THE 2024 JOINT ECONOMIC REPORT

R E P O R T

OF THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

ON THE

2024 ECONOMIC REPORT OF THE PRESIDENT

REPUBLICAN RESPONSE

JUNE 17, 2024

Joint Economic Committee Republicans
Vice Chairman David Schweikert

CONTENTS

VIEWS OF VICE CHAIRMAN DAVID SCHWEIKERT 1

CHAPTER 1: FAILURES IN ECONOMIC POLICY 6

The Fiscal Problem 6

Framework to Bring Balance to the Fiscal Problem 9

Responding to the Biden Administration's Policy Framework 12

Labor Market Policy 20

Housing Policy 23

Trade Policy 27

Clean Energy Policy 32

CHAPTER 2: DEMOGRAPHICS AND THE DEFICIT 36

Social Security 36

Healthcare Spending 42

Fertility 46

Fertility Policy 49

Talent-Based Migration 51

Skilled Immigration and Growth 53

Employment 54

Budgetary Impact 55

Prime-age Labor Force Participation 57

Deaths of Despair 58

Summary 59

CHAPTER 3: TAX INCREASES HARM GROWTH 60

The Limits of Taxing the Rich 65

Laffer Curve 66

The U.S. Tax System is Highly Progressive 67

Biden Administration Tax Proposals 73

Calls to Increase Corporate Income Taxes 78

Increase in Personal Income Taxes 83

Payroll Taxes 91

Whose Taxes Will Rise? 95

A More Efficient Fiscal Consolidation 105

CHAPTER 4: REACHING FISCAL SOLUTIONS THROUGH HEALTHCARE INNOVATION 108

Obesity Rates Continue to Rise at an Alarming Pace 110

Rising Obesity is a Significant Drag on the Economy 113

Labor Supply and Productivity Costs 116

Labor Productivity Costs 117

Healthcare Innovation 118

Cost Considerations 119

Economic and Industry Changing Potential 121

Call for Further Research 127

Macroeconomic Effects 129

Need for Additional Data 129

CHAPTER 5: THE ROLE OF ARTIFICIAL INTELLIGENCE IN GOVERNANCE..131

The Economic Growth Potential of Artificial Intelligence Adoption 131

The Impact of Regulation on Economic Growth...............134

Reducing Bureaucracy with Smart Regulation to Boost Economic Growth 139

Using AI to Improve Governance 142

How Artificial Intelligence, Machine Learning, and Natural Language Processing Can Enhance Regulatory Review...149

Incorporating AI, ML, and NLP into Traditional Approaches to Regulatory Reform..152

Regulatory Budgeting..152

Regulatory Sunsetting 153

Regulatory Impact Analysis Reform.................................154

VIEWS OF VICE CHAIRMAN DAVID SCHWEIKERT

In his letter transmitting the 2024 Economic Report of the President to Congress (henceforth the *Report*), President Biden declared that his economic agenda has brought "transformational progress" by rebuilding the United States' economy "from the middle out and the bottom up" after the COVID-19 pandemic wreaked havoc on the nation.

The President boasted that he would cut the deficit by $1 trillion, signed into law the Orwellian-named Inflation Reduction Act, and canceled hundreds of billions of dollars in student loan debt.

But the economic reality facing the American people is fundamentally different from what President Biden attempted to present in the *Report*. All is not well with the U.S. economy, and hardworking families are being left behind while future generations are saddled with crushing debt.

Since January 2021, the total national debt has increased by more than $6.8 trillion. More than 53 percent of that debt has been added since President Biden declared the COVID-19 pandemic over during a CBS News interview in September 2022.

We have borrowed nearly $100,000 every second over the past year. The national debt has increased by more than $1.4 trillion this fiscal year, and total FY2024 net borrowing will likely be between $2.2 and $2.5 trillion. The national debt will likely surpass $35 trillion before the end of FY2024, and gross interest spending on the debt is projected to exceed $1.1 trillion.

To make matters worse, the 2024 Social Security Trustees Report estimated that the Old-Age and Survivors Insurance (OASI) Trust

Fund will become insolvent by FY2033, leading to an automatic 21 percent cut to retirement benefits. This would cause the senior poverty rate to more than double from 1.5 percent to 3.3 percent. Millions of seniors are counting on us to save their earned benefits.

The Biden Administration has turned a blind eye to the nation's debt crisis, injecting trillions in reckless spending that turbocharged inflation to a four-decade high. As a result, wage growth has not kept pace, and the purchasing power of the dollar has fallen by nearly 20 percent since President Biden took office. It is crystal clear—hardworking Americans are feeling squeezed and are struggling to provide for their families because of this Administration's impractical, demand-side economic policies. According to the JEC Republicans State Inflation Tracker, to maintain the same standard of living they had in January 2021, the typical household needs to spend an additional $1,000 each month. This will be the first generation to be poorer than their parents.

The U.S. Congress Joint Economic Committee plays a pivotal role each year in responding to the Economic Report of the President. The Biden Administration's policy choices outlined in the *Report* have obstructed economic growth, exacerbated inflation, and driven up interest costs on the debt, exacerbating the nation's debt crisis.

The Republican section of the 2024 Joint Economic Report (henceforth the *Response*) delivers its findings and recommendations in five chapters.

Chapter 1 ("Failures in Economic Policy") reviews the nation's fiscal problems and dissects the Biden Administration's policy choices over the past year, which have propelled deficit growth and caused inflation to persist well past its peak in 2022. The

FY2023 deficit was $1.7 trillion—the third highest on record—despite COVID-19 being in the rearview mirror. These higher annual deficits are projected to continue over the next decade and bring the publicly held debt-to-GDP ratio from 99 percent in 2024 to 116 percent by 2034. This deficit growth can largely be attributed to rising interest costs on the debt as the Federal Reserve continues to hold interest rates steady between 5.25 and 5.50 percent—the highest in two decades—because of the difficulty in taming inflation.

Chapter 2 ("Demographics and the Deficit") explores the rapidly changing demographics of the United States as more Americans retire and begin receiving Social Security and Medicare benefits. Since 2021, the combined OASI and DI Trust Fund reserves have begun to decrease because the benefits paid out exceed the income received from payroll taxes. In fact, the proportion of the population aged 65 and older has more than doubled from 6.8 percent in 1940 to 17.3 percent in 2022. This Chapter aims to address the trust fund depletion by encouraging policies that address demographic trends, like removing barriers to family formation, rejuvenating prime-age labor force participation, and attracting high-skilled immigration to increase economic growth and put our retirement programs on a sustainable fiscal path.

Chapter 3 ("Tax Increases Harm Growth") explains that President Biden's tax proposals would be detrimental to the U.S. economy and constitute a harmful strategy for balancing the long-run Federal budget. The President has repeatedly targeted wealthy individuals and corporations to raise revenue to solve the nation's pressing fiscal problems. This Chapter presents compelling arguments against the Left's "tax the rich" approach by proving that such large tax increases would severely hamper economic

growth and exacerbate America's fiscal crisis while raising only a fraction of the tax receipts necessary.

Chapter 4 ("Reaching Fiscal Solutions Through Healthcare Innovation") builds off our findings in the 2023 *Response* which concluded that obesity and obesity-related diseases caused an average of $5,155 in excess medical costs per person who suffers from obesity, amounting to $520 billion in total excess healthcare costs in 2023 alone. After updating our projections, we now estimate that obesity will result in $8.2 to $9.1 trillion in excess medical expenditures over the next ten years. I have long argued one of the most moral things we can do as a society is to curb obesity through healthcare innovation. By making our fellow Americans healthier, we can vastly improve their quality of life, and, in turn, help solve the nation's fiscal challenges so that future generations are not left behind.

Chapter 5 ("The Role of Artificial Intelligence in Governance") analyzes the potential benefits to governance, economic growth, and our fiscal situation that one of the most revolutionary technological innovations of our generation, artificial intelligence (AI), can have. AI will increase labor productivity, raising output and boosting economic growth. Its integration into government administration will minimize waste and improve the responsiveness and efficiency of government services, which will reduce outlays without necessitating legislative changes. Finally, AI can be used to quickly analyze regulatory text, improving the efficacy of existing proposals for smart regulatory review—further accelerating economic growth. The potential for both faster, sustained economic growth and a reduction in outlays will help stabilize the debt-to-GDP ratio and dramatically improve the nation's fiscal trajectory.

America's fiscal health is at a critical juncture. The dramatic rise in America's national debt is a crisis that can no longer be ignored. The challenge before us is neither Republican nor Democrat—it is our moral obligation to ensure American families are not left behind. Our economic future hangs in the balance, and my brothers and sisters in Congress hold the keys to determine which path we choose. We can either behave like adults and choose the path of fiscal responsibility or continue our partisan gamesmanship that will put the American dream further out of reach for future generations.

It does not matter what party one belongs to, we should all want a healthier population, strong and secure social safety net programs, and a robust and flourishing economy.

Our time to act is now.

CHAPTER 1: FAILURES IN ECONOMIC POLICY

The Fiscal Problem

According to the Congressional Budget Office (CBO), the FY2023 deficit was $1.7 trillion, the third highest level on record, only surpassed in FY2020 and FY2021, which were excessively large due to the significant fiscal stimulus in response to the COVID-19 pandemic. This was over two times the average annual deficit between FY2013 and FY2019 and ten times higher than the average annual deficit between FY2000 and FY2007, the two other typical macroeconomic periods of this century.[1]

This level of deficit spending during a time of peace and economic expansion is unprecedented and is not expected to slow soon. Annual deficits are expected to accelerate considerably over the next ten years, surpassing $2.5 trillion in FY2034, according to CBO.[2] Persistent deficits are projected to raise the debt-to-GDP ratio from 99 percent in 2024 to 116 percent by 2034. While much of the recent debate has focused on discretionary spending, mandatory programs account for a larger share of total spending. Social Security, Medicare, and Medicaid accounted for 48 percent of total government spending in FY2023.[3] Overall nominal

---

[1] Congressional Budget Office (CBO), *The Budget and Economic Outlook: 2024 to 2034* (February 2024): Table 1, https://www.cbo.gov/system/files/2024-02/51134-2024-02-Historical-Budget-Data.xlsx.

[2] CBO, *The Budget and Economic Outlook: 2024 to 2034* (February 2024): Table 1-1, https://www.cbo.gov/system/files/2024-02/51118-2024-02-Budget-Projections.xlsx.

[3] In FY2023, Social Security outlays were $1,348 billion, Medicare outlays were $1,009 billion, Medicaid outlays were $616 billion, and total outlays were $6,135 billion: ($1,348 + $1,009 + $616) / ($6,135) * 100 = 48%. CBO, *The Budget and Economic Outlook: 2024 to 2034*, Table 1-4 & Table 1-1, https://www.cbo.gov/system/files/2024-02/51118-2024-02-Budget-Projections.xlsx.

spending has risen 184 percent over the past 20 years, and in FY2023, receipts (government revenue) only accounted for 72 percent of total government outlays.[4] These trends are only exacerbated by demographic headwinds, as discussed in Chapter 2 of this *Response.*

Furthermore, rising interest costs on the debt are propelling deficit growth. The decline in real interest rates over the past several decades, which brought the average nominal interest rate on the debt to levels at or below 2.5 percent between 2010 and 2022, has reversed.[5] In response to the spike in inflation observed in 2021 and 2022, the Federal Reserve raised interest rates. The result has been an increase in interest costs, with net interest payments on the debt nearly doubling over the past three fiscal years, growing from $352 billion in FY2021 to $658 billion in FY2023.[6] Because of the rise in interest rates and the growing debt, by the end of this

---

[4] In FY2003 outlays were $2,159,899 million, and in FY2023 outlays were $6,134,507 million. Office of Management and Budget, "Table 1.1 – Summary of Receipts, Outlays, and Surpluses or Deficits: 1789-2029," Historical Tables, March 2024, https://www.whitehouse.gov/wp-content/uploads/2024/03/hist01z1_fy2025.xlsx; U.S. Department of the Treasury, "Monthly Treasury Statement," (September 2023), https://www.fiscal.treasury.gov/files/reports-statements/mts/mts0923.pdf; CBO, *The Budget and Economic Outlook*, Table 1-1; in FY2023, revenues were $4,439 billion and outlays were $6,135 billion: ($4,439 / $6,135) * 100 = 72%; CBO, *The Budget and Economic Outlook: 2024 to 2034*, Table 1-1.

[5] Kenneth S. Rogoff, Barbara Rossi and Paul Schmelzing, "Long-Run Trends in Long-Maturity Real Rates 1311-2021," NBER Working Paper no. 30475 (September 2022), https://doi.org/10.3386/w30475; U.S. Department of the Treasury, "Average Interest Rates on U.S. Treasury Securities," FiscalData, https://fiscaldata.treasury.gov/datasets/average-interest-rates-treasury-securities/average-interest-rates-on-u-s-treasury-securities.

[6] OMB, "Table 6.1 – Composition of Outlays: 1940-2029," Historical Tables, March 2024, https://www.whitehouse.gov/wp-content/uploads/2024/03/hist06z1_fy2025.xlsx.

fiscal year net interest costs as a share of outlays will have more than doubled since 2017, growing to be larger than the defense budget.[7] By FY2026, net interest payments are expected to exceed $1 trillion.[8] Gross interest payments will surpass $1 trillion this fiscal year.[9] A series of poor Treasury auctions over the past year following an acceleration in the number of securities being auctioned have raised concerns that demand for Treasuries may be waning.[10] Declines in demand could drive up interest costs further and exacerbate our fiscal crisis.

---

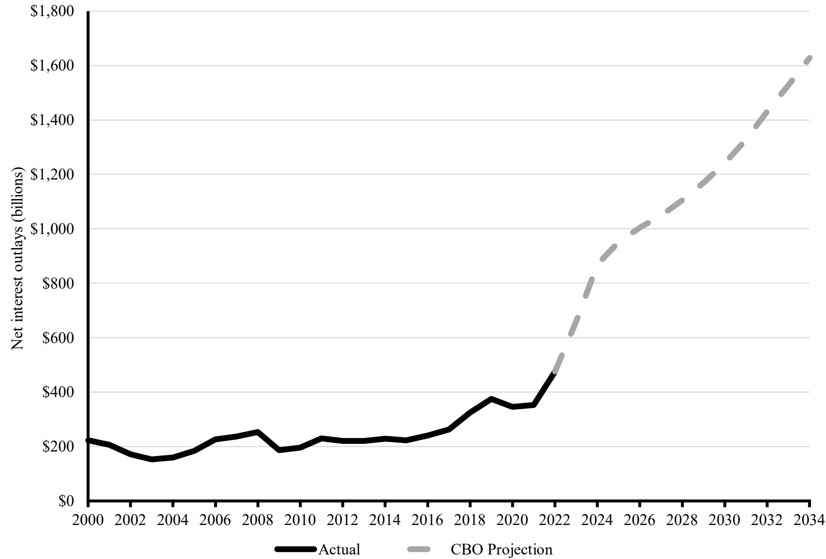
[7] CBO, Historical Budget Data, February 2024, Table 3, Outlays, https://www.cbo.gov/system/files/2024-02/51134-2024-02-Historical-Budget-Data.xlsx; CBO, *Budget and Economic Outlook: 2024 to 2034* (February 2024): Table 1-1, https://www.cbo.gov/system/files/2024-02/51118-2024-02-Budget-Projections.xlsx.

[8] In FY2026, CBO projects that net interest will be $1,005 billion. CBO, *The Budget and Economic Outlook: 2024 to 2034 By the Numbers*.

[9] Bureau of the Fiscal Service, *Monthly Treasury Statement* (U.S. Department of the Treasury, April 2024), Table 3, https://www.fiscal.treasury.gov/files/reports-statements/mts/mts0424.xlsx.

[10] Karishma Vanjani, "30-Year Treasuries Had an Ugly Auction. What's Behind the Weak Demand," *Barron's*, October 12, 2023, https://www.barrons.com/articles/treasuries-weakness-demand-a2bec374.

Figure 1-1: Net Interest Costs, 2000 -2034



Source: Office of Management and Budget (OMB); Congressional Budget Office (CBO), Feburary 2024

Framework to Bring Balance to the Fiscal Problem

Proposed in Chapter 2 of the *2023 Response* was a framework for U.S. debt stabilization. This framework draws on Olivier Blanchard's 2019 presidential address to the American Economic Association and considers the relationship between three macroeconomic variables presented below:[11]

1) the inflation-adjusted growth rate of the U.S. economy ("g");
2) the inflation-adjusted interest rate on U.S. Federal debt ("r"); and
3) the primary deficit of the U.S. Federal government ("p").

[11] Olivier Blanchard, "Public Debt and Low Interest Rates," *American Economic Review* 109, no. 4 (2019): 1197-1229, https://www.aeaweb.org/articles?id=10.1257/aer.109.4.1197.

As a simplifying assumption, assume that r and g are constants, equal to their long-run averages. Where t denotes time, the growth of the debt-to-GDP ratio is given as follows.

$$\frac{\partial}{\partial t}\left(\frac{Debt_t}{GDP_t}\right) = (r - g) * \frac{Debt_t}{GDP_t} + \frac{p_t}{GDP_t}$$

Effectively, Blanchard's model proposes that, so long as real interest rates remain below the growth rate of the economy and deficits are sufficiently small, the U.S. can stabilize debt-to-GDP growth. Considering the increase in interest rates and the projected size of deficits, debt stabilization has become more precarious. While current CBO projections of inflation-adjusted interest rates remain smaller than the forecasted real growth rate of the economy, the gap has shrunk by 0.6 percentage points since prior to the COVID-19 pandemic and has even shrunk from 0.5 percentage points to 0.3 percentage points since last year's *Response*.[12] Given these circumstances, it is now even more pressing to grow the economy and reduce the primary deficit.

[12] Note: Assuming a 2 percent long-run inflation target. CBO, *The Budget and Economic Outlook*, Table 3 in Economic Projections, https://www.cbo.gov/system/files/2024-02/51135-2024-02-Economic-Projections.xlsx; CBO, *The Budget and Economic Outlook: 2024 to 2034*, Table 1-3; CBO, *The Budget and Economic Outlook: 2020 to 2030* (January 2020): Table 1-2, https://www.cbo.gov/system/files/2020-01/51118-2020-01-budgetprojections_0.xlsx; CBO, *The Budget and Economic Outlook: 2020 to* 2030, Table 3 in Economic Projections, https://www.cbo.gov/system/files/2020-01/51135-2020-01-economicprojections_0.xlsx; Joint Economic Committee (JEC) Republicans, *Republican Response to the Economic Report of the President* (U.S. Congress Joint Economic Committee, 2023): 192, https://sen.gov/LVQYY.

Box 1-1: Debt Threshold

Research suggests that a high debt-to-GDP ratio hampers long-run economic growth through a variety of channels. These include an erosion of consumer confidence, increased interest rates, and crowding out of private investment.[13] Specifically, the CBO estimates that every additional dollar the Federal government borrows results in a 33 percent reduction in private investment, slowing economic growth.[14] The cornerstone study on the effect of the debt-to-GDP ratio on economic growth is by Carmen Reinhart and Kenneth Rogoff. By estimating average cross-country growth rates across time, they find that debt-to-GDP ratios above 90 percent correspond with an approximately 50 percent reduction in economic growth compared to countries with debt-to-GDP ratios between 60 and 90 percent.[15] Other research largely supports the premise that economic growth is slowed by higher debt-to-GDP ratios and that there exists a threshold around 90

[13] Committee for a Responsible Federal Budget, "CBO Outlines Negative Implications of High & Rising National Debt," August 17, 2023, https://www.crfb.org/blogs/cbo-outlines-negative-implications-high-rising-national-debt.

[14] Committee for a Responsible Federal Budget, "CBO's Alternative Long-Term Budget Projections."; Mark J. Warshawsky and John Mantus, "An Expanded and Updated Analysis of the Federal Debt's Effect on Interest Rates," *American Enterprise Institute*, September 22, 2022, https://www.aei.org/research-products/report/an-expanded-and-updated-analysis-of-the-federal-debts-effect-on-interest-rates/; Committee for a Responsible Federal Budget, "CBO's Alternative Long-Term Budget Projections," July 25, 2023, https://www.crfb.org/blogs/cbos-alternative-long-term-budget-projections.

[15] Carmen M. Reinhart and Kenneth S. Rogoff, "Growth in a Time of Debt," *American Economic Review* 100, no. 2 (2010): 573–78. doi:10.1257/aer.100.2.573.

percent above which the impact on growth is magnified.[16] Because the U.S. is the global reserve currency this may not apply in exactly the same way as in other countries, however, the point stands that higher debt profiles slow economic growth.

As the debt grows, interest costs to service the debt also rise. The debt grows even faster so long as deficits remain static or increase. Depressed economic growth under these circumstances accelerates the growth of the debt-to-GDP ratio, further slowing growth and worsening the fiscal situation. Unaddressed, a vicious cycle can arise that raises the threat of a debt crisis.

The Biden Administration's policy choices over the past year—and since the beginning of the term—have diverged from the goal of growing the economy while minimizing debt and deficit growth. Instead of enacting policies that reduce regulatory burdens and encourage private-sector-fueled growth and investment, the Biden Administration has prioritized government-led, demand-side, spend-and-regulate policies akin to those in centrally planned economies. This Chapter reviews the Administration's economic policy actions and priorities.

Responding to the Biden Administration's Policy Framework

The Biden Administration has spent more as a share of GDP in the first three years of the term than any other three-year period since World War II (excluding the bipartisan response to the COVID-19 pandemic in 2020).[17] From the nearly $2 trillion American Rescue Plan (ARP), a partisan fiscal stimulus package which passed in March 2021, to the Inflation Reduction Act (IRA),

[16] Jack Salmon, "The Impact of Public Debt on Economic Growth," Cato Institute, 2021, https://www.cato.org/cato-journal/fall-2021/impact-public-debt-economic-growth.
[17] OMB, "Summary of Receipts," Table 1-1.

estimated to cost between $700 billion and $1.2 trillion, and the $1.2 trillion Infrastructure Investment and Jobs Act (IIJA), the Biden Administration has built a demand-side-dominant economic policy regime.[18]

Keynesian economic theory suggests that a rise in outlays creates a fiscal multiplier effect, whereby government spending can be a substitute for private spending in times of crisis—such as the COVID-19 pandemic or the 2007–2008 financial crisis—and the resulting increase in consumption drives employment, creating compounding positive effects. The Biden Administration's economic policy framework appears to rest on this theory. While research tends to find substantially smaller effects than would be suggested by Keynes, government spending in the short run does

[18] In March 2023, researchers at Brookings estimated the IRA's fiscal cost to be $780 billion through 2031, and Goldman Sachs estimated $1.2 trillion. In April, University of Pennsylvania researchers estimated just over $1 trillion from 2023 to 2032. The White House, "Building a Clean Energy Economy: A Guidebook to the Inflation Reduction Act's Investments in Clean Energy and Climate Action," version 2 (January 2023), https://www.whitehouse.gov/wp-content/uploads/2022/12/Inflation-Reduction-Act-Guidebook.pdf; John Bistline, Neil R. Mehrotra, and Catherine Wolfram, "Economic implications of the climate provisions of the Inflation Reduction Act," *Brookings Institution*, March 29, 2023, https://www.brookings.edu/articles/economic-implications-of-the-climate-provisions-of-the-inflation-reduction-act/; Pipeline and Hazardous Materials Safety Administration, "Bipartisan Infrastructure Law (BIL) / Infrastructure Investment and Jobs Act (IIJA)," U.S. Department of Transportation, https://www.phmsa.dot.gov/legislative-mandates/bipartisan-infrastructure-law-bil-infrastructure-investment-and-jobs-act-iija; Michele Della Vigna, Yulia Bocharnikova, Brian Lee, and Neil Mehta, *Carbonomics: The third American energy revolution*, Goldman Sachs (March 2023), https://www.goldmansachs.com/intelligence/pages/gs-research/carbonomics-the-third-american-energy-revolution/report.pdf.

in fact lead to an increase in output.[19] Thus, the growth and tightening of the labor market following the pandemic was accelerated by the vast fiscal stimulus. As of April 2024, there have been 27 straight months with an unemployment rate below 4 percent, and quarterly real economic growth since January 2021 has averaged 3.0 percent.[20] The magnitude of fiscal support was questioned at the outset by prominent economists affiliated with former Democratic presidential administrations, including Lawerence Summers and Jason Furman, and time has shown that the record deficit spending came with a significant cost—the highest inflation in 40 years.[21]

As concluded in Chapter 1 of the 2023 *Response*, the substantial fiscal spending, aided by expansionary monetary policy, contributed to the increase in the price level that has been observed since President Biden took office, with year-over-year CPI inflation peaking at 9.1 percent in June 2022 and cumulative CPI inflation reaching 19.9 percent as of April 2024.[22] Research

---

[19] Veronique de Rugy and Garett Jones, "Keynesian Stimulus: A Virtuous Semicircle?", Mercatus Center Working Paper (June 2, 2021), https://www.mercatus.org/research/policy-briefs/keynesian-stimulus-virtuous-semicircle.

[20] U.S. Bureau of Economic Analysis, "Real Gross Domestic Product [GDPC1]," retrieved from FRED, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/GDPC1.

[21] Lawrence H. Summers, "The inflation risk is real," Larry Summers blog, May 24, 2021, https://larrysummers.com/2021/05/24/the-inflation-risk-is-real/; Nancy Cook, "Obama, Biden Economists in Conflict on Inflation Jump, Spending," Bloomberg, May 12, 2021, https://www.bloomberg.com/news/articles/2021-05-12/obama-biden-economists-in-conflict-on-inflation-jump-spending; U.S. Bureau of Labor Statistics (BLS), "Consumer Price Index for All Urban Consumers: All Items in U.S. City Average [CPIAUCSL]," retrieved from FRED, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/CPIAUCSL.

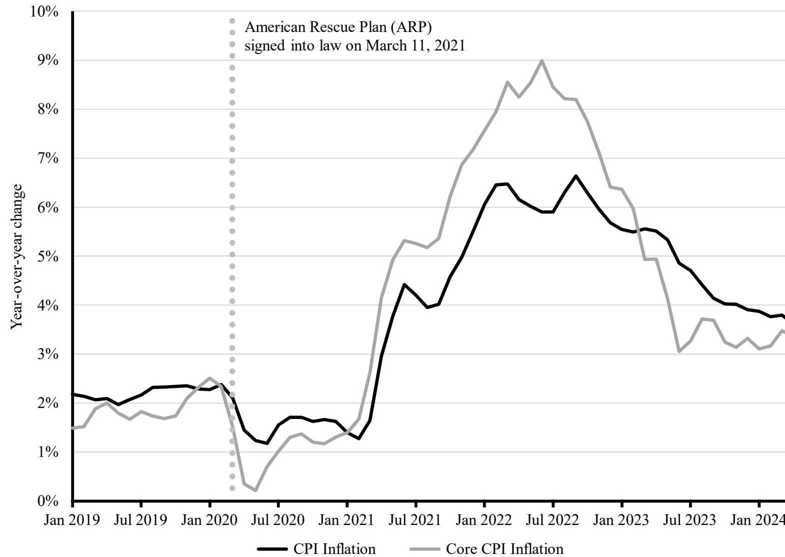
[22] U.S. Bureau of Labor Statistics (BLS), "Consumer Price Index for All Urban Consumers: All Items in U.S. City Average [CPIAUCNS]," retrieved from FRED, Federal Reserve Bank of St. Louis,

suggests that the ARP alone added 2.5 to 3.0 percentage points to U.S. inflation in 2021 and likely also exacerbated inflationary pressures in 2022 and 2023 (see Figure 1-2).[23]

https://fred.stlouisfed.org/series/CPIAUCNS; Julian di Giovanni, Ṣebnem Kalemli-Özcan, Alvaro Silva and Muhammed A. Yildirim, "Quantifying the Inflationary Impact of Fiscal Stimulus Under Supply Constraints," NBER Working Paper no. 30892 (January 2023), https://doi.org/10.3386/w30892; François de Soyres, Ana Maria Santacreu, and Henry Young, "Fiscal policy and excess inflation during Covid-19: a cross-country view," *FEDS Notes* (Board of Governors of the Federal Reserve System, 2022), https://doi.org/10.17016/2380-7172.3083; JEC Republicans, *Response*, 173.

[23] François de Soyres, Ana Maria Santacreu, and Henry Young, "Demand-Supply imbalance during the Covid-19 pandemic: The role of fiscal policy," International Finance Discussion Papers 1353 (Board of Governors of the Federal Reserve System, 2022), https://doi.org/10.17016/IFDP.2022.1353; Òscar Jordà, Celeste Liu, Fernanda Nechio, and Fabián Rivera-Reyes, "Why is U.S. Inflation Higher than in Other Countries?" Federal Reserve Bank of San Francisco Economic Letter, March 28, 2022, https://www.frbsf.org/wp-content/uploads/el2022-07.pdf; Michael R. Strain, "Yes, the Biden Stimulus Made Inflation Worse," *National Review*, February 10, 2022, https://www.nationalreview.com/corner/yes-thebiden-stimulus-made-inflation-worse/.

Figure 1-2: CPI and Core CPI Inflation, Jan 2020 – Apr 2024



Source: U.S. Bureau of Labor Statistics (BLS), Consumer Price Index (CPI-U) (not seasonally adjusted)

The remaining share of inflation in 2021 was likely due to supply chain pressures that arose from the reopening of the economy.[24] If not for the Biden Administration beginning one of the largest regulatory expansions in history, which limited supply in the face of a fiscal surge, inflation would likely have been less severe, and some of the inflationary pressures may have abated more quickly. Since January 2021, a total of over $1.6 trillion in regulatory cost has been added.[25] As explained further in Chapter 5 of the *Response,* regulations, while warranted to an extent, impose compliance and administrative costs that reduce capital investment and innovation, total employment, and economic

---

[24] Zheng Liu and Thuy Lan Nguyen, "Global Supply Chain Pressures and U.S. Inflation" Federal Reserve Bank of San Francisco Economic Letter, June 20, 2022, https://www.frbsf.org/wp-content/uploads/el2023-14.pdf.

[25] Dan Goldbeck, "May Closes With a Whimper," *American Action Forum*, June 3, 2024, https://www.americanactionforum.org/week-in-regulation/may-closes-with-a-whimper/.

dynamism.[26] Regulatory accumulation can also raise consumer prices and exacerbate inflationary pressures.[27]

In response to the inflation fueled in part by the Biden Administration's policies, the Federal Reserve began the most aggressive rate hiking cycle since the late 1970s.[28] Increasing interest rates raise the cost of borrowing and put downward pressure on current demand.[29] The impact has been widespread, from higher mortgage payments to larger interest costs for the

---

[26] Michael Mandel and Diana G. Carew, "Regulatory Improvement Commission: A Politically-Viable Approach to U.S. Regulatory Reform," Progressive Policy Institute Policy Memo, May 2013, https://www.progressivepolicy.org/wp-content/uploads/2013/05/05.2013-Mandel-Carew_Regulatory-Improvement-Commission_A-Politically-Viable-Approach-to-US-Regulatory-Reform.pdf; Dustin Chambers, Patrick McLaughlin, and Tyler Richards, "Regulation, Entrepreneurship, and Firm Size," Mercatus Center Working Paper (April 26, 2018), https://www.mercatus.org/research/working-papers/regulation-entrepreneurship-and-firm-size; James Bailey and Diana Thomas, "Regulating Away Competition: The Effect of Regulation on Entrepreneurship and Employment," Mercatus Center Working Paper (September 9, 2015), https://www.mercatus.org/students/research/journal-articles/regulating-away-competition-effect-regulation-entrepreneurship.

[27] Dustin Chambers and Courtney A. Collins, "How Do Federal Regulations Affect Consumer Prices? An Analysis of the Regressive Effects of Regulation," Mercatus Center Working Paper (February 23, 2016), https://www.mercatus.org/research/working-papers/how-do-federal-regulations-affect-consumer-prices-analysis-regressive.

[28] Board of Governors of the Federal Reserve System, "Federal Funds Effective Rate [FEDFUNDS]," retrieved from FRED, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/FEDFUNDS.

[29] Thorvaldur Gylfason, "Interest Rates, Inflation, and the Aggregate Consumption Function," *The Review of Economics and Statistics* 63, no. 2 (1981), 233-45, https://doi.org/10.2307/1924094.

Federal government. Inflation has since moderated but remains well above the Federal Reserve's long-run target.[30]

The *Report* notes supply-side reforms. However, the Administration's economic policy consists almost exclusively of demand-side, resource-allocation-distorting inflationary proposals, with limited supply-side policies.[31] When the Administration does propose supply-side reforms, they are often temporary or reactive. The temporary reduction in hourly restrictions for truck drivers illustrates this. To address pandemic-era supply chain issues and alleviate inflationary pressure, the Biden Administration temporarily eased driving hour restrictions on truck drivers.[32] The Administration could have instead sought to eliminate or greatly loosen these restrictions permanently to lower transport prices over the long term and make markets more responsive to fluctuations, but it instead sought only a temporary fix to mitigate the short-term effects.

---

[30] BLS, "Consumer Price Index for All Urban Consumers: All Items in U.S. City Average [CPIAUCNS]."

[31] Council of Economic Advisers (CEA), *Economic Report of the President* (The White House, 2024): 167, https://www.whitehouse.gov/wp-content/uploads/2024/03/ERP-2024.pdf; CEA, *Economic Report of the President*, 234.

[32] Federal Motor Carrier Safety Administration, "Extension of the Modified Emergency Declaration 2020-002 Under 49 CFR § 390.25," U.S. Department of Transportation, November 29, 2021, https://www.fmcsa.dot.gov/emergency/extension-modified-emergency-declaration-2020-002-under-49-cfr-ss-39025-november-29-2021; The White House, "Remarks by President Biden on the Nation's Supply Chains," December 1, 2021, https://www.whitehouse.gov/briefing-room/statements-releases/2021/12/01/remarks-by-president-biden-on-the-nations-supply-chains/.

Box 1-2: Biden Administration's Oil and Gas Policy

The Administration's policy on oil and gas production too speaks to its reactive supply-side policy framework. From the outset, its rhetoric and regulatory actions created policy uncertainty, likely raising costs for oil and gas production and refining firms. From issuing an Executive Order that revoked the Keystone XL pipeline, to pausing leases on Federal lands and offshore waters, to the implementation of a costly methane rule and reversing a Trump Administration Executive Order aimed at accelerating energy infrastructure projects, the Biden Administration has taken an oppositional stance to the oil and gas industry.[33] Then, as oil and gas prices rose in late 2021, surpassing $100 per barrel and $5 per gallon by the summer of 2022, respectively, instead of reversing course and reducing regulatory restrictions, President Biden authorized several releases from the Strategic Petroleum Reserve (SPR) in an ill-fated attempt to temporarily lower gas prices.[34] Research suggests that the 2022 unprecedentedly large SPR

[33] JEC Republicans, "Supply and Demand Set Gas Prices, Not Corporate Greed," July 26, 2022, https://www.jec.senate.gov/public/_cache/files/fa3599ea-b1cc-4edf-805d-bd7c1a092210/supply-and-demand-set-gas-prices-not-corporate-greed.pdf.

