-US-STEM-Ecosystem/Product-3001891.pdf.
- Pathak, Parag A., Alex Rees-Jones, and Tayfun Sönmez. 2025. "Immigration Lottery Design: Engineered and Coincidental Consequences of H-1B Reforms." Review of Economics and Statistics 107, no. 1 (January): 1-13. https://direct.mit.edu/rest/article/107/1/1/113167/ Immigration-Lottery-Design-Engineered-and.
- Penn Wharton Budget Model. 2025. "Shifting Immigration Toward High-Skilled Workers." Issue brief. Wharton Budget Model, March 27. https://budgetmodel.wharton.upenn.edu/ issues/2025/3/27/shifting-immigration-toward-high-skilled-workers.
- Sharma, Rishi R., and Chad Sparber. 2024. "Buying Lottery Tickets for Foreign Workers: Lost Quota Rents Induced by H-1B Policy." Journal of International Economics 150 (July): 103932. https://doi.org/10.1016/j.jinteco.2024.103932.
- Zwetsloot, Remco. 2021. Winning the Tech Talent Competition. Center for Strategic and International Studies, October 28. https://www.csis.org/analysis/winning-tech-talentcompetition.

An Energy Strategy for National Renewal

AUTHOR

Joseph Majkut*

ABSTRACT

The United States' energy strategy must bridge economic policy and geopolitical power, while offering a calibrated response to climate change. While the country experienced two decades of relatively constant energy consumption, it now faces a surge in power demand driven by artificial intelligence, domestic manufacturing, and continued electrification. These developments challenge an already-constrained domestic electricity grid with limited spare capacity. This paper argues that a renewed strategy should motivate new action to increase energy supply, build infrastructure, and approach greenhouse-gas emissions reductions with competition in mind. Appropriate actions include expanding the development and deployment of nuclear energy, investing in improvements to the high-voltage interstate transmission system, building new natural-gas plants capable of being later retrofitted with carbon capture equipment, and establishing rigorous carbon-accounting standards.

^{*} Director, Energy Security and Climate Change Program, Center for Strategic and International Studies.

Introduction

Over the past 20 years, the United States became the world's leading producer of oil and natural gas, as the sensitivity of the economy to oil prices decreased. Renewables became the fastest-growing source of new electricity generation, and greenhouse gas emissions fell 27 percent from their 2007 peak. The vulnerability and rising pollution that once drove US energy seem like they could soon be problems of the past. But now policymakers are facing new challenges, and it is imperative to consider what American energy strategy should be in 2025.

Intensifying geopolitical competition is motivating a renewed focus on growth in strategic sectors and technology competition. At home, rising prices and worsening services are challenging the contract between government, industry, and people. And the work of reducing global greenhouse-gas emissions has yet to begin. Energy is central to those objectives, because it is itself a major sector of and critical input to the economy.

Driven by exploding demand for artificial intelligence, domestic manufacturing, and electrification, the power sector is poised for incredible growth in the coming decades.

Forecasts for demand growth between now and 2040 range from 16 to 105 percent (McGeady 2024). An electrified economy running on mostly clean power is one of the most cost-efficient methods for deeply cutting greenhouse gas emissions but will require substantial growth in the power demand. Managing this growth will require care and deliberate action to avoid excessive price increases, threats to reliability, and inordinate delays in meeting new demand or reducing emissions.

"The United States' energy strategy will need to serve as a bridge between economic policy, geopolitical power, and a calibrated response to climate change."

The United States' energy strategy will need to serve as a bridge between economic policy, geopolitical power, and a calibrated response to climate change. This paper argues that a renewed strategy should motivate new action to increase energy supply, build infrastructure, and approach greenhouse gas emissions reductions with competition in mind. That strategy will rely on the electricity, or power, sector rising to the occasion.

1. State of play, 2024-2025

The evolution of the US energy system since the middle of the first decade of the 2000s has been remarkable. It has been influenced by new production of oil and gas from the twin innovations of hydraulic fracturing and horizontal drilling, both of

which unlocked shale resources; it has also been influenced by the rise of renewables as sources of low-carbon power generation.

In the middle of the first decade of the 2000s:

- US imports of crude oil and petroleum products peaked in 2005 at 13.7 million barrels per day. In that year, 60 percent of US oil consumption came via imports, making the country heavily dependent on foreign energy (US EIA 2025b).
- In 2005-2006, most experts thought that the U.S. was destined to become an importer of liquified natural gas (LNG),1 with commercial plans underway to build importing terminals and sign long-term contracts with overseas suppliers.
- In 2007, US greenhouse-gas emissions peaked at 6,130 million metric tons of CO2, accounting for 19 percent of the global total that year. China had surpassed the US as the world's largest emitter just a year before, following rapid growth that began earlier that decade (Ritchie and Roser 2020).
- The average kilowatt-hour of electricity cost the average consumer 8.1 cents in 2005, and in that year the majority of power was generated from coal (US EIA 2025a).

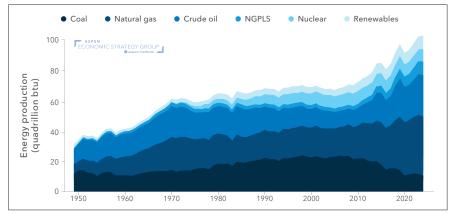
Now:

- The US has experienced a renaissance of energy production from shale formations, with total energy production growing by approximately 30 percent since 2005, while consumption has declined slightly due to efficiency improvements.
- The US became a net exporter of petroleum products in 2020 and emerged as the world's leading exporter of LNG in 2023, completely reversing the import dependency that characterized the middle of the first decade of the 2000s.
- US greenhouse-gas emissions have declined by 15 percent from their 2007 peak, dropping to approximately 5,200 million metric tons of GO2 by 2021, as coal plants retired and their generation was replaced with a combination of natural gas and renewables.
- The average kilowatt-hour of electricity cost the average consumer 12.9 cents (nominal) in 2024, and in that year most power was generated by natural gas.

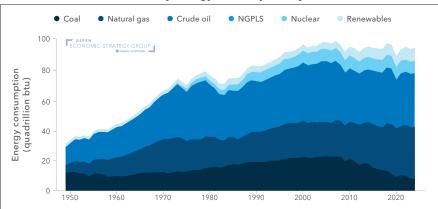
As shown in figure 1, throughout this period the production of primary energy increased nearly 30 percent, mostly due to increased production of oil and gas, while consumption fell slightly. The difference was exported. The fact that consumption fell while the economy grew shows that the energy intensity of GDP decreased. Over that period, the energy sector's contribution to GDP has declined as well, mostly through decreases in the relative size of the oil-and-gas sector.

¹ The US EIA's 2007 Annual Energy Outlook projected that the US would import 4.38 trillion cubic feet of LNG in 2025. In 2024, the US exported an average of 11.9 billion cubic feet per day, for a yearly total of 4.36 trillion cubic feet.

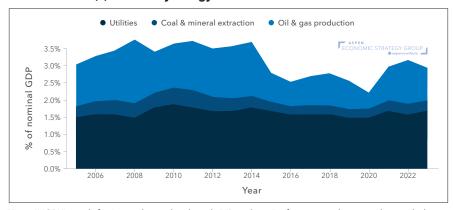
Figure 1: US energy trends, 1950-2023
(a) US Primary energy production by source



(b) US Primary energy consumption by source



(c) US Primary energy sector contribution to GDP



Note: "NGPL" stands for "natural-gas plant liquids." "Petroleum" refers to petroleum product excluding biofuels, which are included in renewables.

Source: US EIA 2025; US BEA 2024a; US BEA 2024b; US BEA 2025

Energy efficiency and growth in digital services mean that energy makes up less of the economy over time.

The rise of the US to become the world's leading exporter of LNG is remarkable, as until 2016 the industry did not exist outside of small projects exporting gas from Alaska. It is now an economic and geopolitical juggernaut. Following the Russian invasion of Ukraine, Europe entered a crisis as it had to replace lost pipeline imports of Russian natural gas (Palti-Guzman and Majkut 2023). US LNG filled the gap, following high prices into Europe and reducing the power of Putin's attempt at economic coercion (Bergmann et al. 2024). This period also saw huge new interest in US LNG around the world, as buyers signed long-term contracts with new export facilities. US LNG exports are now set to double through 2032, and new export terminals—which require large cooling units to liquefy natural gas—have become a significant destination for capital investment in the country. Industry analysis finds that US LNG exports have added 408 billion dollars to US GDP through 2024 and annually amount to double the value of film- and television-related exports (Yergin et al. 2024).

1.1 New competition

Today, economic competition extends beyond top-line growth. Policymakers are seeking to cultivate specific industries, from generative AI and semiconductor manufacturing, two key technologies of the future, to copper mining, one of humanity's oldest and enduring pursuits. These investments are meant to give the US pole position in the race to tomorrow's technologies and security in its supply of critical inputs.

