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REPORT
117–111

THE 2021 JOINT ECONOMIC REPORT

R E P O R T

OF THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

ON THE

2021 ECONOMIC REPORT
OF THE PRESIDENT



JULY 28, 2021.—Committed to the Committee of the Whole House on the state of the Union and ordered to be printed

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LETTER OF TRANSMITTAL

July 28, 2021

HON. NANCY PELOSI
Speaker, U.S. House of Representatives
Washington, DC

DEAR MADAM SPEAKER:

Pursuant to the requirements of the *Employment Act of 1946*, as amended, I hereby transmit the 2021 Joint Economic Report. The analyses and conclusions of this Report are to assist the several Committees of the Congress and its Members as they deal with economic issues and legislation pertaining thereto.

Sincerely,

Donald S. Beyer Jr.
Chairman

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MR. BEYER, from the Joint Economic Committee, submitted the following

REPORT

Report of the Joint Economic Committee on the 2021 Economic Report of the President

CHAIRMAN'S VIEWS

I am pleased to share the Joint Economic Committee (JEC) Democratic response to the 2021 Economic Report of the President. The JEC is required by law to submit findings and recommendations in response to the Economic Report of the President (the Report), which is prepared and released each year by the Council of Economic Advisers (CEA). This year's report was published by the outgoing Trump administration in January 2021.

Much has changed since the Report was originally released. President Biden has been sworn into office, the American Rescue

Plan has been passed into law and coronavirus vaccinations have become available to all Americans over the age of 12. As I write this, the United States is in the midst of recovering from the economic downturn caused by the coronavirus pandemic. With vaccination rates increasing, a return to normal levels of economic activity is within reach. The stimulus provided by the American Rescue Plan is playing a crucial role in smoothing and facilitating this transition back to a more normal economy.

This response assesses where we are and how we got here, but it focuses primarily on forward-looking policies to invest in our future economic growth and establish a stronger, more equitable and more just economy. Achieving these goals requires making long-term investments in our physical and human infrastructure and addressing long-standing racial and gender inequalities.

This response will also consider and analyze concerns that have been raised that the federal government does not have the fiscal capacity to make these investments, especially on top of the stimulus funds already passed. As Congress considers the American Jobs Plan and the American Families Plan, or other legislative proposals, it is crucial to remember there are revenue-raising options to ensure public investments are not entirely deficit-financed.

But even more importantly, we must keep in mind that investing in our physical and human infrastructure will increase and enhance the two primary inputs of economic growth—capital and labor. Therefore, these investments will increase our economy's future potential output and improve future economic growth prospects. Regardless of the exact set of options we use to pay for these investments, their returns will be greater than the opportunity costs of financing them.

We have an opportunity to rebuild a stronger, more equitable, more just economy. It is the economically sound thing to do, it is the right thing to do and it will be a legacy we can be proud of.

DONALD S. BEYER JR.
CHAIRMAN

CHAPTER 1: CREATING SHARED PROSPERITY AFTER AN UNPRECEDENTED CRISIS

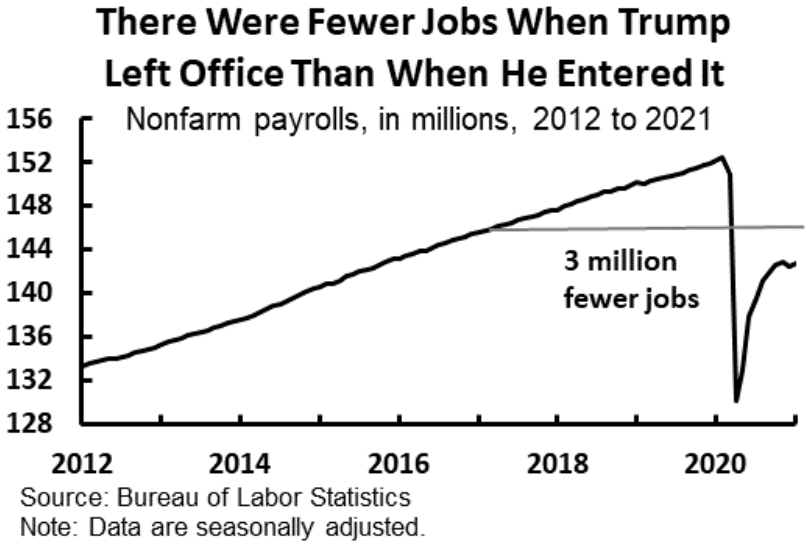
Millions of Americans have returned to work and the United States is experiencing strong economic growth thanks to the American Rescue Plan and the successful vaccination program overseen by President Biden. President Trump's policies and his failed response to the coronavirus pandemic left him with the worst economic record of any modern U.S. president. Even before the pandemic, the Trump administration implemented policies that harmed working families.[1] Despite the strong economic recovery under the Biden administration and the 117th Congress, additional investments in physical and human infrastructure are necessary to advance long-term, broadly shared economic growth.

President Trump had the worst economic record of any modern U.S. president

President Trump inherited the longest economic expansion in U.S. history from President Obama and left as the first president since World War II to oversee net American job loss during his term in office.[2] President Obama left President Trump an economy that was growing and adding jobs. Specifically, President Obama cut the unemployment rate from 10 percent to 4.7 percent in January 2017.[3] President Obama oversaw an economic comeback in which the U.S. economy grew by 15 million jobs over 76 consecutive months, and the economy grew by an average of 2.4 percent during his second term.[4] However, monthly job growth slowed under President Trump, even before his failed response to the coronavirus left millions of Americans without jobs.[5]

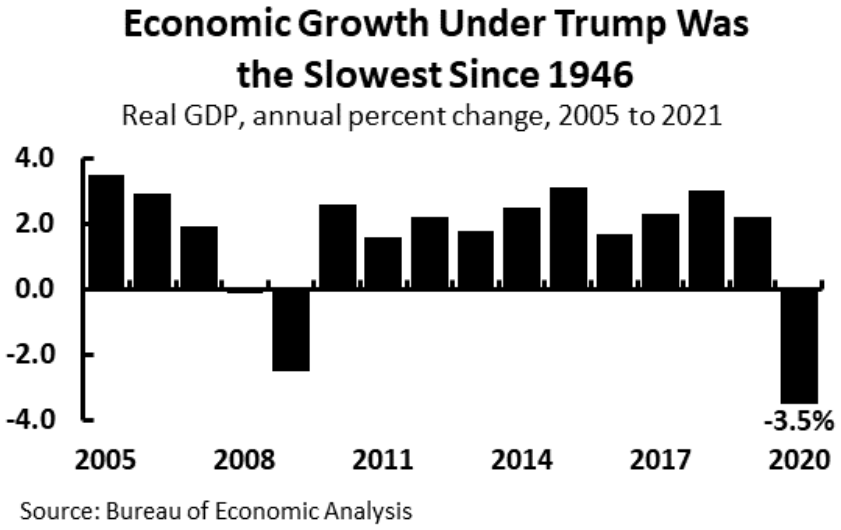
President Trump left office with 3 million fewer Americans employed than when he was sworn in.[6] Among the 22 million Americans who lost their job at the onset of the coronavirus

pandemic in the spring of 2020, just over half had returned to work by January 2021, and there was a net loss of 10 million U.S. jobs from February 2020 to January 2021.[7] Despite inheriting an economy with 4.7 percent unemployment rate from President Obama, President Trump left office with an unemployment rate of 6.3 percent.[8] If unemployment statistics included workers who left the labor force and others who have been misclassified, the unemployment rate would have been 9.7 percent at President Trump's departure from the White House.[9]



Millions of workers left the U.S. labor force during President Trump's term in office. From February 2020 through the end of President Trump's term, 5 million Americans had stopped looking for work and left the labor force.[10] The labor force participation rate fell by 1.4 percentage points, and President Trump oversaw the biggest 12-month decline in labor participation in over 70 years.[11]

The U.S. economy's performance was particularly poor under President Trump, and annual real GDP growth averaged only 1 percent during his term—the worst record of any president since World War II.[12]



President Trump's policies hurt American workers and families before the coronavirus pandemic

President Trump's economic record before the coronavirus pandemic was unremarkable, and he implemented policies that hurt American workers and families. Average monthly job growth slowed under President Trump, with 183,000 new jobs on average added during his first three years in office compared to 220,000 new jobs on average each month during the last three years of President Obama's administration.[13] President Trump's trade war with China cost jobs and hurt farmers.[14] Job growth in manufacturing slowed significantly before the coronavirus pandemic, and manufacturing contracted in 2019.[15] President Trump's 2017 tax cuts gave a windfall to the wealthy and corporations without spurring promised business investment.[16]

The Trump administration consistently implemented policies that favored big businesses at the expense of workers and consumers.

The aftermath of President Trump's trade war with China was higher prices, fewer American jobs, more farm bankruptcies and a larger trade deficit. Studies found that U.S. businesses and consumers paid almost the entire cost of President Trump's tariffs, and an analysis estimated that the tariffs cost American families an average of $460 over the course of a year.[17] Moody's Analytics estimated that President Trump's trade war had cost the United States almost 300,000 job by September 2019.[18] In addition, farmers suffered because of the trade war, and bankruptcy filings among small and mid-sized farms increased 20 percent in 2019.[19] President Trump failed to deliver on American manufacturing, thanks in part to his destructive trade war with China. Manufacturing production fell in 2019, and the sector added just 70,000 new jobs that year, a significant reduction from previous trends.[20]

President Trump's 2017 tax cuts failed to deliver record growth or increased business investment, instead providing a major windfall for the wealthy and corporations. Despite promises that the 2017 tax cuts would yield 6 percent economic growth and pay for themselves, the economic results were paltry.[21] Even though the tax cuts increased the budget deficit by an estimated $1.9 trillion, real GDP growth in 2019 was just 2.2 percent—below the 2.4 percent average during President Obama's second term in office.[22] Business investment decreased after the tax cuts, slowing to 2.9 percent on average for the eight quarters after the tax cuts compared to 4.0 percent in the previous eight quarters.[23] The benefits of the tax cuts accrued mostly to the very wealthy and corporations. Households in the top 1 percent of income were expected to receive a tax break of $50,000 in 2020, while those in

the lowest 20 percent of income were set to receive an average tax cut of only $60.[24]

The Trump administration pushed policies that hurt consumers and workers. President Trump signed a bill under the Congressional Review Act overturning the Consumer Financial Protection Bureau's rule to prohibit binding arbitration agreements, which can deprive consumers of their ability to protect their legal rights in a court of law.[25] President Trump's appointed director of the Consumer Financial Protection Bureau revised the payday lending rule, allowing lenders to give out high-interest loans without checking whether borrowers had the financial ability to repay the loans.[26] President Trump's Department of Labor issued a "joint employer" rule limiting how and when big businesses could be held accountable for violating the Fair Labor Standards Act, a rule that would have made it more difficult for temp workers and workers at franchises to seek adequate redress for wage-and-hours violations.[27] The Trump administration's final overtime rule covered 2.8 million fewer workers than under the proposal from the Obama administration.[28] The Economic Policy Institute estimated that the Trump administration's overtime rule would cost workers at least $1.2 billion in wages, a figure that would only grow over time.[29] The Trump administration used the power of the federal government to help large corporations at the expense of workers and consumers.

President Trump's failure to address the coronavirus pandemic had deadly consequences

President Trump repeatedly downplayed the dangers of the coronavirus, ignored the advice of public health experts and failed to use his powers as president to effectively address the coronavirus. At the onset of the pandemic, President Trump

publicly downplayed the risks, repeatedly claiming the virus was "going to disappear."[30] Privately, however, President Trump told journalist Bob Woodward in February 2020 that the coronavirus was "more deadly than even your strenuous flus." Trump subsequently said to Woodward in a March 2020 private conversation, "I wanted to always play it down" and "I still like playing it down, because I don't want to create a panic."[31] President Trump publicly downplaying the risks of the coronavirus and his failure to act had deadly costs for Americans.

President Trump spread falsehoods that harmed public health and went against the advice of public health experts, with serious consequences for human lives and the U.S. economy. President Trump dismissed the need for coronavirus tests, touted unproven medical treatments, mocked the importance of wearing face masks to prevent the spread of the coronavirus and urged his supporters to attend crowded political rallies in violation of social distancing guidelines.[32] Researchers estimated that well over 100,000 lives could have been saved had Americans adopted universal mask usage in public—something that the Trump administration could have encouraged.[33] According to a study conducted by Goldman Sachs, the widespread adoption of face masks under a national mask mandate would have avoided the need for lockdowns and prevented GDP losses up to 5 percent, or about $1 trillion.[34]

President Trump resisted efforts to relieve economic suffering during the pandemic. The House Democratic majority and Senate Democrats worked on a bipartisan basis during the 116th Congress to deliver relief to American families, workers and small businesses affected by the coronavirus pandemic. Bills such as the Families First Coronavirus Response Act; the Coronavirus Aid, Relief, and Economic Security Act (CARES) Act; the Paycheck Protection Program Flexibility Act; and the Consolidated

Appropriations Act of 2021 passed through bipartisan votes to provide critically needed assistance to the American people during an unprecedented crisis. Thanks to these bills, unemployed workers received a $600 weekly supplement to unemployment benefits, direct payments helped families in need, state and local governments were able to keep essential workers on the job and small businesses received grants and forgivable loans to help them survive the pandemic.

However, these bills were not enough to relieve the full scope of economic suffering in the aftermath of the coronavirus pandemic. President Trump and his allies refused good-faith negotiations on a compromise economic relief bill as the $600 federal enhanced unemployment benefits expired in the summer of 2020, prolonging economic suffering for unemployed Americans. President Trump also refused additional federal assistance to state, city, tribal and territorial governments that employ first-responders in health care and law enforcement, even as these governments faced a significant drop in revenue in 2020.[35] President Trump exacerbated the human toll and economic suffering of the coronavirus pandemic through his public falsehoods about the coronavirus, mismanagement of the federal government and refusal to negotiate in good faith as economic relief programs under the CARES Act expired.

The American Rescue Plan and the Biden administration's successful vaccination program have delivered a robust economic recovery

Under President Biden's administration and the 117th Congress, America's economic outlook has significantly improved with the passage of the American Rescue Plan and the implementation of a successful vaccination program. The American Rescue Plan provided vital assistance to small businesses, unemployed

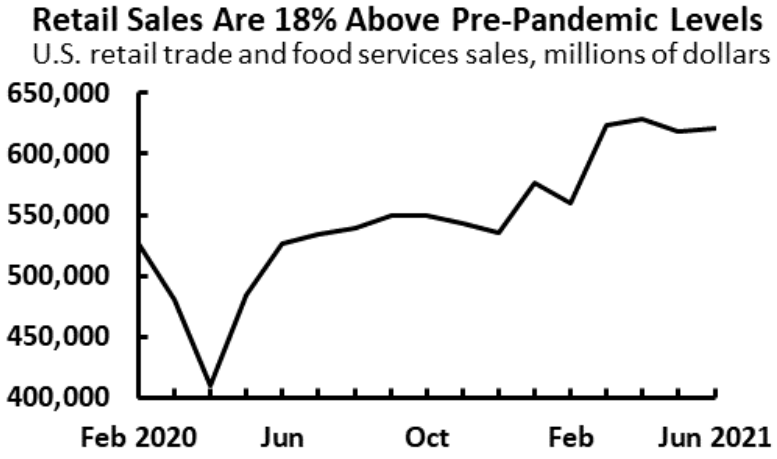
workers, families with children, public schools and the state and local governments that employ first responders. As of the end of July 2021, 163 million Americans were fully vaccinated, compared to just 3 million fully vaccinated Americans when President Biden took office.[36] As a result of these efforts, millions of Americans have returned to work, real GDP is expected to grow in 2021 at rates not seen in over 30 years and retail sales have exceeded pre-pandemic levels.

Projections of economic growth are strong and have only become stronger after the passage of the American Rescue Plan. As of July 2021, CBO projected that the United States would see 7.4 percent real GDP growth in 2021.[37] This was an upward revision in CBO's projected growth rate from its February 2021 projection of 3.7 percent real GDP growth, issued before the American Rescue Plan became law.[38] CBO said that its upward revision to real GDP growth projections for 2021 was due, in part, to "recently enacted fiscal policies" and "a more rapid return to normalcy." CBO also projected 3.1 percent real GDP growth in 2022—higher real GDP growth than any year under the Trump administration.[39]

Millions of American have returned to work under President Biden's administration and the 117th Congress. Total nonfarm employment rose by 850,000 in June 2021, and the United States has added over 3 million jobs in President Biden's first five months in office.[40] As of June 2021, all 50 states and the District of Columbia had more jobs and lower unemployment than a year before.[41] At the same time, the number of new unemployment claims has declined as more Americans have found jobs and returned to work. In mid-July 2021, new claims for unemployment benefits fell to 360,000—the lowest point since the beginning of the pandemic and far below the 1.5 million new claims for the same week a year earlier.[42]

The trend of Americans returning to work is expected to continue. CBO expects that in 2022 overall employment will exceed levels seen before the pandemic and the average unemployment rate will be 3.8 percent. CBO also projects that average unemployment rate will be 3.7 percent in 2023.[43]

Retails sales are also positive as the Biden administration's successful vaccination program has allowed more Americans to resume normal levels of economic activity. Retail sales rose 0.6 percent in June 2021 and were 18 percent above the pre-pandemic level.[44]



Source: U.S. Census Bureau
Note: Data are seasonally adjusted monthly sales.

The outlook for federal budget deficits and public debt continues to improve under the current administration. From its February 2021 estimate to July 2021, CBO revised down its estimate of cumulative federal budget deficits for 2022 through 2031 by $173 billion, even as emergency measures temporarily increased the on-budget deficit in 2021. CBO projected the 2021 on-budget federal deficit will be $158 billion lower than in 2020 and expects the

federal budget deficit to continually decline in 2022, 2023 and 2024. CBO also projected that federal debt held by the public as a percentage of GDP will decline in 2022, 2023 and 2024.[45]

Inflation expectations in the medium- and long-term are consistent with price stability and strong economic growth. In July 2021, CBO projected core PCE price index inflation of 2.0 percent in 2022 and 2.2 percent in 2023.[46] Similarly, the Federal Reserve projected core PCE inflation of 2.1 percent in 2022 and 2023.[47] Federal Reserve Chair Jerome Powell testified to Congress that "longer-term inflation expectations remain well anchored at 2 percent," and at the Federal Open Market Committee's June meeting, officials reaffirmed the Fed's commitment to using its full range of tools to promote its goals of maximum employment and price stability, including its goal of 2 percent inflation on average over time.[48] Market-based measures of inflation expectations, including 10-year Treasury breakeven rates also remain within normal ranges, which suggests that investors share the Fed's assessment of inflation risks.[49]

Thanks to the efforts of the Biden administration and Congress, the U.S. economy continues to rebound and millions of Americans have safely returned to work. To promote sustained growth and shared prosperity, the federal government needs to make long overdue investments in physical and human infrastructure.