[34] The White House, "President Biden Announces Release from the Strategic Petroleum Reserve As Part of Ongoing Efforts to Lower Prices and Address Lack of Supply Around the World," Press Release, November 23, 2021, https://www.whitehouse.gov/briefing-room/statements-releases/2021/11/23/president-biden-announces-release-from-the-strategic-petroleum-reserve-as-part-of-ongoing-efforts-to-lower-prices-and-address-lack-of-supply-around-the-world/; U.S. Energy Information Administration (EIA), "Crude Oil Prices: West Texas Intermediate (WTI) - Cushing, Oklahoma [DCOILWTICO]," retrieved from FRED, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/DCOILWTICO; EIA, "US Regular All Formulations Gas Price [GASREGW]," retrieved from FRED, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/GASREGW.

drawdowns did not have a statistically significant impact on lowering prices.[35]

As evidenced, the Biden Administration has pursued a policy of fiscal excess and regulatory glut, while failing to pursue adequate supply-side solutions. Not coincidentally, inflation remains far above the Federal Reserve's target, notwithstanding notable interest rate hikes, and consumer sentiment remains below pre-pandemic levels.

Labor Market Policy

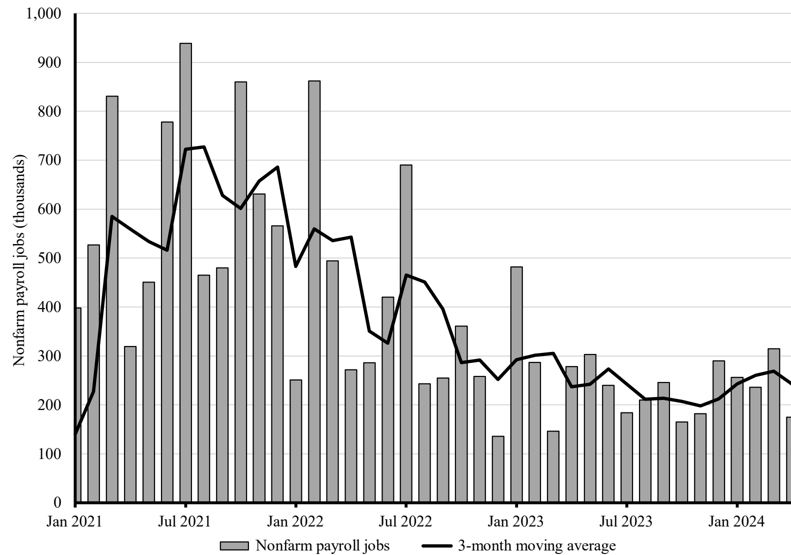
The Biden Administration—in large part due to its inflation-fueling fiscal excess—has overseen a strong labor market recovery from the pandemic. Over the past year, the labor market has remained robust, continuing the post-pandemic job trend that began in the previous Administration. In the face of rising interest rates intended to rein in inflation, there are now indications that the job market may be cooling.[36] Figure 1-3 displays the monthly nonfarm payroll jobs added each month as well as the three-month rolling average. Strong jobs numbers from January 2021 through mid-2022 have moderated, but overall job growth has been consistent over the past four years.

---

[35] EIA, "Weekly U.S. Ending Stocks of Crude Oil in SPR," https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=WCSSTUS1&f=W; Noha Razek, Valentina Galvani, Surya Rajan, and Brian McQuinn, "Can U.S. strategic petroleum reserves calm a tight market exacerbated by the Russia–Ukraine conflict?", *Resources Policy* 86, Part B (2023), https://doi.org/10.1016/j.resourpol.2023.104062.

[36] BLS, "Unemployment rate inches up during 2023, labor force participation rises," Monthly Labor Review, May 2024, https://www.bls.gov/opub/mlr/2024/article/unemployment-rate-inches-up-during-2023-labor-force-participation-rises.htm.

Figure 1-3: Monthly Nonfarm Payroll Jobs since January 2021



Source: U.S. Bureau of Labor Statistics, April 2024 Employment Situation

Despite strong growth, many Americans remained on the sidelines for far too long after the pandemic. It took until February 2023 for prime-aged labor force participation to return to pre-pandemic highs.[37] The overall labor force participation rate has not recovered to pre-pandemic levels.[38] This slow recovery likely put upward pressure on inflation and depressed the pace of the post-pandemic economic rebound.

As expressed in Chapter 1 of the *Report*, the Biden Administration is particularly attentive to the concept of hysteresis, or the cost of not being at full employment to the supply side of the economy. If

---

[37] BLS, "Labor Force Participation Rate - 25-54 Yrs. [LNS11300060]," retrieved from FRED, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/LNS11300060.

[38] BLS, "Labor Force Participation Rate [CIVPART]," retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/CIVPART.

workers remain on the sidelines, they risk sacrificing productivity-enhancing experience that is associated with remaining gainfully employed. This can reduce overall productivity, negatively impacting the growth rate of the economy.[39] Unfortunately, their policy choices following the pandemic did not align with this concern and instead depressed the labor recovery. While the economy had largely recuperated from the pandemic recession by early 2021, the Biden Administration passed the ARP, which included an extension to the emergency unemployment benefits originally implemented in the Coronavirus Aid, Relief, and Economic Security (CARES) Act, passed in the depths of the COVID-19 recession in March 2020.[40] Research suggests that such policies depressed employment by keeping potential workers on the sidelines, hampering the recovery and potentially contributing unnecessarily to inflation.[41] Similarly, the Biden Administration proposed a change to the Child Tax Credit that was estimated to result in 1.5 million fewer workers in the labor force.[42] Furthermore, at the onset of the pandemic, work

---

[39] CEA, *Economic Report of the President*, 48.

[40] Coronavirus Aid, Relief, and Economic Security Act, S. 3548, 116th Cong. (2020); The White House, "American Rescue Plan," https://www.whitehouse.gov/american-rescue-plan/.

[41] Bill Dupor, Iris Arbogast, "Employment Effects of Pandemic Emergency Unemployment Benefits: Incentives Matter," Federal Reserve Bank of St. Louis, August 4, 2022, https://www.stlouisfed.org/publications/regional-economist/2022/aug/employment-effects-pandemic-emergency-unemployment-benefits; Ben Bernanke and Olivier Blanchard, "What caused the US pandemic-era inflation?", Hutchins Center on Fiscal & Monetary Policy Working Paper (June 2023), https://fondazionecerm.it/wp-content/uploads/2023/09/What-caused-the-US-pandemic-era-inflation-.pdf.

[42] Kevin Corinth, Bruce Meyer, Matthew Stadnicki, and Derek Wu, "The Anti-Poverty, Targeting, and Labor Supply Effects of the Proposed Child Tax Credit Expansion," University of Chicago Becker Friedman Institute for Economics Working Paper no. 2021-115 (October 2021), https://doi.org/10.2139/ssrn.3938983.

requirements for the Supplemental Nutrition Assistance Program (SNAP)—which mandate that non-disabled recipients without children must work or volunteer 80 hours per month to receive benefits—were waived. The Administration did not reinstate the work requirements until May 2023, almost two years after the unemployment rate fell below 5 percent, likely keeping many workers disengaged from the labor force.[43]

Instead of pursuing policies that discourage work, the Administration should pursue the proposals set forth in Chapter 5 of last year's *Response*. These include occupational licensing reform, tax reform to allow for expensing of worker training, and allowing greater flexibility for independent and contract workers. These would increase both the supply and productivity of labor.[44] The result would be a faster growing economy with more, higher productivity workers which would improve the fiscal situation.

Housing Policy

Housing affordability has diminished because of the Biden Administration's policies. The excess fiscal stimulus it enacted led to elevated inflation, to which the Federal Reserve responded by raising the Federal Funds Rate from 0.0–0.25 percent to 5.25–5.5 percent since March 2022. This increase in interest rates contributed to pushing mortgage rates up from less than 3 percent in early 2021 to approximately 7 percent as of May 2024, reducing

---

[43] Kevin Corinth, "It's Time to Link Work and Food Stamps Again," *Deseret News*, February 17, 2023, https://www.deseret.com/2023/2/17/23598056/food-stamps-work-requirements-worker-shortage/; BLS, "Unemployment Rate [UNRATE]," retrieved from FRED, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/UNRATE.

[44] JEC Republicans, *Response*, 93-114.

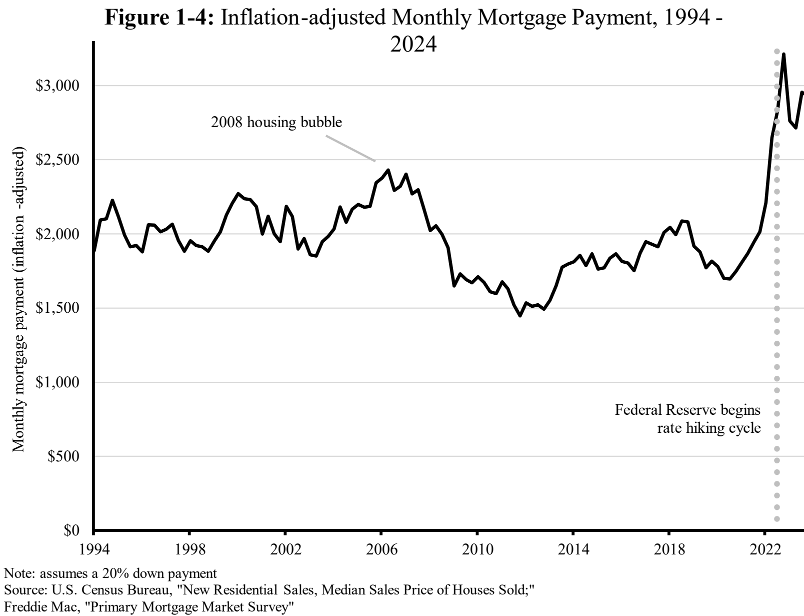
housing affordability.[45] It is estimated that the average household in the United States must spend $227 more per month on shelter costs than they did in January 2021.[46] Because this calculation includes rented housing, and rent prices are not as sensitive to interest rate fluctuations, this amount is much lower than the additional costs new homebuyers face. New homebuyers face the highest monthly mortgage payments in over 30 years.

---

[45] Natalie Newton and James Vickery, "The Pandemic Mortgage Boom," Federal Reserve Bank of Philadelphia, 2022, https://www.philadelphiafed.org/-/media/frbp/assets/economy/articles/economic-insights/2022/q3-q4/eiq3q422-the-pandemic-mortgage-boom.pdf; Eric Milstein and David Wessel, "What did the Fed do in response to the COVID-19 crisis?," *Brookings*, January 2, 2024, https://www.brookings.edu/articles/fed-response-to-covid19/; Freddie Mac, "30-Year Fixed Rate Mortgage Average in the United States [MORTGAGE30US]," retrieved from FRED, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/MORTGAGE30US; Board of Governors of the Federal Reserve System, "Federal Funds Effective Rate [FEDFUNDS]."

[46] JEC Republicans, "JEC Republicans State Inflation Tracker," https://www.jec.senate.gov/public/index.cfm/republicans/state-inflation-tracker.

Figure 1-4: Inflation-adjusted Monthly Mortgage Payment, 1994 - 2024



Note: assumes a 20% down payment
Source: U.S. Census Bureau, "New Residential Sales, Median Sales Price of Houses Sold;" Freddie Mac, "Primary Mortgage Market Survey"

While the Biden Administration's policies have contributed to rising housing unaffordability, its proposals to lower prices fail to address the root of the problem—supply—and may instead exacerbate it. It is estimated that regulation accounts for nearly a quarter of the cost of a new single-family home.[47] For multi-family units like apartment buildings and condominiums, regulations are estimated to account for 40.6 percent of development costs.[48] The proposals cited in the *Report* are largely demand-side and include

[47] Paul Emrath, "Government Regulation in the Price of a New Home: 2021," National Association of Home Builders, May 5, 2021, https://www.nahb.org/-/media/NAHB/news-and-economics/docs/housing-economics-plus/special-studies/2021/special-study-government-regulation-in-the-price-of-a-new-home-may-2021.pdf.

[48] Paul Emrath, "Regulation: 40.6 Percent of the Cost of Multifamily Development," National Association of Home Builders, June 9, 2022, https://www.nahb.org/news-and-economics/press-releases/2022/06/new-research-shows-regulations-account-for-40-point-6-percent-of-apartment-development-costs.

many subsidies, such as a proposed mortgage payment relief tax credit for first-time homebuyers, subsidies for low-income housing construction, and block grants to state and local governments to fund affordable housing development, which if enacted could further push up housing prices.[49] Failure to address the underlying problem of housing availability risks creating a perpetual subsidy demand cycle. In housing, as in other areas, the Administration fails to adequately address supply.

The Federal government can pursue policies that would have a positive impact on supply without overstepping its legislative authority. In 2022, Senator Mike Lee introduced the HOUSES Act, which would authorize state and local governments to nominate tracts of land within their jurisdictions for conveyance by the U.S. Department of the Interior.[50] JEC Republican estimates suggest that an additional 4.7 million Americans would be able to afford an average home in their state under this bill.[51] Reforms to the Davis-Bacon Act could also increase supply. Federal rules provide that workers on Federal public works projects be paid prevailing wages. Labor should instead be paid at the rate that is agreed upon by worker and employer. Market-

[49] U.S. Census Bureau and U.S. Department of Housing and Urban Development, "Median Sales Price of Houses Sold for the United States [MSPUS]," retrieved from FRED, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/MSPUS; "Home Ownership Affordability Monitor," Federal Reserve Bank of Atlanta, https://www.atlantafed.org/center-for-housing-and-policy/data-and-tools/home-ownership-affordability-monitor.

[50] Helping Open Underutilized Space to Ensure Shelter Act of 2022, S. 4062, 117th Cong. (2022).

[51] JEC Republicans, "The HOUSES Act: Addressing the National Housing Shortage by Building on Federal Land," August 2022, https://www.jec.senate.gov/public/_cache/files/efdd0c37-af95-40cd-9125-e80f8a11504b/the-houses-act---addressing-the-national-housing-shortage-by-building-on-federal-land.pdf.

oriented rules make labor more competitive for Federally funded low-income housing construction projects, increasing supply.

Trade Policy

In the modern American economy, trade remains a vital tool to bolster national economic well-being. It is critical that the Administration remains committed to a policy that prioritizes American interests in the long term, without being sidetracked by short-term political motivations. The U.S. should maintain a policy goal of free trade while simultaneously addressing national security concerns. From an economic perspective, the case for free trade is unambiguous.

Free trade grows the economy and places downward pressure on consumer prices by enabling the most efficient allocation of resources. Subjecting domestic producers and consumers to global supply and demand pressures clears the world market at a lower price and results in a higher quantity of goods and services. Restrictions on trade distort consumer and producer surpluses, causing dead-weight losses in the economy.

Furthermore, keeping the domestic market as open as possible to global markets allows American firms to take advantage of lower average costs. Competition with global firms necessitates innovation, building an economy comprised of the most productive possible firms in each industry. Contrastingly, protectionist policies create an incentive structure whereby firms chase opportunities for government protection and rent seeking in protected industries over innovation to compete with imports, making American consumers worse off and reducing American dynamism in the long run.

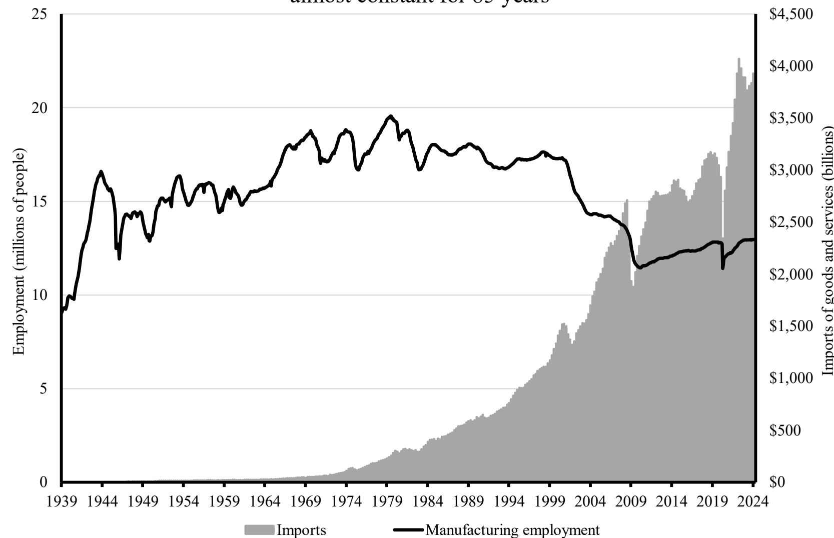
The economic benefit due to expanded trade from 1950 to 2016 is estimated to be $2.1 trillion (in 2016 dollars), which translates to an increase in GDP per capita of approximately $7,000, or $18,000 per household.[52] American consumers gain from lower prices, and producers gain from access to the global market and cheaper intermediate goods.[53]

Arguments against free trade often cite negative distributional impacts on wages and employment, for instance by attributing job losses in the manufacturing sector to import competition. Employment in the manufacturing sector has been relatively stable over the past 85 years, while imports have risen drastically (see Figure 1-5).

[52] Gary Clyde Hufbauer and Zhiyao Lu, "The Payoff to America from Globalization: A Fresh Look with a Focus on Costs to Workers," Peterson Institute for International Economics Policy Brief, May 2017, https://www.piie.com/publications/policy-briefs/payoff-america-globalization-fresh-look-focus-costs-workers.

[53] Scott Lincicome and Alfredo Carrillo Obregon, "The (Updated) Case for Free Trade," Cato Institute Policy Analysis no. 925, April 19, 2022, https://www.cato.org/policy-analysis/updated-case-free-trade.

Figure 1-5: Employment in manufacturing has remained almost constant for 85 years



Source: U.S. Bureau of Economic Analysis; U.S. Bureau of Labor Statistics

The Heckscher-Ohlin trade model suggests that some job losses would be expected in industries that intensively use scarce factors of production.[54] These goods are most likely to face substantial import competition from countries where that factor is abundant. Though this likely explains some job losses in American manufacturing, the data suggests that the impact is not nearly large enough to wholly explain the persistent stagnation. Rather, significant improvements in technology have increased manufacturing productivity and the marginal productivity of labor, therefore the manufacturing sector can employ fewer people to produce greater output.[55]

---

[54] Bertil Ohlin and Eli F. Heckscher, *Heckscher-Ohlin Trade Theory*, translated by Henry Flam and M. June Flanders (MIT Press, 1991).

[55] Stephen J. Rose, "Do Not Blame Trade for the Decline in Manufacturing Jobs," Center for Strategic & International Studies Report, October 4, 2021, https://www.csis.org/analysis/do-not-blame-trade-decline-manufacturing-jobs.

Much of the Biden Administration's pushback against free trade is predicated on the difficulty for labor to move across sectors.[56] However, the appropriate response to reduce the small and concentrated downside of trade is to improve labor mobility and the ease of doing business. The best solutions are domestic supply-side approaches, while anti-trade policies aimed at protecting specific groups risk instilling large losses that are borne nationwide.

The Administration has unfortunately taken steps to increase barriers to trade by raising tariffs on steel, aluminum, semiconductors, electric vehicles, and battery components.[57] Protectionist measures create market distortions and inefficiencies that compromise American growth and overall welfare. In industries that are already unable to meet high demand with current supply, protectionist measures further inhibit supply while many of the Administration's new policies stimulate demand.[58] This interaction creates intense upward price pressure, effectively eroding the purchasing power of the Administration's spending. Moreover, these polices produce incentives for rent seeking, which disincentivizes innovation and further raises prices in an already inflationary environment.[59]

---

[56] CEA, *Economic Report of the President*, 207.

[57] The White House, "FACT SHEET: President Biden Takes Action to Protect American Workers and Businesses from China's Unfair Trade Practices," May 14, 2024, https://www.whitehouse.gov/briefing-room/statements-releases/2024/05/14/fact-sheet-president-biden-takes-action-to-protect-american-workers-and-businesses-from-chinas-unfair-trade-practices/.

[58] Anna B. Mikulska and Michael D. Maher, "Red Light, Green Deal, Yellow Light: Biden's Energy Roadmap," Rice University's Baker Institute for Public Policy Center for Energy Studies Issue Brief, October 5, 2022, https://www.bakerinstitute.org/research/red-light-green-deal-yellow-light-bidens-energy-roadmap.

[59] Robert E. Baldwin, "Rent-Seeking and Trade Policy: An Industry Approach," NBER Working Paper no. 1499 (November 1984),

Instead, the Administration should avoid a slide into further protectionism by considering a supply-side approach that improves labor mobility. As discussed earlier in this Chapter, the Administration should reform occupational licensing and other labor-inhibiting regulations to facilitate mobility across geographies and segments of the economy. To reduce average costs, it should also review and modernize regulations. For example, environmental regulations are found to stifle investment and productivity in the manufacturing sector.[60] The Administration should evaluate alternatives to current regulatory frameworks that utilize emerging technologies.

Furthermore, states and municipalities should take action to increase the supply of housing. Relaxed zoning restrictions better allow low-skilled workers to geographically sort into areas with higher marginal labor productivity, increasing wages and decreasing regional inequality.[61]

Domestic supply-side policies are the ultimate determinant of investment, growth, and industrial concentration. It is critical that the Administration not impede the ability of American firms to

---

https://doi.org/10.3386/w1499; Daniel Brou and Michele Ruta, "Rent-seeking, market structure, and growth," *The Scandinavian Journal of Economics* 115, no. 3 (2013): 878-901, https://doi.org/10.1111/sjoe.12014.

[60] Charles Dufour, Paul Lanoie, and Michel Patry, *Regulation and Productivity in the Quebec Manufacturing Sector* (Centre Interuniversitaire de Recherche en Analyse des Organisations, 1995); Michael Greenstone, John A. List, and Chad Syverson, "The Effects of Environmental Regulation on the Competitiveness of U.S. Manufacturing," NBER Working Paper no. 18392 (September 2012), https://doi.org/10.3386/w18392.

[61] Don Jayamaha, "Land-Use Restrictions: Implications for House Prices, Inequality, and Mobility" (New York University, 2020), https://donj26.github.io/donjayamaha.com/Jayamaha_JMP.pdf.

compete by implementing protectionist policies that hurt the American worker.

Clean Energy Policy

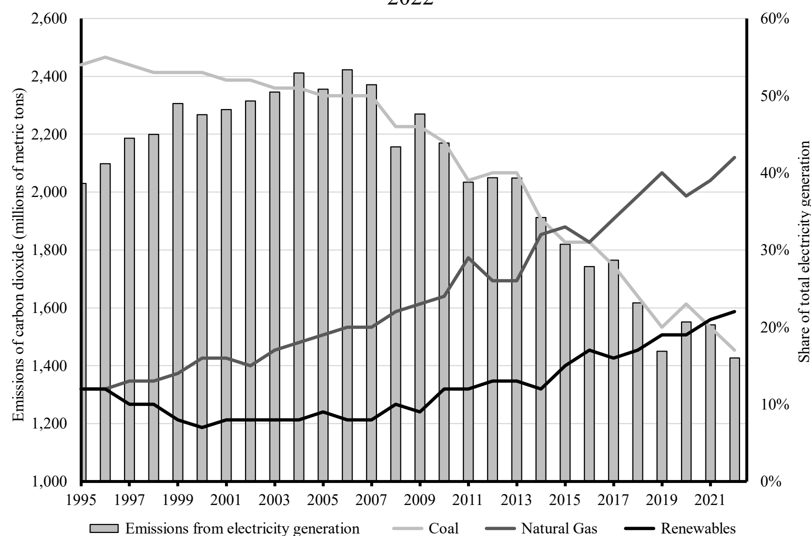
Given the precarious state of its fiscal affairs, policymakers should question whether the U.S. should deficit-finance expenditures—specifically, subsidies—to accelerate clean energy technologies, particularly if the result is slower economic growth or higher prices for consumers. Taking a demand-side approach by issuing tax credits or subsidizing select clean energy projects will be more costly and less efficient than reducing regulatory burdens. Already, the environmental tax credits in the IRA are forecasted to cost significantly more than originally projected. Prior to passage of the bill in August 2022, CBO projected they would cost nearly $400 billion over the 10-year budget window.[62] A revised forecast by the Joint Committee on Taxation projected that they would cost nearly $100 billion more than CBO's calculation.[63] Even more concerning, a private estimate from Goldman Sachs pins the 10-year cost of clean energy subsidies at $1.2 trillion.[64] While subsidizing investment may accelerate clean energy adoption, recent trends in greenhouse gas emissions (GHGs) from electricity production suggest a continued decline (see Figure 1-6), largely as a result of the organic transition that has occurred with the shift from coal to natural gas.

[62] CBO, "Estimated Budgetary Effects of H.R. 5376, the Inflation Reduction Act of 2022," August 3, 2022, https://www.cbo.gov/publication/58366.

[63] The Joint Committee on Taxation, "Estimated Revenue Effects Of Division A, Title III Of H.R. 2811, The 'Limit, Save, Grow Act Of 2023,'" April 26, 2023, https://www.jct.gov/publications/2023/jcx-7-23/.

[64] Travis Fisher, "The Inflation Reduction Act's Energy Subsidies Are More Expensive Than You Think," Cato Institute, September 5, 2023, https://www.cato.org/blog/iras-energy-subsidies-are-more-expensive-you-think.

Figure 1-6: U.S. CO_2 Emissions from Electricity Generation, 1995 – 2022



Source: U.S. Energy Information Administration (EIA), "U.S. Energy-Related Carbon Dioxide Emissions 2023"

Natural gas is a cleaner source of energy than coal.[65] The increase in renewable energy as a share of total electrical power output began as emissions were already decreasing, mainly due to the decline in coal power. As there was already a clear reduction in GHGs, it is not unreasonable to question whether the significant Federal expenditures supporting clean energy infrastructure are worth the benefit in the current fiscal environment.

As the Biden Administration has spent extensively on clean energy, it has failed to reduce restrictions constraining supply that currently make such projects more difficult and costly. For example, in May 2024, it raised tariffs on solar imports from 25 to 50 percent.[66] Increasing the price of solar panels inhibits their

[65] EIA, "Natural gas explained," https://www.eia.gov/energyexplained/natural-gas/natural-gas-and-the-environment.php.

[66] The White House, "FACT SHEET: President Biden Takes Action to Protect American Workers and Businesses from China's Unfair Trade

adoption by American consumers, while at the same time the Administration has taken steps to exacerbate demand for them using tax credits.[67] Furthermore, immediately after taking office, President Biden issued Executive Order 13990, which revoked many of the National Environmental Policy Act (NEPA) reforms implemented by the Trump Administration that were designed to reduce bureaucracy and wait times for permits and environmental impact statements.[68] The repealing of this policy could significantly inhibit clean energy projects. As of 2021, 42 percent of the Department of Energy's active NEPA projects requiring an environmental impact statement (EIS) were related to clean energy, transmission, or environmental conservation, while only 15 percent were related to fossil fuel projects. Moreover, the same study finds that 24 percent of Bureau of Land Management EISs were related to clean energy projects, while only 13 percent were for fossil fuels.[69]

While the Administration has recently proposed a replacement regulatory framework called NEPA Phase II, it faces bipartisan opposition due to its unequal treatment of projects and a perception that it will increase rather than decrease bureaucracy.

Practices," https://www.whitehouse.gov/briefing-room/statements-releases/2024/05/14/fact-sheet-president-biden-takes-action-to-protect-american-workers-and-businesses-from-chinas-unfair-trade-practices/

[67] U.S. Environmental Protection Agency, "Summary of Inflation Reduction Act provisions related to renewable energy," https://www.epa.gov/green-power-markets/summary-inflation-reduction-act-provisions-related-renewable-energy.

[68] Diane Katz, "Biden's Repeal of Permitting Reforms Hinders Infrastructure Improvements," The Heritage Foundation Report, August 29, 2022, https://www.heritage.org/government-regulation/report/bidens-repeal-permitting-reforms-hinders-infrastructure-improvements.

[69] Philip Rossetti, "*Addressing NEPA-Related Infrastructure Delays,"* R Street Institute, 2024, https://www.rstreet.org/wp-content/uploads/2021/07/FINAL_RSTREET234.pdf.

Several members of Congress have since proposed a Congressional Review Act resolution to strike down the policy.[70]

Instead of pursuing large stimulus packages to reduce carbon emissions when they were already on a declining trajectory, the Biden Administration should work to make investment in energy projects and innovation easier. Trade restrictions on components needed in domestic energy production should be lifted. Furthermore, the Administration should work to pass comprehensive permitting reform. H.R. 1, the Lower Energy Costs Act, which passed the House of Representatives in March 2023, would accomplish this objective in a manner that is neutral to the type of energy production. S. 3814, the Revitalizing the Economy by Simplifying Timelines and Assuring Regulatory Transparency (RESTART) Act, introduced by Senate Environment and Public Works Committee Ranking Member Capito, would also similarly reduce permitting burdens.

[70] Senate Committee on Energy & Natural Resources, "ICYMI: Manchin, Graves, Sullivan to Introduce Bipartisan, Bicameral CRA Resolution on NEPA Phase II Final Rule," May 8, 2024, https://www.energy.senate.gov/2024/5/icymi-manchin-graves-sullivan-to-introduce-bipartisan-bicameral-cra-resolution-on-nepa-phase-ii-final-rule.

CHAPTER 2: DEMOGRAPHICS AND THE DEFICIT

Last year's *Response* overviewed the importance and increasingly difficult challenge of improving the United States' fiscal health.[71] JEC Republicans concluded that the growth of the Federal debt is "on an unsustainable and potentially ruinous path" and that this growth in debt is driven largely by spending on mandatory programs.[72] Since that *Response* was written a year ago, the situation has only grown more dire. As of May 2024, the debt-to-GDP ratio exceeds 97 percent and total debt held by the public is more than $27 trillion.[73] Given the current growth rate of the debt, this is projected to be greater than $30 trillion by May of next year.[74] Our debt crisis can only be solved by understanding the factors that are driving our debt and crafting policies that can contend with them. This Chapter is intended to make clear that demographic changes, such as an older population, a declining fertility rate, and a reduction in male prime-age (25-54) labor force participation are the primary forces driving increases in our mandatory spending and deficit.

Social Security

Ensuring the solvency of Social Security is critical to maintaining financial well-being among seniors. As of the 2024 Social Security Trustees Report, the combined Social Security trust funds, which pay out benefits, are expected to be depleted by 2035. This would

---

[71] Joint Economic Committee (JEC) Republicans, *Republican Response to the Economic Report of the President* (U.S. Congress Joint Economic Committee, 2023): 2, https://sen.gov/LVQYY.

[72] JEC Republicans, *Response*, 24.

[73] Congressional Budget Office (CBO), *The Budget and Economic Outlook: 2024 to 2034* (February 2024); JEC Republicans, "Congressman David Schweikert's Daily Debt Monitor," accessed May 9, 2024.

[74] $30 trillion figure is derived by taking the current daily growth of the debt and adding it to the current debt level as of May 9th. CBO, "10 Year Budget Projections;" JEC Republicans, "Daily Debt Monitor."

result in an automatic 21 percent cut to all individuals' benefits.[75] It is estimated that the senior poverty rate would subsequently more than double, from 1.5 to 3.3 percent.[76] Social Security's solvency becomes even more sensitive to employment and wage growth as the depletion of the combined trust funds necessitates increased revenues. Understanding Social Security and the drivers of its rising costs is necessary to ensure its solvency and protect the financial stability of its beneficiaries.

In 1935, President Roosevelt signed the Social Security Act into law which provided retirement insurance to approximately 222,000 beneficiaries.[77] Originally only providing payments to retired workers in certain industries, Social Security has since been expanded dramatically both in coverage and overall fiscal cost. In 1939, the program was expanded to include the families of retired workers, and, since then, there have been more than 20 expansions or reforms to the entitlements and number of covered beneficiaries.[78] While there has not been a major expansion to Social Security in over 20 years, costs continue to grow. Social Security spending as a share of GDP was 3.1 percent in 1970, but now stands at 5.2 percent and is expected to rise to nearly 6 percent

---

[75] Social Security Administration, *2024 OASDI Trustees Report* (May 6, 2024), https://www.ssa.gov/oact/TR/2024/index.html; Peter G. Peterson Foundation, "Social Security and Medicare Trust Funds Could Soon Be Depleted," https://www.pgpf.org/blog/2024/05/social-security-and-medicare-are-facing-serious-shortfalls.

[76] Social Security Administration, "The Distributional Consequences of a 'No-Action' Scenario: Updated Results," July 2005, https://www.ssa.gov/policy/docs/policybriefs/pb2005-01.html.

[77] Note that the 222,000 figure is from the first available data from 1940. Martha A. McSteen, "Fifty Years of Social Security," Social Security Administration, https://www.ssa.gov/history/50mm2.html.

[78] Geoffrey Kollmann, "Social Security: Summary of Major Changes in the Cash Benefits Program," Social Security Administration, https://www.ssa.gov/history/reports/crsleghist2.html.

by 2035.[79] The increases in spending result from a growing number of beneficiaries in response to an aging population.

Social Security benefits are funded by current workers' taxes, which are deposited into the two Social Security trust funds, the Old-Age and Survivors Insurance Trust Fund (OASI) and the Disability Insurance Trust Fund (DI).[80] These funds are obligated to invest in special U.S. Treasury securities, which pay a rate that is determined by a formula established in Section 201(d) of the Social Security Act.[81] The program operates as a "pay as you go system," which means that current workers pay into the trusts to fund the benefits for current retirees.[82] For nearly 30 years, the Social Security Administration (SSA) received more in tax revenue than it paid out in benefits. The excess funds were deposited into the trusts, which receive interest on deposits by investing in securities from the Treasury.[83] Starting in 2021, however, trust fund reserves began to fall because the benefits paid out exceeded the income received from payroll taxes.[84] Short-term increases in Social Security payments can be driven by greater than anticipated cost-of-living adjustments (COLA), but long-run risks to the depletion of the trust funds are due to demographic

---

[79] Social Security Administration, *2024 OASDI Trustees Report* (May 6, 2024), Table VI.G4, https://www.ssa.gov/OACT/TR/2024/index.html.

[80] Social Security Administration, "What are the Trust Funds?", https://www.ssa.gov/news/press/factsheets/WhatAreTheTrust.htm.

[81] Social Security Administration, "Interest Rate Formula For Special Issues." https://www.ssa.gov/oact/progdata/intrateformula.html.

[82] Stephen C. Goss, "The Future Financial Status of the Social Security Program," Social Security Administration, https://www.ssa.gov/policy/docs/ssb/v70n3/v70n3p111.html.

[83] Center on Budget and Policy Priorities, "Policy Basics: Understanding the Social Security Trust Funds," https://www.cbpp.org/research/policy-basics-understanding-the-social-security-trust-funds.

[84] Social Security Administration, "A Summary of the 2021 Annual Reports," https://www.ssa.gov/oact/TRSUM/2021/index.html.

changes. Putting Social Security on a sustainable path requires understanding these demographic changes and implementing policies to contend with them.

The composition of the U.S. population has changed dramatically since Social Security was first implemented. Americans were younger, having children at higher rates, and there was stronger labor force participation among prime-age men.[85] A critical factor to the cost of the program is that in 1940 the proportion of the population that was 65 or older was 6.8 percent, but, as of 2022, that number has more than doubled to 17.3 percent.[86] Currently, there are approximately 2.9 Americans aged between 25 and 64 for every American aged 65 or older. CBO projects that this ratio will fall to 2.2 by 2054.[87] Because of the way benefits are distributed, the country's age distribution is the most important factor in determining present and future costs for Social Security.