In reshoring manufacturing, they might also help reassure middle- and workingclass people about their stake in the US's economic future. Energy and electricity prices are still high on the list of political sensitivities. And many trends now point to worrying increases, particularly in the price of electricity, where new sources of demand, rapid changes in generation, and a sclerotic and complicated industry combine to frustrate rapid progress.

1.1.1 AI data centers

Perhaps more than any other industry, the AI data-center sector demonstrates the opportunity available when the United States can provide access to power. A nearly nonexistent category just a few years ago, investment in AI data centers is booming. In 2024, capital investment into AI data centers in the US was about 125 billion dollars. In prior work, my colleagues and I estimated that cumulative capital expenditures into data centers in the United States could approach \$2 trillion through 2030 in high-growth scenarios (Smith et al. 2025). In that high-growth scenario, annual investment in data-center construction would exceed investment into oil-and-gas production.

Our scenarios for AI data-center investment were tested for feasibility against three key constraints: finance, hardware availability, and electric-power demands. For finance, even the multitrillion-dollar investments we projected could be managed by the large capital markets in the US, if enough value were associated with rapidly growing investments. As a point of comparison, we estimated that the depreciation and interest costs on AI data-center investment would be roughly equivalent to the savings US companies would capture if generative AI made software engineers 42 percent more productive. Or, if used for entertainment, 20 percent of the developed world would need to pay \$160 a month for generative AI services on a subscription basis.

Such rapid-growth plans, in many cases backed by orders for hundreds of thousands of advanced chips, hinge on the availability of power.

In energy terms, data centers are measured in gigawatts (GW), which represents their capacity to draw power off the grid at any moment. Today, a large data center might draw 100–200 megawatts of power (MW; 1,000 MW = 1 GW). The large AI companies are contemplating building data-center clusters that will draw 1–2 GW in the next couple of years, and they foresee building data centers of 5 GW or more by the end of the decade (Belanger 2024). These electricity loads will be the largest on the planet, each one comparable to that of a mid-sized city. But even those comparisons are inadequate, as industrial facilities often generate their own power, and a city has many ups and downs in its power usage in any given day, month, or year. Very large data centers, by contrast, will want to continuously draw power very close to their full capacity, to utilize the capital investment made for the chips within.

What does it take to power a 1-, 2-, or 5-GW data center? As a point of comparison, the Hoover Dam generates about 1 GW of power. A large nuclear reactor will generate about 1 GW (though reactors are typically grouped so one facility will produce a few GWs). A large natural-gas-fired turbine will generate about 500 MW (again, such turbines are typically grouped together), and the largest solar project in the US generates about 700 MW (but won't do much at night). To match large data centers with new generation requires substantial additions of large energy infrastructure.

For the United States, the challenge is powering not just a few gigawatt-scale data centers scattered around the country but a fleet of data centers that will grow toward 100 GW by the end of the decade. In the highest-growth scenario, my colleagues and I projected that data centers used exclusively for generative AI would grow from about 4 gigawatts of demand in 2024 to 84 GW in 2030 in the highest case or 50 GW

in the lowest case. Notably, our estimates were for data centers used exclusively for artificial intelligence. We should expect to see higher total data-center needs when including expansions of conventional computing clusters as well.

Table 1: Power consumption forecasts for US and global data centers from six major research institutions

| Group | Projection subject | Current value | Projection value and date | Subject growth value |
|--------------|------------------------|---------------|--|----------------------|
| CSIS | US AI data centers | 4 GW in 2024 | 84 GW (highest case) or 49.9 GW (lowest case) by 2030 | 2,100 percent |
| LBNL | US data centers | 20 GW in 2023 | 74-132 GW by 2028 | 370-660 percent |
| RAND | Global AI data centers | 11 GW in 2024 | 68 GW by 2027; 327 GW by 2030 | 618 percent |
| SemiAnalysis | Global data centers | 49 GW in 2023 | 96 GW by 2026 | 196 percent |
| BCG | Global data centers | 60 GW in 2023 | 127 GW by 2028 | 212 percent |
| McKinsey | Global data centers | 55 GW in 2023 | 171-219 GW by 2030 | 311-398 percent |

ASPEN ECONOMIC STRATEGY GROUP

Source: McGeady et al. 2025

Projections of cumulative data-center demand show a lot of variation, but all expect dramatic growth in the next few years. Table 1 above shows a selection of analyses from think tanks, nonprofits, and industry analysts with projections for AI-exclusive data centers in the US, all data centers in the US, and global data centers. Looking across those studies, one sees that the US is primed to lead in data-center growth globally and that most of that growth will come from data centers for generative AI.

With such growth, data centers will grow significantly as a share of power consumption. Peak demand for the whole US grid reached 745 GW in 2024. The year before, data centers consumed about 4.4 percent of national power generation. Analysis from Lawrence Berkeley National Lab indicates that all data centers could grow to 74-132 GW by 2028, which would account for 6.7 to 12 percent of national power generation totaled throughout the year (Shehabi et al. 2024).

Utilities are scrambling to meet this demand, and the economics point toward a familiar portfolio: Solar, natural gas, and battery storage dominate recent deployment figures (McGeady et al. 2025). But the sudden surge in demand is causing real supplychain stress. Gas turbine prices have doubled as manufacturers are booked solid through 2028 or 2029. Solar modules, which had been getting cheaper for decades, have stopped falling in price, and in some cases, costs have gone up with new tariffs contributing to higher prices. The infrastructure we need to power the next phase of American economic growth is getting more expensive just when we need it most.

This problem snuck up on us. Over the past twenty years, US electricity demand barely grew. Our country replaced coal plants with natural gas and renewables, but in the process did not add to our ability to power large loads that run nearly around the clock. Adding major new demand to a system with little spare capacity creates reliability problems, as the power sector operates on increasingly thin reserve margins during periods of peak demand. So, every new, large data center must essentially bring its own power supply. Bringing transmission or additional generation to power data centers and cover peak times will cause rate increases for existing power consumers.

Despite the enormous economic promise, electricity supply has become the primary bottleneck constraining AI growth. Northern Virginia hosts the largest collection of data centers in the world, and new facilities there now face wait times of up to seven

years just to connect to the grid. Such a wait is impossible for individual firms to countenance and completely inconsistent with the growth anticipated for the sector.

Data-center developers have fanned out across the country hunting for available power, and the results show the scale of the problem: Industry data indicate that 29 states expect to double their data-center capacity, but 70 percent of the "Despite the enormous economic promise, electricity supply has become the primary bottleneck constraining AI growth."

nation's data centers in 2030 will still be concentrated in just nine states. Developers are gravitating toward Texas, the Midwest, the Southwest, and the Southeast—places where power regulations and permitting allow rapid buildout (McGeady et al. 2025).

For AI data centers, power is an essential input but not a dominant cost. The capital cost of high-performance chips still dominates the cost of building a new data center, followed by the cost of the data center itself, and then the cost power for operations (these cost categories accounting, respectively, for roughly 80, 15, and 5 percent of total costs for the data center (Smith et al. 2025). Power constitutes a larger share of operational costs, but the cost sensitivity for power is low amidst the rush to dominate the AI industry. This low sensitivity is evidenced by the industry's willingness to pay high prices to restart older nuclear plants and build new natural-gas turbines amidst high inflation.

1.1.2 Strategic manufacturing

Reshoring manufacturing represents another major driver of electricity demand growth, and the manufacturing boom is not happening by accident. Policymakers, and to some extent firms, are still responding to the COVID-era lesson of how

a vulnerable supply chain can contribute to inflation. And they see paths to revitalization for the working class and a US role in the value chains that will define economic and national security in the future.

Since 2020, investments in new manufacturing facilities have accelerated dramatically in the United States, driven primarily by two key sectors: semiconductors and electric vehicles. By April 2024, project announcements had reached \$368 billion for semiconductor manufacturing and \$84 billion for EV manufacturing, including the battery supply chain (Nakano and Majkut 2024). Those investments are now in question, as shifting policies related to vehicle electrification, manufacturing subsidies, and tariffs are imposing significant uncertainty for investors and manufacturers. But regardless, these two sectors now represent a substantial fraction of new manufacturing investment in the United States—a remarkable concentration that reflects both market forces and strategic policy choices.

Currently, manufacturing and industrial activities account for about 35 percent of energy consumption in the United States, distributed across different sectors (US EIA 2021). Chemical manufacturing and petroleum refining are the top industrial energy consumers, together accounting for 43 percent of total industrial energy use. Fifth-ranked iron and steel production accounts for 8 percent of manufacturing energy consumption. More strategic sectors like semiconductors, electronics, and aerospace manufacturing account for a much smaller fraction of industrial energy consumption (together 2.6 percent).

While semiconductor and battery manufacturing historically represent a small fraction of the energy used in manufacturing, their rapid growth does create new demand for the energy system. And similar to AI data centers, they will draw on the electricity grid and create large new demand centers in places that attract manufacturing investment.

