116th CONGRESS *1st Session*	SENATE	REPORT 116-

THE 2019 JOINT ECONOMIC REPORT

R E P O R T

OF THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

ON THE

2019 ECONOMIC REPORT
OF THE PRESIDENT

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON: 2019

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[Created pursuant to Sec. 5 (a) of Public Law 304, 79th Congress]

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LETTER OF TRANSMITTAL

July 18, 2019

HON. MITCH MCCONNELL
Majority Leader, U.S. Senate
Washington, DC

DEAR MR. LEADER:

Pursuant to the requirements of the *Employment Act of 1946*, as amended, I hereby transmit the 2019 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,

Mike Lee
Chairman

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THE 2019 JOINT ECONOMIC REPORT

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

R E P O R T

Report of the Joint Economic Committee on the 2019 Economic Report of the President

CHAIRMAN'S VIEWS

The recovery from the Great Recession turns ten years old this month. Earlier this year, we marked 100 straight months of job growth. More working-age Americans are looking for jobs, and more of them are finding work. The unemployment rate has fallen to 3.6 percent, a low not seen in almost half a century. Wage growth has strengthened, particularly for lower-wage workers and in industries employing more of them. This summer the current expansion will become the longest on record.

This good news is covered in detail in the *Economic Report of the President and the Annual Report of the Council of Economic Advisers* (*Report*), issued by President Trump's administration in

March, and here in the *2019 Joint Economic Report* (*Response*), my first as Chairman of the Joint Economic Committee. As these reports make clear, credit for our economic prosperity is owed to the policies enacted into law over the past two years.

Nevertheless, now is no time for complacency. For one thing, economic challenges persist. Labor force participation rates for working-age men and women were higher a decade ago than they are today. The unemployment rate for African Americans—while lower than at any point in at least half a century—remains well above the national average. Robust as the nation's economic growth has been, it has also spread unevenly, concentrated in a relatively small number of metropolises. Millions reside in distressed communities—pockets of rural, urban, and suburban poverty scattered across the country.

And economic considerations should not blind us to other aspects of the good life. Connecting more people to work would bring obvious economic benefits to those who are currently struggling. But just as importantly, work provides non-material benefits: meaning, identity, a sense of value, friendship, and information about opportunities, to name a few. That is to say, connections to coworkers, colleagues, customers, and clients are sources of social capital—the many valuable aspects of our relationships with other people.

For over two years, my staff in the Joint Economic Committee has conducted research on social capital, exploring trends in associational life, the geographic distribution of social capital indicators across the country, and related topics. The Social Capital Project recently entered the next phase of its research. This Congress, the Project is developing a policy agenda to expand opportunity by strengthening families, communities, and civil society.

Lowering the unemployment rate, increasing productivity, accelerating wage growth, spurring innovation, promoting capital investment, and containing inflation—all of these are important policy goals. But fewer than half of children today will make it to adulthood having continuously lived with both of their biological parents. Millions of men and women will find themselves in middle-age wishing they had raised children (or more children than they did). Group membership, cooperation with neighbors, and church attendance have been declining for decades. And the strength and richness of associational life varies dramatically across regions of the country, with family stability, institutional strength, levels of trust, philanthropic generosity, voluntarism, neighborliness, and social support tending to be either high or low in the same places.

And so the focus of this Committee will shift beyond the attention traditionally given to narrower economic problems. Americans care about more than dollars and cents. Our associational life has withered across the board even though economic indicators tell us it is the best of times. We are an almost unprecedentedly affluent nation, but we are becoming ever more socially impoverished by the year.

CHAPTER 1: THE ECONOMIC OUTLOOK

OVERVIEW

Regulatory and tax reform such as the *Tax Cuts and Jobs Act* (TCJA) fostered the U.S. economy's strongest period of the recovery from the 2008-09 recession:

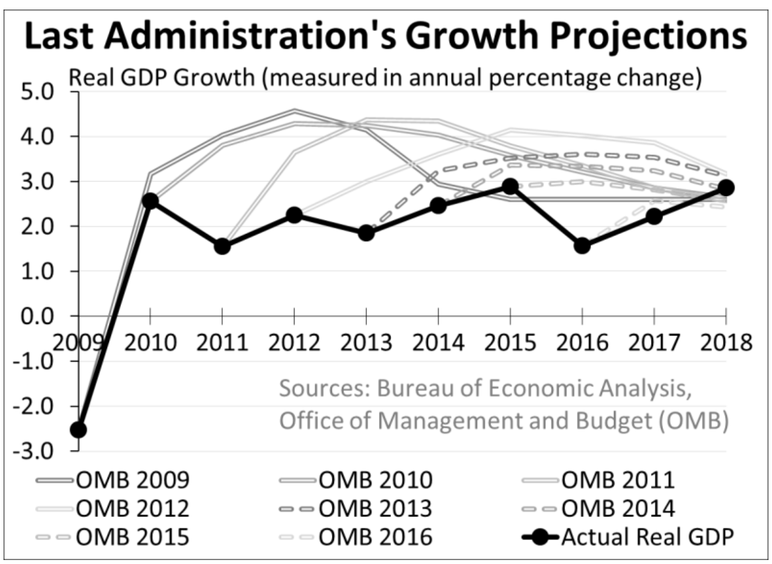
- Calendar-year real (inflation-adjusted) GDP grew 3.0 percent, the highest growth rate during a recovery that began in 2009, and the highest growth rate since 2005.
- Inflation remained at or below the Federal Reserve's 2 percent inflation target.
- Wage and salary indicators show that worker pay is growing at the fastest rate in a decade.
- At 82.6 percent, workforce participation rates among the prime working-age (25-54) population rose to a recovery high as of January 2019.
- Actual average monthly job creation in 2018 was 223,000 jobs per month. Based on laws and other conditions in effect just before the November 2016 election, the Congressional Budget Office (CBO) forecast[1] an average of only 24,000 jobs per month would be created in 2018. In January 2019, 312,000 jobs were created.
- The unemployment rate and jobless claims reached lows last seen in 1969.
- Growth in nonresidential fixed investment—business investment in capital—accelerated to a 7.0 percent rate in 2018 after growing 6.3 percent in 2017. This compares with 1.8 percent (2016) and -0.6 percent (2015) in the two preceding years.

This chapter discusses the U.S. economy's shift into a higher gear and the prospects and challenges that lie ahead.

THE "NEW NORMAL"

Research has consistently shown that the more severe a recession, the stronger the ensuing recovery tends to be.[2] The previous Administration continually forecast its policies would produce the same result following the 2008-09 recession, but through 2015, its short-term projections always fell short, even with repeated downward revisions, as Figure 1-1 shows. While its 2016 projections lined up well with actual subsequent 2017 and 2018 growth, prior to the 2016 election, as will be shown, the trajectory of the economy was decidedly off-track. During the previous Administration, calendar-year real GDP growth never once attained 3 percent or greater.

Figure 1-1



The previous Administration, unwilling to concede that its top-down economic policy interventions did not perform well, cited factors beyond the control of policy. These included the severity of the 2008 financial crisis, demographics, and weak productivity growth as the cause of the "new normal" of slow growth. For example, in an interview, the former Obama Administration's CEA Chairman, Jason Furman noted:

> *So I think that it was a recovery from the financial crisis that caused some of the initial weakness. I think if you are looking at a longer time period and asking why growth has been slow, it's primarily because of demographic change, which there's relatively little we can do about, and the productivity change, which there may or may not be something we can do about.*[3]

As argued in last year's Majority *Response*, misguided policies created these poor outcomes. This view has been confirmed by recent economic progress. Regulatory reform and TCJA jumpstarted capital investment, which raised labor productivity, led to higher wages, and encouraged more workforce participation. The overall effect has been to increase economic growth without creating inflation.

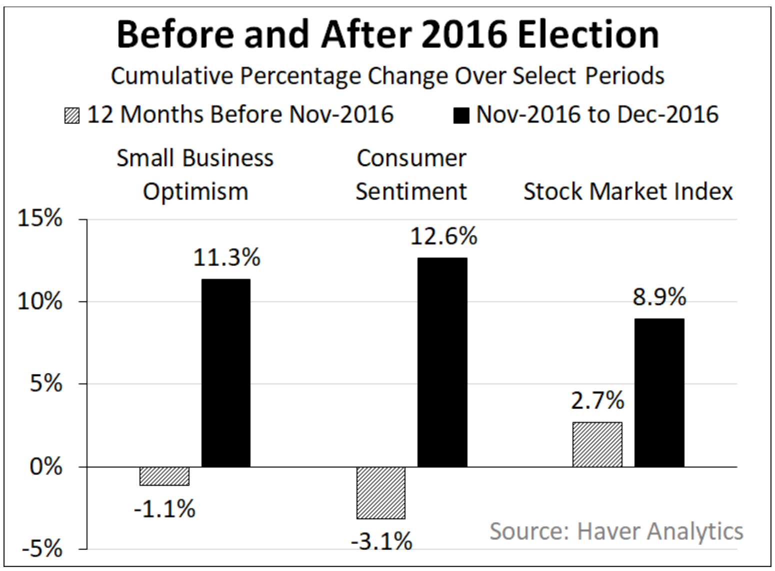
FROM THE "NEW NORMAL" TO JUST NORMAL

Policy changes can affect the economy even before they are enacted or implemented. When business leaders and other investors see an increased probability of growth-enhancing policies, they expect a higher future stream of income from investment, which raises the present value of business capital immediately. They are, in turn, motivated to increase capital investment and hiring even before new policies are actually implemented. Indeed, the 1995 Nobel Prize in economics was awarded to economist Robert Lucas for his research on "rational expectations."[4]

In the twelve months preceding the November 2016 election, small business optimism and consumer sentiment indices had declined and the stock market had barely moved. The yield on 10-

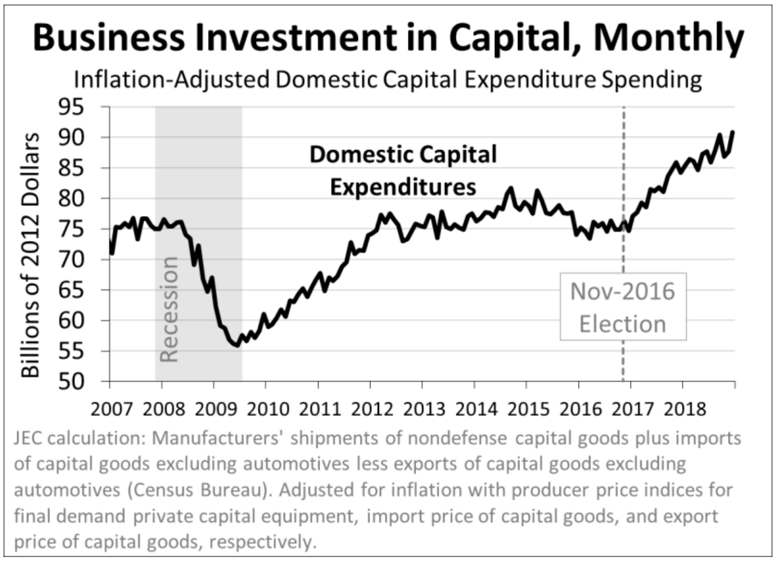
year Treasury notes had declined 31 basis points, signaling financial markets' aversion to new business investment. The election portended pro-growth tax and regulatory policies, such that by year-end 2016, small business optimism, consumer sentiment, and the stock market surged, as Figure 1-2 shows. Likewise, the 10-year Treasury note yield rose 61 basis points.

Figure 1-2



Soon after the November 2016 election, consumer sentiment, business optimism, and financial market values all increased, resulting in tangible economic improvements. By January 2017 monthly domestic business capital expenditures had increased markedly as Figure 1-3 shows. Before then, domestic capital expenditures had stagnated after returning to pre-recession levels only in 2012.

Figure 1-3



JEC calculation: Manufacturers' shipments of nondefense capital goods plus imports of capital goods excluding automotives less exports of capital goods excluding automotives (Census Bureau). Adjusted for inflation with producer price indices for final demand private capital equipment, import price of capital goods, and export price of capital goods, respectively.

The stronger economic outlook also propelled stronger-than-expected job creation in both 2017 and 2018, as Figures 1-4 and 1-5 show.

Figure 1-4

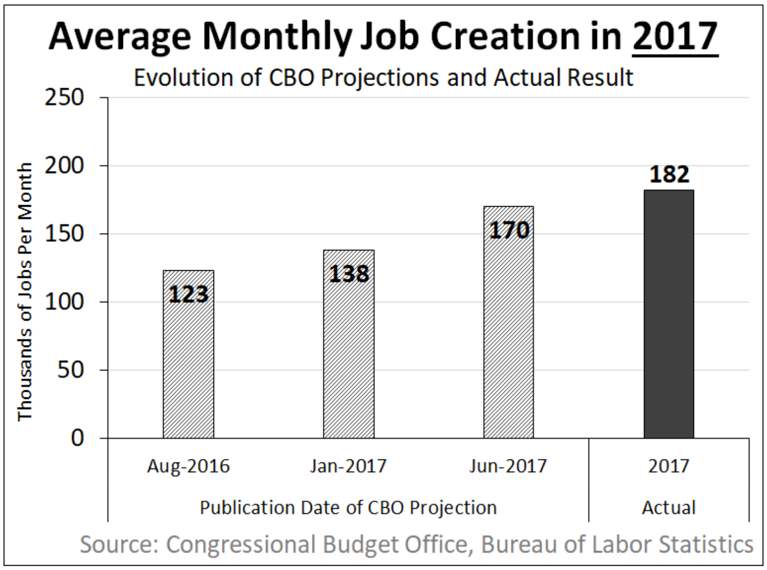
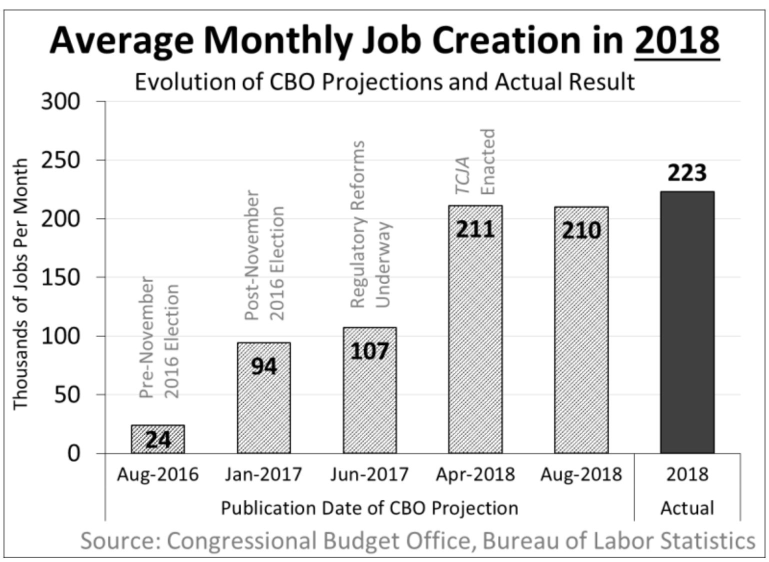
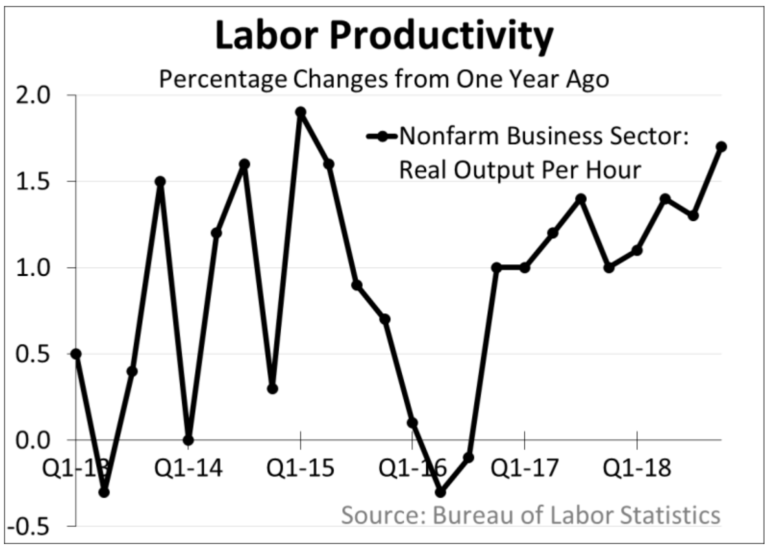


Figure 1-5



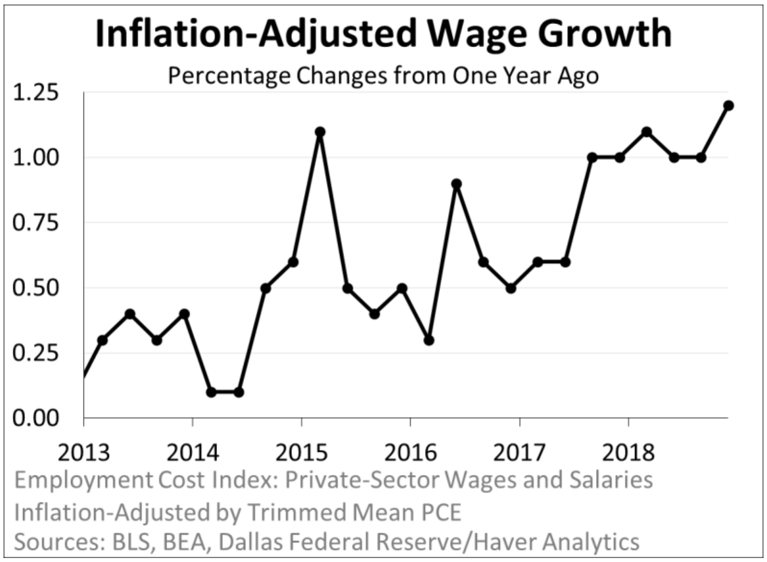
Strong job creation, coupled with capital accumulation that had been dampened for most of the recovery, helped fuel steady labor productivity growth. In contrast, labor productivity growth during the 2009-16 recovery period had been erratic (see Figure 1-6).

Figure 1-6



Capital enables workers to become more productive, which raises their value and translates into higher inflation-adjusted wage growth. Since 2017, inflation-adjusted wages and salaries of private sector workers have risen with labor productivity and continued to grow at a steady pace, without wild fluctuations, as Figure 1-7[5] shows.

Figure 1-7



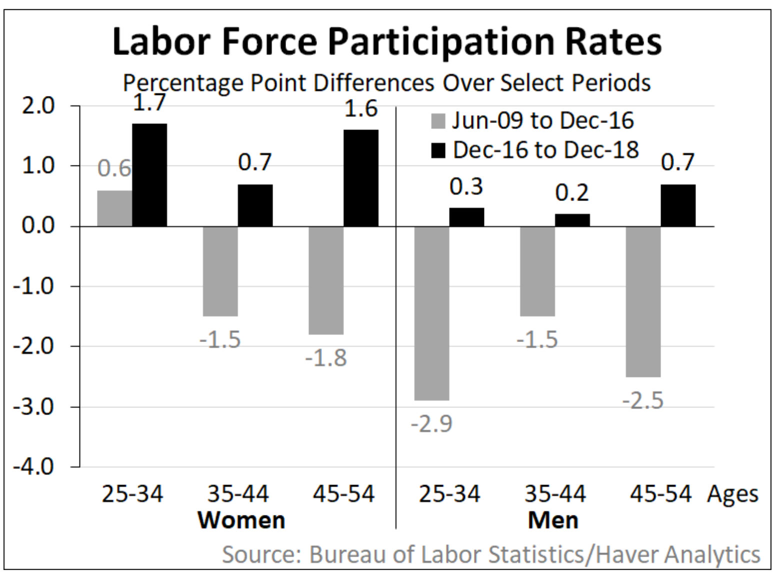
The improved economic outlook also led to increased workforce participation, especially among the prime working-age (25 to 54) population. This result implies that the slow recovery of the 2009-16 period was primarily attributable to economic policy rather than structural factors. CBO's reference to cyclical factors supports this:

> *[CBO] raised its estimate of the historical and projected potential participation rate for prime-age workers (ages 25 to 54) because the participation rate of that group has rebounded more strongly in the past year than previously expected. That development suggests that its decline after the last recession was driven more by cyclical factors and less by structural factors than previously estimated.*[6]

"Structural factors" tend to be more reflective of long-term trends such as in demography.

Figure 1-8 shows that during the previous Administration's tenure (June 2009 to December 2016) the labor force participation rates among men and women declined almost across the board. However, in the first two years since pro-growth policies began, these participation rates have started rising across the board, which signifies that the economy had much latent potential, i.e., room for higher, sustainable economic growth. If the workforce participation rate among the prime working-age population returned to its pre-2008-09 recession level of 83 percent, this would amount to nearly one million additional prime-age workers in the workforce today.

Figure 1-8



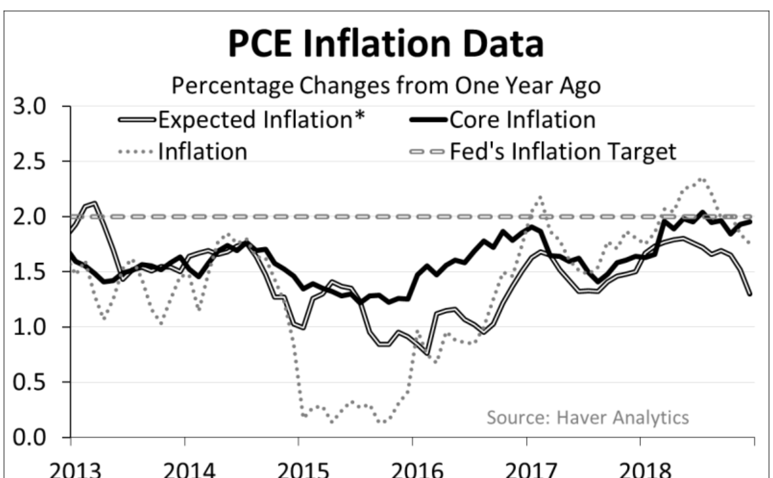
Several new labor market milestones were achieved in 2018. The headline unemployment rate[7] fell to the lowest rate since 1969. The U-3 measure for black Americans fell to a low of 5.9 percent, the lowest in the series history that dates back to 1972. Likewise, the Hispanic unemployment rate, fell to a low of 4.4 percent, the lowest in the series history that began in 1973.

Also in 2018, the unemployment rate of those without a high school diploma fell to the lowest in the series history, which began 1992. The unemployment rate for those with a high school diploma but no college fell to a low last seen in 2000.

Even with the improved job market and wage growth, inflation has remained subdued. Critics have attempted to equate TCJA with a Keynesian-style demand-side stimulus that might have led to unsustainable growth and higher inflation, but just the opposite has occurred. As the Committee Majority anticipated in the *2018 Response* (p. 86), inflation did rise temporarily only to fall again toward the year's end, as is consistent with a positive supply-side development.

Figure 1-9 shows that inflation continues to remain at or below the Fed's symmetric 2 percent inflation target (symmetric means that the target is not a ceiling but an average to be maintained over time), while measures of expected inflation[8] continue to suggest inflation will undershoot the Fed's target over the coming years.

Figure 1-9



*This is the 5-Year Treasury Breakeven Inflation Rate, a market-based measure of expected inflation as measured by the CPI. To make it compatible with PCE, JEC subtracted 0.4 percentage points.

The success of pro-growth policies has removed pressure on the Federal Reserve to keep its primary monetary policy interest rate—the interest on excess reserves (IOER) rate—near zero. Before 2016, the 0.25 percent IOER rate that had prevailed since the end of 2008 was increased only once to 0.50 percent in December 2015. Though the Federal Reserve anticipated four rate hikes in 2016,[9] it held off as the recovery proved too fragile at that time. Since the November 2016 election, resurgent economic growth has enabled the Fed to raise the IOER rate eight times to 2.40 percent.

Prospects and Challenges Ahead

Economists in the previous Administration had predicted year after year that their policies would result in a strong growth rate like that of 2018. Yet, such prosperity was only realized as those policies were reversed. While it is possible that the initial effects of reversing those policies had the strongest impact, and that economic growth may not continue quite as fast in subsequent years, two things are important to note:

1) The gains in 2018 will remain built into future U.S. economic production, resetting the trajectory of the economy. Thus, the gain to the economy will not be reversed, and
2) The relevant benchmark for evaluating current policy and future economic growth is the tepid "new normal" growth rate Americans had been led to expect under the Obama Administration's tenure, not the boost in the rate realized last year.

An aging workforce does indeed constitute a headwind for U.S. economic growth, but better policies can improve the structure of the economy to raise performance on average going forward. In particular, low tax rates encourage people to remain in the workforce longer, attract more working-age individuals to join the workforce, incentivize businesses to invest in more capital, and enable entrepreneurs to increase productivity through innovation. Less government spending could free up resources that the private sector can use more efficiently. Better infrastructure, health care, and trade policies also promote faster economic growth. Last but not least, a sound monetary policy (discussed in Chapter 2) will be essential for keeping the U.S. economy on the higher growth trajectory created by pro-growth policies.

CHAPTER 2: MONETARY POLICY

OVERVIEW

The conventional wisdom associates high interest rates with a tight monetary policy and low interest rates with an easy monetary policy. Along with low interest rates, unconventional monetary policies, such as quantitative easing (QE) and forward guidance, have led to the impression that monetary policy has been extraordinarily accommodative since 2008. However, outcomes suggest otherwise. Inflation has not only remained low, but has persistently undershot the Fed's 2 percent target; aggregate demand,[10] as measured by nominal GDP, averaged only 3.8 percent annual growth over the 2009-16 recovery period, compared with a 5.4 percent average from 1990 to 2007. This incongruity between presumptions about monetary policy instruments and actual outcomes has been described as a "mystery" and a "puzzle."

INSTRUMENTS VS. OUTCOMES

Interest Rates Are Not a Good Indicator of the Stance of Monetary Policy

The federal funds rate—generally seen as being the Federal Reserve's primary monetary policy instrument—is the interest rate at which banks once traded scarce reserves (federal funds) among one another. In this interbank lending market, banks with excess reserves, which did not earn interest at the time, would lend to banks with reserve shortages at the federal funds rate.

Until late 2008, the Federal Reserve actively managed the supply of reserves to keep the effective federal funds rate trading near the Federal Reserve's desired level. To lower the federal funds rate, the Federal Reserve would increase the supply of bank reserves. An increased supply of bank reserves would lead to more bank lending, which finances greater spending on goods and services. This is likely the source of the conventional view that associates lower interest rates with an easier monetary policy.

In their seminal study, *A Monetary History of the United States, 1865-1960*, Nobel Prize winning economist Milton Friedman and economist Anna Jacobson Schwartz convinced the economics profession that an extraordinarily tight Federal Reserve monetary policy was responsible for the Great Depression of the 1930s, despite unusually low interest rates at that time. This was also a fact that Ben Bernanke, then a Federal Reserve Governor, acknowledged in 2002.[11] Japan's economic distress during the 1990s despite low interest rates, led Friedman to comment:

> *After the U.S. experience during the Great Depression, and after inflation and rising interest rates in the 1970s and disinflation and falling interest rates in the 1980s, I thought the fallacy of identifying tight money with high interest rates and easy money with low interest rates was dead. Apparently, old fallacies never die.*[12]

Nominal interest rates, such as the federal funds rate, consist of a real interest rate component and an expected inflation rate component. The former is the additional increment of inflation-adjusted goods and services that a lender can purchase when repaid, while the expected inflation component accounts for the anticipated loss of money's purchasing power.

A monetary policy expected to be tight lowers inflation expectations, reducing nominal interest rates. A deteriorating economic outlook—possibly brought about by expectations of a contractionary monetary policy—reduces the demand for loanable funds, causing real interest rates, and nominal interest rates by extension, to fall.

Scott Sumner, the Ralph G. Hawtrey Chair of Monetary Policy at the Mercatus Center at George Mason University, warns against "reasoning from a price change."[13] Prices, and interest rates, may decline because of an increase in supply *or* a decrease in demand. As the proximate source can be difficult to recognize, then-Federal Reserve Governor Bernanke, suggested the following in 2003:

> *[N]ominal interest rates are not good indicators of the stance of monetary policy…The real short-term interest rate, another candidate measure of policy stance, is also imperfect, because it mixes monetary and real influences… Ultimately, it appears, one can check to see if an economy has a stable monetary background only by looking at macroeconomic indicators such as nominal GDP growth and inflation.*[14]

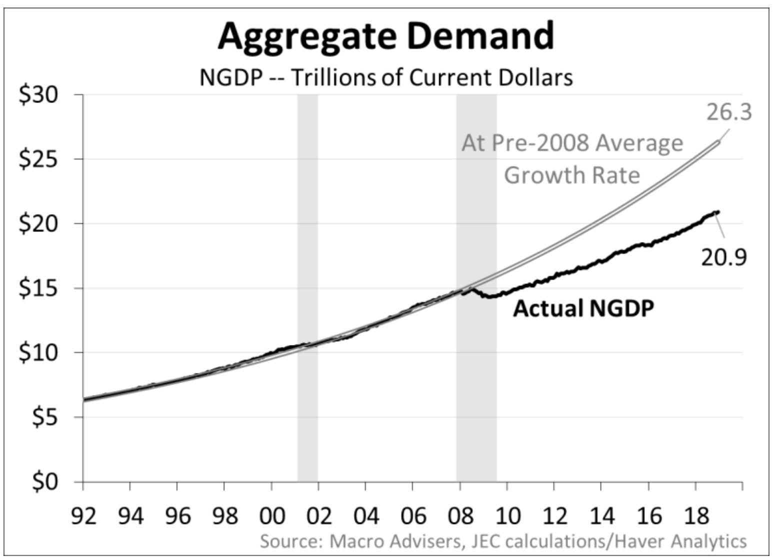
NGDP Is a Good Indicator of the Stance of Monetary Policy

While using the inflation rate to determine the stance of monetary policy is better than using interest rates, the risk of "reasoning from a price change" remains. The inflation rate is determined by aggregate demand *and* aggregate supply. A higher inflation rate might arise from an aggregate supply contraction even though the stance of monetary policy, as reflected in aggregate demand, is unchanged.

It is therefore important to watch nominal GDP (NGDP), which measures aggregate demand. It is the quantity of goods and services sold (reflected in real GDP) multiplied by their prices (reflected in the GDP deflator, a measure of inflation) across the entire economy. An "easy" or "accommodative" monetary policy raises NGDP growth, a "tight" or "restrictive" monetary policy slows it down.

Figure 2-1 shows that NGDP fell considerably during the 2008-09 recession and grew slowly thereafter, clearly indicating that monetary policy in fact has not been extraordinarily accommodative.

Figure 2-1

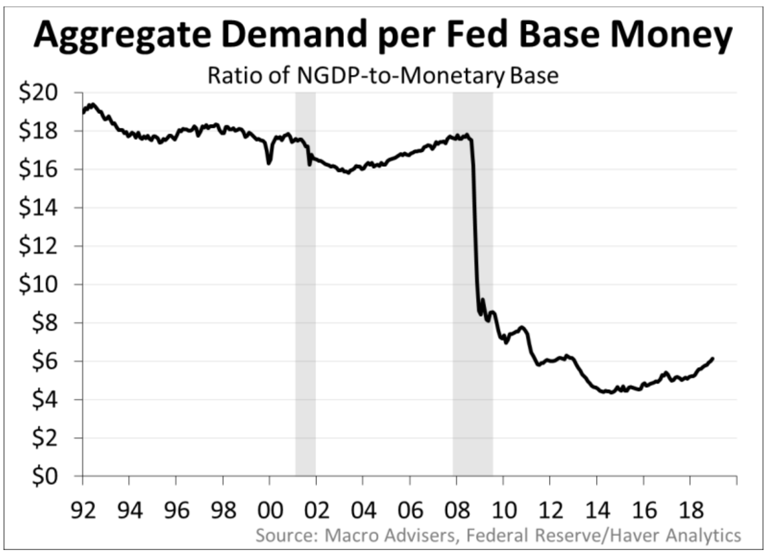


WHY WAS MONETARY POLICY TIGHT?

The Monetary Policy Transmission Mechanism

Because total spending on goods and services—as measured by NGDP—is purchased with money, NGDP is equal to the supply of money multiplied by the rate at which it is spent and turns over, i.e., its "velocity." NGDP represents the velocity-adjusted money supply. The Federal Reserve influences the velocity-adjusted money supply through its control over "base money," which consists of the Federal Reserve's balance sheet liabilities, currency (paper money) and bank reserves. Banks lend funds deposited by savers, keeping only a portion in reserve. This creates a sort of "money multiplier," such that every $1 of base money supported nearly $18 of spending as measured by NGDP up until late 2008. However, this process breaks down if banks rather than creating loans from new reserves hold them as excess reserves.[15] Figure 2-2 suggests this is what happened in late 2008.

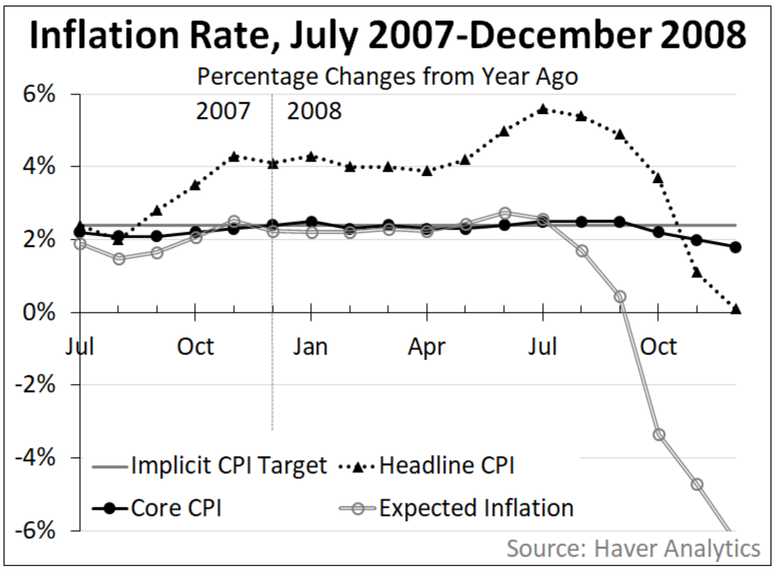
Figure 2-2



Reasoning from a Price Change

A negative aggregate supply "shock" emanating from a sharp rise in oil prices led to elevated headline inflation in late 2007 and early 2008. This was misdiagnosed as arising from strong aggregate demand growth induced by overly easy monetary policy.[16] However, Figure 2-3 shows that core inflation (excludes food and energy prices) and inflation expectations[17] remained near the Federal Reserve's then-implicit target—charted as 2.4 percent, as the consumer price index (CPI) tends to exceed the Federal Reserve's primary inflation measure, the personal consumption expenditures price index (PCE), by 0.4 percentage points). This suggests that monetary policy was not overly accommodative. Nonetheless, from April 2008 to September 2008, the Federal Reserve opted to keep the federal funds rate unchanged even as the economy deteriorated and investment bank Lehman Brothers failed.[18]

Figure 2-3



Interest on Excess Reserves (IOER)

The week Lehman Brothers failed, Federal Reserve emergency lending programs provided a major source of funds for financial markets.[19] This created a correspondingly large increase in the supply of bank reserves, which would have coincidentally lowered the federal funds rate, and led to an easing of monetary policy. However, reluctant to ease monetary policy, the Federal Reserve started paying interest on excess reserves (IOER), to induce banks to hold more excess reserves rather than lend them.[20]

Though the IOER rate was lowered to 0.25 percent by December 2008, it remained high relative to market interest rates, which encouraged banks to hoard reserves. According to George Selgin, director of the Center for Monetary and Financial Alternatives at the Cato Institute, the payment of IOER at market-competitive rates:

> *…severs the link between reserve creation and monetary expansion[;] it makes achieving monetary stimulus, even by means of extraordinary asset purchases [i.e., QE], extremely difficult; and because it has the Fed borrowing heavily from private intermediaries [the Fed borrows private bank funds at the IOER rate], it replaces private-sector lending with lending to the U.S. Treasury and other government agencies.*[21]

Quantitative Easing (QE)

Unwilling to lower the IOER rate to zero, the Federal Reserve then resorted to three rounds of QE between 2009 and 2014 to aid the recovery. QE vastly expanded the monetary base; however, as David Beckworth, a senior research fellow at the Mercatus Center of George Mason University, notes, it failed to generate a strong recovery because:

> *…the Fed could not credibly commit to a permanent expansion of the monetary base…[A] permanent expansion of the monetary base creates the expectation of a permanent rise in the future price level. That in turn, reduces money demand [e.g., banks lend rather than hold excess reserves] and raises current nominal spending [i.e., aggregate demand].*[22]

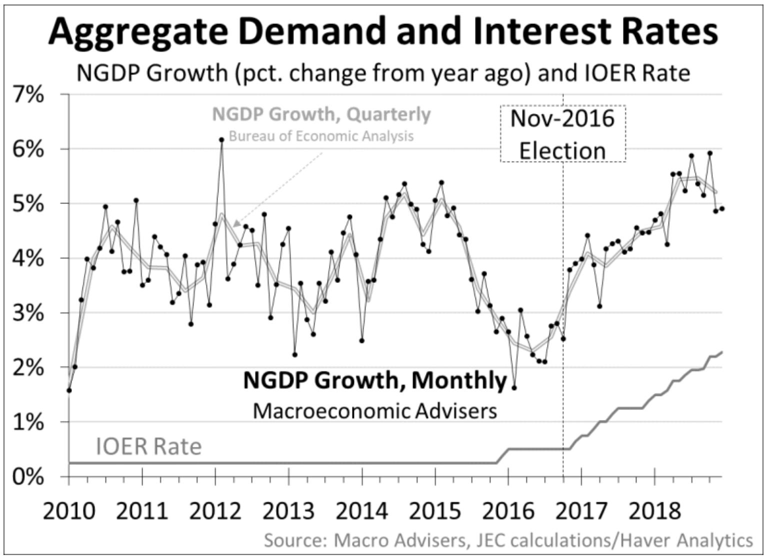
The Federal Reserve's transitory design of QE therefore dampened the expectation that the sharp contraction of aggregate demand that occurred in 2008 would be recovered by the policy.