Broadly shared economic growth requires real investments in physical infrastructure and care economy infrastructure

The American Rescue Plan has put the United States on a course of rapid economic recovery, but the federal government must make significant additional investments in physical infrastructure and the care economy to promote long-term, broadly shared economic growth. Investing in deteriorating physical

infrastructure will yield long-term dividends for economic output. Federal investment in lagging transportation infrastructure, water systems, public schools, the power grid and other physical infrastructure will help maintain America's economic competitiveness and increase the productivity of capital.

Investing in care infrastructure will strengthen the overall economy and support working families, particularly women, participating fully in the labor market. High-quality investments in families and children lead to higher human capital and improve long-term labor productivity. While investing in care infrastructure will help all Americans, it will be particularly beneficial for women of color who bear a disproportionate burden of care duties.[50] To bolster economic resilience and long-term prosperity, the time is now for investing in our crumbling infrastructure and building new kinds of infrastructure to help working families participate in the modern economy.

Congress can invest in America's future without burdening working families

The United States has the fiscal space to make investments that generate broadly shared economic growth, and the federal government can invest in America's future without burdening working families. Low interest rates make it possible for policymakers to invest in infrastructure at a low cost. Inflation expectations are moderate, and the Federal Reserve has the tools to maintain long-term price stability. In addition, public investments offset by new revenue would not have any expected impact on inflation.

The United States can bring in additional revenue simply by enforcing the tax laws already on the books. Strengthening IRS enforcement after years of underfunding and staffing cuts would

bring in additional revenue without forcing anyone to pay more than they already owe. The IRS has options to ensure that wealthy taxpayers and big corporations pay what they owe, without burdening working families or saddling small businesses with egregious audits. In addition, Congress should ensure the very wealthy and big corporations pay their fair share for public investments that benefit all Americans.

CHAPTER 2: PUBLIC INVESTMENT IS KEY TO FUTURE ECONOMIC GROWTH

Even before the pandemic and resulting recession, decades of underinvestment in physical infrastructure—and a failure to invest in a 21st century care and human infrastructure—limited the economy's growth potential. The United States needs to make real investments in physical and care infrastructure to create long-term, broadly shared economic growth. Investing in the main drivers of economic growth—capital and labor—as well as innovation-enhancing policies will increase future U.S. economic output.

Investing in physical infrastructure to increase U.S. capital stock and power future economic growth

In 2018, infrastructure investment was only 1.5 percent of the United States' GDP, the third lowest percentage among high-income countries.[51] As a 2015 report from the Business Roundtable noted, public investment in transportation infrastructure in the United States has fallen from its 1960s high of 2.2 percent of GDP to only 1.6 percent—well below the five percent spent by comparable advanced economies.[52] In addition, the federal government's share of investment in water infrastructure has fallen from 31 percent in 1977 to only four percent in 2017, contributing to an $81 billion gap between total local, state and federal spending and investment needs, according to an analysis by the American Society of Civil Engineers.[53] The failure of government investment to keep up with water infrastructure needs means that rising consumer costs are forced to make up the difference, putting undue pressure on households with the most demand and the lowest financial capacity. For example, one analysis found that water bills exceed 10 percent of monthly disposable income in 11 U.S. cities, including cities

considered to have relatively low costs of living, such as Houston and Indianapolis.[54]

Investment in other types of physical infrastructure, such as housing and schools, has also fallen behind in recent decades. Today, there are only 1.1 million public housing units in the United States and since 1973 the number of public housing units has fallen by more than 200,000.[55] A Government Accountability Office survey found that 41 percent of school districts need to replace or update their heating, ventilation and air conditioning (HVAC) systems in at least half of their schools.[56] More than half of school districts still use local revenues as the primary financing for school facilities, which may risk widening existing inequalities.[57]

Investments in physical infrastructure will have positive spillover effects for the broader economy as well. One literature review of the research into the macroeconomic benefits of infrastructure investment found that "the median and average estimates of a review of dozens of studies on infrastructure indicate that each $100 spent on infrastructure boosts *private-sector* output by $13 (median) and $17 (average) in the long run."[58]

There is strong evidence from the American Recovery and Reinvestment Act that investing in physical infrastructure creates long-term economic benefits that exceed the budgetary costs. Research by the U.S. Conference of Mayors found that $1 in water and sewer infrastructure investment increases GDP in the long-term by $6.35, and that adding one job in water and sewer creates almost four jobs in the national economy to support that job.[59] Further, past analysis of the American Recovery and Reinvestment Act by the Congressional Budget Office estimated

that $1 spent on infrastructure brought an economic benefit of up to $2.20.[60]

Addressing racial inequities must be central to future investments in U.S. physical infrastructure. For example, access to plumbing is not equitably distributed.[61] American Indian or Alaskan Native households represent 6.2 percent of U.S. households that lack a plumbed connection to potable water and sewage despite representing only 1.5 percent of the overall population. Black households make up 16.6 percent of the households lacking complete plumbing but only 12.8 percent of the U.S. population, and Hispanic families represent 16.7 percent of the un-plumbed households but only 12.5 percent of U.S. households.[62]

New investments in transportation infrastructure should correct harms done by past transportation infrastructure investments. For example, as NYU School of Law professor Deborah N. Archer writes, when the federal interstate system was built, "In states around the country, highway construction displaced Black households and cut the heart and soul out of thriving Black communities as homes, churches, schools and businesses were destroyed. In other communities, the highway system was a tool of a segregationist agenda, erecting a wall that separated White and Black communities and protected White people from Black migration. In these ways, construction of the interstate highway system contributed to the residential concentration of race and poverty, and created physical, economic and psychological barriers that persist."[63]

Investment in broadband infrastructure will give communities access to jobs and improve the productivity of the labor force, particularly in rural areas. While 75 percent of U.S. adults overall have access to broadband, only 63 percent of rural residents do.[64]

Research has found that access to broadband is associated with a 1.8 percent increase in the employment rate, with a greater impact in rural and isolated areas. In the most rural locations, the effect of changing from no broadband availability to full availability is more than 2.2 percent increase in the employment rate.[65]

These are all examples of how underinvestment in physical infrastructure is a long-standing, pre-existing problem that needs to be addressed as the United States recovers from the impact of the coronavirus pandemic. By making these investments that will improve both the quality and productivity of physical capital, as well as using the opportunity to address racial inequities in current physical infrastructure, the United States will also be making investments in future potential output, powering and driving long-term economic growth.

Increasing U.S. labor force participation and labor productivity

In addition to investing in physical infrastructure, investing in human infrastructure will increase labor force participation and productivity. Specifically, investing in child care will facilitate greater labor force participation—particularly among women—as well as improve children's human capital development in ways that will drive future economic growth for decades to come.

Women's labor force participation stalled out by 2000 likely in part because of the failure to invest in paid leave and child care infrastructure.[66] The stalled labor force participation of women hurts economic growth. One Brookings analysis found that if American prime-age women's labor force participation had kept pace with that of Japanese women's from 2000 to 2016, for example, U.S. GDP would have been nearly four percent higher, or $800 billion greater, than it actually was.[67] Because responsibility for child care continues to fall disproportionately on

women, affordable child care is crucial to facilitating greater labor force participation by women.[68] The experience of mothers over the past year of the pandemic particularly underscores this point. Mothers' labor force participation fell dramatically in 2020, first as schools transitioned to distance learning and again in fall of 2020 as the new school year started—online in many places—after only partially regaining some of the losses in the summer of 2020.[69] Women's labor force participation is now near its lowest level in 33 years.[70]

In addition to helping facilitate greater labor force participation among women, investment in child care would also boost future economic growth by increasing the human capital of future workers. Early childhood environments are crucial for the development of both cognitive and noncognitive skills, which are the foundation on which later learning capabilities and earning potential are built. Research into the effects of early childhood education have found benefits not only for the individual children in terms of better school performance, graduation rates and future earnings, but also for the economy at large with rates of return between seven and 20 percent depending on the exact program analyzed.[71]

Investment in broadband availability will create long-term benefits for the labor force by helping students access reliable, high-speed internet. During the pandemic, widespread remote learning has brought into stark relief the role of reliable internet in children's learning and ability to accumulate human capital. Analysis by the Pew Research Center had previously found that "roughly one-third (35 percent) of households with children ages 6 to 17 and an annual income below $30,000 a year do not have a high-speed internet connection at home, compared with just 6 percent of such households earning $75,000 or more a year."[72]

This digital divide is further exacerbated by racial disparities, with 25 percent of Black teens reporting that they are sometimes or often unable to complete homework assignments because of a lack of a reliable computer or internet connection, compared to 13 percent of White teens and 17 percent of Hispanic teens.[73] As schools have relied on online learning during the pandemic, children's ability to fully participate in their learning and grow their human capital has differed based on their family's economic and racial demographics.

Racial discrimination in the labor market hurts Americans in innumerable ways, including hindering workforce productivity by influencing the career pathways that people pursue. Research shows that, as social dynamics have shifted over the last 50 years, Black Americans and women of all races have been able to pursue careers better suited to their interests and talents. This progress towards a more equitable distribution of talent across occupations can account for up to 40 percent of growth in U.S. GDP since 1960.[74] When people lose the ability to pursue their talents and interests, whether through outright hostility, unwelcoming and unsupportive environments or systemic barriers to advancement, such as the high costs of higher education, they and society lose their full labor market potential.

Investing in people can improve the economy's future potential output. Facilitating greater labor force participation among women through greater access to child care, improving human capital development for American children and providing access to the technology and opportunities that will allow people to fulfill their full potential will improve productivity to drive long-term economic growth.

Growth through innovation

The United States should make public investments in order to use two key inputs of production—capital and labor—more efficiently and intensely, thereby increasing future potential output and driving economic growth. Improving total factor productivity, commonly thought of as innovation, will also increase future potential economic output. Total factor productivity refers to the part of output that cannot be explained by the inputs of labor and capital alone but by the way in which they are combined.[75] Policymakers should look for opportunities to improve rates of future innovation and increase future potential output.

Increasing participation in STEM fields among women and marginalized communities is one way to drive future innovation. Research has shown that if more women and Black Americans were engaged in the technical innovation that leads to patents, U.S. GDP per capita could be 0.6 to 4.4 percent higher.[76] Policies that encourage more women and underrepresented minorities to go into and stay in STEM fields will stimulate new innovation and help ensure that future generations of researchers have supportive mentors and welcoming work environments. Facilitating wider participation in STEM fields by skilled and talented people who are more likely to be sidelined by lack of opportunity or support, the United States can increase the chances of transformational leaps forward in innovation that drive future potential output.

CHAPTER 3: THE CARE ECONOMY IS CRITICAL INFRASTRUCTURE

Investing in the care economy is a critical tool for helping working families and making the economy more productive. Policymakers should consider the care economy as an important part of American infrastructure—a concept that has expanded and evolved over time. The word "infrastructure," originally a technical term from railway engineering that referred to the structure supporting train tracks, has changed drastically through time to meet the needs of the economy. Today, it broadly refers to "long-lived, capital-intensive systems and facilities."[77] During the time of the New Deal, for example, academics and policymakers expanded the definition of public infrastructure to include universal access to electricity, a utility few Americans live without today.[78]

Similar to the crises of the Great Depression and the Dust Bowl, the coronavirus pandemic has highlighted the technologies and resources required to meet the needs of an evolving economy. The past year made it all too clear that the ability of workers to get to their job and work may depend just as much on broadband and care workers as on roads and bridges. It also highlighted the role of the workers who sustain these essential supports, and how unlivable wages, poor working conditions and tight margins prevent the care industry from growing to meet the needs of workers and families safely and affordably.

The coronavirus pandemic and economic crises have also highlighted the tragically incomplete and unequal reach of existing U.S. infrastructure. All Americans, regardless of race, ethnicity, gender, national origin and religion deserve to be able to care for their families without risking financial ruin or leaving the labor

force entirely. The American Families Plan and the efforts of the Biden administration will help families balance the demands of care and work through strengthened care infrastructure. Ultimately, care work infrastructure supports the balance between work and family, strengthens ties to the labor force—especially for women—and increases the resilience of working families in the face of crises to come.

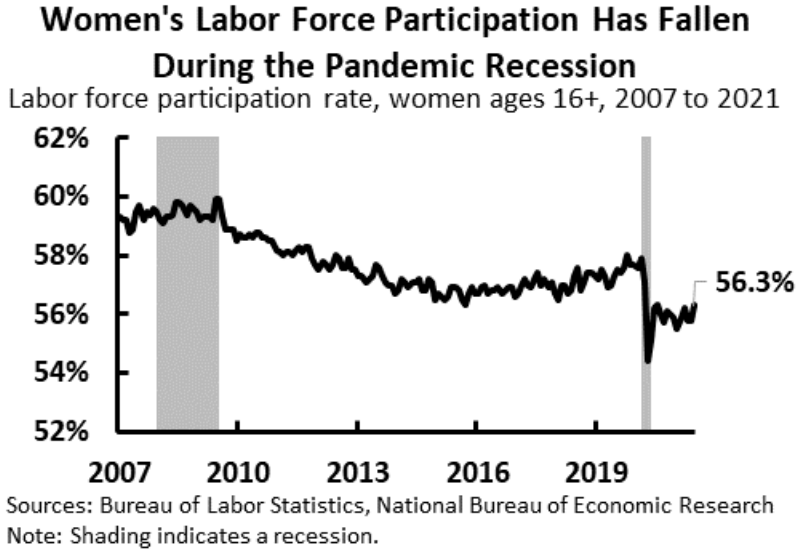
Care work supports the balance between work and family, and care workers should be valued accordingly

Human capital infrastructure requires policymakers' most urgent attention. In the United States, four out of five parents of young children report that finding quality, affordable child care in their area was a serious problem.[79] More than 50 percent of families with young children lived in areas where the demand for licensed child care far outpaced the local supply, known as "child care deserts."[80] This is especially true for families of color. One study that analyzed state-funded preschools found that not one of the 26 states analyzed provided both high quality and high access preschool for Black and Latino 3- and 4-year-olds.[81]

The disconnect between the demand for care work and the supply of care workers can be explained by the low value placed on doing this work. Care workers, in both child care and elder care, frequently do not make a living wage. In 40 states, the median hourly wage for a child care worker is below the living wage, and in 17 states, the median hourly wage for a child care worker is below 90 percent of the living wage. The result is that many care workers are forced to search for alternatives in order to meet their basic needs like food, rent, medication and their own family's care needs.[82]

Care work strengthens labor force ties, especially for women

The future growth of the U.S. economy depends in part on increasing the labor force participation rate, or the share of the working-age population that is employed or looking for a job.[83] From the mid-1960s through 2000, the U.S. labor force participation rate rose significantly, partly as a result of millions of women entering the workforce—mainly those with young children.[84] Women's labor force participation in the United States reached a peak in 2000 and then plateaued until the Great Recession when it declined slightly and settled at a lower plateau until March 2020. It then fell precipitously as a result of the pandemic.[85]



Providing adequate and affordable child care is an important lever for increasing labor force participation—particularly for women, who shoulder a disproportionate share of child care responsibilities.[86] OECD countries that offer better family policies including affordable child care have higher rates of female labor

force participation than the United States.[87] Research consistently reveals that maternal labor force participation rises when affordable child care is available—as much as five to 10 percentage points when the care is available at no cost.[88] A study by the Economic Policy Institute found that capping child care expenditures at 10 percent of family income could increase overall women's labor force participation enough to boost GDP by roughly $210 billion (1.2 percent).[89]

The participation rate for mothers with school-age children declined by 3.3 percentage points between February and September 2020, while it only declined 1.3 percentage points for fathers with school-age children.[90] As child care centers and schools closed or shifted to remote learning, mothers shouldered most of the burden. The resulting decline in women's participation is happening at time when women again comprised half of the U.S. workforce right before the pandemic began.[91] For the first time since April 1986, women's labor force participation dipped below 55 percent in April 2020.[92]

The resilience of working families is dependent on expanding access to quality, dependable and affordable care

In the wealthiest country in the world, parents and adult children should not be forced to choose between work and providing quality care for a relative.[93] The pain and complexity of those decisions has been widely publicized in the news of the last year. For example, many Americans have watched their children struggle to learn remotely or their parents experience low quality of care at nursing homes, all while trying to perform their jobs in an unfamiliar and capricious economic landscape.[94]

As Americans live longer, more families are facing difficult choices between work and caring for their aging relatives.[95]

Although between 65 and 70 percent of people ages 65 and older will need long-term care, the cost of this care is cripplingly expensive in the United States.[96] The median annual cost of home health care varies among states from almost $40,000 to over $75,000. In 16 states, the median cost of home health care is above $60,000 a year.[97]

Many Americans who are aging, who are ill or who live with a disability cannot afford to cover the cost of their care, requiring their relatives to step in and cover the costs. Only slightly more than one-half of people with severe long-term service and support needs could fund two years of paid home care themselves, even if they liquidated all available assets. Only two out of 10 people with severe long-term service and support needs could fund paid home care with their income alone.[98]

Similarly to home health care, the cost and availability of quality, dependable and affordable child care is not adequate to meet the needs of all Americans. Nearly 12 million children under age five are in some form of child care in the United States.[99] More than four out of five (83 percent) parents of young children report that finding quality, affordable child care in their area was a serious problem.[100] One study that analyzed state-funded preschools found that not one of the 26 states analyzed provided both high quality and high access preschool for Black and Latino 3- and 4-year-olds.[101]

In 31 states, a typical married couple with two children (an infant and a four-year-old) in child care spends on average more than 20 percent of their income on child care. In six states, a typical married couple with two young children in child care spends more than 25 percent of their income on child care. In every state, the average cost of child care for a typical family with two young

children exceeds the median cost of rent.[102] These costs are not sustainable and are too often the reason workers choose to leave the labor force to care for their families.