Arizona is a key example. The new Taiwan Semiconductor Manufacturing Company (TSMC) fabrication site in Arizona is estimated to require up to 1.2 GW of power. These new loads will compound with the growth in data centers and other sectors to pressure states and grids. In Arizona, where the TSMC plant will be built, the Arizona Public Service projects that energy needs in its territory will increase at 3.7 percent annually through 2038. This increase translates to approximately 3.4 GW of new capacity requirements over the next 15 years.

Georgia presents an even more dramatic example. During the first half of 2023, the manufacturing sector, including solar, EVs, and aerospace, represented 67 percent of job creation and 81 percent of capital investment in the state. Georgia Power filed an updated integrated resource plan projecting electricity load growth of 6.6 GW through 2030–2031—approximately 17 times larger than anticipated in its 2022 plan.

EV battery production is particularly energy-intensive, requiring approximately 44 kilowatt-hours of energy to produce each kilowatt-hour of battery capacity. The Rhodium Group estimates that if all investments announced since 2018 are realized, they would create 1,062–1,288 gigawatt-hours of domestic battery production capacity by 2030. At current energy intensities, 1,000 GWh of annual battery manufacturing capacity would require approximately 6.6 GW of electricity generation capacity.

The expansion of strategic manufacturing also creates ripple effects throughout the supply chain. New factories need steel, aluminum, critical minerals, concrete, and other materials that will see increased demand and are themselves energy intensive. These materials are also essential inputs into the defense industrial base, which has atrophied. The multiplier effects for reshoring mean that the total energy impact extends far beyond the consumption of just the targeted industries.

As with the companies leading the charge on data centers, leading manufacturers have aggressive corporate-sustainability commitments. These commitments create additional pressure on regional electricity systems to provide power that is not just affordable and reliable but ever cleaner.

The geographic concentration of manufacturing investments in states like Arizona, Georgia, Texas, and others means that the energy system impacts will be regionally concentrated, more than nationally distributed. This concentration allows for more coordinated planning at the state and regional levels, but it also requires more scaling of generation and transmission capacity within specific corridors and markets. Federal policy responses will need to enable and foster state-led solutions.

2. Energy and competitiveness

"When you drive our energy prices up, you don't make things in the United States.

They get offshored, and mostly to China."

— Chris Wright, Secretary of Energy (US House Subcommittee on Energy 2025)

Concerns about high energy prices as a barrier to economic growth and investment are highly salient, but how much do they matter in practice? The political challenges that come from a constituency paying high energy prices are also salient to

policymakers. If energy prices are too high, if energy is in too short supply, or if energy simply cannot be built expediently, then we may risk losing out on investments in the next generation of factories and in new technologies, thereby sacrificing the future to more-competitive jurisdictions.

For almost all manufacturing, energy costs in the US are one set of costs among many. For a few energy-intensive industries, like primary metals, chemicals, paper, and cement, energy costs exceed 10 percent of inputs. But most manufacturing sectors are less energy-intense, which means that manufacturing output has a muted response to energy-price volatility.

The muted response of manufacturing to energy prices explains, in part, why the dramatically falling natural-gas prices of the past few years did little to spur manufacturing. During the shale revolution, natural gas prices fell significantly. But since fuel costs for generation account for less than 40 percent of electricity costs, a halving of gas price can only reduce prices by 20 percent or so. And as more gas is consumed, offsetting coal generation, the effect of falling gas prices is eroded by higher consumption.

Falling natural-gas prices did not lead to a manufacturing or economic renaissance. The academic literature shows a statistically significant, but small, effect of energy prices on manufacturing in the United States (Kahn and Mansur 2010; Wolverton et al. 2022). The 50 percent drop in natural-gas prices between 2007 and 2012 increased manufacturing employment by 0.6 percent. In the sectors most directly using natural gas, employment increased up to 2 percent. These changes are modest given such a large change in the price of an important input.

In terms of international competition, the US has substantially lower energy prices than other developed countries, as shown in figure 2. In June 2022, the average industrial rate in the US was 84 USD/MWh. That compares quite favorably to 205 USD/MWh in Germany, 163 USD/MWh in Japan, and 148 USD/MWh in France. And compared to China's 62 USD/MWh, the US industry pays about 35 percent more than their Chinese competitors (IEA 2025).

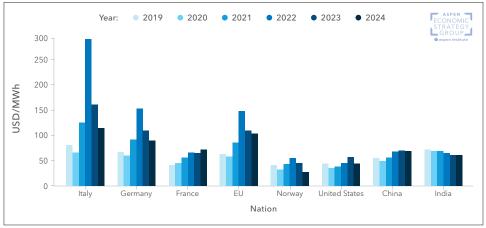


Figure 2: Estimated final electricity prices for large industrial customers in energyintensive industries, by nation, 2019-2024

Source: IEA 2025

3. Multisector demand growth on a constrained grid

Rapid demand growth should be good news. Despite trade conflicts and macroeconomic uncertainty, the United States is positioned to power more economic growth and strategic industries than we've seen in decades. The benefits could be substantial: maintaining US dominance in AI technology, securing critical supply chains, creating good manufacturing jobs, and accelerating the clean energy transition.

But achieving those benefits hinges on a straightforward question: Can utilities provide enough energy and build enough electricity, affordably and reliably, to meet this surge in demand? Policymakers are now confronted with a challenge that is immediately critical for data centers but extends to the broader challenges of strategic competition.

3.1 Electricity pricing in the United States

Much of the new energy demand will be supplied by electricity, so electricity prices are essential to the question of competitiveness—both between states and between the US and other countries. Electricity pricing around the country varies widely. Consumers in Louisiana, Utah, and Washington pay the lowest rates in the continental US, while consumers in California and Connecticut pay the most. A variety of factors contribute

to that large spread, including the market structure within a state, the sources of generation, and regulatory and policy decisions. In each state, electricity prices are influenced by the model used to govern the power sector. In vertically integrated or regulated markets, state utility commissions set retail electricity rates to reflect utilities' capital expenditures, operational costs, and regulated rates of return. In the 33 states with regulated markets, utilities often maintain control over the generation, transmission, and distribution of power to consumers.

In restructured, or deregulated, markets, generation is separated from transmission and distribution, and independent power producers compete to sell electricity into wholesale markets. Depending on the state, competition may also be allowed at the retail level, allowing consumers to choose service providers. While transmission and distribution are still regulated monopolies, rates in the deregulated states may not be directly set by the regulator, though regulators still oversee planning and reliability.

Historically, states with higher prices adopted deregulation to reduce costs through competition. Results have been mixed. Observed rate increases have been slightly higher in deregulated markets than regulated markets over decades. However, some deregulated markets have been good for discerning consumers (e.g., Texas), including large industrials—which have used these deregulated markets to buy renewables and access low prices in wholesale markets. And in recent years, Texas has been the leading state in adding new resources to the grid. Neither model has dispositively emerged as better for managing price increases.

Eventually, the costs of operating the power system fall on ratepayers. Those costs reflect three components of the power system: the generation of electricity, transmission between power plants and demand centers, and the local distribution network. According to the Energy Information Administration, generation costs accounted for 22 percent of operational expenses and 25 percent of capital expenses for utilities (US EIA 2025a). Generation is a significant contributor to utility costs and the price of power. States with abundant low-cost generation resources often have low energy prices. Such abundance can come in several forms. For example, coaland natural-gas-rich Utah and hydropower-rich Washington both have low power prices. High-price outlier Hawaii has high prices because it depends on petroleum fuels that must be transported to the islands.

The same EIA analysis shows that the costs of transmitting and distributing power have been rising as a proportion of cost in the power sector. Between 2019 and 2023, operations and maintenance costs for distribution and transmission increased, while generation costs fell over the same period. Capital expenditure for distribution grew 50 percent and transmission grew 20 percent over the same period. By contrast, capital expenditure on generation decreased 40 percent over the same period.

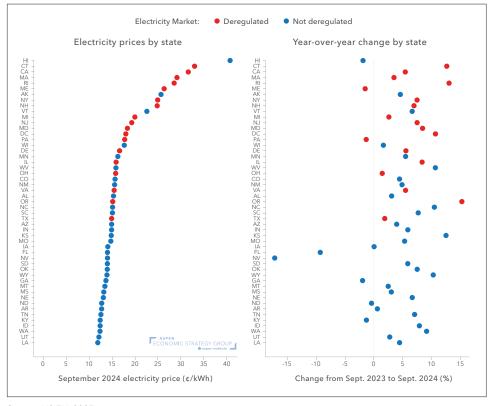


Figure 3: Electricity prices by state, September 2024 (left) and year-over-year percent change since September 2023 (right)

Source: US EIA 2025a

The costs of transmission and distribution investment and maintenance represent quite different geographical phenomena. Dense urban areas might require expensive upgrades for underground lines, higher labor costs, higher property costs, or lengthy legal and permitting challenges. Rural areas may have lower costs for installations but need more installations to serve small, far-flung populations. And capital and maintenance costs can be quite spiky. Individual projects can increase spending across several years, for example fire remediation costs in California, making it hard to assess a single driver of cost increases.