Therefore, although the Federal Reserve's instruments suggested extraordinary monetary policy accommodation—low interest rates and QE quintupling the Federal Reserve's balance sheet size—a market-competitive IOER rate and the transitory design of QE programs short-circuited the transmission mechanism of monetary policy from increased bank reserves to faster aggregate demand growth. This explains inflation persistently undershooting the Federal Reserve's 2 percent inflation target and leaves no "mystery."

"NORMALIZING" MONETARY POLICY

As documented in Chapter 1, the November 2016 election portended considerably brighter prospects for the economic outlook, raising the demand for loanable funds (greater business investment), and leading market interest rates to rise relative to the Federal Reserve's IOER rate. This in turn encouraged banks to convert some excess reserves into credit, stimulating aggregate demand growth as Figure 2-4 indicates.

Figure 2-4



A More "Normal" Level of Interest Rates

As banks currently sit on $1.5 trillion of excess reserves[23] (prior to the 2008 financial crisis the banking system collectively held less than $2 billion of excess reserves), the Federal Reserve must keep the IOER rate near rising market interest rates to prevent an inflationary burst of spending. The improved economic outlook has enabled the Federal Reserve to raise the IOER rate eight times since the November 2016 election to 2.4 percent. (In contrast, it was raised only once to 0.50 percent in December 2015 after being held at 0.25 percent since December 2008).

Balance Sheet "Normalization"

In October 2017, the Federal Reserve was also able to begin allowing its holdings of Treasury securities and Government Sponsored Enterprise (GSE)-issued mortgage-backed securities (MBS) to runoff its balance sheet.[24] (Previously, after the third and final QE program ended in October 2014, whenever the Federal

Reserve's holdings of Treasuries or MBS matured, the Federal Reserve would reinvest the proceeds to keep its balance sheet size near $4.5 trillion.) As of December 2018, the Federal Reserve's balance sheet size was just over $4 trillion. Nonetheless, the size of the Federal Reserve's balance sheet as a share of NGDP remains much enlarged at nearly 20 percent, compared with about 6 percent before 2008.

"Normalization" without Normalizing

On January 30, 2019, the Federal Reserve announced that it will keep a relatively enlarged balance sheet:

> *[The Fed] intends to continue to implement monetary policy in a regime in which an ample supply of reserves [large Fed balance sheet] ensures that control over the level of the federal funds rate and other short-term interest rates is exercised primarily through the setting of the Federal Reserve's administered rates [IOER rate], and in which active management of the supply of reserves [open market operations] is not required…[The Fed] continues to view changes in the target range for the federal funds rate as its primary means of adjusting the stance of monetary policy.*[25]

The Federal Reserve reinforced the notion that monetary policy is eased or tightened by changing the level of the federal funds rate target range, presumably because a lower level of interest rates encourages greater business and household spending by reducing the cost of borrowing. This notion is problematic because it may be "reasoning from a price change," and if this simple transmission mechanism worked, then inflation would not have persistently undershot the Federal Reserve's 2 percent target.

Moreover, the statement regarding an "ample supply of reserves" signifies that the Federal Reserve intends to stop shrinking its balance sheet well short of the point at which banks' reserves would become scarce enough that interbank lending would resume in the federal funds market. As Norbert Michel, the director of the Heritage Foundation's Center for Data Analysis, noted in 2017:

> *So the standard process of managing interest rates through reserve management—the one that the Fed had been using for decades—simply cannot happen right now. The federal funds rate cannot possibly convey the type of information it used to, and there is no comparable short-term rate.*[26]

Thus, the normal pre-2008 operating system has now officially been abandoned for an operating system requiring a large quantity of excess reserves kept in check by an IOER rate competitive with market rates.

OPERATING SYSTEM CONCERNS

Diminished Monetary Policy Effectiveness

As shown in Figure 2-2, every \$1 of the Federal Reserve's monetary base supported \$18 of aggregate demand until late 2008. If aggregate demand contracted by \$180 billion, the Federal Reserve would only have to purchase \$10 billion worth of Treasury securities to offset this. In contrast, under the current operating system, \$1 of base money supports only \$6 of aggregate demand. A \$180 billion aggregate demand contraction would require a much larger Federal Reserve market intervention of \$30 billion of Treasury securities to offset this.

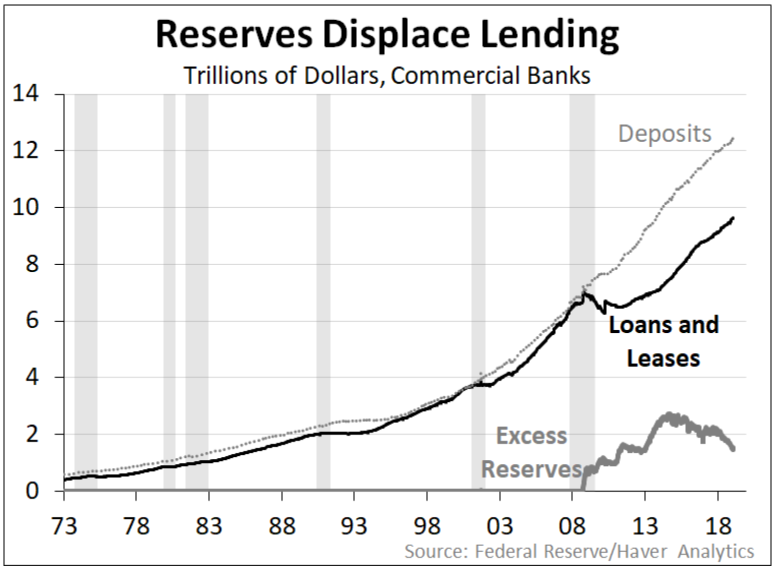
Smaller Margin for Error

Given the $1.5 *trillion* of excess reserves that now exist (compared to about only $2 *billion* before 2008), the Federal Reserve must keep the IOER rate near market interest rates to prevent sudden and sharp aggregate demand expansions and contractions. This gives the Federal Reserve little room for error, and "the Fed becomes an interest rate follower and not an interest rate leader," according to former Senate Banking Committee Chairman, Phil Gramm and Thomas Saving, former Director of the Private Enterprise Research Center at Texas A&M University.[27]

Unintended Supply Side Consequences of a Large Balance Sheet

Research by David Beckworth of the Mercatus Center shows that as the IOER rate rises relative to market-determined interest rates, banks reallocate their assets from loans to reserves.[28] This amounts to the intermediation of credit between borrowers and lenders by the private banking system being rerouted to the Federal Reserve. Before 2008, every $1 of deposits in the banking system were used to finance nearly $1 worth of loans. Since 2008, however, only 80 cents become a loan (see Figure 2-5). Banks deposit the other roughly 20 cents with the Federal Reserve as reserves. The Federal Reserve correspondingly invests these in longer-term Treasury securities and GSE-issued MBS. Thus, the Federal Reserve's enlarged "credit market footprint" may be hindering capital accumulation, labor productivity growth, and the U.S. economy's longer-run growth prospects.[29]

Figure 2-5



Regulatory Concerns

It might be argued that the reserves that appear to be displacing lending, as shown in Figure 2-5, are the result of regulatory requirements brought on by the Dodd-Frank Act, and not the Federal Reserve's payment of a market-competitive IOER rate.[30] However, Thomas Hogan, a fellow in the Baker Institute Center for Public Finance and former chief economist for the Senate Banking Committee, finds that the gap between loans and deposits precedes the regulations that were mostly implemented between 2012 and 2014. After controlling for other factors, he isolates a market-competitive IOER rate as the cause of the lending-deposit gap.[31]

David Beckworth's aforementioned research also controls for the introduction of the Dodd-Frank liquidity coverage ratio (LCR), which requires banks maintain a higher level of liquidity (i.e. more safe assets that either are cash or can easily be converted into cash). He finds that it does explain an increase in cash reserve holdings (though only for large banks), but it does not explain the decline in loan holdings. (This suggests that banks only substituted holding Treasury securities to satisfy the LCR in favor of IOER-earning reserves, and did not contract lending because of it.) He concludes:

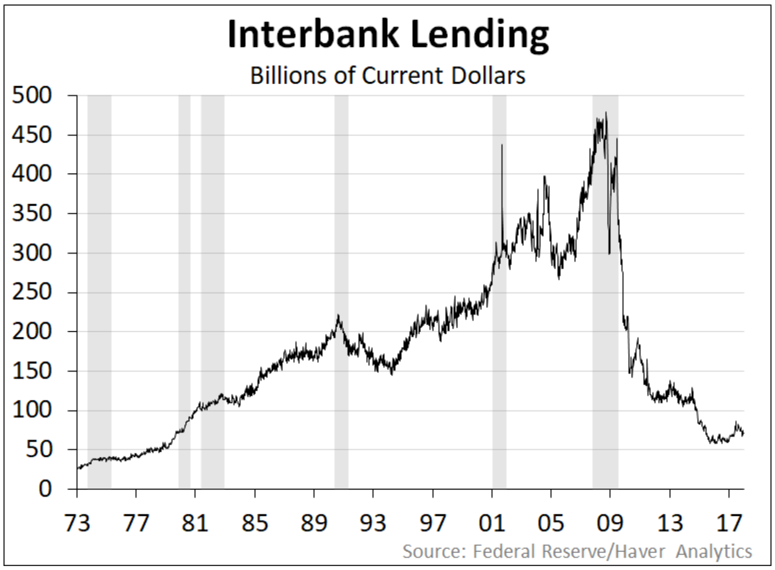
> *In short, the [difference between the IOER rate and market interest rates] is found to be an important causal determinant of cash share and loan share held by commercial banks in the United States…Specifically, [these results] strongly suggest that it was the Fed's [post-2008 operating system] that radically changed the portfolios of banks, starting in early 2009.*[32]

Notably, Canada is subject to the same Basel III regulatory requirements as are embodied within the Dodd-Frank Act, but the Bank of Canada's supply of reserves to the Canadian banking system increased only 50 percent between year-end 2007 and 2018. In comparison, the Federal Reserve's supply of reserves was over 11,200 percent higher.[33] This research and data suggest that regulatory concerns are not binding the Federal Reserve to maintaining its post-2008 operating system.[34]

No Interbank Lending Market

Since the Federal Reserve's current operating system began in late 2008, interbank lending has collapsed as Figure 2-6 illustrates. (Indeed the Federal Reserve even discontinued publishing this data series as of December 2017.) This is unfortunate because it closes an avenue for market discipline. In particular, with interbank loans, banks had an incentive to monitor one another's riskiness, and this was accounted for in the rates they would negotiate to exchange funds.[35]

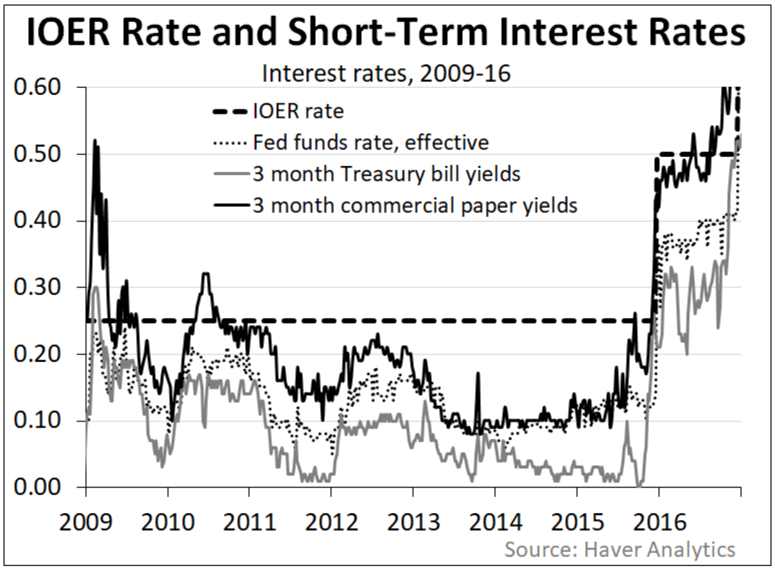
Figure 2-6



Legal Concerns

The law stipulates that IOER be paid at "rates not to exceed the general level of short-term interest rates."[36] As Figure 2-7 shows, this has not been the case during the 2010-2016 period, though this situation was ameliorated somewhat with the better economic outlook following the November 2016 election.

Figure 2-7



Additionally, in the January 30, 2019 statement cited above, the Federal Reserve suggests its inclination to use changes in the "composition" of its balance sheet should conditions warrant, implying the Federal Reserve's intent to use credit policy.[37] As this involves the diversion of funds from the market at-large to particular financial market segments, it is within Congress's purview.

Potential Impairment of Federal Reserve Independence

Before 2008, when changes in the Federal Reserve's balance sheet size had a powerful effect on aggregate demand (see Figure 2-2), the Federal Reserve could resist political pressures to buy assets because doing so would hinder its ability to achieve its statutory mandate to maintain maximum employment and stable prices. Now, with a market-competitive IOER rate, the Federal Reserve can increase its balance sheet size without having an impact on aggregate demand. This may open the Federal Reserve up to demands for financing all manner of programs that would be impossible to fund through taxation.

CONCLUSION

This chapter presented evidence that:

(1) Interest rates—considered a monetary policy instrument—are unreliable for judging the stance of monetary policy.
(2) An alternative indicator that deserves more attention is NGDP, which measures aggregate demand.
(3) Monetary policy was misdiagnosed as accommodative in 2008, when monetary conditions were becoming extremely tight.
(4) IOER exacerbated the tightness of monetary conditions.
(5) The effectiveness of QE to influence aggregate demand was blunted by IOER and the transitory design of the programs.

In the 2011 Financial Crisis Inquiry Commission's 662-page report, none of these factors were considered.[38] Instead, the key takeaway was that maintaining financial stability was an essential prerequisite for economic stability. The 2010 Dodd-Frank Act, though enacted before the Commission's report was published, also rests on this assumption.

A critical question is whether the Federal government is relying too much on financial regulation to prevent the next crisis when tight monetary conditions may have been an underappreciated factor in the last one.

Congress mandates that the Federal Reserve maintain price stability and maximum employment. How it implements monetary policy to attain this "dual mandate" should be more clearly communicated. To this end, the Federal Reserve System, under Chairman Powell's leadership, has scheduled a conference in June 2019 to enable stakeholders from outside the Federal Reserve to offer comments and assessments of the Federal Reserve's monetary policy framework.[39]

Scott Sumner (2018)[40] offers a proposal that involves the Federal Reserve setting "specific quantifiable goals" for price stability and maximum employment, or a metric that simultaneously embodies both, over the upcoming year. After the year has elapsed and the data becomes available, if the relevant metric(s) varied from the pre-specified goal, the Federal Reserve would report to Congress that monetary policy had been either too easy or too tight, and would propose how it will rectify the deviation. This would make it easier for the Federal Reserve to explain and justify corrective measures. An enhanced public understanding and acceptance of Federal Reserve corrective measures would enable less invasive Federal Reserve interventions as markets would adjust their behavior in advance.

For example, if NGDP growth were used as the metric, and if it fell below the goal, then banks, anticipating corrective Federal Reserve measures, would be less inclined to curtail lending to hoard reserves, leading monetary conditions to ease and reducing the need for more drastic Federal Reserve interventions.

Recommendations

- It is important for the Federal Reserve to explain how its operating system (market-competitive IOER rate and large balance sheet) enables it to achieve the "dual mandate."

- The Federal Reserve considers the fact that inflation has remained below the target rate a "mystery." It is important for the Federal Reserve to consider whether its operating system may be the cause.

Chapter 3: How Families, Workers, and the Economy Benefit from the Tax Cuts and Jobs Act

Introduction

Will the *Tax Cuts and Jobs Act* (TCJA) foster long-term sustainable growth or is it merely a "sugar rush" to the economy that will dissipate quickly? Will economic gains translate into higher wages for workers or will the benefits be concentrated among a privileged few?

These were key questions explored by the Joint Economic Committee (JEC) at a September 2018 hearing titled "The Positive Economic Growth Effects of the Tax Cuts and Jobs Act."[41] Finding the answers requires a look at how tax policy in general and TCJA in particular affect the building blocks of the economy, as well as early evidence and long-term projections of the law's success.

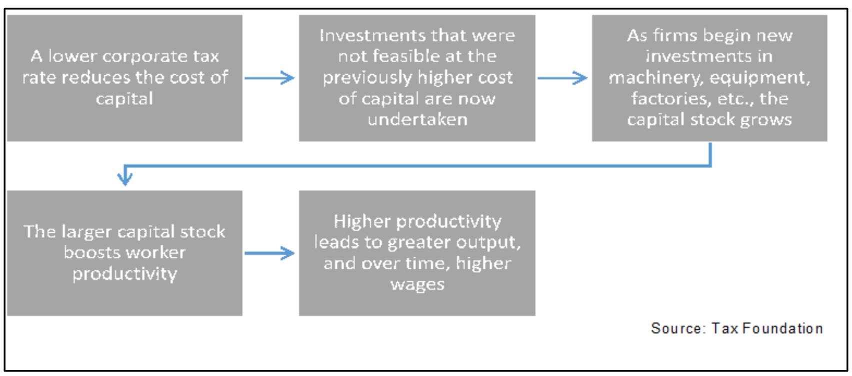
How Tax Policy Affects Economic Growth

To operate at full potential, an economy needs its working-age population in the workforce (labor supply); businesses willing and able to equip workers with high-quality facilities, equipment, technology, and know-how (capital investment); and all of these employed in ways that empower workers to produce more per hour (labor productivity). Tax policy can affect each of these factors either positively or negatively.

The Joint Committee on Taxation (JCT) has noted that lower tax rates paid by individuals allow them to keep more of the money they earn, thus increasing their incentive to work. Similarly, lower tax rates paid by businesses decrease the cost of capital, which encourages companies to invest more in their business and workers by purchasing equipment, upgrading technology or facilities, or providing skills training, all of which make employees more productive.[42] Higher productivity generally leads to higher wages for workers.[43] Higher wages, in turn, may entice more potential workers into the workforce, creating a virtuous cycle of greater prosperity, opportunity, and growth.

Scott Hodge, President of the Tax Foundation, provided a useful graphic in his JEC hearing testimony that shows the relationship between lower business taxes and worker pay (Figure 3-1):[44]

Figure 3-1



Tax policy can also hinder economic and wage growth. High marginal tax rates on individuals discourage them from working and increasing their earnings. High tax rates on businesses raise the cost of capital, making it less feasible for companies to invest in their business and workers. Additionally, tax rules for equipment purchases that require businesses to deduct the purchase price over many years under complicated depreciation schedules—rather than allowing an immediate tax deduction for the cost, known as expensing—discourage companies from making the kind of investments that raise productivity, wages, and economic growth.

As Mr. Hodge explained in his testimony:

> *Delaying deductions means the present value of the write-offs (adjusted for inflation and the time value of money) is worth less than the original cost, sometimes worth much less. Delayed deductions increase the cost of making an investment, which results in less capital formation, lower productivity and wages, and less output.*[45]

In addition, tax policy can have a direct impact on the location of investments. If the domestic tax climate makes it less profitable to invest in the United States, businesses have a powerful incentive to invest in and even relocate to other countries with more favorable tax systems. This diverts both capital and workforce opportunities from the United States, further lowering our Nation's growth potential.

Mr. Hodge described how high corporate taxes can damage growth due to the mobility of capital:

> *Evidence shows that of the different types of taxes, the corporate income tax is the most harmful for economic growth. One key reason that capital is so sensitive to taxation is because capital is highly mobile. For example, it is relatively easy for a company to move its operations or choose to locate its next investment in a lower-tax jurisdiction, but it is more difficult for a worker to move his or her family to get a lower tax bill. Capital is, therefore, more responsive to tax changes; lowering the corporate income tax rate reduces the amount of economic harm it causes.*[46]

Mr. Hodge also explained why workers bear a substantial burden of corporate taxes by earning lower wages:

> *A common misunderstanding is that corporations bear the cost of the corporate income tax. However, a growing body of economic literature indicates that the true burden of the corporate income is split between workers through lower wages and owners of the corporation. As capital moves away in response to high statutory corporate income tax rates, productivity and wages for the relatively immobile workers fall. Empirical studies show that labor bears about half of the burden of the corporate income tax.*[47]

In summary, a tax code that helps make America a more attractive place to work, invest, and start or grow a business is a key ingredient for stronger economic and wage growth.

HOW ECONOMY-WIDE EFFECTS OF TAX POLICY ARE MODELED

Most economists who model major tax changes agree on the general direction a particular tax policy will send the building blocks of the economy in the short run—in other words, whether a change will be pro-growth or anti-growth, and even whether one change is more or less pro-growth than another. Where they differ is on the degree to which the change will influence the economy, and on whether other factors will temper or even reverse the growth effects over time.

Several organizations have developed macroeconomic tax models that attempt to predict future economic outcomes, each with different assumptions and each with various strengths and weaknesses. Some assume that the United States has a closed economy, while others assume an open one where capital flows easily across international borders. The models differ on factors such as the degree to which individual or business taxpayers will respond to changes, whether the Federal Reserve will act aggressively to temper growth with interest rate hikes, or whether higher interest costs for servicing Federal debt will "crowd out" private investment. As such, each model can result in very different predictions about a law's precise impact on long-term growth in GDP, employment, capital investment, and wages, as well as how much additional Federal revenue might be generated from extra growth in the economy.

JCT, the official tax scorekeeper of Congress, uses three different models that it blends together to develop a single growth projection.

The Taxes and Growth model developed by the Tax Foundation focuses on how tax changes influence the supply of workers and capital. The model places a greater emphasis on capital effects because—as outlined earlier—capital is highly mobile and more responsive to tax policy changes, and capital investment drives the productivity gains that lead to long-term wage and economic growth.

The models that project low growth effects from TCJA rely on Keynesian assumptions that aggregate demand drives economic activity, rather than the strength of the supply of economic building blocks such as labor and capital. These assumptions predict a short-term spurt in growth from the demand side of the economy as consumers and businesses spend more due to the extra dollars they have from tax relief. But over time, the story goes, other factors such as accelerated inflation can act to offset the additional spending. Such models also tend to downplay the mobility of capital across borders, which limits the formation of capital even when there are strong incentives to invest.

Mr. Hodge was skeptical of models that show a crowd-out of private investment:

> *There is $20 trillion a year worth of savings globally every year, and a little bit of deficit in the United States is not going to crowd out and raise interest rates on a global basis.*[48]

He also cautioned against raising taxes in order to reduce deficits, citing a recent International Monetary Fund (IMF) study:

> *[The IMF study] looked across the globe at all of the different countries that have cut their deficits at one time or another through tax or spending policies, and which ones did the most harm and which ones did the most good. [The study] found that cutting spending was the most beneficial for both reducing the deficit and for economic growth; whereas raising taxes did the most harm for economic growth, which ended up being counterproductive for trying to reduce the deficit.*[49]

In summary, economic modeling is not an exact science, and no model can predict economic outcomes with absolute certainty. The first thing to remember is that nearly every model finds TCJA to be pro-growth. But most importantly, the takeaway is that TCJA was not designed to be a short-term Keynesian stimulus. It was designed to improve long-term incentives to work and invest so that more Americans will be employed and have access to the tools that will enable them to be more productive, leading to long-term growth in their wages and the economy as a whole.

PRO-GROWTH PROVISIONS IN TCJA

Lower Individual Rates and Other Tax Relief

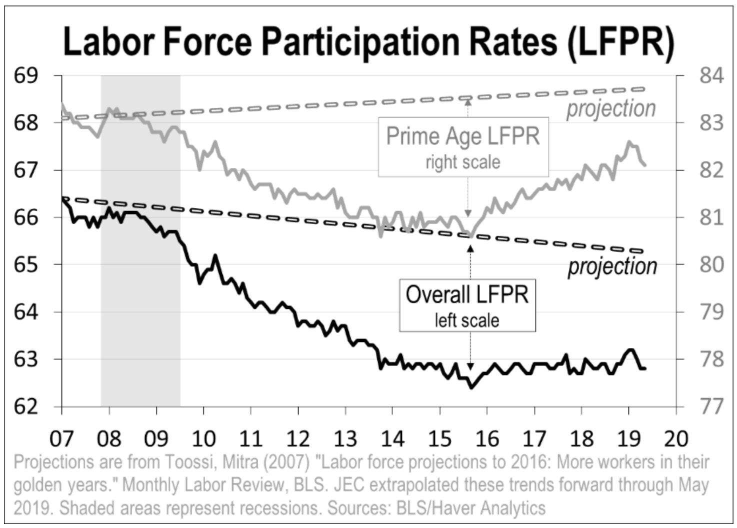
TCJA lowered individual tax rates; applied the lower rates to broader swaths of income; nearly doubled the standard deduction (essentially creating an expanded 0 percent tax bracket); and doubled the child credit to $2,000 per child, while making more of the credit refundable for low-income Americans without federal income tax liability.

In its macroeconomic analysis of TCJA, JCT described how these tax provisions combine to encourage potential workers on the sidelines to join the workforce:

> *The significant reduction in marginal tax rates on labor (resulting primarily from the additional tax rate bracket, lower statutory rates for most brackets, and the increase in the child credit) provide strong incentives for an increase in labor supply.*[50]

By allowing Americans to keep more of what they earn, TCJA increases incentives to work. This is especially important because workforce participation languished during the Obama-era portion of the recovery, and though improving, it still remains below what the Bureau of Labor Statistics (BLS) had projected before the recession, even for workers in their prime working years (Figure 3-2).

Figure 3-2



Due to a lack of support from Democrats in Congress, TCJA could only be enacted under complex budget reconciliation procedures, which led to the expiration of TCJA provisions affecting individuals after 2025. Essentially, JCT provided an economic argument for extending the individual tax relief by noting:

> *After the sunset of the individual tax provisions, the increase in employment is expected to decline.*[51]

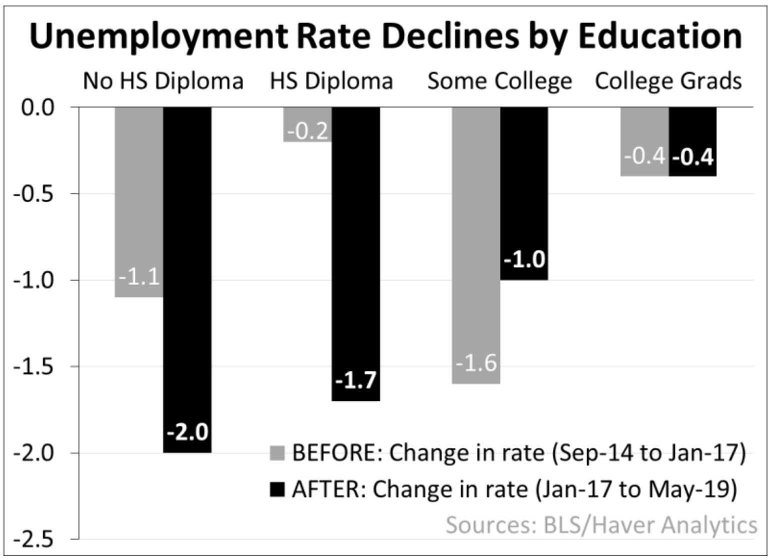
The Myth of "Tax Cuts Only Benefit the Wealthy"

TCJA also increased the progressiveness of the tax code. While TCJA is evenhanded by lowering taxes for all income groups, during the time that TCJA provisions affecting individuals are in effect, the new and lower overall tax burden will be borne more heavily by taxpayers with incomes greater than $1 million. For example, JCT estimated that in 2019, taxpayers with incomes over $1 million will pay 19.8 percent of all Federal taxes, compared to 19.3 percent without TCJA. Conversely, under TCJA, taxpayers with less than $50,000 in income will see their share of Federal taxes in 2019 fall from 4.4 percent to 4.1 percent.[52] JCT also noted that in 2019, Americans with incomes less than $50,000 will enjoy the largest percentage cut in their taxes.

JCT indicated that this increased progressiveness of the tax code under TCJA would eventually disappear, should a future Congress decide not to renew the individual tax provisions, providing yet another argument for extending them beyond 2025.

In addition to the tax relief that low- and middle-income Americans will enjoy through 2025, data on falling unemployment rates defy the critics who claim the current strong economy (made possible by TCJA and regulatory reforms) is only benefiting a privileged few. Employment opportunities have improved greatly for Americans who tend to be most at risk in a weak economy. As described in Chapter 1 of this *Response*, the unemployment rates of minority populations hit milestone lows following enactment of TCJA. Additionally, under the past two years and four months since President Trump took office, the headline unemployment rate fell faster for workers with limited education than it did during the preceding two years and four months of the Obama Administration. (Figure 3-3).

Figure 3-3



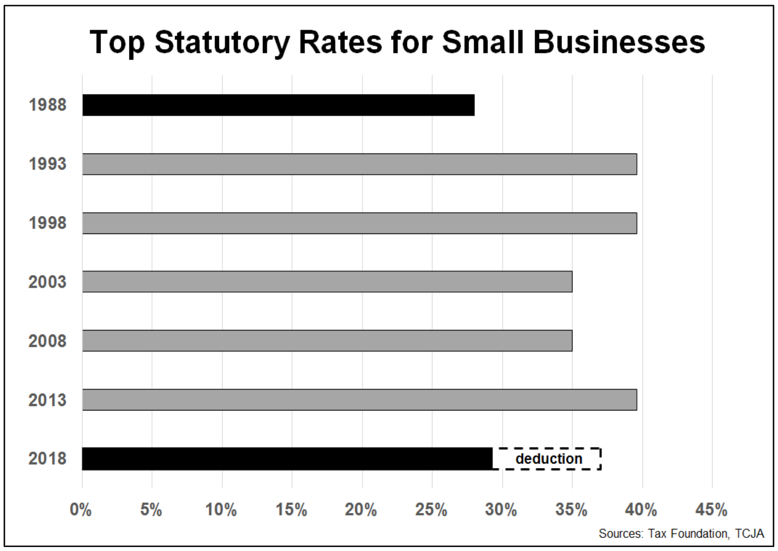
Lower Small Business Rates and the Pass-Through Deduction

Approximately 95 percent of companies are structured to pay taxes at the individual level rather than corporate level; these are known as pass-through businesses.[53] The vast majority of small businesses are organized as pass-throughs, and are therefore very sensitive to individual tax rates.

TCJA reversed part of the Obama-era tax increase on pass-through businesses by lowering the top individual rate from 39.6 percent to 37 percent. Additionally, TCJA provided a new deduction equal to 20 percent of pass-through business income, with safeguards to prevent abuse.

The combination of the lower statutory rate and the pass-through deduction creates a top effective rate of 29.6 percent for most small businesses, very near the top 28 percent rate (represented by the top bar in Figure 3-4) established by the bipartisan Tax Reform Act of 1986.[54]

Figure 3-4



William Dunkelberg, the Chief Economist of the National Federation of Independent Business (NFIB), was also a witness at the September 2018 JEC hearing. NFIB is the largest trade association representing small business owners and regularly surveys its members to gauge the economic well-being, future plans, and top concerns of the small business community. Dr. Dunkelberg described the positive response of small business owners to TCJA, with small business optimism at record highs:

> *The TCJA has made a significant contribution to the growth of the economy, in terms of improving the bottom lines of small firms but also changing the metrics about the future value of investments.*[55]

Dr. Dunkelberg noted that three-fourths of small business owners expected their business would benefit from tax reform, and this was translating into plans to increase investment, worker pay, and hiring:

> *Almost half (47 percent) of small business owners who expect to pay less in taxes next year plan to increase business investments with their tax savings, and 44 percent plan to increase employee compensation… Twenty-seven percent plan to hire an additional employee…*[56]

Dr. Dunkelberg also noted that these plans of small business owners do not simply reflect their belief in a short-term burst of economic growth that will fade, but indicate expectations of long-term benefits:

> *All the decisions that small business owners make are always about the future… So decisions they are making now to spend and to hire are commitments to the future, not just six months or a year, but much longer than that, especially when you look at the fact that we have a record high number now saying it is a good time to expand their business…*
>
> *So we think they are very optimistic about the future, not just the immediate future but long term. They see a different set of policies that are conducive to growth in the economy, and that are encouraging them to do the kinds of things that will raise worker productivity. And to go along with that we have a record-high percentage who are now already reporting raising worker compensation. So as our workers become more productive, we do pay them more.*[57]

Unfortunately, the pass-through deduction is scheduled to expire after 2025, along with the other provisions in TCJA affecting the individual side of the tax code. Dr. Dunkelberg warned against allowing these provisions to expire:

> *The new tax law is a significant step forward in easing one of the main concerns of small business owners: the impact of federal taxes on business income. For long term growth in the small business sector, NFIB strongly urges Congress to make these provisions permanent so that increasing uncertainty over future changes to the tax code do not erode the law's benefits.*[58]

Indeed, the Tax Foundation estimated that making the individual provisions (which include the pass-through deduction) permanent would have a long-run impact of 2.2 percent higher GDP, a 0.9 percent increase in wages, and the equivalent of 1.5 million more full-time jobs.

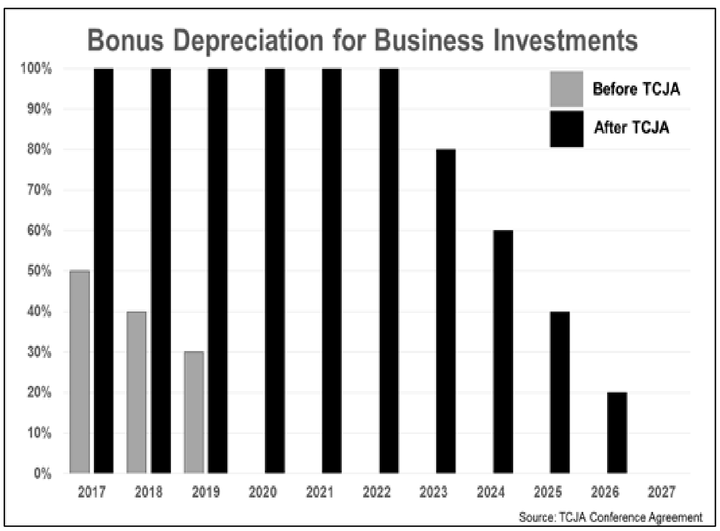
Faster Cost Recovery Through Expensing

As noted earlier, instead of allowing an immediate tax deduction for the full cost of purchasing an asset (expensing), tax rules generally required businesses to use complicated depreciation schedules to deduct the cost gradually over many years,[59] which discourages investment and dampens long-term wage growth.

In order to boost business investments and economic growth, Congress has passed temporary extensions of bonus depreciation, under which companies can deduct a large portion of the purchase price in the first tax year. However, before TCJA, the extra portion of investments that could be deducted immediately was scheduled to decline from 50 percent in 2017, to 40 percent in 2018, and to 30 percent in 2019, after which it would disappear completely.

TCJA provides 100 percent bonus depreciation—which is essentially expensing—for purchases made after Sept. 27, 2017, through the end of 2022, after which it will phase down and eventually disappear by 2027 (Figure 3-5). (Congressional and Administration leaders had announced earlier that expensing would be made retroactive to September so that businesses could begin anticipating that change and make investment decisions at the end of 2017 accordingly, even before TCJA became law.)