The long-term benefits of investing in care work infrastructure are enormous

The failures in American human capital infrastructure discussed above have enormous consequences and costs for the United States' economic prospects. If more Americans were given the resources to care for their families and pursue work without taking on the strain of costs pushing them toward personal fiscal cliffs, the U.S. economy would be more prosperous.[103]

With access to quality, affordable and dependable child care, parents can remain in the workforce and earn needed income. Those who leave the workforce to care for children—disproportionately mothers—can suffer depressed earnings throughout their careers.[104] The lack of affordable child care is a major factor driving the gender wage gap, with the median woman earning 82 percent of what the median man earns.[105] Closing the gender wage gap would add $541 billion to GDP and would reduce poverty for working women by 40 percent.[106]

Child care also provides an excellent return on investment in the children themselves. Economists at the Federal Reserve Bank of Minneapolis found that investments in child care and early education are "the most efficient means to boost the productivity of the workforce 15 to 20 years down the road."[107] Early education interventions are estimated to have produced returns of $3 to $17 for every dollar invested, with lower crime and teenage birth rates, higher high school graduation and college attendance rates, and higher lifetime earnings.[108]

Economists have measured particularly high rates of return for certain types of human capital infrastructure, including investment in childhood education and health. Indeed, these policies are so cost-effective that they often pay for themselves through higher tax revenues from the increased incomes earned by beneficiaries of the programs later in life.[109] One study found that every dollar spent on an early childhood program targeting disadvantaged families in North Carolina resulted in up to $7.30 in benefits in education, health, social behaviors and employment.[110]

Low interest rates continue to make timely investment in infrastructure particularly cost-effective. These economic conditions also make concerns about crowding out private investment much less relevant.[111] Indeed, present-day conditions make it more likely for public infrastructure investment to "crowd in" private activity by promoting overall economic growth, a primary determinant of business investment.[112]

Today's low interest rates and low employment levels mean that infrastructure investment is at its most cost-effective now. Lawmakers should take advantage of favorable economic conditions by investing in a broad set of policies aimed at addressing the nation's declining infrastructure quality. In addition to providing the nation with crucial public goods, if targeted correctly, these investments will promote racial and economic equity and help lay the groundwork for stronger, cleaner future growth.[113]

CHAPTER 4: AMERICA HAS THE FISCAL SPACE TO INVEST FOR THE FUTURE

The United States has enough fiscal space to make necessary investments in physical infrastructure and the care economy. Hypothetical concerns about future Consumer Price Index (CPI) increases at a time of low interest rates and low projected long-term inflation should not outweigh the current empirical evidence that there is sufficient fiscal space to make the kind of investments proposed by the Biden administration, or the existence of revenue-raising options.

"Output gap" criticisms of government fiscal policies do not pass muster

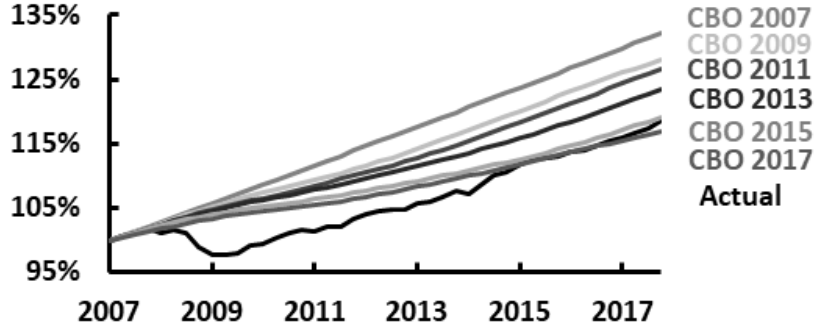
Some critiques of government spending have relied on the "output gap," which purports to measure the difference between the actual and potential output of the economy.[114] Hawkish macroeconomic commentators have said that the American Rescue Plan exceeded the output gap by at least three times.[115] The risk of the stimulus exceeding the output gap is that it could cause the economy to overheat, which, over time, could lead to inflation.

However, inflation concerns based on estimates of the output gap rely on models of potential output that are imperfect and coming under increased scrutiny. Potential output is an imperfect policy target because it is hard to estimate accurately, as Federal Reserve Chair Jerome Powell pointed out in his 2018 speech at Jackson Hole. Powell referred to the practice of formulating policy using estimates of the output gap and the natural rates of unemployment and interest as "navigating by the stars" because the values are often denoted by an asterisk in economic literature. He warned that "[g]uiding policy by the stars in practice, however, has been quite challenging of late because our best assessments of the location of

the stars have been changing significantly."[116] As an example of how difficult it can be to estimate potential output, the Congressional Budget Office (CBO) revises its estimates of the output gap every year.

Potential GDP Estimates Took 10 Years to Recognize Post-Great Recession Trend

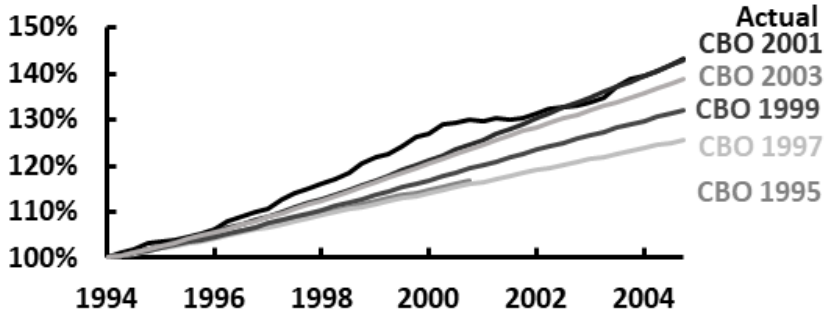
Potential GDP as percent of Q1 2007 value, 2007 to 2017



Source: Congressional Budget Office, "Potential GDP and Underlying Inputs"

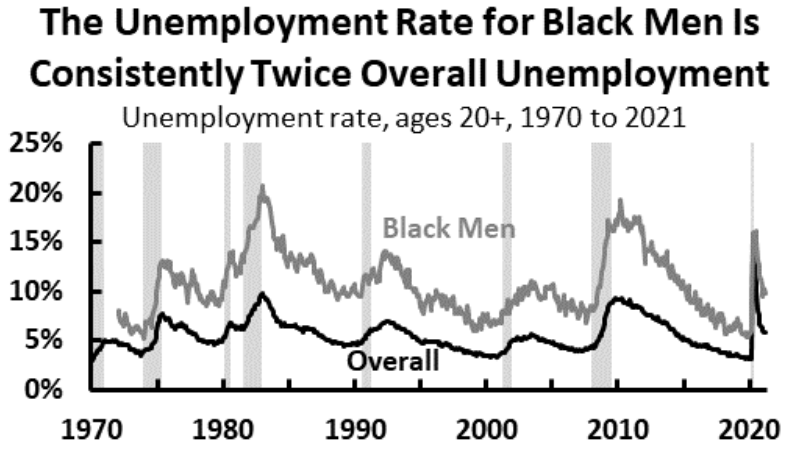
And Took 7 Years to Recognize the 1990s Productivity Boom

Potential GDP as percent of Q1 1994 value, 1994 to 2004



Source: Congressional Budget Office, "Potential GDP and Underlying Inputs"

The economic policy research group Employ America points out that models for calculating potential output use outdated assumptions and methodologies that bake racial inequality into estimates for the future. For example, they explain that the CBO's estimates for potential output rely on a model that assumes that the 2005 unemployment rates for different demographic groups in the United States are representative of their "natural" rate of unemployment. This means that the CBO's estimates assume that the "natural" rate of unemployment for Black Americans is 10 percent and that policies to drive down that unemployment rate are unattractive because of their inflation risk.[117]



Sources: Bureau of Labor Statistics, National Bureau of Economic Research
Notes: Data are seasonally adjusted. Shading indicates a recession.

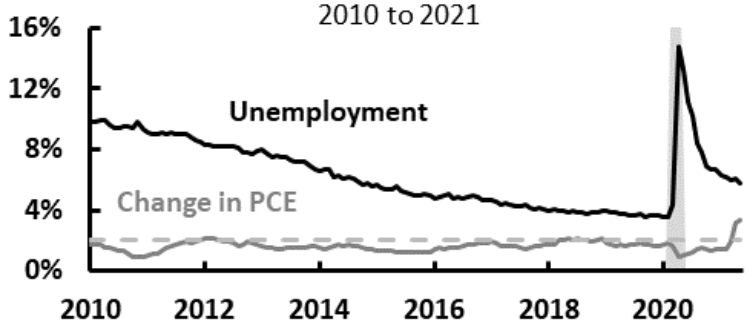
Given the difficulty of precisely estimating, or even defining, the current output gap, policymakers would do better to pursue policies that will increase the potential output of the economy in the long-run.

Expectations of medium and long-term inflation are modest and well within normal ranges for recent inflation

Official projections and market expectations for medium and long-term inflation are modest and within normal ranges for recent inflation. In July 2021, the Federal Reserve projected that core PCE inflation will be 2.1 percent in 2022, similar to projections by the Congressional Budget Office of 2.0 percent core PCE inflation in 2022.[118] The Federal Reserve has failed to reach its own two percent inflation target for most of the past decade, even as unemployment fell dramatically over the same time.

Unemployment Fell as Inflation Remained on or Below Target

Unemployment rate and percent change in core PCE, 2010 to 2021



Sources: Bureau of Labor Statistics, Bureau of Economic Analysis, National Bureau of Economic Research

Notes: "Change in PCE" refers to the percent change from one year ago in core PCE. Dashed line denotes Fed target of 2% inflation. Unemployment rate is for ages 16+.

Evidence suggests that the Phillips Curve—the inverse relationship between unemployment and inflation—has flattened, meaning that the relationship between the two has weakened.[119] One reason for this is that long-run inflation expectations have become more firmly anchored.[120] As noted by Federal Reserve

Chair Jerome Powell recently in testimony to Congress, "[w]ell-anchored inflation expectations enhance our ability to meet both our employment and inflation goals, particularly in the current low-interest rate environment in which our main policy tool is likely to be more frequently constrained by the lower bound."[121] Powell has also said that the Fed would be able to take the necessary actions if expectations became unanchored.[122]

The central macroeconomic challenge of recent decades has been a shortfall in aggregate demand, rather than the risk of inflation.[123] This is the "secular stagnation" advanced by some to explain the rate of recovery from the Great Recession.[124] In fact, concerns that inflation expectations had become anchored *below* two percent led the Federal Reserve to formulate a new monetary policy framework, according to which they seek to balance out periods of below two percent inflation with periods of above two percent inflation.[125] Given that the reality for the past decade has been weak demand and low inflation, short-term increases in demand and inflation after an extraordinary year are unlikely to change these longer-term trends.

The past year has been characterized by a lack of demand as public health policies to slow the spread of the coronavirus meant people couldn't engage in many economic activities, such as dining out, traveling or going to see a movie. As more people become vaccinated and demand returns, there have been some immediate, short-term bumps in CPI because of "base effects"—distortions in year-over-year measures due to abnormally high or low numbers in the preceding year. As the Council of Economic Advisers explained in a blog post on this issue, "[t]welve months later, due to the suddenness and scale of this earlier decline, we expect year-over-year inflation growth rates for the next few months to be temporarily distorted by these sorts of base effects."[126]

Supply chain bottlenecks as demand comes back have also contributed to some short-term increases in CPI. As companies re-adjust to new levels of demand, these bottlenecks should clear. Federal Reserve Chair Powell does not expect them to be contributors to long-term inflation.[127]

These short-term increases will not actually affect long-term trends in inflation because one-off events will not influence inflation expectations. As Chair Powell said recently when testifying before Congress, "[i]nflation dynamics do change over time, but they don't change on a dime."[128]

Low interest rates provide an opportunity to make long-term investments

Low interest rates continue to make timely investment in infrastructure particularly cost-effective.[129] These economic conditions also make concerns about crowding out private investment much less relevant. Indeed, present-day conditions make it more likely for public infrastructure investment to "crowd in" private activity by promoting overall economic growth, a primary determinant of business investment.[130]

While there are many possible causes for today's low real interest rates, they provide a strong signal that now is the right time for bold public investments. Many investments—particularly investments in the human capital of today's children—are all but guaranteed to generate a social rate of return greater than the cost of borrowing, even very long-term borrowing, for the U.S. government—possibly even generating more in future tax revenue than it takes to fund them today. If the private sector had similar or better opportunities, here or overseas, for productive investment, or if owners of capital collectively preferred current

consumption to the growth opportunities presented by available infrastructure investments, then the competition for loanable funds would have pushed interest rates above their current, rock bottom levels.[131]

Low real rates and high expected GDP growth rates make it quite possible that we are experiencing a period when GDP growth exceeds the interest rate on U.S. government debt. Under those circumstances, the national debt will tend to shrink over time, relative to GDP, even without the government running budget surpluses.[132] In addition, the real cost of servicing the debt—in other words, interest payments—is currently smaller relative to GDP than it was in 2000.[133]

CHAPTER 5: RAISING REVENUE THROUGH CONSISTENT TAX ENFORCEMENT AND A FAIR TAX CODE

There are also opportunities to increase total spending capacity by raising additional revenues. The easiest way to do this is by simply enforcing the tax codes already on the books. In April 2021, IRS Commissioner Charles Rettig estimated that the tax gap—the difference between the taxes that are owed and the taxes that are actually paid—"could approach and possibly exceed $1 trillion" each year.[134] Commissioner Rettig attributed much of the growing tax gap to the lightly regulated cryptocurrency sector, foreign-source income and the abuse of pass-through provisions.[135] As some taxpayers continuously develop ever more sophisticated methods of tax evasion, it has become increasingly difficult for the IRS to maintain strong enforcement efforts, particularly as its budget and staffing levels have been slashed in recent years.

As a result, not all taxes that are owed are actually paid, and this tax gap translates into lower revenue, reduced fiscal health for the nation as a whole, a less progressive tax system and greater economic inequality. It means that the burden of paying for public services falls disproportionately on taxpayers who are compliant and on wage earners whose income is reported and transparent. Changes to the tax code, particularly as it relates to wealthy individuals and corporations, are necessary to improve tax fairness, raise revenue and make the United States more competitive. But the federal government must also do a better job of collecting the taxes that are already owed.

Collecting taxes is a basic function of the federal government, and the IRS needs to be restored with multiyear funding and investment to better perform this duty. Cracking down on tax

avoidance does not increase the amount any individual or company owes in taxes but rather increases the amount actually paid—adding revenue that can be used to invest in workers and families. The Biden administration's FY 2022 budget request includes needed investments in the IRS and would provide the IRS with greater resources to stop sophisticated forms of tax evasion, collect more information about obscure forms of income and overhaul outdated technology.[136] These increased IRS investments have the bipartisan support of five recent Treasury secretaries, who have stressed the importance of collecting unpaid taxes, as well as economists and former IRS commissioners.[137]

Estimates of the tax gap reach the trillions of dollars

The tax gap is projected to total $7 trillion over the next decade, according to the Treasury Department.[138] The last official IRS estimate revealed that the tax gap averaged $441 billion each year from 2011 to 2013, and the Treasury Department estimates that after extrapolating for growth in the intervening years, the tax gap reached $584 billion in 2019.[139] Each year, the tax gap costs the federal government around 3 percent of GDP.[140]

The tax gap has grown substantially in recent years. Commissioner Rettig's estimate of a $1 trillion tax gap would be more than double the $441 billion average annual gap from 2011 to 2013.[141] For those three years, the bulk of the tax gap (80 percent) was due to the underreporting of income on timely filed tax returns. Failure to file a tax return on time or at all and the underpayment of reported taxes accounted for the rest.[142] Total unpaid taxes amount to more than the collective individual income taxes paid by the bottom 90 percent of earners.[143] The top 1 percent account for as much as 70 percent of the tax gap.[144]

Much of the tax gap, particularly among the wealthy, is due to different reporting requirements for different forms of income.

Roughly 99 percent of the taxes due on wage and salary income, which is documented by employers and taxpayers and almost universally automatically withheld, is reported to the IRS. Only 45 percent of more opaque forms of income—such as capital gains, rental income, self-employment income and pass-through business income—is reported.[145]

The IRS's budget and staff have been slashed, leading to deteriorating tax enforcement

The IRS's overall budget has declined by 20 percent over the last decade, while its enforcement budget has decreased by more than 20 percent.[146] The number of IRS staff is down by 23 percent, or more than 22,000 employees, over the same period.[147] Lower budgets translate into fewer auditors. In 2017, the IRS had 9,510 auditors—down from over 14,000 in in 2010. The last time the IRS had so few auditors was in the mid-1950s, when the U.S. population was half the size it is today.[148]

Other estimates confirm these trends. In 2020, while testifying before the House Ways and Means Committee, Chye-Ching Huang (now the executive director of the Tax Law Center at NYU Law) showed that, since 2010, overall IRS funding was cut by 21 percent and enforcement funding was cut by 24 percent, while the number of income tax returns grew by 9 percent.[149] At the same time, the number of operations staff fell by 31 percent, and the number of revenue agents with the expertise to conduct audits of complex returns fell by 35 percent.[150]



Sources: Testimony of Chye-Ching Huang before the House Ways and Means Committee, CBPP calculations of IRS data

At the same time, the IRS has taken on more responsibilities, particularly since 2020. These include two consecutive tax filing seasons with delayed filing deadlines, three rounds of Economic Impact Payments (EIPs), a retroactive change to the taxation of unemployment benefits to provide up to $10,200 in relief and the administration of the new enhanced child tax benefit.[151]

Between 2000 and 2018, the share of individual income tax returns examined by the IRS plummeted by 46 percent, and the share of corporate income tax returns examined fell by 37 percent.[152] The audit rate for filers with more than $1 million in annual income fell by 61 percent, while the audit rate for corporations with more than $1 billion in assets is down 51 percent.[153]

Audit rates have plummeted across the board but especially for wealthy taxpayers. The audit rate for millionaires fell from 8.4 percent in 2010 to just 2.4 percent in 2019.[154] In the mid-2010s, the richest 0.01 percent of taxpayers saw close to 30 percent of their tax returns audited. Just a few years later in 2019, that number fell to under 10 percent.[155] A 2020 report from the Treasury

Inspector General for Tax Administration (TIGTA) found that the IRS failed to investigate more than 369,000 high-income individuals, with estimated tax due of $21 billion, that did not file a tax return from 2014 to 2016.[156] The IRS successfully detected tax noncompliance among these households but did not have the staff to work the cases. Another 510,000 individuals, with an estimated tax liability of $25 billion, are sitting in the agency's inventory streams but are unlikely to be pursued.[157]

The collapse in enforcement—mainly due to decreased IRS budgets and staff but also due to a lack of political will—also manifests itself in taxes on particular forms of income. The audit rates for both S Corporation and partnership returns—two forms of pass-through income—have fallen by more than 40 percent since 2010. High-income individuals, who have seen their audit rates fall overall, disproportionately own such pass through businesses.[158]

The wealthy take advantage of lax tax enforcement

Fewer enforcement capabilities within the IRS mean more opportunities for the wealthy to take advantage. Estimates suggest that the top 1 percent account for at least 28 percent and potentially as much as 70 percent of the tax gap.[159] New research from IRS analysts John Guyton and Patrick Langetieg and economists Daniel Reck, Max Risch and Gabriel Zucman shows that tax evasion is significantly higher at the top of the income distribution. Underreported income rises from 7 percent in the bottom 50 percent of the income distribution to over 20 percent in the top 1 percent of the income distribution.[160] This evasion among the top 1 percent is costing the federal government $175 billion per year. The researchers also demonstrated that random audits underestimate tax evasion at the top of the income distribution and do not capture more sophisticated forms of tax evasion, such as

utilizing offshore accounts and manipulating pass-through business income.[161] Similarly, economists Natasha Sarin and Larry Summers found that underreporting of income is more than five times as high for individuals who earn $10 million or more each year than it is for those who make under $200,000.[162] The 2020 TIGTA report found that almost 880,000 high-income individuals, with an estimated collective tax liability of nearly $46 billion, did not file tax returns from 2014 to 2016.[163]

Increased enforcement and reporting requirements will boost revenue

Increased IRS enforcement and reforms to reporting requirements will significantly boost federal revenue. Economists Natasha Sarin and Larry Summers posited in a 2019 paper that the IRS could shrink the tax gap by around 15 percent over the next decade and generate over $1 trillion in additional revenue by increasing enforcement resources, performing more targeted audits of high-income earners, raising information reporting requirements and investing in information technology. Sarin and Summers found that increasing audit rates to 2011 levels could generate over $700 billion in additional tax revenue between 2020 and 2029.[164]

Audits of high-income earners are a more efficient use of IRS resources and yield greater revenue. In 2013, the IRS estimated that an extra hour spent auditing someone who earns $200,000 a year generated only $650, while an extra hour spent auditing someone who makes $5 million or more a year generated around $4,900.[165] Wealthier individuals tend to have larger tax liabilities, so discrepancies between what is owed and what is paid can be larger in magnitude. They also have more complex returns, as their income frequently comes in more opaque forms where information reporting and compliance are lower, as well as more incentives to evade or avoid taxes.