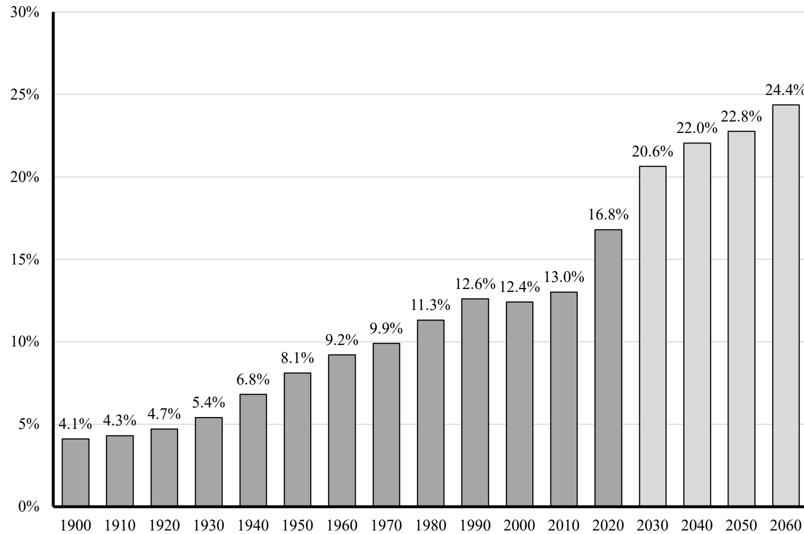
---

[85] U.S. Bureau of Labor Statistics, "Labor Force Participation Rate - Men [LNS11300001]," retrieved from FRED, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/LNS11300001; World Bank, "Fertility Rate, Total for the United States [SPDYNTFRTINUSA]," retrieved from FRED, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/SPDYNTFRTINUSA.

[86] Zoe Caplan, "U.S. Older Population Grew From 2010 to 2020 at Fastest Rate Since 1880 to 1890," United States Census Bureau, May 25, 2023, https://www.census.gov/library/stories/2023/05/2020-census-united-states-older-population-grew.html; United States Census Bureau, "Population 65 Years and over in the United States, 2022," American Community Survey, https://data.census.gov/table/ACSST1Y2022.S0103?q=S0103: Population 65 Years and Over in the United States.

[87] CBO, *The Demographic Outlook: 2024 to 2054*, January 2024, https://www.cbo.gov/publication/59899.

Figure 2-1: Percent of U.S. Population Aged 65 and Older

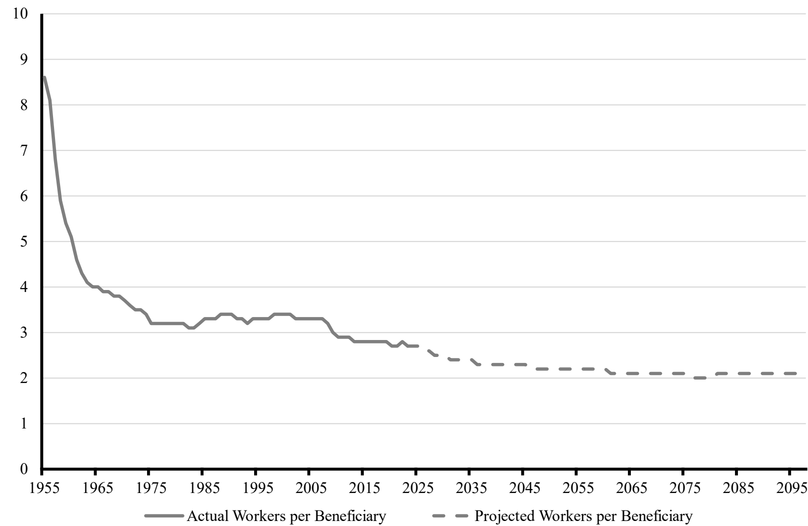


Source: Census Bureau (Decennial Census of Population, 1900 to 2020), 2023 National Population Projections

As more people age and become beneficiaries, it is important that there is a sufficient working population to sustain them. The ratio of covered workers to retirees, which measures the number of workers paying taxes into Social Security relative to the number of retirees receiving benefits, was over 40 in 1945. Today, this ratio has shrunk to 2.7.[88] Fewer covered workers places increased financial pressure on existing workers as there are fewer of them to support more retirees.

[88] Note that the types of individuals covered has expanded since 1945. Since the most recent expansion in 2000, however, the ratio of covered workers to retirees has steadily declined. Social Security Administration, “Ratio of Covered Workers to Beneficiaries,” Social Security History, https://www.ssa.gov/history/ratios.html; Social Security Administration, “Fact Sheet – Social Security,” https://www.ssa.gov/news/press/factsheets/basicfact-alt.pdf.

Figure 2-2: Ratio of Covered Workers to Social Security Beneficiaries



Source: 2024 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, Table IV.B3 (intermediate assumptions)

Even without any major expansions in the past 20 years, Social Security costs are expected to rise substantially over the next decade. CBO projects that annual Social Security spending will grow by over a trillion dollars in the next ten years, increasing from $1.45 trillion in FY2024 to $2.47 trillion in FY2034.[89] Social Security, a program which previously generated more income than it paid out in benefits, is now the most expensive individual program in the Federal budget.[90] The primary driver for this growth is the aging population. Without accepting the demographic reality and creating policies that address its implications, it is impossible to meaningfully put the country on a sustainable fiscal path.

---

[89] CBO, *The Budget and Economic Outlook: 2024 to 2034*, Table 1-4.

[90] Peter G. Peterson Foundation, "The Ratio of Workers to Social Security Beneficiaries is at a Low and Projected to Decline Further." August 2022, https://www.pgpf.org/blog/2022/08/the-ratio-of-workers-to-social-security-beneficiaries-is-at-a-low-and-projected-to-decline-further.

Healthcare Spending

Reining in healthcare spending is also critical to achieving a sustainable fiscal path. Finding innovative ways to reduce adverse health outcomes will lower per patient costs and lead to a healthier overall population. Much like in Social Security, demographics play a significant role in the overall cost of healthcare. Healthcare costs are closely associated with the age of patients, and the sum of healthcare spending borne by the Federal government increases as more seniors enroll in Medicare. It is estimated that nearly half of an individual's lifetime healthcare expenditures will occur after age 65, and expenditures grow larger after an individual reaches 65.[91] For those who reach age 85, an estimated one-third of their lifetime healthcare expenses will occur after that age.[92] The health profile of seniors and the mean age of the Medicare population can accelerate costs even after accounting for changes in the overall number of enrollees. Policymakers should recognize not only the total number of individuals over the age of 65, but also the average U.S. life expectancy and how these factors might impact Federal spending.[93] As healthcare costs continue to rise, more money must be drawn from current earners to fund existing programs. For example, in the most recent MedPAC Report to Congress, they estimated that the share of all personal and corporate income taxes that are transferred to the Medicare trust fund will rise from 13 percent in 2022 to 22 percent in 2030.[94] Understanding future

---

[91] Berhanu Alemayehu and Kenneth E. Warner, "The Lifetime Distribution of Health Care Costs," *Health Services Research* 39, no. 3 (2004): 627-42, https://doi.org/10.1111/j.1475-6773.2004.00248.x.

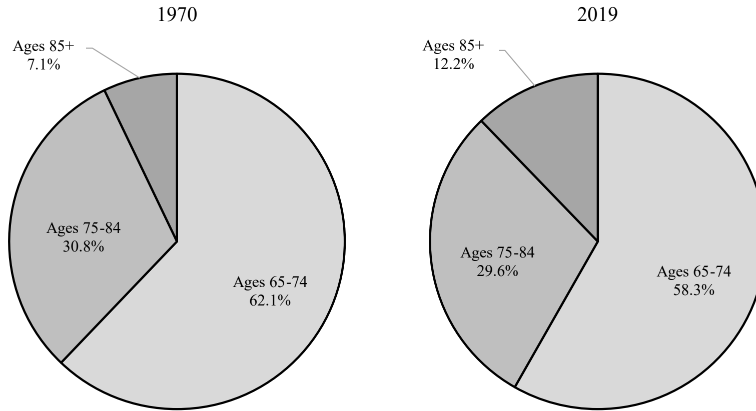
[92] Alemayehu and Warner, "The Lifetime Distribution of Health Care Costs," 637.

[93] Social Security Administration, "Actuarial Life Table," https://www.ssa.gov/oact/STATS/table4c6.html.

[94] Medicare Payment Advisory Commission, *March 2024 Report to the Congress: Medicare Payment Policy* (March 2024): 5, https://www.medpac.gov/document/march-2024-report-to-the-congress-medicare-payment-policy/.

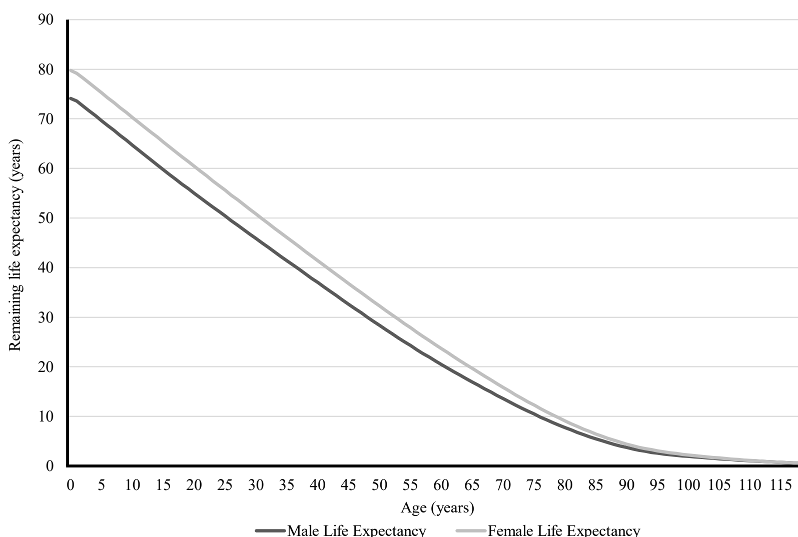
costs is necessary to both protect our existing healthcare programs and ensure economic stability for current workers.

Figure 2-3: Age Distribution of Seniors



Source: U.S. Census Bureau, Population Division, "National Population Estimates by Age, Sex, Race"

Figure 2-4: Remaining Life Expectancy by Age



Source: Social Security Administration (Period Life Table, 2020, as used in the 2023 Trustees Report)

As of the most recently available data from 2021, someone who is age 65 can on average expect to live an additional 17 to 20 years, while someone who is 85 can expect to live an additional 5.7 to 6.7 years.[95] CBO projects, however, that over the next 30 years, life expectancy at birth will rise from 78.7 years to 82.2 years, while life expectancy at age 65 will rise to 21.8 years.[96] Not only will the overall population grow older, but the average age of the population over 65 will also rise. However, actualization of these forecasts is not guaranteed as unforeseen events, such as the COVID-19 pandemic, have caused life expectancy to significantly deviate from prior trends.[97] Unpredictability in life expectancy, in combination with other factors, such as changes in the aggregate

---

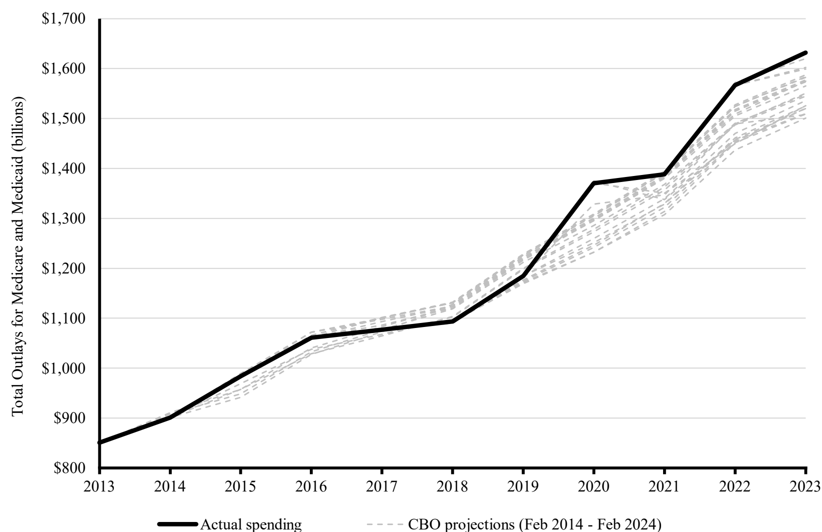
[95] Social Security Administration, "Actuarial Life Table."

[96] CBO, *The Demographic Outlook: 2024 to 2054*.

[97] Centers for Disease Control and Prevention, "Life Expectancy in the U.S. Dropped for the Second Year in a Row in 2021," https://www.cdc.gov/nchs/pressroom/nchs_press_releases/2022/20220831.htm.

health of our population, make projecting overall healthcare spending much more difficult. This is especially true when compared to projecting Social Security expenditures. Medicare spending contributes directly to the deficit, and its unpredictability risks driving outlays and net interest payments much higher than anticipated.

Figure 2-5: CBO Projections Compared to Actual Spending on Medicare and Medicaid Over the Past Ten Years



Source: Congressional Budget Office (CBO, Baseline Estimates 2014 -2024)

Figure 2-5 compares CBO's projections of Medicare and Medicaid spending to actual spending on those programs each year. As expected, outlays for these programs have been above CBO's forecasts for most recent years. CBO models do not explicitly account for or project changes in the aggregate health of the U.S. population. This can cause its projections to substantially deviate from actual spending each year. We urge CBO to instead explicitly account for changes in the aggregate health of the population, such as the rising projected obesity rates outlined in Chapter 4. Healthcare spending will be significantly higher than

CBO anticipates if obesity rates rise at the rate JEC Republicans project due to higher-than-anticipated medical costs. The inherent unpredictability in health and healthcare spending makes it even more prudent to reach a more sustainable fiscal path sooner rather than later. Higher than projected deficit spending would raise net interest costs, further worsening the fiscal trajectory.

Fertility

Until 1971, births alone were enough to keep the population growing.[98] The total fertility rate, or the average number of babies born of each woman over the course of her life, was 2.26, above the replacement rate. The replacement rate is the fertility rate needed to keep the population size stable without any net migration. In the U.S. and most of the developed world the necessary rate is 2.1, while globally it is around 2.3 due to higher mortality rates.[99] CBO projects that in 2040, deaths will exceed births and all additional population growth will be exclusively due to immigration.[100]

---

[98] World Bank, "Fertility Rate, Total for the United States."

[99] World Bank, "Fertility Rate, Total (Births per Woman)," 2022, https://data.worldbank.org/indicator/SP.DYN.TFRT.IN.' Institute for Health Metrics and Evaluation, "The Lanet: Dramatic Declines in Global Fertility Set to Transform Global Population Patterns by 2100." March 2024, https://www.healthdata.org/news-events/newsroom/news-releases/lancet-dramatic-declines-global-fertility-rates-set-transform.

[100] CBO, *The Demographic Outlook: 2024 to 2054*.

Figure 2-6: Declining Fertility Rate in the United States

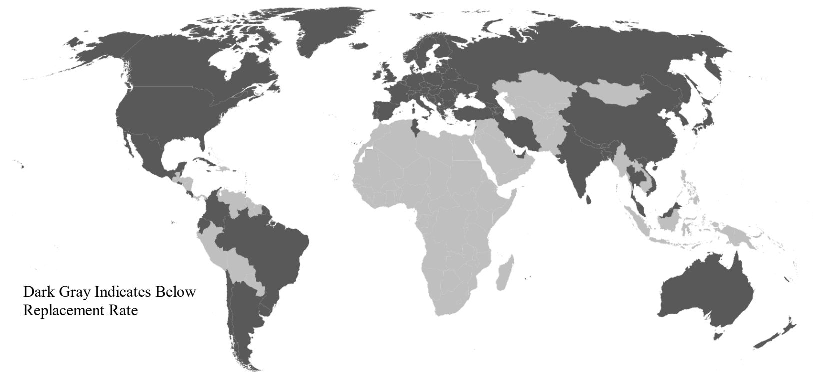
Source: World Bank (Fertility Rate, Total for the United States [9SPDYNTFRINUSA])

The U.S. fertility rate has fluctuated since the mid-1970s but has generally remained below replacement level. The fertility rate reached an all-time low of 1.62 in 2023 and has not rebounded to pre-pandemic levels.[101] The fertility crisis in the United States is not unique, however, and has been observed throughout the industrialized world.

---

[101] Brady E. Hamilton, Joyce A. Martin, and Michelle J.K. Osterman, "Births: Provisional Data for 2023," CDC Vital Statistics Rapid Release, no. 35 (April 2024), https://dx.doi.org/10.15620/cdc/151797.

Figure 2-7: Countries with a Total Fertility Rate Below the Replacement Rate



Source: United Nations (Population Division, World Population Prospects 2022, GEN/01/REV1)
Note: Replacement Rate = 2.1

Very few developed countries have a fertility rate above replacement, and the global fertility rate has been on the decline for several years.[102] The fertility rate is important to the economy and fiscal situation for several reasons. Declining fertility rates and a shrinking ratio of workers to retirees has a significant impact on economic growth and government finances. John Fernald and Huiyu Li at the Federal Reserve Bank of San Francisco find that the new normal rate of economic growth in the U.S. is at historically low levels, largely due to demographic changes and a shrinking labor force from low fertility rates.[103] As outlined in last year's *Response*, a smaller real growth rate of the economy means

[102] James Gallagher, "Fertility Rate: 'Jaw-dropping' Global Crash in Children Being Born," *BBC*, https://www.bbc.com/news/health-53409521.

[103] John Fernald and Huiyu Li, "Is Slow Still the New Normal for GDP Growth?", Federal Reserve Bank of San Francisco Economic Letter, June 24, 2019, https://www.frbsf.org/research-and-insights/publications/economic-letter/2019/06/is-slow-still-new-normal-for-gdp-growth/.

there is a narrower path to stabilize the debt-to-GDP ratio. Slower growth requires a significantly lower primary deficit and a smaller real interest rate on the debt.

In addition, low fertility rates create significant headwinds to financing mandatory spending programs. Earnings from current workers are used to pay for the benefits paid out to older Americans today. Programs like Social Security are built on the assumption that there will be a large enough younger working population to financially support the older population. If fertility rates continue to decline, the working population will shrink too small relative to the older population. Additionally, reduced tax revenues from a smaller working population means there is a weakened ability to fund social services. A greater number of older Americans also means that more younger Americans may need to exit the labor force to care for them. It is critical to understand the implications of lower fertility rates combined with an aging population and the financial challenges that result.

Fertility Policy

There has not been a proven solution to improve fertility rates. Many countries have explicitly set target fertility rates and implemented robust social programs to achieve them. Despite this, only one country, Belarus, was able to meet their fertility target, albeit only temporarily.[104] Spending an additional $250 billion per year on childcare spending in the U.S., or 1 percent of GDP, is

[104] Fertility in Belarus fell 25 percent in the two years following achieving target fertility. Cash transfers were the primary method of incentivizing births, and the subsequent decline implies that the transfers may have just shifted the timing of births rather than created new births that otherwise would not have occurred. Vanessa Brown Calder and Chelsea Follett, "Freeing American Families," Cato Institute Policy Analysis, August 10, 2023, https://www.cato.org/policy-analysis/freeing-american-families.

estimated to only result in raising the total fertility rate by 0.2 children per woman.[105] This would still be approximately 0.3 children per woman below the replacement rate.

The literature on the effectiveness of pro-natalist policies has been mixed at best, suggesting that government spending is a poor method to improve fertility rates.[106] With few exceptions, as countries have become richer, fertility rates have declined.[107] It does not necessarily follow that providing families with more money would reverse fertility trends. Declining fertility rates may instead be a product of cultural changes, such as falling marriage rates and parents choosing to delay having children.[108]

Nevertheless, there is still room for the Federal government to incentivize family formation. Instead of spending additional dollars on programs that have shown limited results, Congress should focus on removing financial barriers for would be parents to give them more flexibility. Reforms such as Vice Chairman Schweikert's bill to reform the tax code to allow deductions for

---

[105] Melissa S. Kearney and Phillip B. Levine, "The Causes and Consequences of Declining U.S. Fertility" in *Economic Policy in a More Uncertain World*, Aspen Economic Strategy Group, 2023, https://www.economicstrategygroup.org/wp-content/uploads/2022/08/Kearney_Levine_081222.pdf.

[106] Calder and Follet, "Freeing American Families."

[107] Matthias Deopke, Anne Hannusch, Fabian Kinderman, and Michèle Tertilt, "The New Economics of Fertility," International Monetary Fund, September 2022, https://www.imf.org/en/Publications/fandd/issues/Series/Analytical-Series/new-economics-of-fertility-doepke-hannusch-kindermann-tertilt.

[108] Pew Research, "The Long-Term Decline in Fertility—and What It Means for State Budgets," December 5, 2022, https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2022/12/the-long-term-decline-in-fertility-and-what-it-means-for-state-budgets.

newborn expenses would reduce the tax burden on families.[109] Additionally, policies that remove barriers to building new homes can reduce housing costs for potential families and reduce the financial burden of having children. Research suggests that home prices are the largest component in the cost of raising a child and that home prices play a significant role in family formation.[110] Although the academic literature suggests that "rising costs for housing and childcare, while certainly having an impact on families, cannot account for the decline in fertility rates in the United States," reducing costs to family formation through tax and regulatory reform can at least marginally reduce the costs associated with having children.[111]

Talent-Based Migration

One of the U.S.' most valuable resources is its ability to attract high-skilled individuals from other countries to come work and study here. The economic literature suggests that skilled immigrants have an outsized impact on the U.S. economy and that their contributions result in positive wage and employment outcomes for native-born Americans.[112] For example, for every 100 foreign-born workers who receive an advanced degree in a STEM field in the U.S., it is estimated that 262 jobs are created for

---

[109] To Amend the Internal Revenue Code of 1986 to Provide a Deduction for Certain Newborn Expenses, H.R. 7425, 118th Cong. (2024).

[110] Lisa J. Dettling and Melissa Schettini Kearney, "House Prices and Birth Rates: The Impact of the Real Estate Market on the Decision to Have a Baby," NBER Working Paper no. 17485 (October 2011), https://doi.org/10.3386/w17485.

[111] CEA, *Economic Report of the President* (The White House, 2024): 114-16, https://www.whitehouse.gov/wp-content/uploads/2024/03/ERP-2024.pdf.

[112] Madeline Zavodny, "Immigration and American Jobs," American Enterprise Institute, December 15, 2011, https://www.aei.org/research-products/working-paper/immigration-and-american-jobs/.

native-born Americans.[113] Additionally, due to the outsized economic output of their contributions, granting permanent residency to immigrants with advanced STEM degrees is projected to reduce the deficit by $129 billion over the next ten years.[114] While research suggests that immigration, especially low-skilled immigration, is an ineffective tool for addressing labor shortages and an aging population in the long run, there is strong evidence that high-skilled immigrants contribute positively to economic growth that is also realized by native-born Americans.[115] Increasing the real growth rate of the economy can help stabilize debt-to-GDP and relieve some of the strains caused by the deterioration of the demographic situation.

High-skilled immigrants contribute disproportionately to technological innovation and this leads to improved economic outcomes for all Americans. As technology improves, more jobs are created, workers become more productive, and firms can produce more goods at lower unit costs. A 2003 survey found that foreign-born individuals with a college degree are twice as likely to have a patent as native-born college graduates.[116] An analysis

---

[113] Zavodny, "Immigration and American Jobs."

[114] Alex Arnon, Vidisha Chowdhury, Duncan Haystead, Brendan Novak, and Youran Wu, "Budgetary Effects of Granting Green Cards to Immigrants with Advanced STEM Degrees," Penn Wharton Budget Model, January 18, 2024, https://budgetmodel.wharton.upenn.edu/issues/2024/1/18/budgetary-effects-of-stem-green-cards.

[115] Steven A. Camarota, "Immigration and the Aging Society," *National Affairs*, no. 59 (2024), https://nationalaffairs.com/publications/detail/immigration-and-the-aging-society.

[116] Shai Bernstein, Rebecca Diamond, Abhisit Jiranaphawiboon, Timothy James McQuade, and Beatriz Pousada, "The Contribution of High-Skilled Immigrants to Innovation in the United States," Stanford Graduate School of Business Working Paper 3748, December 2022, https://www.gsb.stanford.edu/faculty-research/working-

of patent data from 1976 to 2022 found that immigrants are responsible for 30 percent of all U.S. innovation since 1976, despite only composing 16 percent of U.S. inventors over that span.[117] This is due to the large economic impact of their patents and because of the spillover effects that their innovation has on native-born inventors. The intellectual capital gained from the new inventions spurs further innovation. Foreign-born inventors are also more likely to import knowledge from other countries, which exposes native-born inventors to information they may not have otherwise encountered.[118] Skilled immigrants both innovate at a rate greater than the native population and bolster the work of native-born inventors, which results in improved economic outcomes for all.

Skilled Immigration and Growth

At a time where the U.S.' debt-to-GDP ratio is skyrocketing, it is imperative that policymakers pursue policies to increase economic growth.[119] High-skilled immigrants contribute substantially to the U.S. economy and their contributions have led to increased economic activity. Almost half of Fortune 500 companies were founded by immigrants or the children of immigrants which includes companies such as IBM, AT&T, and Bank of America, who as a whole employ 14.8 million people and have combined annual revenue of over $8 trillion.[120] Additional research suggests that immigrants start business at a rate that is 80 percent higher

papers/contribution-high-skilled-immigrants-innovation-united-states.

[117] Bernstein et al., "The Contribution of High-Skilled Immigrants."

[118] Bernstein et al., "The Contribution of High-Skilled Immigrants."

[119] JEC Republicans, "Daily Debt Monitor."

[120] American Immigration Council, "New American Fortune 500 in 2023," August 29, 2023, https://www.americanimmigrationcouncil.org/research/new-american-fortune-500-2023.

than native-born Americans.[121] This held true even for businesses of large sizes, suggesting that this business creation was not exclusive to smaller firms.[122] The accelerated creation of new firms will drive up demand for labor, increasing employment and wages for native-born workers. Increasing the real growth rate of the economy is a critical tool in stabilizing the debt-to-GDP ratio, and high-skilled immigrants offer a pragmatic path to do so.

Employment

Despite fears that immigrants take jobs away from native-born Americans, there is overwhelming evidence to the contrary for those that are high-skilled. On net, high-skilled immigration leads to increased employment for native-born Americans.[123] For every 100 immigrant workers who receive advanced STEM degrees in the United States, an additional 262 jobs are created for native-born Americans.[124] This analysis is derived by comparing employment in states that have a low number of skilled immigrants to states that have a high number. The author controls for differences in the foreign-born population by state that are the result of differing employment opportunities (i.e., high-skilled workers choosing to work in a state with more jobs) to estimate the net employment impact on native-born Americans. Even in the case of temporary residents, the employment effect is strong. The authors estimate that a 10 percent increase in the number of high-skilled H-1B visa workers results in a 0.11 percent increase in the employment rate for native-born Americans, which translates to

[121] Pierre Azoulay, Benjamin F. Jones, J. Daniel Kim, and Javier Miranda, "Immigration and Entrepreneurship in the United States," NBER Working Paper no. 27778 (September 2020), https://doi.org/10.3386/w27778.
[122] Azoulay et al., "Immigration and Entrepreneurship in the United States."
[123] Azoulay et al., "Immigration and Entrepreneurship in the United States."
[124] Zavodny, "Immigration and American Jobs."

an additional 183 jobs for every 100 additional H-1B workers.[125] Across the board, evidence suggests that there is a strong positive relationship between H-1B visas and employment opportunities for native-born Americans.[126]

Budgetary Impact

A common concern regarding immigration is that there will be a resulting increase in outlays. In the case of high-skilled immigration the opposite is true. Unlike for low-skilled immigration, high-skilled immigrants reduce the deficit because they earn higher-than-average wages.[127] The current net fiscal impact of all high-skilled immigrants with at least a college degree is estimated to be a surplus of $13 trillion over the course of their lives.[128] In the short-term, the Penn Wharton Budget Model estimates that granting permanent residency to immigrants with advanced STEM degrees would reduce the deficit by $129 billion between 2025 and 2034 and $634 billion between 2035 and 2044.[129] For the 2025–2034 period, high-skilled immigrants would generate an additional $133 billion in tax receipts while only increasing outlays by approximately $4 billion. Using Penn Wharton's estimates of the change in population that would arise from granting permanent residency to immigrants with advanced degrees, each immigrant would reduce the deficit by

---

[125] Zavodny, "Immigration and American Jobs."

[126] William R. Kerr, "The Gift of Global Talent: Innovation, Policy, and the Economy," NBER Working Paper no. 25875 (May 2019), https://doi.org/10.3386/w25875.

[127] *The Net Fiscal Costs of Low-skilled and Illegal Immigration for the U.S. Taxpayer, Testimony Before the U.S. Senate Committee on the Budget*, 118th Cong. (September 13, 2023) (statement of Robert Rector), https://www.budget.senate.gov/imo/media/doc/rector_testimony_913.pdf.

[128] Rector, testimony before the U.S. Senate.

[129] Arnon et al., "Budgetary Effects of Granting Green Cards."

approximately $150,000 over the next ten years. The economic literature on the net impact of high-skilled immigrants on the budget is overwhelmingly positive, and more growth can be expected as the intellectual capital gained from skilled immigration compounds over time.

Streamlining the process for high-skilled immigrants to work and live in the country has the potential to increase growth, reduce the deficit, and improve outcomes for native-born Americans. The current limit in the H-1B program on the number of foreign-born college graduates who can receive permanent residency, which amounts to only 85,000 a year, holds back economic growth.[130] By failing to accommodate the over 1 million highly skilled individuals who are on waitlists to come and work in the country, the United States misses out on a massive economic opportunity and drives potential talent away to countries like China and India.[131] The United States is squandering its comparative advantage of being a desirable place to live, work, and innovate. Facilitating a straightforward pathway for high-skilled foreign-born workers to work and live in the United States will produce strong economic benefits for all Americans and help put the United States on a more sustainable fiscal path.

---

[130] U.S. Citizenship and Immigration Services, "H-1B Cap Season," U.S. Department of Homeland Security, https://www.uscis.gov/working-in-the-united-states/temporary-workers/h-1b-specialty-occupations-and-fashion-models/h-1b-cap-season.

[131] David J. Bier, "Backlog for Skilled Immigrants Tops 1 Million: Over 200,000 Indians Could Die of Old Age While Awaiting Green Cards," Cato Institute Policy Brief, March 30, 2020, https://www.cato.org/publications/immigration-research-policy-brief/backlog-skilled-immigrants-tops-1-million-over.

Prime-age Labor Force Participation

The decline in labor force participation among prime-age men is yet another demographic headwind to stabilizing the debt-to-GDP ratio. As the ratio of workers to retirees has dropped, those who are of prime working age are simultaneously working less. Chapter 5 of last year's *Response* outlined how one in nine men between the ages of 25 and 54 are now out of the labor force, more than triple the rate in the 1950s.[132] JEC Republican economists estimated that if 25 percent of these men were re-integrated into the workforce, it would result in the economy being $215 billion larger and would generate an additional $400 billion in Federal government tax receipts over the next ten years. As America ages this problem will worsen. Fewer working hours means lower tax receipts, which places even more pressure on mandatory programs. Additionally, even more workers may exit the labor force to care for their aging parents or family members. As of April 2024, 159,000 individuals that were not in the labor force reported being absent due to family responsibilities.[133] More than 100,000 were of prime working age, and the total figure has risen by 14,000 over the past year.

Several factors have contributed to the decline in male prime-age labor force participation including increased participation in disability programs, institutional barriers like occupational licensing, and decreased social pressure to be employed.[134] Another concerning trend that is affecting the overall workforce is the decline in life expectancy for those who are of prime-working age. Following the drop in average life expectancy in 2020 and

---

[132] JEC Republicans, *Response*, 93.

[133] U.S. Bureau of Labor Statistics, "Labor Force Statistics from Current Population Survey," April 2024, https://www.bls.gov/web/empsit/cpseea38.htm.

[134] JEC Republicans, *Response*, 93.

2021, there were parallel increases in mortality for those in the 25–54 age bracket.[135]

Deaths of Despair

The two leading causes of death are still heart disease and cancer, but there has been a significant rise in the number of opioid deaths and other deaths of despair.[136] Deaths of despair, or deaths occurring from drug overdose, suicide, and alcoholic liver disease, have been rising for the past two decades. This trend came to a head during the COVID-19 pandemic, when over 178,000 individuals died due to such causes in 2020 alone.[137] Deaths of despair disproportionately affect younger Americans, and because of this, they resulted in a greater number of years of life lost than COVID-19 did in 2020, despite COVID-19 causing nearly double the overall number of deaths.[138] Even in subsequent years, deaths of despair, especially those due to drugs and alcohol, continued to rise, well above the pre-pandemic pace.[139] As outlined in Chapter 3 of last year's *Response*, improving public health not only improves economic outcomes but also increases the quality of life

---

[135] Sara Berg, "What Doctors Wish Patients Knew About Falling U.S. Life Expectancy," American Medical Association, March 10, 2023, https://www.ama-assn.org/delivering-care/public-health/what-doctors-wish-patients-knew-about-falling-us-life-expectancy.

[136] Sara Berg, "What Doctors Wish Patients Knew."

[137] JEC Republicans, "Long-Term Trends in Deaths of Despair," September 5, 2019, https://www.jec.senate.gov/public/index.cfm/republicans/2019/9/long-term-trends-in-deaths-of-despair; Parker Entrup et al., "Years of life lost due to deaths of despair and COVID-19 in the United States in 2020: patterns of excess mortality by gender, race and ethnicity," *International Journal for Equity in Health* 22, no. 1 (2023): 161, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10464324/.

[138] Entrup et al. "Years of Life Lost."

[139] C. Angus, C. Buckley, A.M. Tilstra, and J.B. Dowd, "Increases in 'Deaths of Despair' During the COVID-19 Pandemic in the United States and the United Kingdom," *Public Health* 218, (2023): 92-96, https://doi.org/10.1016/j.puhe.2023.02.019.

for millions of Americans. Addressing rising mortality among younger Americans and improving health should be a priority for policymakers. Doing so would significantly improve the U.S.' fiscal situation.

Summary

The U.S.' budget crisis is ultimately a product of its ongoing demographic trends. The country is facing a multitude of demographic headwinds largely driven by the aging population, declining fertility rates, and decreased prime-age labor force participation among men. Contending with these demographic trends is essential to solving its budget issues. Policymakers should focus on creating policies to improve demographic outcomes, such as removing barriers to family formation and reconnecting prime-age individuals to work, but also recognize that many demographic problems are due to the nature of social programs. Policy changes can help alleviate some of these demographic problems, but, ultimately, the budget crisis will not be solved without reining in out-of-control spending.