Figure 3-5



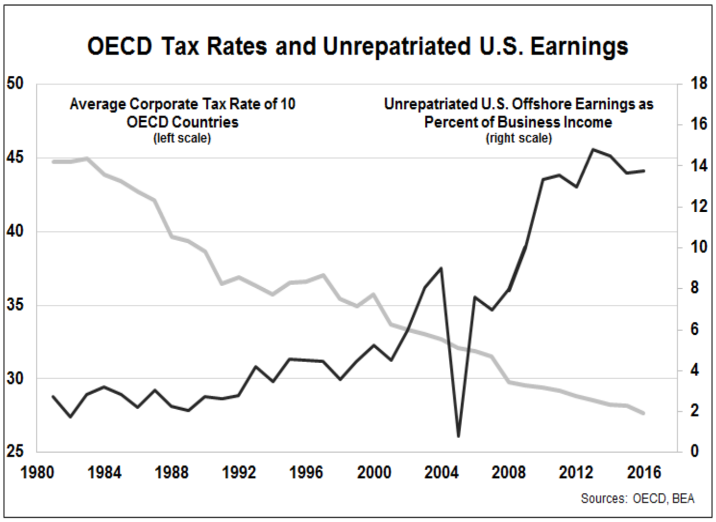
Because expensing is a powerful tool for encouraging new capital investment, the Tax Foundation estimates that making expensing permanent would generate a 0.9 percent increase in long-run GDP over the decade, along with a 0.8 percent increase in wages and the equivalent of 172,300 more full-time jobs.[60]

Lower Corporate Tax Rates and a Territorial Tax System

Before TCJA, the tax code imposed substantial burdens on American corporations competing in global markets on two fronts. First, among the 34 advanced economies in the Organization for Economic Co-operation and Development (OECD), the U.S. corporate rate topped all others in 2017 at nearly 39 percent, including both the 35 percent federal rate and average state taxes.[61] In addition, U.S. businesses were faced with an uncompetitive worldwide tax system rather than a territorial system. Territorial systems allow active business income earned overseas to be brought back to the home country with little or no tax. In contrast, America's worldwide system subjected all income to U.S. taxation, regardless of where it was earned. The tax was triggered when profits were brought back to the United States, giving companies a strong incentive to leave earnings overseas. This created a lock-out effect, which resulted in reduced levels of investment by American companies in the United States.

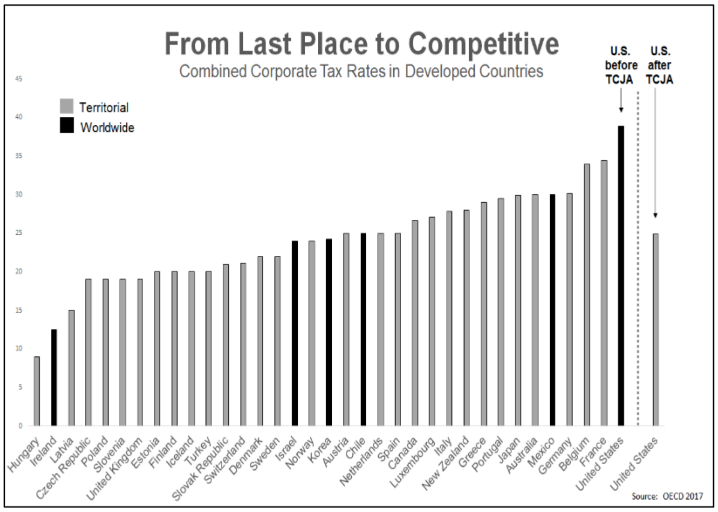
Figure 3-6 illustrates that as the corporate tax rates declined in 10 large economies in the OECD—all of which adopted territorial tax systems—a larger share of the international income of U.S. businesses was left offshore.[62] Unsurprisingly, the dip in earnings that were left overseas in 2005 occurred due to a temporary tax holiday that allowed businesses to repatriate their profits to the United States at a much lower tax rate.[63]

Figure 3-6



In order to prevent the loss of headquarters, jobs, and investment to nations with more attractive tax systems, TCJA lowered America's federal corporate rate from 35 percent to 21 percent and moved to a more territorial system. Figure 3-7, which incorporates both national and average sub-national taxes in OECD countries, illustrates how these two changes put America on a much more competitive footing with other developed economies.

Figure 3-7

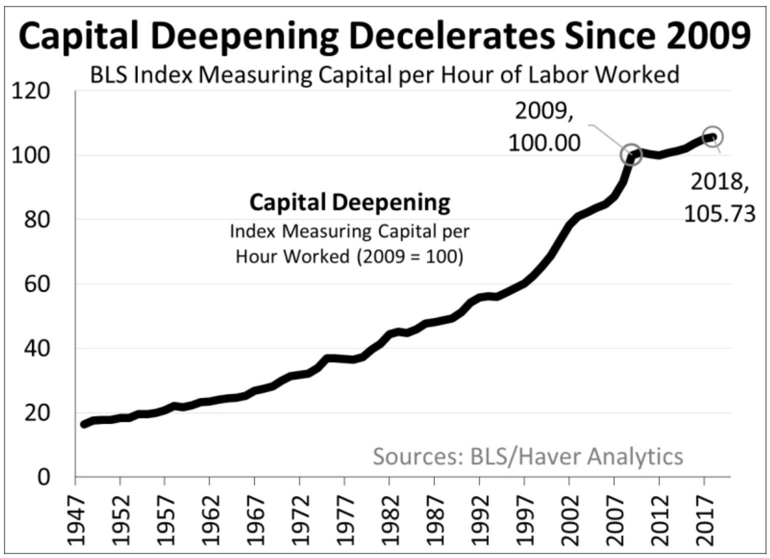


Additionally, TCJA included several provisions to limit the artificial shift of U.S. profit to overseas locations. After analyzing the full effect of these anti-abuse provisions, the corporate and pass-through rate cuts, and new territorial system, JCT concluded (bold emphasis added):

> *The provisions affecting taxation of foreign activity are expected to reduce the incentive for this "profit-shifting" activity… The macroeconomic estimate projects* ***an increase in investment in the United States****, both as a result of the proposals directly affecting taxation of foreign source income of U.S. multinational corporations, and from the reduction in the after-tax cost of capital in the United States due to more general reductions in taxes on business income.*[64]

"Capital deepening" is a measure of the value of capital available to workers per hour worked. As noted earlier, more capital raises workers' productivity, which in turn enables wage growth. During the Obama-era recovery, capital deepening experienced a dramatic deceleration (Figure 3-8).

Figure 3-8



Critics of TCJA claim that using the proceeds from lower corporate tax rates for stock buybacks fails to help the economy or workers. However, buybacks free up investment funds that can then be redirected to companies that are expanding and making investments that ultimately increase workers' wages.[65] Also, more than half of households own stock, and nearly 40 percent of U.S. corporate stock is held in retirement accounts; consequently, workers benefit from stock buybacks through higher stock prices that boost their retirement savings.[66]

PRO-FAMILY PROVISIONS IN TCJA

The JEC's Social Capital Project has documented that communities with strong families, a strong attachment to work, and a strong associational life tend to experience better economic outcomes.[67] TCJA included provisions addressing biases in the tax code that discourage marriage and childbearing.

Expanded Marriage Penalty Relief

A "marriage penalty" occurs when tax rules result in higher tax liability for a married couple than for two unmarried cohabitating adults with the same economic profile.

In a simplified example, consider a tax system in which the first $10,000 of a taxpayer's income is taxed at a 10 percent rate, while all income above $10,000 is taxed at a 20 percent rate. If two unmarried adults each earned $8,000, each adult would pay $800 in taxes, or a total of $1,600 between the two of them. But if each spouse of a married couple earned $8,000 and filed a joint tax return, this would result in combined income of $16,000. The first $10,000 of this would be taxed at a 10 percent rate ($1,000 in tax liability), but the remaining $6,000 would be taxed at a 20 percent rate ($1,200 in additional tax liability), for a combined total tax liability of $2,200, which is $600 more than the amount owed by the two unmarried adults in this example. This would act as a financial disincentive to marry, and also a disincentive to work if both spouses would otherwise choose to earn a paycheck.

In recent years, Congress has ameliorated the marriage penalty by doubling the amount of taxable income that a married couple can earn within a tax bracket compared to the amount allowed for a single taxpayer, while making similar adjustments to other tax provisions. However, before TCJA most tax brackets still contained at least a partial marriage penalty (Table 3-1):

Table 3-1

2017 Tax Rate (before TJCA)	**Income Range (single)**	**Income Range (married filing jointly)**	**Marriage penalty?**
10%	$0-$9,325	$0-$18,650	No
15%	$9,325-$37.950	$18,651-$75,900	No
25%	$37,951-$91,900	$75,901-$153,100	Yes
28%	$91,901-$191,650	$153,101-$233,350	Yes
33%	$191,651-$416,700	$233,351-$416,700	Yes
35%	$416,701-$418,400	$416,701-$470,700	Yes
39.6%	$418,401 or more	$470,701 or more	Yes

Source: IRS

Table 3-1 shows that under 2017 law, full marriage penalty relief was only available within the 10 percent and 15 percent tax brackets. Additionally, in a strange quirk, the starting point for the income range of the 35 percent tax bracket was identical for single taxpayers and married couples filing joint returns, while the starting point of the 39.6 percent tax bracket was slightly more generous for married taxpayers, indicating that the very highest earners had greater access to at least partial marriage penalty relief than those with less income.

Along with lowering individual tax rates, TCJA expanded the range of income within tax brackets so that more married couples would be eligible for full marriage penalty relief:

Table 3-2

2018 Tax Rate (after TCJA)	Income Range (single)	Income Range (married filing jointly)	Marriage penalty?
10%	$0-$9,525	$0-$19,050	No
12%	$9,526-$38,700	$19,051-$77,400	No
22%	$38,701-$82,500	$77,401-$165,000	No
24%	$82,501-$157,500	$165,001-$315,000	No
32%	$157,501-$200,000	$315,001-$400,000	No
35%	$200,001-$500,000	$400,001-$600,000	Yes
37%	$500,001 or more	$600,001 or more	Yes

Source: IRS

After TCJA, taxpayers with household incomes less than $400,000 are eligible for full marriage penalty relief, while those with higher incomes are eligible for at least partial relief from the marriage penalty (Table 3-2). Like other provisions in TCJA affecting the individual side of the tax code, this treatment will expire after 2025 unless Congress and the Administration act to extend or make the provisions permanent.

Expanded Child Tax Credit

As mentioned earlier, TCJA doubled the value of the child tax credit from $1,000 to $2,000 per child. In addition, TCJA increased the refundable portion of the child credit to $1,400 and indexed this amount to inflation, so that the refundable portion will eventually grow to match the full value of the underlying $2,000 credit. (“Refundable” means that it is not necessary to have federal income tax liability against which to take the credit; this tends to provide low-income taxpayers who have less tax liability greater access to the credit.)

The refundable portion of the child credit, known as the Additional Child Tax Credit (ACTC), contains a work incentive because taxpayers must earn a certain amount of income from work in order to claim the ACTC. First, taxpayers must have earned at least $3,000 in order to be eligible for the ACTC; second, taxpayers can only claim 15 percent of their earned income above $3,000 as refundable. Thus, a taxpayer with one child who earned just $2,000 from work would not qualify for the ACTC (though taxpayers still qualify for the underlying child credit to the extent they have tax liability); a taxpayer with $4,000 in earned income could qualify for a $150 ACTC ($4,000 - $3,000 = $1,000; $1,000 x 15% = $150), while a taxpayer who earned $12,334 or more from work would be eligible for the full $1,400 ACTC amount.

In addition to increasing the underlying amount of the child credit and ACTC, TCJA expanded eligibility for the child credit to more families and eliminated a marriage penalty within the credit. Under previous law, single taxpayers with adjusted gross income above $75,000 would begin losing the credit in $50 increments for each $1,000 in income above that threshold. For married couples filing joint returns, the phase-out threshold was $115,000, which was not double the amount available for single taxpayers and therefore constituted a partial marriage penalty.

TCJA raised the phase-out threshold to $200,000 for single taxpayers and $400,000 for married couples, which not only increased access to the credit and ended the marriage penalty, but also provided greater simplicity by eliminating the need for most middle-income households to make complex calculations of the credit amount.

Other Family-Based Tax Provisions

In addition to expanding the child tax credit, TCJA also created a non-refundable tax credit of $500 for dependents who do not qualify for the child credit, which could include family members with disabilities or older children (the child credit is only available for children under the age of 17). Additionally, TJCA retained tax credits for expenses related to adoption and child care. TCJA also instituted the first-ever tax credit for employers who provide paid family and medical leave to low- and middle-income workers.

Additional Progress Needed on the Alternative Minimum Tax

The Alternative Minimum Tax (AMT) operates as a parallel tax system that requires Americans to calculate their tax burden under two separate structures. The AMT tended to ensnare taxpayers with many children, a second mortgage, high State taxes, or who otherwise claim various tax benefits. AMT taxpayers must then recalculate their taxes under a different set of rules, usually resulting in paying much higher taxes.[68]

The AMT was originally inspired by 1969 testimony of the then-Treasury Secretary to the Joint Economic Committee that 155 affluent individuals paid no income tax.[69] Yet, instead of targeting the ultra-wealthy the AMT hit over 4.6 million taxpayers during the 2017 tax filing season, including thousands of Americans with incomes of less than $15,000.[70] Over 10 million taxpayers in the same year had to use complicated calculations on a separate form to determine whether AMT might apply, and millions more had to do other calculations to see whether they were required to fill out that form.[71]

Earlier versions of TCJA had proposed fully eliminating the AMT for individuals, but the final version simply increased the amount of income that is exempt from AMT. Under 2017 law, the first $54,300 in income calculated under the AMT rules was exempt from AMT for single taxpayers, while the exemption was $84,500 for married taxpayers filing a joint return. (Again, because the exemption for married taxpayers was not double the amount available for single taxpayers, the exemption contained a marriage penalty.) Taxpayers would begin losing the exemption once their income (calculated under the AMT rules) reached $120,700 for single taxpayers and $160,900 for married couples filing jointly, which also resulted in a marriage penalty.

TCJA increased the exemption amounts to $70,300 for single taxpayers and $109,400 for married couples. Further, it increased the levels of income at which the exemption begins to phase out to $500,000 for single taxpayers and $1 million for married couples. Thus, while it eliminated the marriage penalty in the income thresholds at which the exemption begins to phase out, TCJA did not completely eliminate the marriage penalty within the exemption amount itself.

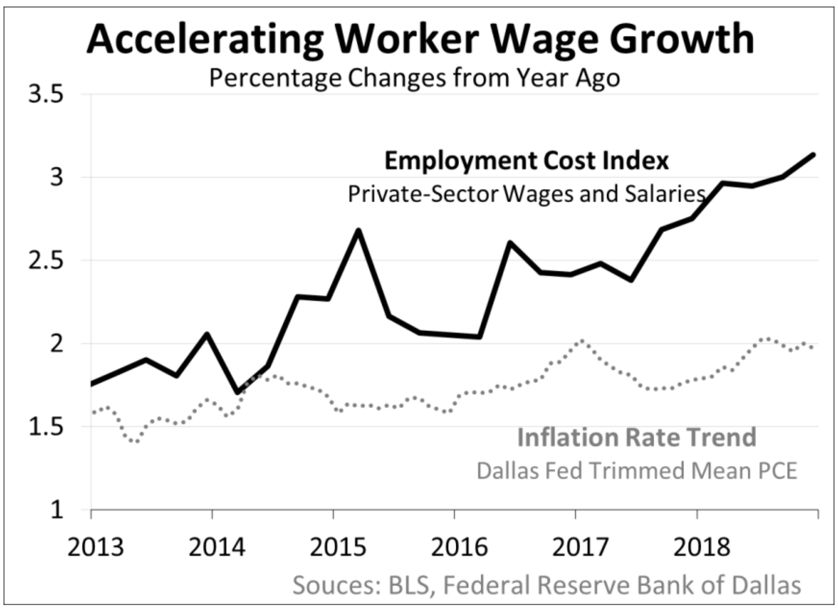
Although increasing the exemption amounts for both single and married taxpayers provided additional monetary relief from the AMT, this did not lift the complexity burden for taxpayers who will still have to determine whether they owe AMT, nor did it fully eliminate the AMT marriage penalty.

“ARE WE THERE YET?”

Since TCJA was signed into law on December 22, 2017, real GDP grew 3.0 percent in 2018—a rate that critics previously believed was no longer possible. Unemployment is near historic lows, almost 2.7 million new jobs were created in 2018, and job openings are near historic highs.

Workers are seeing higher paychecks with fewer taxes withheld, and there are also encouraging signs of rising wages, salaries, and benefits. In January, private-sector pay and benefits grew at the fastest rate since 2008. And importantly, inflation has remained low.

Figure 3-10



But for those still impatient with the rate of progress, Mr. Hodge offered these words at the JEC hearing:

> *Politics demand results now and spectators are eager to pass an early judgment of the new law, but unfortunately, tax reform and economic growth do not do their work within a news cycle. In fact, the current debate resembles a long car ride with your kids. An hour into the ride they kick the back of your seat and demand to know, "Are we there yet?" But these things take time and patience.*[72]

And for those who expect only a short burst of growth from the demand side of the economy, Mr. Hodge explained:

> *The Tax Cuts and Jobs Act was designed to do more; to improve incentives in the economy, encouraging taxpayers to work more, save more, and invest more over the long term. Lowering taxes on capital and labor is expected to boost productivity, wages, and the size of the economy.*[73]

The Tax Foundation model finds that over the long run, TCJA will result in GDP that is 1.7 percent larger, 1.5 percent higher wages, a 4.8 percent larger supply of capital, the equivalent of 339,000 additional jobs, and—as noted earlier—far more growth in all of these if the individual and expensing provisions of TCJA are made permanent.[74]

CBO also validated the pro-growth aspects of TCJA in several passages of its August 2018 economic outlook for 2018-2028 (bold emphasis added):

> *The lower marginal income tax rates that will be in place for much of the projection period will encourage workers to work more hours and businesses to increase investment in productive capital, thereby* ***raising potential output over the entire projection period.***[75]

> *Although the* ***growth of potential output*** *is determined primarily by long-run forces (such as trends in population growth, the labor force participation rate, and productivity),* ***the acceleration of that growth over the next few years in CBO's forecast is also driven by the 2017 tax act, which according to the agency's estimates, boosts investment (and therefore labor***

> ***productivity) and labor supply and thus increases the economy's underlying productive capacity.***[76]
>
> *In later years, as many temporary provisions of the 2017 tax act phase out or expire, growth of actual GDP falls below the growth of potential output in CBO's projections,* ***but the law's total effect on the levels of investment, employment, and output remains positive through 2028.***[77]

CONCLUSION

TCJA made important improvements in incentives to work and invest, which lead to higher productivity and ultimately higher long-term wage growth, employment, and economic growth. TCJA also made progress in eliminating the marriage penalty in several areas of the tax code and making the cost of raising children more affordable.

While the short-term economic indicators are very encouraging, they only provide early signs that the long-term incentives are starting to work. It will take time for TCJA to have its full effect.

It is also important to remember that while tax policy is an important factor, it is not the only factor influencing the economy. Trade and other fiscal policy, monetary policy, and numerous factors beyond the control of policy-makers can affect the economy. However, the incentives in TCJA lay a solid foundation for the levers that drive wage and economic growth, which should help the economy better withstand any challenges ahead.

Congress should continue to improve the tax code to meet the ever-changing challenges of a global economy and produce even stronger growth and expanded opportunities for American workers and families.

Recommendations

The JEC Chairman's staff recommends that Congress and the Administration:

- Make permanent TCJA reforms to the individual side of the tax code that would otherwise expire in 2025, including individual tax relief and the pass-through deduction;
- Make the expensing provisions in TCJA permanent;
- Repeal the individual AMT, or at the very least, eliminate the marriage penalty in the AMT exemption amount;
- Examine and reform other provisions in the tax code that penalize marriage or discourage work; and
- Continue to evaluate the provisions in TCJA affecting taxation of activity in foreign markets to ensure the reforms are having their intended effect of increasing investment in the United States.

CHAPTER 4: DEREGULATION

INTRODUCTION

As discussed in Chapter 2 of the *Report*, the current Administration has made deregulation a priority, with the explicit intent of promoting innovation and economic growth. Last year's *Report* noted that in the Administration's first eight months, 67 deregulatory actions and only 3 regulatory actions were issued.[78] This deregulatory agenda can also be seen in the data collected by RegData,[79] a project that attempts to quantify regulation by counting the number of restrictive words used in regulatory text. From 2016 to 2017, the year-to-year increase in the number of restrictive words used was 2,239 words, while from 2009 to 2016, the average annual increase in the number of restrictive words used was nearly 14,957 words.[80]

More recently, the Administration developed a "regulatory budget," under which agencies were directed to achieve certain levels of savings. According to the American Action Forum, the total regulatory savings achieved in Fiscal Year 2018 was over $1.65 billion, exceeding the Administration's target by roughly $1 billion.[81]

One of the reasons a deregulation agenda is an important national priority is that it could remove unnecessary barriers to innovation, a topic the Committee studied intensively in 2018.

THE LINK BETWEEN INNOVATION AND ECONOMIC GROWTH

Economists have long recognized that innovation is a key driver of economic growth.[82] Although innovation is not a sufficient condition for economic progress, it is a necessary one. The economy can grow with more labor and capital inputs but is confined by the ways in which these inputs are put to use, and eventually runs into diminishing returns. Paul Romer, the 2018 Nobel laureate in economics, argues that technological progress is an integral driver of economic growth by demonstrating that it increases the efficiency of inputs used to produce output, and by showing that technological progress simultaneously increases the marginal productivity of workers in the labor force, leading to higher economic growth.[83]

Productivity growth in the United States has slowed and the reasons are not entirely clear. Given the importance of innovation for productivity and economic growth, the Joint Economic Committee held three hearings in 2018 on the subject, one of which explored the effect of regulation on innovation.

In the first Committee hearing on the link between innovation and economic growth[84], Dr. Michael Strain, Director of Economic Policy Studies at the American Enterprise Institute, confirmed the strong relationship between innovation and growth in his testimony:

> *Economic output is a function of economic inputs. The growth rate of output, therefore, is determined by how quickly capital and labor grow, along with technology and the skill and knowledge with which factors of production are employed. Especially over longer time horizons, the most important driver of growth is innovation. And fundamentally, innovation is driven by letting loose the creative power of individuals to invent new and better ways of producing goods and services and, of course, new goods and services themselves.*[85]

Dr. Strain's point of view was echoed by another witness, Mr. Mark Mills, Senior Fellow at the Manhattan Institute, who stated that, "the closest economists get to having a law of physics is in the truism that increasing productivity is the primary force driving economic growth."[86]

REGULATION REDUCES INNOVATION

Recent empirical work conducted by Bailey and Thomas[87] found that regulation reduces economic growth by reducing incentives to innovate. The authors showed that regulation has a direct negative effect on entrepreneurship and employment. Using data on U.S. federal regulations and on firm births and employment from 1998 to 2011, the authors concluded that more heavily regulated industries had fewer firm births and less employment growth over the time period examined.

Furthermore, Joel Mokyr wrote about the intimate link between regulation and innovation, explaining that because of an innate distaste for and fear of change, societies may err on the side of overregulation and may stifle possible progress. In spite of this tendency, Mokyr insisted that greater economic freedom is needed for progress, emphasizing that, "[w]hat is needed for technological change is a system in which people are free to experiment and reap the fruits of their success if their experiment works." He also stressed that while some regulation is necessary to avoid total chaos, "systems…that are too conservative will end up in stasis."[88]

The second[89] and third[90] hearings held by the JEC further affirmed that while innovation is key to economic progress, regulation is inimical to it. Mr. Christopher Koopman, Senior Director of Utah State University's Center for Growth and Opportunity, testifying at the JEC's hearing on "Breaking through the Regulatory Barrier: What Red Tape Means for the Innovation Economy," reported that the local, State, and Federal regulations that have accumulated are not just stifling innovation in the U.S. but driving innovation overseas where the regulatory climate may be less oppressive.[91] Corroborating this statement, Bloomberg reported that the U.S. dropped out of the top ten in its 2018 Innovation Index, suggesting that other countries are becoming more innovative and that the U.S. may be lagging behind.[92]

During the same hearing, Mr. Scott Brinkman, Secretary of Kentucky Governor Bevin's Executive Cabinet, described how efforts to reform regulation in Kentucky have helped revitalize the State's economy. Mr. Brinkman explained how the Governor's "Red Tape Reduction Initiative" repealed irrelevant regulations, while amending and modernizing others to make them simpler and less strict. According to Mr. Brinkman, the purpose of the initiative was to foster technological and engineering innovation, and the positive results indicate that regulations that had been in place were indeed holding back innovation; since the Red Tape Reduction Initiative began, unemployment has decreased, labor force participation has increased, and private investments in upgrading technology have increased.[93]

Financial Regulation Limits Capital Access

In the Committee's third innovation hearing, "The Innovation Economy, Entrepreneurship, and Barriers to Capital Access," witnesses pinpointed how financial regulation in particular can impede innovation by making it more difficult for innovators to gain access to capital. As Mr. Phil Mackintosh, Global Head of Economic Research at Nasdaq, and Ms. Rachel King, CEO of GlycoMimetics, discussed in their testimonies before the Committee, financial regulations can be particularly harmful by creating barriers to capital access that can reduce innovation. Mr. Mackintosh focused on how financial regulations such as the *Sarbanes-Oxley Act* have played a significant role in the decline in public listings. As Mr. Mackintosh noted, this is harmful to the U.S. because public companies are important to investors who represent millions of everyday Americans.[94] In her testimony, Ms. King focused on the obstacles faced by biotech companies that often go public as emerging growth companies (EGCs). She advocated extending the current smaller-company exemptions from Sarbanes-Oxley Section 404b, explaining that for biotech companies in particular, it takes years to develop a product and during that time companies are not earning revenue. Ms. King argued that forcing companies to bear the full cost of compliance while still at the product-development stage may be counterproductive.[95]

Dodd-Frank Act

After the Great Recession of 2008, a Democrat-controlled Congress passed the *Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010*, which imposed stringent regulations on financial institutions. Unsurprisingly, the law had some unintended and harmful consequences. For example, not distinguishing appropriately between large and small banks ensnared small local banks in constraints that were much more damaging because of their relative size.[96] Large banks became even larger, with greater consolidation in the banking industry, and community banks that may have been more likely to lend to entrepreneurs in their area found it more difficult to do so. In this way, Dodd-Frank may have reduced innovation and economic growth.

Legislation enacted in 2018, the *Economic Growth, Regulatory Relief, and Consumer Protection Act* (EGRRCPA),[97] eased regulations and reduced oversight for smaller banks with assets less than $250 billion (up from $50 billion). The law also exempts banks with assets less than $10 billion from the Volcker Rule (discussed below). The new law requires the Federal Reserve to abandon the "one-size-fits-all" approach of regulating financial institutions and to take into account the size of the banks being regulated. These changes are likely to increase the availability of capital for new tech companies.

Volcker Rule

The Volcker Rule, an element of Dodd-Frank, restricts U.S. banks from making speculative investments, which extends to venture capital investments. Thus, a bank cannot invest in a venture fund. Since venture funds are becoming an increasingly important source of capital for tech startups,[98] the Volcker Rule has had a negative impact on both venture capital investment and startups. While EGRRCPA relaxed requirements for banks subject to this rule, its negative effects are still felt by many banking institutions. As Bobby Franklin, CEO of the National Venture Capital Association (NVCA), wrote in a letter to Congress in March 2017:

> *Without modifications, the Volcker Rule will stand in the way of interested investors deploying capital to venture capital funds across the country who can use that capital to support growth of the next generation of innovative American companies.*[99]

The Volcker Rule was put in place to protect depositors' money. However, as the U.S. Chamber of Commerce has noted,[100] a cost-benefit analysis was not conducted at the time it became law, which suggests the negative consequences were not properly considered and weighed against the potential benefits. The Treasury Department has also advocated major changes to the law.[101] For example, Treasury recommends completely exempting banks with less than $10 billion in assets because these banks are too small to pose a significant risk to the financial system.[102]

Sarbanes-Oxley Act

In 2002, Congress passed the *Public Company Accounting Reform and Investor Protection Act* (*Sarbanes-Oxley Act*). This law was enacted in response to an increase in corporate and accounting fraud in the early 2000s. Major companies such as Enron, Tyco, and Worldcom were embroiled in scandals that shook public confidence and resulted in a call for strict measures to ensure that public companies are conducting reliable financial accounting and complying with the law. To achieve this goal, the *Sarbanes-Oxley Act* imposed a number of stringent regulations on public companies. The law's two most "radical, ongoing, and potentially onerous compliance obligations"[103] are contained in sections 302 and 404.

- Section 302 established corporate responsibility for the accuracy of financial reporting. Hence, the law holds the CEO and CFO of a company responsible, which means that they are held accountable for any irregularities.[104]
- Section 404 mandates that a public company's management and auditors provide an "internal control report" each year. This process involves much time and paperwork, and it can be very costly, as it diverts management time and company resources toward managing red tape rather than product improvement.

The goal of the *Sarbanes-Oxley Act* was to improve the reliability of financial reporting and increase transparency. However, the law has also had harmful effects, particularly in discouraging firms from going public, which restricts an important channel for financing potential innovative products and ideas.

In the recent past, going public would be seen as desirable because it helps the valuation of a company and allows early investors to recover their investment. Accessing public markets seemed to be the best way of getting capital. Today, however, fewer companies are going public. Sarbanes-Oxley has probably played a role by imposing significant regulatory burdens and high compliance costs on public companies.

Sarbanes-Oxley likely plays a role in pushing companies away from exchanges in the U.S. and driving them overseas where regulations are lighter. In addition, there is evidence that financial regulation may be particularly damaging for smaller firms. A study by Piotroski and Srinivasan[105] examined the effect of Sarbanes-Oxley on foreign companies' decision to go public on a U.S. or U.K. exchange, using a sample of companies listed in the U.S. and in the U.K. from 1995 to 2006. The authors found no significant differences in listing preferences for large foreign firms. However, for small firms, they found that Sarbanes-Oxley had a negative effect on going public. This result suggests that while large companies may more easily absorb the costs imposed by Sarbanes-Oxley and may not be easily deterred from going public in spite of the onerous regulations involved, smaller companies experience difficulties in doing so. In other words, for startups seeking access to capital, the compliance costs of going public may be too high to overcome, and this once-surefire method of raising capital may be closed to many entrepreneurs starting new businesses.

DEREGULATION GROWS THE ECONOMY

Supporting innovation is key to economic progress in the coming years. In his testimony, Dr. Harold Furchtgott-Roth, Director of the Center for the Economics of the Internet at the Hudson Institute, who testified in the Committee's first innovation hearing, set forth three basic principles for a robust technology sector.[106]

- *Property rights* – Strong property rights provide incentives to innovate. Dr. Furchtgott-Roth attributes much of the success of the American software industry to strong U.S. intellectual property laws.
- *Light regulatory approach* – Government regulation can substantially delay the development and dissemination of new technologies. Dr. Furchtgott-Roth cited the case of cellular technology; the first application dated back to the 1950s but it was then held up for 30 years by regulation.
- *Market competition* – What is true for the supply of familiar goods and services also applies to new technologies; in competition the best tend to succeed, costs and prices tend to decline, and choices for customers tend to increase.

Recent reform efforts have attempted to address the problem of inadequate access to capital for new businesses and innovators. In July of 2018, the House passed the bipartisan *JOBS and Investor Confidence Act of 2018,* which was intended to further ease regulations on small businesses. The bill focused particularly on helping businesses raise capital and go public. Specifically, the bill would ease regulations on angel investors and expand the definition of "accredited investors," which makes it easier for investors to invest in startups. Also, the bill expanded onramp exemptions for emerging growth companies, giving them more time to prepare for the costs of going public.

Committee Chairman Lee has contributed to recent deregulatory efforts by promoting legislation that would ease regulations. For example, Chairman Lee cosponsored the *Executive in Need of Scrutiny Act* (S.21) which was introduced in the previous Congress. This bill would revise the congressional approval procedure for "major" rules. This includes rules that would result in an annual effect of $100 million or more on the economy, rules that would increase costs for consumers, individual industries, or government agencies, and rules that could have a strong negative impact on competition (both in domestic and foreign markets), employment, investment, productivity, and innovation.[107]

CONCLUSION

The current Administration and Congress have already made progress in pro-growth reforms to regulation. Recent strong economic growth and the record number of job openings in the economy suggest that these efforts are paying off. Continuing this progress will require avoiding overly prescriptive regulation and protecting the economic freedom that encourages growth-driving innovation.

Recommendations

Based on the advice presented by Dr. Joseph Kennedy[108], Senior Fellow at the Information Technology and Innovation Foundation, at the Committee's hearing on "Breaking through the Regulatory Barrier," and the advice of other expert witnesses, we encourage the Administration and Congress to support innovation by reassessing and reforming regulations, while taking into account the following general principles:

- Write rules to anticipate and encourage innovation;
- Make the regulatory process more transparent to regulated entities and the general public;
- Place more trust in consumers who, given sufficient information, will make the best decisions for themselves;

- Actively seek ways to reduce the cost of complying with regulations;
- Use quantitatively-backed studies (as much as possible) to conduct a cost-benefit analysis on every major rule being implemented; and
- Focus on competition and avoid rigid regulations that reduce the U.S. competitive advantage.

Endnotes

[1] Congressional Budget Office. *An Update to the Budget and Economic Outlook: 2016 to 2026*. Congressional Budget Office, August 2016, p. 88, https://www.cbo.gov/sites/default/files/114th-congress-2015-2016/reports/51908-2016outlookupdateonecol-2.pdf

[2] See: Dupraz, S., Nakamura, E., and Steinsson, J. "A Plucking Model of Business Cycles." Working Paper, December 20, 2018, pp. 8-9, http://www.stephaneduprazecon.com/Plucking.pdf; Bordo, Michael D. and Haubrich, Joseph G. "Deep Recessions, Fast Recoveries, and Financial Crises: Evidence from the American Record." *NBER Working Paper No. 18194*, June 2012, pp. 11-12, https://www.nber.org/papers/w18194.pdf; Friedman, Milton. "The 'Plucking Model' of Business Fluctuations Revisited." *Economic Inquiry, Western Economic Association International*, vol. 31(2), pp. 171-77, April 1993.

[3] Pethokoukis, James. "Oval Office economics: A long-read Q&A with top Obama adviser Jason Furman." *American Enterprise Institute*, May 4, 2018, http://www.aei.org/publication/oval-office-economics-a-long-read-qa-with-jason-furman/

[4] "Robert E. Lucas Jr. – Biographical." *NobelPrize.org*, Nobel Media AB 2019, February 12, 2019, https://www.nobelprize.org/prizes/economic-sciences/1995/lucas/biographical/

[5] Figure 1-7 methodology: The BLS's Employment Cost Index (ECI) for private industry wages and salaries is used as it is less sensitive to changes in the composition of the workforce. The Dallas Federal Reserve Bank's 12-month trimmed mean personal consumption expenditures (PCE) is used to adjust for inflation as it better measures the trend value of inflation. See Schibuola, Alexander. "The Rise of American Wages and Incomes." *Republican Staff Study*, Joint Economic Committee, October 25, 2018, pp. 2-6, https://www.jec.senate.gov/public/_cache/files/480f3fb2-938f-48be-9f34-54e537cecb26/american-wages-and-incomes.pdf

[6] Congressional Budget Office. *The Budget and Economic Outlook: 2019 to 2029*. Congressional Budget Office, January 2019, p. 55, https://www.cbo.gov/system/files?file=2019-01/54918-Outlook.pdf

[7] BLS's U-3 rate measures those without jobs who have actively searched for work in the last four weeks as a proportion of the labor force.

[8] The inflation expectations measure referenced here and in Figure 1-9 is the 5-Year Treasury Breakeven Inflation Rate as calculated by the Treasury Department. Details of this estimation and its benefits relative to the "TIPS Spread" can be found in Girola, James A. "The Treasury Real Yield Curve and Breakeven Inflation." *Treasury.gov*, July 21, 2015, https://www.treasury.gov/resource-center/economic-policy/corp-bond-yield/Documents/tii_may2015.pdf

[9] The Federal Reserve's Federal Open Market Committee's (FOMC) December 2015 Summary of Economic Projections, indicated that the median projection was for the federal funds rate to rise from 0.4 percent to 1.4 percent by year-end 2016. As the FOMC generally increases (or decreases) the fed funds rate in 25 basis point increments, this would amount to four expected rate hikes in 2016.

[10] The term "aggregate demand" in this chapter is *defined* as the combinations of price level and real GDP that are consistent with a *given* level of nominal spending, i.e. NGDP. (Or, dynamically, the growth rate of aggregate demand is the combinations of inflation rate and real GDP growth rate consistent with a *given* rate of nominal spending growth,

i.e., NGDP growth rate.) It should not be identified as the equivalent of the Keynesian *theory* of aggregate demand.

