Center for American Progress

Supply-Side Follies: Wasteful Tax Cuts Will Not Boost the Economy

By Christian E. Weller October 26, 2017

This fall's policy agenda has been dominated by talks about tax cuts, nominally disguised as tax reform. The Trump administration and congressional leaders have so far provided few details, but the existing principles and proposal suggest that the final product will include massive tax cuts for top income earners and corporations. The proposal includes little or no tax relief for middle- and low-income Americans. Proponents argue that the tax cuts will translate into a boost to economic growth because the additional money to the wealthy and corporations will trickle down in the form of more money for investments, as well as lower costs of investments. Greater business investments, the argument goes, will lead to accelerated innovation, which will lead to more jobs and higher living standards.

The arguments in support of supply-side tax cuts do not hold up. Past tax cuts, such as the supply-side tax that heavily favored the wealthy during the 1980s and 2000s, showed neither measurable acceleration of economic growth nor clear improvements for workers. There was also no indication of a worsening economy after taxes on the wealthy increased in the early 1990s and in 2012. (see Table 1)

These tax cuts will not be any different. The proposed cuts would constitute a windfall for wealthy households that have already seen outsized gains in income since the early 2000s. (see Figure 1) Additionally, corporations remain highly profitable in the current tax environment; they simply use their earnings to boost shareholders' returns rather than productively invest their cash. If additional money mattered as much for investments and economic growth as proponents of supply-side tax cuts claim, there would have been a massive investment boom for much of the past two decades instead of the lackluster performance that actually occurred. Not tax cuts but, instead, more demand from customers will drive investment upward. Tax cuts for the wealthy, however, will not increase demand. The wealthy are, after all, less likely to spend the additional income than moderate-income taxpayers, who could use the additional income from tax cuts on household necessities.[1] Thus, the proposed tax cuts will not result in faster growth because they waste enormous public resources on those who need extra cash the least.

Existing data show:

- Supply-side tax cuts do not improve economic outcomes. The economic performance after the tax cuts under former Presidents Ronald Reagan in 1981 and George W. Bush in 2001 was no stronger than the economic performance after the 1993 and 2012 tax increases under former Presidents Bill Clinton and Barack Obama.

- Supply-side tax cuts give money to those who have already seen the largest income gains. Tax cuts such as the ones currently under consideration give the largest benefits to the highest-income earners. However, high-income households have already seen outsized income gains since 2000. The economy, including business investment, has been lackluster at the same time. Giving even more money to the wealthy will not result in the investment increases, faster growth, and higher living standards that supply-siders argue it will.

- Corporate tax cuts on domestic profits will benefit shareholders—not the economy. Nonfinancial corporations have been remarkably profitable for some time and have been using much of their profits to keep shareholders happy by buying back shares and paying dividends. They are holding on to large amounts of cash but only investing at a slow pace. Giving corporations even more money will likely result in more share repurchases and dividend payouts, but will not boost investment and innovation.

- The United States is an attractive place for companies to invest, as it offers an attractive market, a well-educated and innovative workforce, and a reliable legal and physical infrastructure.[2] Taxes play a relatively small role in companies' decisions on where to locate their investments. It is not surprising, then, that direct investment inflows have doubled as a share of the economy since the 1980s. The United States is an attractive market in which to do business because it offers companies the market access they really need.

- Cutting taxes on overseas profits will boost growth on Wall Street but will not help Main Street. U.S. corporations have parked large amounts of profits overseas. Cutting taxes on these profits will give corporations more resources for share repurchases and dividends, but it is unlikely to give them more incentive to invest in new factories and hire American workers.

There is little doubt that the proposed tax cuts will result in larger deficits and increases in already historically high income inequality. But they will not lead to faster growth and more jobs. The proposed tax cuts will be largely ineffective because their lion's share would go to those who have already seen outsized income gains and yet have chosen not to invest the additional money. There is no reason to believe that giving wealthy and highly profitable corporations even more money will change the relation

of more inequality without faster growth. This issue brief details relevant data covering the past four tax changes that illustrate how changing taxes for the wealthiest individuals and corporations does not precede noticeable changes in economic performance. Additionally, this brief examines recent trends in income inequality and corporate profitability in relation to business investment. The data demonstrate that giving more money to those who already have a lot does not correspond with more investment and faster growth.

Supply-side tax policy does not improve economic performance

While details are scarce, we do know that the proposed tax cuts point to reductions in the personal income tax rates that heavily favor high-income earners.[3] These cuts on personal income tax rates would be in addition to reductions in the corporate income tax rate and the abandonment of taxation of foreign earnings, making the corporate income tax territorial. Moreover, there are discussions about requiring corporations to pay up on untaxed earnings they currently hold offshore but at a tax rate far below the current 35 percent rate. It is also unlikely that corporations would lose the myriad deductions and exemptions that allow them to lower their effective tax burden. In essence, high-income earners and corporations would see a massive reduction in the tax they need to pay on all of their income.