State policies for climate and other environmental regulations have some influence on pricing, either through direct carbon pricing or rules requiring that renewables be increasingly added to the generation mix. These climate-based policies are thought

to have some effect on prices, though studies show that these effects are modest. A survey study of 27 states that mandate a certain amount of renewable power found that such mandates raised electricity prices less than 2 percent and "scarcely moved manufacturing employment or output—about one-tenth the move in power prices," reports my CSIS colleague Elaine Buckberg (2025).

Demand growth and climate

Historically, energy, emissions, and economy have moved in lockstep. As economies expanded, more people engaged in more activities, driving higher energy consumption. Since energy systems mostly relied on fossil fuels, rising energy use meant rising emissions. This relationship was attenuated in the US over the past 20 years as electricity emissions fell, but that attenuation happened in an environment of slow demand growth in the power sector. A key question for this new era of growth will be how to meet growing demand without reversing course on climate.

The energy portfolio emerging over the next few years will primarily combine natural gas and solar power, with smaller contributions from battery storage and wind. Market economics are driving utilities and power producers toward this mix. The trend is already visible in the numbers. At the start of this year, project developers expected to build 32.5 GW of new solar, 7.7 GW of wind, 4.4 GW of natural-gas power plants, and 18.2 GW of battery storage (US EIA 2025c). This reflects an emerging portfolio strategy visible across America: Utilities are planning gas-solar-storage combinations that deliver both low-cost energy from renewables and reliable capacity from natural gas.

Despite potentially higher emissions, this energy expansion is the cleanest in history and one that will see carbon intensity continue to fall. The National Renewable Energy Lab has calculated lifecycle emissions factors for different generation technologies, including manufacturing, operation, and decommissioning (NREL 2021). Solar produces 43 grams of CO2 per kilowatt hour (gCO2e/kWh), wind produces 13, batteries produce 33, and natural gas produces 486. Adjusting for their uptime producing power and deployment ratios, this emerging portfolio delivers an expected emissions intensity of 75 gCO2e/kWh, which is 80 percent cleaner than today's grid.

However, despite the ever-cleaner intensity of new generation, the sheer scale of increased demand and the continued addition of fossil fuel-based resources raises concerns that America's decades-long trend of falling emissions could stall or the country fail to meet ambitious climate goals. A prolonged stall in emissions

reductions is unlikely, as the additional portfolio of generation is so clean, and because utilities continue planning coal plant retirements.

The main risk lies in emergency interventions. Coal plants might be kept open under emergency authorities to preserve grid reliability and are already seeing increased utilization to meet rising demand (Maguire 2025). In this scenario, total emissions could indeed rise, in an outcome that the climate community would find objectionable.

The framing of stalled progress on climate strongly depends on the policy objective that defines success. The 2015 Paris Climate Agreement aimed to limit global

warming to well below 2 degrees centigrade, with the ambition of 1.5 degrees C, to avoid dangerous climate change. Achieving these goals requires reaching net-zero greenhouse gas emissions by around 2050 for the 1.5-degree target and between 2070 and 2090 for the 2-degree target (Hausfather 2022). The range reflects uncertainty about both the warming response of the climate to emissions and the pace of global reductions.

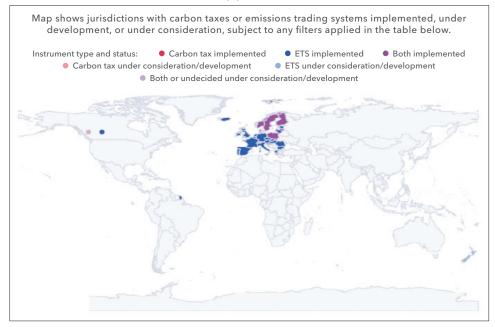
"Our response to climate change cannot meaningfully compromise America's economic security or technological competitiveness."

But this framing misses the bigger picture. Any emissions increase from building strategically or competitively essential industries would be modest compared to existing US emissions and negligible compared to rising emissions elsewhere in the world. More fundamentally, our response to climate change cannot meaningfully compromise America's economic security or technological competitiveness.

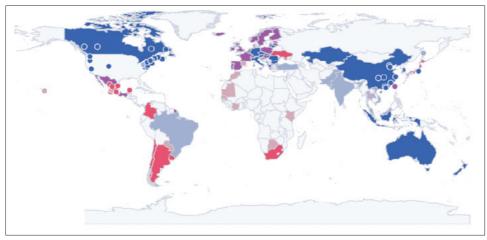
This reality demands a climate approach that enables rather than constrains growth and one that aligns with America's economic and strategic imperatives. Fortunately, global markets are creating exactly this opportunity. As more countries implement carbon regulations and pricing mechanisms, the carbon intensity of products is becoming a key competitive differentiator in international markets.

Figure 4: Compliance carbon-pricing instruments around the world, 2007 and 2025

(a) 2007



(b) 2025



Source: World Bank n.d.

As displayed in figure 4, carbon pricing schemes have grown enormously in the last 20 years. As of 2025, 28 percent of global emissions are covered by some form of carbon pricing—with prices ranging from \$0.1 to \$160 per ton—and account for more than \$100 billion in annual government revenue.

As carbon pricing schemes proliferate and affect a broader swath of the economy, they are set to reshape global trade policy and flows. In 2021, the European Union announced plans for a Carbon Border Adjustment Mechanism (CBAM) that charges importers based on their products' carbon intensity, to avoid the potential offshoring of emissions due to their increasingly binding emissions trading system (Benson et al. 2023). Currently in a transitional reporting phase, the CBAM will become a payment obligation in 2026.

This trend is accelerating globally. The UK and Turkey, close trading partners of the EU, are now both implementing carbon border measures to complement their carbon pricing programs. The UK's system is set in law to begin in January 2027. Japan is studying a border adjustment to complement its upcoming industrial-emissions trading system. And China is pursuing a national accounting standard for estimating the carbon intensity of manufactured goods, as preparation for compliance with international border measures.

The shift toward carbon-based trade policy creates significant opportunities for the United States. As displayed in table 2, America already holds distinct carbon-intensity advantages in key production sectors, particularly compared to China. As border adjustments and carbon pricing continue to expand internationally, these carbon advantages translate into pricing advantages for US exports in global markets. And the competitive benefit would be realized domestically if the US were to implement its own border adjustment or to base tariffs on carbon intensity. However, the embrace of carbon pricing by the United States—both at the border and domestically—has been politically elusive.

The US also cannot lose its carbon advantage and hope to maintain international competitiveness, as markets shift toward cleaner imports. This point has implications for domestic policy and energy strategy, as it creates additional motivation for investing in ever-cleaner energy technologies and accelerating the continued deployment of today's clean electricity portfolio to meet rising demand. It is through developing a cleaner and more accessible energy system that the US can build an economic strategy that will be responsive to growing demand and competitive in the long term.

| | European Union | United States | China |
|---|----------------|---------------|-------------|
| Semiconductor manufacturing (mt CO2e) | 5 [-28.5%] | 7 | 15 [114.0%] |
| NMC111 EV battery* per kilowatt-hour of battery capacity (g CO2e/kWh) | 66.9 [-9.0%] | 73.7 | 100.6 [36%] |
| Electricity (g CO2 / kWh) | 213 [-45%] | 384 | 560 [146%] |

Table 2: Carbon intensity across industries in the EU, US, and China

ECONOMIC STRATEGY GROUP

Source: Nakano and Majkut 2024; Graham et al. 2025 (electricity)

Priorities for policymakers

In a previous AESG paper, Borenstein and Kellogg (2021) tackled the challenge of reducing greenhouse gas emissions while maintaining reliable, on-demand energy services. Their policy prescription centered on broad incentives such as carbon pricing and clean-energy production subsidies. Such technology-neutral approaches

"Failure to supply adequate energy will also slow our ability to compete at the economic frontier."

favor low-carbon production without picking winners. To amplify those incentives, they argued for investing in research, development, and support for early-stage deployment of diverse clean technologies; wholesale power market reforms to promote price transparency; enhancing federal authority over long-distance transmission; and reforming retail electricity

rates to more accurately reflect society's full marginal cost. Many of those priorities were addressed by policy in the Bipartisan Infrastructure Bill and the Inflation Reduction Act. In particular, the Inflation Reduction Act established long-term technology-neutral subsidies for low-carbon power generation that applied to wind, solar, batteries, nuclear power, enhanced geothermal, hydropower, and more. The One Big Beautiful Bill, once implemented, modified that package to rapidly phase out subsidies for wind and solar but maintain subsidies for clean, firm sources like nuclear into the 2030s.