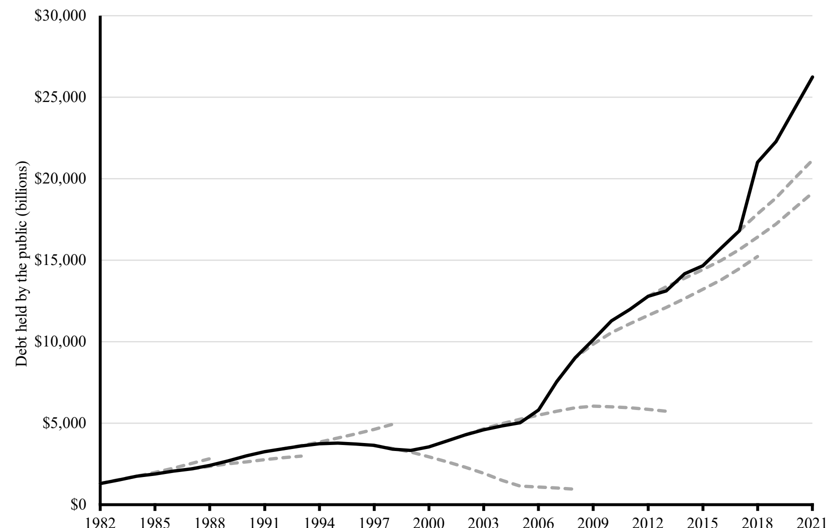
CHAPTER 3: TAX INCREASES HARM GROWTH

The United States is on an unsustainable fiscal path.[140] Persistent budget deficits are ballooning the national debt at an alarming rate. As of May 2024, the debt held by the public is over $27 trillion (99 percent of Gross Domestic Product), and the total government debt is almost $35 trillion (124 percent of GDP). According to the Congressional Budget Office (CBO), it is estimated that by 2050, these components will reach 155 and 169 percent of the size of the economy, respectively.[141] These could be underestimations. Figure 3-1 shows that debt projections have been consistently below the realized values in the past two decades.

[140] Taylor Giorno, "Powell: 'The US is on an unsustainable fiscal path,'" *The Hill*, February 4, 2024, https://thehill.com/homenews/4447860-powell-the-us-is-on-an-unsustainable-fiscal-path/.

[141] Congressional Budget Office (CBO), *The Long-Term Budget Outlook: 2024 to 2054* (March 2024): Table 1, https://www.cbo.gov/system/files/2024-03/51119-2024-03-LTBO-budget.xlsx.

Figure 3-1: Debt Held by the Public Compared to CBO Projections



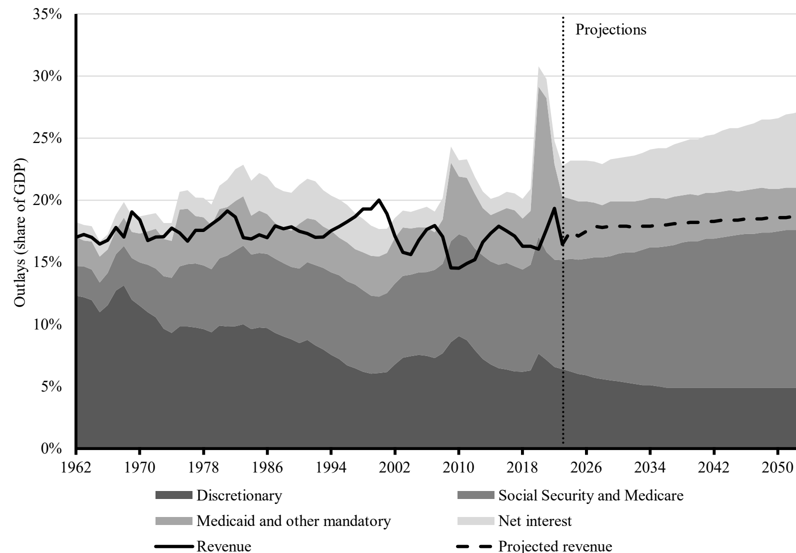
Source: Congressional Budget Office (CBO), baseline projections (1985, 1990, 1995, 2000, 2005, 2010, 2015, 2020)
Note: CBO baseline projections prior to 1996 are 5-year projections

While large jumps in the debt-to-GDP ratio typically coincide with recessions, the primary driver of deficits is mandatory spending which only continues to increase. Most of the growth in mandatory spending is due to demographics, specifically the aging of the population. Figure 3-2 shows that while Social Security and Medicare were less than 19 percent of total outlays in 1970, by the 2040s they will represent almost one of every two dollars spent by the government.[142] This means that over 60 percent of all primary spending will be transfers to the population aged 65 and over. Moreover, as the size of the debt continues to grow, so does net interest on the debt. Spending on debt service will likely increase

[142] CBO, *The Budget and Economic Outlook: 2024 to 2034* (February 2024): Table 1-4, https://www.cbo.gov/system/files/2024-02/51118-2024-02-Budget-Projections.xlsx; CBO, *The Long-Term Budget Outlook: 2024 to 2054*, Table 1; CBO, Historical Budget Data, February 2024, https://www.cbo.gov/system/files/2024-02/51134-2024-02-Historical-Budget-Data.xlsx

due to interest normalization and debt maturities.[143] According to CBO, by 2052, the combination of Social Security, Medicare and net interest will be higher than total revenue.

Figure 3-2: Federal Expenditures as a Share of GDP



Source: Congressional Budget Office (CBO)

Deficits are projected to be greater than 8 percent of GDP in the next three decades, portending ever-higher debt levels. A growing public debt crowds out private capital investment, reducing growth.[144] As discussed in Chapter 1, the economic literature agrees that large government debts have severely negative effects

---

[143] Low interest rates in the past two decades led many economists to dismiss the debt problem. However, for most skeptics, the rise in the rates to values above the GDP growth after the pandemic was an awakening on the true problem of the public debt.

[144] CBO, Historical Budget Data; Kent Smetters and Marcos Dinerstein, “Explainer: Capital Crowd Out Effects of Government Debt,” Penn Wharton Budget Model blog, June 28, 2021, https://budgetmodel.wharton.upenn.edu/issues/2021/6/28/explainer-capital-crowd-out-effects-of-government-debt.

on GDP growth.[145] Moreover, a perceived inability by policymakers to address imprudent fiscal policy will erode the confidence of investors, who may see rising probabilities of large tax increases or even a default. Either scenario would be catastrophic, leading to economic instability and making it more difficult for the government to sell treasury securities to fund further deficit spending. These frictions in debt management would make it difficult to raise spending in response to a future global crisis, which has national security implications.[146] Moreover, the status of the dollar as the world's reserve currency gives the United States the privilege of a higher debt threshold. However, a future multipolar globe and the possibility of the erosion of the relative status of the dollar due to fiscal inflation might move the point of financial reckoning closer than anticipated.[147] The failure of the 118th Congress to implement a

---

[145] Jack Salmon, "The Impact of Public Debt on Economic Growth," *Cato Journal* 41, no. 3 (2021): 487-509, https://www.cato.org/sites/cato.org/files/2021-10/cj-41n3-2.pdf.

[146] Romina Boccia and Dominik Lett, "National Security Implications of Unsustainable Spending and Debt," Cato Institute blog, July 27, 2023, https://www.cato.org/blog/national-security-implications-unsustainable-spending-debt; Government Accountability Office (GAO), "A Warning About the Nation's Fiscal Health," WatchBlog, February 16, 2024, https://www.gao.gov/blog/warning-about-nations-fiscal-health.

[147] Losing such privilege is not without precedent, as the U.K. was in a similar position in the 19th Century and first decades of the 20th Century. On fiscal inflation, see Barro and Bianchi and Dorn; on the privileged position of the U.S. on debt sustainability, see Choi et al. According to the Penn Wharton Budget Model, the United States has about 20 years until reaching the point that no fiscal policy would be able to avoid a default. Robert Barro, Francesco Bianchi, "Fiscal Influences on Inflation in OECD Countries, 2020-2022," NBER Working Paper no. 31838 (November 2023), https://doi.org/10.3386/w31838; James A. Dorn, "The Menace of Fiscal Inflation," Cato Institute blog, June 16, 2022, https://www.cato.org/blog/menace-fiscal-inflation; Jason Choi, Duong Q. Dang, Rishabh Kirpalani, and Diego J. Perez, "On Exorbitant Privilege and the Sustainability of US Public Debt," NBER Working Paper no. 32129 (February 2024),

debt commission only lends credence to the sentiment that policymakers are unwilling to address the politically difficult fiscal problems.

Stabilizing the debt-to-GDP ratio is likely the most important policy goal the Federal government must address over the next decade. While reducing the deficit is the required course of action (reducing the growth of the numerator), these policies should not hamper economic growth (the denominator). Deficit reduction that disregards economic growth is a recipe for failure. The Biden Administration, more interested in putting the economy at the service of the state, has taken the stance that debt can be fixed by "taxing the rich" and making them pay their "fair share."[148] This is misleading; high-income individuals already pay for the vast majority of government spending; increasing taxes on this group would not raise sufficient revenue (as low as 19 percent of deficits), and the White House is overly optimistic of the effects of such policies on the economy.[149]

This Chapter explores the limits of the "taxing the rich" approach to balancing the fiscal situation by first looking at the issue across

---

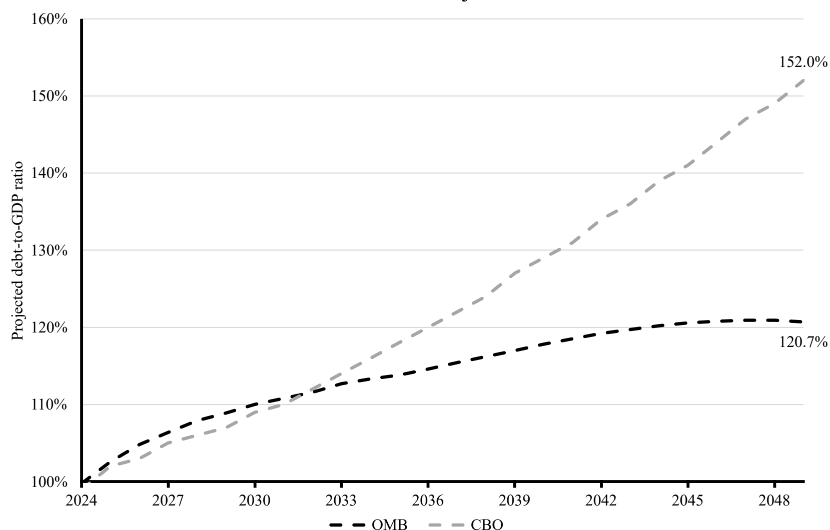
https://doi.org/10.3386/w32129; Jagadeesh Gokhale, Kent Smetters and Mariko Paulson, "When does federal debt reach unsustainable levels?", Penn Wharton Budget Model brief, October 6, 2023. https://budgetmodel.wharton.upenn.edu/issues/2023/10/6/when-does-federal-debt-reach-unsustainable-levels.

[148] Office of Management and Budget (OMB), *Budget of the U.S. Government Fiscal Year 2025*, (The White House, 2024): 8, 15, 19, 20, 45, 46, 47, 78, 133, 138, 139, 145, 149, https://www.whitehouse.gov/wp-content/uploads/2024/03/budget_fy2025.pdf.

[149] Calculation based on Brian Riedl's lower bound estimation of 1.1 percent reduction in deficit, divided by the 5.7 percent of GDP deficit estimation by CBO. Brian Riedl, "The Limits of Taxing the Rich," Manhattan Institute report (September 2023), https://manhattan.institute/article/the-limits-of-taxing-the-rich; CBO, *The Budget and Economic Outlook: 2024 to 2034*.

each type of tax, then determining that these shortcomings are more evident when examined at a macro level. Finally, we briefly discuss the advantages of instead taking prudent approaches to fiscal consolidation.

Figure 3-3: Differences between OMB and CBO Debt-to-GDP Projections



Source: Congressional Budget Office (CBO); Office of Management and Budget (OMB)

The Limits of Taxing the Rich

As the public and their elected representatives have become more cognizant of the deteriorating fiscal situation, there has been an increased interest in policy solutions, with ubiquitous cries among the left to "tax the rich." Given the allure of having someone else pay to solve the nation's fiscal concerns, perhaps it is unsurprising the Biden Administration targets successful businesses and higher income individuals in its proposals to raise revenue. With the magnitude and path of deficits, merely taxing the rich will be insufficient to fully address the country's fiscal concerns. "Tax the rich" is inflammatory political rhetoric, not rational economic policy. Economic theory supports the idea that there are limits to

the revenue raised from higher tax rates, and estimates of the revenue raised as a percentage of GDP from taxing the rich are low. These limits differ by country and change over time, and, while they could improve the country's finances, they come at a great cost for private businesses and households. Furthermore, their estimations could vary widely, depending on the assumptions of the public's reaction to changes in tax rates.

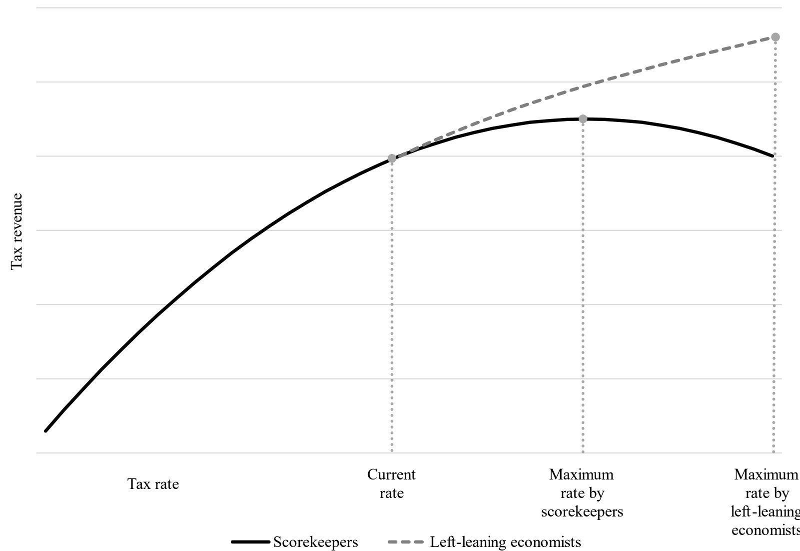
Laffer Curve

One well-examined theory illustrating the relationship between tax rates and revenue raised is the Laffer curve. Developed by economist Arthur Laffer, the concept begins with the premise that both at a tax rate of 0 and at a rate of 100 percent, there will be no revenue raised. This is because the taxed market activity would be unprofitable and thus cease to continue. Tax rates between these two points would generate varying levels of revenue. Increases in tax rates would generate more revenue only up to a certain level, beyond which any increase in rates would result in less in revenue because economic activity would decline.[150] Its shape further suggests that each additional tax dollar results in a larger loss for the economy. The shape of the Laffer curve is a function of taxable income elasticity (or the sensitivity to a change in tax rates). As discussed later in the Chapter, there are diverging opinions on this elasticity, which lead to different estimations of the optimum tax rate. The revenue-maximizing tax rate depends on economic conditions, the rates of other taxes, the possibility for an amount of tax avoidance, and other factors, but—contrary to some

[150] Art Laffer, "Laffer Curve Napkin," National Museum of American History, September 14, 1974, https://americanhistory.si.edu/collections/nmah_1439217.

policymakers' beliefs—evidence supports the premise that taxes can only be raised so high to maximize revenue.[151]

Figure 3-4: Diverging Views on the Laffer Curve



The U.S. Tax System is Highly Progressive

While a key justification for targeting businesses and high-income individuals with higher effective tax rates is the need to raise revenue, the idea of equity buttresses the policy. Specifically, there is a perception that high-income individuals pay less than their "fair share."[152] In 2019, the top 1 percent paid over 20 percent of

[151] The JEC Republicans avoid using the term 'optimal rate,' as included in part of the literature, because a tax rate maximizing the size of the government cannot be considered optimal.

[152] The meaning of what is "fair" is uncertain. This term is repeated throughout every economic document released by The White House; see, for example: OMB, *Budget of the U.S. Government Fiscal Year 2025*, 8, 15, 19, 20, 45, 46, 47, 78, 133, 138, 139, 145, 149.

all Federal taxes and almost 40 percent of all income tax.[153] Notably, the Tax Cuts and Jobs Act of 2017 (TCJA) made the U.S. tax code more progressive. The same data from CBO show that the ratios of Federal tax liabilities paid by the upper percentiles was higher in every year after the passage of the law in 2017. Moreover, the Congressional Budget Office estimates that, while the top quintile earns almost 60 percent of all income, after taxes and transfers that percentage drops under 50 percent, while every quintile in the bottom 80 percent sees an increase in their shares (see Figure 3-6).[154] While the concept of decreasing marginal utility of income—that a rich person would value less an additional dollar than someone poorer—supports taxing the wealthy to reduce the budget deficit, the U.S. already maintains one of the most progressive tax systems among developed nations.[155] Given the degree of progressivity, it is critical to question whether further steepening would generate the purported revenue, or, alternatively, what level of income would be classified as "rich" and therefore subject to higher taxation, to close the chasm between projected receipts and expenditures.

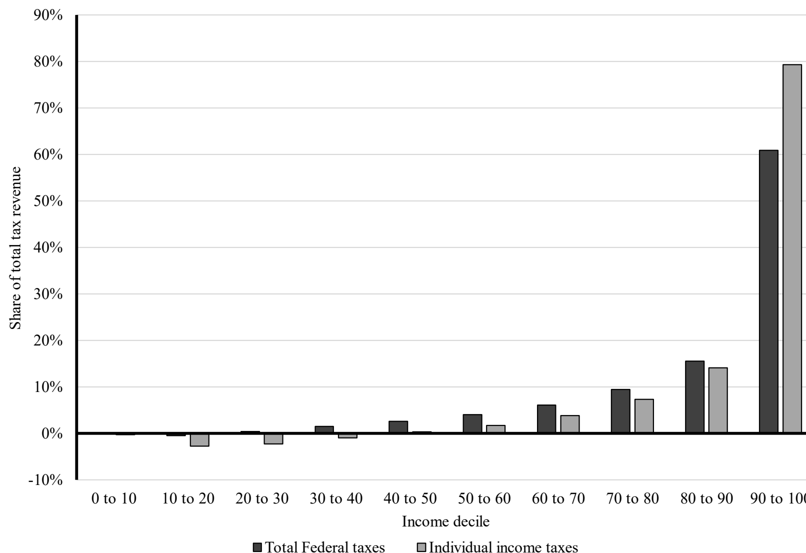
---

[153] CBO, *The Distribution of Household Income in 2020,* November 2023. https://www.cbo.gov/publication/59509

[154] CBO, *The Distribution of Household Income in 2020*

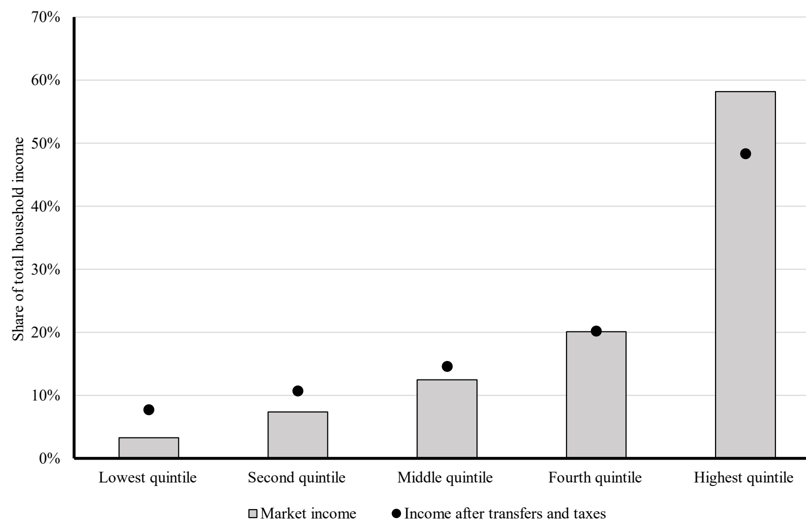
[155] Joint Economic Committee (JEC) Republicans, *Republican Response to the Economic Report of the President* (U.S. Congress, 2023), https://sen.gov/LVQYY; Thomas Blanchet, Lucas Chancel, and Amory Gethin, "Why Is Europe More Equal than the United States?" *American Economic Journal: Applied Economics* 14, no. 4 (2022): 480-518, https://doi.org/10.1257/app.20200703.

Figure 3-5: Share of Tax Liability by Income Decile, 2024



Source: U.S. Department of the Treasury, Office of Tax Analysis

Figure 3-6: Comparing the Distribution of Household Income before and after Transfers and Taxes, 2019



Source: Congressional Budget Office (CBO) "The Distribution of Household Income in 2020"

Box 3-1: The Importance of State and Local Taxes in the Analysis

Most discussions on taxes focus on the Federal level. An analysis including all levels for each type of tax would include multiple rates, in some cases, one for each municipality in the country. The Federal government lacks authority over state and local taxes but including state and local taxes is important when discussing average households' tax burden and distributional aspects.

There is an abundant heterogeneity of tax codes between states and localities. For example, while approximately 11.2 percent of household income is paid in taxes by state and local governments, this range varies from 7.4 percent in Wyoming to 15.9 percent in New York.[156] The heterogeneity is not only in rates but also in composition. States like Nevada and Washington rely heavily on sales taxes, while others like Montana do not tax consumption, relying on revenue from property and income.[157] This heterogeneity also opens the possibility for individuals to avoid heavier tax burdens by moving across state lines.[158]

State and local taxes represent over 30 percent of all U.S. tax revenue, placing it in the top five for this metric among developed

---

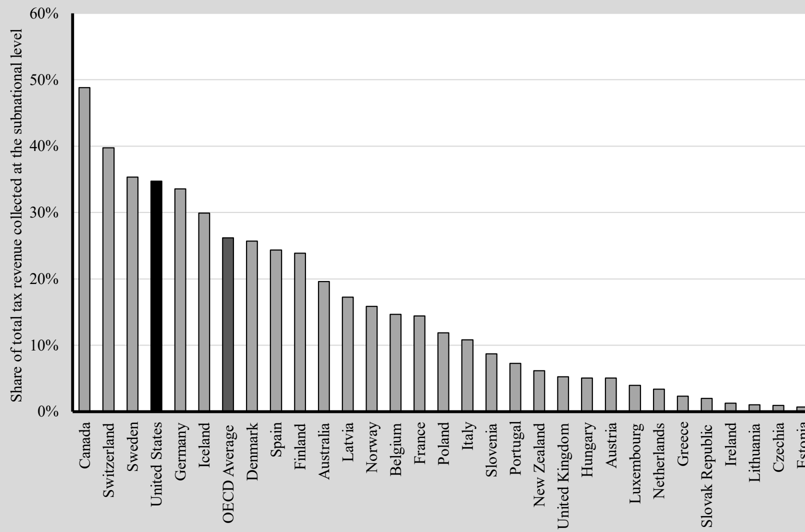
[156] Note that Alaska has a lower rate (4.9 percent) but the state receives high rate of federal subsidies, not making it useful for comparison. Tax Foundation, *Facts & Figures 2024: How Does Your State Compare?* (April 2024): Table 2, https://taxfoundation.org/wp-content/uploads/2024/04/Facts-and-Figures-How-Does-Your-State-Compare-Tax-Foundation-2.pdf.

[157] Tax Foundation, *Facts & Figures 2024*, Table 7.

[158] Jorge Barro, "Domestic Migration and State Tax Policy," Rice University's Baker Institute for Public Policy Center for Public Finance issue brief (August 12, 2022), https://www.bakerinstitute.org/research/domestic-migration-and-state-tax-policy-0.

countries.[159] Moreover, while the U.S. is often criticized for collecting a relatively small share of taxes on income compared to peer countries, after accounting for state and local taxes it shifts to the middle of the distribution.[160]

Figure 3-7: Share of Total Tax Revenue Collected at State and Local Levels

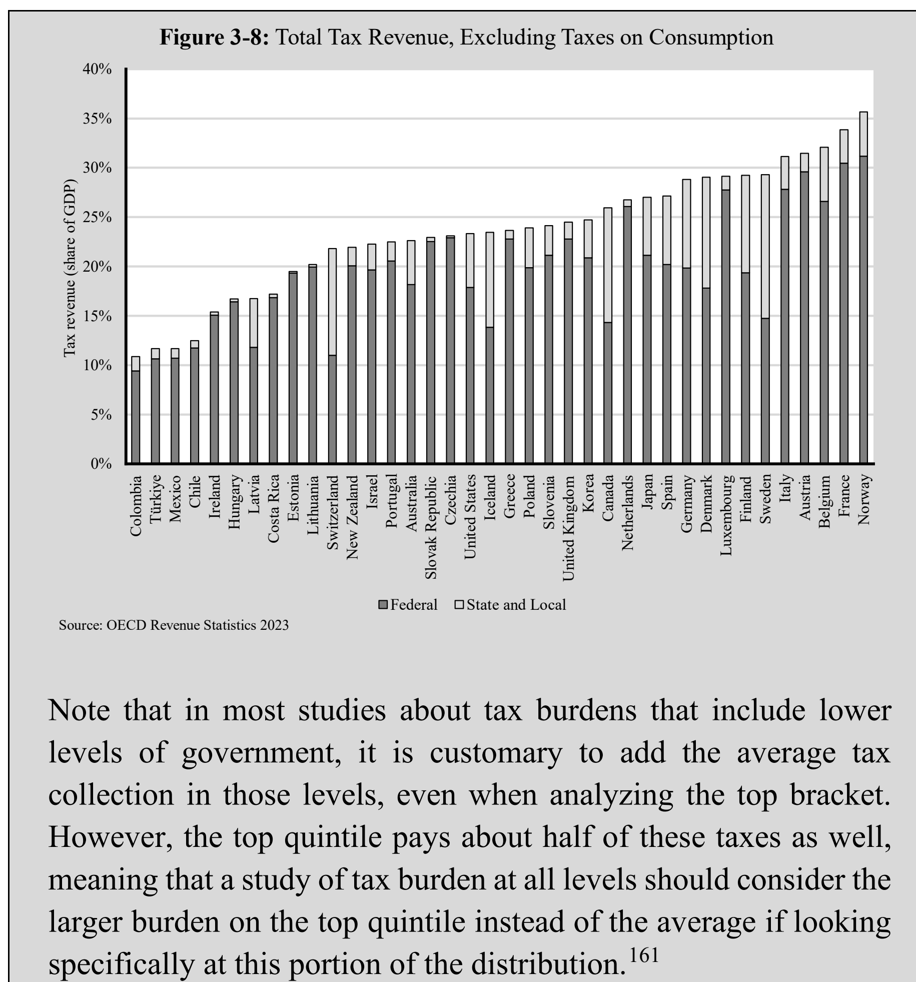


---

[159] Organisation for Economic Co-operation and Development (OECD), "Effective Tax Rates," OECD.Stat, accessed May 8, 2024, https://stats.oecd.org/index.aspx?DataSetCode=CTS_ETR.

[160] Excluding the collection of regressive taxes and considering only those based on income and property.

Figure 3-8: Total Tax Revenue, Excluding Taxes on Consumption

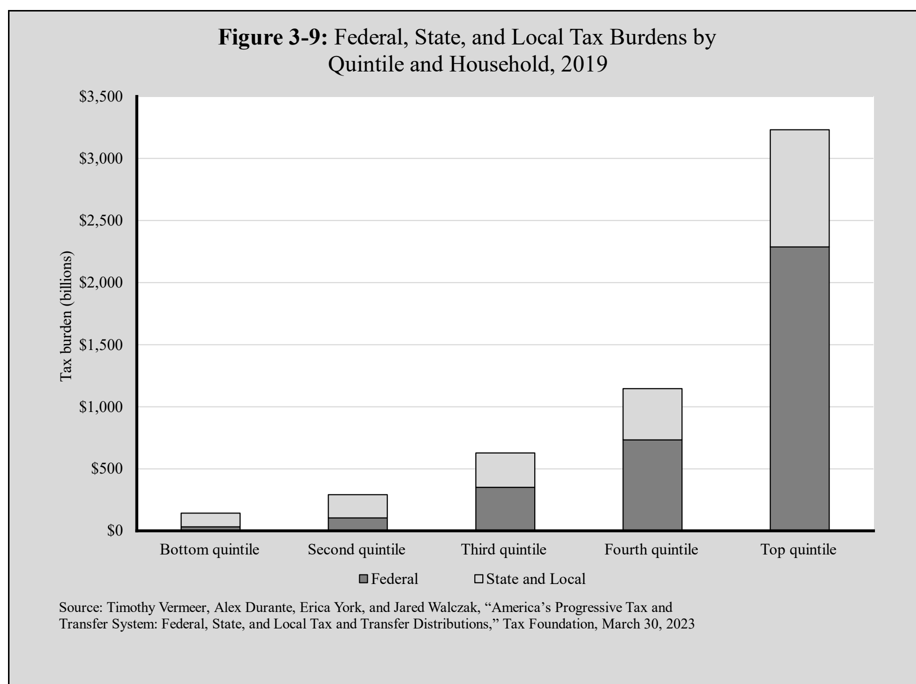


Source: OECD Revenue Statistics 2023

Note that in most studies about tax burdens that include lower levels of government, it is customary to add the average tax collection in those levels, even when analyzing the top bracket. However, the top quintile pays about half of these taxes as well, meaning that a study of tax burden at all levels should consider the larger burden on the top quintile instead of the average if looking specifically at this portion of the distribution.[161]

[161] Nevertheless, the same study shows that while the tax burden is higher for the top quintiles, state and local taxes are easier to transfer to consumers and wages, transforming its distribution into a flat one when looking at its incidence. Timothy Vermeer, Alex Durante, Erica York, and Jared Walczak, "America's Progressive Tax and Transfer System: Federal, State, and Local Tax and Transfer Distributions," Tax Foundation, March 30, 2023, https://taxfoundation.org/research/all/federal/who-pays-taxes-federal-state-local-tax-burden-transfers/.

Figure 3-9: Federal, State, and Local Tax Burdens by Quintile and Household, 2019



Source: Timothy Vermeer, Alex Durante, Erica York, and Jared Walczak, "America's Progressive Tax and Transfer System: Federal, State, and Local Tax and Transfer Distributions," Tax Foundation, March 30, 2023

Biden Administration Tax Proposals

In March 2024, the White House released the Biden Administration's FY2025 Budget.[162] Its purported objective of stabilizing the debt-to-GDP ratio is laudable, however, the Administration's proposals warrant critique. First, as discussed above, tying tax increases to making successful businesses and affluent individuals "pay their fair share" reinforces misconceptions about the true distribution of the tax burden, especially when using misleading statistics to distort reality.[163]

---

[162] OMB, *Budget of the U.S. Government Fiscal Year 2025*.

[163] Note, however, that OMB projects that the baseline debt-to-GDP would stabilize organically by 2048, which is very different than the nonstop growth projected by CBO. OMB, *Budget of the U.S. Government Fiscal Year 2025*, Table S-1; OMB, *Analytical Perspectives Budget of the U.S. Government Fiscal Year 2025* (The White House, 2024): 20, https://www.whitehouse.gov/wp-

Second, there is uncertainty about the size of the revenues that the proposed tax increases would generate. Taken together with the Administration's record of implementing spending that costs more than estimated at enactment, there is a reasonable risk that its policies will exacerbate rather than relieve fiscal pressures.[164] Third, large tax increases severely harm economic growth and could be counterproductive to stabilizing debt ratios and supporting investments that may make disruptive discoveries that could drastically improve Americans' quality of life.

The tax policy proposed in the FY2025 Budget would make the U.S. one of the most heavily taxed countries in the developed world. Presently, the country's statutory top marginal corporate tax rate is approximately 25.8 percent (including the average state corporate tax), which, in comparison to European countries, would make it the seventh-highest country out of 52.[165] If corporate income tax rates rose to 28 percent, as proposed in the President's

---

content/uploads/2024/03/spec_fy2025.pdf; Glenn Kessler, "Biden keeps saying billionaires pay 8 percent in taxes. Not really," *The Washington Post*, January 23, 2024, https://www.washingtonpost.com/politics/2024/01/23/biden-keeps-saying-billionaires-pay-8-percent-taxes-not-really/.

[164] Estimates that extending all provisions from TCJA would cost more than 3.4 trillion through 2033. Additionally, the original costs related to the Inflation Reduction Act were underestimated. Note also that recent increases in the interest rates have (unanticipatedly) contributed significantly to the level spending. CBO, "Budgetary Outcomes Under Alternative Assumptions About Spending and Revenues," CBO report (May 2023), https://www.cbo.gov/publication/59154#data; Travis Fisher, "The Inflation Reduction Act's Energy Subsidies Are More Expensive Than You Think," Cato Institute blog, September 2023, https://www.cato.org/blog/iras-energy-subsidies-are-more-expensive-you-think.

[165] Cristina Enache, "Corporate Tax Rates around the World, 2023," Tax Foundation (December 12, 2023), https://taxfoundation.org/data/all/global/corporate-tax-rates-by-country-2023/.

Budget, the combined Federal and state rate would be 32.8 percent. This would bring the U.S. to the second-highest rate when compared to European countries. Moreover, the FY2025 Budget proposes raising long-term capital gains taxes to 44.6 percent, which is higher than Denmark, the highest rate in Europe at 42 percent. [166]

In addition to the high tax rates, the Budget also relies on unrealistic assumptions to generate rosy results.[167] First, the Budget projects no changes in revenue and spending on Social Security, unemployment insurance, and customs duties despite the vast increase in taxes and social spending.[168] The projections fail to reflect the repercussions on retirement, employment, and life expectancy.[169]

Second, the White House projects no significant effect from the proposed tax policies on growth. Meanwhile, outside analyses

---

[166] U.S. Department of the Treasury, *General Explanations of the Administration's Fiscal Year 2025 Revenue Proposals* (March 11, 2024), https://home.treasury.gov/system/files/131/General-Explanations-FY2025.pdf; Alex Mengden, "Capital Gains Tax Rates in Europe, 2024," Tax Foundation Europe (March 12, 2024), https://taxfoundation.org/data/all/eu/capital-gains-tax-rates-in-europe-2024/.

[167] James C. Capretta, "The Biden Administration's 2025 Budget," American Enterprise Institute AEIdeas, March 12, 2024, https://www.aei.org/health-care/the-biden-administrations-2025-budget/.

[168] Compare Tables S-3 and S-4. OMB, *Budget of the U.S. Government Fiscal Year 2025*.

[169] There are many other aspects worth analyzing but they are unrelated to taxation. For example, under current law, spending on defense is scheduled to decrease as a share of GDP to a record low of 2.4 percent, which might not be the most likely scenario as global tensions continue to mount. Additionally, a more qualitative criticism could be made to the proposed transfer of several programs from discretionary to mandatory spending, curtailing the power of the purse given to Congress by the Constitution.

predict a drop in the long-run GDP of more than two percent due in large part to notable declines in capital, employment, and wages.[170] A slower economy means households are relatively poorer, implying a smaller tax base. According to the Tax Foundation, the proposals in the Budget would only reduce the deficit by $1.4 trillion over the next 11 years, which is less than half of what the White House Office of Management and Budget (OMB) estimates.[171] The lack of pro-growth policy measures will only widen this gap further in the long run.

It is concerning that the Administration's proposals ignore that changes to taxation distort economic behavior and can ultimately slow growth. Most taxes are not neutral and change the relative cost of labor and consumption, impacting individual decision-making. This can have large-scale effects on investment and labor participation when aggregated to the scale of the macroeconomy. These omissions in their analysis are particularly important when the policies proposed include significant new taxes whose effects are not independent. Additionally, the burden of tax incidence trickles down to consumers and workers.