Improved information reporting can increase compliance and shrink the tax gap. Underreporting of income on filed tax returns accounts for 80 percent of the tax gap, and underreporting is most common among categories of income that are less visible to the IRS, such as capital gains, rental income, self-employment income and pass-through business income.[166] Wealthier Americans are more likely to have these forms of income, and the IRS estimates that up to 55 percent of such income can go unreported.[167] Sarin and Summers find that increasing reporting requirements for individual income categories subject to "some information reporting" and for income subject to "little or no information reporting" would generate nearly $2 trillion in tax revenue.[168]

Overhauling antiquated IT systems and increasing IT outlays can also help shrink the tax gap. In 2018, the IRS spent only $2.5 billion on IT investments—just 15 percent of what Bank of America spent to serve only a quarter of Americans. Most of the IRS's hardware is beyond its useable life, while some of its software is several releases behind the most up-to-date version.[169] Some of the IRS's IT systems are over 50 years old—the oldest and highest risk systems in the federal government.[170] Maintaining the antiquated IT systems that layer new systems on top of an obsolete infrastructure is actually more costly for the IRS than switching to a modern system.[171] Better systems for matching taxpayer filings with third-party information returns and increased investigation of mismatches can also yield significant revenue.[172]

Economists Daniel Reck, Max Risch and Gabriel Zucman also find that greater fiscal support for the IRS is necessary to combat widespread tax evasion by the top income earners in the United States. They propose a number of strategies to clamp down on tax evasion: greater scrutiny of pass-through businesses, more comprehensive audits, more thorough litigation of tax disputes, new regulations that explicitly prohibit legally questionable

avoidance strategies and programs to encourage whistle-blowing.[173]

The Congressional Budget Office (CBO) estimates that increasing IRS funding for examinations and collections by $20 billion over 10 years would increase revenue by $61 billion and that increasing funding by $40 billion over 10 years would increase revenue by $103 billion. These estimates only capture the direct effect of enforcement and do not include the indirect effects, such as deterrence and greater voluntary compliance.[174] Additionally, the estimates understate the level of investment necessary to restore the IRS, assume rapidly diminishing returns to modest increases in investment, exclude the long-run benefits of increased enforcement beyond a 10-year window and consider a limited range of IRS interventions (excluding better information reporting and IT improvements).[175]

CBO acknowledges that increased funding for IRS enforcement activities could improve tax compliance and increase federal revenue, but due to the scorekeeping rules used by Congress, it does not count this additional revenue in formal cost estimates or for budget enforcement purposes.[176] Under these scorekeeping rules, CBO does not include added revenue or reductions in mandatory spending that might result from additional spending. Congress established these rules to avoid crediting uncertain potential savings as an offset against certain upfront spending. CBO does not count potential revenue from legislation in a cost estimate if that revenue does not come from changes in the tax code; it also does not count budgetary savings if they result from funding in authorizing legislation for administrative or program management activities (such as increased IRS enforcement).[177]

President Biden's FY 2022 budget request boosts the IRS's funding. The Biden administration's budget calls for a $13.2 billion baseline budget for the IRS in fiscal year 2022, which

would amount to a $1.2 billion or 10.4 percent increase over the 2021 enacted level. Part of that increased baseline budget, combined with an additional increase of $417 million for tax enforcement as part of a multiyear initiative to increase tax compliance and revenues, would boost resources for tax enforcement by a total of $0.9 billion.[178] The IRS would use this funding to increase oversight of high-income and corporate tax returns.[179]

President Biden's American Families Plan includes significant investment in the IRS to help pay for the American Families Plan, President Biden has proposed giving the IRS more enforcement power and an extra $80 billion over the next 10 years to help crack down on tax evasion by high-earners and large corporations.[180] The plan also includes new disclosure requirements for individuals who own pass-through businesses and for other wealthy individuals who may use sophisticated methods to hide income. The Treasury Department believes that reforms to the IRS and more aggressive tax enforcement will generate an additional $700 billion in tax revenue over the next decade ($460 billion from expanded information reporting and $240 billion from increased IRS staff and upgraded IT systems).[181] This is a conservative estimate, as studies have shown that investments of this magnitude could generate more than $1 trillion over a decade.[182] The Treasury Department also finds that these reforms will raise $1.6 trillion in the second decade, as investments in the IRS often take several years to reach their ultimate payoff.[183]

The Treasury Department has outlined reforms that will provide the IRS with greater resources to stop sophisticated forms of tax evasion, provide the agency with more complete information, overhaul outdated technology and give the IRS the authority to regulate tax preparers.[184] Specifically, the Biden administration

"would require financial institutions to report information on account flows so that earnings from investments and business activity are subject to reporting more like wages already are."[185] Importantly, this would not create an additional burden on the taxpayers affected (with income from financial accounts) as financial institutions would report information they already know about taxpayers in reports they already file.[186] But the IRS would have the information to verify income, incentivizing taxpayers to accurately report their income. President Biden has committed to focusing more aggressive tax enforcement on the most wealthy individuals, rather than Americans with incomes of less than $400,000.[187]

The extra $80 billion would be an increase of two-thirds over the IRS's entire funding levels for the past decade. President Biden's commitment over the 10 years is important because it signals to potential tax evaders that stronger enforcement is here to stay, and it will take time to build up the necessary infrastructure and technology and to train IRS staff to conduct complex audits. The disclosure requirements are important because as former IRS commissioner Fred Goldberg said, "audits alone will never do the trick."[188] Investment in the IRS truly pays for itself. The IRS estimates that each additional dollar spent on tax enforcement yields $4 in revenue. The potential deterrence effects, given that the U.S. tax system largely depends on voluntary compliance, are even greater, with an estimated return of $24 for each dollar invested.[189]

Only multiyear funding, such as that included in the American Families Plan, will enable the IRS to make the necessary reforms—to hire and train staff, make multiyear investments in upgrading information technology (IT) and build up enforcement capabilities. IRS Commissioner Rettig told Congress earlier this year that "mandatory, consistent, adequate, multiyear funding

allows us to plan appropriately."[190] More IRS staff must be hired and trained. It takes four to five years for the IRS to train new staff to become revenue auditors capable of detecting fraud in the most complex cases, such as those common among high-income individuals, partnerships and large corporations.[191] IRS staffing suffered from a hiring freeze from 2011 to 2018, which has contributed to a generation gap at the agency with as much as 40 percent of the agency's current workforce eligible to retire in the next several years.[192]

The IRS also must overhaul its antiquated IT systems to better match information and more efficiently process and examine tax returns. In 2019, the IRS outlined its multiyear IRS Modernization Plan, which is a six-year strategy to modernize the agency's IT infrastructure expected to cost approximately $2.3 billion to $2.7 billion.[193] Incremental, yearly funding will not enable the IRS to fully implement this plan. Many economists and tax policy experts have consistently made the case for multiyear funding provided directly through authorizing law, as well as a "multi-year 'allocation adjustment' to appropriations" that would allow for additional appropriations for the IRS that would not count toward its overall appropriations and thus would not be forced to compete with other discretionary spending priorities.[194]

Reforms to and reinvestment in the IRS are necessary to administer a more fair and effective tax system—one in which individuals of different income levels and with different sources of income contribute equitably. A foundational principle of good taxation is that individuals with the same level of income, regardless of the type, should pay the same in taxes. Increased funding and staff as well as improved disclosure requirements, information and technology will help the IRS pursue high-income taxpayers who evade their tax liability, ensure that more opaque forms of income are reported, investigate cases of underreported

income and begin to close the tax gap. Even in its current state of continued disinvestment, the IRS collected more than $3.5 trillion in taxes in 2018 with a budget of just $11.4 billion; greater investment will empower the IRS to be even more effective.[195] Reforms to the IRS will lead to greater revenue, improved fiscal health for the nation and a more progressive tax system.

Corporations and the wealthy should pay their fair share

The United States can raise revenue for public investments by asking corporations and the wealthy to pay their fair share. The Biden administration has proposed restoring the top individual marginal tax rate to its pre-2017 Tax Cuts and Jobs Act level and taxing labor and capital income at the same rates for households with incomes exceeding $1 million.[196] Going beyond current law, the Biden administration has announced intentions to reform corporate taxes to raise an additional $2.5 trillion over the next 15 years.[197] The plan would set the corporate tax rate at 28 percent, which is higher than the current 21 percent, but still lower than the 35 percent rate before the passage of the Trump administration's tax law. [198] The changes would also bring U.S. corporate taxes more in line with those of other advanced economies. The only OECD countries whose corporate taxes account for a lower share of their GDP than the United States' are Hungary and Latvia.[199] The changes would also help end the "race to the bottom" in international tax laws, in which countries compete against one another by lowering their tax rates to attract multinational corporations' profits and activities.[200] This harms all countries' abilities to raise adequate revenue to fund necessary public investments.



Source: Organisation for Economic Co-operation and Development
Note: Tax on corporate profits is defined as taxes levied on the net profits of enterprises. It also covers taxes levied on the capital gains of enterprises.

In June of 2021, the G7 reached an agreement on a U.S. proposal for international corporate taxation, which was then accepted by the G20 in July.[201] This agreement is evidence of renewed international cooperation under the Biden administration and could lead to the largest change in international corporate taxation in a century, solving a long-running structural problem with international tax and contributing to the fiscal sustainability of the American Families Plan and American Jobs Plan.[202]

The agreement would be an important step in preventing large companies from shifting their profits to tax havens by requiring them to pay taxes in the place where they actually sell their products. The agreement also would institute a global minimum tax of at least 15 percent on a country by country basis. These measures would increase tax revenue in the United States and places with similar tax rates, while making large companies pay taxes in the places where they actually do business. The Organisation for Economic Co-operation and Development

(OECD) has estimated that the agreement could generate an additional $150 billion a year overall in tax revenues.[203]

The OECD announced in early July that 130 countries had agreed to the proposal on a global minimum tax of at least 15 percent on multinational corporations. The 130 countries, which include major economies such as China and India and major tax havens such as Bermuda and the Cayman Islands, represent more than 90 percent of global GDP.[204] The agreement, which is identical to the one agreed to by the G7 and G20, is a significant accomplishment for the Biden administration after just six months in office, and as Treasury Secretary Janet Yellen said, marks "an historic day for economic diplomacy."[205] The 130 countries endorsed a blueprint for a global minimum tax and pledged to work for final approval by the end of October with the new rules set to be implemented by 2023.

In short, there are ample opportunities for raising additional revenue from the very wealthy and big corporations that will benefit from long-term investments that boost capital and labor productivity.

CONCLUSION

The United States has chronically underinvested in the inputs to economic growth—capital and labor—for decades. This hurts our long-term economic prospects. The American Rescue Plan and the successful roll out of coronavirus vaccinations have led to a robust economic recovery. Additional investments in our physical and human capital that will increase our future potential output are needed to drive long-term economic growth.

Policies to invest in our crumbling physical infrastructure, bring it into the 21st century, facilitate the greater labor force participation of women and allow everyone to make investments in and make good on their investments in their human capital will all increase the capital and labor stocks and their productivity, increasing the future potential output of our economy and driving long-term economic growth.

We have the fiscal capacity to make these investments, with well-anchored expectations about inflation as well as continuing low interest rates that make the cost of servicing debt minimal. We also have revenue-raising options, even before discussion of raising taxes, with the low-hanging fruit of ensuring that existing tax laws are enforced, especially so that the wealthy pay their fair share.

This is a unique moment to rebuild our economy to be stronger, more equitable and more just. We have the policy tools to meet the moment.

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VIEWS OF RANKING MEMBER MIKE LEE

Like many annual publications, the *Joint Economic Report* is a chance to look back and to look forward. We will reflect on the difficult year of 2020, which blindsided a strong economy with an unprecedented pandemic. But we will also look ahead to consider ways that American life can be improved in 2021 and beyond, with special attention to the key priorities of reconnecting Americans to work and supporting families. Work and family are two pillars of American life that I have tasked Joint Economic Committee Republican staff with studying. It is important to understand what policy choices might strengthen these institutions, especially after an unprecedented, difficult year.

The year 2020 was one of the most tumultuous, stressful, and challenging in recent memory. A prosperous economy, the product of steady growth over a decade, was suddenly thrown into chaos in early March with the arrival of COVID-19. Many aspects of economic, social, and institutional life were inhibited or even temporarily abandoned. Twenty-two million Americans lost their jobs. Many more lost access to social support networks like schools and churches. Hundreds of thousands lost their lives to COVID-19 and many more lost their loved ones.

However, life began to return in the spring and summer as Americans learned more about how to keep themselves, their friends, and their families safe. The boundless creativity of individuals and businesses was on full display as they made use of technology and outdoor events to help keep up their social and professional relationships, even in the face of the challenges presented by COVID-19.

The greatest breakthroughs in returning to normal came towards the end of the year, as several efforts to create a vaccine ultimately succeeded. The American approach to solving problems through competition and choice prevailed, giving Americans a means to protect themselves and those around them. This would ultimately dramatically curb the spread of COVID-19 and set the stage for the recovery.

The first goal for the recovery is to reconnect Americans to work. Work is not merely a source of income; it also creates social connections and builds a sense of purpose and self-worth. It is therefore critical that we return to a robust labor market similar to that of early 2020, with more than eighty percent of working-age Americans employed. A strong labor market creates opportunities for those who have historically struggled to find work in weaker economies, strengthens workers' bargaining power, and increases their wages.

In returning Americans to work, we should study the policies that made the early part of 2020 so successful, but also aim to learn from the pandemic itself: jobs can be made more flexible, and impediments to working remotely or across state lines can be removed to help get people back to work and keep a wide variety of jobs available to them even after the recession is over.

The second goal for the recovery is to support families. Families were harmed disproportionately by restrictions placed on schooling and childcare during the pandemic. One of the best ways to support them is through more choice, pluralism, and flexibility in these important services. We can also make life more affordable for families in many ways, for example, reforms to the child tax credit that would offset their payroll tax burden.

The ideas contained in this report are just a start for policymakers. But much of the hardest work in this recovery will come from the

American people themselves, who will reopen and rebuild the small institutions that dot our social landscape: volunteer organizations, community groups, and places of worship. I look forward to seeing that growth in the year to come.

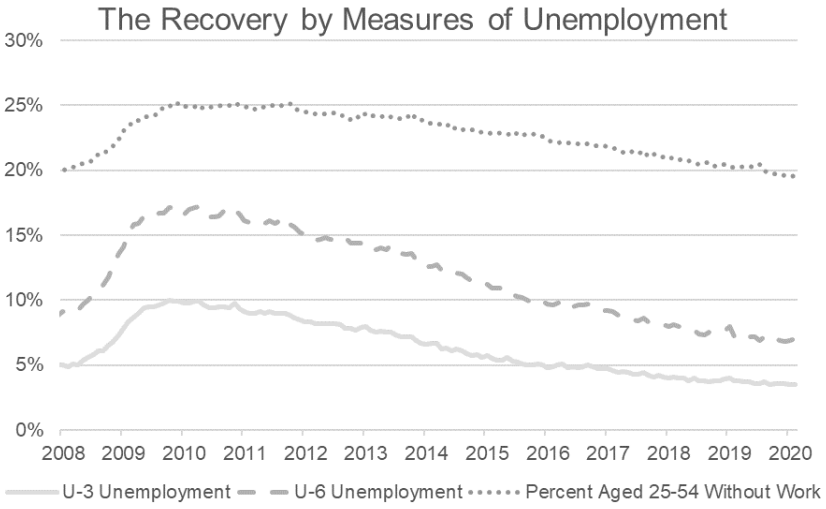
CHAPTER 1: THE YEAR IN REVIEW

The year 2020 was arguably the most eventful in U.S. economic history. The economy was strong at the beginning of the year, led by the tightest labor market in a generation. Then, in March, the rapid spread of Coronavirus Disease 2019 (COVID-19) brought economic activity to a virtual standstill, as Americans reduced their level of physical contact with each other in an effort to slow the spread. This created one of the largest shocks, and certainly the most sudden shock, that the U.S. economy had ever experienced. Over the late spring and summer, the economy began to reopen and many Americans returned to work, often under new precautionary measures. Finally, in the last months of the year, a resurgence of the virus slowed the recovery, but promising vaccine developments offered hope for a stronger return the following year.

PRE-PANDEMIC: JANUARY AND FEBRUARY

At the beginning of 2020, the labor market was at its strongest in decades. The *Economic Report of the President* (ERP, or *Report*) touts an unemployment rate of just 3.5 percent at the end of 2019 and notes that this was the first time the measure had dipped below 4 percent since 2000. As an additional measure, it offers the U-6 unemployment rate, which includes those who are employed only part-time for economic reasons; this measure stood at an all-time low of 6.7 percent in December 2019. [1] There is one more measure, unmentioned in the ERP's summary but increasingly used by labor market analysts for additional context: the share of working-age Americans who hold a job was 80.5 percent, the highest since 2001.