Intellectually, those recommendations are sound. The fundamentals of energy and climate policy haven't changed. What has changed is the strategic context in which these policy goals can be achieved and the urgency of supplying adequate power for economic competition.

It is increasingly clear that failure to supply adequate energy will also slow our ability to compete at the economic frontier. The convergence of artificial intelligence, strategic manufacturing, and intensifying global competition—increasingly defined by new lines of technology and by carbon intensity—has elevated the need to build quickly and sustainably. Meanwhile, there are worrying signals that the United States may not be able to meet that growth challenge and maintain the reliability, affordability, and decarbonization that were the starting point of the previous paper and clear imperatives for policymakers.

So what should an energy strategy for 2025 look like in practice?

The need to meet new demand with energy supply efficiently and expediently requires a focus on policy measures that will remove regulatory burdens and coordinate the disparate activities of firms, states, and the federal government to make strategic investments or prepare for future competitive advantage.

5.1 Making energy investments with growth in mind

Nuclear power

The federal government has a strong role to play in supporting the development and deployment of nuclear power, which provides a complement to the existing portfolio of solar, storage, and natural gas by providing carbon-free and firm power in large amounts. But the sheer size of capital investment necessary to build new nuclear capacity, along with cost-overrun risks, creates huge challenges for financing plants. Utilities and utility commissioners are unwilling to take such large risks or impose them on their ratepayers. The recently completed Vogtle reactors in Georgia eventually cost \$32 billion, after \$18 billion in cost overruns, and required multiple rounds of support from the Department of Energy's Loan Programs Office.

A more direct procurement of new nuclear capacity by the federal government could play a helpful role in developing nuclear power. In previous work, colleagues and I have encouraged a framework in which the Department of Energy (DOE) could buy offtake rights for new nuclear projects (McGeady et al. 2025). This anchor tenancy model would allow the DOE to be a contracted purchaser of power from a project under development, so that private developers could secure funding from capital markets and attract other potential offtakes, enabling financing and the start of construction. As other customers crowd in to contract offtake from the project, the government can sell off or auction its contracted volumes to recover costs and leave the new infrastructure in the private market.

The scale of demand growth and preferences for low-carbon electricity make this approach fiscally prudent and strategically important. Existing nuclear plants, or nuclear plants that can be restarted, have already attracted renewed commercial interest. And the risk to public coffers would be manageable given robust demand for the resulting power, while the benefits for energy security, grid quality, and emissions reductions would be substantial.

This program should be large enough to generate momentum for the industry. A commitment to contracts supporting 10 GW of new nuclear-reactor construction would help foster economies of scale, rebuild a domestic workforce and supply chain, and attract further commercial investment. Such a target would return the US to a position of global leadership while meeting the administration's ambitions for a nuclear renaissance

Grid enhancements

High-voltage interstate transmission represents one of the most strategic longterm investments that the federal government can make in America's economic future. And the federal government is uniquely suited to make it. Transmission infrastructure routinely operates for 80 years or more, and, unlike rapidly evolving generation technologies, transmission infrastructure provides a durable foundation for economic growth and technological enhancement.

Federal investment is essential because states will underinvest in interstate transmission. While transmission projects deliver regional and national benefits, no individual state has sufficient incentive to fund infrastructure to benefit the whole system, especially into the future. The result is that states channel investment into lower-value local projects while forgoing higher-value regional and interregional lines that stabilize the grid and unlock broader economic opportunities and lower system costs.

Federal investment should focus on projects that expand regional and interregional transfer capacity, particularly to areas that are hosting strategic industries and data centers. Increased federal funding can be paired with enhanced federal authority to site and promote interstate transmission projects. Enhanced federal authority helps by streamlining approvals through a single federal agency, diluting the power of political interests to lobby individual states, and forestalling conflict between state officials and the federal government. Similar to the authority the Federal Energy Regulatory Commission has to site and permit interstate natural-gas pipelines, this authority would allow for faster buildout of a truly national-scale grid.

Carbon capture readiness

Building new natural-gas plants ready for later retrofit with carbon capture and storage equipment represents a pragmatic approach to expanding natural-gas generation. Natural-gas generation will inevitably play a significant part in meeting growing demand this decade. Recognizing this reality but also the need to prepare for longer-term emissions reductions, policymakers should ensure that new plants are designed for future emissions reductions.

Capturing the carbon released by burning natural gas and storing it underground or in some durable media is an effective way to reduce the emissions intensity of gas generation by up to 90 percent. And existing tax credits will reward firms for doing just that. But the necessary infrastructure, affordable technologies, and regulatory models are not available today to meet the immediate timeline for growing power demand, especially not nationwide. However, plants built today could operate for decades, making retrofit capability essential for continued emissions reductions.

To minimize the cost of future retrofits, today's facilities can be designed and planned appropriately. Active planning and engineering studies at the project development stage can ensure that plants are built with the layout, piping, CO2 compression equipment, and additional power and water requirements necessary for capture and storage in mind. They can be sited near existing or planned infrastructure for CO2 capture. Avoiding siting and design choices that will make future retrofit impossible or expensive should become an industry standard in this moment of growth.

Establishing standard practices for CCS-ready natural-gas plants will make the economics of widely deployed carbon capture more favorable and contribute to the long-term viability of the natural-gas fleet and its suppliers. Energy modeling from the National Renewable Energy Laboratory shows that in scenarios with nearnet-zero emissions in the power sector, natural gas with CCS can provide as much generation as gas does today while enabling carbon competitiveness and a robust market for future natural-gas producers. It's a climate hedge for the natural-gas industry.

Federal and state policy should encourage CCS readiness as a condition of accelerated permitting and incentives for new gas generation. This approach would create a pathway for natural gas to play a long-term role in a decarbonizing economy and to function as an option for future grid managers, utilities, and power producers. But it also does not, at this moment, require too burdensome a cost on expensive technologies or slow deployment with an impossible standard for immediate CCS deployment. It's a strategy that acknowledges today's imperatives while allowing for tomorrow's to be met flexibly.

5.2 Realizing carbon competitiveness

Establishing rigorous carbon-accounting standards is the first step toward realizing the intersection of American economic competitiveness with an increasingly carbonconscious economy. As the EU, Japan, China, and others establish their own systems for carbon accounting, American exporters will start to face markets sensitive to emissions intensity without a credible domestic-emissions accounting system. A harmonized US approach, leveraging expertise in the Department of Energy and the Commerce Department, could create the accounting infrastructure necessary to allow producers to realize the carbon advantages the U.S. already holds and develop strategies for how to extend them.

US-led standards for carbon accounting could guide strategic investment in emissions reductions. Standardized metrics allow firms and policymakers to identify where decarbonization investments will deliver competitive returns in international or domestic markets. And they can be built with the flexibility to allow US firms to show reduced intensity through cleaner electricity, process improvements, or supply chain management. Such a market-driven approach would provide flexibility for different industries and regions to pursue cost-effective reductions, investing in reductions where they see premium pricing or preferential market access. It would also allow the US government to represent US interests in trade negotiations with its own approach to how emissions should be calculated.

Perhaps most importantly, a credible and US-based carbon accounting system could be designed with learning mechanisms to build political and industry trust and support for broader climate policies. As businesses invest based on carbon metrics and as international markets for carbon-differentiated products expand, firms and the government can pursue a virtuous cycle of expanding market access while reducing emissions through economic competition. Both Democratic and Republican leaders are starting to realize that American manufacturing efficiency offers not just a comparative advantage but an environmental advantage as well. Proving this point will go a long way to sustaining that efficiency.

Conclusion

Energy strategy is a key component of economic strategy. And the US finds itself revisiting its energy strategy amidst a new competitive landscape. The convergence of artificial intelligence, manufacturing, and electrification of the economy are creating new pressures on the energy system and demand for rapidly buildable, affordable electricity. Unlike the last era of relatively stagnant demand, the country now faces the challenge of enabling rapid, sustainable growth at rates not seen since the boom in power demand following World War II. But now sustainability means keeping prices affordable, reliability intact, and emissions trending downward.

The policy framework outlined here aims to enable this growth under today's state-led model for developing energy infrastructure. By investing in the hardestto-finance infrastructure, with broadly felt benefits, the recommendations aim to unlock the potential of the US to discover low-cost and efficient options for meeting growing demand with markets, while creating long-term opportunities for growth and competitiveness. More than technical solutions, the paper has aimed to position these moves as strategic investments in America's long-term competitive advantage.

By ensuring speed-to-power for strategic industries, building the grid infrastructure of the future, and preparing for a more carbon-constrained world, the United States can utilize its resources, technology, and market power as engines of economic leadership. Doing so requires moving beyond the traditional framework that treats energy supply and climate action as competing priorities, toward an integrated approach that recognizes abundant—and ever-cleaner—energy as a pillar of economic security.