[11] Ben Bernanke:

> *Let me end my talk by abusing slightly my status as an official representative of the Federal Reserve. I would like to say to Milton and Anna: Regarding the Great Depression. You're right, we did it. We're very sorry. But thanks to you, we won't do it again.*

Bernanke, Ben S. "On Milton Friedman's Ninetieth Birthday." Remarks by Governor Ben S. Bernanke at the Conference to Honor Milton Friedman, Chicago Illinois. The Federal Reserve Board, November 8, 2002, https://www.federalreserve.gov/boarddocs/speeches/2002/20021108/

[12] Friedman, Milton. "Rx for Japan: Back to the Future." *The Wall Street Journal*, December 17, 1997. https://www.wsj.com/articles/SB882308822323941500

[13] Scott Sumner:

> *I have some sympathy for the NeoFisherian view, if only as a rebuke to conventional assumptions that low interest rates represent "easy money." Unfortunately, both conventional economists and their NeoFisherian critics are "reasoning from a price change", that is, drawing inappropriate conclusions about the current stance of monetary policy, based on the level or change in nominal interest rates. In fact, very low interest rates are likely to lead to higher inflation if caused by an easy money policy, and they are likely to lead to lower inflation if caused by a tight money policy. And which outcome actually does occur depends on what else the central bank does when it changes interest rates.*
>
> *As with the Keynesian view of monetary policy, the problem comes from looking at the stance of monetary policy in terms of interest rates, which are an outcome of policy. This error is analogous to trying to discern the impact of plunging oil prices on oil consumption, without first establishing whether the lower oil prices are due to less demand or more supply.*

Sumner, Scott. "Monetary policy rules in light of the great recession." *Journal of Macroeconomics*, Vol. 54, Part A, December 2017, p. 92.

[14] Bernanke, Ben S. "Remarks by Governor Ben S. Bernanke At the Federal Reserve Bank of Dallas Conference on the Legacy of Milton and Rose Friedman's Free to Choose." Dallas, Texas, October 24, 2003, https://www.federalreserve.gov/boarddocs/speeches/2003/20031024/default.htm

[15] It is also possible that an increased conversion of bank deposits into currency can produce a similar effect.

[16] As Frederic Mishkin, former Vice Chairman of the Federal Reserve noted in September 2008:

> *If the monetary authorities react to headline inflation numbers, they run the risk of making serious policy mistakes. We have seen that headline inflation has risen well above its underlying trend as the price of energy has risen. But with energy prices having fallen, it will soon fall back to or below its underlying trend. A tightening of monetary policy in reaction to the rise in headline inflation would lead to a decline in employment and inflation.*

Mishkin, Frederic S. "Don't Worry About Inflation." *The Wall Street Journal*, September 18, 2008, https://www.wsj.com/articles/SB122169336538749851

[17] The inflation expectations measure referenced here and in Figure 2-3 is the 1-Year Treasury Breakeven Inflation Rate as calculated by the Treasury Department. Details of this estimation and its benefits relative to the "TIPS Spread" can be found in Girola, James A. "The Treasury Real Yield Curve and Breakeven Inflation." *Treasury.gov*, July 21, 2015, https://www.treasury.gov/resource-center/economic-policy/corp-bond-yield/Documents/tii_may2015.pdf

[18] Federal Reserve statement:

> *The Federal Open Market Committee decided today to keep its target for the federal funds rate at 2 percent…Inflation has been high, spurred by the earlier increases in the prices of energy and some other commodities…The Committee expects inflation to moderate later this year and next year, but the inflation outlook remains highly uncertain…The downside risks to growth and the upside risks to inflation are both of significant concern to the Committee.*

"FOMC Statement." Board of Governors of the Federal Reserve System, September 16, 2008, https://www.federalreserve.gov/newsevents/pressreleases/monetary20080916a.htm

[19] For further details on this episode refer to the *2018 Joint Economic Report*, pp. 52-65, https://www.jec.senate.gov/public/_cache/files/7faf912a-0fd2-4a92-bba4-e41c2c1f8e93/2018-joint-economic-committee-response.pdf

[20] Federal Reserve statement:

> *The payment of interest on excess reserves will permit the Federal Reserve to expand its balance sheet as necessary to provide the liquidity necessary to support financial stability [credit policies] while implementing the monetary policy that is appropriate [a tight monetary policy] in light of the System's macroeconomic objectives of maximum employment and price stability.*

"Board announces that it will begin to pay interest on depository institutions' required and excess reserve balances." Board of Governors of the Federal Reserve System, October 6, 2008, https://www.federalreserve.gov/newsevents/pressreleases/monetary20081006a.htm

See also Ben Bernanke's memoirs:

> *[By] setting the interest rate we paid on reserves high enough, we could prevent the federal funds rate from falling too low, no matter how much [emergency] lending we did.*

Bernanke, Ben S, *The Courage to Act*, W.W. Norton, New York, NY, 2015, pp. 325–6. See also Federal Reserve August 5, 2008 Federal Open Market Committee transcripts. William Dudley, then-Manager of the System Open Market Account of the Federal Reserve Bank of New York, stated:

> *…we continue to press for legislation that would accelerate the timing of the Federal Reserve's authority to pay interest on reserves. Being able to pay interest on reserves would put a floor under the federal funds rate. In this case, an inability to drain additional reserves from the banking system would not result in the federal funds rate collapsing toward zero.*

"Meeting of the Federal Open Market Committee on August 5, 2008." Board of Governors of the Federal Reserve System, January 2013, p. 8, https://www.federalreserve.gov/monetarypolicy/files/FOMC20080805meeting.pdf

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> *Some of [the tightening of credit] can also be traced to novel post-crisis central bank operating frameworks, floor systems especially, that have reduced the follow of bank credit to business borrowers by boosting banks' demand for reserve balances. By encouraging banks to fund central bank balance sheets instead of making loans to business, these arrangements make it more difficult other things being equal for business to finance capital investment and R&D, both of which contribute to productivity.*
>
> *Productivity is unlikely, on the other hand, to get boosted by the Fed's investment in Treasury and agency debt.*

Selgin, George. *Floored! How a Misguided Fed Experiment Deepened and Prolonged the Great Recession*. Cato Institute, October 2018, pp. 133-34.

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Interview with then-Federal Reserve Bank of New York President William Dudley:

> *I guess I was always more in the camp that the demand for reserve was going to be higher in the new environment because of, you know, changes in regulation, like the liquidity coverage ratio, that increases the demand for high-quality assets.*

"Transcript: Media Q&A With New York Fed President William Dudley." *WSJ Pro Central Banking*, June 15, 2018, https://www.wsj.com/articles/transcript-media-q-a-with-new-york-fed-president-william-dudley-1529078294

Interview with Federal Reserve Board of Governors Vice Chairman Richard Clarida:

> *Now, that being said, and as I'm sure everyone in your audience appreciates, we're not going back to the size of the balance sheet we had before the crisis, if for no other reason the demand for currency – which is one of our primary liabilities – is approaching $2 trillion now. So we're not going back to a $700 billion balance sheet. Secondly, of course, and as everyone in this room certainly appreciates, is that there have been significant changes in financial*

> *regulation with regards to so-called high-quality liquid assets and liquidity coverage ratios. And that means that we are going to be in a world in which financial institutions are either going to require or going to want to hold onto liquid assets. And obviously, reserves at the Fed are a very desirable liquid asset to meet those obligations.*

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STATEMENT OF VICE CHAIR CAROLYN B. MALONEY

Introductory Letter

I am pleased to share the Joint Economic Committee (JEC) Democratic response to the 2019 *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* is substantially different from those of previous administrations, which largely were careful, research-based and data-driven assessments of the economy supported by mainstream economic theory. Instead, the 2019 *Report* misconstrues well-established facts, cherry-picks data, relies on economic theories widely rejected by mainstream economists and entirely omits critical subjects. As a result, it seems motivated more by politics than economics.

The *Report*, like President Trump, claims full credit for economic conditions that he mostly inherited from his predecessor. It altogether ignores the fact that average monthly job growth was stronger during the last two years of the Obama administration than the first two years of the Trump administration, the period examined in the *Report*. At the time of the president's inauguration, the unemployment rate was 4.7 percent and trending down and the economy had added jobs for 76 straight months. The president implausibly has claimed that he has achieved an economic turnaround, a claim that has been refuted by the facts.

The Trump administration's economic forecast is extremely optimistic compared to those of respected mainstream sources like the Federal Reserve and the Congressional Budget Office (CBO). It estimates real GDP growth of 3.2 percent in 2019 and 3.0 percent or higher in each of the next five years, assuming full implementation of an economic agenda that is widely believed to be extremely unrealistic. In contrast, the Federal Reserve estimates growth at 2.1 percent this year before falling below 2 percent in 2020. CBO projects average annual growth of 1.7 percent from 2020 to 2023.

The *Report* exaggerates the impacts of the Republican tax cuts, which mainstream economists have characterized as a short-term "sugar high" and an unnecessary stimulus of an already-hot economy. While private investment increased in 2018, much of the increase may have resulted from changes in oil prices. Even with the boost from oil prices, private investment grew more slowly in 2018 than in 2011 or 2012.

The *Report's* claim that in the long term the tax cuts would result in a $4,000 increase to average household income has been widely dismissed by most economists as not credible. A year after the tax cuts passed, corporate profits grew 14.3 percent while wages increased only 3.4 percent. Moreover, the law is expected to worsen economic inequality, with more than 99 percent of the benefits going to the top 5 percent in 2027.

While the benefits of the Republican tax legislation are targeted at the fortunate few, the costs are substantial and will be widely shared. The 2017 tax package adds $1.9 trillion to the debt. If the president's FY 2020 budget were enacted, which makes permanent the individual provisions set to expire at the end of

2025, the costs would increase. It is widely believed that this sharp increase in debt likely will slow future economic growth.

The *Report* gives only brief consideration of the economic status of Millennials, who now make up the largest generation in the workforce. It ignores their experience entering the workforce and beginning their careers during and in the wake of the worst recession since the Great Depression. Many Millennials have depressed wages, more student debt and lower rates of homeownership and household formation than previous generations at the same stage of their lives.

The *Report* tilts at windmills, spending many pages claiming the dangers of the individual mandate for health insurance coverage, even though Republicans already eliminated that mandate. When it was in existence there was no evidence it was causing the dangers claimed in the *Report*. After the *Report's* release, the administration came out in support of throwing out the entire Affordable Care Act, which would take away health insurance from millions of Americans and remove protections for the more than 130 million Americans who live with pre-existing health conditions.

The *Report* paints an overly rosy picture of recent progress on prescription drug prices. The United States spends twice as much per capita on prescription drugs as Great Britain. Some drugs, such as insulin, cost thousands of dollar each year and as many as one in four people using insulin do not take the amount they need because of the high price.

The *Report* ignores the substantial risks inherent in the administration's weakening of financial regulations and consumer protections. It fails to consider the impact of the administration's dismantling of the Consumer Financial Protection Bureau, which has left consumers vulnerable to predatory lending practices. It also ignores the fact that loosened lending regulations have led to an explosion in leveraged loans. Lenders have made more than $1 trillion in high-risk loans in 2017 and 2018. These risks do not appear in the *Report.*

The *Report* declares that President Johnson's War on Poverty "is largely over and has been a success" based on 1963 standards of material hardship. It uses an alternative measure of poverty to find that only 2.3 percent of Americans live in poverty, compared to the official poverty rate of 12.3 percent. This makes light of the daily challenges facing the nearly 40 million Americans who live in poverty and the millions more who move in and out of poverty during their lives.

With such an overly optimistic assessment of poverty, it is not surprising that the *Report* says little about the critical issue of income and wealth inequality, which has widened dramatically over the past four decades. It also sidesteps issues of race, class, gender, education, age and geography.

The *Report* almost entirely omits the subject of climate change, perhaps the greatest challenge facing the global economy in the coming decades. The economic effects of climate change likely will dwarf those of any of the subjects covered by the *Report.*

Ultimately, the *Report* is a reflection of a president who attaches little value to economic facts, and whom *The Washington Post* found to have made 931 false or misleading economic claims during his first 16 months in office. Like the president, the *Report* claims credit for an economy he inherited and displays little regard for the work of mainstream economists. This Democratic response, by contrast, focuses on core economic challenges facing the country and is grounded in fact. It is divided into six chapters:

1) Macroeconomic Overview

2) Economic Inequality

3) Millennials

4) Consumer Financial Protection

5) Prescription Drug Prices

6) Climate Crisis

This response is not intended to be exhaustive. It highlights major issues from climate change to widening inequality that must be part of any comprehensive effort to strengthen our economy and lay the groundwork for future growth. In the coming months, we look forward to addressing many of these issues in more detail through reports, hearings and further analysis.

CAROLYN MALONEY

VICE CHAIR

CHAPTER 1: MACROECONOMIC OVERVIEW

OVERVIEW

The *Economic Report of the President* (the *Report)* presents a misleading picture of recent economic trends, making overly optimistic projections of economic growth, cherry picking data, low-balling the debt and omitting entire subjects. It implausibly claims credit for conditions and trends inherited from the Obama Administration. In addition, it glosses over the economic costs of numerous self-inflicted economic wounds by the Trump Administration, including reckless trade wars, an unnecessary government shutdown and massive tax cuts that favored the wealthy and will add $1.9 trillion to the debt.[1]

This chapter presents a more balanced and mainstream overview of U.S. economic trends and indicators, assesses the Administration's policies that have affected these trends and examines headwinds that are slowing long-term economic growth. Later chapters explore some of the challenges that the economy and individuals face, as well as disparities in economic outcomes across different segments of the population.

STATE OF THE ECONOMY

The U.S. economy has come a long way in the last 10 years. After the worst recession since the Great Depression—during which unemployment peaked at 10 percent and nearly $13 trillion in household wealth was lost—the unemployment rate now stands at a level not seen since December 1969.[2] By the end of the Obama Administration, housing prices had largely rebounded. Wages are starting to grow again. These trends are the result of a nearly decade-long expansion, spurred by actions taken by the Federal Reserve, the Obama Administration and Congressional

Democrats. Two prominent economists, Alan Blinder and Mark Zandi, projected that without these actions, the recession would have been twice as large and twice as long.[3]

Economic Growth

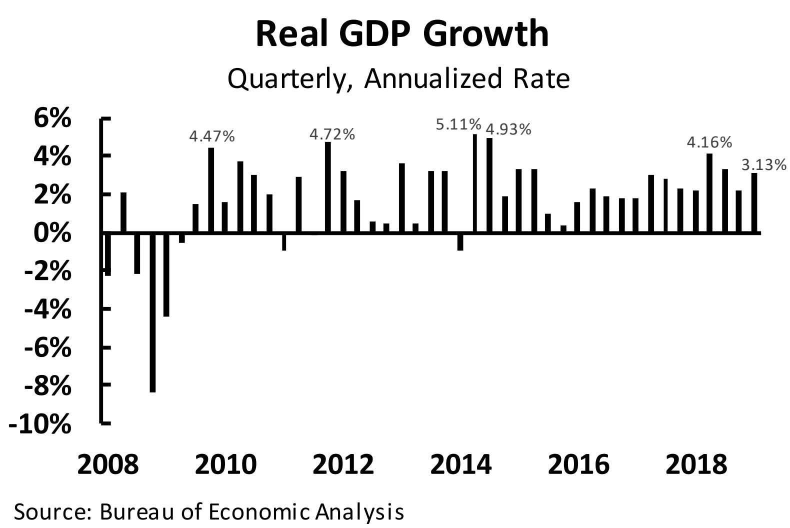
After contracting by more than four percent in the Great Recession, the economy has recovered substantially, even though growth has been uneven throughout the recovery. This long-term trend continued through the first half of 2019, with quarterly annualized real growth rates ranging from 2.2 to 4.2 percent. In total, the economy grew by 3.0 percent from the fourth quarter of 2017 to the fourth quarter of 2018.[4] This boost in growth likely reflected a short-term stimulus from the deficit-fueled Tax Cuts and Jobs Act (TCJA). Unfortunately, as the sugar high wears off, growth will quickly revert to its long-term trends. Although first quarter 2019 GDP growth was 3.1%, the New York and Atlanta Federal Reserve currently forecast second quarter growth rates of 1.5% and 1.4%, respectively.[5]

The *Report* predicts sustained 3 percent growth, but only with a second round of tax cuts, $1 trillion in new infrastructure investment and new policies that it claims will bring people into the labor force. These estimates are far out of the mainstream consensus. The Congressional Budget Office (CBO) projects that growth will slow to 2.3 percent in 2019 and 1.7 percent in 2020.[6] The median Federal Reserve projection shows growth slowing to 2.1 percent in 2019 and 2.0 percent in 2020.[7] The International Monetary Fund projects 2.3 percent growth in 2019.[8] These nonpartisan predictions show that the *Report*'s projection of sustained 3 percent growth is unlikely.

The White House cherry-picks growth indicators to present a misleading picture of long-term trends. For instance, it claims that the fourth quarter of 2018 had the highest year-over-year growth rate for any fourth quarter since 2005—this was technically true but ignores the fact that there were higher growth rates in the third quarter of 2010, the third quarter of 2014 and the first and second quarters of 2015.[9] In other words, the fourth quarter of 2018 was the fastest pace of growth in more than a decade only if you ignore three-fourths of the data.

Similarly, when comparing annualized quarterly growth rates (see *Figure 1-1*), the economy experienced higher growth rates during the Obama Administration than over the last year. The Administration fails to mention these facts when falsely claiming that they have ushered in a new era of growth.

Figure 1-1

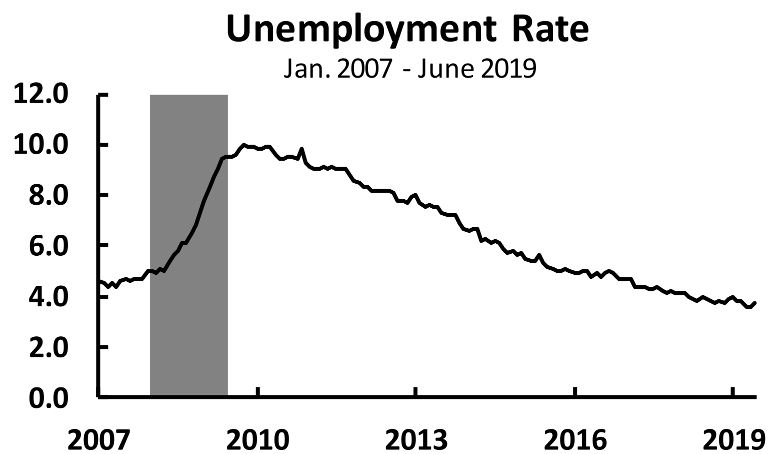


Growth over the last year largely was boosted by positive contributions from government spending and lower tax revenue. The fourth quarter of 2017 through the end of 2018 represented the first sustained positive fiscal contribution for the federal government since the American Recovery and Reinvestment Act (ARRA).[10] Ironically, when during the Great Recession the economy was in dire need of stimulus, Republicans opposed it. Now, during the strong economy left by the Obama Administration and with unemployment below four percent, they have embraced massive stimulus in the form of tax cuts.

The Labor Market

During the Great Recession, the unemployment rate doubled, peaking at 10 percent in the fall of 2009; by the time President Obama left office, the unemployment rate had fallen to 4.7 percent.[11] The economy had hemorrhaged more than 3 million jobs in the first four months of 2009 alone.[12] Spurred by the ARRA and other federal stimulus efforts, including actions taken by the Federal Reserve, the economy began consistently adding jobs in 2010. By the end of the Obama Administration, the United States labor market had already added jobs for 76 consecutive months. By June 2019, the streak was extended to 105 straight months.[13]

Figure 1-2



Source: Bureau of Labor Statistics, using the Civilian Unemployment Rate Ages 16+, Seasonally Adjusted

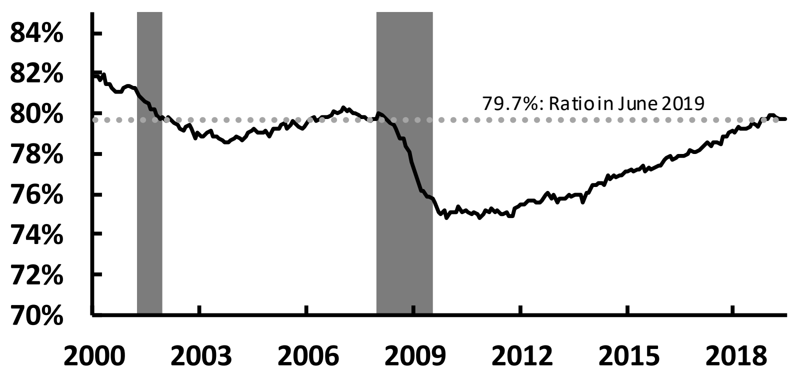
During the first two and a half years of the Trump Administration, this downward trend in unemployment has continued, with unemployment dropping from 4.7 percent in January 2017 to 3.7 percent in June 2019.[14] Recent unemployment rates have been lower than at any point in the previous business cycle and lower than many economists' estimates of full employment.[15]

At the same time, inflation remains low and wages have only recently started to rise, suggesting that the labor market is not quite at its full productive capacity. The explanation for this can be found in alternative measures of the labor market, such as the employment to population ratio of prime-age workers, which is only just now starting to reach its prerecession levels and still has room to increase further. In April 2000, this measure peaked at 81.9 percent. In June 2019, it stood at 79.7 percent.[16]

Figure 1-3

Employment to Population Ratio

Ages 25 to 54



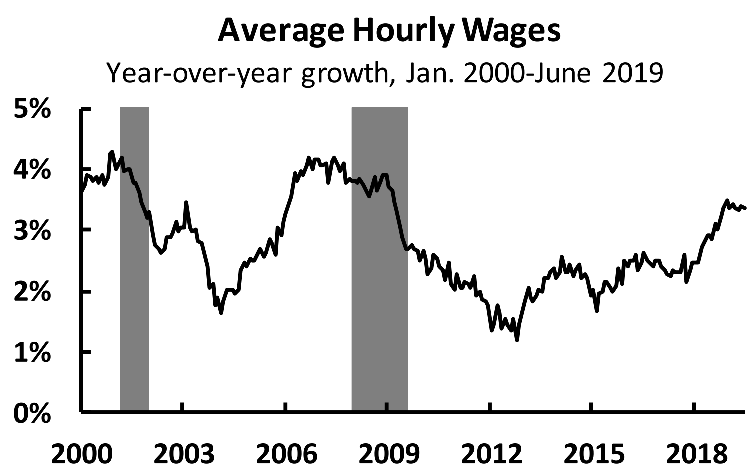
Source: St Louis Federal Reserve

These trends suggest that workers who had dropped out of the labor force during the recession are starting to come back as their job prospects improve. Many of these individuals likely face high barriers to entering the workforce. For example, they may be suffering from a disability or have spent a considerable amount of time unemployed.[17] As it becomes tougher for employers to fill openings, they are more likely to look for workers from historically marginalized groups. Pulling them into the labor force allows the economy to add jobs without raising inflation concerns. Recent research has shown that particularly tight labor markets tend to disproportionately benefit disadvantaged groups and that these gains persist into the future.[18]

Wage Growth

The continued presence of labor market slack helps explain why wage growth remained sluggish up until mid-2018 even as the unemployment rate continued to drop. As employers looked to hire in the expansion, they were able to find sidelined workers willing to work for relatively low wages, rather than having to offer higher wages to people already employed elsewhere. Average wages for production and nonsupervisory workers—a category that offers a real-time approximation of the median wage—picked up in 2018 as the labor market further tightened, but are still growing at a rate below their prerecession levels.[19]

Figure 1-4



Source: Bureau of Labor Statistics, numbers for Production and Non-Supervisory Workers

Encouragingly, recent wage growth has been the most robust at the bottom of the wage distribution. From 2017 to 2018, growth was substantially higher for workers at the 20th and 30th percentile of the income distribution than at the 95th percentile.[20] This comes on the heels of sluggish growth at the bottom over the last several decades.[21] These long-term trends are explored more in the chapter on *Economic Inequality*.

Economic Disparities

An important caveat to current labor market trends is that not everyone in the United States is experiencing the same strong trends. The unemployment rate remains almost twice as high for black workers (who faced an unemployment rate of 6.0 percent in June) and a third higher for Hispanic workers (4.3 percent unemployment) than for white workers (3.3 percent).[22] Homeownership rates, incomes and wealth also remain lower for those groups. Labor force participation rates and wages remain lower for women than men.[23] Millennials remain affected by beginning their careers during or in the wake of the financial crisis.[24] These disparities and others are explored in later chapters.

ASSESSMENT OF THE TAX CUTS

The *Report* claims that the recent tax cuts passed in TCJA are the main drivers of the current strong labor market and economy. While the deficit-financed TCJA likely acted as a temporary stimulus in 2018, there is little logic in linking the year-old law to the nine-year-long trend of a strengthening economy. Instead, the tax cuts were a windfall for the wealthy and likely will have little long-run positive effect on the economy.

Economic Effects of the TCJA

The theory behind the corporate tax cuts in the TCJA was to incentivize companies to invest in America, leading to job creation, higher wages and broad prosperity. While tax rates and structures are important and have economic implications, many of the Administration's claims are outside the mainstream economic consensus. In reality, the TCJA will lead to little in raises for workers, higher income inequality and debt, little business investment and, ultimately, little boost to gross domestic product (GDP) growth.

Income and Wages: During the tax cut debates, the CEA claimed that the TCJA would lead to at least a $4,000 increase in average household income.[25] This claim has been widely dismissed by mainstream economists.[26] Former Treasury Secretary and Harvard professor Lawrence Summers said "[T]here is no peer-reviewed support for his central claim that cutting the corporate tax rate from 35 percent to 20 percent would raise wages by $4,000 per worker…The claim is absurd on its face."[27]

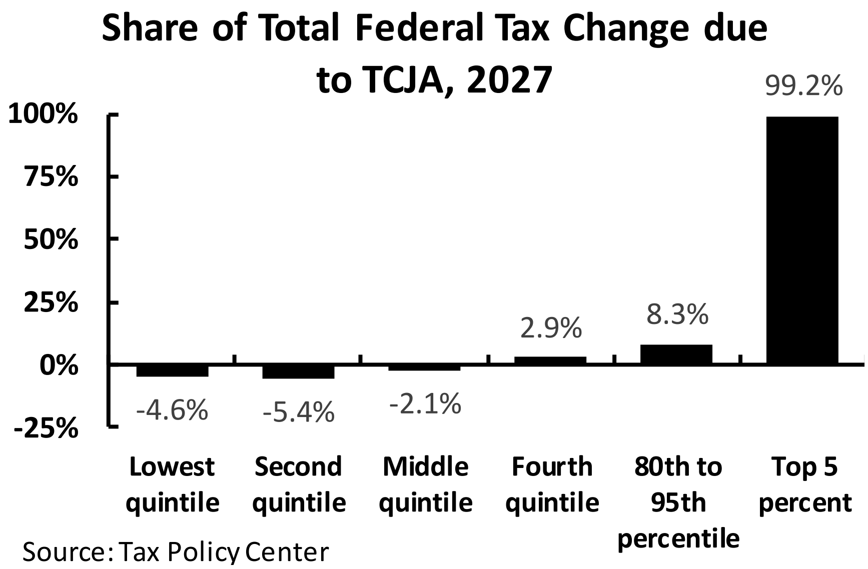
The fact that the claim is far outside the mainstream is demonstrated by the estimate's implied corporate tax incidence rate on worker wages. Ultimately, corporate taxes come out of either workers' wages or the return to shareholders—the tax incidence measures the share of which is born by each. As economist Ben Harris testified to the JEC in 2018, the CEA estimate implies that household income will increase four and a half times more than the cost of the tax cut.[28] In other words, it implies a corporate tax incidence of over 400 percent. This is well out of line of the mainstream consensus for the corporate tax incidence of around 20 percent.[29]

Similarly, the *Report* implausibly gives credit to the tax cuts for increasing average household income by $640 in 2018 alone. They theorize that employers decided to share their tax cut windfalls with their workers through bonuses and raises. More likely, wage gains this past year were driven by the economy starting to reach full employment, which requires employers to compete for workers and gives workers more confidence to ask for raises or switch jobs.

In the long run, the TCJA might have a small effect on wages, but that will be outweighed by the tax law's increased tax burden on middle- and working-class families in the long run. The TCJA permanently lowered the inflation adjustment for income tax rate brackets. This will result in people moving up in brackets because of inflation, not because they are earning more inflation-adjusted dollars, known as "bracket creep." By 2027, the Urban-Brookings Tax Policy Center (TPC) estimates that the TCJA will lead to lower after-tax incomes for the bottom 40 percent of households in the income distribution and no change in after-tax incomes to the next 40 percent.[30]

Income Inequality: Rather than working to address decades of increasing income inequality, the TCJA will exacerbate the problem. Even in the early years, the benefits to the wealthiest Americans are substantially larger than for others. TPC projects that for 2018, the change in after-tax income for the wealthiest fifth of Americans will be seven times larger than for the bottom fifth. When the temporary provisions expire, the distortions will be even worse. More than 99 percent of the benefits of the TCJA in 2027 will go to the top five percent of tax units.[31]

Figure 1-5



Source: Tax Policy Center

Private Investment: The primary mechanism by which the *Report* claims the TCJA increases growth and wages is through higher business investment. It is not clear that the tax cuts have led to a major investment boom to date. Private, nonresidential fixed investment grew at about an 8.4 percent rate in 2018, similar to the growth rate in 2014 and lower than in 2012 or 2011.[32]

Although this rate of investment growth reflects a small uptick from 2017, much or all of the boost may have been driven by fluctuations in global oil prices, rather than by U.S. tax policy. There is a strong relationship between crude oil prices and investment within the United States—when prices rise, more domestic oil fields become profitable to drill in, leading to firms investing in new equipment and structures on those fields. The Penn Wharton Budget Model estimates that if oil prices had not risen, business investment growth would have remained flat in 2018.[33]

Early evidence gives little reason to expect a wave of TCJA-driven investment in the near future. A survey of business economists found that 84 percent of their companies have not adjusted investment or hiring plans due to the new tax law.[34] As Chairman Powell recently told Congress, "[g]rowth in business investment seems to have slowed notably, and overall growth in the second quarter appears to have moderated. The slowdown in business fixed investment may reflect concerns about trade tensions and slower growth in the global economy. In addition, housing investment and manufacturing output declined in the first quarter and appeared to have decreased again in the second quarter."[35]

Stock Buybacks: Meanwhile, corporations announced more than $1 trillion in stock buybacks in 2018.[36] Although the new report portrays the boom in stock buybacks as part of the desired effect of the TCJA, CEA reports leading up to the bill had emphasized that companies would use repatriated earnings to make productive investments in the United States. None of the pre-TCJA reports mentioned share repurchases as a step in the process.[37]

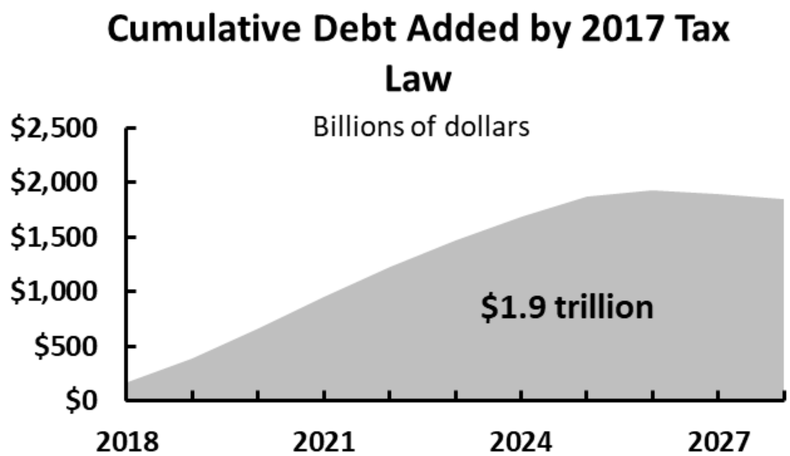
While the money that goes to shareholders could eventually be reinvested in other companies, one of the main arguments in favor of the law had been that the U.S. worldwide tax system was a roadblock to companies bringing foreign profits back into the states to invest.[38] However, according to experts, the tax law did little to change the incentive for multinational companies to shift profits overseas.[39] Profits that are repatriated will most likely benefit shareholders but do little to boost investment. This was the ultimate outcome of the 2004 repatriation.[40]

Public Investment: The tax law will also likely affect public investment at the state and local level. Part of the TCJA was to cap taxpayers' ability to deduct state and local taxes (SALT) paid from their federal income tax returns. In effect, this makes the taxes paid to state and local governments more burdensome for taxpayers and puts pressure on lawmakers to cut taxes.[41] Since most states have limitations on deficit spending, this will often come with budget cuts or the inability to make new investments.[42]

The impact will vary from state to state and locality to locality, but the overall results should be very concerning. One-third of state budgets are spent on education—making school funding a likely casualty of this effect.[43] At a time when education is becoming ever more important for economic success, substantial cuts would likely result in worse economic outcomes for many children and college students. It could also inhibit investments in infrastructure, health care and other important areas that will affect economic outcomes and growth. This is especially concerning given that state and local government budgets were already hit hard by the Great Recession.

Debt: Most mainstream economists suggest that deficits should rise in economic downturns in order to stimulate growth, and then fall as the economy picks up. The TCJA turns this conventional wisdom around, adding stimulus spending at a time when the economy was growing and labor markets were thought to be approaching full employment. The cost of this stimulus is an additional $1.9 trillion in debt through 2028.[44] If companies and individuals can identify new loopholes in the hastily written law, the revenue loss could be even larger.

Figure 1-6



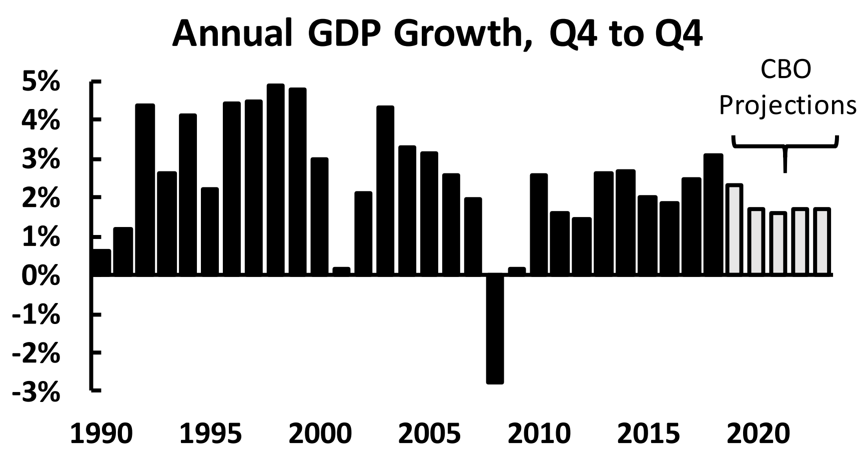
Source: Congressional Budget Office

Mainstream economics posits that increased deficits can lead to higher interest rates and crowding out of private sector investment. While some economists are becoming more skeptical of the magnitude of crowding out effects in the modern economy, there are undoubtedly practical and political concerns about adding to the deficit during good economic times. Higher deficits can undermine the political will for growth-boosting investments in infrastructure, education and research. Already, some policymakers are decrying the higher deficits and demanding spending cuts to compensate, and the President has proposed hundreds of billions in cuts to Medicaid, Medicare and Social Security.[45] Further, higher deficits are associated with smaller stimulus responses to economic downturns, meaning that the TCJA may decrease the United States' ability to recover from future economic troubles.[46]

Growth: The TCJA came with a high price tag, but nonpartisan experts estimate the long-term growth effects to be small. Out of eight models examined by the Tax Policy Center (TPC), six estimated that the economy would be less than one percent larger in 2027 because of the TCJA, and one estimated that the economy would be just about one percent larger. TPC itself estimates that the TCJA will result in an economy that is the same size as it would have otherwise been.[47]

GDP growth accelerated in 2018, likely driven by short-term stimulus from the tax cuts, rather than the long-term supply-side effects. CBO estimates that growth will fall in 2019 and again in 2020 before settling in around a long-term trend of 1.7 to 1.8 percent annual growth.[48]

Figure 1-7



Source: Bureau of Economic Analysis and Congressional Budget Office
Note: Grey bars represent CBO projections for future year-over-year growth rates

The presence of slack in the labor market helps explain why an increase in the deficit from the Tax Cuts and Jobs Act (TCJA) and 2018 bipartisan budget agreement was able to provide a temporary boost to growth. According to conventional economic models, higher government deficits at a time when the economy is below potential leads to higher economic output. Traditionally, mainstream economists advocate stimulus immediately following a downturn—such as ARRA– rather than late in the cycle—such as the TCJA. The stimulus also comes after years of Republicans opposing other stimulus efforts and declaring that the deficit and debt were national emergencies.

The contents of stimulus spending are also important. Spending that increases the productive capacity of the economy, such as on infrastructure improvements, will have a long-term higher return on investment than tax cuts for favored special interest groups.