This criticism is not unique to the White House's economic team. Most of the academic research by left-leaning economists related to increasing tax revenue share similar flaws in their analysis. Many greatly underestimate the response from the private sector with regards to the decrease in earnings and omit the interactions

[170] Garrett Watson, Erica York, William McBride, Alex Muresianu, Huaqun Li, and Alex Durante, "Details and Analysis of President Biden's Fiscal Year 2025 Budget Proposal," Tax Foundation (March 22, 2024), https://taxfoundation.org/research/all/federal/biden-budget-2025-tax-proposals/.

[171] Watson, York, McBride, Muresianu, Li, and Durante, "Details and Analysis."

of different proposals when aggregating their effects.[172] Furthermore, despite their optimism, none of these studies find that when incorporating economic effects of higher taxes, there will be enough revenues collected to stabilize the debt-to-GDP ratio in the long term. JEC Republicans estimate that, to keep that ratio at 100 percent, the primary deficit (revenue minus non-interest spending) needs to decrease between 1 percent of GDP in

---

[172] Most of these papers share many of the provisions that President Biden proposed since his time as a candidate, and the proposals are a response to TCJA. In general, they raise taxes on corporations in similar ways as in the President's Budget without measures to mitigate GDP growth slowdown. In particular, Batchelder and Kamin also add a surtax to high incomes and propose expanding the estate tax while eliminating the step-up basis, and therefore double taxing part of the inherited wealth. Sarin and Summers propose similar changes and add an additional $400 billion in revenue by investing $20 billion in the IRS. However, those proposals only raise 1.1 percent of GDP. Notice that when these papers were written, the budget deficit had been at an average slightly over 3.1 percent in the previous five years. Clausing and Sarin proposed a tax reform that include a subset of those FY 2025 reforms and add a Financial Transactions tax and Corporate Carbon Fees (and also revenue neutral changes to TCJA and expansion of tax credits) that would raise almost $5 trillion dollars ($3.5 trillion net of additional spending, or 1.1 percent of GDP). While they propose restoring expensing for research and experimentation, this is not enough to prevent a slowdown in the economy. For reasons explained below, this *Response* leaves out of consideration proposals that include taxes on wealth or on unrealized gains that are almost impossible to implement and have the potential of seriously harming the economy. Lily Batchelder and David Kamin, "Taxing the Rich: Issues and Options" (September 2019), https://doi.org/10.2139/ssrn.3452274; Natasha Sarin and Lawrence Summers, "A broader tax base that closes loopholes would raise more money than the plans by Ocasio-Cortez and Warren," *The Boston Globe*, March 28, 2019, https://www.hks.harvard.edu/sites/default/files/centers/mrcbg/files/Broader%20tax%20base%2C%20Summers.pdf; Kimberly A. Clausing and Natasha Sarin, "The coming fiscal cliff: A blueprint for tax reform in 2025," The Hamilton Project paper (September 2023), https://www.hamiltonproject.org/wp-content/uploads/2023/09/20230927_THP_SarinClausing_FullPaper_Tax.pdf.

2025 to 2.5 percent in 2054.[173] Notably, this is a low estimate that assumes spending continues as projected under current law. A more likely scenario would incorporate at least some incremental spending from new programs, the renewal of expiring ones, and other additional costs to current policies.[174] An underestimation of future deficits will require larger reductions to stabilize it. Furthermore, any delay in fiscal consolidation would stabilize the debt at a higher level, increasing the cost of net interest payments which would require a larger reduction of the deficit.

Calls to Increase Corporate Income Taxes

The President's FY2025 revenue proposals include a variety of reforms to business taxation.[175] About half of the $2.7 trillion in additional taxes on businesses is expected to come from an increase in the corporate income tax rate from 21 to 28 percent.[176] The 2023 *Response* discusses the shortcomings of the corporate tax proposals in the President's FY2024 Budget.[177] As the corporate tax proposals in the President's FY2025 Budget are

---

[173] JEC Republicans calculations are based on CBO's long-term budget projections. These calculations account for the reduction in the deficit after certain provisions from TCJA phase out. CBO, *The Long-Term Budget Outlook: 2024 to 2054*.

[174] Estimates that extend all provisions from TCJA would cost more than 3.4 trillion through 2033. Additionally, the original costs related to the Inflation Reduction Act were underestimated. Note also that recent increases in the interest rates have contributed significantly to the level spending. CBO, "Budgetary Outcomes Under Alternative Assumptions;" Fisher, "The Inflation Reduction Act's Energy Subsidies Are More Expensive Than You Think."

[175] U.S. Treasury, *General Explanations FY2025*.

[176] OMB, *Budget of the U.S. Government Fiscal Year 2025*, 45.

[177] Note that most of the largest provisions in FY2025 are the same as FY2024, so the analysis done applies to this year as well. JEC Republicans, *Response*, 62-92.

almost identical to the previous year's, the sentiments presented in last year's *Response* are also applicable.[178]

The policies:

- reduce incentives to invest, hampering growth and delaying technological advances;
- distort the types of business that are viable;
- incentivize profit shifting and relocation overseas;
- have a substantial incidence on wages of all quintiles, reducing employment;
- tax the same income twice; and
- reduce the volume of long-term investments as investors anticipate a probable tax hike. That is, GDP growth may slow even if the tax hike never materializes.

Corporate income taxes are levied on the earnings of businesses structured as corporations and are distinct from the taxes applicable to businesses structured as pass-through entities. The Administration cites administrative simplicity of a corporate tax increase and increasing progressivity of the tax code as primary reasons for their revenue proposal.[179] The statement on the simplicity of the tax to raise revenue is at odds with the Administration proposing over 25 additional measures to prevent tax avoidance, including an increase in the corporate alternative minimum tax rate.[180] On top of this, empirical research show that

---

[178] OMB, *Budget of the U.S. Government Fiscal Year 2025*, Tables S-1 and S-9; JEC Republicans, *Response*

[179] U.S. Treasury, *General Explanations FY2025*.

[180] Business practices are complex and can lead to different tax rates, depending on the type of corporation (C-type or pass through), origin of the profits, type of financing, type of costs, etc. Increasing the complexity of the tax code makes it easier to find paths for tax avoidance.

labor bears a significant amount of the corporate tax burden, between 20 and 70 percent.[181]

The Tax Foundation finds that raising the corporate tax rate to 28 percent would reduce long-run GDP by 0.9 percent, the capital stock by 1.7 percent, wages by 0.8 percent, and full-time equivalent jobs by 192,000.[182] The additional measures in the Budget would exacerbate this effect. Some of these changes would apply only to domestic firms and not to foreign, creating incentives for U.S. corporations to move their headquarters overseas, merge with foreign corporations, and sell their assets to foreign investors, resulting in a reduction of the domestic stock of capital, which is an essential component of economic growth.[183] Moreover, while profit shifting (that is, the practice of moving intangible capital to low-tax countries) is often seen as negative, there is evidence that, in its absence, new taxes could have a much

---

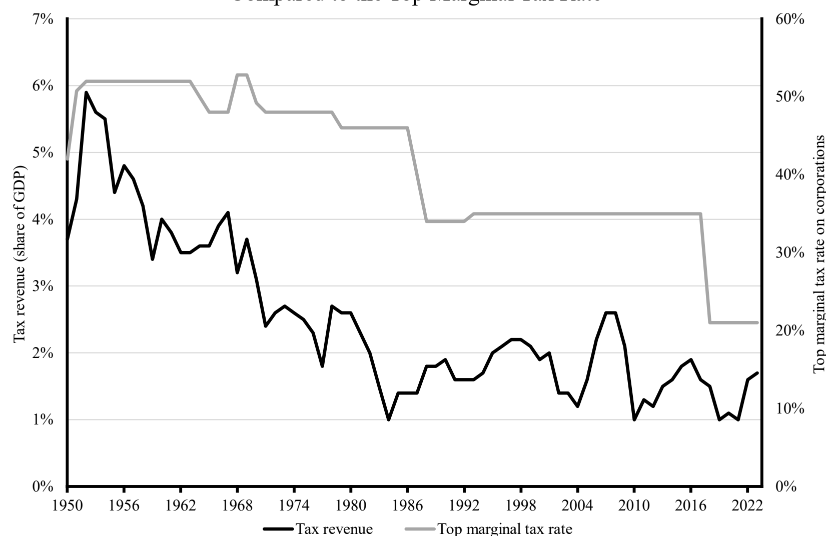
[181] Stephen J. Entin, "Labor Bears Much of the Cost of the Corporate Tax," Tax Foundation Special Report no. 238 (October 2017), https://files.taxfoundation.org/20181107145034/Tax-Foundation-SR2382.pdf; James R. Nunns, "How TPC Distributes the Corporate Income Tax," Tax Policy Center (September 13, 2012), https://taxpolicycenter.org/publications/how-tpc-distributes-corporate-income-tax.

[182] Watson, York, McBride, Muresianu, Li, and Durante, "Details and Analysis."

[183] Kyle Pomerleau, "Biden's Reforms to the Tax Treatment of US Multinational Corporations: The Knowns and Unknowns," American Enterprise Institute Economic Perspectives (July 20, 2021), https://www.aei.org/research-products/report/bidens-reforms-to-the-tax-treatment-of-us-multinational-corporations-the-knowns-and-unknowns/; Cody Kallen, "Effects of Proposed International tax Changes on U.S. Multinationals," Tax Foundation Fiscal Fact, no. 761 (April 2021), https://files.taxfoundation.org/20210427161012/Effects-of-Proposed-International-Tax-Changes-on-U.S.-Multinationals.pdf; Pomerleau, "Biden's Reforms to the Tax Treatment of US Multinational Corporations."

larger negative impact on employment, wages and investment.[184] Expecting no reaction from the business sector to a large reduction in their returns to investment is contrary to one of the most fundamental concepts in economics.

Figure 3-10: Corporate Income Tax Revenue as a Share of GDP Compared to the Top Marginal Tax Rate



Source: Office of Management and Budget (OMB); U.S. Department of the Treasury, Office of Tax Analysis

Furthermore, historical data shows that increases in corporate tax rates do not meaningfully increase receipts (see Figure 3-10).[185]

---

[184] In this paper, the author warns that preventing multinationals from using tax shelters might have serious impact on investment and employment, that is not prevalent when this option is available.; Juan Carlos Suárez Serrato, "Unintended Consequences of Eliminating Tax Havens," NBER Working Paper no. 24850 (July 2018), https://doi.org/10.3386/w24850.

[185] Note that the corporate tax rate is not the only determinant of the tax revenue. Changes in legislation other than the rate (tax credits and exemptions, for example) affect revenue. However, according to Auerbach and Poterba, the main determinant behind the drop in revenue in the three decades before the 1980s was a drop in the corporations' margin of profits.; Alan J. Auerbach and James M. Poterba, "Why Have Corporate Tax Revenues Declined?" *Tax Policy*

Advocates for raising the corporate tax rate often make the argument that revenue from this form of tax as a share of GDP is significantly lower than in other developed economies.[186] While this may be the case, the U.S. has relatively more pass-through companies and relatively fewer corporations than peer countries.[187] Kyle Pomerleau and Donald Schneider estimate that if the rest of the OECD had the same corporate composition as the U.S., the U.S. would fall near the median. Notably, by international standards, the U.S. does not have a low corporate tax rate and raising it would make the country notably less competitive than its peers.[188]

Given the swath of evidence of the limited positive and broad negative effects, proposals to raise such a large amount of taxes from corporations are ill-advised. They would only encourage relocation of companies, reduce capital formation, growth and

---

and the Economy 1 (1987): 1-28, https://doi.org/10.1086/tpe.1.20061761.

[186] Jason Furman, "How to increase growth while raising revenue: Reforming the corporate tax code," The Hamilton Project, (January 28, 2020), https://www.hamiltonproject.org/wp-content/uploads/2023/01/Furman_LO_FINAL.pdf.

[187] While in 1980 about three-quarters of business income was originated in C-corporations, by the 2010s this was under one-half, with most of the remainder split between partnerships and S-corporations. Note that many of the new pass-through businesses are just individuals who formed a business to manage their personal investments at a lower tax rate. The authors also find that some of the partnerships taxed at a lower rate are part of clusters of partnerships partially owned by each other, such that it is difficult to identify the true ownership of these companies.; Kyle Pomerleau and Donald Schneider, "The Biden Administration's Corporate Tax Statistic Is Misleading," *Bloomberg Tax*, April 16, 2021, https://news.bloombergtax.com/daily-tax-report/the-biden-administrations-corporate-tax-statistic-is-misleading; Michael Cooper et al., "Business in the United States: Who Owns It, and How Much Tax Do They Pay?" *Tax Policy and the Economy* 30, no. 1 (2016): 91-128, https://doi.org/10.1086/685594.

[188] Enache, "Corporate Tax Rates around the World, 2023."

employment, all while having a negligible impact on deficit reduction, reversing many of the achievements of the TCJA.

Increase in Personal Income Taxes

The Biden Administration proposes raising over $1.8 trillion in additional personal income taxes.[189] Part of this increase comes from restoring the top marginal rate to 39.6 percent, a reform of the capital gains tax, and an expansion of the net investment income tax.[190] Notably, it also plans to impose a minimum tax of 25 percent (inclusive of unrealized capital gains) on taxpayers with a net worth of $100 million or more. As with the proposed corporate tax increases, the Biden Administration reinforces the misconception that many Americans do not "pay their fair share," citing progressivity and redistribution as motives for their proposals.

The expectation of increasing tax collections by returning to pre-Reagan Administration-era tax rates is based on misguided academic research that estimates a maximum rate of up to 70 percent, but such research is based on unrealistic assumptions.[191]

---

[189] Note that when adding the changes in estate tax and additional collections from the expansion of the IRS, this value would be closer to 2.2 trillion. These proposals are also a repeat from previous Budgets. U.S. Treasury, *General Explanations FY2025*.

[190] The two main changes regarding capital gains are taxing high-income earners at ordinary rates and realizing the capital income at death or donation.

[191] Vanessa Williams, "Alexandria Ocasio-Cortez's 70 percent tax on the rich isn't about revenue, it's about decreasing inequality," *NBC News Think*, January 26, 2019, https://www.nbcnews.com/think/opinion/alexandria-ocasio-cortez-s-70-percent-tax-rich-isn-t-ncna963146; Alan Cole and Scott Greenberg, "Details and Analysis of Senator Bernie Sanders's Tax Plan," Tax Foundation (January 28, 2016), https://taxfoundation.org/research/all/federal/senator-bernie-sanders-tax-plan-2016/; Peter Diamond and Emmanuel Saez, "The Case for a Progressive Tax: From Basic Research to Policy Recommendations,"

Raising the top statutory marginal tax rate is a suboptimal policy response to the burgeoning Federal debt for various reasons.[192]

The relatively modest revenue projected to be raised is consistent with the effects of past tax rate changes. While income tax rates have generally declined over the past 45 years, tax revenue as a share of the economy has remained relatively stable (see Figure 3-11). This may result from a greater incentive for skilled tax planning, with higher rates raising the incentive for tax avoidance, increasing the deadweight loss from this form of tax.[193] This problem is particularly pertinent for states with high top-end rates, where total taxes for high earners already surpass 50 percent, making them among the most heavily taxed in the developed world.[194]

Journal of Economic Perspectives 25, no. 4 (2011): 165-90, https://doi.org/10.1257/jep.25.4.165; Aparna Mathur, Michael R. Strain, and Sita Nataraj Slavov, "Should the Top Marginal Income Tax Rate Be 73 Percent?", American Enterprise Institute Tax Notes (November 19, 2012), https://www.aei.org/wp-content/uploads/2012/11/-should-the-top-marginal-income-tax-rate-be-73-percent_085518416524.pdf?x85095.

[192] Note that the top marginal rate is expected to go back to 39.6 percent in January 2026 when some provisions from the TCJA expire.

[193] The size of this deadweight cost is disputed by Raj Chetty, although he does not dispute the high sensitivity to marginal tax rates by those prone to tax avoidance. Also note that a high rate would increase tax evasion, as some individuals would find it less costly to run the risk of illegally not paying taxes, but this is not easy to estimate. Martin Feldstein, "Tax Avoidance and the Deadweight Loss of the Income Tax," *The Review of Economics and Statistics* 81, no. 4 (1999): 674-80, https://doi.org/10.1162/003465399558391; Raj Chetty, "Is the Taxable Income Elasticity Sufficient to Calculate Deadweight Loss? The Implications of Evasion and Avoidance," *American Economic Journal: Economic Policy* 1, no. 2 (2009): 31-52, https://doi.org/10.1257/pol.1.2.31.

[194] Alex Mengden, "Top Personal Income Tax Rates in Europe, 2024," Tax Foundation Europe (February 13, 2024), https://taxfoundation.org/data/all/eu/top-personal-income-tax-rates-europe-2024/; Andrey Yushkov, "State Individual Income Tax Rates

Figure 3-11: Personal Income Tax Revenue as a Share of GDP Compared to the Top Marginal Tax Rate

Source: Office of Management and Budget (OMB); U.S. Department of the Treasury, Office of Tax Analysis

Taxing capital gains is central to left-leaning tax reform agendas for various reasons. First, it applies mostly to the wealthy. It is a negligible part of most households' income, but about half for those with an AGI of $10 million and above.[195] Second, the tax rate on long-term investments is lower than for ordinary income. Third, the tax is paid upon realization, meaning that some gains go

and Brackets, 2024," Tax Foundation (February 20, 2024), https://taxfoundation.org/data/all/state/state-income-tax-rates-2024/.

[195] According to the latest data from the IRS, this value is above 57 percent, but the two years when COVID-19 hit the hardest on the economy were atypical. Internal Revenue Service, *Statistics of Income —2021 Individual Income Tax Returns* (U.S. Department of the Treasury, 2021), Table 1.4, https://www.irs.gov/pub/irs-pdf/p1304.pdf; John Ricco, "The Revenue-Maximizing Capital Gains Tax Rate: With and Without Stepped-up Basis at Death," Penn Wharton Budget Model blog, December 4, 2019, https://budgetmodel.wharton.upenn.edu/issues/2019/12/4/the-revenue-maximizing-capital-gains-tax-rate-with-and-without-stepped-up-basis-at-death.

untaxed indefinitely if the asset is not sold.[196] Moreover, if the person dies or donates the asset to charity, the gains are reset; the recipient never pays taxes on them. The reforms proposed not only seek to raise the rates but are also a response to an impatient desire to tax gains before realization.

However, there is uncertainty as to the revenue that would be raised from an increase in the capital gains tax rate. As with other taxes, there is some evidence that tax revenue would increase, but collection also depends on the frequency of the realizations.[197] The sensitivity of the gains realized to changes in the tax is measured by the "elasticity of realization."[198] On the aggressive end of estimates, a recent study by Agersnap and Zidar find this elasticity to be between -0.5 and -0.3, meaning that the maximum rate for capital gains is somewhere between 38 and 47 percent.[199] Their findings indicate that an increase of 5 percentage points in the capital gains tax rate would yield $18 to $30 billion in annual Federal tax revenue (0.08 to 0.13 percent of GDP in 2021). Note that their estimations have a large margin of error, with the true maximum rate being somewhere between 0 and 94 percent.[200]

---

[196] Batchelder and Kamin, "Taxing the Rich."

[197] For example, a profitable portfolio taxed at a 100 percent rate has no incentive to be sold and, therefore, will not collect any tax.

[198] The percent change in amount realized given a 1 percent change in the tax rate.

[199] Note that some of these papers express the results in dollar value. Given that the goal is to compare the effects regardless of when the studies were made, we transformed the values to percentage of GDP. Ole Agersnap and Owen Zidar, "The Tax Elasticity of Capital Gains and Revenue-Maximizing Rates," *American Economic Review: Insights* 3, no. 4 (2021): 399-416, https://doi.org/10.1257/aeri.20200535; Natasha Sarin, Lawrence H. Summers, Owen M. Zidar, and Eric Zwick, "Rethinking How We Score Capital Gains Tax Reform," NBER Working Paper no. 28362 (January 2021), https://doi.org/10.3386/w28362.

[200] Robert McClelland, "A New Study Suggests Congress Could Raise Money By Increasing Capital Gains Tax Rates To 47 Percent. But There Is A

Sarin, Summers, Zidar and Zwick, using these estimations, calculate that, given that a sizeable portion of the capital is invested in fixed terms, raising the rate to 40 percent can raise an additional 0.4 percent of GDP in revenue, which is still far short of the magnitude of the deficit.[201]

Nevertheless, these findings are outliers. Scorekeepers (such as CBO and JCT) and most research find that most capital investment is very sensitive to changes in the tax rate, with the maximum revenue-raising rate being around 30 percent.[202] There are several reasons to believe that the current rate is close to the maximum rate. The historical data is not consistent with the assertion that raising rates would increase revenue, as shown in Figure 3-12 below. Moreover, while a sizeable portion of capital investment is indeed inelastic to changes in the rate, this is because the majority of stocks are in non-taxable accounts, which are, by nature, unresponsive to changes in the tax rate.[203] This is an important

---

Catch," Tax Policy Center TaxVox, September 16, 2020, https://www.taxpolicycenter.org/taxvox/new-study-suggests-congress-could-raise-money-increasing-capital-gains-tax-rates-47-percent.

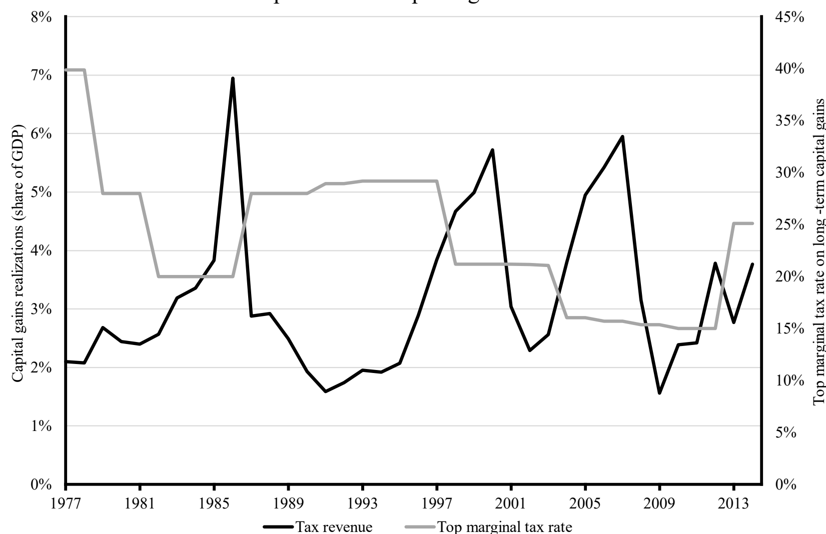
[201] Sarin, Summers, Zidar, and Zwick, "Rethinking How We Score Capital Gains Tax Reform."

[202] However, John Ricco estimates that the rate could go from 33 percent to 42 percent if stepped-up basis at death is eliminated. Timothy Dowd and Robert McClelland, "The Bunching of Capital Gains Realizations," Tax Policy Center research report (February 7, 2017), https://www.taxpolicycenter.org/publications/bunching-capital-gains-realizations/full; Joint Committee on Taxation, *New Evidence on the Tax Elasticity of Capital Gains: A Joint Working Paper of the Staff of the Joint Committee on Taxation and the Congressional Budget Office* (JCX-56-12) (June 2012), https://www.jct.gov/getattachment/c0efd05d-a7a4-47b6-91cf-a9981301d97d/x-56-12-4472.pdf; John Ricco, "The Revenue-Maximizing Capital Gains Tax Rate: With and Without Stepped-up Basis at Death."

[203] Also, note that changes in the rate will have a bigger effect on those paying the tax in full, but very little on those who are skilled at avoiding

point; large changes in the rate would drive more investors to tax-free type of investments, even if the pre-tax ROI is lower.

Figure 3-12: Capital Gains Realizations as a Share of GDP Compared to the Top Marginal Tax Rate



Source: U.S. Department of the Treasury, Office of Tax Analysis

While there is disagreement on the additional revenue that can be raised from increased capital gains tax rates, the economic consequences of doing so are almost all negative. Increasing tax rates on capital gains would mean an exodus of capital, lower employment, and a bias against saving, leading to a lower level of national income in the long term.[204] A study finds that the Biden

taxes. Steven M. Rosenthal, "Only About One-Quarter of Corporate Stock is owned by Taxable Shareholders," Tax Policy Center TaxVox, May 16, 2016, https://www.taxpolicycenter.org/taxvox/only-about-one-quarter-corporate-stock-owned-taxable-shareholders.

[204] This is not unlikely even in Agersnap and Zidar's paper since their margin of error was large. Agersnap and Zidar, "The Tax Elasticity of Capital Gains and Revenue-Maximizing Rates."; Note also that a drop in employment will also mean a drop in collections of personal income and payroll taxes. Martin Feldstein, "The Effect of Taxes on Efficiency and Growth," NBER Working Paper no. 12201 (May

Administration's proposal to raise the capital gains tax rate for those with income over $1 million to the top-end marginal tax rate (currently 37 percent), would lower long-run GDP by 0.3 percent.[205]

Changes in the capital gains tax rate will dramatically affect the volume and type of investments in capital, which are the backbone of long-run economic growth. This has a bigger impact on risky investments, like tech startups or healthcare research, where investors compete to be the first to develop innovative products, such as drugs.[206] It will also distort the timing of realization, with some investors suboptimally delaying the realization of gains, slowing the flow of capital to more dynamic markets. Finally, not all gains are profit. Part of the appreciation is due to inflation but would be taxed nevertheless ("inflation tax").[207] In real terms, the "real" capital gains rate is much higher than the statutory.[208]

2006), https://doi.org/10.3386/w12201; Erica York, "An Overview of Capital Gains Taxes," Tax Foundation (April 16, 2019), https://taxfoundation.org/research/all/federal/capital-gains-taxes/.

[205] John W. Diamond, "The Economic Effects of Proposed Changes to the Tax Treatment of Capital Gains," Rice University's Baker Institute for Public Policy Working Paper (October 2021), https://www.bakerinstitute.org/research/economic-effects-proposed-changes-tax-treatment-capital-gains.

[206] The one coming second would not be awarded with a patent. There is a substantial focus on the profits of the winner but, in some industries, every winner loses a significant number of (costly) races.

[207] That is, if a stock is bought at $10 and then sold at $20, but out of the $10 gain, $5 is due to inflation, the true gains from this sale would be $5, but the investor would pay taxes on the $10 stock appreciation Garrett Watson, "Efforts to Combat Inflation's Impact on the Tax Code Should Remain a Priority in 2023," Tax Foundation (February 16, 2023), https://taxfoundation.org/blog/index-for-inflation-tax-adjustments/.

[208] Note that the higher fluctuations due to risk, the inflation tax, and the higher elasticity of certain capital (due to its ease to move across jurisdictions) are some of the main reasons why tax rates on capital are lower than those on labor.

The distortive policy of taxing unrealized capital gains has been promoted by far-left economists.[209] The Biden Administration attempts to implement this in two provisions. First, it proposes treating transfers of appreciated property by gift or on death as realization events.[210] While eliminating the step-up basis (that erases taxable gains of assets at death) reduces distortions, treating the transfer at death as a realization would create a liquidity crisis, especially for households that hold high value but illiquid assets (e.g., land and equipment), such as farms. In addition, the Administration proposes expansions to the estate tax, double taxing some inheritances if both reforms materialize.[211]

The second proposed change imposes a minimum tax of 25 percent on total income, generally inclusive of unrealized capital gains, for all taxpayers with wealth greater than $100 million.[212] This is not only potentially even more harmful, but also administratively unfeasible. While, according to OMB, it would be the largest source of increase in personal income tax revenue, external scorekeepers continue to be reluctant to score such a

---

[209] Emmanuel Saez and Gabriel Zucman, "How to Get $1 Trillion from 1000 Billionaires: Tax their Gains Now," Working Paper (April 2021), https://eml.berkeley.edu/~saez/SZ21-billionaire-tax.pdf; Emmanuel Saez, Danny Yagan, and Gabriel Zucman, "Capital Gains Withholding', Working Paper (January 2021), https://eml.berkeley.edu/~yagan/CapitalGainsWithholding.pdf.

[210] U.S. Treasury, *General Explanations FY2025*, 80.

[211] Note that both changes combined could lead to partial double taxation of certain assets. U.S. Treasury, *General Explanations FY2025*, 120.

[212] The same tax was proposed for FY 2024, and a similar one was proposed for FY 2023. U.S. Department of the Treasury, *General Explanations of the Administration's Fiscal Year 2024 Revenue Proposals* (March 9, 2023), https://home.treasury.gov/system/files/131/General-Explanations-FY2024.pdf; U.S. Department of the Treasury, *General Explanations of the Administration's Fiscal Year 2023 Revenue Proposals* (March 28, 2022), https://home.treasury.gov/system/files/131/General-Explanations-FY2023.pdf.

policy.[213] Given that many assets are neither publicly traded nor readily valued, yearly valuation presents a considerable hurdle not only to taxing unrealized gains, but also to determining who is affected by the tax.[214] While the proposal allows for delays in payments for taxpayers with illiquid assets, it will likely nevertheless cause them to sell part of their businesses or property to meet the tax obligation. This problem will be exacerbated by shocks in the market from other individuals speculating with this quest for liquidity.

The Biden Administration also proposes to increase the Net Investment Income Tax rate from 3.8 to 5 percent and expand it to pass-through businesses. While this looks like a minor change, OMB projects an additional revenue of $800 billion, which, in comparison, is more than three times what it expects to collect from raising the income tax to 39.6 percent, with similar negative consequences as the ones described above.[215]

Payroll Taxes

There have been multiple attempts to strengthen the trust funds of Social Security and Medicare through increases in payroll tax rates in recent years.[216] As rising payroll taxes are partially borne by employers, the cost of labor increases, depressing wages, reducing employment and, ultimately, precautionary savings toward old

---

[213] Watson, York, McBride, Muresianu, Li, and Durante, "Details and Analysis."

[214] David Kamin, "How to Tax the Rich," *Tax Notes* 146, no. 1 (2015), https://ssrn.com/abstract=2550936.

[215] OMB, *Budget of the U.S. Government Fiscal Year 2025*, Tables S-6

[216] The office of the Chief Actuary of the Social Security Administration scores some of these proposals and updates the effect of some of these provisions every year. Social Security Administration, "Provisions Affecting Payroll Taxes," https://www.ssa.gov/OACT/solvency/provisions/payrolltax.html.

age.[217] In the medium and long term, wage dynamics will depend on the capacity of each type of worker to negotiate their employment situation and the employers' demand for employees. Furthermore, most of the income subject to this tax is also subject to personal income tax (double taxation). Also, lower wages from increases in the payroll tax rate mean offsetting revenues on the personal income tax since its base is eroded, increasing the on-budget deficit.[218]

[217] This is because employers base their cost-benefit analysis on total compensation of the employee, not just the wage. For example, if employers and employees pay a payroll tax equal to 10 percent of the wage, a wage of $100 will pay $10 and the cost of the employee would be $110. If the rate is hiked to 20 percent, the cost will remain at $110, but the employee would be paid $91.67, and each side would pay $18.33 in taxes, which is 20 percent of $91.67.

[218] Joint Committee on Taxation, *The Income and Payroll Tax Offset to Changes in Payroll Tax Revenues* (JCX-89-16) (November 18, 2016), https://www.jct.gov/getattachment/df6ad7a8-d3f8-4f39-b465-1cbe5b077d20/x-89-16-4962.pdf.

Box 3-2: Who Pays for Medicare?

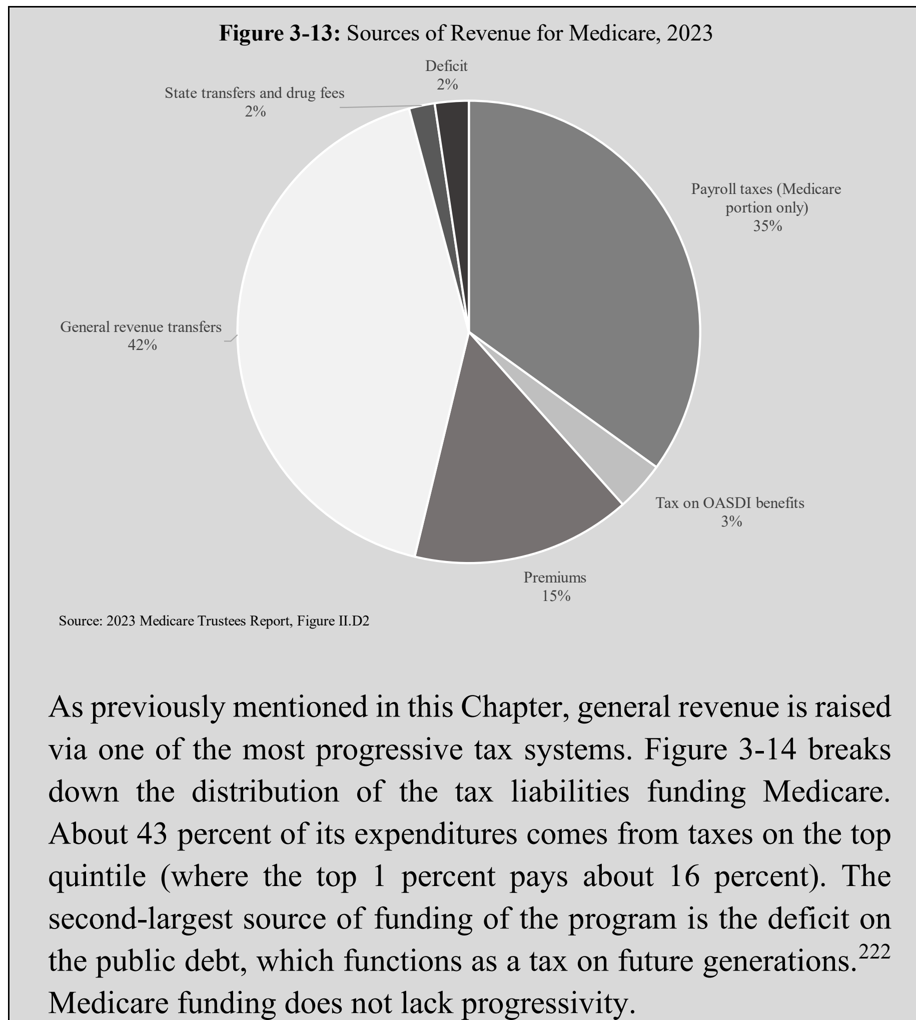
The FY2025 Budget proposes "wealthy people to pay their fair share toward Medicare."[219] This misconception arises due to the Medicare tax not being as progressive as the rest of the tax code.[220] However, the payroll tax only funds the HI Trust Fund (Part A), which only accounts for about 40 percent of total Medicare spending, a proportion that is expected to continue its decline in the future.[221] Most of the expenses originate in Parts B and D, which are almost entirely funded through premiums and general revenue. Figure 3-13 below breaks down the sources of funding of Medicare.

[219] There are numerous bills proposed over the past decade with a similar intent, for instance the Medicare and Social Security Fair Share Act. The White House, "FACT SHEET: The President's Budget Cuts Taxes for Working Families and Makes Big Corporations and the Wealthy Pay Their Fair Share," Press Release, March 11, 2024, https://www.whitehouse.gov/briefing-room/statements-releases/2024/03/11/fact-sheet-the-presidents-budget-cuts-taxes-for-working-families-and-makes-big-corporations-and-the-wealthy-pay-their-fair-share/; Senator Sheldon Whitehouse, "Medicare and Social Security Fair Share Act," Fact Sheet, https://www.whitehouse.senate.gov/wp-content/uploads/imo/media/doc/Medicare%20&%20Social%20Security%20Fair%20Share%20Act%20fact%20sheet.pdf.