References

- Belanger, Ashley. 2024. "OpenAI Asked US to Approve Energy-Guzzling 5GW Data Centers, Report Says." Ars Technica, September 25. https://arstechnica.com/tech-policy/2024/09/ openai-asked-us-to-approve-energy-guzzling-5gw-data-centers-report-says/.
- Benson, Emily, Joseph Majkut, William A. Reinsch, and Federico Steinberg. 2023. "Analyzing the European Union's Carbon Border Adjustment Mechanism." Center for Strategic and International Studies, February 17. https://www.csis.org/analysis/analyzing-europeanunions-carbon-border-adjustment-mechanism.
- Bergmann, Max, Cy McGeady, Otto Svendsen, Mathias Zacarias, and Ignacio Urbasos. 2024. Power Plays: Europe's Response to the Energy Crisis. Center for Strategic and International Studies, September. https://csis-website-prod.s3.amazonaws.com/s3fspublic/2024-09/240903_Bergmann_Power_Crisis.pdf?VersionId=2ge2hwdyWP79graodpVT sz95vY.t_CeS.
- Borenstein, Severin, and Ryan Kellogg. 2021. "Challenges of a Clean Energy Transition and Implications for Energy Infrastructure Policy." In Rebuilding the Post-Pandemic Economy, edited by Melissa S. Kearney and Amy Ganz, 234-71. Aspen Institute Press. https://www.economicstrategygroup.org/publication/borenstein-kellogg/.
- Buckberg, Elaine. 2025. "Not So Fast: Why U.S. Manufacturing Is Likely to Stay Home Through Decarbonization." Commentary. Center for Strategic and International Studies, January 3. https://www.csis.org/analysis/not-so-fast-why-us-manufacturing-likely-stay-homethrough-decarbonization.
- Graham, Euan, Nicolas Fulghum, and Katye Altieri. 2025. "Major Countries and Regions." In Global Electricity Review 2025. Ember, April 8. https://ember-energy.org/latest-insights/ global-electricity-review-2025/major-countries-and-regions/.
- Hausfather, Zeke. 2022. "Analysis: What the New IPCC Report Says About How to Limit Warming to 1.5C or 2C." Carbon Brief, April 6. https://www.carbonbrief.org/analysis-whatthe-new-ipcc-report-says-about-how-to-limit-warming-to-1-5c-or-2c/.
- International Energy Agency (IEA). 2025. Electricity 2025. International Energy Agency. https://www.iea.org/reports/electricity-2025.
- Kahn, Matthew E., and Erin T. Mansur. 2010. "How Do Energy Prices, and Labor and Environmental Regulations Affect Local Manufacturing Employment Dynamics? A Regression Discontinuity Approach." Working paper no. 16538. National Bureau of Economic Research, November. https://www.nber.org/papers/w16538.
- Maguire, Gavin. 2025. "US Power Pollution Climbs on Higher Coal Use." Reuters, July 1. https://www.reuters.com/markets/commodities/us-power-pollution-climbs-higher-coaluse-2025-07-01/.
- McGeady, Cy. 2024. "Strategic Perspectives on U.S. Electric Demand Growth." Commentary. Center for Strategic and International Studies, May 20. https://www.csis.org/analysis/ strategic-perspectives-us-electric-demand-growth.
- McGeady, Cy, Joseph Majkut, Barath Harithas, and Karl Smith. 2025. The Electricity Supply Bottleneck on U.S. AI Dominance. Center for Strategic and International Studies, March 3. https://www.csis.org/analysis/electricity-supply-bottleneck-us-ai-dominance.

- Nakano, Jane, and Joseph Majkut. 2024. Strategic Equilibrium: The United States' Manufacturing Resurgence and the Role of Natural Gas in a Carbon-Competitive World. Center for Strategic and International Studies, September 10. https://www.csis.org/analysis/strategic-equilibriumunited-states-manufacturing-resurgence-and-role-natural-gas-carbon.
- National Renewable Energy Laboratory (NREL). 2021. "Life Cycle Greenhouse Gas Emissions from Electricity Generation: Update." NREL/FS-6A50-80580. National Renewable Energy Laboratory. https://docs.nrel.gov/docs/fy21osti/80580.pdf.
- Palti-Guzman, Leslie, and Joseph Majkut. 2023. "U.S. LNG: Remapping Energy Security." Center for Strategic and International Studies, January 17. https://features.csis.org/us-lngremapping-energy-security/.
- Ritchie, Hannah, and Max Roser. 2020. "CO2 and Greenhouse Gas Emissions." Our World in Data, June; revised January 2024. https://ourworldindata.org/co2-emissions.
- Shehabi, Arman, Alex Newkirk, Sarah J. Smith, Alex Hubbard, Nuoa Lei, Md Abu Bakar Siddik, et al. 2024. 2024 United States Data Center Energy Usage Report. Lawrence Berkeley National Laboratory, December 20. https://escholarship.org/uc/item/32d6m0d1.
- Smith, Karl, Cy McGeady, Joseph Majkut, and Barath Harithas. 2025. The AI Power Surge: Growth Scenarios for GenAI Datacenters Through 2030. Center for Strategic and International Studies, March 3. https://www.csis.org/analysis/ai-power-surge-growth-scenarios-genaidatacenters-through-2030.
- US Bureau of Economic Analysis (US BEA). 2024a. "Gross Domestic Product: Mining (Except Oil and Gas) (212) in the United States [USMINEXOILGASNGSP]." FRED, Federal Reserve Bank of St. Louis, September 27. https://fred.stlouisfed.org/series/USMINEXOILGASNGSP.
- US Bureau of Economic Analysis (US BEA). 2024b. "Gross Domestic Product: Oil and Gas Extraction (211) in the United States [USOILGASNGSP]." FRED, Federal Reserve Bank of St. Louis, September 27. https://fred.stlouisfed.org/series/USOILGASNGSP.
- US Bureau of Economic Analysis (US BEA). 2025. "Value Added by Industry: Utilities as a Percentage of GDP [VAPGDPU]." FRED, Federal Reserve Bank of St. Louis, June 26. https://fred.stlouisfed.org/series/VAPGDPU.
- US Energy Information Administration (US EIA). 2007. Annual Energy Outlook 2007: With Projections to 2030. US Energy Information Administration. https://www.eia.gov/outlooks/ archive/aeo07/pdf/0383(2007).pdf.
- US Energy Information Administration (US EIA), 2021. "Manufacturing Energy Consumption Survey (MECS) 2018." US Energy Information Administration. https://www.eia.gov/ consumption/manufacturing/data/2018/.
- US Energy Information Administration (US EIA). 2025a. "Electricity." US Energy Information Administration. https://www.eia.gov/electricity/data.php.
- US Energy Information Administration (US EIA). 2025b. "U.S. Imports of Crude Oil and Petroleum Products." US Energy Information Administration. https://www.eia.gov/petroleum/data.php.
- US Energy Information Administration (US EIA). 2025c. "Today in Energy: Solar, Battery Storage to Lead New U.S. Generating Capacity Additions in 2025." US Energy Information Administration, February 24. https://www.eia.gov/todayinenergy/detail.php?id=64586.

- US House Subcommittee on Energy. 2025. Hearing on Department of Energy's FY 2026 Budget. 119th Cong., 1st sess. https://energycommerce.house.gov/posts/chairman-latta-deliversopening-statement-at-subcommittee-on-energy-hearing-on-department-of-energy-s-fy-2026-budget25.
- Wolverton, Ann, Ronald Shadbegian, and Wayne B. Gray. 2022. "The U.S. Manufacturing Sector's Response to Higher Electricity Prices: Evidence from State-Level Renewable Portfolio Standards." Working paper no. 30502. National Bureau of Economic Research, September. https://www.nber.org/papers/w30502.
- World Bank. n.d. "State and Trends of Carbon Pricing Dashboard." World Bank Group. Accessed July 1, 2025. https://carbonpricingdashboard.worldbank.org/.
- Yergin, Daniel, Carlos Pascual, Michael Stoppard, Eric Eyberg, Leandro Caputo, Mohsen Bonakdarpour, et al. 2024. Major New US Industry at a Crossroads: A US LNG Impact Study— Phase 1. S&P Global, December 17. https://www.spglobal.com/en/research-insights/ special-reports/major-new-us-industry-at-a-crossroads-us-lng-impact-study-phase-1.

Author Biographies

HENRY M. PAULSON, JR.