Figure 1-1



Source: U.S. Bureau of Labor Statistics, via FRED

The ERP identifies this tight labor market as the primary source of the economy's strength. It further makes three main points about the labor market. First, the strength of the economy allowed income to be shared more broadly than it had been in the recent past. Second, it was better than most forecasters expected was possible. And finally, it was aided by specific policy choices. The ERP is right on all three counts.

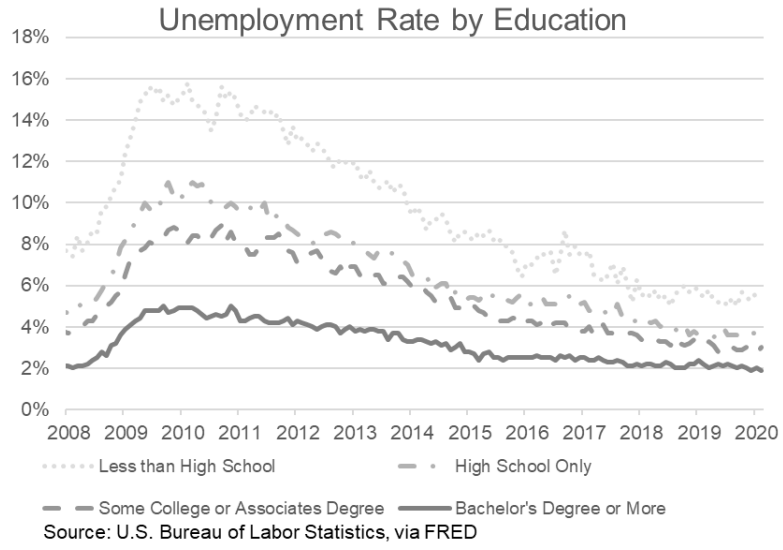
Robust labor markets are critical to broad prosperity. A strong labor market not only extends job opportunities to workers who would not have those opportunities under a weaker economy, but also increases wages for workers in the aggregate as employers compete to attract scarce talent by raising their pay.

This is especially important to workers with lower education levels, Black workers, and Latino workers, who are more likely to suffer from cyclical employment than more-educated workers or White workers. They therefore have more employment to gain from recoveries. While it may be difficult to determine the exact

reasons for this empirical fact, it is relatively simple to observe. The recovery that lasted from 2009 to the beginning of 2020, and eliminated much of the cyclical unemployment of the 2007-2009 crash, serves as an example.

At the bottom of the post-financial crisis trough, there were elevated unemployment rates for workers of all kinds. However, unemployment rates were much higher for workers with lower levels of education. The ensuing recovery improved employment for workers of all education levels, and also closed much of the gap between education levels. It removed about ten percentage points from the unemployment rate for those with less than a high school education. By contrast, it removed three percentage points from the unemployment rate for those with a bachelor's degree or more. While everyone stands to benefit from a strong economy, those with lower education benefit more in relative terms because they are harmed more by a weak economy.

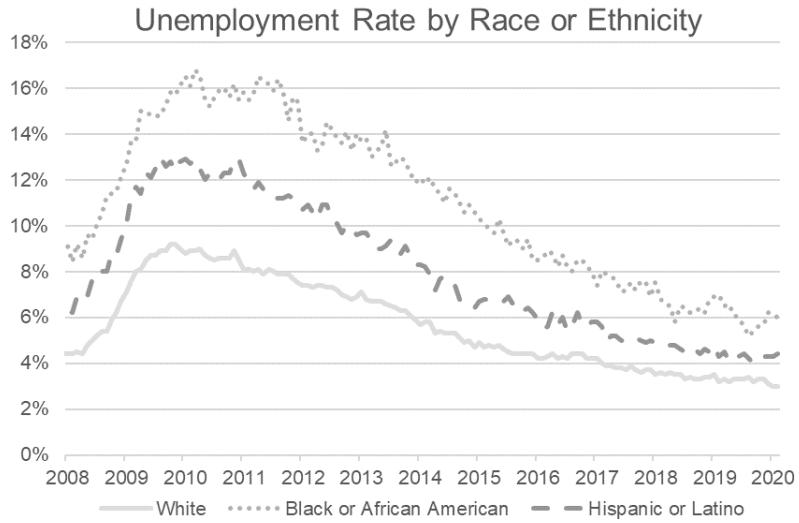
Figure 1-2



Source: U.S. Bureau of Labor Statistics, via FRED

The dynamics of cyclical employment by educational attainment are echoed in the dynamics of cyclical employment by race. Over the course of the recovery, the unemployment rates for Black and Latino workers fell by more than twelve points and more than eight points, respectively. In contrast, the unemployment rate for White workers fell by six points. All groups did better under a stronger economy, but Black and Latino workers had much more room to benefit from a stronger economy.

Figure 1-3



Source: U.S. Bureau of Labor Stastics, via FRED

The result of this stronger economy was that workers of all kinds had more bargaining power than they had previously, and their wages began to rise at a faster rate than they had previously.

There is a general economic relationship between employment and wages; typically, the more employment, the faster the wage growth. In theory, this relationship might exist because as employment rises, firms may need to offer competitive wages to attract workers employed at other firms. In contrast, if

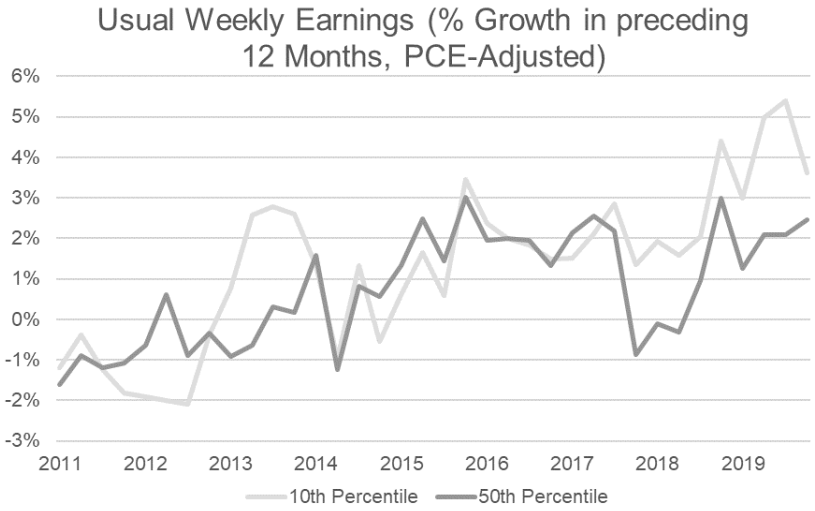
employment is relatively weak, firms may be able to hold wages constant and simply offer jobs to previously-unemployed workers.

The relationship between employment and pay growth also holds empirically under most circumstances. It is strongest using the prime-age employment-population ratio as the measure of employment, and the employment cost index as the measure of pay.[2]

These theories concern nominal pay raises, and not necessarily real ones. However, the final few years of the 2009-2020 expansion were marked by an extended period of accelerating real wages, especially for lower-wage workers, who earned raises even faster than the median worker did. The lower portion of the wage distribution was compressed and inequality was reduced.

Graphed below is the inflation-adjusted growth in earnings throughout the recovery for two kinds of workers: those at the tenth percentile of the earnings distribution and those at the median. The wages of an earner at the tenth percentile grew consistently from 2015 onwards, and at a faster rate than those of the median worker from the middle of 2017 onwards.

Figure 1-4



Source: U.S. Census Bureau, Current Population Survey

The ERP discusses one other possible contribution to rising 10th-percentile wages: state and local minimum wage laws. Some analysts suggest these changes contributed significantly to the trend, while others noted that places without minimum wage increases also saw lower-wage workers catching up with the median.[3]

One further consideration is useful in evaluating the claim: minimum wage laws may be endogenous with respect to the overall health of the low-wage labor market. That is, jurisdictions feel more emboldened to pass minimum wage laws when the labor market for low-wage workers is strong and able to absorb those increases.

Both the trend towards expanded employment and the trend towards faster wage growth are beneficial in isolation. However, they are especially good in tandem, because their desirable qualities are multiplicative. Not only was wage growth accelerating faster than before, but also, more jobs experienced

accelerated wage growth than before. The result, as the ERP notes, was a strong increase in real incomes for all households toward the end of the expansion, but especially strong increases for Black and Hispanic households: 7.9 and 7.1 percent, respectively, in 2019.[4]

Overall, as of early 2020, the strong labor market contributed to an environment of rising incomes, especially at the lower end of the income distribution.

The ERP makes a second point about the strong labor market of early 2020: it was stronger than many forecasters thought possible. This is largely a technical point, but it is an important one. Many forecasters use predictions about long-run equilibrium employment. The economy of 2019 and 2020 had far exceeded typical forecasters' predictions.

It did so on two fronts simultaneously. The first was labor force participation: more people sought jobs than forecasters expected. The second was unemployment: the people who did seek jobs were more successful in doing so than forecasters expected.

Past Congressional Budget Office (CBO) economic projections, which hew closely to professional consensus, show both of these errors clearly. Their projections from the month of January 2017, for example, predicted a decline in labor force participation through the fourth quarter of 2019, from the then-current value of 62.9 percent to 62.6 percent.[5] This was consistent with a belief that labor force participation was already at its maximum, and would only decline as the population grew older and accumulated more retirees. Instead, labor force participation increased to 63.2 percent over that time frame.[6] That is, more people looked for jobs than CBO expected.

The January 2017 projections also envisioned an unemployment rate of 4.7 percent in Q4 of 2019.[7] Instead, the unemployment rate

trended down to 3.6 percent. That is, of the people who were seeking jobs, more of them were successful than CBO anticipated.

CBO was not unusual in making these mistakes, and it is not singled out here for critique. Rather, it is a non-partisan organization that admirably makes falsifiable predictions on difficult subjects. This is instructive, even when the predictions turn out to be mistaken.

Furthermore, CBO reflected accurately the consensus of the time. Even as early as 2015, respected labor economist Alan Krueger was already making the argument that labor markets were tight, and that lost labor force participation was mostly a continuation of structural, not cyclical, trends.[8] While at least one of these structural trends—aging of the population—was clear-cut, the cyclical portion was underestimated, and an improving economy brought more people into the workforce for another four years.

One of the most important reasons for this mistake was a relatively simple one. Some people who do not identify as seeking jobs nonetheless end up taking jobs as the economy improves. They may identify as students, or disabled, or retired, or as homemakers. These are perfectly legitimate reasons not to have a job, and for some people, those reasons are absolute. However, many others who place themselves in these categories do so conditionally, and only under poor economic conditions. If economists mistakenly assume that those individuals are *permanently* out of the labor force, rather than *conditionally* out of the labor force, they will underestimate the labor force's potential size.

This mistake ultimately matters because it informs policy. Policy choices like the 2017 tax reform, which cut taxes on net, are relatively better in economic environments where there is more labor market slack, and relatively less effective in environments where there is less labor market slack. Tax cuts allow more money

to stay in the private sector for people to purchase goods and services. If there were no more workers to be found—if everyone was working as hard as they desired to be—then firms could not, on net, respond to that increased demand with increased hiring. They might instead have to raise prices, leading to inflation and an "overheating" of the economy.

Many critiques of the 2017 tax law, from the Dallas Federal Reserve President Robert Kaplan, to the International Monetary Fund's Christine LaGarde, focused specifically on this point.[9,10] The critiques that took this angle were mistaken; there was enough labor available in the economy to serve not only all of the baseline demand, but also the demand enabled by greater after-tax income in the private sector.

The tax law may also have expanded labor supply, as well as labor demand. The tax law generally reduced marginal tax rates on labor, increasing the after-tax wages for many individuals and incentivizing them to work more. The Joint Committee on Taxation (JCT) considered this effect, and projected that the law would increase labor supply by 0.6 percent on average while those provisions were in effect.[11] This projection took into account both the substitution effect, where people choose between work and leisure based on after-tax wages, and the income effect, where people may choose to work less if they are wealthier. The substitution effect is the larger of the two.

While changes in labor supply explain some of the outperformance of the labor market relative to 2017's expectations, it does not explain all of it. Between the greater-than-anticipated labor force participation and the lower-than-anticipated unemployment rate, the outperformance by early 2020 was too large to be explained by JCT's labor supply effects of tax reform alone.

Instead, it is likely that there was some untapped potential labor supply in 2017 that could have been brought into the economy by any increase in labor demand, even if tax reform had not occurred. However, to bring about this labor demand, policymakers would need to explicitly ignore warnings about overheating and pursue expansionary policy. This pursuit ultimately occurred, first through the fiscal channel with tax cuts in 2017, and later, through decreases in the federal funds rate in 2019.

The robust early 2020 labor market, therefore, was brought about by specific policy choices, ones that others—those who underestimated potential labor supply—might not have made. The three points the ERP makes about the labor market are ultimately part of a single chain of events: optimistic and expansionary policy, defying the consensus of a tight labor market or overheating economy, brought more workers into the fold than forecasters thought possible. This then improved market wages, especially at the low end.

The early 2020 labor market deserves considerable discussion for a simple reason; it is a blueprint for the type of economy the United States should attempt to return to—or perhaps, even surpass—after the COVID-19 pandemic is over. The post-pandemic labor force will not be a substantially different group of people than it was at the beginning of 2020, and it should support roughly the same level of employment. Early 2020 demonstrated that the economy can support jobs for at least 81 percent of Americans age 25-54 without inflationary pressures, and this is a valuable benchmark for assessing the coming recovery. Furthermore, it is at least plausible that the economy could have supported even higher levels of employment than that, had the expansion been able to continue absent COVID-19.[12]

Whether the strongest possible labor market lies at early-2020 levels, or somewhat beyond, it will be important to reach those

levels quickly. The previous recovery, beginning in 2009, took a decade to reach that mark. The current recovery can and should do so much faster, especially if lessons from the previous recovery are well-learned. Joint Economic Committee Social Capital Project research shows that a stable long-run path of nominal income is a desirable property of monetary policy, and conducive to strong labor markets.[13] While it was not feasible or desirable to maintain nominal gross domestic product under COVID-19 restrictions, it is desirable to return to a steady path over the medium run.

POST-PANDEMIC: MARCH THROUGH DECEMBER, ECONOMIC RESPONSE

The last ten months of 2020 were unfortunately quite different from the first two. When COVID-19 reached the United States, it struck first in Seattle and New York and soon spread to the rest of the country. Economic activity fell dramatically, primarily from reduced demand for in-person consumption that could risk exposure to the virus, or from state-imposed closures.

The size and speed of this shock was completely unprecedented in U.S. history, and perhaps best illustrated by initial unemployment claims, which reached 6 million in a single week at the end of March. Prior to the pandemic, the all-time largest number of claims was just 695,000.

Figure 1-5



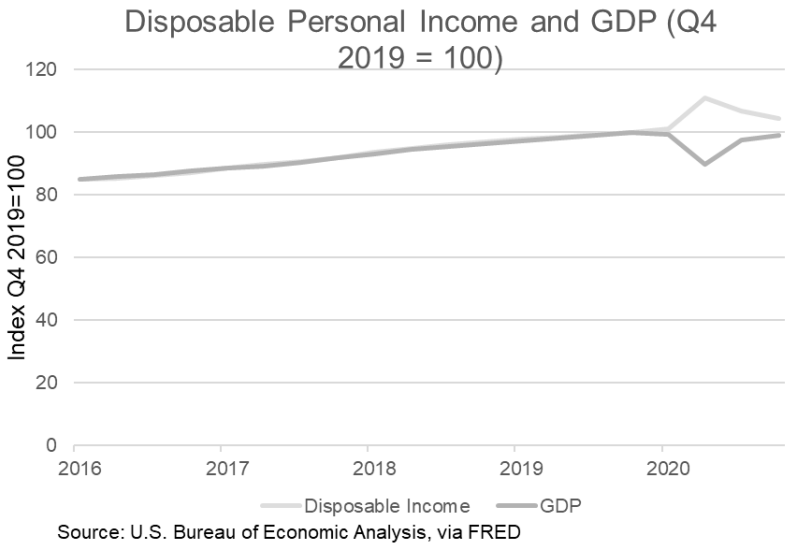
Source: U.S. Department of Labor, U.S. Employment and Training Administration, via FRED

Dealing with such an unprecedented shock took a swift recalculation of policy. The Federal Reserve internalized the new situation quickly and lowered the federal funds rate to zero by March 16th. This accurately reflected the coming shift in market dynamics: as many avenues for consumption were shut down, people began saving more. Meanwhile, the pandemic conditions would make it harder to find worthwhile investments that could earn a return. Under such conditions, it would be natural for interest rates to fall. By contrast, an unchanged interest rate would have been an unintended intervention into capital markets, keeping risk-free interest rates artificially high even as market conditions dictated low returns on saving.

Congress also responded to the shock, later, through a series of fiscal policy bills. The most significant of these was the Coronavirus Aid, Relief, and Economic Security (CARES) Act, signed into law on March 27th. The bill was very large and costly overall. However, it did boost private-sector incomes in aggregate through a combination of tax deferrals and transfers.

One of the largest policies in CARES was an unprecedented expansion of unemployment benefits. The initial expansion under CARES was in fact so large that 69 percent of unemployed workers were eligible for unemployment benefits that would exceed total compensation lost.[14] Exceeding 100 percent of lost compensation was undesirable for two reasons. First, it used fiscal space past even the goal of full insurance coverage; this use of fiscal space would crowd out other, more productive uses or potential uses of money. Second, it would later inhibit a return to normalcy.

Figure 1-6



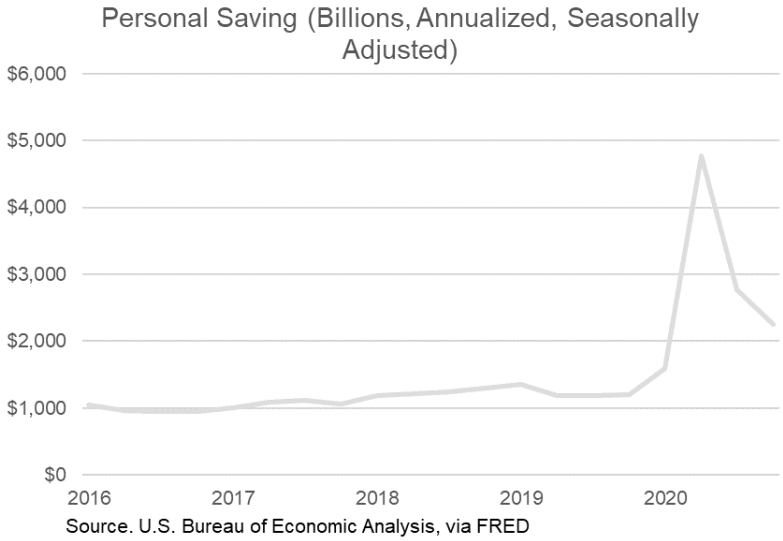
Source: U.S. Bureau of Economic Analysis, via FRED

During the final three quarters of 2020, an unusual trend took hold: GDP became decoupled from personal income. Under normal circumstances, these two measures of economic performance are very similar. Personal income is largely spent on consumption goods (and, sometimes, investment goods), adding to GDP. In turn, GDP creates personal income as people are paid for what they produce. However, under the unusual circumstances of the COVID-19 pandemic, personal income was sustained through

fiscal policy even as people spent less, workers lost jobs, and businesses lost revenues. In fact, for much of 2020, personal income was above its pre-pandemic trends, in part due to the overinsurance mentioned above.