This approach is standard supply-side economics. The underlying argument in favor of lowering taxes on wealthy households is that the money they save would go to finance investments. Subsequently, proponents argue that the economy would grow at a faster rate than it would otherwise. Faster growth, they believe, would translate into more jobs, while more investments would contribute to greater productivity and increases in workers' living standards.[4]

Proponents of supply-side tax cuts assert that corporations will invest more in the United States as a result of the tax cuts. Their argument goes as follows: First, corporations would be able to keep more of their profits, which would supposedly finance more productive investments and innovation. Second, corporations would bring some of their offshore profits to the United States and invest those additional funds in U.S. manufacturing plants, office space, and equipment, such as computers and trucks. Third, corporations would find the United States a more attractive place to invest due to lower taxes. Basically, more money would become available to finance investments in the United States. More productive investments, they argue, would lead to faster growth and rising living standards.[5]

However, economic data show that past supply-side-oriented cuts did not live up to those promises. Similarly, tax increases on high-income earners did not slow the economy, as supply-siders would argue. Taxes often change in myriad ways, but four particular

examples of large-scale tax changes come into play here. In 1981, during the Reagan administration's first year, Congress lowered personal income tax rates—especially for high-income earners—as well as the corporate income tax rate.[6] In 1993, Congress raised the top marginal tax rate during the Clinton administration.[7] Congress again enacted massive supply-side tax cuts to personal incomes during former President George W. Bush's first term in 2001.[8] Congress again raised taxes for high-income earners at the end of 2012 as part of the deal to avoid the so-called fiscal cliff.[9]

Consider what happened to key economic indicators in the wake of these tax changes. To make the data comparable, the starting point is always 10 quarters into an economic recovery, since that was the point at which the 1993 tax increases were enacted.[10] Data for the 2001 tax cuts measure the average change over the subsequent five years or until the next recession started.[11] Data for the 2012 tax cuts only cover four and a half years, since data on the entire five years are not yet available.[12] Table 1 shows the average annual rates of change from those years.

TABLE 1

Supply-side tax cuts do not improve economic performance

Economic indicators over five years after tax cuts, annualized averages

	Tax change year			
Economic measure	1981	1993	2001	2012
Investment to gross domestic product	-0.4%	0.4%	0.5%	0.1%
Economic growth	3.5%	3.9%	2.6%	2.1%
Nonfarm employment	2.5%	2.6%	1.4%	1.8%
Inflation-adjusted hourly wages	-0.5%	1.0%	0.0%	1.0%
Median household income	1.2%	2.3%	-0.2%	n/a

Notes: Changes for investment to gross domestic product are in percentage points; all other numbers are growth in percent. All figures are annualized. Changes for economic growth, hourly wages, and median income are based on inflation-adjusted levels. Hourly wages are for nonsupervisory workers, the overwhelming majority of the labor force. The methodology for measuring household income changed in 2013, so that a comparison for the period starting in 2012 is not possible. Average annual income growth from 2013 to 2016 was 2.2 percent.

Sources: Bureau of Economic Analysis, *National Income and Product Accounts* (U.S. Department of Commerce, 2017); Bureau of Labor Statistics, *Current Employment Statistics,* (U.S. Department of Labor, 2017); Bureau of the Census, *Income and Poverty in the United States: 2016* (U.S. Department of Commerce, 2017), available at https://www.census.gov/library/publications/2017/demo/p60-259.html.

The key starting point is business investment, since supply-side tax cuts supposedly finance more of such investments, while tax increases dry up such funds. Business investment as a share of gross domestic product (GDP) fell at an annual rate of 0.5 percent after the 1981 tax cuts but grew at a rate of 0.4 percent following the 2001 tax cuts. Business investment also grew at a rate of 0.4 percent annually after the 1993 tax increases. After the 2012 tax increases, it increased at a rate of 0.1 percent.[13]

Of course, many factors determine business investment decisions in an expanding economy. But the data clearly show that supply-side tax cuts do not lead to noticeable investment acceleration, nor do tax increases hinder such growth.

Unsurprisingly, economic growth did not show a marked acceleration associated with tax cuts. The average annual growth rate of 3.9 percent following the 1981 tax cuts was similar to the 3.6 percent growth that followed the 1993 tax increase. Both of these growth rates were substantially greater than the 2.6 percent average growth rate after the 2001 tax cuts, which is comparable to the average growth rate of 2.1 percent following the 2012 tax increases. The best we can say is that the data do not support the assertion that cutting taxes on high-income earners will boost growth.[14]

The data also do not show noticeably faster labor market growth following supply-side tax cuts. After the 1980s tax cuts, jobs increased by an average annual rate of 2.5 percent; after the 1993 tax increases, they grew at a rate of 2.6 percent. After the 2001 tax cuts, jobs grew at an annual average rate of only 1.4 percent; after the 2012 tax increases, they grew at a rate of 1.8 percent. Inflation-adjusted wages fell by an average of 0.5 percent after the 1980s and plateaued after the 2001 tax cuts. After the 1993 tax increases, however, wages grew at an average rate of 1 percent; after the 2012 increases, they also grew at an average rate of 1 percent. This is not to say that higher taxes increase labor market growth, but the data do not suggest that lower taxes lead to labor market improvements either.[15]