Co-Chair, Aspen Economic Strategy Group; Chairman, The Paulson Institute

Henry M. Paulson, Jr. is the founder and chairman of the Paulson Institute, a non-profit organization dedicated to fostering global relationships that advance economic prosperity, promote sustainable growth, and maintain global order in a rapidly evolving world. He is executive chairman of TPG Rise Climate, the climate investing platform of the global private equity firm TPG. Paulson is also the cochair of the Aspen Economic Strategy Group. Paulson served as the 74th Secretary of the Treasury under President George W. Bush, from July 2006 to January 2009. Prior to that, he had a thirty-two-year career at Goldman Sachs, serving as chairman and chief executive officer beginning in 1999. A lifelong conservationist, Paulson was Chairman of The Nature Conservancy Board of Directors and, prior to that, founded and co-chaired the organization's Asia-Pacific Council. In 2011, he founded the Latin American Conservation Council, comprised of global business and political leaders, which he co-chaired until 2017. He also co-chaired the Risky Business Project from 2013- 2017, a non-partisan initiative that quantified and publicized the economic risks of climate change in the United States. Earlier in his career, he was a member of the White House Domestic Council as well as a staff assistant at the Pentagon. Paulson is the author of the bestsellers On the Brink and Dealing with China. He is also the co-author of two books with Ben Bernanke and Tim Geithner, First Responders and Firefighting. Paulson graduated from Dartmouth College and received an M.B.A. from Harvard University.

TIMOTHY F. GEITHNER

Co-Chair, Aspen Economic Strategy Group; Chairman, Warburg Pincus

Timothy F. Geithner serves as Chairman of Warburg Pincus. Before joining Warburg Pincus, Geithner served as the 75th Secretary of the U.S. Department of the Treasury from 2009 to 2013. He previously served as President and Chief Executive Officer of the Federal Reserve Bank of New York from 2003 to 2009. He began his U.S. government career with the Treasury Department in 1988. Geithner is Chair of the

Program on Financial Stability at the Yale University School of Management, where he is also a visiting lecturer. He is a member of the International Rescue Committee Board of Advisors. He is the Co-Chair of the Aspen Economic Strategy Group. He is a member of the Group of Thirty. Geithner holds a BA in Government and Asian Studies from Dartmouth College and an MA in International Economics and East Asian Studies from Johns Hopkins School of Advanced International Studies.

MELISSA S. KEARNEY

Director, Aspen Economic Strategy Group; Gilbert F. Schaefer Professor of Economics, University of Notre Dame

Melissa S. Kearney is the Gilbert F. Schaefer Professor of Economics at the University of Notre Dame. She is also director of the Aspen Economic Strategy Group; the director of the Strengthening Families Research Initiative at the University of Notre Dame; a research associate at the National Bureau of Economic Research; and a nonresident senior fellow at the Brookings Institution. She currently serves on the Board of Directors of MDRC and on the Board of the Notre Dame Wilson-Sheehan Lab for Economic Opportunities. Kearney previously served as the Neil Moskowitz Professor of Economics at the University of Maryland, Director of the Hamilton Project at Brookings, and co-chair of the Massachusetts Institute of Technology J-PAL State and Local Innovation Initiative. Kearney's research focuses on US poverty, inequality, social policy, and the economics of fertility and families. She has served in editorial positions for the American Economic Journal: Economic Policy; Journal of Economic Literature; Journal of Human Resources; Demography; and Future of Children. She is the author of The Two-Parent Privilege (University of Chicago Press, 2023.) Kearney teaches Public Economics at both the undergraduate and Ph.D. level. She holds a B.A. in Economics from Princeton University and a Ph.D. in Economics from MIT.

CRAIG GARTHWAITE

Herman Smith Research Professor in Hospital and Health Services Management; Director of the Program on Healthcare, Northwestern Kellogg School of Management

Craig Garthwaite is the Herman R. Smith Research Professor in Hospital and Health Services, a Professor of Strategy, and the Director of the Program on Healthcare at Kellogg (HCAK). He is an applied economist whose research examines the business of healthcare with a focus on the interaction between private firms and public policies. His recent work in the payer and provider sectors has focused on the private sector effects of the Affordable Care Act, the impact and operation of Medicaid Managed Care plans, the responses of non-profit hospitals to financial shocks, and the economic effects of expanded social insurance programs such as Medicaid and Medicare for All. Professor Garthwaite also studies questions of pricing and innovation in the biopharmaceutical sector. In this area he has examined the effect of changes in market size of investments in new product development, the evolving world of precision medicine, expanded patent protection on pricing in the Indian pharmaceutical market, the innovation response of United States pharmaceutical firms to increases in demand, and the relationship between health insurance expansions and high drug prices. His research has appeared in journals such as the Quarterly Journal of Economics, the American Economic Review, the Annals of Internal Medicine, and the New England Journal of Medicine. Garthwaite received a B.A. and a Masters in Public Policy from the University of Michigan and his PhD in Economics from the University of Maryland. Prior to receiving his PhD, he served in a variety of public policy positions including the Director of Research for the Employment Policies Institute. He has testified before the United States Senate, United States House of Representatives and state legislatures on matters related to the healthcare markets, prescription drugs, the minimum wage, and health care reforms.

BENJAMIN KEYS

Rowan Family Foundation Professor; Professor of Real Estate and Finance, The Wharton School, University of Pennsylvania

Ben Keys is the Rowan Family Foundation Professor of Real Estate and Finance at the University of Pennsylvania's Wharton School and a Research Associate of the National Bureau of Economic Research. Keys's research has been published in such journals as the Quarterly Journal of Economics, American Economic Review, and Econometrica, and has been profiled in the Economist, Wall Street Journal, and New York Times. His recent research has focused on climate risk, housing, mortgage, and insurance markets, among other topics. Before joining Wharton, Keys taught at the University of Chicago and worked as a staff economist at the Board of Governors of the Federal Reserve System. Keys holds a B.A. in economics and political science from Swarthmore College and an M.A. and Ph.D. in economics from the University of Michigan.

TIMOTHY LAYTON

Associate Professor of Public Policy and Economics, University of Virginia

Timothy Layton is an associate professor of public policy and economics, specializing in health economics, at the Frank Batten School of Leadership and Public Policy at the University of Virginia. Layton's research focuses on the economics of health insurance markets, with a particular focus on markets and social health insurance programs for low-income households. His research involves a mix of empirical and conceptual work studying how and why health insurance markets often struggle to provide the contracts consumers want at prices they can afford. He is an international expert in adverse selection in health insurance markets and policy tools to correct selection-induced market distortions. He also studies the design of social insurance programs, especially Medicaid and Medicare, with particular focus on private provision of public social insurance benefits and how to design programs that are optimized for the poorest and most vulnerable Americans. Layton is a Research Associate at the National Bureau of Economic Research and an affiliated researcher at J-PAL at MIT. He sits on the editorial board of the American Journal of Health Economics and will start a term as an editor at the Journal of Health Economics in January 2025. Prior to coming to UVA, Layton was the 30th Anniversary Associate Professor of Health Care Policy at Harvard Medical School.

Layton's research has been published in top economics journals including the American Economic Review, American Economic Review, Insights, the Journal of Political Economy, the Review of Economics and Statistics, American Economic Journal: Applied, American Economic Journal: Economic Policy, and the Journal of Health Economics. He has also published widely in top clinical and health policy journals such as the New England Journal of Medicine and Health Affairs. He has won numerous awards for his work including the Willard Manning Memorial Award for the Best Research in Health Econometrics from the American Society of Health Economists, the Mark Satterthwaite Award for Outstanding Research in Healthcare Markets from the Kellogg School of Management, and the Outstanding Statistical Application Award from the American Statistical Association. His work is funded from a variety of sources, including grants from the National Institute on Aging, the National Institute on Minority Health and Disparities, the Agency for Healthcare Research and Quality, Arnold Ventures, and J-PAL. Layton has taught courses on health policy and health economics and advanced econometric methods for causal inference. He has advised many students over the course of his career, many of whom have gone on to top jobs in academies, government, and industry. He received his bachelor's degree from Brigham Young University and his Ph.D. from Boston University. He has three boys and loves mountain biking, hiking, and trail running.

JOSEPH MAJKUT

Director, Energy Security and Climate Change Program, Center for Strategic and International Studies

Joseph Majkut is director of the Energy Security and Climate Change Program at the Center for Strategic and International Studies (CSIS). In this role, he leads the program's work understanding the geopolitics of energy and climate change and working to ensure a global energy transition that is responsive to the risks of climate change and the economic and strategic priorities of the United States and the world. Joseph is an expert in climate science, climate policy, and risk and uncertainty analysis for decisionmaking. He is frequently cited in trade and national media on the politics of climate change and has testified before Congress on climate change and science. Before CSIS, Majkut worked as the director of climate policy at the Niskanen Center, where he led that group's efforts to research and promote carbon pricing, low-carbon innovation, regulatory reform, and other market reforms to speed decarbonization. From 2014 to 2015, he worked in the U.S. Senate as a congressional science fellow, supported by the American Association for the Advancement of Science and the American Geosciences Institute. He holds a PhD from Princeton University in atmospheric and oceanic sciences, a master's degree in applied mathematics from the Delft University of Technology, and a bachelor's degree in mathematics from Harvey Mudd College.