One side effect of the circumstances and policy was that personal saving rose to record highs: at peak, nearly $4.8 trillion of saving, at an annualized pace, in the second quarter of 2020. Private sector saving has a variety of benefits, and is more effective at sustaining firms and investment than overengineered public bailouts for businesses.

Figure 1-7

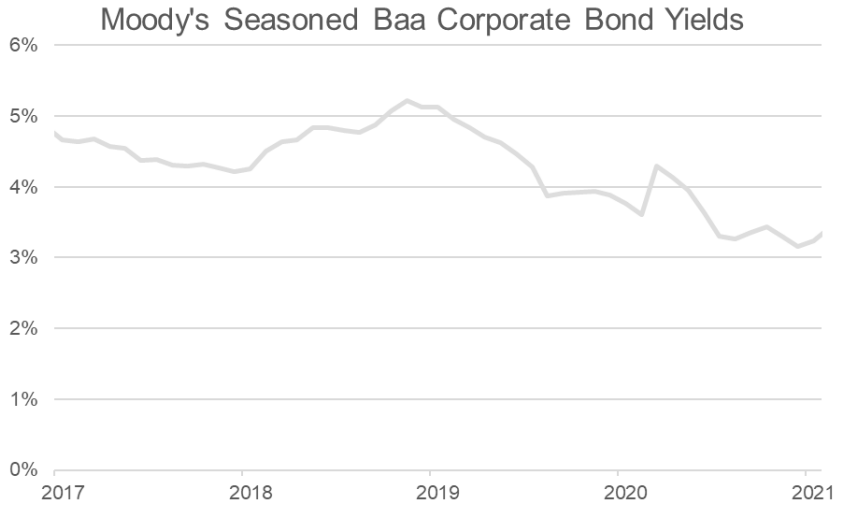


These savings provided for deep and borrower-friendly capital markets. For businesses, they helped them borrow against future cash flows, cover momentary disruptions, and even invest for the future. In housing, they lowered mortgage rates, helped people afford homes, and eventually brought new homes into production.[15]

The year 2020 included, counterintuitively, a large rally in the S&P 500 index. Bonds also rallied (or, alternatively stated, yields fell). This pattern of high valuations and low yields was generally apparent across all asset classes.

Moody's Seasoned Baa corporate bond yields, for example, declined to a 50-year low towards the end of 2020. This measurement is an average interest rate on many moderate-risk corporate bonds. In other words, it is a realistic example of the sort of rate at which a firm might be able to borrow. The rate fell because so many Americans had savings from foregone consumption, and offered more and more competitive terms to borrowers.

Figure 1-8

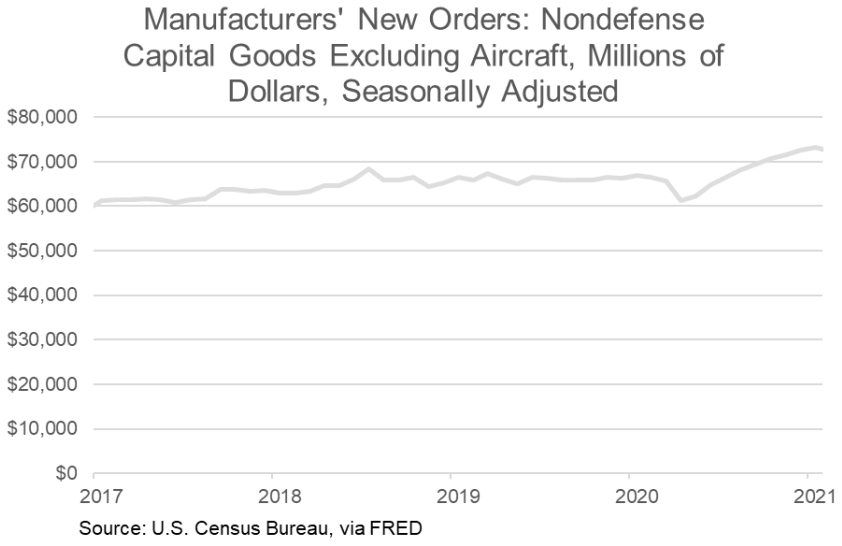


These savings were a private-sector lifeline to firms. Many firms took losses in the latter three quarters of the year. However, many firms expected to be profitable again in the future once the pandemic subsided. Firms with such a profile—firms that need cash injections in the near term, but can pay for that injection by

promising future cash flows—are well-served by a deep capital market with many eager savers. Critically, private-sector investors have the ability to consider the longer run and extend loans only to businesses expected to be viable after the pandemic. By contrast, a government-led approach to lending may have the drawback of propping up firms that would not be viable even absent the pandemic.

The low cost of capital for business also boosted business investment, which actually picked up in 2020. That upswing in capital investment was somewhat counterintuitive, as the pandemic surely made many capital investments less profitable. But it was actually the best plausible outcome for the situation, and it was enabled by the reduced cost of capital.

Figure 1-9

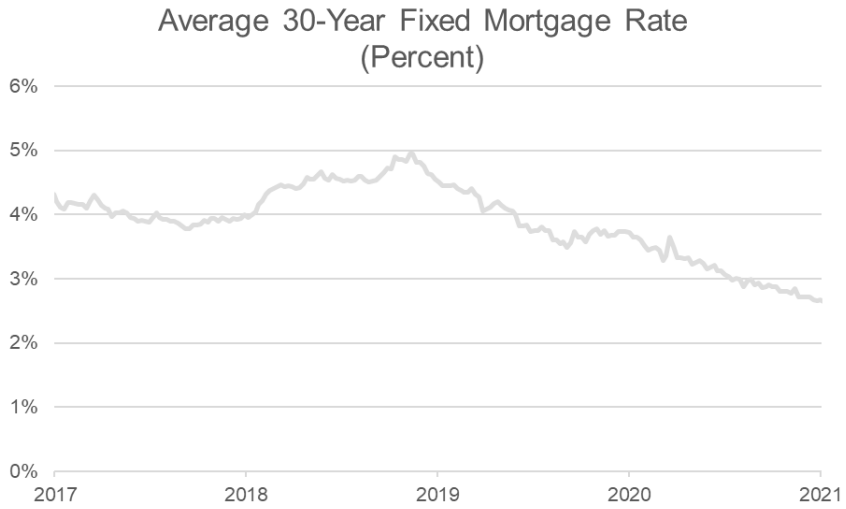


The cost of capital in a market system of creative destruction is a discipline mechanism for a small fraction of persistently inefficient enterprises, forcing them to exit and free up resources for more efficient enterprises. However, if a high cost of capital

would cause many firms to fail, and many resources to go unused, then it is not efficient or market-clearing. Instead, interest rates can be allowed to fall until equilibrium is restored. Given the difficulties of the COVID-19 pandemic, it was desirable for interest rates to fall: even though capital goods spending likely produced a worse rate of return than businesses had planned pre-pandemic, it was still the best use of resources at the time.

A similar trend took hold in housing. High savings drove bond prices upward, and mortgage rates downward. The average 30-year fixed mortgage in the United States dipped below 3 percent for the first time.

Figure 1-10

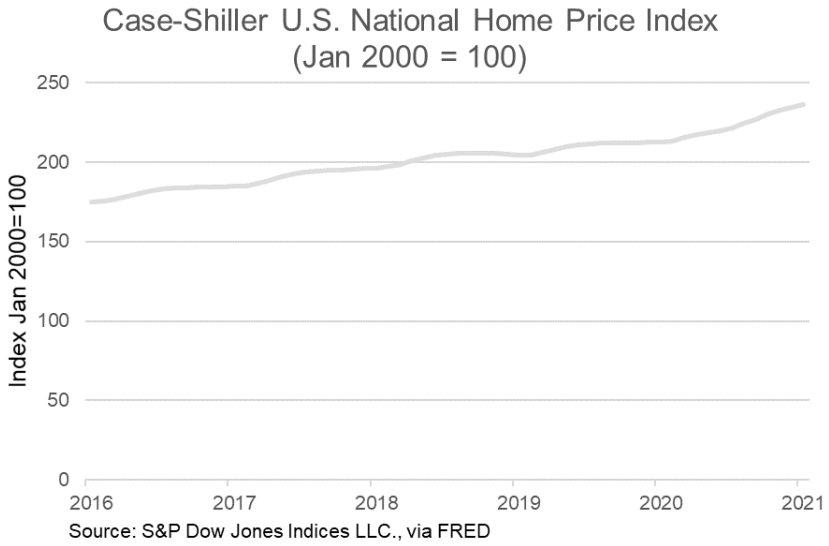


Source: Freddie Mac Primary Mortgage Market Survey, via FRED

This low mortgage rate allowed more Americans to borrow larger sums even at the same monthly payment; therefore, they were more able to pay for homes. In fact, they were able to pay the pre-pandemic market prices, or more, despite the pandemic's diminished opportunities for market income. Home prices

ultimately steadily rose, at rates that somewhat exceeded pre-pandemic rates.

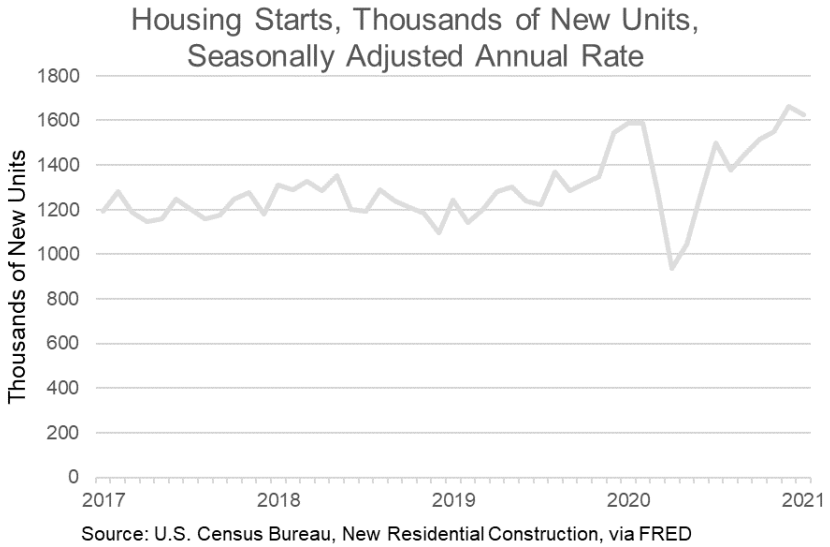
Figure 1-11



Rises in home prices are neither good nor bad in themselves. Any increase in price harms the future buyer just as much as it helps the future seller. However, they can serve as evidence of good or bad trends in the economy. When high housing prices are caused by people having higher ability to pay, that higher ability to pay is a positive development. When high housing prices are caused by limited supply, that limited supply is a negative development.

The rise in home prices during the pandemic was mostly driven by higher ability to pay. In fact, it supported new home construction throughout the pandemic, and home construction ultimately reached new highs, responding to extremely strong consumer demand. In fact, home construction may need to increase even further in order to satisfy that demand.

Figure 1-12



If mortgage rates had been higher, i.e. if Americans were less able to pay for homes and housing prices fell, homebuilders would be less able to pay their workers, and fewer houses would have been constructed. Saving and low cost of capital for home buyers therefore helped save some homebuilding jobs.

All told, through robust saving and lending, the private sector was able to keep a variety of industries growing throughout the pandemic. The saving created a seemingly-counterintuitive trend in asset prices, which increased despite a troubled real economy. However, the rise in asset prices should not necessarily be understood as a boon to savers: they sacrificed in terms of future returns or yields.

Ultimately, private-sector balance sheets were healthy going into 2021: that is, after reopening, households would have enough money, in aggregate, to pay for as many goods and services as before and allow people to return to work at the jobs they had prior to the pandemic. However, the policy environment was no longer

as work-friendly as that of 2020. Given a variety of new policies impeding or disincentivizing work, there were challenges ahead for 2021 as well; if spending returned and workers did not, there would be an imbalance between the nominal economy and the real economy, resulting in inflation.

MARCH THROUGH DECEMBER: CONSTRAINTS ON THE ECONOMY

When Americans judged their conditions to be sufficiently safe, and as economic restrictions were removed, they had the resources to engage in economic activity. Unfortunately, the Government's health response had a mixed record. For example, critical time was lost early on. In some areas, the health system—designed around the goals like caution and privacy—proved sluggish in a fast-changing environment. For example, a researcher in Seattle in early 2020 fortuitously had already collected nasal swabs for the purpose of studying the flu. She was blocked by regulatory agencies from repurposing those samples to screen for COVID-19 in the critical early weeks of Seattle's outbreak, even as she found a case among one of her samples.[16] Furthermore, the FDA was slow to approve privately-developed testing kits for the virus, even as the CDC's own test was flawed.[17] [18]

The Government's guidance on effective non-pharmaceutical interventions (NPIs) early in the pandemic was poor. It mischaracterized COVID-19 transmission mechanisms, which, in turn, led people and organizations to prioritize relatively ineffective avoidance behaviors over effective ones.

For example, it strongly emphasized the dangers of fomite transmission: transmission through touching of infected surfaces. However, experience with the virus quickly showed that it transmitted much more through breath than initially expected, and much less through touch than initially expected. Only in April

2021 did the CDC finally acknowledge that the risk of infection from touching a surface was low, a change that many scientists considered long-overdue. This misleading guidance led Americans to use their time and resources on surface cleaning, resources that could have been deployed on more effective NPIs like holding activities outdoors or filtering air.[19]

By contrast, the CDC failed to emphasize airborne transmission, even as evidence for it mounted. In the summer, scientists appealed to public health bodies to acknowledge airborne transmission, through open letters and newspaper op-eds.[20] In other words, scientists as a whole did not misunderstand the transmission mechanisms, but official public health guidance was behind the state of knowledge in science journals and the popular press. In fact, the CDC did not release guidance acknowledging airborne transmission until October 5th, 2020, months after hundreds of scientists had signed onto open letters begging them to do so.[21]

Top-down executive orders focused on restricting economic activity entirely were often heavy-handed and ineffective. For example, some states attempted to ban the sale of nonessential goods in large stores, even as essential goods were on sale in those same stores. This would invariably require clarifications on which goods were essential. [22] Overall such orders wasted time and did little to minimize person-to-person contact. Bottom-up ideas to reduce contagion implemented by individuals and businesses, such as removing windows on spring days to improve ventilation, were often more creative and effective.

While early stumbles were plentiful in the area of testing and NPIs, the record on vaccines was quite good. Key to U.S. success in this area was robust private healthcare innovation. The U.S. companies Pfizer, Moderna, and Johnson & Johnson were all eventually able to produce vaccines that were deployed in the United States. The

Pfizer and Moderna vaccines were a new technology, never implemented before, known as nucleoside-modified mRNA.

The development of these vaccines was dependent on the expertise and competitive nature of the private sector. While the Federal Government focused extra resources on incentivizing the productions of these particular vaccines, through a program known as Operation Warp Speed (OWS), it alone likely could not have produced multiple vaccines and treatments for the American people. OWS helped fund vaccine research and development through a combination of grants and advance purchase guarantees.

Another successful initiative collapsed the timeline for vaccine development from a typical multi-year timeline to under a year. This was achieved by allowing steps usually done in sequence to be done concurrently instead. This was an extremely important choice: the ERP estimates that even just one month saved on vaccine timelines could be worth a benefit of $155 billion.[23] While a precise estimate for such a complex question is impossible, the ERP has the right order of magnitude. The expedited processes for the COVID-19 vaccines likely saved many months, or even years, relative to a typical timeline.

While the speed of the vaccine development process was impressive overall, more could have been done. For example, a more efficient process for approval would have used the "rolling review" process employed by United Kingdom. The UK's Medicines and Healthcare products Regulatory Agency reviewed data from vaccine makers as it became available rather than waiting for a complete submission before beginning its assessment. This allowed the UK to begin its vaccination campaigns earlier than the U.S..

The first Pfizer vaccinations ultimately occurred on December 14th, and the first Moderna vaccinations followed soon after. With

advanced purchases already complete and production accelerating, an effective counter to COVID-19 was at last within grasp. The year 2020 took a dark turn in March, but it ended with a growing capacity to manufacture vaccines and healthy private-sector balance sheets.

The public balance sheet, however, was damaged significantly by $4.2 trillion of added debt over the fiscal year 2020, and more in ensuing months.[24] Furthermore, the year closed with a variety of federal and state laws on the books that would ultimately impede the recovery: business closures, mandates, and unemployment benefits so large that they frequently exceeded market wages.

Overall, the year ended with a mixed record on policy, and a variety of restrictions to unwind, but also with considerable technological innovations that would help safely reopen the economy.

CHAPTER 2: POLICIES FOR RECOVERY – CONNECTING MORE PEOPLE TO WORK & SUPPORTING FAMILIES

The past year presented major economic and social challenges; however, the American economic and social recovery is well underway. Over more than two years, JEC Social Capital Project (SCP) research has explored strategies to connect people to work, encourage happy two-parent households, increase family affordability, improve investment in America's youth, and strengthen the institutions of civil society. As Americans continue to rebuild, connecting Americans to work, supporting families and children through increasing family affordability, and improving investment in youth are essential. This chapter outlines recommendations that support these important goals.

CONNECTING PEOPLE TO WORK

Improving Healthcare Response and Vaccination Rates Come First

An effective healthcare response and vaccine strategy is foremost in returning more Americans to work. Several deregulatory actions early in the pandemic laid the groundwork for a swifter healthcare response, and emergency use authorizations spurred record vaccine development. Now that several vaccines are available to reduce transmission of COVID-19, Americans can more readily return to normal economic and social activity.