[220] There is a 2.9 percent on payroll earnings (split between employers and employees), plus an additional 0.9 percent on wages paid in excess of $200,000.

[221] Centers for Medicare & Medicaid Services (CMS), *2023 Medicare Trustees Report* (March 31, 2023), https://www.cms.gov/oact/tr/2023.

Figure 3-13: Sources of Revenue for Medicare, 2023

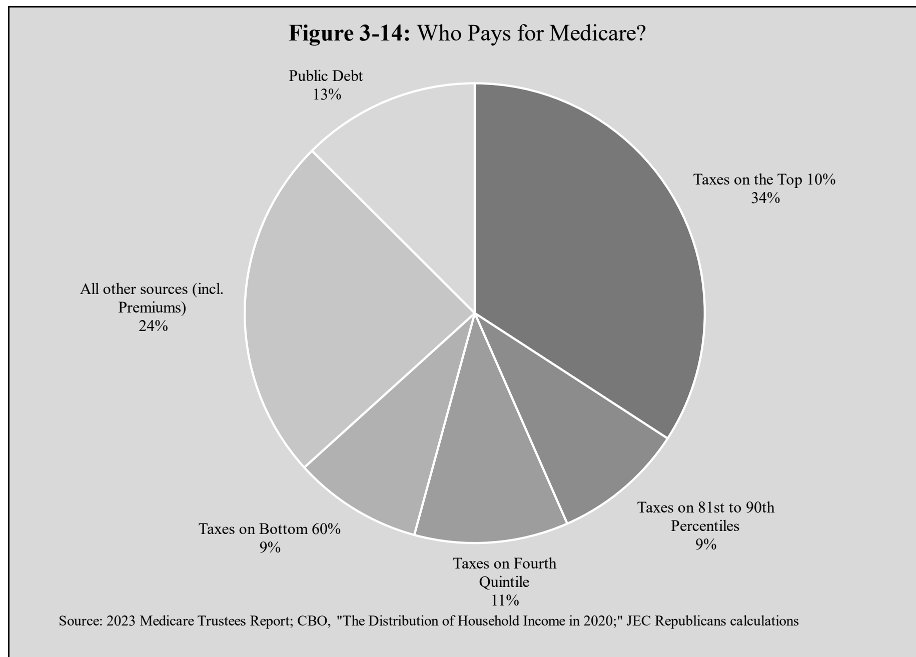


Source: 2023 Medicare Trustees Report, Figure II.D2

As previously mentioned in this Chapter, general revenue is raised via one of the most progressive tax systems. Figure 3-14 breaks down the distribution of the tax liabilities funding Medicare. About 43 percent of its expenditures comes from taxes on the top quintile (where the top 1 percent pays about 16 percent). The second-largest source of funding of the program is the deficit on the public debt, which functions as a tax on future generations.[222] Medicare funding does not lack progressivity.

[222] JEC Republicans calculations using data from the 2023 Medicare Trustees Report and CBO. Note that, from the CBO report, JEC Republicans used 2019 data instead of 2020 data (the latest) because the latter was an anomalous year in terms of income distribution. Also note that if there was available data on the breakdown by quintiles of the "other sources" component, the top quintile would be closer to 50 percent. CMS, *2023 Medicare Trustees Report*; CBO, *The Distribution of Household Income in 2020* (November 2023), https://www.cbo.gov/publication/59757.

Figure 3-14: Who Pays for Medicare?



Source: 2023 Medicare Trustees Report; CBO, "The Distribution of Household Income in 2020;" JEC Republicans calculations

Whose Taxes Will Rise?

In total, President Biden's proposals to increase taxes on businesses and high-income taxpayers would raise $2.4 trillion dollars ($4.95 trillion in additional receipts, minus outlays), which is relatively small compared to the $19.5 trillion increase in the deficit over the same period.[223] CBO estimates $20 trillion for the same period, but while the OMB's deficits decrease over time, CBO's worsens (see Figure 3-15).[224] As mentioned above, the effects of these policies on growth would reduce the projected revenue by more than a third.[225] When examined, it becomes clear

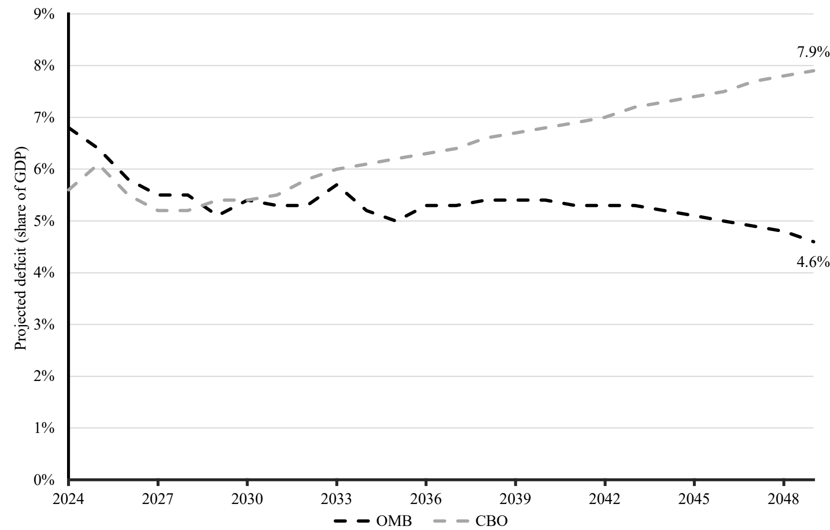
[223] U.S. Treasury, *General Explanations FY2025*, 247.

[224] This difference is relevant. According to OMB, even without changing current law, debt-to-GDP would stabilize before the year 2050. OMB, *Analytical Perspectives Budget of the U.S. Government Fiscal Year 2025*.

[225] Watson, York, McBride, Muresianu, Li, and Durante, "Details and Analysis."

that taxing successful businesses and affluent individuals will not only be a drag to the economy but would also fail to stabilize the debt. Thus, if revenues are the only target to rectify fiscal policy, individuals other than the rich would likely see their tax bills rise.

Figure 3-15: Differences between OMB and CBO Baseline Deficit Projections



Source: Congressional Budget Office (CBO); Office of Management and Budget (OMB)

Box 3-3: Taxes Are Not Independent of Each Other

One major difficulty in scoring multiple tax provisions is dealing with their interacting effects. The most common practice is to use individual estimations, then aggregate them. However, this approach is incorrect. The sum of the individual effects of ten different 10 percent taxes on income are not equivalent to a 100 percent income tax.

It is easy to see this when taxes are applied to the same base, but it is less straightforward when it involves different types. One

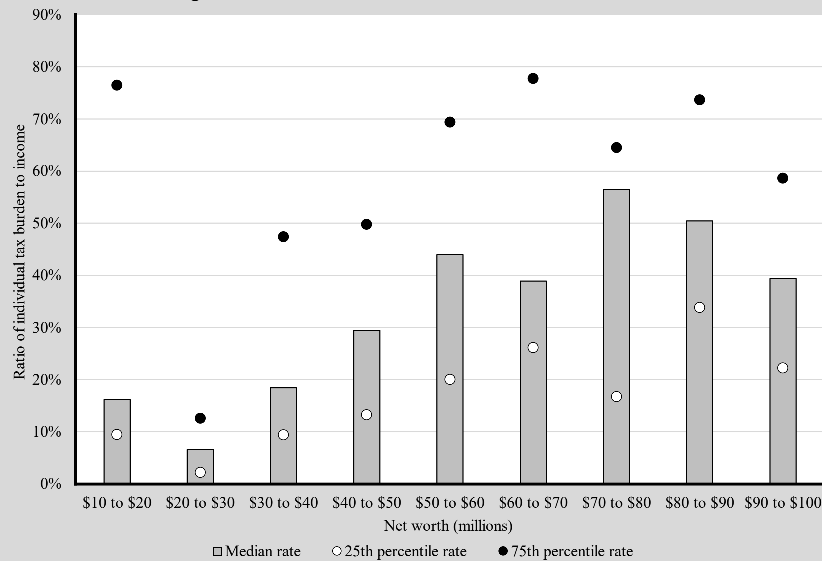
approach is to transform each tax as a percentage of income, then calculate the combined effect as if it was one larger tax on income. For example, suppose there is a tax on businesses of 20 percent, the same rate on dividends, and 5 percent on consumption. If the company has profits for $100, after paying taxes on profits and dividends (assuming all profits are disbursed), the owner is left with $64 that can be used to pay for $60.8 in goods and services (because of sales tax). Now, suppose that each tax rate is raised by 5 percentage points. Disposable income would drop by 12 percent (from $64 to $56.25) and purchasing power by 17 percent (from $60.8 to $50.6). As suggested by the Laffer curve, the marginal economic cost of raising taxes increase with the rate. Adding the effects of the three tax increases of 5 percent is more optimistic than the estimated effect of a 17 percent drop in disposable income. The disparity of both scenarios is going to be greater closer to the peak of the Laffer curve.

This method is also useful to evaluate a new tax, especially if the description could mislead on its true costs. Suppose that a 2 percent wealth tax is applied to net worths over $10 million if filling individually, and $20 million if filing as a married couple. This type of tax is commonly advertised as "only two cents for every dollar of excess wealth."[226] Of course, this is misleading, as that dollar in excess is taxed every year ad infinitum (or until the person loses enough wealth to no longer face the tax). The true size of the burden is clear when measured as a percentage of total

[226] "[…] on that next dollar, you pitch in two cents, so everyone else can have a chance." Senator Elizabeth Warren, "Warren, Jayapal, Boyle Reintroduce Ultra-Millionaire Tax on Fortunes Over $50 million," Press Release, March 19, 2024, https://www.warren.senate.gov/newsroom/press-releases/warren-jayapal-boyle-reintroduce-ultra-millionaire-tax-on-fortunes-over-50-million.

income.[227] Figure 3-16 uses the 2022 Survey of Consumer Finances of the Federal Reserve to estimate this.[228] The chart shows that a significant number of households would have to pay 40 percent or more of their income, on top of all the other taxes paid on income.

Figure 3-16: 2% Wealth Tax Rate Relative to Income



Adding a wealth tax to existing taxes could bring the tax burden of some households to levels close to 100 percent of their income.

---

[227] Of course, total income is not the only way to accumulate wealth. Most households at the top do so through the growth in the value of their assets. However, not all these gains are realized while the tax is applied regardless of the liquidity of the taxpayer.

[228] JEC Republicans acknowledge that the data is based on a survey that might not reflect true net worths and income, but it is one of the best sources available. Aditya Aladangady et al., “Changes in U.S. Family Finances from 2019 to 2022: Evidence from the Survey of Consumer Finances” (Board of Governors of the Federal Reserve System, 2023), https://doi.org/10.17016/8799.

This example emphasizes the importance of calculating the aggregate tax burden before estimating the effects on the economy.

This is because there is a limit on how much tax the government can "extract" from the highest earners. Brian Riedl, researcher at the Manhattan Institute, estimates that, at most, the Federal government can raise revenues by another 2.1 percent of GDP through increasing the top marginal rate.[229] Moreover, when including dynamic effects on the economy, tax revenue can only be raised by between 1.1 and 2 percent of GDP, far short of the 2.5 percent needed in the long term to keep the debt ratio at 100 percent.[230] As explained in Box 3-3, simultaneous tax hikes have spillovers effects; the aggregate effect of more than one tax increase is greater than the sum of the individual parts. This means that the maximum revenue from taxing the highest earners, after accounting for dynamic effects, would most likely be closer to the lower bound of Riedl's estimation.

Pursuing fiscal solvency through more progressive taxation is a mistaken and partisan approach.[231] The U.S. tax code is already

[229] Note that this calculation includes 0.4 percent from aggressive tax enforcement, which is significantly more optimistic than OMB's or any other work cited in this Chapter. Riedl, "The Limits of Taxing the Rich."

[230] Note that the deficit reduction required would be larger if the debt is stabilized at a higher ratio, since the net interests paid will be larger as well. JEC Republicans calculated the 2.5 percent value using CBO's long-term budget projections. CBO, *The Long-Term Budget Outlook: 2024 to 2054*.

[231] The bipartisan Simpson Bowles commission in 2010 prescribed lower taxes and expanding the tax base. The National Commission on Fiscal Responsibility and Reform, *The Moment of Truth: Report of the National Commission on Fiscal Responsibility and Reform* (The White House: December 2010), https://www.ssa.gov/history/reports/ObamaFiscal/TheMomentofTruth12_1_2010.pdf.

among the most progressive in the developed world, and attempts to increase the progressivity may not produce the expected outcomes.[232] The reason European countries collect more tax revenue is because income levels across the distribution are taxed at similar rates, while the U.S.' budget is funded overwhelmingly by the top 10 percent of taxpayers.[233] Blanchet, Chancel and Gethin calculated the tax burden for each percentile of the income distribution. They found that the top one percent of income earners pay a similar tax rate on both sides of the Atlantic, but the middle and lower quintiles pay a larger portion of their income in Europe (almost a flat rate) compared to the United States.[234] Emulating their tax code would not raise taxes on the rich but instead would increase taxes for middle- and lower-income taxpayers. As a result, the number of households on the lower end of the income distribution who would struggle to afford basic goods would likely increase, which could result in increased pressure to raise social spending.[235] Fortunately, raising taxes is not the only fiscal policy lever that can be adjusted to achieve fiscal balance.

---

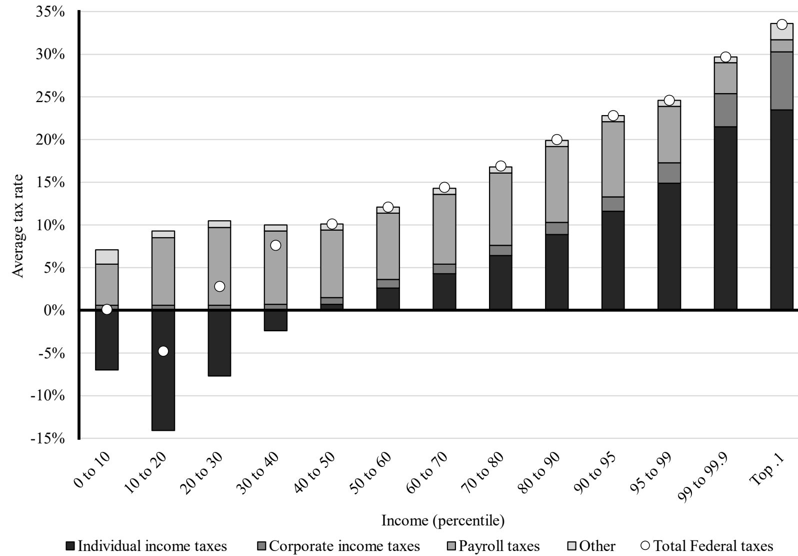
[232] Howard Gleckman "How Should We Tax The Rich," Tax Policy Center TaxVox, September 10, 2019, https://www.taxpolicycenter.org/taxvox/how-should-we-tax-rich.

[233] Blanchet, Chancel, and Gethin's appendix replicates the data for each country. Note that the United States is still at the top in progressivity even after including social spending. Blanchet, Chancel, and Gethin, "Why Is Europe More Equal than the United States?"; CBO, *The Distribution of Household Income in 2020*.

[234] This is not only because of consumption-based taxes like VAT. The paper shows that direct taxes on incomes are also higher for the bottom quintiles. Blanchet, Chancel, and Gethin, "Why Is Europe More Equal than the United States?"

[235] Blanchet, Chancel, and Gethin find that when comparing the progressivity of the systems on both sides of the Atlantic, the United States comes out on top because the lower levels of taxation for families at the bottom more than compensate for the smaller safety net. They conclude that the greater inequality in the U.S. is due pre-tax income distribution. They find that the post-tax-and-transfers relative inequality is even lower than the pre-tax. It is outside of the scope of this Chapter, but this does not necessarily mean that there is a bigger

Figure 3-17: Distribution of Average Tax Rate



Source: U.S. Department of the Treasury, Office of Tax Analysis (2024 estimates)

Box 3-4: Value-Added Tax

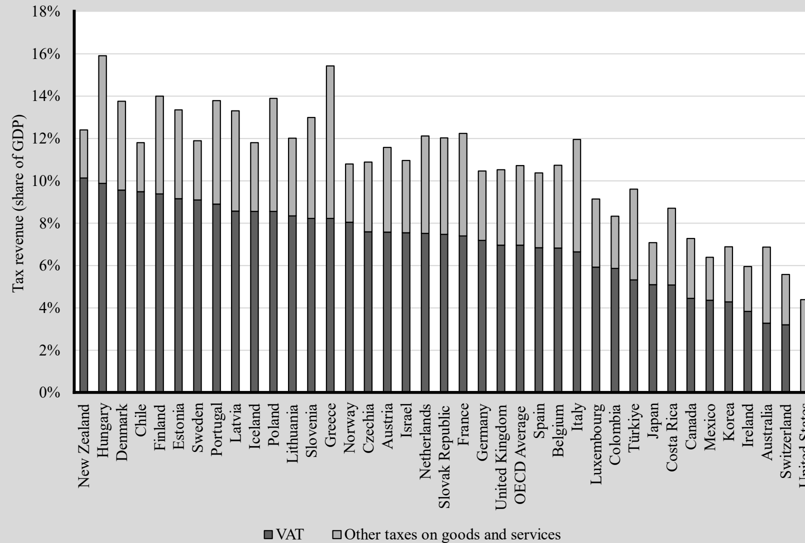
Another peculiarity of the U.S. tax code is the low reliance on taxes on consumption. The most commonly used consumption tax globally is the Value-Added Tax (VAT), which is applied to all increases in the value of a product through the supply chain. Proponents list many reasons why such a tax would be advantageous, for instance the simplicity to implement, ability to raise large amounts of tax revenue, and ability to produce a higher level of saving and productivity in the economy.[236] For example,

flaw in our private sector. For example, a welfare system plagued with benefits cliffs and valleys could discourage growth of pre-tax earnings.

[236] William G. Gale, "Raising revenue with a progressive value-added tax," in *Tackling the Tax Code: Efficient and Equitable Ways to Raise Revenue*, ed. Jay Shambaugh and Ryan Nunn, (Brookings, January 2020), https://www.brookings.edu/articles/tackling-the-tax-code-

Figure 3-18 shows that collection of a VAT in several OECD countries is higher as a percentage of GDP than the personal income tax in the US (8.1 percent in 2023).[237]

Figure 3-18: Importance of VAT on Tax Revenue in the OECD



Source: OECD Revenue Statistics 2023

Consumption is a substantial potential source for additional tax revenue. CBO estimates that a 5 percent VAT can raise more than $3 trillion over ten years.[238] William Gale calculates that the gross revenue from a 20 percent VAT (as seen in many European

efficient-and-equitable-ways-to-raise-revenue/; Donald J. Marples, "Consumption Taxes: An Overview," Congressional Research Service report (January 24, 2023), https://crsreports.congress.gov/product/pdf/R/R44342.

[237] OECD, "Effective Tax Rates;" CBO, *The Budget and Economic Outlook: 2024 to 2034*.

[238] CBO, *Options for Reducing the Deficit, 2023 to 2032—Volume I: Larger Reductions* (December 7, 2022), 84-87, https://www.cbo.gov/publication/58164.

countries) could decrease the budget deficit by more than $10 trillion dollars over the next ten years.[239]

It is critical to note that the VAT has major shortcomings. A primary concern is its regressivity, since consumption represents a much larger portion of the lower quintiles' incomes than that of the top ones. Taxes on consumption are the main reason why the tax burden distributions in European countries are flat.[240] According to the Congressional Research Service, transitioning to a VAT would increase aggregate savings, but also lower savings rates for the bottom two quintiles because their consumption represents a larger part of their earnings).[241] Given that in 2019 the bottom and second quintiles consumed 239 and 123 percent of their earnings respectively, a 20 percent VAT would represent a higher percentage of their earnings while the top quintiles (who have positive levels of savings) would pay a much lower tax rate (See Figure 3-19).[242] According to the same report, there would also be an age gap, with those 75 and over and those under 25 disadvantaged. The negative impact in purchasing power would come from price increases or reduced wages, and it would generate additional pressure on social spending, decreasing its potential for deficit reduction.[243]

---

[239] Note that these are pre-inflation 2019 estimations. Gale, "Raising revenue with a progressive value-added tax."

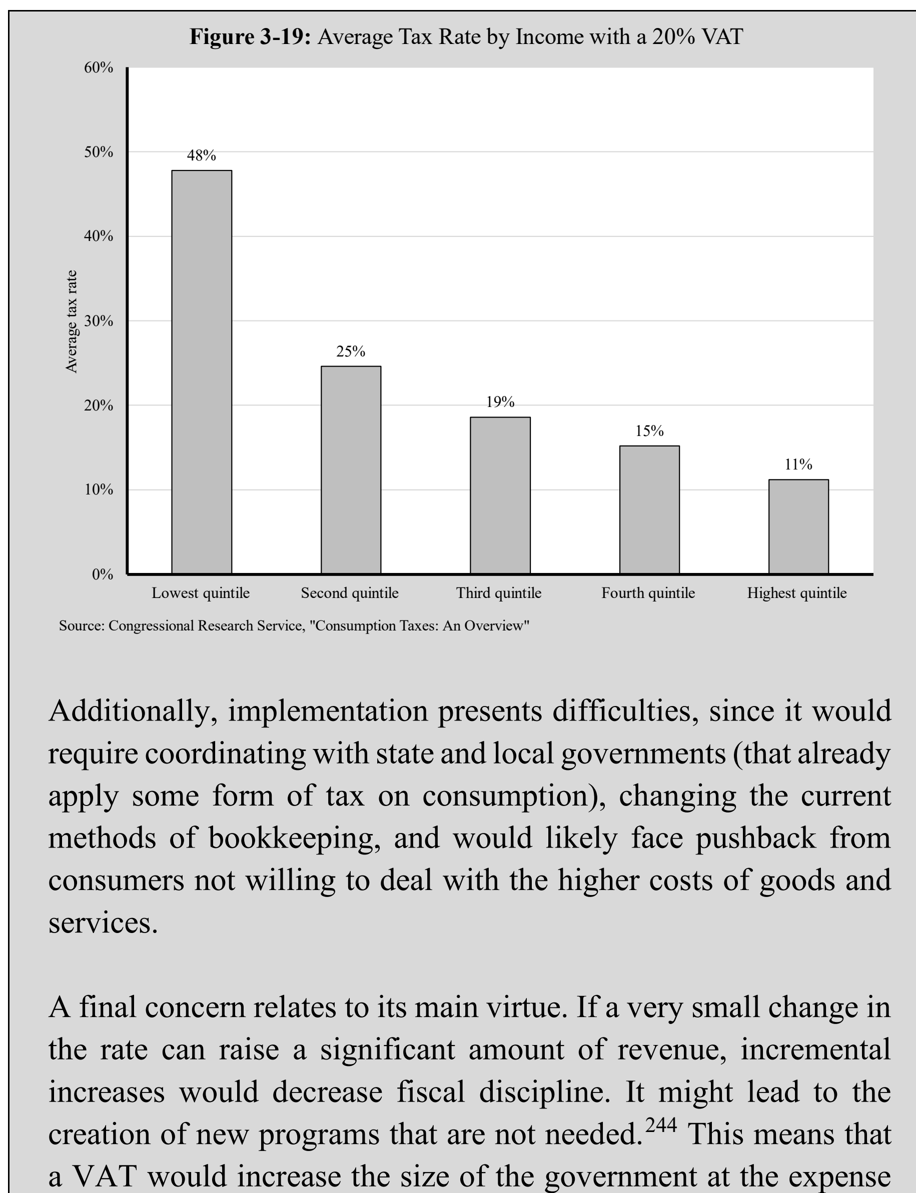
[240] Blanchet, Chancel, and Gethin's appendix replicates the data for each country. Note that the United States is still at the top in progressivity even after including social spending. Blanchet, Chancel, and Gethin, "Why Is Europe More Equal than the United States?"

[241] CRS, *Consumption Taxes: An Overview*.

[242] Values over 100 percent indicate population requiring supplemental income to their earnings to afford their consumption levels.

[243] Some economists propose solutions to counter this. For example, William Gale proposes implementing a universal basic income, but this would reduce net revenue significantly. Gale, "Raising revenue with a progressive value-added tax."

Figure 3-19: Average Tax Rate by Income with a 20% VAT



Source: Congressional Research Service, "Consumption Taxes: An Overview"

Additionally, implementation presents difficulties, since it would require coordinating with state and local governments (that already apply some form of tax on consumption), changing the current methods of bookkeeping, and would likely face pushback from consumers not willing to deal with the higher costs of goods and services.

A final concern relates to its main virtue. If a very small change in the rate can raise a significant amount of revenue, incremental increases would decrease fiscal discipline. It might lead to the creation of new programs that are not needed.[244] This means that a VAT would increase the size of the government at the expense

[244] Daniel Mitchel, *How a Value Added Tax Would Harm the U.S. Economy*, The Heritage Foundation report (May 11, 1993), https://www.heritage.org/taxes/report/how-value-added-tax-would-harm-the-us-economy.

of workers and businesses, while increasing dependency on government.

A More Efficient Fiscal Consolidation

Raising taxes is a harmful tactic to balance the long-run budget deficit and harms GDP growth.[245] Growth not only affects the denominator in the debt-to-GDP ratio equation (making stabilization of the debt-to-GDP ratio more challenging), but also increases taxable income and alleviates poverty. Alternatively, spending reduction has proven to be a better approach to achieve fiscal consolidation. A series of studies by Alesina, Favero and Giavazzi found that fiscal adjustments based on spending reductions are much less costly to the economy than tax-based ones.[246] Although in general these adjustments have been mixtures of revenues and expenditures, the latter were the main component in successful cases, including Canada and Finland (85 percent), and Netherlands, Sweden, and the United Kingdom (75 percent).[247] Of course, fiscal adjustment may have a short-term cost due to the observed reduction in government spending in the economy. But de Rugy and Salmon find that while both revenue- and spending-based fiscal consolidations can have an initial contractionary effect on the economy, the latter is milder and lasts

---

[245] JEC Republicans, *Response*.

[246] Two of their most representative works on this issue are: Alberto Alesina, Carlo Favero, and Francesco Giavazzi, "The Output Effect of Fiscal Consolidations," NBER Working Paper no. 18336 (August 2012), https://doi.org/10.3386/w18336; Alberto Alesina, Omar Barbiero, Carlo Favero, Francesco Giavazzi, and Matteo Paradisi, "The Effects Of Fiscal Consolidations: Theory And Evidence," NBER Working Paper no. 23385 (May 2017), https://doi.org/10.3386/w23385.

[247] Joel Chiedu Okwuokei, "Fiscal Consolidation: Country Experiences and Lessons from the Empirical Literature," in *Caribbean Renewal. Tackling Fiscal and Debt Challenges*, ed. Charles Amo Yartey and Therese Turner-Jones (International Monetary Fund, 2014): 126, https://doi.org/10.5089/9781484369142.071.

for a much shorter period.[248] Tax hikes are more severe, and the negative economic effects tend to last longer.

Addressing spending excesses does not explicitly mean that the working poor and elderly will see their benefits impacted. Instead of broad-based changes to transfer programs, targeted reforms could mean reducing inefficiencies and maintaining programs for those that need them most. Pro-market competition reforms to the heavily regulated healthcare sector could be translated into lower spending on Medicare, Medicaid, and greater economic independence for retirees. Additionally, the Federal government could use the information at its disposal to evaluate programs, doing a longitudinal cost-benefit analysis to make spending more efficient. Finally, base broadening and simplifying the tax code would level the field, increasing revenue and reducing the tax-gap without raising tax rates.[249] Pro-growth measures would also be helpful, like restoring the full expensing as well as expensing for research and development that were successfully implemented with TCJA but have since expired.[250]

---

[248] Veronique de Rugy and Jack Salmon, "Flattening the Debt Curve: Empirical Lessons for Fiscal Consolidation," Mercatus Center research paper (July 22, 2020), https://www.mercatus.org/research/research-papers/flattening-debt-curve-empirical-lessons-fiscal-consolidation.

[249] Moreover, Feldstein mentions that tax credits are mostly subsidies to high-income individuals. Martin S. Feldstein, "Raising Revenue by Limiting Tax Expenditures," NBER Working Paper no. 20672 (November 2014), https://doi.org/10.3386/w20672.

[250] Jason Furman argues that full expensing can act as a full tax break on investments with normal profits. Adam N. Michel, "Expensing and the Taxation of Capital Investment," Cato Briefing Paper no. 159 (June 7, 2023), https://www.cato.org/sites/cato.org/files/2023-06/BP159.pdf; Martin Feldstein and Lawrence Summers, "Inflation and the Taxation of Capital Income in the Corporate Sector," *National Tax Journal* 32, no. 4 (1979), https://doi.org/10.1086/NTJ41862265; Furman, "How to increase growth while raising revenue."

Unfortunately, given the nature of Federal spending and the trajectory of the deficit, there is no silver bullet sufficient to solve the country's fiscal woes. It is also unlikely that any fiscal stimulus (spending or tax cuts) could pay for itself through growth, especially when projections tend to be more optimistic than reality.[251] The reforms needed require both sides of the aisle to work for this common goal of tempering the bloating of the public debt.

Policymakers must look to novel approaches and disruptive technologies to provide breakthrough solutions. The following Chapters discuss tackling obesity and greater adoption of artificial intelligence as two possible areas for exploration.

---

[251] Note that changes in global affairs would likely contribute to this as well. Niall Ferguson, "Biden Can't Pay His Way Out of Fighting Cold War II," *Bloomberg*, May 19, 2024, https://www.bloomberg.com/opinion/articles/2024-05-19/us-can-t-pay-other-countries-to-wage-cold-war-ii-against-russia-china.

CHAPTER 4: REACHING FISCAL SOLUTIONS THROUGH HEALTHCARE INNOVATION

Last year, the Joint Economic Committee Republicans outlined the economic and social costs of obesity. JEC Republicans estimated that obesity causes an average of $5,155 in average excess medical costs per person who suffers from the condition, which correspond to $520 billion in total excess healthcare costs in 2023 alone.[252] This year, we update these figures given changing obesity trends and calculate that obesity will result in $8.2 to $9.1 trillion in excess medical expenditures over the next ten years for those suffering from the disease.[253] We also estimate that reductions in labor supply and labor productivity due to obesity result in the size of the economy being $13.5 to $14.7 trillion smaller over the next ten years than it otherwise would have been and that these reductions would result in $2.4 to $2.6 trillion in foregone tax revenue.

Even more significant than these economic costs are the dramatic impact that obesity has on individuals' health and well-being. Obesity is a causal risk factor for many diseases including diabetes, cardiovascular disease, and cancer and has a substantial impact on life expectancy.[254] Last year's *Response* estimated that obesity is responsible for 4.7 years of life lost for the average person suffering from the disease and reduces the overall United States life expectancy by 2.1 years.[255] Finding effective obesity treatments will dramatically improve both the personal and economic health of the United States.

---

[252] Joint Economic Committee (JEC) Republicans, *Republican Response to the Economic Report of the President* (U.S. Congress Joint Economic Committee, 2023): 41-42, https://sen.gov/LVQYY.
[253] Note: Figure is in real dollar terms.
[254] JEC Republicans, *Response*, 40.
[255] JEC Republicans, *Response*, 47.

As outlined in last year's *Response*, putting the United States on a sustainable fiscal path is necessary to fulfill the responsibilities outlined in the Employment Act of 1946 which declares that:

> "It is the continuing policy and responsibility of the Federal Government […] to promote maximum employment and production, increased real income, balanced growth, a balanced Federal budget, adequate productivity growth, proper attention to national priorities, achievement of an improved trade balance […] and reasonable price stability."[256]

As discussed in Chapter 2 of this year's *Response*, mandatory spending is a primary driver of the Federal deficit. Stabilizing the debt-to-GDP ratio requires running a primary deficit that is smaller than the difference between the real growth rate of the economy and the real interest rate on the debt, which is extremely difficult, if not impossible, to do without addressing mandatory programs.[257] Targeted reforms to these programs remains one of the most pragmatic ways to stabilize the debt-to-GDP ratio. As outlined in Chapter 3 of last year's *Response*, reducing the burden of obesity through improved nutrition policy, treatment, and medical innovation may result in significantly lower aggregate healthcare spending. This Chapter highlights the changes that have occurred in the obesity space in the past year, including updated obesity projections and cost estimates, and presents an overview of the potential of obesity-related healthcare innovations that have risen to prominence.

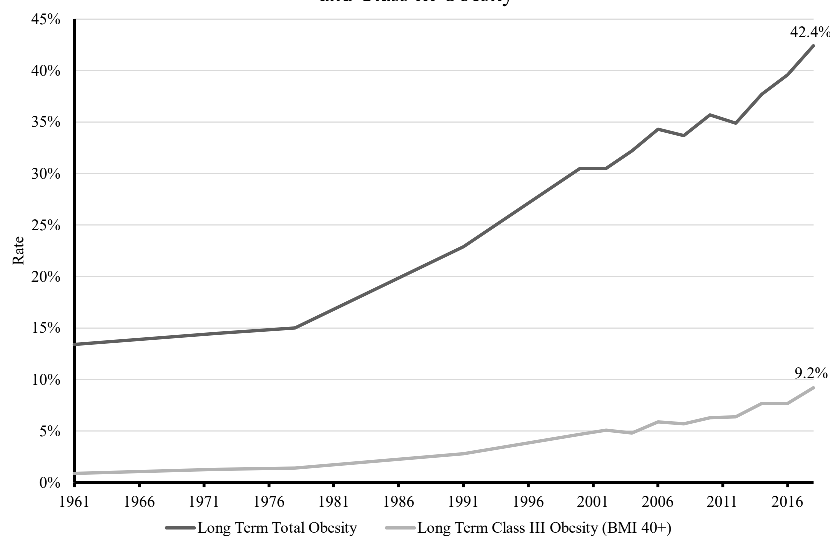
---

[256] 15 U.S.C. 21 § 1021(a) (1946).
[257] JEC Republicans, *Response*, 24-34.

Obesity Rates Continue to Rise at an Alarming Pace

Over the past 10 years, adult obesity and severe obesity prevalence have increased at a rate significantly faster than prior decades.[258]

Figure 4-1: Historic Rates of Adult Obesity (Ages 20+) and Class III Obesity



Source: CDC/NCHS, NHES and NHANES

Adult obesity rates have risen gradually since the 1980s and accelerated starting in the early 2010s. From 2009 through 2018, the obesity prevalence rate in adults grew by almost 19 percent

---

[258] Cynthia L. Ogden et al., "Trends in Obesity Prevalence by Race and Hispanic Origin—1999-2000 to 2017-2018," *Journal of the American Medical Association* 324, no. 12 (2020): 1208-10, https://doi.org/10.1001/jama.2020.14590.; Cynthia L. Ogden and Margaret D. Carroll, "Prevalence of Overweight, Obesity, and Extreme Obesity Among Adults: United States, Trends 1960–1962 Through 2007–2008," Centers for Disease Control and Prevention, June 2010, https://www.cdc.gov/nchs/data/hestat/obesity_adult_07_08/obesity_adult_07_08.pdf.

while the prevalence of severe obesity grew by 46 percent.[259] In the prior decade, 1999 to 2008, obesity prevalence grew approximately 10 percent while severe obesity prevalence grew 21 percent. Given that the 10-year growth rate of obesity prevalence nearly doubled from the prior 10-year period, JEC Republicans have updated obesity prevalence projections based on near and long-term obesity rates.