THE ECONOMIC EFFECTS OF AGGRESSIVE DEREGULATION

The *Report* gives part of the credit for higher growth in 2018 to the Trump Administration's deregulatory efforts. The research to back this up is weak. The *Report* relies more on unsupported economic theory than evidence. While the *Report* states that cost-benefit analyses are important, it ignores the fact that many of the regulations rolled back by the Administration passed rigorous cost-benefit analyses. Indeed, the Office of Management and Budget found that the major regulations implemented between 2006 and 2016 created between $287 and $911 billion in benefits (in 2015 dollars), compared with costs of between $78 and $115 billion.[49] The *Report* focuses more on the costs than the benefits and ignores the harms that these rollbacks of protections will have on workers, consumers, children, the environment and the economy.

Research Fails to Find a Link Between Broad Deregulation and Economic Growth

Studies on federal regulations have failed to find a link between federal regulation and broad economic trends. In one study, economists looked across industries to see if there was a connection between the extent of federal regulation and firm dynamism and found no significant link.[50] An older study on air pollution regulations, meanwhile, found that the regulations did not substantially reduce employment.[51] A former EPA administrator has cautioned that employment effects are going to vary substantially from regulation to regulation and across varying industries.[52] This implies that applying findings from studies on occupational licensing research to actions such as eliminating safety protections for mine workers would not provide useful results.[53]

Smart regulations are necessary to correct for market failures in the complex modern economy. Broad and blind deregulatory efforts that are more driven by contempt for the party that was in charge when the rules were implemented, rather than by rigorous cost-benefit analyses, are unlikely to yield good results for American workers, families and the broader economy. It is also important to remember that many regulations are the result of experienced market failures and often devastating cases of fraud, abuse and dereliction of duty. Forgetting this for the sake of deregulation could result in repeating these mistakes.

Deregulation Results in Winners and Losers

Deregulatory advocates often focus mostly on the compliance costs that businesses incur from regulations. However, there are other stakeholders involved. Depending on the rule, the benefits of a regulation accrue to consumers, workers, investors and the broader economy and environment. For instance, in failing to defend the proposed rule changing the threshold for mandatory overtime, the Administration has left workers without \$1.2 billion in additional pay they would have received under the new guidelines each year.[54]

Another example of the Administration rolling back a rule projected to provide substantial benefits is the Clean Power Plan, which was projected to provide $34 billion to $54 billion in annual benefits by 2030, compared with $8.4 billion in costs.[55] The updated and weaker Affordable Clean Energy rule eliminates the carbon reduction mandates in the prior rule, thereby getting rid of most of the projected benefits of the regulation.[56] Under this new Trump rule, individuals living near power plants will lose out as they suffer from higher levels of pollution and worse health outcomes, and greater emissions will lead to higher levels of global warming, which will hurt economic growth. Coal power plants, meanwhile, will be the winners as there will be fewer requirements for them to reduce emissions.

The Department of Labor Fiduciary Rule provides an example of how consumers can benefit from smart regulations. The modern finance industry is complex, and it is often difficult for consumers to know whether their advisers are steering them toward the best options or toward those that come with the highest fees for the advisers. Conflicts of interest in retirement advice cost families $17 billion each year. The Fiduciary Rule would have required financial advisers to act in the best interest of their clients, helping consumers recoup these costs.[57] However, the Trump Administration put the rule on hold and then failed to defend it in court. Consumers are losing billions each year because of these actions.[58]

THE COST OF TRADE WARS

There are legitimate concerns that need to be addressed in global trade. Globalization has left many American workers with worse job prospects and lower wages, without a strong enough safety net to help lift them back up.[59] Many countries engage in unfair trade practices. China entered global markets full steam after joining the World Trade Organization, but still engages in unfair trade practices that advantage Chinese companies over American and other competitors.[60]

However, rather than proposing investment in a national workforce development system or building a coalition of allies to pressure change in Chinese policies, the Administration has engaged in haphazard and counterproductive tariffs and threats; on-again, off-again negotiations; and undermined international institutions and relationships. The *Report* glosses over these actions understates their magnitude and fails to fully consider the harm that they are doing to the U.S. economy.

CBO estimates that the United States imposed new tariffs on 12 percent of goods imported into the country in 2018, and trading partners imposed tariffs on nine percent of goods exported by the United States. CBO projects that the result of this will be both lower GDP and lower American exports.[61] Two studies released early in 2019 found that in total, the cost of the U.S.-implemented tariffs was almost entirely borne by Americans, lowering total national income even after factoring in tariff revenue.[62]

The soybean industry shows how retaliatory tariffs have harmed American workers and businesses. After the first round of tariffs on Chinese goods, one of the ways China retaliated was instituting a 25 percent tariff on American soybean exports.[63] As China was the number one export market for American soybeans, this was devastating for farmers. Soybean exports to China fell by nearly three quarters from 2017 to 2018 and were down 98 percent in December 2018 relative to December 2017.[64] Even if a deal is reached soon, American soybean farmers will still face some economic whiplash—the USDA projects that exports would not reach their previous highs for another seven years, and more than 900 million bushels of stockpiled soy from last season will continue to push prices down, hurting farmers.[65]

Beyond China, the Administration's targets have included close allies, like Canada and the European Union, stoking unprecedented levels of trade tension in modern times. It remains to be seen what the result of this turmoil will be, as negotiation deadlines continue to pass and be extended with no concrete results to show for them.

Uncertainty Weakens Investment

Beyond the actual actions taken, investors and businesses are uncertain of what direction the Administration is moving on trade policy, as senior level advisers give different indications in public from day to day and week to week.[66] Tweets from the President on tariffs have sent markets roiling, only to be walked back the next day by other officials.[67] One index tracking uncertainty over trade in major news publications found that trade uncertainty has more than doubled since the 2016 election.[68] Farmers and other agricultural producers have also been unsure of whether to commit to new investments in areas potentially affected by tariffs.[69]

A January 2019 survey of businesses uncertainty said that tariff hikes and trade tensions were projected to lower capital expenditures by $32.5 billion, including $22 billion in the manufacturing sector alone.[70] Further, some international investors may decide that their dollars are better invested elsewhere. Already, the United States has seen a drop in foreign direct investment flows into the United States. While there are many factors that influence these trends, uncertainty over

American trade and other policies likely influences many investors' and business's decisions.[71]

THE GOVERNMENT SHUTDOWN

Another source of uncertainty and unforced errors was the recent partial government shutdown, which CBO estimates will cost the economy at least $3 billion in lost economic activity.[72] The third shutdown of the Trump Administration, it lasted 35 days—longer than any previous shutdown.[73] The shutdown had direct economic impacts: workers did not get paid, important government services were halted and important economic data was not released. BEA estimated that the shutdown subtracted 0.1 percentage point from fourth-quarter growth and a 0.3 percentage point from real GDP growth in the first quarter.[74]

These measures focus on lost government productivity—the output lost because furloughed workers do not make up for lost hours. The cost could be larger once indirect effects such as delayed or canceled business investments and worsened agency backlogs are taken into account.

LONG-TERM CHALLENGES

There are several key factors slowing economic growth in the coming years and decades, factors that policymakers should be working to address. At a high-level, economic growth is a function of two factors: the number of hours worked and the productivity of those workers. To this extent, it is concerning that labor force growth and productivity growth have both been slowing in recent decades. Further, demographic shifts, rising income inequality and rising global temperatures present major challenges that require substantial policy responses.

Declining Labor Force Growth

Labor force participation peaked in the late 1990s and early 2000s at around 67 percent, and has since declined to a rate of about 63 percent as of June 2019.[75] CBO projects that the rate will continue to fall in the coming years, hitting 62.2 percent in 2023.[76] Much of this decline has been and will continue to be driven by the aging of the workforce. The number of Americans aged 65 or older has doubled in the last 50 years and is projected to increase by another third over the next decade.[77] While the labor force will continue to grow overall, retiring Baby Boomers will put downward pressure on that growth rate.

These trends are too large for policymakers to reverse, but federal policy has a place in mitigating the decline. For instance, paid leave and affordable child care can help attract more women to the labor force, bringing the United States back toward its former position of leading the globe in female labor force participation. Bipartisan criminal justice reform passed last year is a promising start toward getting more individuals out of the criminal justice system and into the workforce—but much work remains in this area, particularly at the state level. Similarly, bipartisan action to address the opioid crisis will help more Americans avoid or recover from addiction, allowing them to live longer, more productive lives—although more work remains to fully address the crisis.

Another major area where Congress can affect labor force growth trends is through immigration. Immigrants tend to have high rates of labor force participation, likely due to requirements associated with the immigration process.[78] As the growth of the native-born workforce declines, this becomes even more important. While immigration cannot completely make up for this decline, limiting the number of immigrants and refugees coming into the country and working to kick out large numbers of people already educated and working in the United States is moving in the wrong direction. The *Report* is unfortunately silent on this important issue.

Low Productivity Growth

Productivity growth has been slower in recent years than in previous periods, a trend that is very concerning for future growth prospects.[79] The cause of the slowdown is not entirely clear, although economists have put forth potential explanations. Some economists project that the decline is temporary, with major productivity-boosting breakthroughs in areas like automation and artificial intelligence on the horizon. Others posit that people have discovered most of the low-hanging productivity-enhancing fruit, and that future gains will be harder to come by.[80] Rising market concentration, higher income inequality and aging demographics are all also plausibly linked to lower investment and productivity.[81]

Regardless of the cause, policymakers cannot sit idly by. As we have seen, the TCJA has done little to drive substantial private sector investments to date. Instead of waiting for the possibility that future investment materializes, Congress and the Administration should work toward advancing substantial new investments in infrastructure, education and federally funded research. Policymakers should also facilitate competitive markets where incumbents must innovate to maintain market share. Democrats have already put forth a number of policies initiatives that would work toward these goals in the 116th Congress. Advancing these initiatives would create an environment where innovation thrives, productivity increases and the economy grows.

Income Inequality

Income inequality has been on the rise for the past four decades. While the literature linking income inequality to economic growth is still emerging, many economists have already sounded the alarm that high levels of inequality can depress economic growth. A recent study found a strong link between income inequality and growth when also factoring in the level of economic mobility.[82] In countries with lower levels of economic mobility, income inequality is more likely to impact growth—a situation the study points to as occurring in the United States. Income inequality trends are explored more in the next chapter on *Economic Inequality*.

The Climate Crisis

Rising global temperatures are likely already affecting the economy, particularly through the rise in extreme weather events. As temperatures continue to rise, these effects will expand to more areas, industries and people. Agricultural yields will be hurt, labor productivity will fall, property values will decline and entire communities will be displaced. The longer policymakers take to act on climate change, the greater the economic threats will be. The impact that rising temperatures have on the economy is covered in more depth in the chapter on the *Climate Crisis*.

CONCLUSION

The economic assessment of the *Economic Report of the President* fails to acknowledge that current positive economic trends are a continuation of the momentum that the Trump Administration inherited from the Obama Administration. It cherry-picks facts to claim that the President has ushered in a new economic era, rather than acknowledging the reality that Trump is riding the wave of a long economic recovery. It also presents overly rosy economic forecasts that are out of line with mainstream and nonpartisan consensus. Further, it neglects to reflect on the disastrous self-inflicted wounds caused by the President's trade war, the unnecessary government shutdown and ill-designed tax cuts that favor the wealthy and balloon the federal debt.

Although the U.S. economy is strong in many ways, structural challenges and disparities remain. The Administration glosses over these challenges and disparities in its *Report*. We need smart investments that address these issues and ensure that all Americans have the opportunity to succeed.

CHAPTER 2: ECONOMIC INEQUALITY

OVERVIEW

Aggregate measures of economic health do not fully reflect the experiences of tens of millions of Americans, who face higher unemployment, lower wages, higher poverty rates and decreased economic mobility. Disaggregating those indicators reveals vast economic disparities by income, race and ethnicity, gender and geography.

Economic inequality has plagued the American economy for decades, and by key measures, it is growing. However, rather than address this issue, the Administration has worsened it by passing $1.9 trillion tax cuts that disproportionally benefit the wealthiest Americans. Unfortunately, the *Economic Report of the President* is silent on this issue and paints an overly rosy picture of the economy that ignores the reality many Americans face. This chapter dissects aggregate indicators to examine economic disparities and discusses possible ways to enable all Americans to participate in national economic growth.

AGGREGATE ECONOMIC INDICATORS DO NOT TELL THE WHOLE STORY

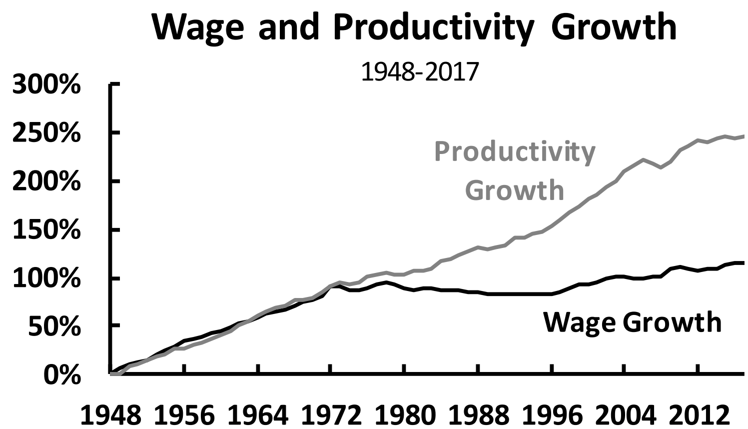
The United States economy has expanded at approximately 2.6 percent annually since 1980, adding over $12 trillion in total economic activity to the U.S. economy over those four decades.[83] The current economic recovery from the Great Recession is now the longest in United States history, with gross domestic product (GDP) growing at an average of 2.3 percent and now exceeding pre-recession levels by over $3 trillion.[84]

Decades of Wage Stagnation

However, economic growth has not led to broad-based gains in wages over the last several decades. Wages have been growing slowly for the median worker and even slower for those at the bottom of the income distribution. From 1979 to 2017, the median worker's wages increased just over six percent, from an estimated $20.27 an hour to $21.50 an hour, after accounting for inflation. That is less than a two-tenths of a percentage point increase each year, which translates to annual earnings growing from $40,540 in 1979 to only $43,000 in 2017. This long-term picture is even worse for workers at the bottom of the income distribution. Over the same period, wages at the 10th percentile grew by just 1.2 percent in total, increasing only 13 cents an hour from $10.81 in 1979 to just $10.94 in 2017. That means that annual earnings for workers at the 10th percentile grew a mere $260 over almost four decades, from $21,620 in 1979 to just $21,880 in 2017.[85]

Slow wage growth translates to lower lifetime earnings for workers. As shown by *Figure 2-1*, productivity growth has sharply diverged from wage growth since the early 1970s, demonstrating how economic growth has not translated to real wage gains for workers.[86] Each cohort of men entering the labor force between the late 1960s and early 1980s has experienced lower starting median earnings than the cohort of men who entered the labor force in the previous year, and lifetime earnings trended steadily downward during that time.[87] There are several factors that are likely contributing to sluggish wage growth, such as slower productivity growth, increased automation, pressures from globalization, the erosion of the real value of the minimum wage, fewer protections for workers and more bargaining power for employers.[88]

Figure 2-1



Source: Economic Policy Institute
Notes: Productivity growth shows the cumulative percent change in output per hour of work since 1948, net of depreciation; wage growth shows the cumulative percent change in hourly compensation of private sector production and nonsupervisory workers since 1948.

However, over the past year, wages have started to rise, likely as a result of an unusually tight labor market. This has particularly benefited low-income workers, whose wages have grown up to twice as fast as those at the 95th percentile.[89] This is described in greater detail in the *Macroeconomic Overview* chapter.

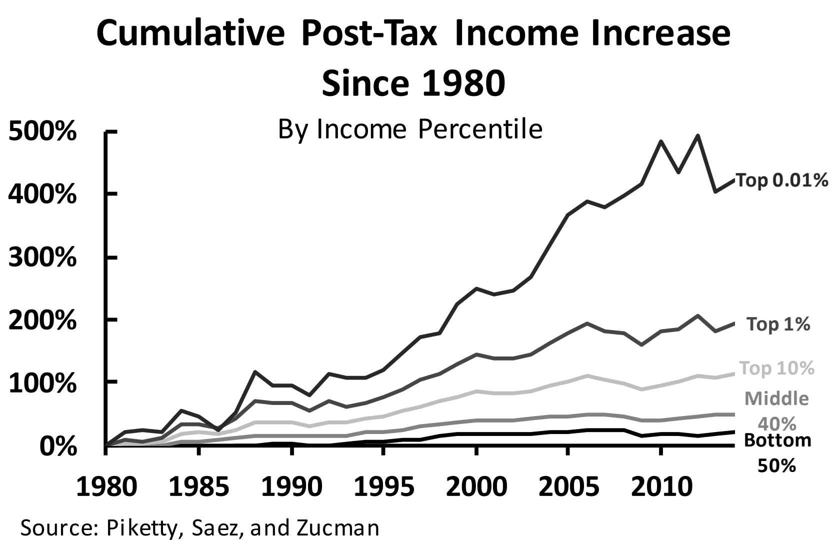
Rising Income Inequality

While median wage growth has been stagnant since the late 1970s, the wages and incomes of those at the top have risen substantially. Workers at the 90th percentile have seen wages grow by 34 percent, a stark contrast from the six percent for the median worker and just over one percent for the worker at the 10th percentile.[90]

Tax data show a dramatic increase in income inequality over the last few generations.[91] One study suggests that the continued rise of income inequality since 2000 has been driven largely by gains of the top one-hundredth of one percent (0.01)—those with incomes of about \$7.2 million.[92] Since 1980, approximately 70 percent of the increase in the share of income going to the top 0.01 percent was caused by incomes within this group growing faster than the long-run growth rate of two percent, and around 30 percent was caused by incomes outside this tiny sliver growing more slowly.[93]

While the top 0.01 percent have seen extraordinary gains and the top one percent overall have seen very large gains, the top 10 percent of the distribution have kept up with GDP growth over this time. The other 90 percent of the income distribution have been losing ground (see *Figure 2-2*).[94]

Figure 2-2



Wage Growth Varies by Education Level

Disaggregating wage growth across different levels of educational attainment reveals different wage patterns. Wages for workers with lower levels of education (high school diploma or less) fell from 1979 to 2017 at all levels of the income distribution, while wages for workers with at least a college degree rose over this period. Wages dropped more than 14 percent for the median worker with a high school degree or less, while they grew more than 15 percent for the median worker with a college degree. Rising wages for college graduates reflect the marked increase in the college wage premium—the economic benefit of a college degree—leading up to the turn of the century. However, in recent years, the college wage premium has started to flatten out, likely in part due to continued growth in the college-educated population.[95]

Growing Wealth Inequality

While income inequality measures the difference between earned income in a given year, wealth inequality measures the differences in accumulated lifetime assets. Today, wealth inequality is even more extreme than income inequality. This is partly because the returns of invested wealth are often high, leading to further increases in income that allow for the acquisition of even more wealth, and partly because wealth is passed down from generation to generation. The share of wealth of the bottom 90 percent of families has been falling for most of the past quarter-century, down from one-third (33 percent) in 1989 to just under one-quarter (23 percent) in 2016.[96] At the same time, the top one percent of households hold nearly 40 percent of all wealth in America, with half of that belonging to the top one-tenth of one percent (0.1).[97]

Decreased Economic Mobility

Over the last several decades, absolute mobility rates have fallen, and it has become increasingly difficult for children to earn more than their parents—a foundational aspect of the American dream. While a child born in 1940 had a 90 percent chance of earning more at age 30 than their parents at the same age, the odds for a child born in 1980 were no better than 50-50. These rates have fallen across the entire income distribution and in all 50 states, with the largest declines for families in the middle class.[98]

Family Economic Security

All of these structural challenges—including income and wealth inequality and declining mobility—threaten families' economic security. Assessing family economic security is difficult, but it is rooted in a family's ability to plan for expenses, save for the future and pay any outstanding debts. Tens of millions of Americans experience substantial economic insecurity. Nearly 40 percent of American adults report that they or their families struggle to meet at least one basic need like food, health care, housing or utilities.[99] A 2019 Federal Reserve report found that four in 10 Americans reported that they would be either unable to afford an unexpected $400 expense, or would have to resort to borrowing money or selling possessions to cover it.[100]

Improving Measurement

Aggregate national indicators do not tell the whole story. For example, GDP figures do not show how economic growth is distributed among the American people across different income levels. Recent legislation introduced in the House and Senate would work to supplement that information. The *Measuring Real Income Growth Act of 2019* (H.R. 707) instructs the Bureau of Economic Analysis (BEA) to report on income growth indicators, which measure how income is growing at each decile (bottom 10 percent up to top 10 percent) of income and for the top one percent. New indicators like this would provide a more complete picture of how economic gains are distributed, allowing policymakers to implement policies that benefit all Americans.

PERSISTENT DISPARITIES

More than half a century since the civil rights movement, racial economic disparities in the United States persist. Evidence shows gaps in key measures of economic well-being, such as unemployment rates, incomes, poverty rates, wealth, homeownership and mobility.

Employment

The black unemployment rate peaked at 16.8 percent in the aftermath of the Great Recession, then fell to 7.7 percent at the end of the Obama Administration and 6.0 percent in June of this year. However, it is still about double the rate of white unemployment.[101] Research shows black unemployment is also more cyclical than white unemployment, and that black workers experienced more involuntary part-time employment over the last four decades.[102] Tight labor markets improve relative outcomes for black workers, but the U.S. economy has more often than not run below potential since 1980.[103]

Wage and Income

Wage growth also has been particularly weak for black and Hispanic workers over the last several decades. For Hispanic workers, wages at the median and 10th percentile fell between 1979 and 2017. As a result, the wage gap between the median Hispanic worker and the median non-Hispanic worker grew over this period. In 1979, the median Hispanic worker earned 81 cents for every dollar earned by the median non-Hispanic worker, but in 2017 that figure fell to just 70 cents on the dollar. The wage gap also grew between the median white and black worker—the median black worker earned 80 cents for every dollar earned by the median white worker in 1979, with that figure falling to just 71 cents on the dollar in 2017.[104]

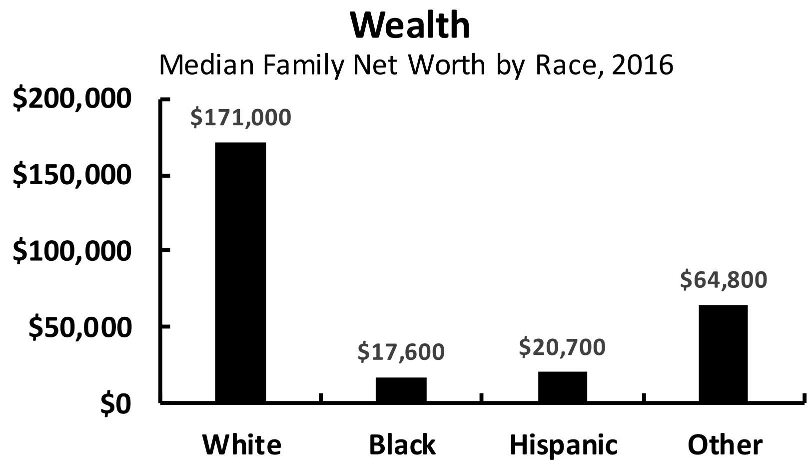
There are substantial gaps in household income by race. In 2017, the median Hispanic household earned just 74 cents for every dollar of income earned by the median white household, while the median black household earned just 60 cents. Black household incomes have remained relatively flat over the past few decades. Black real median household income in 2017 was about $40,600, roughly where it stood in 2007 and below its peak of over $42,300 at the turn of the millennium.[105]

Wealth

Racial wealth disparities are stark and have significant implications for the economic security of communities of color. Median net worth for all families fell during and in the immediate aftermath of the Great Recession. However, it continued to fall for black and Hispanic families between 2010 and 2013, while remaining unchanged for white families. Despite overall gains for black and Hispanic families between 2013 and 2016, the racial wealth gap increased during this period. In 2016, the typical black and Hispanic family held about 10 and 12 percent, respectively, of the wealth held by the typical white family (see *Figure 2-3*).[106]

Homeownership rates remain lower among black and Hispanic households compared to white households.[107] Further, home equity makes up a larger proportion of household net worth for black and Hispanic families—37 to 39 percent on average—compared to 32 percent of a white family's net worth.[108] Unfortunately, many families saw this equity vanish following the Great Recession. Homeownership rates and the value of homes for families of color plummeted following the housing crisis, eliminating much of the wealth built up by these families.[109]

Figure 2-3



Source: Federal Reserve Survey of Consumer Finances, 2016
Note: Both white and black refer to non Hispanic; other refers to other or multiple race.

Poverty

Communities of color also experience higher poverty rates. In 2017, poverty rates among blacks and Hispanics were 21 percent and 18 percent, respectively—more than twice as high as the white poverty rate of less than nine percent. Out of the nearly 40 million people living in poverty, almost 13 million are children.[110] Roughly one in four black and Hispanic children were living in poverty in 2017 (28 percent and 25 percent, respectively), compared to just one in ten white children (10.9 percent).[111] Research shows that children growing up in poverty tend to experience worse health, educational and economic outcomes than children who do not grow up in poverty.[112]

Economic Mobility

Black children experience far less upward mobility than white children. For every one hundred black children who grow up in households in the bottom fifth of the income distribution, less than three will make it to the top fifth as adults. White children are more than four times as likely to move from the bottom fifth to the top fifth. Further, black children are more downwardly mobile, as they are nearly twice as likely to fall from the top of the income distribution to the bottom as white children are.[113]

GENDER DISPARITIES

Over the last several decades, women have made significant wage gains and great strides toward pay parity. Since 1980, real median earnings for women working full-time, year-round have increased by more than 30 percent and the gender pay gap has been cut in half.[114] Key elements of this progress include improved female labor force participation, increased educational attainment among women and strengthened legal protections for fair pay.

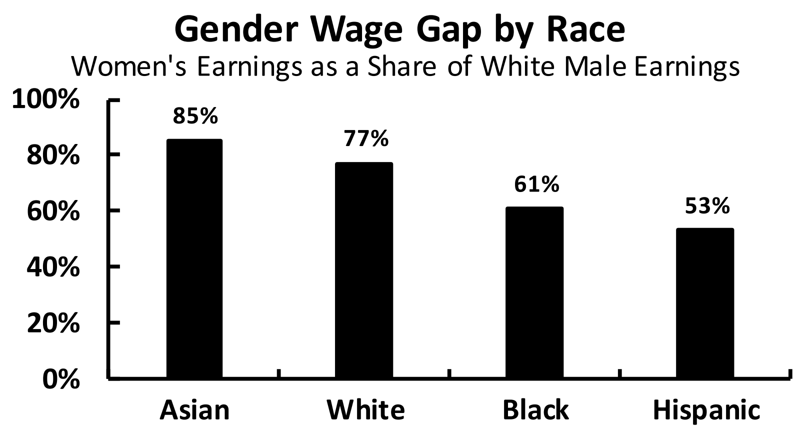
The Gender Pay Gap Persists

In 2017, the typical woman working full-time, year-round earned just 80 cents for every dollar earned by her male counterpart.[115] The gap was wider among women of color: the typical black and Hispanic woman earned 61 cents and 53 cents respectively for every dollar earned by the typical white man. Although Asian women come closest to achieving pay parity, some Asian subgroups earn far less than the national average (see *Figure 2-4*).[116]

These wage gaps add up over women's careers. The 20 percent gap in real median earnings translates to a little more than $10,000 each year. [117] If a woman were to experience this same disparity over her 40-year career, she could lose out on more than $400,000 in wages (in today's dollars).[118] Research looking into the long-term earnings of women compared with men find that the gap can even be greater once you factor in the gendered pattern of disruptions to men's and women's careers.[119]

The gender wage gap does not only affect women; it has lasting consequences for families, men and the economy as a whole. Women's share of household earnings has grown from 36 percent in 1993 to 45 percent in 2016.[120] One study shows that mothers are the sole or primary breadwinners in half of U.S. households with children.[121]

Figure 2-4



Source: JEC analysis of 2018 CPS ASEC
Note: Ratio is comparing median annual earnings of full-time, year-round workers only; Asian American, white, and black figures exclude respondents with multiple races reported or of Hispanic ethnicity; the pay gap is substantially larger for some Asian American subgroups.

There are many factors that contribute to the gender pay gap. For example, women are more likely than men to have to interrupt their careers to care for children. Roughly 43 percent of women in the workforce have experienced at least one year with no earnings—nearly twice the rate of men.[122] The wage penalties associated with taking time out of the labor force are high, harming women's present and future earnings and hampering their overall economic potential.

Female Labor Force Participation Still Lags Male Participation

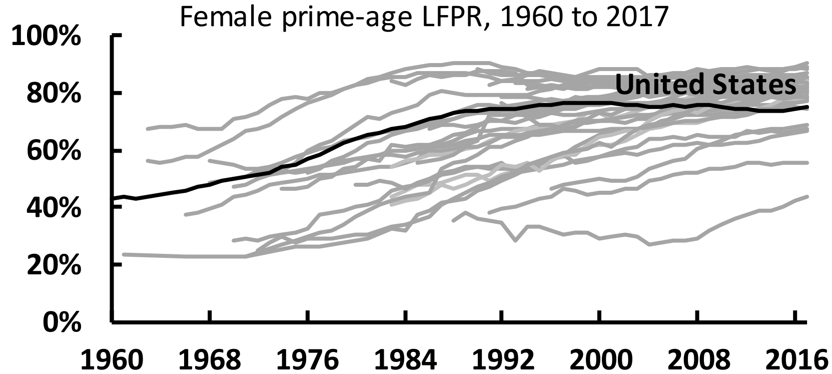
In the postwar period, women flooded into the labor force, and the prime-age female labor force participation rate (LFPR) more than doubled from 1948 to 1999. The dramatic increase in female participation in the labor force began to offset the declining participation of men, and overall labor force participation was rising until 2000. However, since its peak at the turn of the century, women's LFPR has declined and remains far below men's LFPR.[123]

Additionally, the United States is trailing other industrialized countries when it comes to women's labor force participation (see *Figure 2-5*). Many countries with higher female labor force participation have family-friendly workplace policies, such as paid family leave and child care, which make it easier to balance work and family obligations.[124] It is estimated that lower women's labor force participation in the United States, relative to other OECD countries, potentially left over $500 billion in estimated economic activity on the table in 2017 alone.[125]

Figure 2-5

U.S. Female Labor Force Participation Compared to Other OECD Countries

Female prime-age LFPR, 1960 to 2017



Source: OECD Labour Force Statistics by sex and age
Note: Prime-age includes persons aged 25 to 54.

Gender Disparities Result in Retirement Insecurity

Earnings disparities between men and women have implications for women's economic security later in life. Planning for retirement early is becoming increasingly important for women. Older women are less financially secure than they were more than 25 years ago.[126] In 2017, women ages 65 and older earned just 59 percent of what men the same age earned, which is more than twice the overall gender wage gap.[127] In fact, elderly women are 40 percent more likely than elderly men to live in poverty.[128] Lower lifetime earnings, longer life spans and shorter work tenures all contribute to women's retirement insecurity.[129]

Improving the Economic Outlook for Women and Families

Paid family leave allows both male and female workers to better fulfill caregiving responsibilities without sacrificing pay. Research shows that paid leave policies increase employment among mothers, as those with access to leave are almost 70 percent more likely to return to work in the long run than those without access.[130] However, only 16 percent of private sector workers had access to paid family leave through their employers in 2018.[131] The United States is the only industrialized country that does not guarantee any paid leave for new parents.[132] The Federal Employee Paid Leave Act (H.R. 1534) would provide 12 weeks of paid leave for federal employees—an important first step in the effort to expand access to paid family leave.

In addition to paid family leave, more accessible and affordable child care can help increase women's work hours and earnings. As women have entered the workforce and become breadwinners, access to high-quality, affordable child care has become an increasingly important part of a family's economic success. Research shows that mothers whose children attend high-quality early learning and care programs can boost their earnings by $90,000 over the course of their careers.[133]

GEOGRAPHIC DISPARITIES

Just as the U.S. economy has become fractured by income, race and gender, it has increasingly been divided by geography. While some communities and areas of the country are booming, others might be experiencing a bust. In the years since the Great Recession, these differences have become more pronounced with the gaps between thriving and struggling areas growing wider. Large swaths of American communities—many of them in rural areas—have not shared in the recovery since the Great Recession.

Economic Growth is Increasingly Geographically Concentrated

In successive recoveries, job growth and business creation have aggregated in fewer and fewer metropolitan areas.[134] Nearly half of the nation's ZIP codes still had not reached pre-recession employment levels in 2016, and some are on a track to never fully recover.[135] As the think tank Economic Innovation Group (EIG) puts it, this means that "National growth rates have become less reflective of local realities." The median county added jobs at less than half the pace of the national economy, according to their research, and if you subtract the top five counties, the nation as a whole still had fewer businesses in 2016 than in 2007.[136]

These disparities manifest in a variety of ways. The Brookings Institution's Hamilton Project divided the nation's counties into quintiles based on several indicators of economic vitality. They found that in the lowest performing quintiles, incomes are less than half that of the highest performing quintile, poverty rates are nearly three times higher, employment levels for prime-age workers trail by nearly 16 percent and life expectancy is a full six years lower.[137]

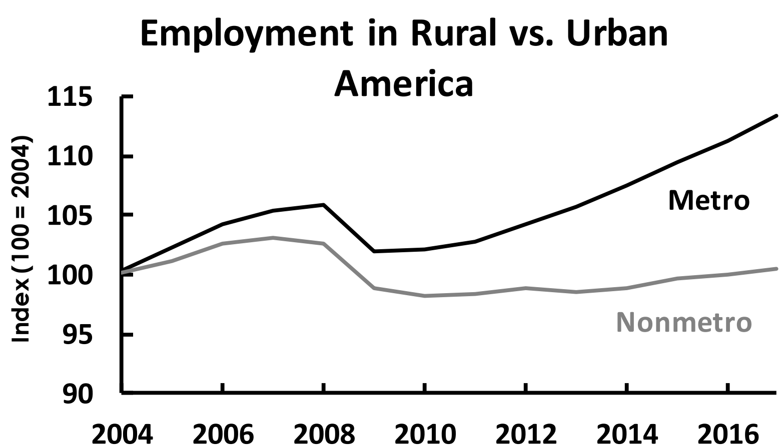
The Rural-Urban Divide

Wages have been particularly stagnant for rural workers. Since 2007, the median income of rural workers has averaged 25 percent below that of urban workers.[138] Rural Americans also experience higher unemployment rates than their urban counterparts—a gap that has widened since the Great Recession.[139] EIG found that the number of rural Americans living in distressed communities has risen even as the national share has fallen.[140]

There is also a stark rural-urban divide in labor force participation rates, with participation much lower in rural areas. Some of this can be attributed to an aging population and the outmigration of young people from rural areas. However, even when looking at participation rates of prime-age workers, there is a growing gap between participation in urban areas and rural areas, especially since the Great Recession.[141] This gap is mostly concentrated among workers with lower levels of education. Recently, the rural-urban gap in labor force participation grew sharply among workers with a high school diploma or less.[142]

Rural America has not shared in the employment recovery that has occurred since 2010. While most urban areas have long since surpassed pre-recession employment levels, employment in rural America is still below pre-recession levels (see *Figure 2-6*).

Figure 2-6



Source: Bureau of Labor Statistics, Local Area Unemployment Survey.
Note: Quarterly data is indexed at 2004Q1, seasonly adjusted, and uses USDA adjusted data for survey redesign break in 2009Q4 -2010Q1.

Economic Opportunity Varies by Location

The geographic economic divide is about more than just the current working population—it also affects future generations. Groundbreaking research over the last decade has revealed that where a child is born has a large impact on their ability to achieve upward economic mobility. Researchers have tapped into federal administrative data records to show how children's ability to improve their economic situation is heavily influenced by several factors, including where they are born. Children who move from a below average mobility area to a high mobility area—for example, from a low-income to an affluent community—early in life increase their lifetime earnings by $200,000. They are also less likely to end up incarcerated or have a teenage birth. Even growing up a few miles apart can make the difference in where a child ends up later in life.[143]

THE IMPORTANCE OF ANTI-POVERTY PROGRAMS

Nearly 40 million Americans live in poverty—for a family of four with two children, this includes those with incomes of less than about $25,000.[144] Many more will experience poverty at some point during their lives. More than half experience poverty by the time they are 65, typically from losing a job for a period of time.[145]

The effects of poverty ripple throughout the economy. Child poverty alone costs the nation an estimated $1 trillion each year in increased health care bills, child maltreatment costs, higher crime rates and lost wages and productivity.[146]

The *Report* declares that "President Johnson's War on Poverty is largely over and has been a success based on 1963 standards of material hardship."[147] It arrives at this conclusion using a proposed alternative to the U.S. Census Bureau's Official Poverty Measure (OPM) and Supplemental Poverty Measure (SPM). The proposed measure uses a different index for inflation, counts the household rather than the family as the sharing unit and includes the various forms of federal assistance to help low-income Americans. These include the Earned Income Tax Credit (EITC) and Child Tax Credit (CTC), as well as the "the market value of noncash transfers, including [the Supplemental Nutrition Assistance Program] (SNAP); subsidized school lunches; rental housing assistance; and public health insurance (Medicare and

Medicaid)."[148] In other words, the *Report* suggests that the War on Poverty has been won thanks to federal government programs that many conservatives deem too generous or unnecessary. The *Report* then proposes a new war on poverty centered on gutting these same programs that are focused on alleviating poverty for millions of Americans.