The CEA argues that the unprecedented speed in vaccine development during the pandemic offers insight into "the development of new medical breakthroughs and the key role that deregulation can play in such efforts… As with COVID-19 testing and treatment, other new drugs have the potential to save lives and

substantially improve well-being, which creates high opportunity costs for a long approval process."[25]

Tests were also an effective tool for fighting COVID-19 transmission, providing value not just in diagnostics but also in transmission surveillance. An accelerated regulatory approval process for tests ultimately yielded a more effective pandemic response. Many testing-related regulations, while intended to protect the public, prevented timely medical innovations that could have saved lives during the pandemic.[26] For example, the Centers for Disease Control and Prevention's (CDC) and the Food and Drug Administration's (FDA) regulations prohibiting private testing kits were an early barrier to disease control, and the lengthy approval process for new drugs continues to stand in the way of medical innovations coming to market.[27] Fortunately, the FDA approved 20 different diagnostic COVID-19 tests by the end of the first quarter in 2020, which proved critical to monitoring the severity of the pandemic.[28]

The pandemic was also an opportunity to reconsider other laws that routinely impede access to doctors and medicine. A number of regulations initially impeded a more effective pandemic response, including Federal rules preventing hospital flexibility in virus hot spots; state and Federal restrictions on telemedicine; constraints on virus testing; certificate of need rules for hospital capacity and equipment; barriers to expedited and cross-state licensing of new and retired medical professionals; state rules governing workflow and registration for health care facilities; and rules for online education.[29]

The CEA points to four critical deregulatory efforts that proved invaluable in the fight against the pandemic, including allowing telemedicine on platforms that otherwise fail to meet HIPAA regulations, relaxing Federal licensing restrictions for health care professionals, enabling Medicare telehealth across state lines, and

expanding the list of services that could be performed via telehealth.[30]

Given the benefits of these actions in an emergency, the CEA postulates: "…if the absence of many regulations has improved social welfare, a natural question is why these regulations need to be reimposed when the pandemic subsides. Indeed, the CEA finds substantial benefits from extending many of the existing deregulatory efforts."[31] Though some of these regulations have been temporarily relaxed, it is worth considering their permanent removal following the crisis.[32]

Reducing Regulatory Barriers Is Important in Order to Clear the Path for Recovery

Regulations are often intended to correct perceived market failures and systemic problems, but they typically involve a *de facto* trade off: they create higher costs and barriers to production, effectively reducing access and affordability of goods and services. A cost-benefit analysis, which is a prerequisite for economically significant regulations at the Federal level, can help show whether the regulations are ultimately worth the associated costs. However, not every regulation is deemed "economically significant,"[33] and not every regulation is subject to this scrutiny.

Furthermore, the distributional effects of regulations are not always considered. The CEA argues in the 2021 ERP that regulations are indeed regressive, affecting low-income workers and the families they support. As the CEA points out, regulations that most negatively affect lower income households tend to do so by raising the prices of goods and services on which this income group spends higher shares of their income, including groceries, utilities, and health care—incidentally, goods and services "that are produced by heavily regulated sectors of the economy."[34]

The CEA estimates that gains from deregulatory actions taken by the Trump Administration in these areas "amount to 3.7 percent of the average income of the poorest fifth of households, compared with only 0.8 percent of the richest fifth, suggesting that they benefited the poorest households four times as much as the richest ones."[35] Counted among these improvements for households, the CEA points to 20 deregulatory actions that will continue to deliver benefits for Americans both as consumers and producers, with a select number listed in Table 6-1 including removal of the Affordable Care Act's individual mandate and restoring internet freedom.[36] Additionally, prior to the pandemic, Executive Order 13771, "Reducing Regulation and Controlling Regulatory Costs," introduced a regulatory budget with a regulations cap and eliminated an estimated $50.9 billion in regulatory costs over three years, preemptively increasing the American economy's dynamism and resilience.[37] Altogether, these actions laid the groundwork for a stronger economic rebound in the aftermath of the pandemic.

Deregulatory initiatives both prior to and during the pandemic helped reduce costs not only for consumers but also for employers. Regulatory reform is especially helpful for small businesses and entrepreneurs that would like to grow, expand, and hire additional workers but face high regulatory costs that they are ill equipped to absorb and that prevent them from doing so.

The benefits of deregulatory initiatives could also be enjoyed after the pandemic. As the CEA observes, "regulatory reform may help position the United States for a robust economic recovery and be a powerful tool to help lift up middle- and low-income Americans as the economy recovers from the COVID-19 pandemic."[38] Considering the rising importance of telework, workplace flexibility, and home-based businesses, there are several key areas in which deregulatory actions, at all levels of government, could

help workers, including addressing occupational licensing regimes and curbing the overuse of non-compete clauses, as was mentioned in last year's *Response*.

Telework and Workplace Flexibility

COVID-19 rapidly changed the way Americans work. Seemingly overnight, the fraction of employees working from home grew from one-fifth of the workforce to over 50 percent,[39] and estimates suggest that these workers may now account for more than two-thirds of U.S. economic activity.[40] This change was initially a shock, requiring a rapid adjustment for which many employers and workers were ill-prepared. As the year progressed, however, the successes of telework highlighted the value of flexibility in the workplace.

Before the pandemic, remote work was gradually rising. According to a November 2019 survey, employers were expecting to increase the share of fully or partly remote workers from 33 percent to 46 percent over the next five years, a 45 percent increase.[41] After COVID-19, businesses now anticipate 58 percent of their workers will be remote in some form, representing a 77 percent increase.[42] In another survey, U.S. businesses indicate that they expect the share of total working days from home to triple after the pandemic is over compared to 2019.[43] Similarly, researchers from the National Bureau of Economic Research estimate that "20 percent of full work days will be supplied from home after the pandemic ends, compared with just 5 percent before."[44]

Initially, some workers reported that telework decreased their efficiency due to insufficient access to distraction-free workspaces, poor internet connectivity, and separation from their colleagues.[45] Yet, subsequent surveys reveal that teleworking may

have actually increased productivity. For instance, one third of managers surveyed in April 2020 reported that their workers' productivity increased as a result of telework, and 91 percent felt that the shift to remote work had gone as well or better than expected.[46]

Pre-pandemic research also provides evidence that telework and geographic flexibility can increase worker productivity. A 2012 study of workers in the U.S. Patent and Trademark Office found that productivity increased for employees who started working from home. Productivity increases were even greater among workers who took advantage of the "work from anywhere" program, which allowed them to live more than 50 miles away from the office.[47] Studies of German, Portuguese, and Chinese firms have all observed similar findings.[48]

The rise of telework this past year has also revealed benefits beyond productivity. For instance, Gallup reported that the percent of Americans highly engaged in their work and committed to their job reached its highest level on record in May of 38 percent.[49] Additional surveys have found that employees benefit from the time saved not commuting and the money saved on work-related expenses, while employers benefit from the option to downsize or eliminate their physical offices.[50] Moving forward, 76 percent of workers want to work from home at least one day per week, compared to just 31 percent before the pandemic began – suggesting that COVID-19's effect on work has inspired a long-term desire for flexibility among workers.

After the pandemic ends, employers should continue enabling and expanding workplace flexibility options, recognizing the potential benefits for employees' work-life balances, job satisfaction, and productivity.

Home-Based Business Regulation

In addition to the increasing share of workers that worked from home at least some of the time pre-pandemic, home-based businesses comprise half of all firms, a share that has remained remarkably constant over the years preceding the pandemic and kept pace with the rising number of businesses.[51]

As mentioned in last year's *Response*, the pandemic magnified the negative effects of local zoning restrictions on home-based businesses.[52] Many of these regulations were written prior to the digital age—which makes remote work possible for a broad number of occupations—creating unnecessary barriers to entrepreneurship, particularly for many business owners who for various reasons could not otherwise participate in the traditional labor market.[53]

With the dual headwinds of job loss and stay-at-home orders brought on by the pandemic, many more workers have seized the opportunity to start a home-based business as a way to make ends meet. Applications for new businesses filed by likely employers, including many home-based businesses, rebounded dramatically from June into the third quarter of 2020 after a particularly muted first half of the year due to the pandemic.[54]

Amid the growth in new businesses, there is pressing need for regulatory relief. Anecdotal evidence of unnecessary home-based business regulation abounds. City and local ordinances are used to shut down otherwise legal home-based operations with "no impact" on their neighborhood's character. In essence, these examples fail to meet the typical criteria for enforcing home-based business regulations—the generation of noise, unwanted traffic, noxious odors or unsightly conditions.[55]

The Arizona *Home-Based Business Fairness Act*, mentioned in last year's *Response*, would have permitted "no impact" home-based businesses that otherwise would be prohibited under existing regulations. Despite its failure to pass in 2018, several states and cities have since introduced similar bills and reforms to address regulatory harm on home-based businesses.[56] As working from home increases in prevalence—a trend that was already rising prior to the pandemic—it is in the best interest of states and their localities to review and reform their regulatory frameworks to enable more home-based businesses to thrive.

Occupational Licensing Reform

Occupational licensing continues to be one of the largest barriers to work and is particularly burdensome on military veterans, dislocated workers, immigrants, and those with a criminal record.[57] As the CEA notes, "efforts to combat the inefficiencies of individual state licensing have been ongoing for decades."[58] The 2020 ERP and subsequent *Response* also highlighted state level occupational licensing regimes as a significant barrier to work, and despite the temporary relaxation of these rules for healthcare workers delivering care across state lines during the pandemic and previous emergencies, more permanent reforms must take place. Some states are leading the way, like Arizona, which in 2019 implemented a universal license recognition for those relocating to Arizona. At least three other states have since followed suit, and several more are in the process of doing so.[59]

Though occupational licensing largely occurs at the state level, several federal-level reforms can serve as a model for improving state licensure. The CEA highlights several Federal actions taken to reduce licensing barriers, including by the Department of Veterans Affairs, which enabled its licensed physicians to practice in any state. Awarding Federal grants for state cooperation has led

to several interstate licensing compacts, particularly for health care workers. The benefits of deregulatory actions and mutual license recognition extend to consumers as well. The CEA argues that cost savings from "expanding occupational licensing deregulation for nurse practitioners nationwide could result in $62 billion in cost savings annually."[60]

Furthermore, the Administration took important and appropriate measures to suspend a variety of unnecessary Federal regulations that pre-dated the crisis and served as barriers to an effective response. As the CEA mentioned in the ERP, these efforts included decisions by the Department of Health and Human Services to allow doctors to practice medicine across state lines as well as Administration decisions to allow doctors to provide telehealth services for Medicare patients.[61] Recognition of these critical authorizations dates back to at least the Obama Administration, which highlighted in its occupational licensing framework a 2009 report from the Department of Health and Human Services recommending the expansion of "telehealth networks and reducing legal barriers, based on the effectiveness of telehealth in responding to public health emergencies and disasters."[62] Finally, two of Senator Lee's bills seek to reform occupational licensing regimes. First, the *Restoring Board Immunity (RBI) Act* would enable states to establish a process either for active supervision of licensing boards or meaningful judicial review of board actions to reduce over-reliance on licensing and clarify the necessary steps to establish anti-trust immunity to state boards. Second, the *Military Spouse Licensing Relief Act* would make professional licenses of members of the uniformed services and their spouses portable.[63]

Apart from Federal reforms, states can undertake additional actions. For instance, states can continue to expand reciprocity for professions likely to remain regulated and licensed, such as those

in health care. For a number of other occupations where licensure is not universal across states, reciprocity may not be as helpful, as not everyone has a license. In many of these cases licenses may not be necessary at all. To that end, state-level review of the necessity of licensure for each regulated occupation will help determine whether the current licensing regime meets the goal of consumer safety or primarily insulates current license holders from competition.

Non-Compete Reform

Non-compete agreements prevent employees from subsequently working at firms in competition with their current employer. However, many workers are asked to sign a non-compete only after accepting a job offer; this condition often goes unstated until the worker has invested significant time and energy into securing the job. However, non-compete clauses can benefit workers by creating an environment where costly non-job specific employee training, such as general career skill building, can be internalized through the employment contract.[64] Where non-compete clauses are used to protect trade-secrets they can be an important protection for innovation and research. Policymakers at all levels should study the effects of non-compete agreements more closely to determine their relative costs and benefits and potential reforms.

Potential reforms could improve transparency regarding the existence of a non-compete before job acceptance to help to reduce misuse of these agreements. Alternatively, similar to Oregon and New Hampshire, non-competes could be voided if they are not included in "the original terms of employment."[65] Additionally, research from the Economic Innovation Group (EIG) focuses on several state reforms currently in use or under consideration, including: requiring transparency regarding the existence of a non-compete well in advance of a potential worker accepting a job;

"garden leave" provisions that compensate a worker for abiding by the non-compete; refusing re-write and subsequent enforcement of vague non-competes; bans on non-competes for low wage workers and specific high-skill jobs; and outright non-compete and no-poach bans.[66]

In a separate report, EIG highlights state reforms in 2019 and 2020 that narrowed the application of non-competes to certain jobs and imposed transparency mandates, aimed at improving mobility among the one-fifth of American workers affected by non-competes.[67] Furthermore, the Congressional Budget Office suggests restricting the use of non-compete agreements to reduce barriers to entry for new firms and increase entrepreneurship.[68]

Removing Additional Barriers

While changes to occupational licensing and non-compete agreements are mostly state-initiated reforms, the Federal Government can also take proactive steps to enable a faster economic recovery as the pandemic wanes. For example, Congress could remove restrictive employment regulations that make it harder for individuals to obtain employment and harder for businesses to access talent. These reforms include implementing the *Working Families Flexibility Act* to allow private employers to extend the option of overtime pay or paid time off to their employees who work overtime.[69] As the CEA notes in the ERP: "A persistent focus on regulatory reform will play a critical role in the U.S. economy's return to the levels of economic prosperity it achieved before the COVID-19 pandemic."[70]

Preparing a Skilled Workforce Remains an Imperative

In addition to regulatory reform, making skill acquisition easier can help recently unemployed workers connect with new

employers and enable workers with relatively fewer skills to improve their job prospects and potentially increase their standards of living. In particular, improvements to workforce training programs and higher education reforms can help workers acquire new skills.

As the ERP states, "Federal program requirements could also encourage, rather than limit, partnerships between higher education providers and employers. Employers are most aware of the skills needed to succeed in the workplace."[71] Federal policymakers should streamline the administration of workforce training programs without sacrificing program diversity and improve collaboration between public and private participants. To that end, the Department of Labor developed industry-recognized apprenticeship programs (IRAPs) that expand employment opportunities for participants by granting industry-recognized credentials in a variety of programs including paid work, work-based learning, and mentorship programs. Standard Recognition Entities, which include trade associations, employer groups, educational institutions, state and local governments, non-profit organizations, and labor unions, develop the curricula for IRAPs.[72] Though the Biden Administration ended IRAPs in February 2021, they serve as an example of a flexible approach to accreditation and administration that could serve as a model and improve community college and other educational partner integration.[73]

There is even room for improvement in the Federal workforce development programs already in existence. Since its 1937 inception, the industry concentration of federally registered apprenticeships has hardly changed, remaining largely in goods-producing industries even though the service sectors comprise the vast majority of current employment and projected job growth.[74]

When it comes to higher education, the CEA notes that the system as a whole is out of sync with the skills acquisition necessary to

fill today's skilled jobs: "The Federal Government could also improve outcomes for students by better aligning education with the needs of today's workforce. The higher education system has been slow to adapt to the changing nature of work. In recent years, millions of jobs have remained unfilled, in part due to a lack of Americans with appropriate skills."[75] The ERP details that traditional post-secondary institutions do not typically bear financial risk when it comes to the outcomes of post-graduates, and argues for reforms that "could better hold institutions accountable for the economic return that they provide to students, as well as assist students and families to make more informed decisions regarding their educational options."[76] Indeed, schools seem to bear very little or no risk: Schools accept students, students pay however they decide to, students graduate or do not, and universities move on relatively unaffected by any specific student outcome. Such a set-up does not provide schools with the right incentives to accept promising students, guide them towards graduation, and give them the best education possible to prepare them to succeed in the job market. Policy can have a role in reducing some of the inefficiencies that currently exist in higher education as outlined below. However, such a policy need not overreach its potential for impact by micromanaging universities and students or increasing subsidies, which could reduce accessibility for the very people that stand to gain the most from higher education.

Federal policy could also address the way it funds higher education and related programs. In particular, the prospect of assuming student debt is not financially viable for many Americans seeking occupational training—particularly in the case of a mid- or late-stage career change. One suggestion the ERP offers involves one of many reforms to the Pell Grants program:

> *…to include high-quality, short-term programs that provide students with a credential, certification, or license in a high-demand field and that demonstrate strong employment and earnings outcomes. Pell Grants are typically used to support students in traditional two- or four-year degree programs. Though some certificate programs are eligible for Pell Grants, programs must cover at least 15 weeks of instruction. Expanding support to shorter-term programs designed to teach skills specific to well-paying jobs could better meet the needs of students with near-term employment goals.*[77]

Additionally, income-share agreements (ISA) offer a higher education funding tool for students by enabling them to pay some portion of their income post-graduation for a specific period.[78] Both online academies with massive open online courses and major universities such as Purdue and Clarkson have adopted ISA models.[79] By making revenue contingent on student outcomes, ISAs improve educational institutions' financial incentives while mitigating risk of default for students.[80] To improve the model's credibility, appeal and sustainability, Federal policymakers should clarify the legality and enforceability of ISAs to reduce investor uncertainty.[81]

Federal accreditation reform could support workforce development and re-skilling efforts as well. Despite the inability to assess the effectiveness of unaccredited programs, nearly a third of the American working class has a license or certificate from a non-degree or work-experience program.[82] Furthermore, unaccredited programs cannot receive Federal aid.[83] Federal policymakers should consider new models of Federal funding that pair financial aid with quality-assurance measures, as some states

have done with their programs, including Virginia's FastForward program.[84] Other reforms would improve the accreditation system, as mentioned in last year's *Response*, such as Senator Lee's *Higher Education Reform Opportunity (HERO) Act,* which—in addition to streamlining Federal aid, realigning education providers' incentives, and providing greater transparency into student success—enables states to accredit *any* post-secondary institution.[85]

As the ERP states:

> *Improving the four-year degree to generate greater skill increases for students, as well as providing alternative paths for human capital accumulation, can avoid a one-size-fits-all approach that leaves individuals and groups behind. Apprenticeships, training programs, and four-year degrees are all paths to a more productive workforce and a higher quality of life for millions of Americans.*[86]

The labor market challenges posed by a rapidly evolving economy, particularly in light of the dramatic changes brought on by the pandemic, present an opportunity to further invest in human capital. Recent innovations within workforce development shows signs of promise, and Federal policy reforms can make room for even greater innovations that equip workers with the skills in high demand from area employers.

SUPPORTING FAMILIES

In addition to reconnecting workers to the labor force, post-pandemic policy should also prioritize increasing family affordability and improving investments in youth, which will in turn result in a better equipped future workforce. Policy reforms can aid families facing hardship resulting from unemployment and

children facing learning losses from a year of online schooling, and examples of relevant reforms are outlined below.