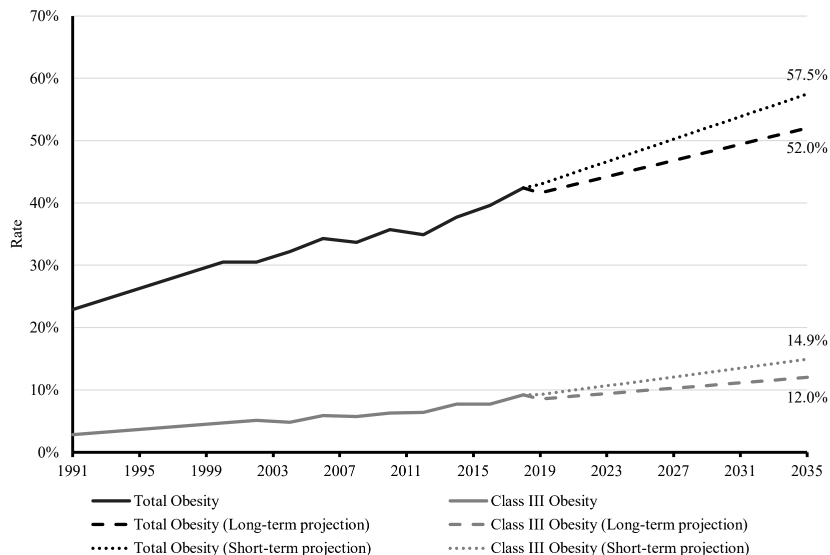
We project that the share of U.S. adults who are obese will rise from between 44.9 percent and 47.5 percent in 2024 to between 51.4 percent and 56.6 percent by 2034.[260] These projections are based on a linear regression over the prior 10 years and 31 years of obesity rate data. Since the rate at which obesity has risen has been greater in the past 10 years than the past 31 years, obesity projections based on the past 10 years of obesity data serve as the upper bound of our estimates while projections based on the past 31 years serve as the lower bound. Figure 4-2 displays the projected obesity and severe obesity rates based on these parameters.

---

[259] JEC Republicans calculations.

[260] Our long-term growth scenario projects that 44.9 percent of adults will qualify as obese in 2024, while our near-term growth scenario projects the share will be 47.5 percent. Long-term growth scenario incorporates the past 31 years of data from 1988-2018 while the near-term growth scenario incorporates the past 10 years of data from 2009-2018. We use age-adjusted obesity data provided by the Centers for Disease Control and Ogden et al. in our projection. Our use of age-adjusted data means there will be slight deviations from our previous research in Chapter 3 of the 2023 *Response*. JEC Republicans, *Response*, 200; Cynthia L. Ogden et al., “Trends in Obesity Prevalence by Race and Hispanic Origin—1999-2000 to 2017-2018,” *Journal of the American Medical Association* 324, no. 12 (2020): 1208-10, https://doi.org/10.1001/jama.2020.14590.

Figure 4-2: Projected Adult (20+) Obesity Rates



Source: CDC/NCHS, NHES and NHANES, Ogden et al., JEC Republicans Staff Calculations

These results are significant for several reasons. First, even using a low-end projection of obesity rates, it is expected that by 2032 more than half the U.S. adult population will be obese. In our near-term projection, based on the past 10 years of obesity growth rates, the adult obesity rate can be expected to eclipse half the adult population as soon as 2027. Equally concerning are the projected severe obesity rates, which as outlined in Chapter 3 of last year's *Response*, are associated with significantly higher medical costs when compared to Class 1 and Class 2 obesity.[261] Severe obesity rates can be expected to be between 11.8 percent and 14.6 percent by 2034.

[261] For additional information on the definitions of the various Body Mass Index classifications, please see: JEC Republicans, *Response*, 42-43.

Rising Obesity is a Significant Drag on the Economy

In last year's *Response*, JEC Republicans estimated the costs of obesity and calculated that the Federal government will spend $4.1 trillion on obesity related diseases over the next 10 years and that obesity related labor productivity and supply reductions will cost $2.6 and $5.6 trillion over the same span, respectively. This year's *Response* intends to provide new estimates to these figures using an updated methodology to estimate the aggregate economic cost of obesity.

There are three primary contributors to the overall economic cost of obesity: medical expenditures, labor productivity reductions, and labor supply reductions due to poor health. Given updated obesity prevalence figures, it is prudent to update the calculations of excess medical costs due to obesity. This year's estimates include private spending on obesity treatments to understand obesity's overall impact on the economy. We estimate that obesity will result in $8.2 to $9.1 trillion in excess medical expenditures over the next 10 years.

This calculation is derived from research by Cawley et al. that estimates the excess annual medical expenditures by various obesity classes per individual.[262] Because this number is indexed to 2017 dollars, we first adjust it for inflation using the CPI-U and CBO's projections of CPI-U for the next 10 years. In addition, Cawley et al. estimates that excess obesity costs are rising at a rate of 1.93 percent per annum, in inflation-adjusted dollars. For this reason, we apply an additional adjustment to the annual excess medical costs due to obesity that considers both general CPI-U

---

[262] John Cawley et al., "Direct Medical Costs of Obesity in the United States and the Most Populous States," *Journal of Managed Care and Specialty Pharmacy* 27, no. 3 (2021): 354-66, https://doi.org/10.18553/jmcp.2021.20410.

inflation and the 1.93 percent annual increase outlined in Cawley et al.

Next, we take Census projections of the U.S. population ages 20 and over for the next ten years and multiply it by the projected percentage of the U.S. population that will be either Class 1 and Class 2 obese or Class 3.[263] It is important to note that due to the dramatic difference in expenditures for Class 3 versus Class 1 and Class 2 obesity, each must be calculated separately. Using the calculations on the following page, we estimate that the excess cost of Class 1 and Class 2 obesity in 2024 is $4,043 while for Class 3 it is $9,895.

Additionally, because Class 1 and Class 2 obesity rates are not reported separately, we assume there is an equal proportion of Class 1 and Class 2 individuals. After calculating the annual estimates of the population of Class 1 and 2 as well as Class 3 individuals, we multiply the results by the adjusted annual excess costs of obesity to calculate the total excess cost of obesity for a given year. As outlined in the previous section, there is a range of projected obesity rates due to the differences in the growth rate in obesity prevalence over the past 31 years versus the past 10 years. The 31-year growth rate represents the low-end estimate. These calculations can be expressed as the following equations:

---

[263] U.S. Census Bureau, "Projected Population by Five-year Age Group and Sex (NP2023-T3)," 2023, https://www2.census.gov/programs-surveys/popproj/tables/2023/2023-summary-tables/np2023-t2.xlsx.

(Inflation-Adjusted Excess Medical Costs per Person) $_t$

=

(Excess Medical Costs) $_{t-1}$

×

(1 + Annual Increase in CPI-U + 0.0193)

$$\boldsymbol{c_{it} = c_{i(t-1)} \times ((1 + \pi_t) + 0.0193)}$$

c_{it} = Total medical costs for person i in year t

π_t = Inflation in year t, or increase in CPI-U in year t

(Total Excess Medical Costs) $_t$

=

Census Projection of Population Ages 20+

×

Estimated Share of Class 1 or 2 Obesity

×

(Average Excess Medical Costs per Person) $_t$

$$\boldsymbol{C_t = p_t \times s_t \times c_t}$$

C_t = Total excess medical costs in year t

p_t = Population in year t

s_t = Share of population with Class 1 or 2 obesity in year t

c_t = Average individual excess medical costs in year t

$$\boldsymbol{P = \sum_{t=2024}^{2033} C_t}$$

P = Total 10-year cost projection

C_t = Total excess medical costs for Class 1 and 2 obesity in year t

This process is then repeated for Class 3 obesity and the two results are summed to estimate the total excess medical costs of obesity.

Labor Supply and Productivity Costs

Obesity also leads to economic costs through reductions in the aggregate labor supply due to the curtailment of life expectancies. As outlined in last year's *Response*, obesity has a significant impact on life expectancy, reducing the average lifespan of someone with the disease by 4.7 years and the overall lifespan of the entire U.S. adult population by 2.1 years.[264] When estimating lost output due to reduced lifespan, we incorporate research that suggests that a 1 percent increase in the labor supply results in a 0.8 percent increase in long-run economic activity.[265] We model the effect of early mortality due to obesity on labor supply by assuming obese persons devote similar proportions of their working life to work and retirement as does the average person.[266]

We then divide the weighted estimate of years of life lost due to obesity, as calculated in last year's *Response,* by the average worker's "work span" to provide an annual estimate of the labor supply lost each year due to early mortality attributable to obesity. Work span in this context is the 45 years in between an adult turning 20 (the first year in which we have adult obesity data) and the average retirement age of 65.

Next, we use CBO's projections of nominal GDP in a given year and multiply it by 0.8 percent, to calculate the labor share of

[264] JEC Republicans, *Response*, 47-48.
[265] JEC Republicans, *Response*, 103-4.
[266] JEC Republicans, *Response*, 55.

potential GDP.[267] This figure is then multiplied by the weighted percent reduction in work span to estimate the GDP lost due to reductions in the labor supply. We weigh this percent reduction each year to account for the fact that the reduction in work span will be higher in the future as obesity and severe obesity rates rise. Ultimately, we estimate that the U.S. will lose between $10.9 to $11.9 trillion in GDP due to labor supply reductions from obesity over the next 10 years. The range is derived from the various obesity growth rates outlined previously in this section. Using CBO's estimates for income as a percent of GDP, we estimate that this would result in $1.93 to $2.12 trillion in lost tax revenue.[268]

Labor Productivity Costs

A similar methodology can be applied to calculate the labor productivity costs of obesity, namely through "presenteeism", in which employees are not able to work at full capacity due to illness or other related reasons. Last year's *Response* discussed research that estimates that obese workers are absent 2 to 2.5 more days each year than normal BMI workers and that obesity causes a 2 percent reduction in overall productivity for workers.[269] Using this assumption, we can estimate how much higher U.S. output would be given our updated projections of obesity. After calculating the labor share of potential GDP, we multiply it by the projected

---

[267] We multiply by 0.8 percent because a 1 percent increase in the labor supply results in a 0.8 percent increase in long-run economic activity.

[268] Using CBO's estimates of tax receipts as percentage of GDP for 2024-2033. Congressional Budget Office (CBO), *The Budget and Economic Outlook: 2024 to 2034* (February 2024): Table 2, https://www.cbo.gov/system/files/2024-02/51134-2024-02-Historical-Budget-Data.xlsx.

[269] Ian Kudel, Joanna C. Huang, and Rahul Ganguly, "Impact of Obesity on Work Productivity in Different US Occupations," *Journal of Occupational and Environmental Medicine* 60, no. 1 (2018): 6-11, https://doi.org/10.1097/JOM.0000000000001144; JEC Republicans, *Response*, 55.

obesity rates each year and calculate what a 2 percent increase in this number would be.[270] Ultimately, we find that this increase in output would be $2.6 to $2.8 trillion dollars over the next 10 years. This translates to $461 to $498 billion in lost tax revenue.

Healthcare Innovation

The prevalence and economic costs of obesity continue to grow at an astonishing rate, and finding policies that can reduce the burden of the disease could dramatically improve the U.S.' personal and fiscal health. Fortunately, significant progress has been made in the fight against obesity even within the past year. There has been a rise in AI-powered wearable technologies such as smart watches that have helped monitor and screen for various obesity-related comorbidities, but one innovation that has received significant attention is the class of diabetes treatment and weight loss drugs known as GLP-1s.[271]

GLP-1s (glucagon-like peptide 1) are a class of medication used to treat diabetes and obesity. These drugs work by regulating insulin and imitating the hormone glucagon-like peptide 1 which suppresses appetite and releases insulin.[272] While these drugs have been approved to treat diabetes since 2005, they have received significant attention in recent years due to two GLP-1s being

---

[270] Labor share of potential GDP is calculated the same as it was for the labor supply reduction calculation.

[271] Stefano Canali, Viola Schiaffonati, and Andrea Aliverti, "Challenges and Recommendations for Wearable Devices in Digital Health: Data Quality, Interoperability, Health Equity, Fairness," *PLOS Digital Health* 1, no. 10 (2022), https://doi.org/10.1371/journal.pdig.0000104.

[272] Dani Blum, "What is Ozempic and Why is it Getting So Much Attention?" *The New York Times*, November 22, 2022, https://www.nytimes.com/2022/11/22/well/ozempic-diabetes-weight-loss.html.

approved specifically for weight loss.[273] The medical literature suggests that these drugs have been effective in reducing cardiovascular events and all-cause mortality in patients with Type 2 diabetes and obesity.[274] Additionally, these drugs lead to lower caloric intake, suppressed appetite, and fewer food cravings for patients using them.[275] Research suggests that these drugs, when combined with lifestyle intervention, result in a mean body weight difference for those with diabetes of 6.1 to 17.4 percent when compared to a placebo.[276] These results suggest that there could be substantial reductions in obesity given sufficient uptake of these medications.

Cost Considerations

While GLP-1s have the potential to significantly improve outcomes for those with diabetes and obesity, currently the drugs are prohibitively expensive. Without insurance coverage, these drugs can cost nearly $1,000 a month, and, even with insurance

---

[273] Kelsey H. Sheahan, Elizabeth A. Wahlberg, and Matthew P. Gilbert, "An Overview of GLP-1 Agonists and Recent Cardiovascular Outcomes Trials," *Postgraduate Medical Journal* 96, no. 1133 (2020): 156-61, https://doi.org/10.1136/postgradmedj-2019-137186; Rachael Ajmera and Adrienne Youdim, "GLP-1 Agonist For Weight Loss: What You Need to Know," *Forbes Health*, September 25, 2023, https://www.forbes.com/health/weight-loss/glp-1-agonists/.

[274] Naveed Sattar et al., "Cardiovascular, mortality, and kidney outcomes with GLP-1 receptor agonists in patients with type 2 diabetes: a systematic review and meta-analysis of randomised trials," *The Lancet Diabetes & Endocrinology* 9, no. 10 (2021): 653-62, https://doi.org/10.1016/s2213-8587(21)00203-5.

[275] John Blundell et al., "Effects of once-weekly semaglutide on appetite, energy intake, control of eating, food preference and body weight in subjects with obesity," *Diabetes, Obesity & Metabolism* 19, no. 9 (2017): 1242-51, https://doi.org/10.1111/dom.12932.

[276] Mojca Jensterle, Manfredi Rizzo, Martin Haluzík, and Andrej Janež, "Efficacy of GLP-1 RA Approved for Weight Management in Patients with or Without Diabetes: A Narrative Review," *Advances in Therapy* 39, no. 6 (2022): 2452-67, https://doi.org/10.1007/s12325-022-02153-x.

coverage, they can cost up to $300 a month.[277] Fortunately, costs can be reduced significantly as these drugs come off patent. Research suggests that when drugs become generic, their price drops significantly.[278] Two GLP-1s are expected to come off patent later this year. Furthermore, 74 anti-obesity medications are in clinical trials, although the impact of this on future prices is not immediately clear.[279]

Price is of major importance when the market and economic potential of these drugs is so large. Briggs and Kodnani estimate that the potential market for GLP-1s could be 133 million Americans, with 74 million of the individuals of the potential market using the drug specifically to treat obesity rather than exclusively Type 2 diabetes.[280] They estimate that within five years 10 to 70 million Americans could be taking GLP-1 medications. The wide range for the estimate depends on a variety of factors, including clinical trial approval of drugs being tested, price of generics, and general take-up and usage rates. Depending on the total usage and effectiveness of GLP-1s, they estimate that

---

[277] Benedic N. Ippolito and Joseph F. Levy, "Estimating the Cost of New Treatments for Diabetes and Obesity," American Enterprise Institute Economic Perspective (September 18, 2023), https://www.aei.org/research-products/report/estimating-the-cost-of-new-treatments-for-diabetes-and-obesity/.

[278] Simon van der Schans et al., "The impact of patent expiry on drug prices: insights from the Dutch market," *Journal of Market Access & Health Policy* 9, no. 1 (2020), https://doi.org/10.1080/20016689.2020.1849984; Gerard T. Vondeling, Qi Cao, Maarten J. Postma, and Mark H. Rozenbaum, "The Impact of Patent Expiry on Drug Prices: A Systematic Literature Review," *Applied Health Economics and Health Policy* 16, no. 5 (2018): 653-60, https://doi.org/10.1007/s40258-018-0406-6.

[279] Nadia Bey, "The Biopharma Patent Cliff: 9 Drugs Losing Exclusivity by the End of 2023," *BioSpace*, https://www.biospace.com/article/9-drugs-losing-patents-or-exclusivity-clauses-by-the-end-of-2023.

[280] Joseph Briggs et al., "The Economic Potential of Accelerated Healthcare Innovation," Goldman Sachs Research (February 2024).

anti-obesity medications could potentially raise GDP levels by 0.1 percent to 1.1 percent with a median GDP boost of 0.4 percent.

Pricing also has a large impact when estimating the potential benefits of GLP-1s to the Federal government. As debates continue as to whether Medicare and Medicaid should cover these drugs, it is important to have an accurate estimate of their long-term costs. The Congressional Budget Office (CBO) has made note of the potential savings from GLP-1s and has solicited further information about the drugs, such as take-up rates and long-term cost projections given changing pricing.[281] If prices fall enough to where it becomes cost effective for the Federal government to cover these drugs, GLP-1s could drastically improve the nation's overall fiscal situation, while ensuring Americans live longer, healthier lives. For this reason, it is important to foster a regulatory environment in which innovators have the ability test and design new drugs without excessive intervention that unreasonably impedes progress.

Economic and Industry Changing Potential

In addition to the overall reduced expenditures on healthcare, reducing obesity would change the types of healthcare individuals consume. The prevalence of obesity comorbidities such as cardiovascular disease, osteoarthritis, sleep apnea, etc. would decline and, therefore, healthcare expenditures on these diseases would also fall. Reduced demand for these treatments could drive down healthcare costs and insurance premiums for all consumers as overall demand for healthcare falls. Demand for treatments related to obesity, such as joint and bariatric surgery, may also fall,

---

[281] Phill Swagel, "A Call for New Research in the Area of Obesity," Congressional Budget Office, October 5, 2023, https://www.cbo.gov/publication/59590.

leading to lower prices for other types of obesity-related treatments.

A dramatic reduction in obesity due to GLP-1s could have a widespread impact on other sectors of the economy beyond healthcare. For example, GLP-1s are also observed to be impacting consumers' food choices. Initial survey data suggests that after starting on an anti-obesity medication, patients consumed more healthy and less unhealthy food.[282] These survey results fall in line with the medical literature on GLP-1s, which suggests that these drugs reduce caloric consumption and food cravings.[283] Widespread use of GLP-1s could have a large impact on the restaurant and food industry as consumer preferences shift and consumers choose to eat less and prefer healthier foods. These preference changes could have a widespread impact on the agricultural sector and global supply chains if consumers suddenly demand less processed food and less food overall. Changing consumption habits may already be occurring as food industry executives have already made note of GLP-1s and their potential as a headwind for the snack food industry and food industry as a whole. In October 2023, the CEO of Walmart reported a decline in overall food purchases that may be attributable to GLP-1 usage.[284] Although it is too early to tell the magnitude of the impact of these drugs on the food industry, the fact that executives have recognized them as a potential business headwind signifies that they may have industry-changing potential.

---

[282] Morgan Stanley, "Could Obesity Drugs Take a Bite Out of the Food Industry?", September 5, 2023, https://www.morganstanley.com/ideas/obesity-drugs-food-industry.

[283] Blundell et al., "Effects of once-weekly semaglutide," 1248-49.

[284] Brendan Case and Shelly Banjo, "Ozempic Is Making People Buy Less Food, Walmart Says," *Bloomberg*, October 4, 2023, https://www.bloomberg.com./news/articles/2023-10-04/walmart-says-ozempic-weight-loss-drugs-causing-slight-pullback-by-shoppers.

Box 4-1: Nutrition

Changing food consumption habits are important as diet is understood to be one of the main factors contributing to the U.S.' comparatively high obesity rates.[285] Before the dramatic rise in obesity rates starting in the 1980s, poor nutrition in the United States was largely due to calorie deficits rather than surpluses.[286] Today, poor nutrition is more likely to be due to an excessive amount of calories, fats, and unhealthy added sugars.[287] To combat poor nutrition, the United States has a variety of food programs, including the Supplemental Nutrition Assistance Program (SNAP), the Emergency Food Assistance Program (TEFAP), and the Commodity Supplemental Food Program (CSFP).[288] These programs are funded through an omnibus bill known as the farm bill, which is authorized every five years and establishes agricultural and nutrition policy.[289]

---

[285] Varundeep Rakhra et al., "Obesity and the Western Diet: How We Got Here," *Missouri Medicine* 117, no. 6 (2020): 536-38, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7721435/.

[286] Institute of Medicine (US) Committee on Examination of Front-of-Package Nutrition Rating Systems and Symbols, *Front-of-Package Nutrition Rating Systems and Symbols: Phase I Report*, ed. Ellen A. Wartella et al. (National Academies Press [US], 2010), https://doi.org/10.17226/12957; Chris Edwards, "SNAP: High Costs, Low Nutrition." *Cato Institute*, September 1, 2023, https://www.cato.org/briefing-paper/snap-high-costs-low-nutrition.

[287] Dietary Guidelines Advisory Committee (DGAC), *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2020-2025*, U.S. Department of Health and Human Services, U.S. Department of Agriculture, https://www.dietaryguidelines.gov/resources/2020-2025-dietary-guidelines-online-materials.

[288] Feeding America, "Federal Food Assistance Programs," accessed May 2024, https://www.feedingamerica.org/take-action/advocate/federal-hunger-relief-programs.

[289] United States Senate Committee on Agriculture, Nutrition, and Forestry, "The Farm Bill," https://www.agriculture.senate.gov/farm-bill.

The farm bill was set to be reauthorized in 2023 and would authorize more than $120 billion a year in spending on food assistance programs like SNAP and another $30 billion on various subsidies for farming and food production.[290] Last year's *Response* overviewed the ways in which nutrition programs can be reformed to better achieve their goals, which is improving nutrition.[291] JEC Republicans concluded that the government should avoid policies that create negative externalities in which unhealthy behavior is exacerbated or encouraged. A specific aspect of farm policy that has been under significant scrutiny are the farming subsidies that provide insurance, loss coverage, and disaster aid to farmers of over twenty crops.[292] The largest beneficiaries of these premium subsidies are corn, soy, and wheat producers who receive nearly 70 percent of all premium farm subsidies.[293]

Given the type of crops being subsidized, the academic literature suggests that these subsidies may distort the market for food, which leads to the production of cheaper, and more calorie dense food. Research suggests that subsidies reduce crop diversification by mitigating the risks of poor crop yields and volatile prices.[294] Alternatively, just like with any other investment, farmers could mitigate risk through diversification of the types of crops planted.

---

[290] Chris Edwards, "Farm Bill 2023 and Obesity," Cato Institute blog, April 6, 2023, https://www.cato.org/blog/farm-bill-2023-obesity.

[291] JEC Republicans, *Response*, 57-59.

[292] Chris Edwards, "Cutting Federal Farm Subsidies," Cato Institute blog, August 31, 2023, https://www.cato.org/briefing-paper/cutting-federal-farm-subsidies#types-farm-subsidy.

[293] Environmental Working Group, "Share of premium subsidies by crop, 1995-2023," https://farm.ewg.org/cropinsurance.php?fips=00000&summpage=PS_BY_CROP®ionname=theUnitedStates.

[294] Chris Edwards, "Agricultural Subsidies," Downsizing the Federal Government, April 16, 2018, https://www.downsizinggovernment.org/agriculture/subsidies.

The reduced need to diversify crops in conjunction with the discrepancy in the types of crops receiving the most subsidies may be artificially suppressing the production of more healthy crops like fruits and vegetables.[295] Jackson et al. finds that the price of fruits and vegetables has increased in real dollar terms since 1985, meanwhile the cost of sugar, fats, and soft drinks has fallen.[296] Although it cannot be casually established that subsidies are the reason for these price changes, it follows that subsidies for certain foods could lead to increased production and therefore lower costs of certain foods for consumers.

That said, the academic literature on the effect of these subsidies on obesity is mixed. Alston, Sumner, and Vosti find that the impact of farm policy on obesity rates has been insignificant due to the relatively small impact that the subsidies have on price.[297] On the other hand, Franck, Gandi, and Eisenberg find that "Although findings suggest that eliminating all subsidies would have a mild impact on the prevalence of obesity, a revision of commodity programs could have a measurable public health impact on a population scale, over time."[298]

---

[295] Paulina Enck, "PRIMER: Agriculture Subsidies and Their Influence on the Composition of U.S. Food Supply and Consumption," American Action Forum press release, November 3, 2021, https://www.americanactionforum.org/press-release/primer-agriculture-subsidies-and-their-influence-on-the-composition-of-u-s-food-supply-and-consumption/.

[296] Richard J. Jackson et al., "Agriculture Policy Is Health Policy," *Journal of Hunger & Environmental Nutrition* 4, no. 3-4 (2009): 393-408, https://doi.org/10.1080/19320240903321367.

[297] Julian M. Alston, Daniel A. Sumner and Stephen A. Vosti, "Farm Subsidies and Obesity in the United States: National Evidence and Internation Comparisons," *Food Policy* 33, no. 6, (2008): 470-79, https://doi.org/10.1016/j.foodpol.2008.05.008.

[298] Caroline Franck, Sonia M. Grandi and Mark J. Eisenberg, "Agricultural Subsidies and the American Obesity Epidemic," *American Journal of Preventative Medicine* 45, no. 3 (2013): 327-33, https://doi.org/10.1016/j.amepre.2013.04.010.

The inconclusive nature of the findings on the impact of farm subsidies on obesity rates warrants further research. Especially as Congress continues discussions around the farm bill reauthorization, it is necessary for policymakers to have a clear understanding of the health impacts of its farm policy. Given the astounding costs of obesity, policymakers should be sensitive to how policies could adversely affect nutrition and, therefore, obesity.

Behavioral Changes

The increased disposable income that would come from people spending less on healthcare and food could also impact other sectors like the clothing and fitness industry. Individuals using anti-obesity medication (AOMs) reported exercising more and changing their clothing consumption following starting the drug.[299] Individuals on AOMs also reported buying more athleisure wear and less luxury clothing items and reported being twice as likely to engage in weekly exercise since taking the drug. While some of this change in behavior may be due to selection bias, i.e. people taking these drugs now are more inclined to engage in healthier habits than the general population would be if given GLP-1s, these responses at least signal how GLP-1s could be changing consumption and behavioral choices. It is not currently clear that distributing AOMs to the general population would yield the same results, but these initial survey results show promise.

A large reduction in obesity would have widespread positive effects on both Federal spending and the health and behavior of the country overall. As behavior changes and people become more

[299] Zachariah Reltano, "Food for Thought: The Potential Ripple Effect of GLP1s," Ro, October 10, 2023, https://ro.co/weight-loss/potential-ripple-effect-of-glp1s/.

productive and have higher incomes due to lower BMI, dramatic changes could occur in nearly all sectors of the economy. Even seemingly unrelated areas, like military recruitment, could see improvements as individuals become healthier and thus more combat ready. The micro and macroeconomic effects of these drugs could also have large implications on demographic indicators such as fertility and labor supply as people become more productive due to reduced weight. Research suggests that obesity puts women at a greater risk of infertility and that reductions in BMI have been shown to improve fertility outcomes.[300] Reductions in BMI could expand the labor force both through increased fertility and through individuals returning to the labor force who were previously unable to work due to obesity-related health issues. Ultimately, GLP-1s offer a potential revolutionary step forward in health and offer the potential to materially improve the economic outlook through a large reduction in obesity.

Call for Further Research

Given how quickly obesity treatments are evolving, it is imperative for researchers to have access to timely and accurate data on the effectiveness of these drugs and their pricing. As Congress considers expanding Medicare coverage to include anti-obesity medication, it is necessary to consider all the potential economic effects and not restrict the analysis to the 10-year window that is typical for legislation. CBO recently published a report that identified a shortfall of data and research, specifically regarding the effect of targeting the Medicare coverage of anti-obesity medications to cases that would substantially reduce

---

[300] Erica Silvestris, Giovanni de Pergola, Raffaele Rosania, and Giuseppe Loverro, "Obesity as Disruptor of the Female Fertility," *Reproductive Biology and Endocrinology* 16, no. 22 (2018), https://doi.org/10.1186/s12958-018-0336-z.

healthcare costs.[301] JEC Republicans encourage CBO to use outside-the-box approaches to give Congress and public health researchers readily available analysis of policy proposals.

For example, using currently available data, CBO could evaluate a series of breakeven points to determine where the cost of policies that expand Medicare coverage to targeted individuals, such as those suffering from Class 3 obesity or those with certain comorbidities, is equivalent to reductions in other government expenses. This information would give policymakers the tools to craft fiscally responsible anti-obesity policies.

The budgetary impact of covering AOMs for obese individuals who are on Medicaid should also be analyzed. Given that the Medicaid population is generally younger than the Medicare population, this could have a correspondingly larger effect on long-term healthcare spending given the longer window through which reductions could take effect. Such analysis should explicitly consider the avoided future healthcare costs attributable to preventing any projected increase in obesity severity in absence of the intervention. It may be the case that policies that have a larger upfront cost result in longer-term savings as certain comorbidities that are costly to the Federal government are avoided.

CBO should also consider the potential of rapid price reductions of AOMs. As of September 2023, an estimated 74 anti-obesity medications are in some phase of clinical trials.[302] If additional AOMs come to market or become available as generics, there might be significant impacts on the price of these drugs, and

---

[301] Swagel, "A Call for New Research in the Area of Obesity."

[302] Elaine Chen, Allison DeAngelis, and J. Emory Parker, "Stat+ Obesity Drug Tracker," *Stat*, September 12, 2023, https://www.statnews.com/2023/09/12/new-weight-loss-drug-tracker-novo-nordisk-eli-lilly/.

scoring could be affected. Given the uncertainty surrounding various aspects of AOMs, such as long-term price, take-up rates, and mean weight reductions, CBO should account for these uncertainties when scoring any relevant legislation.

Macroeconomic Effects

Accurately estimating the fiscal impact of AOMs will also require tracking and assessing the macroeconomic effects of a reduction in obesity rates. How might economic measures such as labor force participation and productivity be impacted, and how would incorporating changes to these economic indicators impact the scoring of Medicare and Medicaid coverage of anti-obesity medications? As discussed in the prior section, AOMs seem to at least have some impact on individuals' behavior. It may be the case that a reduction in obesity results in more individuals returning to the workforce and an aggregate increase in productivity. This could lead to greater tax revenues than anticipated, which should be reflected in the scoring of a bill that results in more individuals using AOMs. As CBO and other researchers estimate the impact of AOMs, it is important to assess how they may impact economic measures beyond healthcare spending, especially regarding labor supply.

Need for Additional Data

As the JEC Republicans and others continue their obesity research, it is imperative to have access to timely and accurate data. Especially as the anti-obesity healthcare sphere evolves rapidly, it is important for there to be consistent and detailed obesity data. Regularly updated data on the prevalence and characteristics of obesity in America is a valuable tool in both crafting and assessing the effectiveness of anti-obesity policy. Specifically, data on the Federal expenditures associated with each obesity class and their various comorbidities would be valuable as debates continue over

whether Medicare should cover AOMs. Additionally, greater data transparency from the private sector would allow researchers to better estimate the effects of AOMs. Data such as take-up rates, average time spent on the medication, mean weight reductions by obesity class, and average annual costs are all important pieces to understanding the impact of AOMs. Greater data transparency can help better inform researchers and policymakers as they move forward in addressing the obesity crisis.

CHAPTER 5: THE ROLE OF ARTIFICIAL INTELLIGENCE IN GOVERNANCE

As the other Chapters of the *Response* have reiterated, the United States faces a grave fiscal trajectory. The U.S. Federal debt is on an unsustainable path that could have devastating consequences if unaddressed.[303] As noted by the Blanchard-inspired fiscal balance framework in Chapter 1, inducing economic growth to increase the overall size of the economy will help to stabilize our debt-to-GDP ratio. This Chapter explores the potential economic and fiscal benefits of the broad adoption of artificial intelligence (AI) and the opportunity it has to improve governance to accelerate economic growth. First, this Chapter examines the potential economic benefits of the broad adoption of AI. Then, it explores adopting smarter regulatory approaches to reduce bureaucracy and raise economic growth. It then discusses the use of AI to make government more effective and efficient, before concluding with the potential for AI to implement a smarter regulatory landscape and grow the economy.

The Economic Growth Potential of Artificial Intelligence Adoption

Technological advancement can increase labor productivity, which can unlock faster economic growth. There are three primary components to economic output: the size of the working population, its skill level, and the number of hours worked. Technological innovation raises output per labor hour. When each

[303] Joint Economic Committee (JEC), *Republican Response to the Economic Report of the President* (U.S. Congress Joint Economic Committee, 2023), https://sen.gov/LVQYY.

unit of labor results in greater output, incomes, purchasing power, and economic growth rise.[304]

Recent innovations in AI present significant opportunities for increasing productivity and, thus, economic growth. AI uses modern computing power to identify patterns in data on which a given model is trained. AI can then make predictions or classifications when fed new data.[305] A popular example of its broad use is in large language models (LLMs), such as Chat-GPT. These technologies can assist in coding, writing, editing, brainstorming, and answering technical questions—even medical diagnoses. This technology has been found to notably improve the efficiency of software engineers and economists, as well as significantly accelerate writing speed.[306] AI can also be employed in chatbots, fraud detection, and text analysis of large volumes of documents. It can also facilitate more accurate decision-making.[307] While there will likely be some distributional effects

---

[304] YiLi Chien, "What Drives Long-Run Economic Growth?", Federal Reserve Bank of St. Louis, June 1, 2015, https://www.stlouisfed.org/on-the-economy/2015/june/what-drives-long-run-economic-growth.

[305] IBM, "What is AI?", https://www.ibm.com/topics/artificial-intelligence.

[306] Eirini Kalliamvakou, "Research: quantifying GitHub Copilot's impact on developer productivity and happiness," GitHub blog, September 7, 2022, https://github.blog/2022-09-07-research-quantifying-github-copilots-impact-on-developer-productivity-and-happiness/; Anton Korinek, "Language Models and Cognitive Automation for Economic Research," NBER Working Paper no. 30957 (February 2023), https://doi.org/10.3386/w30957; Shakked Noy and Whitney Zhang, "Experimental Evidence on the Productivity Effects of Generative Artificial Intelligence," Massachusetts Institute of Technology Working Paper (March 2023), https://economics.mit.edu/sites/default/files/inline-files/Noy_Zhang_1.pdf.

