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Journal
11(2) Columbia Journal of Tax Law 31-75 (2020)

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Publication Date
2019-07-01

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Fixing Five Flaws of the Tax Cuts and Jobs Act

3 February 2020

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Abstract: The tax legislation commonly referred to as the Tax Cuts and Jobs Act (Public Law 115-97) came into effect in 2018. The new tax law was flawed in five important ways. First, the law generates large deficits that will reduce the ability of government to fund important priorities in the future; these deficits also risk justifying a more tepid fiscal response to the next recession. Second, after more than 35 years of increasing income inequality, the tax law moves the tax system in a regressive direction. Third, while the legislation increases economic efficiency in some ways, it decreases economic efficiency in other ways, moving the tax system away from optimal design principles. Fourth, the legislation misses an opportunity to combat profit shifting by multinational companies, changing the character of the problem but leaving its scale largely undiminished; also, the law provides new incentives for the offshoring of physical investment. And fifth, the legislation introduces new sources of complexity. This paper explains these five flaws in detail, setting the analysis within the context of relevant literature and facts. Thereafter, the paper suggests both short term and more fundamental ways to reform the tax code. Nearly immediately, simple fixes can address most of the TCJA flaws. Moving forward, a true tax reform can modernize the tax system to better handle the challenges posed by economic inequality, climate change, and the global nature of business activity.

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Fixing the Five Flaws of the Tax Cuts and Jobs Act

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I. Introduction

A good tax system raises the revenue needs of the state in a way that is sensitive to fairness, efficiency, and tax administration. While the wisdom of that simple sentence is undeniable, the US tax system has fallen short of these laudable goals for some time. First, the revenues raised by the federal tax system are insufficient in comparison with our fiscal priorities; while deficits and debt have been handled without disruption so far, the trajectory of debt over the coming decades looms large at the same time that urgent priorities go unfunded. Second, despite increases in income inequality over the prior generation, the tax system has become more regressive in several important ways. The tax system can do far more to respond to pressing concerns regarding wage stagnation and soaring inequality. Third, in terms of efficiency, the present tax system favors some industries over others, favors some forms of income over others, and favors some locations of income over others, all leading to tax-motivated economic decisions that distort the nature of economic activity. And finally, our tax system is notoriously complex, and IRS funding is insufficient to smoothly administer the existing tax system.

From this starting point, enter the 2017 tax legislation known as the Tax Cuts and Jobs Act (hence TCJA).[1] The main provisions of the law follow.

- Individual tax rates are cut, for the period 2018 to 2025.
- On a temporary basis, the standard deduction is increased, personal exemptions are repealed, and the state and local tax deduction is limited to $10,000.
- The threshold for the estate tax is doubled, to $11 million, temporarily.
- On a temporary basis, 20 percent of pass-through business income is no longer taxable for some pass-through businesses.
- The corporate tax rate is cut permanently, from 35 to 21 percent.
- Foreign income of corporations is permanently exempt from taxation, subject to some base protection measures.[2] Previously, foreign income was taxed at the domestic tax rate (35 percent) upon repatriation, with foreign tax credits for tax paid abroad.[3]

While aspects of the new tax law should be retained, overall the law is severely flawed. In addition to increasing deficits by nearly $2 trillion over ten years, the TCJA makes the tax system less progressive, less efficient, and more difficult to administer. The closing sections of the paper provide simple and practical ways to improve the tax system, beginning from the post-TCJA starting point.

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[1] The official title of the law is Public Law 115-97.

[2] There is a minimum tax on foreign income earned by U.S. multinationals of half the U.S. tax rate; this tax is payable only on returns (relative to physical assets) that exceed 10 percent. The minimum tax is assessed on a global basis, so foreign tax credits from tax paid in higher-tax countries can offset the minimum tax due from operations in low-tax countries. There is also a second minimum tax known as the BEAT (for base erosion and anti-abuse tax) that affects all multinational companies; it is triggered by excessive deductible payments to related parties.

[3] Under the TCJA, there is a one time tax on prior unrepatriated foreign earnings of U.S. corporations. These earnings are taxed at a rate of either 8 or 15.5 percent, less foreign tax credits.