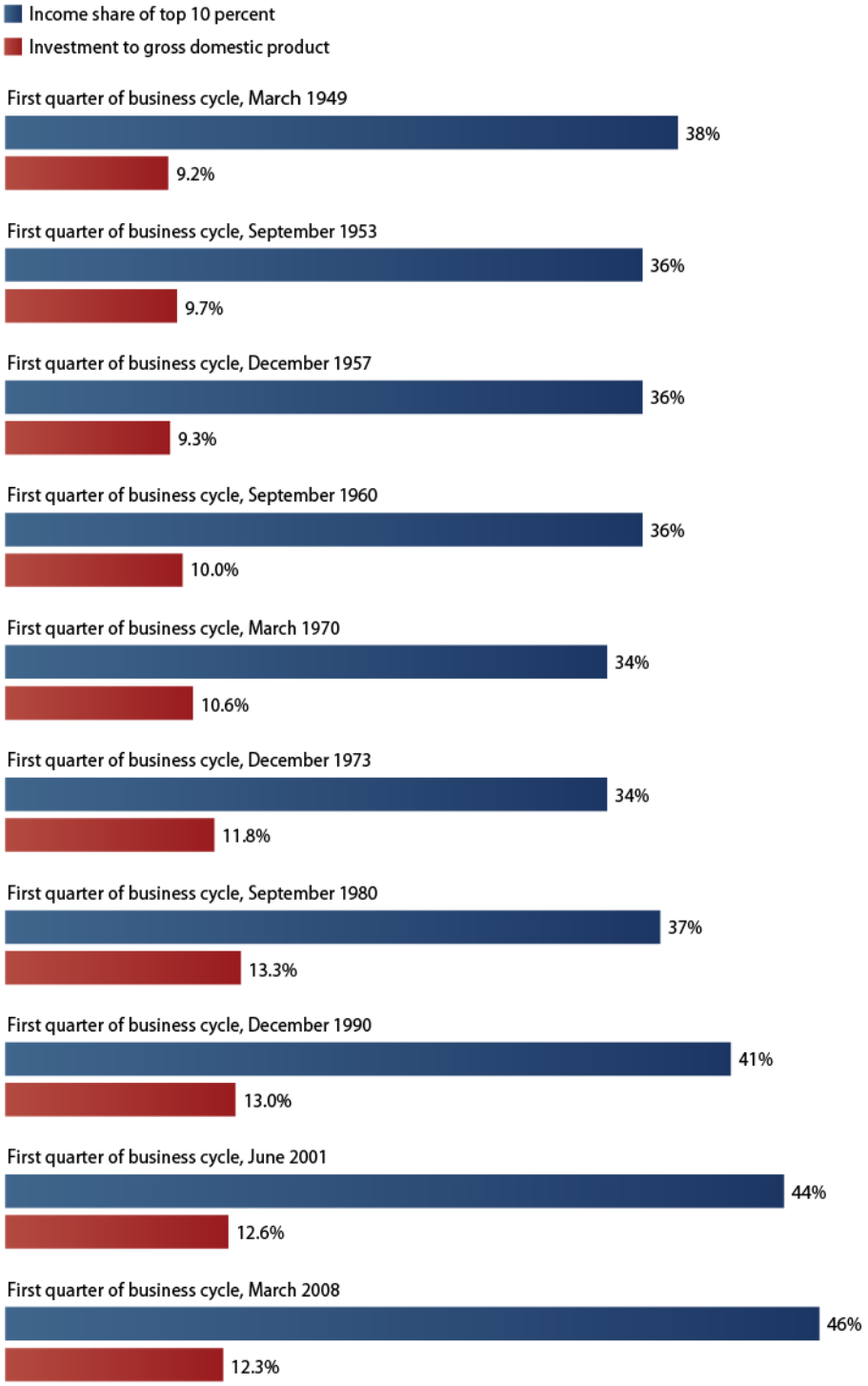
The bottom line is that supply-side tax cuts such as the ones currently under consideration do not improve economic outcomes. Because they will not improve economic outcomes, they also will not pay for themselves. That is, they will force the government to cut valuable programs that middle-class families rely on; result in larger budget deficits; or lead to program cuts and larger deficits. Initial estimates indicate that the proposed tax cuts could balloon the federal deficit by $2.6 trillion over the next decade.[16]

Supply-side tax cuts benefit the wealthiest Americans and corporations

Cutting taxes for high-income earners and corporations would increase the wealth of people and companies that already have substantial amounts of money on hand. Wealthy households and corporations have seen substantial income gains since the Great Recession, but that has not translated into an investment boom, as it should have if having money to invest was actually the key driver of business investment. Instead, corporations have used their funds to keep shareholders happy. Thus, it is hard to believe that the savings from corporate tax cuts—such as lowering the corporate tax rate or eliminating the tax on overseas corporate profits—would be spent on productive investments rather than share repurchases and dividend payouts. There is also no indication that the U.S. corporate tax rate is a hindrance for companies doing business in the United States. Thus, lower corporate taxes will not result in more investments in the United States—only in less revenue for the government.