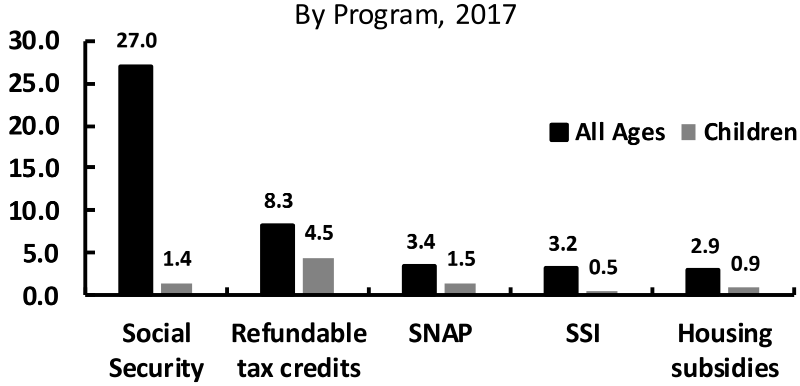
While the *Report* is correct in arguing that a strong labor market can help offer opportunities for those living below the poverty line to work their way out of poverty, an unemployment rate under four percent will not continue indefinitely and is not the silver bullet to ending poverty. Many Americans face barriers to work that a tight labor market would not address, such as serious health conditions or a lack of child care. For these reasons, federal programs that mitigate poverty will continue to be critical.

As shown by the SPM, which extends the OPM by taking into account many of the programs that assist low-income Americans, anti-poverty programs like the EITC, CTC and SNAP keep millions of Americans from feeling the worst effects of poverty each year. In 2017, Social Security alone lifted 27 million Americans above the poverty line, while refundable tax credits like the EITC and CTC alleviated poverty for another eight million. Out of the 3.4 million people SNAP prevented from falling into poverty, more than 40 percent were children (see *Figure 2-7*).[149]

Figure 2-7

Millions Kept Out of Poverty

By Program, 2017



Source: U.S. Census Bureau, 2018 CPS ASEC
Note: Refundable tax credits include the Earned Income Tax Credit and the refundable portion of the Child Tax Credit. SSI is Supplemental Security Income.

There are other proven benefits that these programs provide in addition to the sheer number of people lifted above the poverty line, such as the intergenerational effects that will benefit future generations. Medicaid results in long-term health, educational and economic benefits for recipients. Children with Medicaid coverage are healthier and are more likely to complete high school and college and be employed as adults.[150]

Research shows that programs like SNAP and EITC collectively reduce the level of income volatility in the economy.[151] Additionally, SNAP is a vital investment in human capital, setting a healthy foundation for America's current and future workforce. Every dollar of SNAP generates $1.79 in increased GDP.[152] Tax credits like the EITC and CTC provide much-needed wage boosts for families and improve outcomes. Increasing the EITC has been shown to substantially increase employment among single mothers and reduce poverty levels for their families.[153] Supporting these programs is key to setting up current and future generations for success to fuel a strong, vibrant economy.

CONCLUSION

While the *Economic Report of the President* focuses mostly on aggregate economic indicators that show a strong economy, data and research reveal large disparities by income, race and ethnicity, gender and geography. The *Report* includes almost no discussion of economic inequality, except in a discordant chapter on socialism, and it declares that the War on Poverty has been won. This ignores the economic experiences of tens of millions of Americans.

Addressing these disparities will require a robust agenda that combats discrimination, invests in education and sets the foundation for broad-based inclusive growth. It also will require expanding access to paid family leave and affordable, high-quality child care to help workers balance the demands of work and family while remaining in the labor force. Finally, rather than claiming that poverty is rare and attempting to cut Medicaid and nutrition assistance, we should protect these programs so that they can continue to help lift millions out of poverty and put future generations on a viable path to the American Dream.

CHAPTER 3: MILLENNIALS

OVERVIEW

Young adults today are less likely to earn more than their parents than any generation in American history. Children born in 1940 had about a 90 percent chance of earning more than their parents; the first Millennials, born in 1980, had only a 50 percent chance.[154] This is a crisis for millions of Millennials and it should be a primary concern for policymakers. However, the *Economic Report of the President* largely disregards the unique challenges of this generation and the word "Millennial" does not appear in the *Report*.

With education increasingly a prerequisite for economic opportunity in the labor market, Millennials are more likely than any prior generation to seek higher education and more advanced degrees.[155] However, the need for more education has ripple effects that affect them throughout their lives. They take longer to achieve milestones such as completing school, setting up their own household and marrying. More face the burden of student debt while fewer obtain homeownership. These social changes and economic challenges may be further complicated by the increasing diversity of the Millennial generation.

Despite these vast changes, many federal policies, especially concerning support for families and children, have changed little in the past half-century. Therefore, today's young adults are supported by a less adequate national safety net compared to their parents' generation, in that it no longer reflect the realities that American young adults face. For Millennials to have a better chance to succeed, new social policies are needed to address the unique challenges they face. However, the first step, which is lacking in the *Report*, is to acknowledge that the challenges exist.

The Historical Context

Millennials grew up during times of great social and economic change. There was a transformative shift in household structure, increasing globalization, weaker protections for unions, stagnating male wages and mass deregulation.[156] Despite the economic and social instability faced by this generation, federal social investments—such as in public education, housing subsidies and income support programs—were reduced and more federal social programs were transferred to states or localities starting in the 1980s.[157]

Within seven months of President Ronald Reagan's inauguration, Congress slashed spending by $35 billion below projected levels and reduced personal and corporate income taxes by almost $38 billion. Most of the budget savings were made in programs affecting the poor.[158] President Reagan also gave states more options to vary the implementation of social programs, such as allowing states to require welfare recipients to participate in workfare programs in order to receive cash aid and other program benefits. The transfer of power to states allowed some states to develop innovative safety net programs while others engaged in a 'race to the bottom' to minimize public investments in social services.[159]

In the 1980s, the nation also faced a period of deepening urban ills—such as the crack epidemic and violent crime—and increasingly punitive approaches to addressing social problems, which had devastating impacts on low-income families, children and neighborhoods. Sentencing for drug offenses became more punitive as mandatory prison time for these offenses was widely adopted by the states through the 1980s. In 1986, President Reagan signed legislation with harsh federal mandatory minimum sentences for drug offenses and Congress authorized hundreds of millions of dollars in new grants for state and local law enforcement.[160] Children—many from low-income communities—were separated from their parents as more men and women were incarcerated for longer periods.

The initial cohorts of Millennials were born in a decade of new family and work arrangements among their parents' generation, the Baby Boomers (ages 17 to 35 in 1981). Starting in the late 1970s and early 1980s, most women worked irrespective of whether they were married or had a young child.[161] Women's earnings proved to be critical to the American household amid instability in the economy and the male-head-of-household structure during this decade. In the 1980s, there was a double-dip recession, mass layoffs and the U.S. divorce rate peaked.[162] Between 1960 and 1980, the annual number of divorces tripled from approximately 400,000 to nearly 1.2 million.[163]

As children growing up and as young adults coming of age, Millennials experienced economic instability and have not enjoyed the same level of federal social investments experienced by other generations. In the postwar era, workers, families and children had an array of federal investments, subsidies and protections that began to erode under the deregulation and federal funding cuts that started in the 1980s.[164] Compared to Millennials, Baby Boomers grew up during an era of more stable wages for (male) breadwinners, historically high marriage rates, a more robust safety net and higher rates of upward mobility.[165]

Coming of Age in a Changing America

Much of the recent analysis about the economic status of Millennials reflects that, by definition, Millennials are now in the coming-of-age period of life (ages 23 to 38 in 2019). Most Millennials are finishing or have finished schooling and most are entering or have entered the labor market. Generation X and Baby Boomers are in later life stages. Generation X—ages 39 to 54 in 2019—are typically considered to be in the middle stage of life with most having achieved the typical milestones of adulthood, such as establishing financial independence and an independent household or family. In contrast, Baby Boomers—ages 55 to 73 in 2019—typically have more experience in the labor market and most have entered or are preparing to enter retirement.[166] In 2019, the number of Millennials is expected to exceed the number of Baby Boomers at 73 million versus 72 million, respectively.[167]

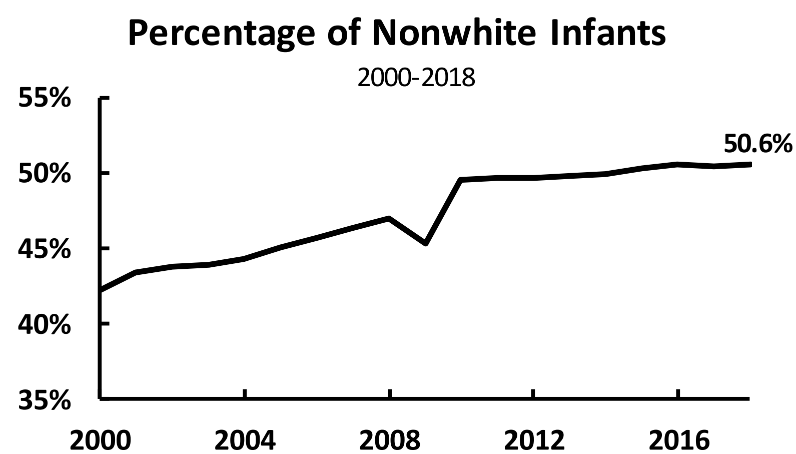
Overall, Millennials lag prior generations in the timing and order of obtaining the traditional markers of American success—a steady career, homeownership, starting a family and building a nest egg. While Millennials report highly valuing these typical life milestones, economic uncertainty, rising housing costs and high debt levels are pushing these goals out of reach for many. Most Millennials report being worried about future job opportunities. Four in five say that student debt has forced them to delay homeownership and three in five believe the country is headed down the wrong track.[168] The promise and duty to ensure the nation's economy works for all Americans is increasingly critical to the vitality of our labor force, households and consumer markets as each new generation is becoming more diverse and many hold a precarious position in an unstable economy.

Growing Diversity and Economic Inequality

Today's young adults represent the most diverse U.S. generation. Nonwhite racial and ethnic groups make up more than half of the millennial population in 10 states and in another 10 states nonwhites are more than 40 percent of millennial residents.[169] One in four Millennials speaks a language other than English at home.

About one in seven marriages among Millennials are interracial.[170] As of 2015, most of the U.S. population under age five were nonwhite.[171] The share of nonwhite infants (less than one year old) in the United States reached about half (49.6 percent) for the first time in 2010 (see *Figure 3-1*).[172] Yet the *Report* has not fully considered the policy implications of the emerging millennial demographic shifts on U.S. education patterns, the labor force, household arrangements and the economy.

Figure 3-1



Source: U.S. Census Bureau
Note: Percentage reflects nonwhite and Hispanic resident population under the age of 1.

It is possible that the young adults of today are also on track to be the most unequal generation yet.[173] On the one hand, the top end of the income and wealth distribution has seen the most gains since the Great Recession.[174] Millennials who are technologically savvy are positioned to earn a high premium for their skills and higher education in the labor market.[175] This year, a record number of the world's billionaires were under 40.[176] The 71 youngest billionaires in the world (under age 40) are collectively worth nearly $300 billion and, on average, each is worth about $4 billion.[177]

On the other hand, there has been increasing wage inequality in the labor market.[178] Compared to Baby Boomers and Generation X when they were ages 25 to 34, young adult Millennials are more likely to live in poverty (eight percent in 1980, 10 percent in 2000 and 15 percent in 2015, respectively).[179] Millennial households have the highest rates of poverty compared to other U.S. generations, which reflects that the poverty rate among young adult households has been rising since WWII while declining among households headed by older Americans.[180] Many Millennials also have no retirement savings and most lack confidence in the future of Social Security.[181]

Black and Latino Millennials report various dimensions of being more financially vulnerable than white Millennials.[182] White Millennials employed in full-time positions report having more benefits from their employer than black and Latino full-time workers. Black Millennials (ages 25 to 34) are more than twice as likely as white Millennials to live in poverty (24 percent compared to 11 percent, respectively).[183] Black Millennials also report being less likely to rely on financial assistance from their parents or family.[184]

Long-Lasting Impacts of Economic Instability

Overall, the *Report* lacks sufficient attention to the economic and social realities that Millennials face. While Millennials are on track to be the most highly educated and productive generation of workers, troubling indicators of economic insecurity are evident across race, ethnicity, gender, education level and geography. Many Millennials graduated from high school or college and entered the labor market during the Great Recession and many experience unemployment, underemployment or depressed wages. Without an effective policy framework to foster greater financial security and fairer economic outcomes, the fragile status and disparate outcomes of today's young adults pose a great risk to the pillars of the American Dream as well as to the stability and growth potential of our nation's economy.

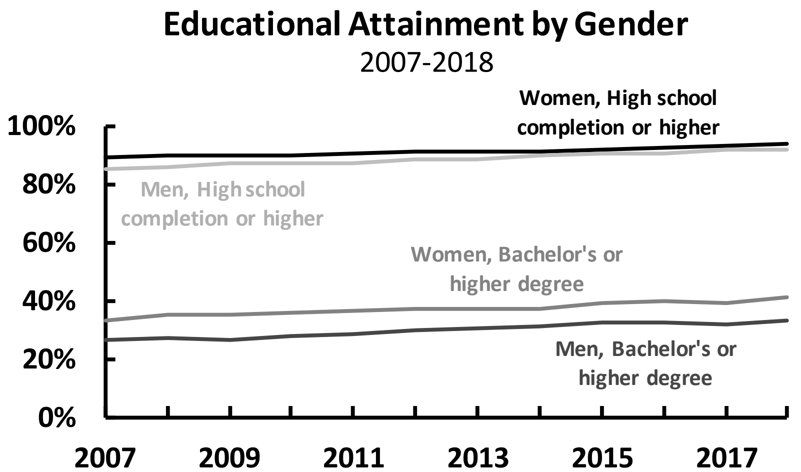
The Shifting Outcomes and Costs of Education

Changing Benefits of Education and Gender Shifts in Educational Attainment

While a generation ago a high school education would typically be enough to achieve the milestones associated with the American Dream—buying a home, starting a family and building a nest egg—it has become far more important to get a college degree or an advanced degree to guarantee such success. Nearly four in ten (37 percent) jobs typically require some type of postsecondary education.[185] According to the Georgetown University Center on Education and the Workforce (CEW), 65 percent of all jobs in the economy will require postsecondary education and training beyond high school by 2020.[186]

Millennials represent the second U.S. generation in which women outpaced men in college completion (Generation X was the first).[187] By the mid-to-late 1990s, young women ages 25 to 29 began to have higher college attainment rates than young men.[188] This means that young men and women now stay in school longer, which can affect the timing of entering the labor market and starting a family for both.

Figure 3-2



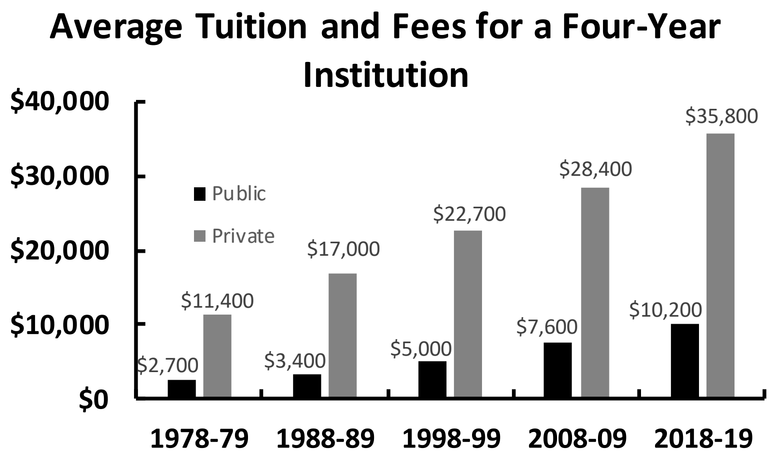
Source: National Center for Education Statistics; Percentages reflect educational attainment for persons 25 to 29 years old

Even though Millennials are the most educated generation in U.S. history, recent educational gains have been modest. Between 2007 and 2017, the percentage of young people achieving a high school degree increased from 87 to 93 percent and the percentage earning a bachelor's degree or higher increased from about 30 to 36 percent.[189]

Skyrocketing Tuition Costs and the Student Debt Crisis

Since the 1980s, the average costs of a full-time undergraduate degree has more than tripled for public institutions and private institutions. From the 1978-79 school year to the 2018-19 school year, average public college costs went from $2,700 to $10,200 and average private college costs went from $11,400 to $35,800. The average published tuition and fee price at private nonprofit four-year institutions is now about 3.5 times the average price at public four-year institutions.[190]

Figure 3-3



Source: JEC Democratic staff calculations based on College Board, Trends in College Pricing 2018 – Note: Average tuition and fee prices exclude room and board; prices reflect in-state charges for public four-year institutions and are rounded to the nearest one hundred dollars.

Many young adults come into the labor market seeking financial independence, but have the disadvantage of a high student debt burden. Four in ten young adults under age 30 have student debt.[191] More than 2.5 million student loan borrowers have student loan debt higher than $100,000, with more than 600,000 of these borrowers holding student loan debt exceeding $200,000.[192] Today's young adults graduate from school owing substantially higher debt than prior U.S. generations, with total aggregate student debt now surpassing $1.5 trillion.[193]

The average student loan balance for Millennials in 2017 was more than double the average loan balance for young adults of Generation X (in 2004).[194] The cost of attending college has increased much faster wages, leading to higher student loan burdens.[195] This debt is difficult to repay, setting up many young adults for financial precariousness. While the economic rewards of a college degree—such as higher earning power and lower unemployment rates—continue, escalating costs have discounted the benefits of completing college.[196] Even adults with a Ph.D. are showing frustration about not finding their way in the economy.[197] Citing risks ranging from social unrest to another economic freefall (due to the insolvency of sky-rocketing student debt), experts have started to argue that the rising costs and financing scheme of higher education in the United States merit urgent attention from policymakers.[198]

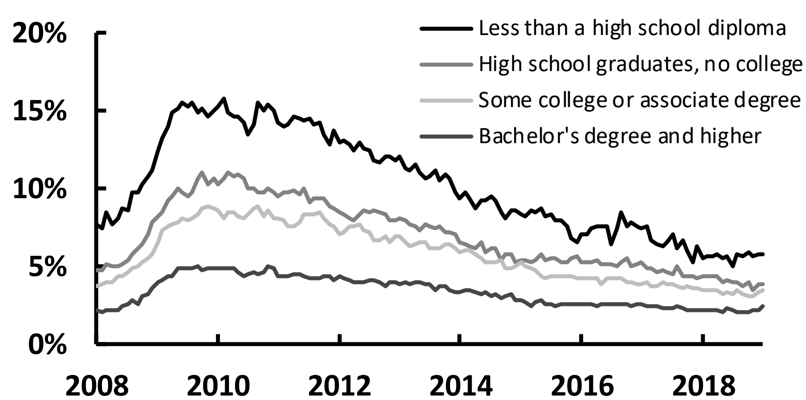
Trump Administration Moves to Deregulate Higher Education Despite Scandals

The Trump Administration has moved to weaken federal oversight and deregulate the higher education industry. For example, Education Secretary Betsy DeVos restored federal recognition of Accrediting Council for Independent Colleges and Schools (ACICS), a for-profit college accreditor from which the Obama Administration withdrew recognition.[199] In another departure from the prior Administration, the Department of Education did not intervene or place stringent conditions on a proposal by the nonprofit Dream Center for the acquisition and consolidation of several for-profit colleges and universities, including Argosy University, South University and the Art Institutes.[200] The deal was ultimately a catastrophic failure, resulting in $13 million in misused federal student aid and the sudden closure of multiple higher education campuses—leaving thousands of students with unpaid bills, unfinished classes and dashed hopes for graduation day.[201] College scams using false advertising and high-pressure sales techniques—such as those alleged in claims against the now-defunct Trump University—have harmed countless students across the nation.[202]

Education Secretary Betsy DeVos also moved to loosen rules and restrictions on student lending, undermining efforts by the Obama Administration to protect student borrowers from fraud and to require federally funded institutions to prepare students for gainful employment or risk losing funding.[203] Given lax oversight, the rollback of common sense consumer protections for students and threats to end subsidies for student loans, the current Administration has failed to lighten the load on Millennials—a generation already overburdened by the effects of entering the labor market during a volatile economy and starting adulthood in a rapidly changing society.

Figure 3-4

Unemployment Rates by Educational Attainment



Source: Bureau of Labor Statistics
Note: Unemployment rates are for persons 25 years and older, seasonally adjusted

RISING MARKET UNCERTAINTIES

Harsher Labor Market Realities

The prosperity of America's future depends on Millennials' successful labor market entry and financial well-being. Four in ten (38 percent) workers in the labor force are Millennials.[204] By 2025, they are expected to comprise three in four workers.[205] Labor market outcomes for this generation are uncertain as many

Millennials entered the labor market during the 2001-03 recession, the 2007-09 Great Recession or a recession recovery period. Studies show that entering the labor market in a bad economy can have negative effects on earnings and employment that can be long term.[206] Data show college enrollment increased following the Great Recession.[207] While some young adults obtained additional schooling during the recession, other Millennials endeavored to find jobs and start their careers during a volatile labor market.

Many are Overqualified and Underemployed

Many Millennials have had a hard time securing employment in the wake and recovery of the Great Recession.[208] Even outside of the business cycle, Millennials face a secular trend of increasingly difficult labor market conditions, including widening wage inequality and an increasing gap between "good jobs" versus "bad jobs." [209] With a college degree being increasingly necessary for employment, studies show that the extent of job mismatches and the percentage of workers who are overqualified for their job have been increasing since the 1970s.[210]

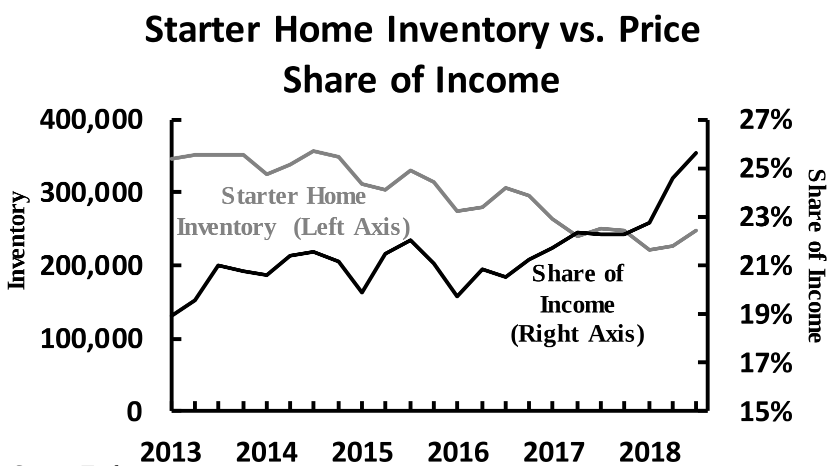
Even recent college graduates face the risk of underemployment, as workers with a college degree outnumber the jobs that require a college degree.[211] Underemployment and unemployment may be contributing to less work and life satisfaction among Millennials.[212] A 2016 Gallup study found that most Millennials (71 percent) do not feel engaged at work and more than half of Millennials say they are looking for new employment opportunities.[213] Data show that low employee engagement costs firms and the economy due to lower worker productivity.[214]

The Housing Crisis, Barriers to Asset Building and the Rental Trap

According to the Pew Research Center, Millennials are less likely to own their home compared to prior generations of young adults. From the 1980s to the present decade, the percent of young adult households (under age 35) that owned their homes dropped from over two in five (41 percent) to just over one in three (35 percent).[215] Studies show today's young adults have many barriers to homeownership. Millennials face a U.S housing market with a declining share of modest-priced housing suited for first-time homebuyers, often called "starter homes" (see *Figure 3-5*). Some also have not yet recovered from the negative effects of the Great Recession on wealth recovery and asset building, which may further reduce their ability to buy a home.[216]

According to Trulia, starter homes have seen continued increases in prices and decreases in inventory. These homes have seen a nearly 10 percent (9.6 percent) annual increase and starter inventory has hit a historic low. As the inventory for starter homes has declined, the share of income spent on housing costs has risen.[217] According to the Census Bureau, the median price for a home in 1950 was $44,600, adjusted for inflation.[218] By 2018, average prices for starter homes had more than tripled to $150,000 in some markets and even quintupled to $250,000 in others.[219]

Figure 3-5



Source: Trulia
Note: Data on a quarterly basis. Share of income is amount needed to afford a median-priced starter home.

Most of the nation's metro areas—where most Millennials work—have not increased new housing supply to meet the growing demand among Millennials. About nine in ten Millennials (88 percent) live in metro areas.[220] Data show undersupply is worst in city centers where new construction has lagged and median rental housing costs in urban areas have risen faster than median incomes.[221]

Moreover, saddled with the financial burden of high rates of school debt, most Millennials (80 percent) report that student debt has forced them to delay homeownership.[222] According to the Federal Reserve, increasing student debt among Millennials can account for a 20 percent decline in homeownership among today's young adults.[223] Economists Mezza, Ringo and Sommer conclude that a $1,000 increase in student loan debt causes a 1.5 percentage point drop in the homeownership rate for student loan borrowers in their mid-20s and early 30s.[224]

Modern Household Economics

According to a 2017 U.S. Census Bureau report, compared to young adults in 1975, fewer young adults live with a spouse (27 percent) and more live alone (eight percent) or live with a roommate (21 percent). Since the 1980s, most people have started to live with a romantic partner around age 22. Though many more do so by living with an unmarried partner (rather than marrying). The number of single people living with a romantic partner increased by more than 12 times in about the last 40 years, becoming the fastest growing living arrangement for young adults. Nearly one in eight Millennials live with an unmarried partner (12 percent).[225]

In the context of the difficulties of achieving financial self-sufficiency, living with a parent is now the most common and most stable living arrangement among young adults. Nearly one in three (31 percent) young adults live with a parent and most young people who report living with a parent are still living with a parent one year later.[226] Among young adults, men are more likely than women to live with a parent.[227]

According to the U.S. Census Bureau, one in four young adults who live with a parent is not in school and does not work. Young adults who live with a parent are more likely to have a child and are more likely to have a disability, suggesting that many young adults are living at home to receive parental help.[228] Previously, adults ages 85 and older, who often cannot live alone and require assistance, were most likely to live in a multi-generational household whereas today young adults are the age group most likely to live in a multi-generational household. Multi-generational living arrangements are growing for nearly all racial groups.[229]

Millennials may be more likely to live with a parent due to economic reasons. The Pew Research Center reports there was an increase in the number and share of Americans living in multi-generational households during and immediately after the Great Recession. Since then, however, the trend has slowed but remained more rapid than the growth before the Great Recession.[230] In 2009, approximately 50 million Americans were living in a multi-generational household and the number rose to about 60 million Americans in 2014. The trend continued in 2016, rising to 64 million people.[231] Data show that those who are unemployed and those without a college degree are more likely to live in a multi-generational household.[232]

Delaying Marriage and Children

Given the difficulty in achieving the traditional precursors to family formation, Millennials are staying single longer and living in new household arrangements. While these are not new trends, the recent economic difficulties of Millennials suggest the delayed achievement of economic milestones may become more pronounced. That would have a long-lasting impact on future family and household arrangements in the United States.[233]

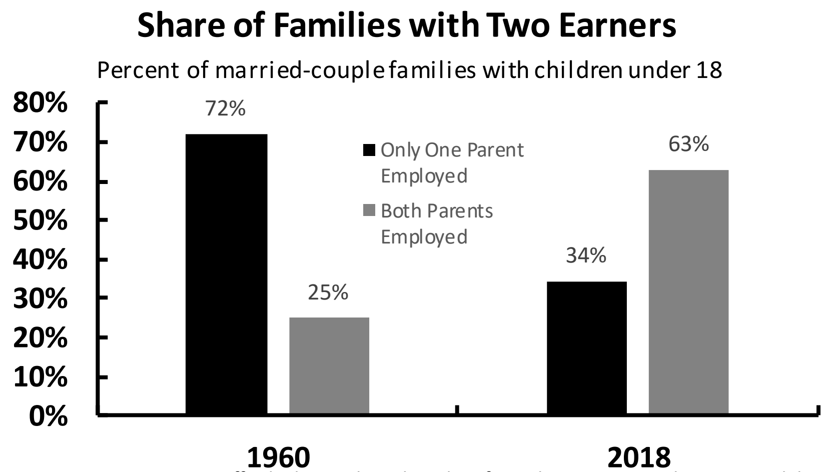
Despite social expectations, few young adults have obtained full-time employment or become financially independent of their parents by their early twenties. One in four young adults (under age 30) receive some form of financial support from someone living outside their home.[234] About nine in ten Americans think that certain milestones—including completing school, being employed full-time, becoming financially independent from their parents and the ability to financially support a family—are important experiences to becoming an adult. Most Americans believe that educational and economic milestones are more important and should be achieved before marrying and having children.[235] A 2016 Gallup study showed that nearly one in five (19 percent) Millennials report they have put off marrying due to financial constraints. [236]

Although most Americans think the ideal age to marry is 25, only one in four adults marries by that age.[237] In 2018, the median age to marry was 30 for men and 28 among women. This is seven years later than the median age (23) for men in 1956 and eight years later than the median age (20) for women.[238] However, data show that the chances of ever marrying have not changed much in recent decades, suggesting as many Millennials will eventually marry as did in prior generations—just at a later age.[239]

Another change in the economics of marrying in the United States is the timing and chances of marrying for the college educated. In the past, the college-educated were the least likely to marry. According to the Pew Research Center, the college-educated are now more likely to marry compared to those without a college degree.[240] The National Center for Health Statistics has found that, once married, college-educated women are also more likely to stay married.[241]

Among Millennials, modern household and family economics are based on the income of not only men but also women. Most of today's married households with children rely on two incomes to achieve economic security for their families (see *Figure 3-6*). As young adults now report wanting to achieve financial independence at an earlier age than marrying, dramatically different economic and living arrangements have emerged as today's young adults seek economic security and romantic partnership outside of marriage.[242]

Figure 3-6



Source: JEC Democratic staff calculations based on data from the Pew Research Center and the Bureau of Labor Statistics
Note: Excludes married-couple families with neither parent employed

It is likely that Millennial women will continue to hold jobs after marrying and after having their first child. According to the Bureau of Labor Statistics, more than half (54 percent) of married-couple households—with or without children—report earnings from both the husband and wife. Less than one in five (18 percent) have earnings from the husband alone. Most married mothers also work (two-thirds).[243]

According to a 2018 study by Child Care Aware of America, three in five children under age six have both parents in the workforce. The average annual cost of child care is over $9,000. Across all states, the average cost of center-based infant care exceeds 27 percent of median household income for single working parents. Over six months, nearly half of parents (45 percent) are absent from work at least once due to child care breakdowns, which negatively affects families, workplaces and the nation's economy.

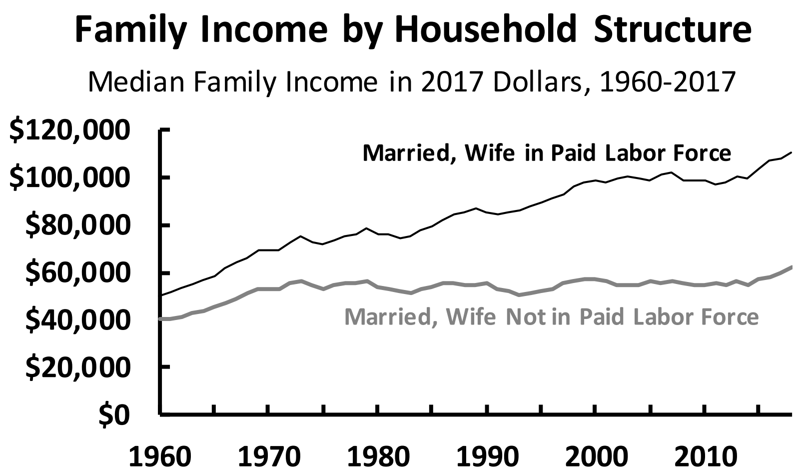
U.S. businesses lose around $4.4 billion annually due to the employee absenteeism associated with child care breakdowns. [244]

Family Income and Dual-Earner Households

In most married American families, when the wife is working in the labor market, the husband is also working and vice versa. Today, more than three-quarters (78 percent) of millennial families have dual-earner couples.[245] Starting in about the 1970s, the increases in median income of married families have been mostly observed among households with a wife in the paid labor force (see *Figure 3-7*). The median family income for married families without a wife in the paid labor force has been generally flat since then.

The prevalence of the dual-earner household structure and increasing average income level for married families with a wife in the paid labor force suggest that having two earners in the household is increasingly necessary for American families. Further, compared to the 1960s, those with a college graduate degree are now more likely to marry someone else with a college degree.[246] Marriage may now be a factor that widens rather than narrows income inequality.[247]

Figure 3-7



Source: U.S. Census Bureau, Historical Income Tables, Table F-7, All Races

CONCLUSION

Millennials are less likely than previous generations to earn more than their parents.[248] Entering the labor market and starting a family has been difficult for them due to challenging labor market conditions, high levels of debt and high housing prices. In addition, many Millennials face an inadequate federal safety net and rising wage inequality.[249] Overall, federal policies have not kept pace with the changing lives of Millennials and their new household arrangements.

For Millennials to be given a fair chance to achieve upward mobility, federal policies must keep pace with the vast transformations that have occurred over the past half-century. This should include greater support for education, paid family leave, affordable child care and more robust consumer protections. Such policies would go a long way to ensuring that Millennials have the opportunity to meet or exceed the economic success of previous generations.

CHAPTER 4: CONSUMER FINANCIAL PROTECTION

OVERVIEW

The Great Recession was "the worst financial crisis in global history, including the Great Depression," according to former Federal Reserve Chairman Ben Bernanke.[250] The economy shed 8.7 million jobs; unemployment reached 10 percent; almost four million Americans lost their homes and more than 170,000 small businesses closed.[251] The economic meltdown was the result of predatory lending practices, lax regulation, poorly understood financial instruments, overleveraged financial institutions and excessive risk-taking.[252] In response, Congress passed the landmark Wall Street Reform and Consumer Protection Act, which created a framework to protect consumers and minimize the risk of future crises.

The Trump Administration has aggressively attempted to roll back financial regulations and to undermine consumer protections.[253] The *Economic Report of the President* tries to justify these actions and the President's claims that regulations place unsustainable burdens on small financial institutions and choke business lending. Both those claims have been shown to be untrue.[254]

The Administration's actions have made the economy more susceptible to financial shocks and consumers more vulnerable to predatory practices. This undermines the financial security of all Americans and particularly threatens those on the economic margins.

Nevertheless, the *Report* looks only at the potential costs of regulations while ignoring the proven benefits of financial safeguards and consumer protections. This chapter examines these issues more broadly, finding that prudent regulations and strong consumer protections are critical to the economic well-being of all Americans.