[307] Frederic Becker, Julian Skirzyński, Bas van Opheusden, and Falk Lieder, "Boosting Human Decision-making with AI-Generated Decision Aids," *Computational Brain & Behavior* 5 (2022): 467-90, https://doi.org/10.1007/s42113-022-00149-y; Sukwoong Choi, Hyo Kang, Namil Kim, and Junsik Kim, "How Does AI Improve Human

on labor (for example, there may be fewer lawyers required as a result of AI), research suggests that labor demand will increase as a result of large-scale AI adoption, increasing employment.[308] By aiding firms to serve more customers, process more transactions, access more information, increase aggregate intellectual capital, and improve efficiency of processes, AI supports increases in productivity and economic growth.[309]

Because widespread adoption of AI is a relatively new phenomenon, many of the economic growth effects have not been studied extensively. Accurate forecasts of AI's impact on economic growth and other economic variables, such as employment, are limited. Nevertheless, research has found that the number of AI patents (a proxy for AI adoption and innovation) has a significant, positive effect on economic growth. Notably, a 1 percent increase in the number of AI patents results in a 0.00223–0.00367 percentage point increase in the GDP per-capita growth rate (five-year average) in advanced countries.[310] Thus, under this assumption, if the number of AI patents doubled, the rate of medium-term economic growth would be expected to increase by 0.2 to 0.4 percentage points. Increased adoption of AI would have positive implications for growth and, subsequently, the overall size of the economy.

Decision-Making? Evidence from the AI-Powered Go Program," USC Marshall School of Business Research Paper, October 1, 2023, http://dx.doi.org/10.2139/ssrn.3893835.

[308] Lili Yan Ing and Gene M. Grossman, *Robots and AI: A New Economic Era* (2022), https://doi.org/10.4324/9781003275534.

[309] Philip Trammell and Anton Korinek, "Economic Growth under Transformative AI," NBER Working Paper no. 31815 (October 2023), https://doi.org/10.3386/w31815.

[310] Julius Tan Gonzales, "Implications of AI innovation on economic growth: a panel data study," *Journal of Economic Structures* 12, no. 13 (2023), https://doi.org/10.1186/s40008-023-00307-w.

Given the magnitude of its potential benefits, Congress should be cautious to avoid deterring investment or hindering innovation in this space. Policymakers should not require entrepreneurs to seek permission to create new AI products or services, nor implement onerous and unnecessary regulations. Restricting the invention of new AI tools and products could mean missing out on potential lifesaving and productivity-enhancing technologies that could vastly improve human and economic well-being.

While the potential of AI to improve economic growth is significant, the fiscal problem warrants the exploration of other avenues to boost economic growth.[311] Given the mass of regulatory accumulation—which the Biden Administration accelerated—and the costs that poorly constructed regulations impose on economic activity, the current regulatory framework should be made smarter to reduce bureaucracy and improve economic growth, thus helping to balance the fiscal situation.[312]

The Impact of Regulation on Economic Growth

Regulations are rules promulgated by Federal agencies in response to authority granted to them by statute. As of 2021, there are over 1.3 million Federal regulatory restrictions.[313] There is limited oversight and review of regulations once issued and limited coordination between agencies to ensure regulations do not conflict.

[311] Congressional Budget Office (CBO), *The Long-Term Budget Outlook: 2024 to 2054* (March 2024): Table 1, https://www.cbo.gov/system/files/2024-03/51119-2024-03-LTBO-budget.xlsx.

[312] Dan Goldbeck, "The Spring Surge Resumes," *American Action Forum*, May 13, 2024, https://www.americanactionforum.org/week-in-regulation/the-spring-surge-resumes/.

[313] QuantGov, "RegData 4.1,"," Mercatus Center, https://quantgov-bulk-downloads.s3.amazonaws.com/RegData-US_4-1.zip.

Regulation can dampen economic activity in various ways, including:

- distorting resource utilization;[314]
- restricting investment;[315]
- imposing labor and capital costs due to diverting resources to compliance, reducing companies' investment in innovation;[316]
- creating barriers to market entry;[317]
- reducing business dynamism, which disproportionally falls on small businesses, making businesses larger and older;[318]
- hampering entrepreneurship and firm formation, which has a downward effect on wages and total employment, leading to

---

[314] Phil Lewis, Alice Richardson, and Michael Corliss, "Compliance Costs of Regulation for Small Business," *Journal of Business Systems, Governance & Ethics* 9, no. 2 (2015), https://doi.org/10.15209/jbsge.v9i2.715.

[315] Lewis, Richardson, and Corliss, "Compliance Costs of Regulation for Small Business."

[316] Michael Mandel and Diana G. Carew, "Regulatory Improvement Commission: A Politically-Viable Approach to U.S. Regulatory Reform," Progressive Policy Institute Policy Memo, May 2013, https://www.progressivepolicy.org/wp-content/uploads/2013/05/05.2013-Mandel-Carew_Regulatory-Improvement-Commission_A-Politically-Viable-Approach-to-US-Regulatory-Reform.pdf; Alberto Alesina, Silvia Ardagna, Giuseppe Nicoletti, and Fabio Schiantarelli, "Regulation and Investment," NBER Working Paper no. 9560 (March 2003), https://doi.org/10.3386/w9560.

[317] Alesina, Ardagna, Nicoletti, and Schiantarelli, "Regulation and Investment."

[318] Dustin Chambers, Patrick McLaughlin, and Tyler Richards, "Regulation, Entrepreneurship, and Firm Size," Mercatus Center Working Paper (April 26, 2018), https://www.mercatus.org/research/working-papers/regulation-entrepreneurship-and-firm-size.

less competition, further reducing productivity and innovation;[319] and

- raising prices as increased costs are passed on to consumers, increasing poverty and inequality.[320]

The ultimate result of misguided or overly burdensome regulation is forgone investment, lower labor productivity, and diminished output.[321]

Only 137 of the 36,255 final regulations issued between 2007 and 2016 had estimates of quantifiable benefits and costs.[322]. The cumulative cost of all regulations is larger than their summed costs.[323] Moreover, as the volume of regulation grows, so does the

---

[319] James Bailey and Diana Thomas, "Regulating Away Competition: The Effect of Regulation on Entrepreneurship and Employment," Mercatus Center Working Paper (September 9, 2015), https://www.mercatus.org/students/research/journal-articles/regulating-away-competition-effect-regulation-entrepreneurship.

[320] Dustin Chambers and Courtney A. Collins, "How Do Federal Regulations Affect Consumer Prices? An Analysis of the Regressive Effects of Regulation," Mercatus Center Working Paper, (February 23, 2016), https://www.mercatus.org/research/working-papers/how-do-federal-regulations-affect-consumer-prices-analysis-regressive; Dustin Chambers, "The Human Cost of Regulations and Some Possible Solutions," Mercatus Center Working Paper (November 17, 2022), https://www.mercatus.org/research/policy-briefs/human-cost-regulations-and-some-possible-solutions.

[321] Philippe Aghion, Antonin Bergeaud, and John Van Reenen, "The Impact of Regulation on Innovation," NBER Working Paper no. 28381 (January 2021), https://doi.org/10.3386/w28381.

[322] James Broughel and Richard A. Williams, "More Information Needed on the Benefits and Costs of Regulations," Mercatus Center Expert Commentary, August 22, 2018, https://www.mercatus.org/economic-insights/expert-commentary/more-information-needed-benefits-and-costs-regulations.

[323] Council of Economic Advisers (CEA), *Economic Report of the President* (The White House, 2019): 81, https://www.whitehouse.gov/wp-content/uploads/2021/07/2019-ERP.pdf.

risk that they conflict with each other. For example, vehicle safety requirements favor larger and heavier vehicles, but fuel economy standards favor the opposite. Car companies must design vehicles that fit both parameters, resulting in excess costs to consumers.[324]

Cumulative regulation provides a negative drag on economic growth, particularly for developed countries like the United States.[325] Since 1970, total regulatory restrictions, as measured by a count of the words, “shall,” “must,” “may not,” “required,” and “prohibited” in the Code of Federal Regulations (CFR) have tripled, creating significant headwinds for economic growth.[326]

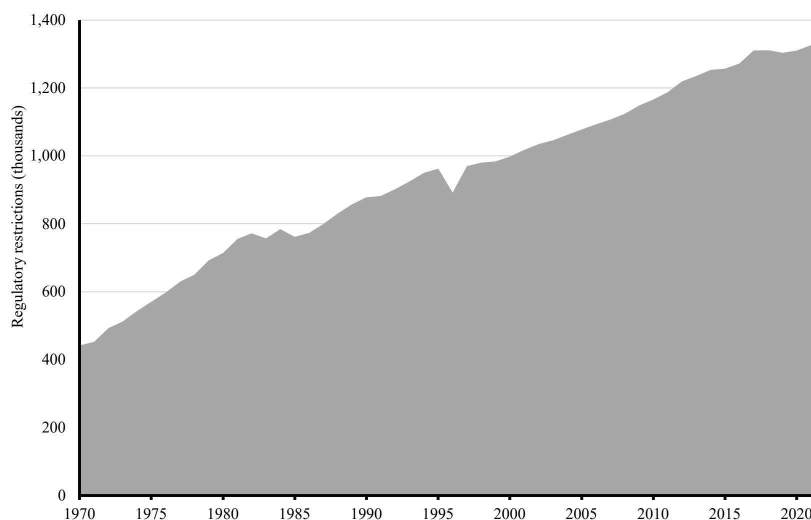
---

[324] Mandel and Carew, “Regulatory Improvement Commission: A Politically-Viable Approach to U.S. Regulatory Reform.”

[325] John Dawson and John Seater, “Federal Regulation and Aggregate Economic Growth,” *Journal of Economic Growth* 18 (2013): 137-177, https://doi.org/10.1007/s10887-013-9088-y; Simeon Djankov, Caralee McLiesh, and Rita Maria Ramalho, “Regulation and Growth” (2006), https://ssrn.com/abstract=893321; Jamal Ibrahim Haidar, “The impact of Business Regulatory Reforms on Economic Growth,” Centre d’économie de la Sorbonne Working Paper (2012), https://shs.hal.science/halshs-00717423; CEA, *Economic Report of the President* (The White House, 2018): 73, https://www.whitehouse.gov/wp-content/uploads/2021/07/2018-ERP.pdf.

[326] QuantGov, “Bulk Downloads;” Patrick McLaughlin, Jonathan Nelson, and Thurston Powers, “RegData U.S. 4.1 User’s Guide,” March 15, 2022, https://quantgov-documentation.s3.amazonaws.com/regdata_4_1_user_guide.pdf.

Figure 5-1: Total Regulatory Restrictions in the Code of Federal Regulations, 1970 -2021



Source: QuantGov, RegData 4.1 "restrictions_2_0"

According to Coffey et. al, if regulatory restrictions were frozen at their 1980 levels, the U.S. economy would have been about 25 percent larger in 2012. This would amount to an average annual GDP growth rate 0.8 percentage points higher per year over the period from 1980 to 2012.[327]

Box 5-1: GDP in 2023 Under 1980 Regulation

Assuming this average trend of increased growth would have continued through 2023, JEC Republicans estimate that the economy would be nearly 40 percent larger than it was last year.[328]

---

[327] Bentley Coffey, Patrick McLaughlin, and Pietro Peretto, "The Cumulative Cost of Regulations," Mercatus Center Working Paper (April 26, 2016), https://www.mercatus.org/research/working-papers/cumulative-cost-regulations.

[328] 39.4 percent larger

Mathematically, this can be represented as follows.

$$ERGDP_{1980+t} = RGDP_{1980} * (1 + \delta + \varepsilon)^t$$
$$\Delta = ERGDP_{1980+t} - RGDP_{1980+t}$$

t = Years since 1980
δ = Average real GDP growth rate from 1980 to 2023 (2.67 percent)
ε = Average annual increase in growth with 1980-level regulation (~0.8 percentage points per year)
Δ = Foregone GDP growth
$RGDP$ = Real GDP, chained 2017 dollars
$ERGDP$ = Estimated real GDP, chained 2017 dollars

An economy nearly 40 percent larger would mean GDP would be over $38 trillion in 2023, far larger than the $27.4 trillion recorded in 2023. Keeping the current government debt profile static, the gross Federal debt would be under 90 percent of GDP, compared to 121.6 percent observed in the fourth quarter of 2023.[329] While some regulations added since 1980 may have benefits that outweigh their costs, the point remains: cumulatively, regulations lead to slower economic growth.

Reducing Bureaucracy with Smart Regulation to Boost Economic Growth

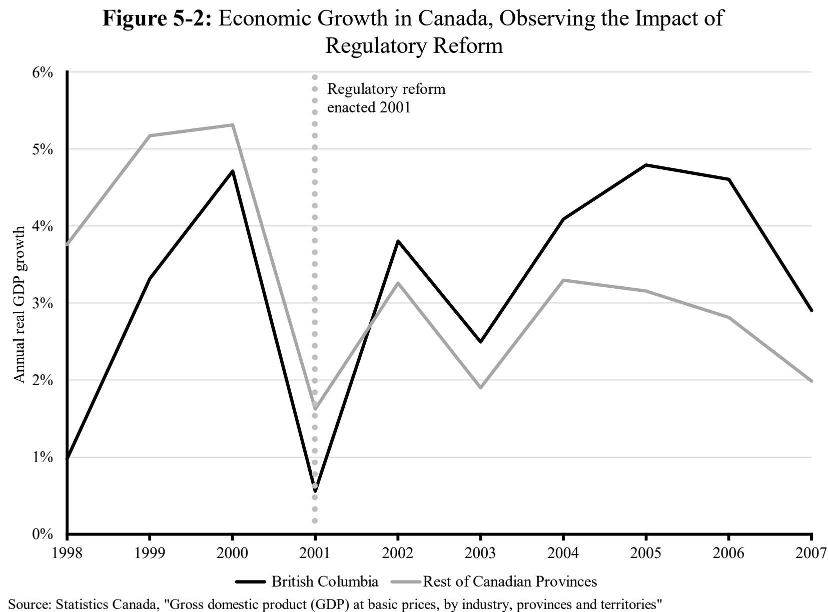
As increasing regulations slow economic growth, reducing bureaucracy through the implementation of smarter regulatory

[329] U.S. Office of Management and Budget, "Total Public Debt as Percent of Gross Domestic Product [GFDEGDQ188S]", retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/GFDEGDQ188S.

approaches presents an avenue to increase growth. Because addressing excessive regulatory burdens does not materially shrink receipts or increase outlays, it presents a pragmatic opportunity to help restore fiscal balance.

McLaughlin and Coffey study the effect of repealing excessively burdensome rules on economic growth using data from British Columbia, Canada. Regulatory reform enacted in 2001 reduced the quantity of the most bureaucratic provincial regulatory restrictions by nearly 40 percent. They found that this led to an increase in annual economic growth of approximately 1 percentage point. The increase in the growth rate is shown in Figure 5-2.[330]

Figure 5-2: Economic Growth in Canada, Observing the Impact of Regulatory Reform



Source: Statistics Canada, "Gross domestic product (GDP) at basic prices, by industry, provinces and territories"

[330] Coffey, McLaughlin, and Peretto, "The Cumulative Cost of Regulations."

Box 5-2: British Columbia Bureaucracy Reform

Appropriately called the "Red Tape Reduction" program, in 2001, the province of British Columbia, Canada enacted an initiative to eliminate "regulatory excess," targeting regulations that limited economic activity with no tangible benefits. The program mandated the reduction in the quantity of regulatory restrictions by one-third by 2004.[331] By establishing a requirement that each new regulation implemented required the repeal of another, and by creating a Minister of Deregulation and the Office of Regulatory Reform, British Columbia surpassed their goal. Regulatory requirements fell by 36 percent from their 2001 level. Controlling for other policy changes, research finds that the reforms corresponded to an increase in annual economic growth of 1 percentage point. The improvements brought British Columbia from growing significantly below the national growth rate to well above it in the five years following the implementation of the program.[332]

This finding suggests that addressing bureaucratic excess improves economic growth not only in theory, but also in practice.

[331] Laura Jones, "Cutting Red Tape in Canada: A Regulatory Reform Model for the United States?", Mercatus Center Research Paper (November 11, 2015), https://www.mercatus.org/research/research-papers/cutting-red-tape-canada-regulatory-reform-model-united-states.

[332] Patrick McLaughlin and Bentley Coffey, "Regulation and Economic Growth: Evidence from British Columbia's Experiment in Regulatory Budgeting," Mercatus Center Working Paper (June 1, 2021), https://www.mercatus.org/research/working-papers/regulation-and-economic-growth; Juan de Lucio and Juan S. Mora-Sanguinetti, "New Dimensions of Regulatory Complexity and Their Economic Cost. An Analysis Using Text Mining," Banco de España Working Paper no. 2107 (February 9, 2021), http://dx.doi.org/10.2139/ssrn.3782403.

Vice Chairman Schweikert has previously proposed and sponsored legislation to improve the current regulatory framework: H.R. 4335, H.R. 283, and H.R. 2676. H.R. 4335, the NEPA Accountability and Enforcement Act, creates deadlines for Federal agencies to complete reviews of the environmental effects of proposed major Federal actions and imposes penalties for agencies that do not comply with these deadlines. H.R. 283, the Crowd Sourcing of Environmental Data Act of 2021, authorizes states to monitor certain air pollutants and restricts the EPA from preventing states from relying on said data to meet national pollutant standards. H.R. 2676, the Small Business Health Relief Act of 2011, repeals burdensome provisions added to the Internal Revenue Code as a result of the Patient Protection and Affordable Care Act. Further, he co-sponsored H.R. 3794, the Public Land Renewable Energy Development Act of 2019, which sets forth improvements to making permitting renewable energy projects on public lands easier. He also sponsored H.R. 190, the Saving Gig Economy Taxpayers Act, which raises the reporting requirement for third party settlement platforms to $20,000, and more. These proposals address bureaucracy across several sectors. Regrettably, instead of addressing regulatory excess to support economic growth, the Biden Administration has taken the opposite approach.

Using AI to Improve Governance

Addressing regulatory excess provides an opportunity to grow the economy and improve governance. A more efficient and responsive government would provide a better backdrop for economic growth and could also lead to lower outlays, further correcting the fiscal trajectory. Beyond its potential for improving economic growth, AI also presents the prospect of improving the efficacy and efficiency of government.

So long as AI innovation continues with limited interference from regulators, existing and new technologies will increase economic growth, and help government be more responsive, effective, and efficient. By automating tasks, improving administrative processes, and creating new methods of policy analysis and measurement, governance can improve, and the economic effects of AI could be fully realized. The potential of reducing deadweight loss due to administrative waste could lead to a decline in outlays, thereby reducing deficits without any policy changes.

While widespread adoption by administrative agencies across most functions has not yet been realized, there exist several examples of successful use cases across the Federal government. Many uses of AI in administrative agencies relate to science and research, distinct from policy, regulatory, or administrative functions. Examples of these include using AI to estimate the wind speed of hurricanes (National Aeronautics and Space Administration), assess water quality (National Oceanic and Atmospheric Administration), classify images to assist in monitoring endangered species (Department of the Interior), and more.[333] While scientific research currently makes up a sizeable share of the over 700 examples of AI usage in the Federal government, there remains a substantial number of use cases that are more closely related to reducing administrative burdens and making government more efficient and responsive.

A 2020 article published by Stanford Law School categorizes current uses for AI to improve governance in administrative agencies into five major categories. These are presented in Table 5-1.

---

[333] AI.gov, "The Government is Using AI to Better Serve the Public," https://ai.gov/ai-use-cases/.

Table 5-1: Examples of AI use in Administrative Agencies[334]

Use Type	Description	Examples
Enforcement	Tasks that identify or prioritize targets of agency enforcement action	• Securities and Exchange Commission, Centers for Medicare and Medicaid Services, and Internal Revenue Service predictive enforcement tools. • Customs and Border Protection and Transportation Security Administration facial recognition systems. • Food Safety and Inspection Service prediction to inform food safety site testing.
Regulatory research, analysis, and monitoring	Tasks that collect or analyze information that shapes agency policymaking	• Consumer Financial Protection Bureau analysis of consumer complaints. • Bureau of Labor Statistics coding of worker injury narratives. • Food and Drug Administration analysis of adverse drug events.
Adjudication	Tasks that support formal or informal agency adjudication of benefits or rights	• Social Security Administration system for correcting adjudicatory errors. • U.S. Patent and Trademark Office tools for adjudicating patent and trademark applications.
Public services and engagement	Tasks that support the direct provision of services to the public or facilitate communication with the public for regulatory or other purposes	• U.S. Postal Service autonomous vehicles project and handwriting recognition tool. • Department of Housing and Urban Development and U.S. Citizenship and Immigration Services chatbots. • Agency analysis of submitted rulemaking comments.
Internal management	Tasks that support agency management of resources, including employee management, procurement, and maintenance of technology systems	• Department of Health and Human Services tool to assist procurement decision-making. • General Services Administration tool to ensure legal compliance of Federal solicitations. • Department of Homeland Security tool to counter cyberattacks on agency systems.

[334] David F. Engstrom, Daniel E. Ho, Catherine M. Sharkey, and Mariano-Florentino Cuéllar, *Government by Algorithm: Artificial Intelligence in Federal Administrative Agencies*, Administrative Conference of the United States (2020), https://www.acus.gov/sites/default/files/documents/Government by Algorithm.pdf.

One notable example of AI's implementation in administrative agencies for improving policy efficacy is at the Food and Drug Administration (FDA). AI has been used to enhance data collection and surveillance during the clinical trial period and for post-market surveillance of drugs following FDA approval.[335] At the FDA, it monitors adverse drug events using data from reports that were filed to the Federal Adverse Event Reporting System (FAERS). Using this technology, analysts at the FDA have been able to find relationships previously undetected by pre-market trials between specific adverse effects and particular drugs. Expanding this type of analysis to other agencies and use cases could help improve understanding of potentially unconsidered consequences of regulation. Feedback from programs such as this could help shape policy.

Another noteworthy use of AI is to improve engagement with the public. AI chatbots can take in information and provide answers or relevant documentation, making interfacing with government more efficient and seamless (i.e., Emma at U.S. Citizenship and Immigration Services).[336] Furthermore, AI can make government more responsive to public sentiment, as observed at the Federal Communications Commission (FCC) and Consumer Financial Protection Bureau (CFPB). These agencies receive comments from the public in response to rulemaking actions. AI has been used to analyze the sentiment of batches of comments to improve understanding of public feedback. Use of this technique across the

---

[335] U.S. Food & Drug Administration, "Using Artificial Intelligence & Machine Learning in the Development of Drug & Biological Products," FDA Discussion Paper (May 5, 2023), https://www.fda.gov/media/167973/download.

[336] U.S. Citizenship and Immigration Services, "Meet Emma, Our Virtual Assistant," U.S. Department of Homeland Security, https://www.uscis.gov/tools/meet-emma-our-virtual-assistant.

government can save countless paperwork hours and make the government more responsive to the input of the public.[337]

AI could also improve mandatory spending programs. The integration of AI technology could reduce costs without significant legislative changes.

Box 5-3: Administrative Waste in Federal Healthcare Programs

JEC Republicans estimate the total amount of waste in Federal healthcare expenditures. By relying on the findings from three recent studies by Himmelstein et al., Cutler, and Sahni et al., that take the most expansive view of administrative waste in healthcare, JEC Republicans estimate a lower bound and median estimate of waste.[338] The estimate is represented mathematically below.

[337] Engstrom et al., *Government by Algorithm*.

[338] David U. Himmelstein, Terry Campbell, and Steffie Woolhandler, "Health Care Administrative Costs in the United States and Canada, 2017," *Annals of Internal Medicine* 172, no. 2 (2020): 134-42, https://doi.org/10.7326/M19-2818; David M. Cutler, "Reducing Administrative Costs in U.S. Health Care," The Hamilton Project Policy Proposal, March 2020, https://www.hamiltonproject.org/assets/files/Cutler_PP_LO.pdf; Nikhil Sahni, George Stein, Rodney Zemmel & David M. Cutler, "The Potential Impact of Artificial Intelligence on Healthcare Spending," NBER Working Paper no. 30857 (January 2023), https://doi.org/10.3386/w30857.

Median estimate:

$$\text{FHAWME} = \beta \times \varepsilon \times \delta$$

FHAWME = Federal healthcare administrative waste, median estimate

δ = Average of administrative waste estimates as share of national healthcare expenditures across Himmelstein et al., Cutler, and Sahni et al. (44.1 percent)

ε = Average of administrative spending estimates as share of total healthcare expenditures, across Himmelstein et al., Cutler, and Sahni et al. (26.8 percent)

β = Total Federal healthcare spending in 2023 ($1,733 billion)[339]

Lower bound estimate:

$$\text{FHAWLE} = \beta \times \gamma \times \theta$$

FHAWLE = Federal healthcare administrative waste, lower bound estimate

θ = Lowest of administrative waste estimates as share of national healthcare expenditures across Himmelstein et al., Cutler, and Sahni et al. (21.3 percent)

γ = Lowest of administrative spending estimates as share of total healthcare expenditures, across Himmelstein et al., Cutler, and Sahni et al. (27.9 percent)

β = Total Federal healthcare spending in 2023 ($1,733 billion)

[339] CBO, *The Budget and Economic Outlook: 2024 to 2034* (February 2024): Table 1-4, https://www.cbo.gov/system/files/2024-02/51118-2024-02-Budget-Projections.xlsx.

We conservatively estimate that between $100 to $200 billion or 6 to 12 percent of Federal healthcare spending can be attributed to administrative waste.[340]

Specific examples of AI's implementation to address inefficiencies in mandatory spending programs include being used to better process redeterminations of eligibility for Medicaid and preventing improper payments in Medicare programs, resulting in hundreds of billions in savings. Improper Medicaid payments were over $50 billion in FY2023, about one quarter of total improper payments made during the last fiscal year.[341]

Vice Chairman Schweikert has previously proposed legislation to support the adoption of AI in other potential Federal government use cases, such as H.R. 206, H.R. 7147, and H.R. 8283. H.R. 206, the Healthy Technology Act of 2023, establishes a legal framework to allow AI or machine learning (ML) technology to be eligible to prescribe drugs. H.R. 7147, the Medicare Transaction Fraud Prevention Act, would establish a pilot program for the Centers for Medicare and Medicaid to use AI to detect fraud in durable medical equipment purchases. H.R. 8283 would create an experimental program to test the efficacy of real time, AI-powered claims development tools for Medicaid. Moreover, the Vice Chairman had two amendments agreed to in H.R. 8580, the Military Construction, Veterans Affairs, and Related Agencies

---

[340] Note that JEC Republican economists assume that the share of healthcare expenditures is equivalent between NHE and Federal government healthcare spending. Further note that in Culter, a range is provided for administrative waste as a share of NHE so the midpoint of said range, 30.5 percent, is utilized.

[341] U.S. Government Accountability Office, "Federal Government Made $236 billion "Improper Payments" Last Fiscal Year," March 26, 2024, https://www.gao.gov/blog/federal-government-made-236-billion-improper-payments-last-fiscal-year.

Appropriations Act of 2025. These support the Veterans Benefits Administration's utilization of AI to expedite claims and a study on the benefits of AI to streamline oversight, reduce fraud, and improve data accuracy and financial management practices at the department, respectively. Congress should consider these bills as well as other similar proposals to allow government agencies to adopt AI more readily in ways that minimize waste and improve administration of government services. Moreover, Congress could consider legislative changes to facilitate AI adoption in areas where it is currently limited or prohibited.

While there may be a moderate decrease in spending due to administrative waste reduction from the implementation of AI across government functions, increasing economic growth remains a more viable method of improving the fiscal situation. Congress can act to increase the implementation of AI in government to increase economic growth. This can be done by using AI to reduce excess bureaucracy and make existing regulation smarter.

How Artificial Intelligence, Machine Learning, and Natural Language Processing Can Enhance Regulatory Review

The emergence of AI technologies, such as Natural Language Processing (NLP) that allow for large-scale text analysis, provide an opportunity to improve regulatory review.[342] Given the volume of regulatory text in the CFR, a detailed manual review of the existing regulatory text is impractical. Implementing these technologies could assist in categorization and the identification of linguistic complexity and conflicting sentiments in existing regulations.

---

[342] NLP is an application of ML, which is a subfield of AI. NLP is focused on large-scale text analysis.

The use of AI, ML, and NLP to analyze the CFR has been done before. The RegData project at the Mercatus Center at George Mason University took a novel approach to measuring the quantity of regulatory restrictions in the CFR.[343] It used NLP to count regulatory restrictions and estimate total regulatory accumulation. Moreover, each individual restriction was classified into the most likely industry that the rule pertains to. [344]

To complement the categorization of regulations, these technologies can be used to identify the linguistic complexity of regulatory text. Linguistic complexity can be viewed as a proxy of a rule's complexity. Regulatory complexity is found to reduce productivity growth, a major component in economic growth.[345] The RegData project estimates linguistic complexity through two lenses: the median sentence length of text in each section or document and Shannon entropy. Shannon entropy is a measure of the density of information transmitted in text.[346]

Sections of regulatory text that are linguistic complexity outliers, such as NAICS code or date of regulation being added, could be targeted for review. Furthermore, NLP could be used to identify

---

[343] Omar Al-Ubaydli and Patrick A. McLaughlin, "RegData: A Numerical Database on Industry-Specific Regulations for All United States Industries and Federal Regulations, 1997-2012," *Regulation & Governance* 11, no. 1 (March 2017): 109-123, https://doi.org/10.1111/rego.12107.

[344] Al-Ubaydli and McLaughlin, "RegData."

[345] de Lucio and Mora-Sanguinetti, "New Dimensions of Regulatory Complexity."

[346] C.E. Shannon, "A Mathematical Theory of Communication," *The Bell System Technical Journal* 27, no. 3 (1948): 379-423, https://doi.org/10.1002/j.1538-7305.1948.tb01338.x; Patrick McLaughlin, "RegData Canada: A Data-Driven Approach to Regulatory Reform," Mercatus Center Policy Brief, March 19, 2019, https://www.mercatus.org/research/policy-briefs/regdata-canada-data-driven-approach-regulatory-reform.

whether language is outdated. For example, the RegData model can detect the last date any given regulatory text's word count changed by more than 1 percent. Measures like this can help to identify regulations that are old and that should be brought up for review. [347]

While JEC Republicans have not found a use case for regulatory text in the literature, machine learning techniques have been used to identify conflicting sentiments and logical inconsistencies in text.[348] The application of these techniques to analyze regulatory text, particularly within each industry subcategory of regulation, can be used to help target rules for revision.

Research also finds that it is possible to predict how much regulatory discretion a particular agency has and detect the evolution of the location and scope of regulatory authority and action over time.[349] These approaches can further aid in the prioritization and identification of regulations to review.

---

[347] McLaughlin, "RegData Canada;" McLaughlin, Nelson, and Powers, "RegData U.S. 4.1 User's Guide."

[348] Vishal Lingam, Sonika Bhuria, Madhavan Nair, Damanpreet Gurpreetsingh, Ankush Goyal, and Ayush Sureka, "Deep Learning for Conflicting Statements Detection in Text," *PeerJ Preprints* 6 (2018), https://doi.org/10.7287/peerj.preprints.26589v1; Satoshi Masuda, Tohru Matsuodani, and Kazuhiko Tsuda, "Detecting Logical Inconsistencies by Clustering Technique in Natural Language Requirements," *IEICE Transactions on Information and Systems* E99.D (2016): 2210-18, https://doi.org/10.1587/transinf.2015KBP0005.

[349] Sharyn O'Halloran, Sameer Maskey, Geraldine McAllister, David K. Park, and Kaiping Chen, "Data Science and Political Economy: Application to Financial Regulatory Structure," *The Russell Sage Foundation Journal of the Social Sciences* 2, no. 7 (2016): 87-109, https://muse.jhu.edu/article/644576; S. O'Halloran, K. Chen, R. Biswas, H. Kim, P. Liu, Y. Zhang, and Y. Zhou, "Delegating Regulation: European Union and Financial Markets," *Annales des Mines - Réalités industrielles* (2018): 91-111, https://doi.org/10.3917/rindu1.184.0091.

Incorporating AI, ML, and NLP into Traditional Approaches to Regulatory Reform

Traditional policy approaches to regulatory reform and review have a mixed history of success. While some are successful, they often are implemented temporarily then eliminated or have limited enforcement power. Given that AI can enable almost instantaneous analysis of regulations across numerous metrics, regulations that fit the parameters for potential reform can be identified easily. While AI cannot eliminate human discretion, it can be used to improve existing approaches to regulatory review and reform.

Regulatory Budgeting

Implemented effectively in British Columbia as well as in the Trump Administration through Executive Order 13771, regulatory budgeting is a procedure whereby the total quantity of regulations or regulatory restrictions is capped, the total economic impact of regulations or regulatory restrictions is limited, or existing rules must be repealed to add regulations.[350] The downside of this approach is that changes in administration can easily result in the overturning, repeal, expiry, or elimination of such policies.

The advancements in processing capability in AI make the identification process of expiring regulations more efficient and cost-effective. Decreasing the management costs of regulatory review could increase the potential of keeping such a policy. Similarly, an Obama-era Executive Order, 13610, tasks agencies

---

[350] Trump White House Archives, "Presidential Executive Order on Reducing Regulation and Controlling Regulatory Costs," January 30, 2017, https://trumpwhitehouse.archives.gov/presidential-actions/presidential-executive-order-reducing-regulation-controlling-regulatory-costs/.

to regularly review their cumulative regulations to minimize overly complex, duplicative, and conflicting mandates.[351] Given that agencies are likely biased in their assessment of their own rules, Congress could consider passing legislation to centralize this form of retroactive review in OIRA—or in Congress itself—and compel the use of AI in the review process.

Regulatory Sunsetting

Used briefly in 2020 at the Department of Health and Human Services (HHS), regulatory sunsetting was implemented to force periodic reviews of regulations for their effect on small businesses. If the review was not undertaken or the regulation was not adequately defended, the regulation would expire.[352] This provides the opportunity to revise or eliminate poorly constructed regulations. While this approach to retrospective review appears to have proven successful at reducing old, irrelevant regulations, there appears to be limited coordination between agencies.

AI's ability to identify outdated language and conflicting sentiments and logical inconsistencies could improve the implementation of regulatory sunsetting. Congress may consider pursuing legislation that utilizes AI to force review and potential revision of regulations after a set period, or else the rule sunsets.

---

[351] The White House, "Executive Order -- Identifying and Reducing Regulatory Burdens," May 10, 2012, https://obamawhitehouse.archives.gov/the-press-office/2012/05/10/executive-order-identifying-and-reducing-regulatory-burdens.

[352] James Broughel and Kofi Ampaabeng, "HHS's Innovative New Sunset Regulation," Mercatus Center Public Interest Comment, December 4, 2020, https://www.mercatus.org/research/public-interest-comments/hhss-innovative-new-sunset-regulation.

Regulatory Impact Analysis Reform

RIA involves producing cost-benefit analyses of each regulation.[353] While an important component of evaluating the impact and necessity of each regulation, the current approach to RIA lacks consistency across agencies, resulting in estimates that are not comparable across agencies, time, or subject matter. Moreover, the interactions between regulations are not typically measured.

RIA could also be improved by implementing AI to identify existing rules that may have interaction effects. Congress could pursue legislation that standardizes the RIA process, requiring the analysis and calculation of potential interaction effects between regulations and use of AI in the regulatory identification process.

[353] The White House, "Agency Checklist: Regulatory Impact Analysis," https://www.whitehouse.gov/wp-content/uploads/legacy_drupal_files/omb/inforeg/inforeg/regpol/RIA_Checklist.pdf.