Improving Family Affordability through the Tax Code

The COVID-19 pandemic hit many American families hard and created ripple effects across the economy. Unemployment rates skyrocketed in the spring of 2020, businesses were forced to close (some permanently), and school closings made it difficult for parents to work, which disproportionately affected mothers who—at least temporarily—dropped out of the labor force to care for their children.[87] The Social Capital Project (SCP), a multi-year research effort of JEC Republican staff led by Senator Lee, has studied factors that affect family affordability. While many of these issues pre-date the pandemic, they are amplified by the detrimental effects of COVID-19 on the economy. Thus, addressing challenges to family affordability is paramount to helping American families through these difficult times.

Inequities in the tax code that unfairly reduce family income are an example of one important issue that affects family affordability. Chapter 11 of the *Report* highlights two ways in which the tax code penalizes certain types of families. First, the second-earner penalty imposes higher marginal tax rates on secondary earners who file jointly. In other words, joint filing combines the incomes of a dual-earner household and effectively penalizes the second earner for the earnings of the primary earner by taxing the secondary earnings at a higher marginal tax rate. This penalty is exacerbated for people with children. Thus, there is a bias in the tax code toward single-earner families, which may discourage dual-earner households and depress household earnings, particularly for households with married adults who may have children or want to have children.

Second, Chapter 11 of the *Report* points out that under the current tax code, low-wage workers face some of the highest marginal tax rates, after taking into account both explicit taxation and the implicit taxation of means testing.[88] In other words, because of the way in which income taxes at the Federal and State level are levied, and the structure of benefits programs, a low-income household earning an additional $1 may lose more than that in income lost to taxes and reduced benefits. The *Report* illustrates this using a hypothetical case of a mother with two children who loses benefits as her income rises so that when she earns $44,000 annually, she is as well off in terms of net resources as she was when she earned $11,000 annually. This creates a cycle of poverty by creating disincentives to earnings growth, and greatly reduces household income for families.

The SCP has explored other ways in which the tax code favors some households while hurting others.[89] For example, embedded in the current tax code is a stay-at-home parent penalty. The tax code subsidizes the costs of having children in formal childcare arrangements because the Child and Dependent Care Tax Credit (CDCTC)—as well as childcare flexible spending accounts–offsets the costs for families who use formal childcare. Thus, families that don't require formal childcare arrangements (e.g., families with a stay-at-home parent) do not accrue any of these benefits and are put at a disadvantage. This penalty is problematic for at least two reasons: First, the stay-at-home parent penalty signals to American families that some family arrangements are better than others and more deserving of tax benefits. Second, the penalty unnecessarily reduces household income for some families with children and hurts family affordability. This is especially unfair in the COVID-19 era where families may have a parent at home and may not be using formal childcare arrangements.

In addition, Senator Lee has drawn attention to the parent penalty implicit in the current tax code.[90] Two families, one with children and one without, that have the same income will pay the same amount in payroll taxes over 18 years. However, the family that has children will also spend hundreds of thousands of dollars to raise those children who will later pay into Social Security and Medicare for their parents and for seniors who did not have any children of their own. Thus, the family with children contributes more than the family without children. The tax code may want to recognize this imbalance and further offset some of the costs of sustaining our entitlement system.[91]

Senators Lee and Rubio have proposed ways to mitigate the stay-at-home parent and parent penalties. Their work succeeded in expanding the CTC in the 2017 *Tax Cuts and Jobs Act* (TCJA), benefiting millions of American families.[92] The Senators have continued to call for a further expansion of the Child Tax Credit (CTC) and increasing its refundability, in addition to replacing the CDCTC with a Young Child Enhancement that eliminates part of the stay-at-home parent penalty and expands access of the credit to more families.[93]

Their bill would accomplish two things. First, it would fix the refundability of the CTC so that parents could receive the full credit up to their total tax liability – income and payroll. This would put more money in the hands of families with children, offsetting some of the financial burden of raising children, and mitigating the imbalance that families with children face. Second, it would eliminate the stay-at-home parent penalty by repurposing the CDCTC and creating an expanded CTC of $3,500 with a $1,000 enhancement for families with children aged 5 and under (i.e., a total Young Child Credit of $4,500).[94]

Replacing the CDCTC with an expanded CTC would allow more families to keep more of their hard-earned money and use it for

child rearing expenses other than formal childcare, creating a win-win for dual-earner and single-earner families alike.

In addition to the penalties faced by some types of households that are embedded in the tax code, research by the JEC Republicans suggests that the tax code may also drive up the cost of living in metropolitan areas, making it harder for families to afford living accommodations.[95] In other words, rising housing prices may be due in part to the deductibility of residential property taxes and mortgage interest. This creates a problem for family affordability because housing is one of the most expensive inputs into starting a family. The JEC Republicans discussed this issue at length in the 2020 *Joint Economic Report (Response)*.[96] While the TCJA included limits on itemized deductions for mortgage interest and state and local taxes, these should be extended or made permanent in exchange for more broad-based tax relief.

Increasing Family Flexibility

In addition to improving family affordability, measures that provide working parents with greater flexibility would be beneficial for families. As JEC Republicans explained in the 2020 *Joint Economic Report*, reasonable policies that mitigate difficulties in work-life balance may have positive effects on family formation and family affordability.[97] Furthermore, the difficulties in work-life balance brought on by the pandemic, as described in Chapter 11 of the *Report*, could be mitigated by greater flexibility at work.[98]

Senator Lee has introduced two pieces of legislation that could ease difficulties in work-life balance which are more important than ever given the effects of COVID-19 on working parents.[99] As written in the JEC's 2020 *Joint Economic Report* and briefly mentioned earlier in the chapter:

> *The* Working Families Flexibility Act *proposes reforming federal labor laws that restrict the use of comp time in the private sector. This legislation would help workers improve work-life balance by allowing private-sector employers to offer all employees working overtime the choice between monetary compensation or time off. Policies like these that make reasonable but helpful changes to reduce work-life challenges may be instrumental in the longer term in enabling parents to be successful both at work and at home. Such policies can reduce the long-term costs of childbearing and child-rearing, ease family affordability, and may enable parents to reach their fertility goals.*[100]

In addition, last year's *Joint Economic Report* also highlighted Senator Lee's *Child Rearing and Development Leave Empowerment (CRADLE) Act*, which would allow new parents to borrow up to three months of paid parental leave, alleviating the upfront costs of having children and enabling parents to bond with their babies, while delaying retirement for up to six months.[101]

Increasing Childcare Access and Affordability

Access to childcare was severely disrupted over the last year as childcare centers shut down to stop the spread of COVID-19. According to a survey from the Bipartisan Policy Center (BPC), 60 percent of childcare programs were fully closed in April and 46 percent of parents were concerned that their childcare providers would not reopen.[102] By December, childcare availability improved moderately, but 42 percent of parents with formal care arrangements still did not have access to their childcare providers.[103]

Additionally, some childcare providers were forced to increase their prices to cover the cost of new safety protocols, worsening the pre-existing trend of rising childcare costs.[104] These barriers to childcare access and affordability pose major challenges for working parents as well as parents seeking to enter the labor force.

Disruptions to childcare availability required some parents, especially mothers, to work less or stop working entirely in order to care for their children. One study found that the drop in employment during 2020 disproportionately affected women, whose falling labor force participation was driven in part by increased childcare needs.[105] Additionally, the Bipartisan Policy Center's April survey found that 21 percent of parents had to reduce their work hours and 11 percent needed to take unpaid leave to care for their children.[106]

Even after employment returns to pre-pandemic levels, many parents worry that they will not be able to afford childcare.[107] The uncertainty about post-COVID affordability is exacerbated by rising childcare prices prior to the pandemic. While there is disagreement about the magnitude, most observers agree that childcare costs have been increasing for decades.[108]

Childcare unaffordability is a major burden for many families. According to Child Care Aware of America's 2019 report, "in all regions in the United States, average child care prices for an infant in a child care center exceed the average amount that families spend on food and transportation combined."[109] For families with two children, annual childcare prices are higher than median rent payments in every state, and higher than mortgage payments in 40 states and DC.[110]

For parents that cannot afford formal childcare, their only choice may be to stop working and provide care themselves. In chapter 11 of the ERP, CEA presents research showing that "as of 2016,

the high cost of childcare was preventing up to 3.8 million parents from joining the labor force."[111]

One likely driver of childcare unaffordability is the growing number of regulations affecting childcare providers. The 2020 *Joint Economic Report* cited several of these regulations, including staff-to-child ratios and education requirements for caregivers, which impose burdensome compliance costs and drive up the cost of care.[112]

For instance, Diana Thomas and Devon Gorry of the Mercatus Center estimate that increasing child-staff ratio requirements by one infant would reduce the annual cost of childcare by $850 to $2,890 per child.[113] Furthermore, they estimate that education requirements for caregivers increase the cost of care by up to 46 percent.[114] Similarly, after a comprehensive review, researchers at the American Institute for Economic Research conclude "the preponderance of the statistical evidence indicates a link between tougher government regulations and higher prices faced by families for child care."[115]

Additional research suggests that burdensome regulations also decrease the availability of childcare. One study estimates that "tightening the staff-to-child ratios by one child reduces the number of childcare centers in an average area by 10 percent with no apparent impact on quality."[116] Loosening these requirements, in turn, would increase childcare availability, enabling more parents to join the labor force.

For example, Senator Lee's *Childcare Worker Opportunity Act* would reverse Washington, D.C.'s new regulation that requires childcare workers to possess two to four years of college education.[117] Research finds that these mandates disproportionately harm low-income childcare employees who cannot afford college tuition.[118] Furthermore, they also increase

costs for childcare providers, leading to price increases and making childcare unaffordable for many low- and middle-income families in Washington, D.C.[119]

Improving the Quality of K-12 Education

For any family with children, K-12 schooling is a vital part of everyday life. Chapter 7 of the *Report* describes the value of nontraditional educational models, explaining that they lead to higher quality education by increasing competition between schools. Research surveyed in the ERP shows that, by encouraging creativity and innovation in schooling, school choice programs can improve parental satisfaction, increase students' educational achievement, and increase long run educational attainment.

As the ERP explains:

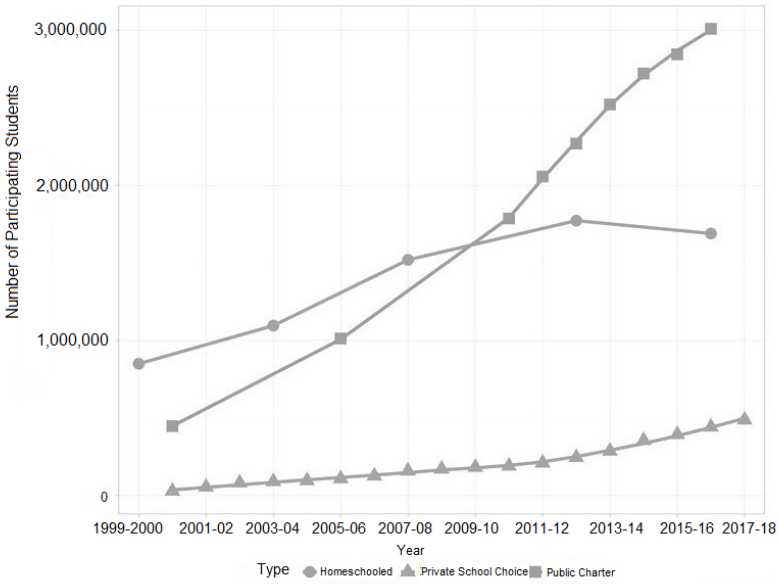
> *For students participating in these programs, achievement results as measured by test scores are mixed, although several studies find large positive results for minority and low-income students. We explain that some positive outcomes of school choice emerge later in a child's development through higher educational attainment, and studies of these longer-term outcomes are generally more positive.*[120]

The ERP also presents evidence that school choice programs benefit society. For instance, voucher programs and charter schools have been linked to lower rates of criminal activity, incarcerations, and teenage pregnancies.[121] The *Report* also demonstrates that school choice programs disproportionately serve low-income and minority communities, reducing the education opportunity gap.[122]

According to SCP research, the vast majority of students (over 90 percent) attend public school, yet confidence in public education has been steadily falling—from 62 percent of parents expressing confidence in 1975 to under 30 percent in 2019. At the same time, enrollment in private school choice programs is climbing. SCP found that "from 2000 to 2018, the number of students participating in a private school choice program increased 16 times over, while participation in public charter programs increased nearly seven-fold."[123] Similarly, the number of children in homeschooling has doubled over the past 20 years.[124] These trends are visualized in Figure 2-1, below.

Figure 2-1

Students Participating in Choice Programs or Homeschooling, 1999-2018



Source: National Center for Education Statistics; American Federation for Children

The SCP has conducted extensive research into the benefits of educational pluralism, a concept closely related to school choice. Educational pluralism encourages a diversity of school models and learning cultures, allowing parents autonomy over their children's schooling and the values and traditions children are exposed to. In "Multiple Choice: Increasing Pluralism in the American Education System," the SCP finds that alternative schooling like charter schools can lead to better educational outcomes, with the best results occurring in communities that emphasize school accountability.[125] They also find that community-based schooling, like Catholic schools, create societal benefits by emphasizing strong relationships between parents, teachers, and students, and embedding behavioral norms into the institution of schools.[126]

Over the past year, COVID-19 has exposed the drawbacks of a traditional one-size-fits-all education system and highlighted families' demands for innovative educational alternatives.[127] SCP research demonstrates that widespread school closures in 2020 harmed children developmentally, academically, and psychologically—challenges that could have been mitigated with greater diversity in educational opportunities.[128]

Extensive evidence exists showing that children suffer from school closures. The largest developmental effects are concentrated among the youngest students: those in the midst of learning foundational skills like reading and writing and beginning to develop social skills. Older students also suffered from the transition to remote learning, with teachers reporting that students returned to the fall semester significantly less prepared than in years prior.

These learning losses will likely translate to economic losses later in life, reducing students' future earnings. Low-income students will be disproportionately affected, as research shows they face greater setbacks from remote learning. On a macroeconomic scale, the U.S. economy as a whole will suffer from the future labor force's reduced skill level. One estimate suggests that, by 2040, the 2020 school closures will shrink annual GDP by as much as $271 billion per year.[129]

Parents' new responsibilities connected to their children's schooling, especially for parents with young children, have additional negative ramifications for worker productivity. Surveys suggest that over 70 percent of parents struggle with simultaneously working and schooling their children. The potential effect on overall productivity is significant, as nearly one third of U.S. workers have school-age children.[130]

In response, many parents embraced alternative models of education. For instance, reports suggest that parents turned to private schools in search of in-person instruction while public schools continued to practice remote learning.[131] Furthermore, roughly 40 percent of parents report that COVID-19 made them more likely to consider homeschooling, and school closures spurred new "learning pods" where students received group instruction from parents or tutors.

The American experience in 2020, combined with the already growing popularity of public and private choice programs before the pandemic, suggest that policymakers should aid families seeking education outside of the traditional public school system. As argued by the SCP, "a more individualist approach would have education funding follow the child—parents would receive the value of their children's public education dollars to use at the school of their choice."[132]

One example discussed in the ERP is the Empowerment Scholarship Accounts program in Arizona, which allows students to receive 90 to 100 percent of state per-pupil education funding, depending on their families' income levels.[133] These funds can be used for a variety of education-related expenses, including private school tuition, tutoring, and expenses related to homeschooling—making it a truly flexible program that enables families to pursue what is best for them and their children.

The TCJA also expanded the scope of 529 education savings plans, which now allow families to save money in tax advantaged accounts for K-12 education—including private and religious schools—in addition to college. The *Children Have Opportunities in Classrooms Everywhere (CHOICE) Act*, introduced by Senator Lee, would further expand 529 savings accounts to qualifying expenses related to virtual learning, tutoring, books, homeschooling, and educational services for students with

disabilities.[134] It would also empower low-income families to apply for Federal education funds that can be used in a variety of ways, enabling them to choose the best educational options for their children.[135]

Policymakers should also explore options to break the link between home value and school quality. SCP research, referenced in the ERP, finds that median home prices are four times higher in ZIP codes with the highest quality public elementary schools than in those with the lowest quality public elementary schools.[136] School choice programs help to close this gap by empowering parents to send their children to any school, regardless of location. However, states and localities could also take a more proactive approach by reforming residential zoning regulations and thereby increasing housing choice across school boundaries. There are other policy reforms that could be tried, as well. Indiana, for example, uses sales taxes to fund grants for schools in poorer districts in an effort to equalize per-pupil spending across district lines.[137]

CONCLUSION

The economic and emotional fallout from the pandemic took an unprecedented toll on Americans, causing many to struggle with the loss of employment, schooling, and childcare. As the United States enters recovery, policymakers should give Americans the tools to succeed now and in the future by removing current barriers to work, increasing the affordability of having and caring for a family, and empowering children and adults to build their skills with a diverse array of educational opportunities.

Recommendations

Connecting People to Work

- Pass the *Working Families Flexibility Act* to allow private employers to extend the option of overtime pay or paid time off to their employees who work overtime.
- Pass the *RBI Act* in order to reduce over-reliance on occupational licensing and pass the *Military Spouse Licensing Relief Act* to create portability for military spouses' licenses.
- State regulatory reforms should support the continued growth of home-based businesses, and continue to remove burdensome occupational licensing regimes and non-compete agreements in order to enhance worker economic and geographic mobility.
- Support workforce development and re-skilling efforts with Federal accreditation reform, and pass the *HERO Act* in order to streamline Federal aid, realign education providers' incentives, improve transparency in student outcomes and enable states to accredit *any* post-secondary institution.

Supporting Families

- Replace the Child and Dependent Care Tax Credit with an expanded Child Tax Credit and a Young Child Enhancement credit for families with children age 5 and younger to eliminate the stay-at-home parent penalty and enable more families to utilize it.
- Make permanent the limits in the TCJA on itemized deductions for mortgage interest and state and local taxes.
- Pass the *CRADLE Act*, which would allow new parents to borrow up to three months of paid parental leave, thereby alleviating some of the initial costs of childbearing and allowing new mothers and fathers to spend more time bonding with their infants.
- Pass the *Childcare Worker Opportunity Act*, which would remove newly imposed regulations increasing the cost of childcare in Washington, D.C.
- States should encourage flexible schooling by removing barriers to nontraditional schooling and empowering families to pursue the education models and cultures that are best for them.
- Pass the *CHOICE Act*, which would allow low-income families to utilize Federal education funds in a way that best fits their needs and further expand 529 savings accounts to allow greater flexibility for families to save tax-free for education expenses.

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