FIGURE 1

Business investment fell as top earners received more income



Sources: "Investment" refers to nonresidential fixed investment. See Bureau of Economic Analysis, *National Income and Product Accounts*, Table 1.1.5 (U.S. Department of Commerce, 2017), available at https://www.bea.gov/iTable/iTable.cfm?ReqID=9&step=1#reqid=9&step=1&isuri=1. "Income share of top 10 percent" refers to before-tax income. Data are available only through 2014. See World Wealth & Income Database, "Data," available at wid.world/data/ (last accessed October 2017).

Income inequality has remained high for the past five years. Since the end of the Great Recession in 2009, the share of income going to the top 1 percent of income earners rose from 18.5 percent in 2009 to 20.2 percent in 2014. This is slightly above the 19.9 percent recorded in 2007—the last year before the Great Recession—and slightly below the 20.8 percent recorded in 2012. Notably, it is still only the third time that the income share of the top 1 percent has exceeded 20 percent since World War II, with the other years being 2006 and 2012.[17]

Yet even as income inequality has reached new heights, with large amounts of money concentrated among the wealthy, business investment has remained modest. During the current business cycle, which started at the end of 2007, business investment has averaged 12.3 percent of GDP. This is the lowest share of any business cycle since the cycle ending in the middle of 1980.[18] At the same time that investment has trended downward, the share of income going to the top 10 percent of households has increased. Increased business investment has not correlated with rising income inequality. On the contrary, business investment has decreased as the wealthy gained more funds. There is, thus, no reason to expect that giving even more money to the highest-income earners will translate into a faster-growing economy.

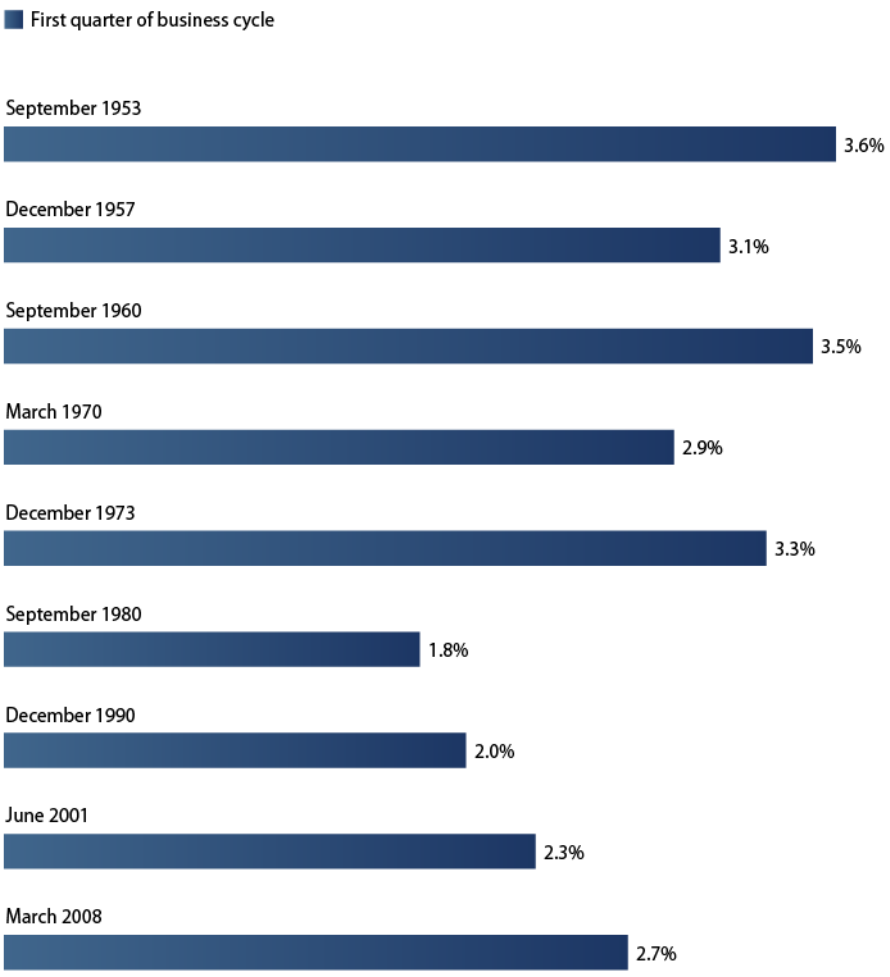
It is not just the wealthy who have received an increasing share of resources. Corporations have also become very profitable in recent decades. The average after-tax profit rate for nonfinancial corporations—after-tax profits to total corporate assets—has been 2.6 percent in this business cycle.[19] This is the highest after-tax profit rate since the business cycle that ended in the middle of 1980.

Rather than investing their money, nonfinancial corporations pay out their profits to shareholders. On average, nonfinancial corporations have used just more than 100 percent of their after-tax profits for net equity issues and dividends in this business cycle. Net equity issues are the difference between money spent on buying back a company's own shares and new issues, such that a negative number indicates a corporation spending more on buying back shares than it receives from issuing new ones. Buying back shares shrinks the supply of a company's shares on the stock exchange, thus raising stock prices and giving shareholders a capital gain. Dividends also immediately increase the return for shareholders. To keep shareholders happy, corporations have used all of their after-tax profits, which have been higher in this business cycle than in previous business cycles.