Regulatory Reforms Restored Confidence and Consumer Spending

The modern regulatory framework implemented after the Great Recession under the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act helped strengthen our economy by better protecting Americans from the unscrupulous financial activities that threatened the stability of the nation's financial system in the 2000's. The advent of the Consumer Financial Protection Bureau (CFPB) marked the first time in U.S. history that the federal government created an agency whose sole responsibility was to protect consumers of financial products from unfair, deceptive and abusive practices.[255] The 2009 Credit Card Accountability Responsibility and Disclosure (CARD) Act curtailed certain credit card fees, strengthened protections for young consumers and made credit card notices and the true cost of credit more transparent. These pioneering post-crisis regulatory reforms successfully ensured American consumers could rely on a dedicated federal entity to take action—including disseminating information, investigating, enforcing and recovering restitution—to prevent future catastrophic risks, predatory behavior and a loss of confidence in the nation's financial system.[256]

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010

Signed into law by President Barack Obama in 2010, the Wall Street Reform and Consumer Protection Act (Dodd-Frank) was the most sweeping reform of the nation's financial system since the Securities Exchange Act of 1934.[257] It increased oversight and regulations on large financial institutions to prevent or mitigate the far-reaching effects that the failure of a big bank could have on financial markets and the economy. To ensure that taxpayers do not have to shoulder the cost of big bank dissolutions, Dodd-Frank requires larger institutions to periodically undergo stress tests to ensure they have sufficient capital and liquidity to survive a financial crisis.[258] In order to mitigate systemic risk, large banks must now develop and submit for federal review resolution and recovery plans ("living wills") to show they have the internal capacity to dissolve or restructure in the event of a financial crisis or failure.[259]

To prevent the catastrophic shocks and financial uncertainty that hurt Main Street and the everyday consumer during the last financial crisis, Dodd-Frank created a regulatory framework to address the grave abuses and systemic instabilities in the financial sector.[260] It also required more derivatives to be cleared and traded through regulated exchanges.[261] Indicators show banks to be safer now due to the guardrails on the banking sector that were established by Dodd-Frank. [262] For example, capital ratios of the country's largest firms have shown positive growth and one key measure of capital strength, the average Tier 1 risk-based capital ratio, has increased 48 percent since 2007.[263]

Dodd-Frank also amended the Truth in Lending Act (TILA) to set minimum "ability-to-repay" standards for certain residential mortgages and bolstered other existing financial regulations and consumer protections.[264] It enhanced protections for whistleblowers and strengthened anti-retaliation laws for employees who report wrongdoing. It also mandated additional reporting requirements to permit more effective detection of racial discrimination and federal oversight of discriminatory lending practices.[265] Contrary to the claims of its early opponents, the proactive approach to protect American consumers and ensure a stable financial system resulted in enhanced access to credit: credit card, auto and mortgage lending all increased since the passage of Dodd-Frank.[266]

The Consumer Financial Protection Bureau (CFPB)

Dodd-Frank established the Consumer Financial Protection Bureau (CFPB)—an independent agency within the Federal Reserve System—as the first federal agency specifically charged with protecting consumers of financial products from unfair, deceptive and abusive practices.[267] The CFPB has primary compliance authority over larger banks, thrifts and credit unions (depositories with more than $10 billion in assets). Previously, federal consumer financial protection authority was spread across various federal agencies. Six federal agencies—the Federal Reserve, Office of the Comptroller of the Currency (OCC), Federal Deposit Insurance Corporation (FDIC), National Credit Union Administration (NCUA), Department of Housing and Urban Development (HUD) and Federal Trade Commission (FTC)—retain some authorities, but they hold consumer protection powers among an array of other responsibilities that may be competing or at times conflicting. That includes the responsibility to serve the interests of depositories and other or all participants in the financial system.[268]

Charged with rulemaking, enforcement and supervisory powers, the CFPB has conducted over 200 enforcement actions against bad actors dealing with predatory student loan debt, car dealerships, cellphone providers and more.[269] The CFPB allows consumers to provide feedback and make inquiries about financial consumer products across the nation. Through the CFPB, nearly 30 million consumers have received restitution, totaling over $12 billion in relief.[270] The CFPB also coordinates with federal and state agencies, including the Department of Defense, to improve consumer protection measures and lending rules.[271] The broad success of the CFPB shows that Dodd-Frank created a prudent framework for more robust checks and balances to our financial system, resulting in effective outreach, education, advocacy, oversight and enforcement efforts.

In late 2017, President Trump appointed as interim CFPB director Mick Mulvaney, a former congressmember and state senator from South Carolina and the White House Budget Director. Mulvaney had previously said that the agency should not exist and called it a "joke" in "a sick, sad kind of way." In some of his first actions at the CFPB, Mulvaney instituted a hiring freeze at the agency, put new enforcement cases on hold and sent the Federal Reserve a budget request for zero dollars.[272] Mulvaney dismissed the members of the agency's Consumer Advisory Board (CAB) after 11 CAB members held a news conference and criticized Mulvaney for canceling legally required meetings with the board.[273] He pulled back the probe into how Equifax failed to protect customers and timely notify the public after a data breach that had exposed the information of 145 million consumers. Some Equifax executives quickly sold nearly $2 million worth of the company's shares yet waited weeks before publically disclosing the breach, estimated to hit record costs of over $600 million.[274]

Mulvaney, who comes from the home of some of the largest payday lending companies in South Carolina, also moved to roll back the investigation and prosecution of payday lenders. In one instance, the Bureau settled with a group of payday lenders named NDG Enterprise that falsely threatened customers with arrest and imprisonment if they failed to repay loans and levied no financial penalty on the group after a three-year prosecution.[275] The CFPB also dropped a lawsuit in Kansas against four payday lending companies that charged interest rates of 440 to 950 percent—well beyond the limit many states allow for consumer loans—with little explanation.[276] The CFPB even joined with a payday lending trade association in asking a federal judge to stay both the compliance date for the payday lending rule and the trade association's own lawsuit against the Bureau.[277]

Overall, the CFPB's enforcement actions have been drastically curtailed under the Trump Administration. In 2018, the Bureau announced just 11 lawsuits or settlements, which is less than a third of the number it announced in 2017 during Richard Cordray's final year as director. When Mulvaney and his successor have allowed cases to move forward, they have often settled with lenders for lowered fines or none at all.[278]

Mulvaney radically undermined the agency's mission by asserting that the Bureau had an equal responsibility to serve the interests of consumers and financial institutions.[279] Under Mulvaney's tenure as acting director, one of the regulatory agency's new priorities would be deregulation. This new role was added to the Bureau's mission statement—making the CFPB "a 21st-century agency that helps consumer finance markets work by regularly identifying and addressing outdated, unnecessary or unduly burdensome regulations…"[280] The mission shift left consumers without an agency solely dedicated to consumer protection.

Mulvaney filled top positions with other political appointees rather than career specialists, and the Bureau lost more than 10 percent of its staff over a year.[281] For example, Eric Blankenstein, a CFPB policy director responsible for enforcing an array of consumer protection laws such as the Equal Credit Opportunity Act, previously worked as a private sector lawyer and represented banks involved in prior CFPB regulatory investigations. His pre-CFPB contributions to discourse about combating racial discrimination were blog posts dismissive of hate crimes and mocking of increased academic penalties for racist behavior on college campuses.[282] Already-low morale worsened under Mulvaney's leadership.[283]

The Trump Administration and Republicans in Congress have made clear attempts to dismantle the CFPB with the failed Financial CHOICE Act of 2017 and early moves made by Trump appointees.[284] Mulvaney, who is now President Trump's acting chief of staff, was replaced by current CFPB Director Kathy Kraninger in December 2018. Kraninger had previously worked with Mulvaney in the Office of Management and Budget.[285] In her first testimony before Congress this year, she did not provide any concrete pledges to make changes to the shifts initiated under Mulvaney. For example, Kraninger declined to commit to restoring the Office of Fair Lending to its former role under the Obama Administration.[286]

The Credit Card Accountability Responsibility and Disclosure (CARD) Act of 2009

In 2009, Congress passed the Credit Card Accountability Responsibility and Disclosure (CARD) Act with bipartisan support.[287] Introduced by U.S. Representative Carolyn Maloney, the CARD Act bans unfair, arbitrary and retroactive rate increases; requires institutions to give cardholders more transparent disclosures; mandates consumers be given a reasonable time to pay their bills and more advanced notice of rate increases; eliminates double-cycle billing; increases industry accountability; and provides new protections for college students and young adults, among other consumer protection measures.[288]

Numerous studies find clear evidence that the bill's enhanced notice requirements, college credit card marketing prohibitions, "ability-to-pay" provisions and fair fee standards successfully resulted in reduced late fees, less college-based marketing of credit cards, improved readability of credit card statements and more straightforward information about the total costs of credit.[289] Advocates and consumer protection agencies laud the CARD Act for reducing the costs of credit, including fees and interest charges, by two percent while available credit increased. According to the CFPB, the CARD Act has saved consumers over $16 billion in unfair overdraft and late fees.[290]

However, the successful implementation of the CARD Act revealed additional areas of concern in deceptive practices related to overdraft fees on debit cards and bank transactions that are not covered by the 2009 legislation. Without additional consumer protection regulations, overdraft practices can be especially egregious in applying outrageously high overdraft fees for small-dollar transactions.[291] The CFPB found that the average consumer pays a 17,000 percent annual percentage rate on overdraft fees. Most debit card overdraft fees are incurred on purchases of $24 or less while financial institutions charge a median overdraft fee of $34 for typically small overdrafts. In order to fully extend the protections to bank accounts, Representative Carolyn Maloney has called for congressional legislation and/or CFPB rule-making to extend opt-in requirements, fee caps and disclosure rules to debit card, Automated Clearing House (ACH), checking and direct debit transactions.[292]

FINANCIAL SERVICES VITAL TO ECONOMIC WELL-BEING

Financial protections provided by legislation like Dodd-Frank are becoming increasingly important as a growing number of Americans participate in the financial system. Most national indicators on assets, debt and financing have rebounded since the

Great Recession.[293] Notwithstanding the robust recovery at the aggregate level, the wealth and financial security of U.S. households vary greatly across demographics and socioeconomic statuses.

The consumers hardest hit by the financial crisis—such as young adults, racial minorities, working families and those with less education—still lag in the economic recovery.[294] Wealth gaps persist or have widened since the Great Recession. The mean net worth of white families is now higher than pre-recession levels; however, the (mean and median) net worth of black and Latino families is still below pre-crisis levels. That is in part because nonwhite families faced net worth losses over a longer period than white families after the recession recovery period. Among white families, net worth for the median percentile still has not rebounded, which indicates the recovery was experienced by the top of the income distribution.[295]

Americans who gain access to the financial system are often confronted by a sophisticated and complex market. Historically, overly aggressive, predatory and exclusionary practices of bad actors have hurt American consumers and threatened the stability of the financial sector, causing widespread economic and social impacts. Today, nearly every American household and family relies on financial services to meet their daily needs, manage unexpected emergencies and realize their lifetime goals, suggesting the ramifications of firm behavior and systemic risk in the finance sector are even more far-reaching.

Expanding Financial Services

Based on a 2017 FDIC national survey of unbanked and underbanked households, less than one in 10 U.S households (6.5 percent) were unbanked or lacked bank account services in 2017.

Nearly nine in 10 households that reported receiving income (86.7 percent) typically receive a direct deposit into a bank account. Most American households (68.4 percent) accessed insured banks for all their financial services, and technology is further improving access to financial services. From 2013 to 2017, the percent of banked households using mobile banking to access their bank account nearly doubled and the number of banked households that deposited a check electronically tripled.[296]

The "Unbanked" and the "Credit Invisible"

Though most households meet their needs through financial services, about 8.4 million American households remained unbanked in 2017, 26 million Americans were "credit invisible" and millions more had insufficient credit histories or lacked a recent credit history to be "scorable" by a commercially-available credit scoring model.[297] Those who were excluded from mainstream banking and financial services were more likely to be younger, have lower levels of education and have lower income levels. They were more likely to be black or Latino, disabled and to experience more income volatility. Black households (16.9 percent) and Latino households (14.0 percent) were much more likely to lack a checking or savings account than white households (3.0 percent) in 2017. Black and Latino households had lower credit use rates than white households irrespective of income level.[298]

Most of the changes in those served by financial institutions and those recently exiting or entering the finance and banking system have been due to demographic and socioeconomic shifts.[299] While historically underserved groups have shown declines in unbanked rates and increases in credit utilization, they still have disproportionately less access to safe, secure and affordable financial services. Given the widespread reliance on financial services to make ends meet, the banking sector and financial institutions have an essential role to play in facilitating financial stability and economic well-being by making available full information and offering affordable financial products to all Americans.

Lack of Sufficient Savings

More than half of households (57.8 percent) reported in 2017 that they save for unexpected expenses or emergencies and most said they do so using a savings account (71.6 percent) or a checking account (23.7).[300] In the Federal Reserve System's "Report on the Economic Well-Being of U.S. Households in 2018," 39 percent of Americans reported they could not afford a $400 emergency using cash or its equivalent. Many Americans reported they could not even fully cover their expected expenses in a typical month. Nearly one-fifth of adults were unable to pay their current month's bills in full, and one-fourth of adults reported skipping necessary medical treatment because they could not afford the cost.[301] In other words, for many Americans, unexpected needs and even daily consumption are covered through mainstream financial services (through savings and checking accounts) or, if they are not fully banked, through informal debt or alternative financial services.

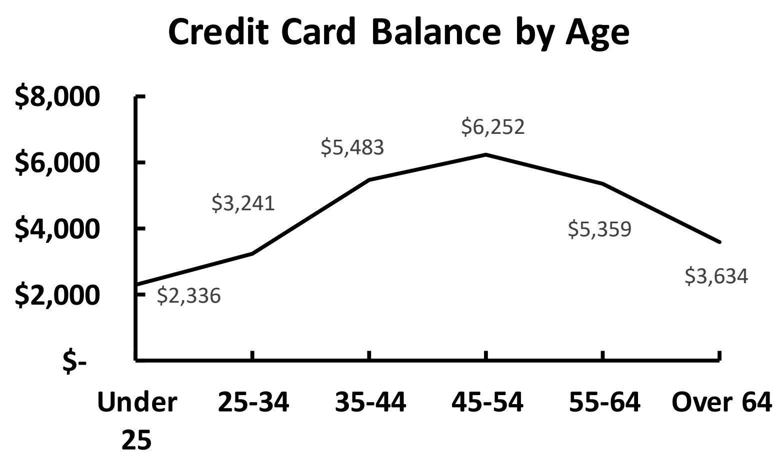
Among unbanked households, over half (52.7 percent) reported in 2017 that they do not have a bank account due to not having enough money to keep in an account and, increasingly, most (58.7 percent) reported they do not plan to open an account at all.[302] Other top reasons reported for not having a bank account include lacking trust in banks (30.2 percent) as well as high banking fees (29.9 percent). Concern for privacy was also listed as a reason by many (28.2 percent) for not having a bank account. For those who are unbanked, most said they hold their savings in their home or with friends or family (66.8 percent) and about one in ten (10.1 percent) use a prepaid card to hold their savings. [303]

Credit Card Gap and Debt Share by Age

Most American households (80.3 percent) use a mainstream credit product or service to finance consumption, with households primarily accessing financial services through a major credit card (68.7 percent) or a store credit card (41.6 percent). Fewer hold debt as a home loan (33.8 percent), auto loan (32.3) or student loan (16.6 percent).[304] However, debt share by loan type and, more specifically, credit card adoption rates and average credit card balances dramatically differ by age groups.[305]

Young adults (under age 25) hold the least credit card debt (see *Figure 4-1*). Those aged 45 to 54 hold the most credit card debt. Less than half of young adults under the age of 25 (48.4 percent) have at least one credit card while most adults over the age of 25 have two or more cards.[306]

Figure 4-1



Source: Federal Reserve Bank of Boston/Equifax, 2018 Q4

Compared to older age groups, young adults have a different profile of consumer debt types (see *Figure 4-2*). Student loan delinquencies increased during the recession and the rate of student loan delinquencies has not returned to prerecession levels (see *Figure 4-3*). These delinquencies disproportionately affect young adults, as student debt is the largest segment of debt they hold. For those over the age of 30, the largest share of debt held is in the form of a home mortgage, which has a lower delinquency rate compared to student debt (see *Figure 4-3*).

Holding a large share of debt in a loan type that features a higher delinquency rate as a young adult may contribute to lower creditworthiness in the future for these birth cohorts. Partly due merely to a shorter length of credit history, there is a 91-point difference between the average credit scores of those in the oldest and youngest age groups.[307] However, the debt composition of young adults may portend lower credit worthiness even at later ages if the credit history they establish is affected by holding debt of a higher delinquency rate. For example, missing a student loan payment could hinder or delay the timing of obtaining a mortgage and lifetime asset accumulation. In this context, the debt, credit and assets of Americans must continue to be assessed by age, birth cohort and other demographic factors to fully assess the current snapshot and long-term horizon of national and household financial well-being. [308]

Figure 4-2

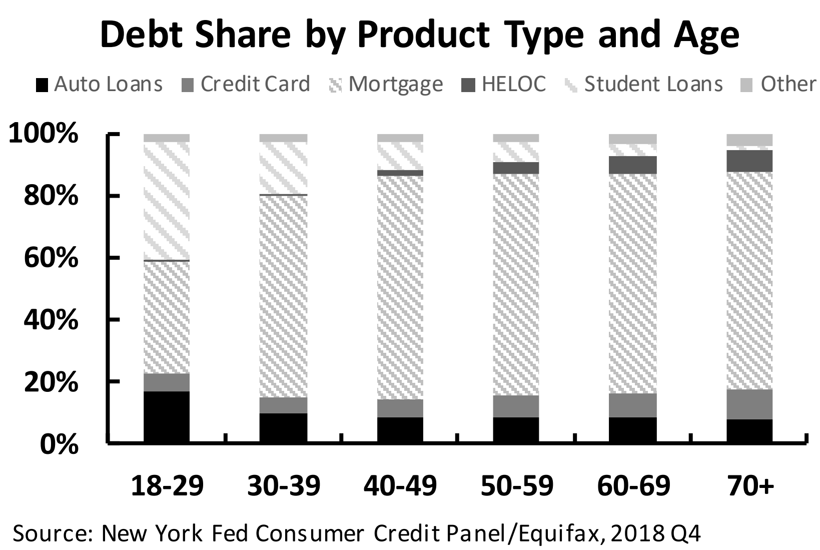
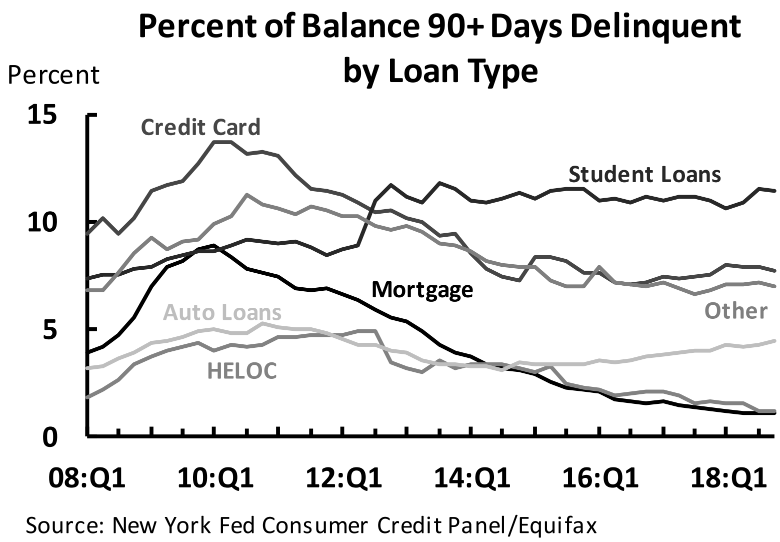


Figure 4-3



The Need for Stronger Consumer Protections

Increased consumer participation in the financial system has led to the entry of more vulnerable consumers. We must maintain robust safeguards and reasonable protections so that we do not undermine the U.S. financial system's ability to absorb an expanding consumer base and promote equal economic opportunity and the financial well-being of every American. Unfair banking practices negatively affect Americans who already have and can least afford higher costs of credit.

Before the Wall Street reforms enacted in the wake of the Great Recession, there was no federal regulator dedicated to ensuring that financial institutions would responsibly and fairly manage the financial products that most American households rely on to meet their basic day-to-day needs and to make critical life investments, such as purchasing a home. It would be imprudent to weaken the very regulatory reforms that brought about a robust financial recovery and the recent bout of economic stability.

Financial Insecurity in Retirement

Elderly adults can be targeted by predatory lending practices, risky lending products and face financial precariousness in retirement.[309] The adequacy of consumer protections for seniors is critical because abuses of seniors can be especially devastating to the financial stability and well-being of retirees. David Stevens, a former FHA commissioner, has blasted predatory sales tactics targeting seniors in the reverse-mortgage industry.[310] The Federal Housing Administration's investigation into possible appraisal inflations on reverse-mortgage loans found approximately 50,000 appraisals (37 percent) were overvalued by at least three percent.[311] According to the CFPB, inflated appraisals allow fraud perpetrators to create a false appearance of high equity, allowing borrowers, who otherwise would not qualify, to obtain a loan and higher sums of liquidity that can be subject to a scam.[312]

Many older Americans face the risk of downward mobility in their golden years. About one in two seniors facing retirement risk not having enough assets to combine with Social Security to maintain their living standards.[313] The average home equity of elder homeowners is nearly $80,000, which is higher than the nearly $45,000 average held in a retirement account.[314] According to the Government Accountability Office (GAO), about one in three (29 percent) older Americans have neither a pension nor a defined benefit plan nor any assets in a 401(k) or IRA account.[315]

Further, according to the CFPB, suspicious activity reports (SARs) of elder financial exploitation quadrupled from 2013 to 2017. Most elder financial exploitation (58 percent of incidents) occurred through money services businesses. In SARs involving a loss to an older adult, the average amount lost was $34,200. When an elderly victim was known to the suspect, the average loss was even larger than when the suspect was unknown.[316] Given the fragile financial standing of seniors facing retirement and the inadequacy of Social Security and asset holdings, it is critical that U.S. financial institutions enhance services and consumer protections for elderly consumers.

Reverse Redlining

Leading up to the Great Recession, large banking institutions, such as Wells Fargo and Countrywide Financial, aggressively targeted vulnerable groups with predatory lending practices, now referred to as reverse redlining.[317] At the dawn of the mass production of single-family homes, the Federal Housing Administration (FHA) was established in 1934 to guarantee long-term (30-year) housing mortgages. While the intent of the federal government was to make homeownership more affordable and accessible, widespread and institutionalized discriminatory practices at the time exacerbated racial segregation and inequality because the FHA refused to insure mortgages in and near nonwhite neighborhoods—a policy known as "redlining."[318] Despite promulgated protections against racial discrimination in housing, racial minorities continue to be preyed upon in housing finance markets. Today's "reverse redlining" refers to the countering approach of saddling underserved communities with predatory, and often insolvent, financial products.

Under the Obama Administration, a U.S. Justice Department investigation found 34,000 instances of Wells Fargo charging black and Latino customers higher fees and rates on mortgages. Nonwhite borrowers were charged higher fees than white consumers with similar credit profiles and were steered into subprime mortgages even though they qualified for cheaper loans. Wells Fargo paid a $175 million settlement in the federal probe. Bank of America's Countrywide Financial unit paid $335 million to settle similar charges of racial discrimination.[319] Without federal consumer protections and enforcement action, the nation risks returning to chronic racial disparities in lending at levels similar to when racial discrimination was legal in this country.

Modernization of the Community Reinvestment Act

In August 2018, the Office of the Comptroller of the Currency (OCC) published its Advanced Notice of Proposed Rulemaking for the 1977 Community Reinvestment Act (CRA).[320] CRA established a federal mandate that financial institutions serve the needs of the communities in which they are chartered, including in low- and moderate-income communities. The federal legislation was a pioneering measure to address the historical redlining practices of housing and banking discrimination in urban and minority neighborhoods. According to the National Community Reinvestment Coalition (NCRC), banks have made about $6 trillion in CRA commitments since the law took effect.[321]

CRA has a long track record of encouraging banks to provide underserved communities access to banking and financial services.[322] The Financial Crisis Inquiry Commission found CRA was not a significant factor in subprime lending or the financial crisis.[323] Loans made by CRA-regulated lenders in communities mandated under CRA to lend were half as likely to default as comparable loans in the same neighborhoods by independent mortgage originators not subject to CRA.

Despite the demonstrated positive impact of CRA, Trump Administration Treasury Secretary Steven Mnuchin and OCC head Joseph Otting have spearheaded a CRA rollback effort focused on regulatory relief for banks rather than reforming the CRA to address the modern landscape of banking, lending and credit disparities.[324] Mnuchin and Otting have personal experiences with CRA as former bank heads who once had a standoff with community groups over the sale of the bank they owned, OneWest, due to an initial lack of CRA commitments.[325]

According to S&P Global data analyzed by Bloomberg, banks have shut nearly two thousand (1,915) more branches in lower-income neighborhoods than they have opened nationally from 2014 to 2018.[326] Technology has transformed the way the banking industry provides credit to consumers. Millions of Americans are unable to access affordable credit and many low- and moderate-income communities continue to suffer blight from a lack of public and private investments. Reforming the CRA regulatory framework is important, but the modernization effort must be responsive to the original intent and strengthen rather than weaken the law's mission to combat discriminatory and predatory lending practices.

SECURING FAIR AND AFFORDABLE CREDIT FOR ALL

Given the Trump Administration's lack of commitment to consumer protections, Congressional Democrats have taken leadership to defend the nation's consumers against unfair fees for payday lending and overdraft protection and to stand against the deregulation of corporate fraud and abuse.

Payday Lending

Interest on payday loans often has an effective annual percentage rate of 390 percent or more—well above industry standards for credit cards or other consumer loans.[327] The Center for Responsible Lending found that small, short-term payday and car title loans cost borrowers $8 billion every year.[328] Short-term payday loans often turn into long-term debt traps.

Many borrowers take out consecutive loans to pay off prior loans. According to the CFPB, over 80 percent of payday loans are rolled over or followed by another loan within two weeks.[329] Half of all payday loans are part of a sequence of 10 or more consecutive loans, and loan size is more likely to increase in longer loan sequences.[330]

Payday lenders historically operated with little regulation and oversight until the CFPB took steps to implement a rule governing payday, vehicle title and certain high-cost installment loans in 2017.[331] The rule would have required lenders to make underwriting determinations to ensure that borrowers could afford their loans before issuing the loan. It also would have limited the number of consecutive loans lenders can make by barring them from making more than three short-term loans without a 30-day "cooling off" period.[332] These provisions sought to prevent spiraling debt traps and outrageously expensive debt obligations. However, in 2019, the CFPB proposed rescinding most of the 2017 rule, including the underwriting and consecutive loan provisions.[333] The CFPB also proposed delaying the compliance date for the underwriting provision of the rule from August 19, 2019 to November 19, 2020.[334]

Overdraft Protection Fees

Americans pay billions of dollars in overdraft fees, with total overdraft revenue increasing to $34.5 billion in 2018.[335] Most debit card overdraft fees are incurred on small purchases and, according to the CFPB, consumers repay most overdrafts within three days.[336] The application of high overdraft fees causes those who face hard times to essentially pay very high interest rates for small, short-term loans. Given the success of the CARD Act on saving consumers billions in excessive fees on credit cards and the still exorbitant fee rates for debit card overdrafts, there is evidence to support prudent expansion of overdraft and other consumer protections to banking and prepaid card transactions not covered by existing rules.[337]

Emerging technologies have stepped in to provide financial products for small loans as small as $2 internationally, but the robust financial system in the United States means that many of these transactions occur within the mainstream banking system in America.[338] In some cases, U.S. banks engage in practices to maximize overdraft coverage fees collected and impose multiple overdraft coverage fees resulting from a single overdraft.[339] There already are some opt-in and notice regulations for banks, such as Regulation E requirements that financial institutions obtain affirmative consent from account holders to charge certain overdraft fees for ATM and point-of-sale (POS) debit card transactions.[340] Yet there are also cases of banks violating the existing "opt-in" rules.[341] For example, Santander Bank was ordered to pay $10 million for deceptively marketing overdraft services and signing up some customers without consent in 2016.[342]

Emerging Threats to Consumer Protections and Financial Stability

While our financial system is now considered safer than before the Great Recession, there is a grave concern that the common sense reforms adopted to prevent a future economic freefall are being hastily dismantled. The very consumer and taxpayer protections that made our banking sector safer have been undermined in the Trump Administration through moves to weaken financial regulations, rollback consumer protections and cut funding.[343] It is further alarming that the Trump Administration has endeavored to violate the independence of the Federal Reserve and other regulatory institutions from political influence.[344]

Financial security, consumer confidence and economic stability depend on a fair, transparent and inclusive banking system. Dodd-Frank bolstered the existing American framework of prudential financial regulations and consumer protections, many of which also were direct responses to financial crises and corporate fraud. The Federal Reserve Act of 1913, which created the Federal Reserve System as the nation's central bank, followed the Panic of 1907.[345] The 1929 Great Depression prompted the Glass-Steagall Act of 1933, which established the Federal Deposit Insurance Corporation.[346] Many corporate accounting fraud schemes in the early 2000s, including the Enron scandal, resulted in the 2002 Sarbanes-Oxley Act to combat corporate fraud and protect whistleblowers.[347]

CONCLUSION

Congress responded to the Great Recession by enacting the most comprehensive financial regulations and consumer protections since the 1930s. These reforms attempt to protect American consumers from predatory practices and minimize the risk of catastrophic market failure and.

The *Economic Report of the President* provides a theoretical foundation for the Trump Administration's efforts to roll back regulations and weaken consumer protections. However, it focuses only on the potential costs of regulations and protections, almost completely overlooking their substantial benefits. Furthermore, it ignores the effect of financial deregulation and poor enforcement on American families, particularly those most vulnerable, who rely on the federal government to help protect their economic well-being.

Economic growth and prosperity depend not only on increasing productivity but on an adequately regulated financial system and strong consumer safeguards. Given the lessons of the Great Recession, it is irresponsible to ignore these prerequisites for a sound economy.

CHAPTER 5: PRESCRIPTION DRUG PRICES

OVERVIEW

The United States spends approximately $500 billion annually on prescription drugs, more per person than any other country in the world.[348] The *Economic Report of the President* claims that this is mostly the fault of the federal government. However, the core of the problem is a series of failures in complex and opaque markets, in which incentives for manufacturers, distributors and insurance companies often conflict with the interests of patients.

New drugs for rare diseases drive much of the overall spending. However, the law prohibits the federal government from assessing the cost-effectiveness of those medications, creating an information asymmetry that can lead to overuse of the newest and most expensive drugs. Moreover, although the United States uses generic medications at a higher rate than other OECD countries, Americans pay more for them because some companies use strategies like "pay-for-delay," compensating other manufacturers for slowing introduction of generic drugs.

Market concentration and perverse incentives in supply chains also drive up prices. In other industrialized countries, governments negotiate drug prices, resulting in lower costs to consumers. However, Medicare is prevented by law from negotiating prices. The *Report* largely overlooks these complexities, offering few solutions that would lower costs.

IMPACT ON CONSUMERS

The growing cost of prescription drugs imposes financial hardship on millions of Americans and poses a health risk to some of the country's most vulnerable populations. One in four Americans who take prescription drugs reports having difficulty affording their medications.[349]

Some people cope with high costs by skipping doses. Two-thirds of Americans who did not fill a prescription in the previous 90 days did so because of cost.[350] This figure goes up to almost 95 percent of Americans earning under $25,000 a year. In a 2016 international survey of adults, insured Americans were seven times more likely than people in the United Kingdom not to fill a prescription or skip doses due to cost.[351]

One study found that 25 percent of diabetic patients have underused their insulin because of the cost, as the price has roughly tripled in the last decade.[352] Although prices do not necessarily reflect the cost to consumers, Americans pay more out of pocket than people in other countries. That is because they are more likely to lack health insurance and even those with insurance tend to be less shielded from drug prices than consumers in other countries.[353]

The inability to comply with recommended medical treatment, including failing to fill a prescription, skipping doses or cutting pills in half to make them last longer, has severe health consequences and can lead to higher long-term medical costs.[354] These practices are estimated to cause 10 percent of hospitalizations among older adults and are associated with increased mortality rates.[355] They also cost the U.S. health care system an estimated $100 billion to $289 billion annually.[356]

Some consumers deal with high costs by attempting to purchase medicines outside of the United States. In a 2017 survey, 12 percent of consumers reported that the cost of prescription drugs drove them to purchase medication abroad.[357]

COST DRIVERS

The United States spent an estimated $333 billion on retail prescription drugs in 2017, which was approximately 10 percent of total health care spending, according to the latest CMS National Health Expenditure data.[358] Including non-retail drugs, such as those administered at a physician's office or hospital, the figure climbs to around half a trillion dollars or nearly one-fifth (17 percent) of all personal health spending.[359]

Americans spent approximately $1,000 per capita on prescription drugs in 2015—roughly 50 percent more than what Germany pays and double what the United Kingdom pays.[360] Although some of this difference is because we often use newer, more expensive treatments, higher spending is not linked to better health outcomes. Since Americans use similar quantities and types of drugs overall, much of the cost difference has to be driven by Americans paying higher prices for the same or similar drugs.[361]

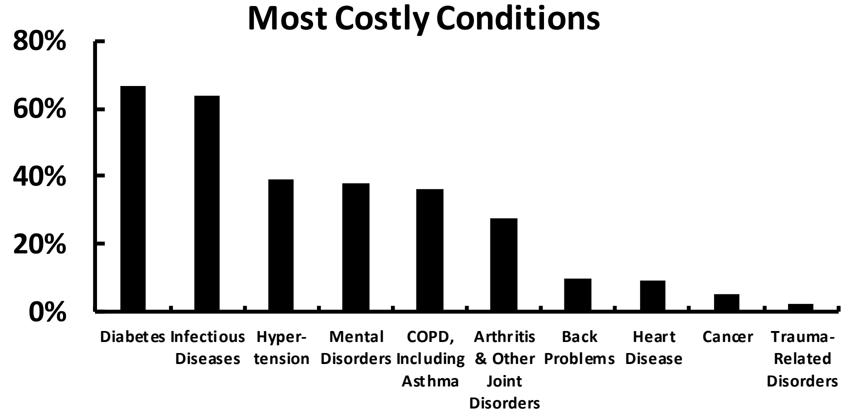
The Most Expensive Drugs Drive Total Costs

High drug prices impact all Americans, though a smaller group that uses very expensive medicines bears a growing share of the costs. Many new, innovative drug releases are for specialty drugs, which often treat chronic, complex or rare diseases and are administered by a specialist in a hospital or doctor's office. These drugs can have prohibitively high prices, running into hundreds of thousands of dollars in a single year.[362]

These trends force the government to concentrate on spending on fewer, costlier drugs. Just 10 drugs make up 17 percent, or $24 billion, of all Medicare Part D spending by the government and consumers.[363] The three percent of enrollees who reached the highest threshold of out-of-pocket expenses—called catastrophic coverage—spend, on average, nearly $3,200 out-of-pocket on their medication, over six times more than the overall average.[364]

Figure 5-1

Prescription Drugs as a Share of Spending for the Most Costly Conditions



Source: JEC Democratic Staff analysis of the Medical Expenditure Panel Survey, 2015
Note: Prescription drug expenditures do not include drugs administered by a doctor or in a hospital. COPD is Chronic Obstructive Pulmonary Disease.

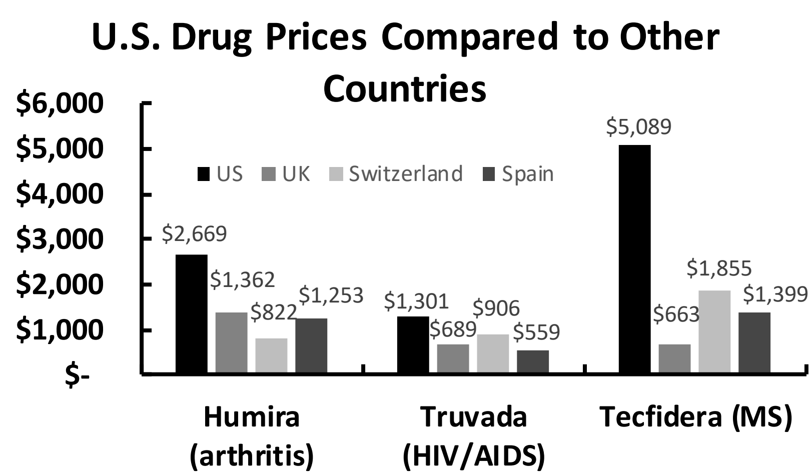
For the 10 most costly conditions in the United States, private and public expenditures on prescription drugs accounted for $227 billion, more than one-quarter (28 percent) of all outlays, even excluding the cost of drugs directly administered by hospitals or physicians.[365] For example, the annual cost of insulin almost doubled from 2012 to 2016, reaching $5,705 on average.[366] Prescription drugs accounted for over 60 percent of spending on diabetes in 2015.

The solution to higher drug prices is not just wider use of generic medicines. In fact, data from the OECD shows that the United States already has almost the highest share of generic pharmaceutical use, comprising 84 percent of drug utilization in the United States.[367] This suggests that at some level, incentives to use cheaper drugs are getting through to doctors and patients. It also suggests that cost differences are being driven by other factors, including large increases in the prices of even generic drugs.[368]

One reason prices are substantially higher in the United States is that other countries have more centralized government payers negotiating prices or policies to restrict prices. A Brookings/USC paper estimates that sales in the United States account for two-thirds to three-fourths of global drug makers' profits, despite the country only accounting for one-fourth of global income.[369]

Overall, drug prices in the United States are more than twice as high as those in the United Kingdom.[370] Compared to the United Kingdom, prices in America are double for Humira (used to treat arthritis), 42 percent higher for Harvoni (used to treat Hepatitis C), 89 percent higher for Truvada (used to treat HIV/AIDS) and over seven and a half times more for Tecfidera (used to treat multiple sclerosis).[371]

Figure 5-2



Source: International Federation of Health Plans

Market Failures

Challenges of a Patent System

Inefficiencies and market failures in the pharmaceutical supply chain stymie innovation and drive up drug prices. For example, the uncertainty and long research times involved in drug discovery make it difficult for the private sector to fund research and development of pharmaceuticals.