JEREMY NEUFELD

Director of Immigration Policy, Institute for Progress

Jeremy Neufeld is the Director of Immigration Policy at the Institute for Progress. Previously, he was an immigration policy analyst at the Niskanen Center. His work has been cited in numerous outlets including the Wall Street Journal, Washington Post, and Bloomberg. He graduated with a B.S. in economics from the University of Maryland, College Park.

VINCENT REINA

Professor, University of Pennsylvania

Vincent Reina is a professor in the Department of City and Regional Planning at the University of Pennsylvania, with a secondary appointment as Professor of Real Estate in the Wharton School of Business. Reina is the Founder and Faculty Director of the Housing Initiative at Penn and is currently a Stoneleigh Foundation

Fellow and Editor in Chief of the peer-reviewed journal Housing Policy Debate. His research focuses on urban economics, housing policy, and community and economic development, and has been published in various peer-reviewed journals.

In 2022-2024 Reina served as the Senior Advisor for Housing and Urban Policy in the White House Domestic Policy Council, where he worked to address the nation's housing affordability and supply challenges, affirmatively further fair housing, increase access to homeownership, and advance community investment.

Reina was also previously a Visiting Scholar at the Federal Reserve Bank of Philadelphia, a Lincoln Institute for Land Policy Scholar, and a Coro fellow.

JAMES SULLIVAN

Professor of Economics, University of Notre Dame; Co-Founder and Director, Wilson Sheehan Lab for Economic Opportunities (LEO)

James Sullivan is a Professor of Economics at the University of Notre Dame. He also is co-founder and Director of the Wilson Sheehan Lab for Economic Opportunities (LEO), a research center that works with service providers and policymakers to identify effective and scalable solutions to reduce poverty in America. He has been a visiting scholar at the National Poverty Center and has served on its Advisory Board. He was a visiting professor at the University of Chicago and has served as a national Phi Betta Kappa Visiting Scholar. In 2019, he was appointed to the U.S. Commission on Social Impact Partnerships. His research examines the effectiveness of anti-poverty programs at the national, state, and local level. He also studies the consumption, saving, and borrowing behavior of poor households, as well as poverty and inequality measurement. Sullivan has published numerous journal articles and book chapters and his work has been covered by major media outlets including CNN, the Wall St. Journal, the Washington Post, the New York Times, Forbes, Fox News, Barron's, Bloomberg News, Slate, the Atlantic Monthly, the Chicago Tribune, National Public Radio, and others. He has testified at Congressional hearings on evidence-based policy on multiple occasions. In 2023, he was also appointed as the inaugural Director of the Notre Dame Poverty Initiative. Sullivan received his bachelor's degree from the University of Notre Dame and his Ph.D. from Northwestern University.

ECONOMIC STRATEGY GROUP aspen institute

CO-CHAIRS

Henry M. Paulson, Jr.

Founder & Chairman The Paulson Institute

ASPEN INSTITUTE CHAIR

Margot Pritzker

Chair

The Aspen Institute

DIRECTOR

Melissa S. Kearney

Gilbert F. Schaefer Professor of Economics

University of Notre Dame

Timothy F. Geithner

Chairman

Warburg Pincus

ASPEN INSTITUTE PRESIDENT

Daniel R. Porterfield

President & CEO

The Aspen Institute

POLICY DIRECTOR

Luke Pardue

The Aspen Institute

MEMBERS

Wally Adeyemo

Former Deputy Secretary of the United States Treasury

Joshua Bolten

CEO

Business Roundtable

Raphael W. Bostic

President & CEO

Federal Reserve Bank of Atlanta

Erskine Bowles

President Emeritus University of North Carolina Co-Chair Emeritus Aspen Economic Strategy Group Erik Brynjolfsson

Jerry Yang & Akiko Yamazaki Professor Stanford University

Kenneth I Chenault

Chairman and Managing Director General Catalyst

John H. Cochrane

Rose-Marie and Jack Anderson Senior Fellow The Hoover Institution

Susan M. Collins

President & CEO

Federal Reserve Bank of Boston

Bob Corker

Former US Senator from Tennessee

David Cote

Executive Chairman Vertiv Holdings; CompoSecure, LLC

Ray Dalio

Founder Bridgewater Associates Co-Founder Dalio Philanthropies and OceanX

Mitchell E. Daniels, Jr.

President Emeritus Purdue University

Brian Deese

MIT Innovation Fellow MIT

Blair W. Effron

Co-Founder & Partner Centerview Partners

Rahm Emanuel

Senior Advisor Centerview Partners

Laurence D. Fink

Chairman & CEO BlackRock

Adena T. Friedman

Chair & CEO Nasdaq, Inc.

Michael Froman

President Council on Foreign Relations

Jason Furman

Aetna Professor of the Practice of Economic Policy Harvard University

Craig Garthwaite

Professor of Strategy Kellogg School of Management

Timothy F. Geithner

Chairman Warburg Pincus

Edward L. Glaeser

Fred and Eleanor Glimp Professor of Economics Harvard University

Austan D. Goolsbee

President & CEO Federal Reserve Bank of Chicago

Jonathan Gray

President & COO Blackstone

Keith Hennessey

Lecturer in Economics Stanford University

Mellody Hobson

Co-CEO & President Ariel Investments

Douglas Holtz-Eakin

President American Action Forum

Glenn Hubbard

Dean Emeritus & Russell L. Carson Professor of Finance & Economics Columbia Business School

Greg Ip

Chief Economics Commentator & Deputy Economics Editor The Wall Street Journal

Neil Irwin

Chief Economic Correspondent

Neel Kashkari

President & CEO Federal Reserve Bank of Minneapolis

Melissa S. Kearney

Gilbert F. Schaefer Professor of Economics University of Notre Dame

Jonathan Levin

President Stanford University

Maya MacGuineas

President Committee for a Responsible Federal Budget

Joseph Manchin III

Former US Senator from West Virginia

N. Gregory Mankiw

Robert M. Beren Professor of Economics Harvard University

Kevin McCarthy

55th Speaker of the US House of Representatives

Steven Mnuchin

Founder & Managing Partner Liberty Strategic Capital 77th United States Secretary of the Treasury

Brian Moynihan

Chair of the Board & CEO Bank of America

Henry M. Paulson, Jr.

Chairman The Paulson Institute

John Podesta

Founder Center for American Progress

Ruth Porat

President & Chief Investment Officer Alphabet and Google

Rob Portman

Distinguished Visiting Fellow in the Practice of Public Policy American Enterprise Institute

James Poterba

Mitsui Professor of Economics MIT President & CEO NBER

Penny Pritzker

Founder & Chairman PSP Partners

Gina Raimondo

Distinguished Fellow Council on Foreign Relations

Steven Rattner

Chairman & CEO Willett Advisors LLC

Virginia "Ginni" Rometty

Former Chairman, President & CEO IBM Co-Chair OneTen

Robert E. Rubin

Co-Chairman Emeritus Council on Foreign Relations Former United States Secretary of the Treasury

Paul Ryan

Partner Solamere Capital

Natasha Sarin

Professor of Law Yale University President & Co-Founder The Budget Lab at Yale

Minouche Shafik

Chief Economic Advisor to the Prime Minister of the United Kingdom

Matthew J. Slaughter

Paul Danos Dean Tuck School of Business, Dartmouth College

Brad Smith

Vice Chair and President Microsoft

Andrew Ross Sorkin

Columnist & Editor New York Times; CNBC

Robert K. Steel

Partner & Vice Chairman Perella Weinberg Partners

Michael R. Strain

Director, Economic Policy Studies; Paul E. Oreffice Chair in Political Economy American Enterprise Institute

John Waldron

President & Chief Operating Officer The Goldman Sachs Group

Meg Whitman

US Ambassador to Kenya (Ret.)

Heidi Williams

Orville E. Dryfoos Professor in Economics and Public Affairs Dartmouth College

Tom Wilson

Chair, President & CEO The Allstate Corporation

Janet Yellen

Distinguished Fellow in Residence The Brookings Institution 78th United States Secretary of the Treasury

Robert B. Zoellick

Chair

Temasek Americas



ABOUT THE ASPEN ECONOMIC STRATEGY GROUP

The Aspen Economic Strategy Group (AESG), a program of the Aspen Institute, is composed of a diverse, bipartisan group of distinguished leaders and thinkers with the goal of promoting evidence-based solutions to significant US economic challenges. Co-chaired by Henry M. Paulson, Jr. and Timothy F. Geithner, the AESG fosters the exchange of economic policy ideas and seeks to clarify the lines of debate on emerging economic issues while promoting bipartisan relationship-building among current and future generations of policy leaders in Washington.

CONTRIBUTORS

Craig Garthwaite, Northwestern University

Melissa S. Kearney, Aspen Economic Strategy Group; University of Notre Dame

Benjamin J. Keys, University of Pennsylvania

Timothy Layton, University of Virginia

Joseph Majkut, Center for Strategic and International Studies

Jeremy Neufeld, Institute for Progress

Vincent Reina, University of Pennsylvania

James Sullivan, University of Notre Dame