FIGURE 2

Corporations have become increasingly profitable in the past four decades

After-tax profit rate of nonfinancial corporations



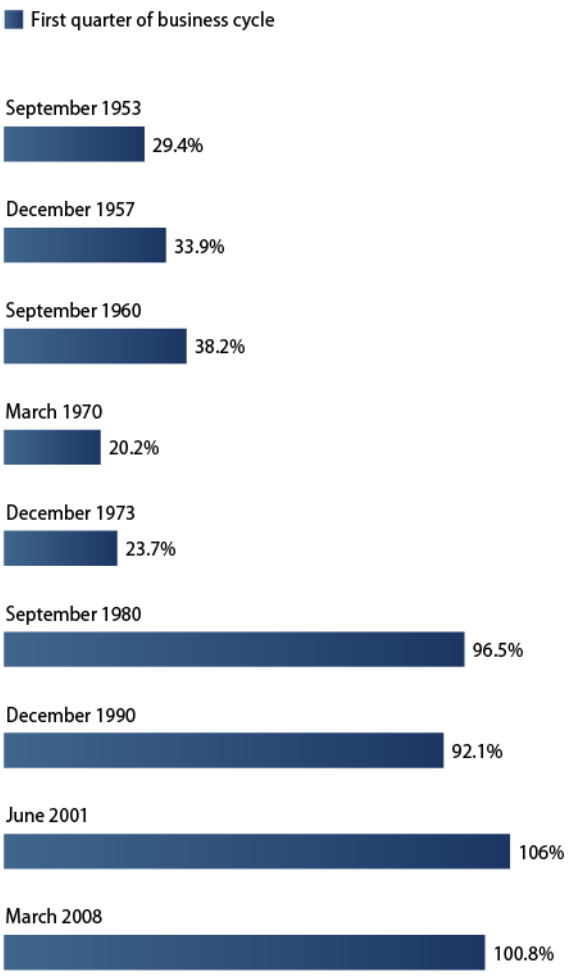
Source: The after-tax profit rate is the ratio of profit after taxes to total assets. The data only include nonfinancial corporations. See Board of Governors of the Federal Rerserve System, "Financial Accounts of the United States - Z.1," September 21, 2017, available at https://www.federalreserve.gov/releases/z1/current/default.htm.

Holding large amounts of cash is another indication that highly profitable corporations are not all that eager to invest their additional funds. Nonfinancial corporations have held, on average, 5.3 percent of all their assets in cash during this business cycle—the largest share since the business cycle that ended at the end of 1969. Again, there is no sign that firms are strapped for cash and need extra money in order to invest more.

FIGURE 3

Corporations use their profits to boost stock prices

Share of net equity issues and dividend payouts in after-tax profits



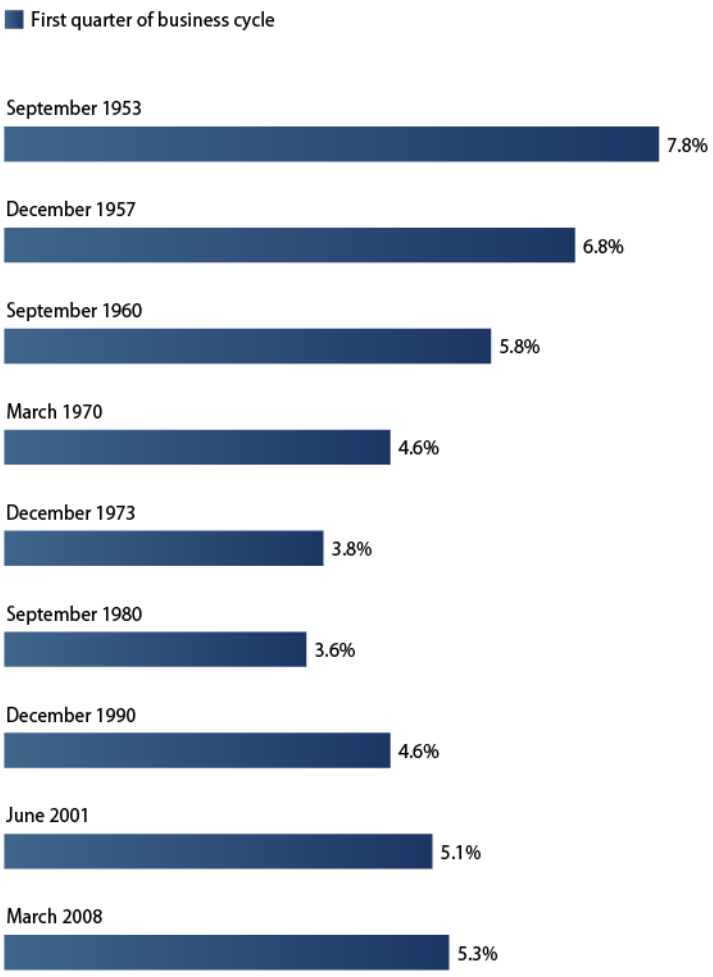
Source: Net equity issues are the difference between new corporate-share issues minus share repurchases. The data only include nonfinancial corporations. See Board of Governors of the Federal Reserve System, "Financial Accounts of the United States - Z.1: Tables F.103 and B.103," September 21, 2017, available at https://www.federalreserve.gov/releases/z1/current/default.htm.