The federal government issues patents, as well as markets exclusivities, and grants temporary monopolies to successful drug innovators as an incentive to conduct private investment in research and development (R&D). In effect, it delegates responsibility for providing a public good to a private company and compensates the company for doing so by allowing it to charge monopoly prices.

Contracting out a task that you cannot fully observe to an agent who has their own incentives creates what economists refer to as a "principal-agent problem." Principal-agent problems can often be solved, but this requires sufficient monitoring and carefully designed rewards and penalties. Naively assuming that markets will deliver efficient outcomes in these situations is a recipe for inefficiency and abuse.

It is difficult to argue that this system for incentivizing drug discovery is achieving its goals in an efficient manner. One study found that the amount that Americans overpay (relative to other Western countries) on the top 20 drugs alone is more than one-and-a-half times what the drug manufacturers involved spend on R&D worldwide.[372] To maximize returns on their research investments, companies spend huge sums on marketing their drugs. Only one of the 10 largest drug companies spends more on research than it does on marketing.[373]

The Role of Federally Funded Research

The federal government is involved in pharmaceutical R&D through funding research, providing tax credits, reviewing drug safety and ensuring patents and exclusivities. In particular, publicly funded research continues to be a large contributor to fundamental scientific discoveries. Private companies have an incentive to underinvest in "upstream" research that can be used for multiple products later on since some of the benefits of widely applicable discoveries will end up going to their competitors.

The government helps offset this underinvestment by investing directly in basic research. One study of 35 major drugs found that at least 80 percent were based on scientific discoveries made by public sector research institutions.[374] Another study found that a one percent increase in publicly funded research led to a 1.8 percent increase in new drugs developed. In the same study, a one-time $1 investment in public sector basic research yielded $0.43 in benefits every year from then on, due to the development of new molecular entities.[375]

Public institutions are also now taking a more direct role in applied research. Estimates of the share of new drugs attributable to publicly-funded sources vary, but one study found that over nine percent of drugs approved by the FDA from 1990 to 2007 resulted from patents from public sector research institutions. These applications could also be more targeted toward the public good, as they are twice as likely as purely private applications to be granted priority review by the FDA. That means the FDA determined the drug would provide a significant improvement in safety or effectiveness in treating a serious condition.[376]

Non-Transparent Pricing

Pharmaceutical companies use complex price structures to extract as much money as possible from customers. The practice, known as price discrimination, would be impossible in a perfectly competitive market. The ability to conceal that pricing structure from other customers is a further departure from that ideal.

Manufacturers typically sell their drugs to pharmacies through a wholesaler. When the patient has insurance, they pay a copayment to the pharmacy that accounts for a share of the drug price. The insurer reimburses the pharmacy for the remainder of the cost of the medication. The insurer bargains with the pharmacy over the final price of the drug and may change the size of the copayment to encourage patients and doctors to opt for drugs that are more profitable for the insurer.

Additionally, the manufacturer may go around the pharmacy and wholesaler and offer rebates and incentives directly to the insurer. They do this to persuade the insurer to give their drugs better placement in the insurer's tier system, which means that plan participants will pay a lower copay for those drugs. This drives business toward those drugs instead of drugs made by competing manufacturers. The insurer, in turn, often negotiates coverage decisions with an employer or the government, rather than directly with the insured patient. Increasingly, the insurer may contract out the management of this process, and the bargaining involved, to another company, called a Pharmacy Benefits Manager (PBM).

The complexities and imperfections of the market for prescription drugs are partly caused and compounded by information asymmetries at several steps in the process. As with any aspect of the health care process, the patient has much less information than the doctor, physician assistant or nurse practitioner about the correct treatment for their condition. The health care provider, in turn, will have less information than drug manufacturers about the effects of drugs, particularly newer ones. Manufacturers also have an information advantage over regulators such as the FDA, which does not see all the omitted research in an application to market a drug. Manufacturers have an incentive to selectively share information with regulators and to market their drug aggressively to health care providers and directly to consumers instead of providing unbiased information to both groups.

Markets that deviate from the ideal of perfect competition in so many ways require vigilance to prevent abuse, such as unfair price increases, and guarantee that existing and new products are delivered efficiently to the public.

Perverse Incentives in Supply Chains

The practices of drug manufacturers are only partly responsible for the high cost of prescription drugs. Prices that consumers pay are also the result of a series of negotiations among drug makers, health care insurers, wholesalers, pharmacies and PBMs.

The gap between the price of drugs before negotiations with the PBM and after price concessions remains large. In 2017, prices before negotiations increased by about seven percent, compared to about two percent after negotiations.[377] These prices generally reflect a dynamic where manufacturers push sticker prices higher to improve their negotiating position, while insurers and PBMs attempt to extract the greatest concessions from manufacturers.

Perverse incentives, however, can lead multiple actors to attempt to generate greater profits by driving list prices higher and can be exacerbated by reimbursement structures in public insurance programs. In general, the practice of charging different prices to different customers is always an indicator that a seller is exploiting some form of market power. The complex, opaque system of discounts and rebates can produce results that are good for profits but not good for consumers.

Anti-Competitive Practices

Research shows that competition generally leads to lower prices. Greater competition among brand-name drugs in a given therapeutic category and greater generic competition for a brand-name drug are both well-documented to lower prices. FDA research found that the first generic competitor only reduces prices slightly lower than the brand-name drug on average, but the second generic competitor reduces the price of the drug by nearly half. Further, drugs with nine or more generic competitors had an average price of 80 percent less.[378]

Unfortunately, there are more than 180 off-patent drugs without any generic competition. Some generics also may have no competition, as there are more than 500 drugs where brand-names have withdrawn from the market, possibly leaving only one generic.[379]

Egregious price increases, such as those involving Albuterol Sulfate and Digoxin, are enabled and exacerbated by lack of competition. The price for a bottle of 100 tablets of Albuterol Sulfate (used to treat asthma) increased from $11 to $434—a four thousand percent increase—in only six months. The price for a tablet of Digoxin (used to treat irregular heartbeats and heart failure) increased from $0.11 to $1.10 (an 884 percent increase) in less than two years.[380] Such extreme price increases often occur when a manufacturer is the sole producer of a drug that treats a small market. One example of this is the drug Daraprim, which is used for a rare, life-threatening parasitic infection.[381]

Abuse of the Patent System

Brand-name companies engage in practices to create barriers to generic competition. Companies will extend the patent protection period for a drug by filing for additional patents on a certain aspect, such as methods of production, new formulations or new dosage schedules. One study found that almost 80 percent of drugs associated with new patents between 2005 and 2015 were existing drugs, not new ones. Nearly 40 percent of all drugs available on the market during that period added patents or exclusivities.[382]

Pay-for-Delay

Brand-name companies engage in other practices to block competition and maintain monopoly status. In pay-for-delay settlements, they pay generic companies to slow the introduction of a generic version of a drug, effectively extending the patent and preserving their monopoly. The Federal Trade Commission estimates that this costs consumers at least $3.5 billion per year.[383]

Slowing the Development of Generics

Some brand-name manufacturers also attempt to block generic companies from accessing the samples of a drug they need to prove that their product is identical when they file generic drug applications to the FDA. Access is sometimes blocked by misusing FDA safety protocols intended to ensure that drugs are properly handled and distributed. One study found that access restrictions cost the U.S. health care system $13.4 billion annually.[384]

“Gag Clauses”

Because of the lack of transparency in drug pricing and their efforts to charge different prices to different payers, PBMs inserted “gag clauses” into contracts with pharmacies to prevent pharmacists from notifying customers when the cash price of a drug they were buying would have been less than the copay required to purchase it through their insurance. Several states passed laws to ban this practice, and in 2018 Congress passed the “Patient Right to Know Drug Prices Act” and the “Know the Lowest Price Act of 2018” to eliminate this practice nationwide.[385]

Price Fixing

Generic companies also engage in anti-competitive practices. A massive antitrust lawsuit by the Attorneys General of 47 states and the U.S. Department of Justice alleges price-fixing by 16 generic drug companies encompassing over 300 drugs. Executives at one company pled guilty to conspiring to collude with other drug makers to divide up markets and keep prices higher. Investigators report that even a small fraction of the $104 billion in total sales by generic-drug makers in 2017 would have cost consumers billions of dollars.[386]

Market Concentration

Mergers and acquisitions between companies that would otherwise be competitors generally result in less competition and higher prices. There is even evidence that mergers between large brand-name drug companies result in less R&D spending and fewer patents. According to a Government Accountability Office report, the number of mergers and acquisitions in the pharmaceutical sector held steady between 2005 and 2015, but the total value of the average deal went up, as did the number of deals involving the 25 largest manufacturers.[387] Market concentration is increasing in some drug classes.[388]

Medicare Part D

The federal government is the largest payer for pharmaceuticals in the United States through various government programs like Medicare and Medicaid, which together spend almost as much on pharmaceuticals as all private insurers combined. In fact, those programs comprised 40 percent of retail prescription drug spending in 2017, and that share is projected to grow to nearly 45 percent by 2026.[389] Prescription drug costs have an outsized role in budgets for these programs. Drug spending in Medicare Parts B and D combined, which includes both physician-administered drugs and retail drugs, accounted for almost one-fifth (19 percent) of all Medicare spending in 2017.

The governments of other industrialized countries like Canada, Germany and the United Kingdom use centralized bargaining power to hold down pharmaceutical prices. In the United States, the Department of Veterans Affairs and the Department of Defense bargain with drug manufacturers to get a discount of approximately 50 percent relative to retail pharmacies.[390]

However, Medicare Part D is prohibited from bargaining on behalf of the American people. The Medicare Prescription Drug, Improvement, and Modernization Act of 2003, which created Medicare Part D, prohibits the government-subsidized voluntary insurance program for prescription drugs for Medicare recipients from negotiating drug prices. The Republican majority in the 108th Congress passed this provision by bending House rules to hold votes open for hours to get the bill through the House and then to pass the conference report.[391]

Unlike those in other countries, American regulators are not required to consider whether new drugs deliver better value for money than existing alternatives. The FDA does not even require applicants to submit pricing information with new drug applications and is doubtful of its legal authority to do so. Because of this, the FDA is unable to consider the price of a drug when it decides whether to grant the medicine market exclusivity.[392]

Foreign governments may be more effective shoppers than the U.S. government in other ways as well. Several other countries have agencies charged with comparing the effectiveness of new drugs—going beyond simply evaluating their safety and effectiveness. Those countries tend to spend less on expensive new drugs.[393] While it is important to determine whether cost savings will result in slower adoption of useful new treatments, allowing more expensive drugs to enter the market without determining whether they are more effective than existing medication results in higher overall costs. Some countries balance these competing priorities by using different pricing mechanisms for old and new drugs.[394]

CONCLUSION

The *Economic Report of the President* fails to dig deeply into the causes of high prices for prescription drugs, pointing the finger at the FDA when in fact drug companies, distributors and insurance companies deserve much of the blame. As in other areas, the *Report* fails to recognize market failures even when they are obvious.

The patent system is often abused, stifling competition and driving up prices. Well-functioning, fairly regulated markets would lead to lower drug prices for millions of Americans. Conservatives—supposedly proponents of competitive markets—should take heed.

The federal government could help reduce drug prices by enforcing antitrust laws and outlawing anticompetitive behavior such as “pay-for-delay.” It could provide unbiased research into the cost-effectiveness of new treatments. In addition, it could learn from the example of other countries to negotiate lower prices and to counterbalance the market power of drugmakers.

However, the *Report* fails to grapple with market failures and other factors that drive up prices. Lowering the high cost of prescription drugs will require a better analysis of the root causes of the problem.

CHAPTER 6: CLIMATE CRISIS

OVERVIEW

The *Economic Report of the President* fails to address sufficiently one of the most critical threats facing the American and global economies: the climate crisis. Without sweeping and immediate action, global temperatures will continue to rise and cause growing economic harm that will dwarf the most serious economic crises in our history. It is estimated that the future cost to the U.S. economy will reach hundreds of billions of dollars each year.

Nevertheless, President Trump has called climate change a "hoax," and his Administration has taken steps to undo progress. He plans to withdraw the United States from the Paris Agreement, ceding U.S. leadership on the issue. Moreover, he has pulled back from the Clean Power Plan, removing standards requiring power plants to reduce emissions.

Earlier this year, four former Federal Reserve chairs joined 27 Nobel laureates and 12 former chairs of the CEA to issue a statement saying, "Global climate change is a serious problem calling for immediate national action." This list includes every living former Republican CEA chair, with the exception of CEA Chair Kevin Hassett, who was charged with writing this year's *Report* and has left the CEA since its publication. It is disappointing that the President's CEA, under Hassett's leadership, did not express similar concerns.

This chapter presents an overview of the macroeconomic impact of the climate crisis, including the rapidly growing costs of more frequent severe weather events. It looks at the rising costs to individuals and businesses, including the disproportionate impacts of the climate crisis on disadvantaged communities. On the other hand, this chapter also highlights improvements in renewable energy and the economic opportunities of that sector. It is unfortunate that these issues are missing from the *Report*.

MACROECONOMIC ESTIMATES OF CLIMATE CRISIS COSTS

Major new studies highlight the grave threat of the climate crisis. The United Nations' Intergovernmental Panel on Climate Change recently released a comprehensive 700-page report written by scientists and researchers from dozens of countries based on 6,000 peer-reviewed studies.[395] The report estimates that global economic damages will total $54 trillion at 1.5 degrees Celsius of warming, and $69 trillion at 2.0 degrees of warming. Without policy interventions, the researchers project that global temperatures are on track to rise 3.7 degrees by the end of the century.[396]

In May 2019, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) announced the findings from its forthcoming report on biodiversity, which is the most comprehensive assessment of the planet's biodiversity to date. The 455 authors from 50 countries who contributed to the 1,500-page report warn that up to 1 million of the planet's eight million species are at risk of extinction, many within decades. They call for transformative change—"a fundamental, system-wide reorganization across technological, economic and social factors"—to protect and restore nature.[397] The report also highlights the impact of the unprecedented loss in biodiversity on human health, water, energy, agriculture and property. Notably, it concludes that land degradation has already reduced the agricultural productivity of 23 percent of the global land surface; up to $577 billion global crops are now at risk from pollinator loss each year and up to 300 million people now face increased risk of floods and hurricanes due to coastal habitat destruction.[398]

The most recent U.S. National Climate Assessment, compiled by a team of more than 300 experts, concluded that if emissions continue to grow at current rates, the annual losses to the U.S. economy could surpass half a trillion dollars by the end of the century.[399] The assessment warns of impacts to the agriculture, tourism and fisheries sectors, higher spending on electricity and disruptions to global supply chains and trade.[400]

A 2017 study estimates that the level of U.S. gross domestic product (GDP) will decline by about 1.2 percent for every degree of additional warming—for context, 1.2 percent of GDP in 2017 was $233 billion.[401] These costs include higher human mortality, lower agricultural output, higher crime rates, more coastal storms, lower labor productivity and higher energy costs. The study also estimates that the economic costs could be even more severe at high levels of warming, with costs of up to 5.6 percent of GDP at four degrees of warming.[402]

Research published by the Federal Reserve Bank of Richmond projects that climate change could reduce annual economic growth in the United States by one-third over the next century.[403] For context, that magnitude of impact would have reduced U.S. economic growth from three percent to two percent last year.[404] The researchers use seasonal and geographical variations to show that the effects of global warming will spread beyond strictly outdoor industries, such as agriculture and construction, and have substantial negative effects on industries such as real estate and the services sector. These negative effects are driven by lower labor productivity during the summer as temperatures rise.[405]

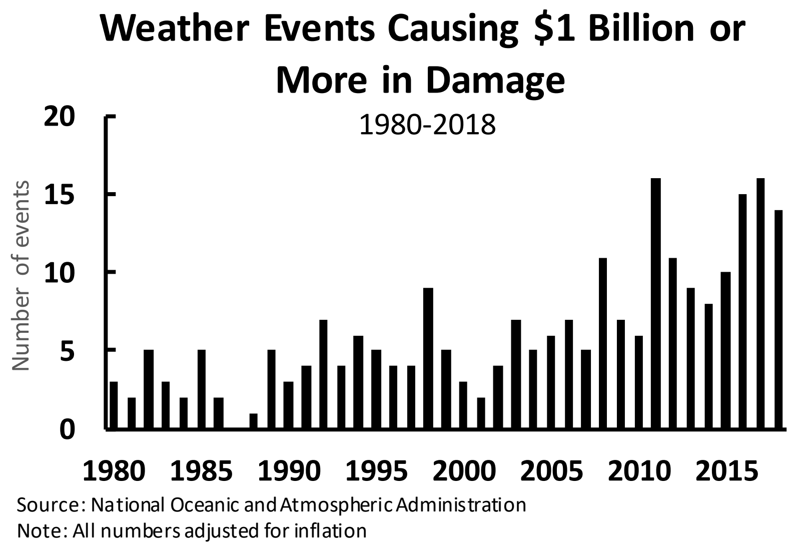
THE INCREASING FREQUENCY AND COST OF EXTREME WEATHER DISASTERS

It will not take decades to see the economic consequences of the climate crisis—many areas of the country are already feeling its effects. One already visible consequence of climate change is the increase in frequency, intensity and cost of severe weather events, which climate experts have unambiguously linked to warming temperatures.[406]

The National Oceanic and Atmospheric Administration (NOAA) tracks weather events that cause more than $1 billion in economic damage (adjusting past events for inflation). These events include hurricanes, droughts, floods, wildfires and other storms. In the 1980s, there were 28 such events, causing over $170 billion in total damages. The pace of these extreme events has dramatically accelerated, and since 2010, there have been more than 100 high-cost weather disasters, causing more than $750 billion in total losses. The economic cost also has soared—so far this decade the economy has suffered $580 billion more damage from extreme weather events than during the 1980s. The years 2016, 2017, and 2018 saw the most such events in the history of the NOAA aside from 2011, and 2019 has already seen six billion-plus dollar disasters (the *yearly* average since 1980).[407]

Extreme weather leads to high costs to the federal government, in addition to the costs to the economy. The Office of Management and Budget (OMB) estimated in 2017 that the climate crisis cost the federal government more than $350 billion in the prior decade. Much of this spending goes to emergency aid and rebuilding infrastructure.[408] These costs will likely rise even further in the near future. An analysis by the OMB projects that climate change could increase the average annual expenditures on hurricane relief by $50 billion by 2075.[409]

Figure 6-1



Threats to Household Wealth and Property

Rising sea levels and increased frequency of disasters will have enormous consequences for homeowners and businesses in affected regions. Rising sea levels will cause increased chronic tidal flooding in coastal neighborhoods.[410] This flooding will cause damage and hurt property values.

The Union of Concerned Scientists identified 311,000 homes and 14,000 commercial properties that will be at increased risk of chronic tidal flooding over the next 30 years. By the end of the century, more than $1 trillion in homes and commercial properties will be at increased risk of chronic tidal flooding because of the climate crisis, including around one million homes in Florida alone. Some U.S. communities will be hit particularly hard—almost 175 will see at least 10 percent of homes put at risk by 2045.[411]

Property values in coastal communities likely are already being affected. While many of these regions are still seeing property values increase, recent research shows that exposure to potential sea-level rises is leading to lower property value appreciation. Exposed homes sell for seven percent less than comparable homes that are not exposed to rising sea levels, even after accounting for the distance to beaches.[412] For homeowners whose wealth is mostly in home equity, a seven percent hit to a home's value can be a substantial financial setback.

With extreme weather disasters, homes and businesses are damaged and destroyed, local and regional economies are disrupted and, most importantly, lives are lost. In 2018, California wildfires that raged for weeks because of exceptionally dry conditions killed 106 people and caused a record $24 billion in damage.[413] Hurricane Maria, which hit Puerto Rico in 2017, is estimated to have taken 2,975 lives.[414]

Few parts of the country have been spared from the rise in extreme weather. In March 2019, for instance, a "bomb cyclone" hit the Midwest United States, dropping record amounts of snow and rain and creating massive floods across a large swath of the country. Nebraska Governor Pete Ricketts called the flooding "the most widespread disaster we have had in our state's history."[415] Early estimates placed the total damage at $12.5 billion across 11 states, including home and property damage, lost business and farm revenue from destroyed crops.[416]

Businesses have also suffered catastrophic losses, which affects not only shareholders but also employees. For example, after the 2018 Camp Fire in California was linked to power lines from Pacific Gas and Energy (PG&E), the anticipated liability claims led the company to declare bankruptcy.[417] The company is California's largest utility and it employed 24,000 people.[418]

Extreme Weather Creates Increased Risk

Private sector actors increasingly are showing strong concern about the likely economic impacts of the climate crisis. This should send a strong message to policymakers.

The insurance industry, which is in the business of calculating the possible economic impact of future catastrophic weather events, is sounding the alarm. Extreme weather brings costly damages to homeowners and business proprietors. Afterward, these individuals are reliant on insurance policies to make them whole—or if they are uninsured, the government often steps in to partially mitigate the loss. However, where and how the climate crisis will strike is uncertain, and it is not clear that risk models can keep up. As the environment becomes less predictable, it is more likely that insurers will find that they mispriced risk and the associated premiums.[419] Where insurers do correctly price in climate change, premiums are likely to rise for consumers and some may choose to go without it if possible.[420]

For instance, the models and maps that use past floods to determine the designation of flood zones, setting of premiums by insurance companies, and decisions of where to build or rebuild are proving increasingly inadequate for providing a realistic roadmap of risks. For example, in Houston, floods that were expected by insurers only once every 500 years hit three times in the three years from 2015 to 2017, driving home the lesson that measures of flood risk have become outdated.[421]

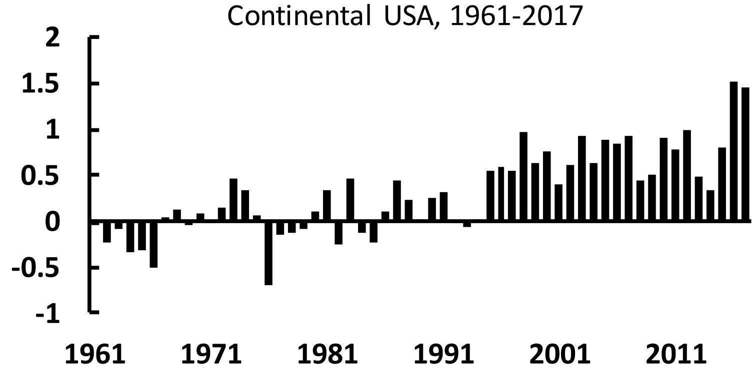
Catastrophic weather events are hitting uninsured properties more often than in the past. The amount of annual catastrophic weather-related damages not covered by insurance has increased by 50 percent globally since 2004.[422] This increase makes it more difficult for families and businesses to rebuild after disasters. For example, only 50 percent of homes in Puerto Rico were covered against wind damage before Hurricane Maria.[423] Further, less than four percent of households had flood insurance. This left homeowners without the money needed to rebuild and instead waiting to be approved for Federal Emergency Management Agency (FEMA) aid.[424]

Insurers are starting to recognize the risks that climate change poses. Several industry actuary groups worked together to create the Actuaries Climate Index, which monitors the rise in extreme weather and sea levels in the United States and Canada.[425] The five-year moving average of the index reached a new high with its latest release.[426] An association of insurance executives, the Geneva Association, has also reported on the challenges that the climate crisis brings to the insurance industry, highlighting the inherent complexity and volatility of disasters and limited takeup of disaster insurance, among other challenges.[427]

Figure 6-2

The Actuaries Climate Index

Continental USA, 1961-2017



Source: Actuaries Climate Index
Note: Data is average of 4-quarters; measures frequency of extreme weather and sea level rise

Past and current insurance executives are also calling for action. In a recent op-ed, former State Farm chief executive Edward B. Rust said, "We need to move away from the politically charged rhetoric about climate change and talk about its real, tangible consequences."[428] Announcing damages from the California wildfires, Allstate's current chief executive Tom Wilson stated, "It's time to address the impact that more severe weather is having on Americans instead of fighting about climate change…. It is now time to come up with longer-term solutions."[429]

CLIMATE CHANGE WILL HAVE DISPARATE IMPACTS

The climate crisis will not impact everyone or all parts of the country equally. Areas such as the South and Midwest, where temperatures are already warm or that rely heavily on agriculture, will suffer some of the harshest effects of rising temperatures. Crop yields will be negatively affected and humans will be forced to deal with the growing health consequences of extreme heat. Atlantic coastal areas will be hardest hit by rising sea levels, experiencing more chronic flooding and more intense storms.[430]

Not all industries will be impacted equally. Sectors that rely heavily on labor, like construction, will see large declines in productivity and output during hotter summers.[431] The agriculture sector will have to adjust to new growing seasons and weather patterns.[432] The real estate industry will be hit as hotter summers affect peak buying season. Wholesale and retail trade rely on laborers to load and unload goods in areas that are typically not climate-controlled, exposing those industries to the effects of rising temperatures as well.[433]

The climate crisis also will adversely affect the health and well-being of the elderly, poor and most vulnerable in our society. Increases in air pollution and frequency of extreme weather events and temperatures due to climate change will hurt poor communities and some communities of color the most, many of whom already experience higher than average exposure to unhealthy environments.[434] Children will more often suffer from infectious diseases, air pollution, heat waves and mental health trauma resulting from extreme weather changes. Moreover, the elderly are at higher risk of heat-related deaths.[435]

Climate Change Will Cause Mass Migration

Rising temperatures will have disparate effects internationally, with some parts of the globe potentially seeing drastic changes that lead to mass migration. Destruction from extreme weather will force people from homes and communities, rising sea levels will make it untenable to live in some low-lying areas and declining agricultural yields will leave many farmers unable to earn a living. While people will first try to adapt to changes so they can stay in their communities, millions will likely be forced to find new homes.[436] One estimate suggests that up to one billion people could be environmental migrants by 2050.[437]

One-third of the population of the Marshall Islands, a U.S. territory, has already moved to the continental United States, partially due to the effects of climate change.[438] A town in Alaska received funding to start relocating because of the effects of the climate crisis last year.[439] More are under threat from coastal erosion and also considering or undergoing relocation.[440] Some island nations are already planning to relocate entire communities.[441]

Increased global migration will impact not only those forced to migrate but the rest of the world and the global economy as well. Migrant caravans could become more frequent and global humanitarian efforts will have to adjust accordingly. Developing countries will look to richer nations like the United States to lead in relief efforts. Local communities and labor markets will have to adjust to dramatic and sudden changes in population flows.

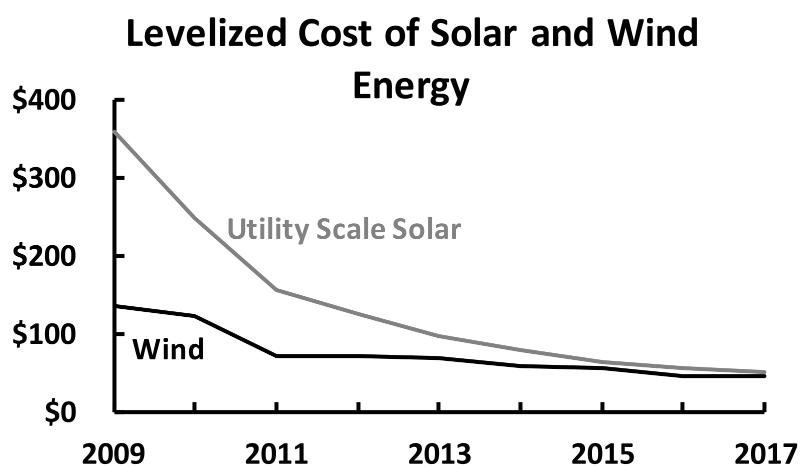
INNOVATION IS DRIVING RENEWABLE COSTS DOWN

Mitigating the worst effects of climate change will require increased usage of renewable energy. Fortunately, as solar and wind are deployed on larger scales, production techniques continue to develop and grids become smarter, experts anticipate the costs of renewables will continue to decline.

Solar photovoltaic (PV) cells have dropped substantially in price and have become more efficient. System costs for PV fell by between 10 and 15 percent annually from 2010 to 2016, when measured on a per-watt basis.[442] These gains were driven by both improvements in production technologies and improvements in cell design leading toward more efficient cells.[443] Estimates from the International Renewable Energy Agency (IRENA) show that solar projects are continuing to converge on the lower end of the cost range, driving down the average cost of new solar projects.[444]

The cost of producing electricity from onshore wind turbines dropped by two-thirds from 2009 to 2017.[445] Improved efficiencies in designs, like longer turbine blade lengths and higher hub heights, and more developed supply chains have pushed down these costs. IRENA research shows that onshore wind projects are continuing to move toward the lower end of the current cost range, which will further drive down the average cost in coming years and make wind more competitive.[446]

Figure 6-3



Source: Lazard

Data on power purchase agreements (PPA)—contracts between energy providers and buyers—in the United States show a similar trend. In 2009, PPAs for wind averaged around $70 per megawatt hour (MWh). By 2017 that price had dropped to around $20 per MWh.[447] Similarly, prices for solar PPAs have dropped substantially since 2006. Some solar agreements are priced as low as $20 per MWh.[448] At these prices, solar and wind are competitive with traditional energy sources.

Renewable Prices Are Competitive with Fossil Fuels

This rise in innovation, along with increasing economies of scale, is leading to increasing cost parity between renewables and fossil fuels. In many parts of the country, utilities are discovering that solar or wind energy comes in below the cost of conventional energy sources. As innovation continues, and prices continue to decline, the case for renewables will become even clearer.

Lazard, a financial advisory firm, analyzed new energy generation projects in the United States using a variety of conventional and alternative sources. The analysis finds that utility-scale solar and wind energy are already cheaper than coal and on par with or cheaper than natural gas, after accounting for tax preferences. This is even before factoring in the cost of externalities associated with many conventional sources of fuel, such as high levels of air pollution and climate change-induced effects of carbon emissions.[449]

More Innovation Is on the Horizon

Energy storage plays a key role in integrating renewables into electrical grids. Solar and wind production is variable, and storage is needed to bridge gaps in production, such as overnight when there is no sunlight. On a small scale, batteries can help homes and mini-grids powered by solar store enough energy to meet their overnight needs.[450] On a larger scale, hydroelectric storage facilities use surplus energy production to pump water into higher locations, which can then be released through turbines to generate electricity when demand is higher.[451] More advanced utility-scale technologies are also being invested in to meet this challenge—for example, a 100-Megawatt battery was brought online last year in Australia and Bloomberg NEF projects that more than $600 billion will be invested in large-scale energy storage by 2040.[452]

As costs drop and new technologies emerge, energy storage will become cheaper and allow for longer durations. Costs for lithium-ion batteries already dropped by three-fourths from 2010 to 2016.[453] With these advances, the case for renewables will become stronger.

A development that has facilitated the incorporation of renewable technology into grids and will likely become more important in the coming years is Distributed Energy Resources (DER) technology. These advancements incorporate a variety of physical and virtual technologies which enable a transition away from one-way centralized grids where power goes from power plants to consumers. Instead, DER creates smart microgrids where consumers and communities can feed unused power back into the grid, batteries store excess energy to cover production lulls, and other technologies are implemented to improve energy efficiency and better manage demand.[454] Nationwide DER capacity is expected to double from 2017 to 2023.[455]

International Competition Over Renewable Jobs is Fierce and Growing

Many jobs in clean electricity generation are protected from global competition and outsourcing because wind and sunlight cannot be imported in the same way as fossil fuel sources. However, the parts essential to making a wind turbine, the photovoltaic cells that convert sunlight into electricity, and the batteries that store energy can all be produced anywhere on the globe.

Countries around the world recognize this opportunity and are investing billions of dollars into advancing clean energy production, storage, and distribution technologies in the hopes that their countries will become the global leaders producing the technologies and jobs of the future. Clean energy investment in China totaled $569 billion in the last five years—comparatively, clean energy investment in the United States totaled $289 billion over the same time frame, less than half the Chinese investment.[456]

Before the 2016 presidential election, Ernst & Young had rated the United States as the most attractive country in the world for private sector renewable energy investment. Since the Trump Administration has taken over, China has surpassed the United

States and now is ranked as the most attractive destination for renewable investments.[457] Ceding leadership in this space means ceding the jobs of the future to China and other countries.

THE CLIMATE CRISIS REQUIRES IMMEDIATE AND BOLD ACTION

Circumventing the worst impacts of climate change requires substantial investment in clean energy innovation and infrastructure, as well as other actions to reduce carbon and greenhouse gas emissions. The economic costs of not acting justify a very large-scale approach that some have compared to the moon landing. This Congress, more than one hundred Congressional Democrats in the House and Senate introduced a resolution calling for a Green New Deal, outlining bold principles that would help transition to a clean economy.[458]

Supercharging Clean Energy Growth

In 2018, renewable energy sources were used to produce nearly one-fifth (17 percent) of the electricity generated in the United States. This is almost twice the market share renewables had in 2008 (9 percent).[459] This surge is driven by rapid declines in the price of renewable energy, though the federal government could do more to support the sector. This is particularly important in light of the large-scale investments being made by other countries.[460] Millions of jobs will be created in clean energy production over the coming decades.[461] Ensuring that American workers are filling many of those jobs requires smart policies at the federal level.

Fully pricing in the cost of carbon through a carbon tax would level the playing field and make clean energy even more cost-competitive. Federal research support for clean sources and complementary technology is also vital to the sector's growth. Further, the federal government could increase its own usage of clean energy wherever possible, creating more demand, and thereby greater economies of scale, for clean energy. Lastly, subsidies for high-carbon emission technologies should be ended by recognizing the high social costs that come with these fuels.

Committing to International Efforts and Goals

The climate crisis is a global problem and requires international cooperation to address. In 2015, the United States joined with 194 other countries in the Paris Agreement to commit to taking action to mitigate climate change.[462] Specifically, the agreement called for efforts to keep the global increase in average temperatures to below two degrees Celsius, with a long-term target of 1.5 degrees of warming.[463] At these levels, the negative global economic impact would still be significant, but less severe than at higher levels.[464]

As noted earlier, the Trump Administration has abdicated leadership on the agreement and is working to remove the United States from the pact.[465] Instead, the United States should be leading this effort and holding the international community accountable for reaching these targets. We also must do better—after three straight years of declines, U.S. carbon emissions increased by 3.4 percent in 2018.[466]

Investing in Resiliency

Beyond working to reduce emissions, policymakers need to recognize that the climate crisis is already impacting people, businesses and local economies, and work to mitigate these effects. The United States should build more resilient infrastructure and take steps to ensure that we better understand

and better minimize the risks of living in communities likely to be most affected by climate change. When it responds to major disasters, the federal government should stipulate that the relief funds are used to make regions more resilient to future extreme weather events, as was done during the previous Administration. Updating outdated FEMA flood maps to more accurately reflect flood risk and to account for the anticipated effects of climate change would provide homeowners, construction and insurance companies and urban planners better information.

Equipping Workers with Training for Clean-Energy Jobs

An issue at the center of any meaningful effort to move to a clean-energy economy is support for those workers in traditional fossil fuels jobs. Regardless of the particular approach, there must be investments in workers to help them transition from jobs in fossil fuels to new careers. The wind, solar and other clean-energy fields could offer new employment options that take advantage of many of the skills these workers already have.

There have been recent efforts in Appalachia and Wyoming, supported by companies and nonprofits, to assist workers with the transition from coal to clean-energy jobs. Some of the skills are transferrable; others require workforce training.[467] Of course, many of the jobs in wind and solar will be hundreds of miles from the coal mines where generations of workers earned substantial wages after graduating from high school. Successful efforts will need to combine diversification of economies in communities where mining jobs are being lost and also assistance to those workers who are able to move to build skills in demand in other regions.

The Obama Administration launched the Partnerships for Opportunity and Workforce and Economic Revitalization

(POWER) initiative in 2015 to give grants to communities seeking to transition workers from legacy fuel industries to new career paths.[468] Building on this model, and learning from how communities have used these grants, could be an opportunity to expand these initiatives.

CONCLUSION

The climate crisis is one of the most pressing economic threats facing humanity in the 21st century. Without significant action, the cost to the United States alone will reach hundreds of billions of dollars annually and the cost to the global economy will be in the trillions. However, the *Economic Report of the President* largely ignores the issue and offers no proposals to address this growing threat.

Ironically, the Administration is trying to undo previous progress on climate change. This not only makes it more difficult to slow the rise in global temperatures but also cedes markets for renewable energy technologies to international competitors. Policymakers should take swift and bold action to lower carbon emissions and integrate clean energy sources. Such progress will be impossible as long as the President continues to put his head in the sand.

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