Even as U.S. corporations are reluctant to put their money to work in the United States, overseas firms increasingly invest. Investments are largely driven by considerations such as the skill level of the local labor force and access to markets, a sound legal system, and good infrastructure.[20] In those regards, the United States is clearly an attractive place to invest, as the share of direct investments from foreign firms relative to GDP has risen over time. Foreign direct investment, on average, amounted to 1.6 percent of GDP for this business cycle—above all previous three business cycle averages for which complete data are available. Foreign firms view the United States as an attractive place to invest their money,[21] even as U.S. firms hold back on investing their own cash.

FIGURE 4

Corporations are sitting on large amounts of cash

Liquid assets to total assets of nonfinancial corporations

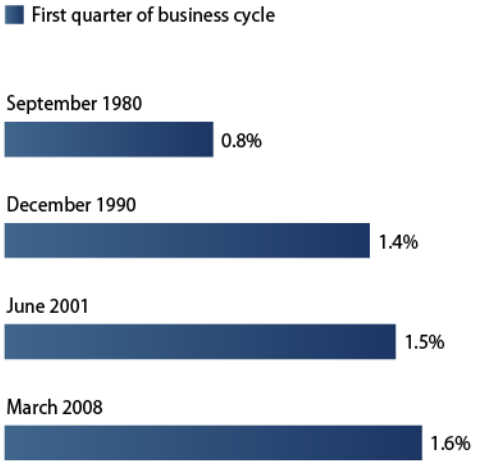


Source: "Cash" refers to liquid assets. Data only include nonfinancial corporations. See Board of Governors of the Federal Reserve System, "Financial Accounts of the United States - Z.1: Tables L.103 and B.103," September 21, 2017, available at https://www.federalreserve.gov/releases/z1/current/default.htm.

FIGURE 5

Investing in the United States is increasingly attractive for foreign firms

Foreign direct investment (FDI) inflows as share of gross domestic product (GDP)



Source: Bureau of Economic Analysis, "International Data: International Transactions (ITA), Table 6.1. U.S. International Financial Transactions for Direct Investment," available at https://www.bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=6&isuri=1&6210=1&6200=65 (last accessed October 2017).

Conclusion

Yet again, the country finds itself on the verge of another debate over the merits of supply-side tax policy. A closer look at the data shows that showering large amounts of fiscal resources on the wealthy and corporations will do little to boost economic growth. There is no evidence that supply-side tax cuts in the recent past accelerated investment, economic growth, employment, or living standards. Moreover, the wealthy and corporations have already seen substantial gains in income over the past few decades. Those gains, however, did not translate into accelerated investments.

The data contain several important implications. First, cutting taxes for the wealthy and corporations would only exacerbate income inequality, which is already near record-high levels. Supply-side tax cuts would disproportionately benefit the wealthy and, thus, directly increase after-tax income inequality. They would also indirectly raise before-tax income inequality, as corporations would spend much of their additional money on share repurchases and dividend tax cuts. While this would boost the wealth and incomes of those who own stocks, stock ownership is highly concentrated among the wealthiest Americans, and many Americans do not any own stocks. In fact, recent data showed that only 51.8 percent of households owned any stocks, either directly or indirectly. The top 10 percent of income earners, of whom 93.6 percent owned stocks, held an average of $1.4 million in stocks in 2016. In comparison, only a little more than 20 percent of households in the bottom of the income distribution owned stocks, worth,

on average, $52,300 in 2016.[22] Giving corporations more resources to boost the fortunes of shareholders—through tax cuts on domestic profits as well as profits held overseas—will contribute to wealth and income inequality.

Second, massive supply-side tax cuts would increase deficits and force spending cuts on vital programs in health care, education, retirement, and social services. This is basic budget narrative. The government would lose money from massive tax cuts without any offsetting economic gains. This means that the government would have to cover the losses somehow—either by incurring larger deficits or by cutting spending.

Supply-side tax cuts would not boost economic growth. The wealthy would receive outsized gains from lower taxes and corporate giveaways to shareholders. Middle-class families, in comparison, would experience few if any direct benefits and instead would see cuts to key programs that help them make ends meet.

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Endnotes

1 See, for example, Barry Z. Cynamon and Steven M. Fazzari, "Inequality, the Great Recession, and Slow Recovery," Social Science Research Network, October 2014, available at https://ssrn.com/abstract=2205524.

2 See, for example, Organisation for Economic Co-operation and Development, "Tax Effects on Foreign Direct Investment" (2008), available at https://www.oecd.org/investment/investment-policy/40152903.pdf; Organisation for Economic Co-operation and Development, "Tax Effects on Foreign Direct Investment," *Recent Evidence and Policy Analysis* 17 (2007): 9–23, available at http://www.oecd.org/ctp/tax-policy/39866155.pdf; Kimberly A. Clausing, "Beyond Territorial and Worldwide Systems of International Taxation," Social Science Research Network, February 2015, available at https://papers.ssrn.com/sol3/papers2.cfm?abstract_id=2567952.

3 For the current proposal for tax changes, see U.S. Congress and the White House, "Unified Framework for Fixing Our Broken Tax Code," September 27, 2017, available at http://www.politico.com/f/?id=0000015e-c3bc-da71-a57f-c3ff8e1d0000. For the Tax Policy Center's analysis of this framework, see TPC Staff, "A Preliminary Analysis of the Unified Framework" (Washington: Tax Policy Center, 2017), available at http://www.taxpolicycenter.org/publications/preliminary-analysis-unified-framework.

4 See The White House Office of the Press Secretary, "CEA Report: Corporate Tax Reform and Wages – Theory and Evidence," Press release, October 16, 2017, available at https://www.whitehouse.gov/the-press-office/2017/10/16/cea-report-corporate-tax-reform-and-wages-%E2%80%93-theory-and-evidence. For a critique of this particular claim, see, for instance, Kimberly Clausing and Edward Kleinbard, "Trump's economists say a corporate tax cut will raise wages by $4,000. It doesn't add up," Vox, October 20, 2017, available at https://www.vox.com/the-big-idea/2017/10/20/16506256/cea-report-corporate-taxes-wages-boost-job-growth.

5 Ibid.

6 HISTORY, "This Day in History: Reagan signs Economic Recovery Tax Act (ERTA)," available at http://www.history.com/this-day-in-history/reagan-signs-economic-recovery-tax-act-erta (last accessed October 2017).

7 Regional Oral History Office of The Bancroft Library at the University of California, Berkeley, "1993 Omnibus Budget Reconciliation Act," available at http://bancroft.berkeley.edu/ROHO/projects/debt/1993reconciliationact.html (last accessed October 2017).

8 Emily Horton, "The Legacy of the 2001 and 2003 'Bush' Tax Cuts" (Washington: Center on Budget and Policy Priorities, 2017), available at https://www.cbpp.org/research/federal-tax/the-legacy-of-the-2001-and-2003-bush-tax-cuts.

9 Lori Montgomery and Paul Kane, "Obama, Senate Republicans reach agreement on 'fiscal cliff'," *The Washington Post*, January 1, 2013, available at https://www.washingtonpost.com/business/fiscal-cliff/biden-mcconnell-continue-cliff-talks-as-clock-winds-down/2012/12/31/66c044e2-534d-11e2-8b9e-dd8773594efc_story.html?utm_term=.49a635e93f01.

10 Other ways of defining "starting point," such as the effective date of the tax change, do not change the conclusions. Also, comparing the immediate aftermath of a tax change with the economic performance during the three years preceding the tax change or the recession immediately before the tax change does not change the conclusions. Detailed calculations available from author upon request. Calculations based on Bureau of Economic Analysis, *National Income and Product Accounts* (U.S. Department of Commerce, 2017). Productivity data from Bureau of Labor Statistics, *Databases, Tables & Calculators by Subject* (U.S. Department of Labor), available at https://www.bls.gov/data/#productivity (last accessed October 2017). Employment data from Bureau of Labor Statistics, *Databases, Tables & Calculators by Subject* (U.S. Department of Labor), available at https://www.bls.gov/data/#employment (last accessed October 2017). Data from Bureau of the Census, *Income and Poverty in the United States: 2016* (U.S. Department of Commerce, 2017), available at https://www.census.gov/library/publications/2017/demo/p60-259.html.

11 The measures here look at five years of data to capture long-term effects, not temporary, short-term impacts. Shortening the time period to three years, though, does not change the conclusions.

12 The starting point, or the end of 2012, also occurs later in the business cycle. Starting earlier or shortening the comparison to three years to use complete data does not alter the conclusions. See Table 1.

13 The data also show similar changes for net investment. Author's calculations based on Bureau of Economic Analysis, *National Income and Product Accounts* (U.S. Department of Commerce, 2017), available at https://www.bea.gov/iTable/iTable.cfm?reqid=19&step=2#reqid=19&step=2&isuri=1&1921=survey. Details available from author upon request. Data show a widening gap between after-tax profits, which have risen, and net investments, which have been falling since 2000. See Marc Jarsulic, Brendan Duke, and Michael Madowitz, "Long-Termism or Lemons" (Washington: Center for American Progress, 2015), available at https://www.americanprogress.org/issues/economy/reports/2015/10/21/123717/long-termism-or-lemons/.

14 This conclusion is further supported by comparing economic growth during the three years immediately following the tax cuts with economic growth during the three years preceding the tax cuts—or the recession before the tax cuts. The average growth rate in the 1980s remained steady at 3.9 percent; growth rates declined from 3.7 percent before the 2001 tax cuts to 3.1 percent after them; and economic growth rates accelerated from 2 percent to 3.6 percent associated with the 1993 tax increases. See Table 1. Details available from author upon request. Thomas Hungerford undertook a time series econometric exercise in 2013 of the correlation between statutory corporate tax rates and economic growth, as well as of effective corporate tax rates and economic growth. He found that there was no statistically significant correlation between corporate tax rates and economic growth over more than 50 years of data in the United States. That is, extending the time period to earlier years and using more sophisticated statistical analyses than this brief does not change the conclusion that lower corporate taxes are not associated with faster economic growth. See Thomas Hungerford, "Corporate tax rates and economic growth since 1947" (Washington: Economic Policy Institute, 2013), available at http://www.epi.org/publication/ib364-corporate-tax-rates-and-economic-growth/.

15 Using sophisticated time series econometric analyses for U.S. data from 1950 to 2006, Karel Mertens and Morton Ravn found no significant effect of changes in corporate taxes on employment. See Karel Mertens and Morton Ravn, "The Dynamic Effects of Personal and Corporate Income Tax Changes in the United States," *American Economic Review*, 103 (4) (2013): 1212—1247. Chye-Ching Huang and Brandon DeBot discuss several widely cited studies that suggest that workers bear the majority of corporate taxes, contrary to the standard assumptions of the Congressional Budget Office, Congress' Joint Committee on Taxation, and the Tax Policy Center. Based on others' analyses, Huang and DeBot show that arguments that workers bear most corporate taxes rest on flawed assumptions in economic models and/or contradict any possible outcome in the real world. The assertion that workers pay the majority of corporate taxes conjures a world that does not exist. See Chye-Ching Huang and Brandon DeBot, "Corporate Tax Cuts Skew to Shareholders and CEOs, Not Workers as Administration Claims" (Washington: Center on Budget and Policy Priorities, 2017), available at https://www.cbpp.org/sites/default/files/atoms/files/7-20-17tax.pdf.

16 See TPC Staff, "A Preliminary Analysis of the Unified Framework."

17 These data show before-tax income inequality. The discussion is based on data for the top 1 percent of income earners. See World Wealth and Income Database. available at http://wid.world/data (last accessed September 2017). The effective tax rate for high-income earners has fallen and declined even faster than the effective tax rate for middle-income and lower-income earners. After-tax income inequality has probably grown even more quickly than before-tax income inequality. See Thomas Piketty, Emmanuel Saez, and Gabriel Zucman, "Distributional national accounts: Methods and estimates for the United States." Working Paper 2016-12 (Washington Center for Equitable Growth, 2016), available at http://equitablegrowth.org/working-papers/distributional-national-accounts/. They show that the effective tax rate for the top 1 percent has trended downward over time, while the effective tax rate for lower-income households has increased, largely due to higher payroll taxes.

18 Author's calculations based on Bureau of Economic Analysis, *National Income and Product Accounts* (U.S. Department of Commerce, 2017), table 1.1.5. These data refer to gross investment and thus understate the decline in net additions to the U.S. capital base. Gross investment includes the replacement of investments that have depreciated. The share of replacing depreciated investment goods—most notably, cars, trucks, computers, and software—out of total investment spending has grown over time. The share of quickly depreciating investment goods has increased as long-lasting manufacturing plants have lost importance and computers and software, among other items, have gained relevance. The combination of less total investment spending over time and a greater share of those investments going to replacing obsolete capital means that the net additions to the U.S. capital stock for each dollar invested are smaller than in the past. Decreasing gross investment over time is thus larger in meaningful economic terms than the total numbers suggest. The country indeed needs more investment spending, but, importantly, this additional spending has not materialized even as wealthy households and corporations have gained access to more funds.

19 These numbers exclude financial corporations, including banks, since they finance investment but undertake very little business investment themselves. Author's calculations based on Board of Governors of the Federal Reserve System, "Federal Reserve Statistical Report: Z.1 Financial Accounts of the United States: Flow of Funds, Balance Sheets, and Integrated Macroeconomic Accounts: Second Quarter 2017" (2017), available at https://www.federalreserve.gov/releases/z1/Current/z1.pdf.

20 See, for example, Organisation for Economic Co-operation and Development, "Tax Effects on Foreign Direct Investment" (2008); Organisation for Economic Co-operation and Development, "Tax Effects on Foreign Direct Investment," *Recent Evidence and Policy Analysis*; Clausing, "Beyond Territorial and Worldwide Systems of International Taxation."

21 There is no indication that foreign direct outflows have increased faster than foreign direct inflows. For the current business cycle, the average ratio of outflows to inflows is 113.6 percent, compared with 134.3 percent during the business cycle from 2001 to 2007, but up from 84.9 percent for the business cycle from 1990 to 2000 and 47.2 percent for the business cycle from 1980 to 1989, when foreign direct investment outflows were relatively low. Generally speaking, foreign direct investment outflows and inflows can be volatile and influenced by myriad factors. They have largely grown at similar rates since 1990. Author's calculations based on Bureau of Economic Analysis, *International Transactions, Services & IIP* (U.S. Department of Commerce, 2017), table 6.1.

22 Jesse Bricker and others, "Changes in U.S. Family Finances from 2013 to 2016: Evidence from the Survey of Consumer Finances," *Federal Reserve Bulletin* 103 (3) (2017): 1–41, available at https://www.federalreserve.gov/publications/files/scf17.pdf.