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II. Deficits

It is abundantly clear that the tax law will increase budget deficits as well as the debt burden of the United States. Originally, the Joint Committee on Taxation (JCT) estimated TCJA would cost $1.5 trillion.[4] Including the additional interest payments due to higher debt, the Congressional Budget Office (CBO) estimated the cost at $1.8 trillion.[5] Since then, the CBO has raised the ten-year numbers to $1.8 (without interest) and $2.3 trillion (with interest).[6]

These estimates do not include dynamic effects, or ways in which higher economic growth due to provisions in the legislation might lower its revenue cost. CBO's revised dynamic estimates indicate a revenue cost of $1.9 trillion including interest costs on the additional debt.[7]

Nearly all dynamic estimates at the time of the legislation indicated that the cost of the legislation would certainly exceed $1 trillion, aside from one very optimistic assessment from the Tax Foundation, using modeling methodology that came under criticism.[8] A Penn-Wharton Budget Model analysis found that growth effects from the legislation could offset a small percentage of the revenue loss, still leaving a static 10 year revenue cost of $2.2 trillion over 2018-2027; dynamic estimates range from $1.8 to $2.0 trillion.[9] Tax Policy Center found a ten-year revenue cost of $1.3 trillion.[10] Barro and Furman (2018) report a dynamic estimate that places the 10-year deficits under the legislation at $1.2 trillion, or $1.7 trillion if the temporary provisions are extended (which raises both economic growth and the budget cost).

Of course, one difficulty with understanding the effects of the legislation is separating the effects of the legislation from the overall effects of the underlying macroeconomy, and establishing the counterfactual of what the macroeconomic trajectory would have been without the tax legislation.

Nonetheless, receipts of both individual and corporate income taxes are down as a share of GDP, while payroll taxes are relatively steady, indicating that the tax cuts have sharply reduced revenues. Federal receipts were 17.2 percent of GDP in 2017, and declined to 16.2 percent of GDP in 2018, and 16.3 percent of GDP in 2019, the first two years the legislation was in effect. Corporate tax revenues were 1.5 percent of GDP in 2017 but only

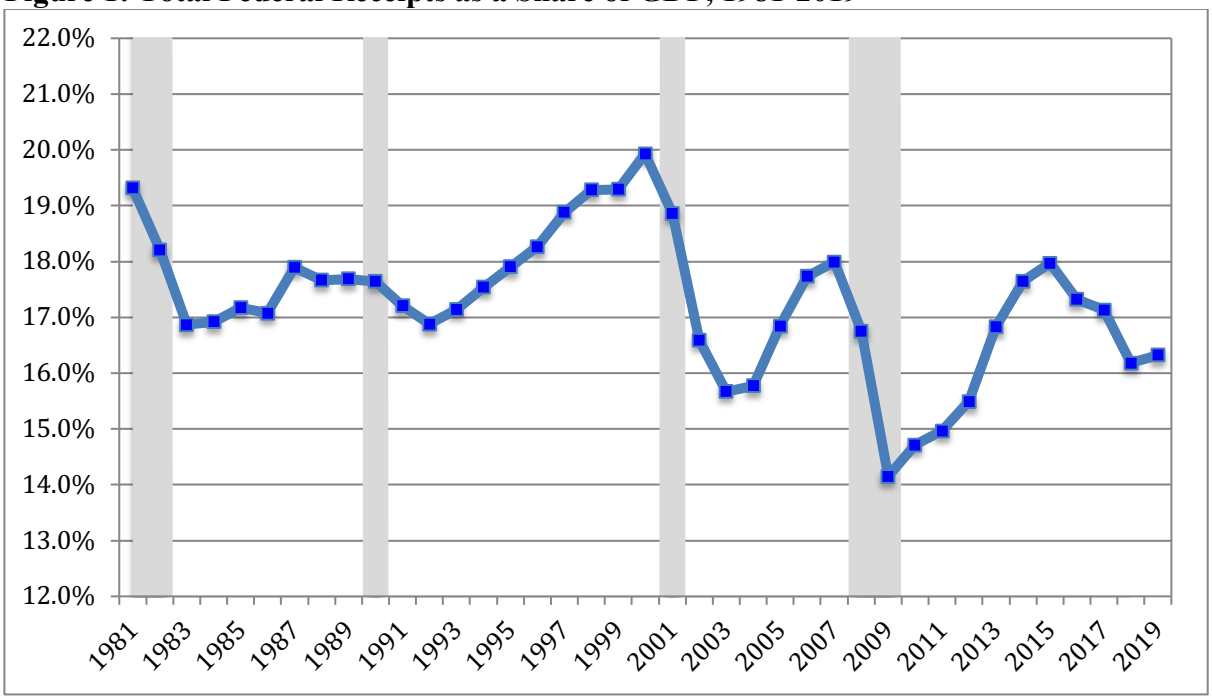
[4] See Joint Committee on Taxation (2017a). "Estimated Budget Effects Of The Conference Agreement For H.R.1, The "Tax Cuts And Jobs Act".
[5] See CBO (2018a). "Estimated Deficits and Debt Under the Conference Agreement of H.R. 1."
[6] McClelland and Werling (2018).
[7] The number without interest costs is $1.3 trillion. See McClelland and Werling (2018).
[8] Critiques of the Tax Foundation model include Leiserson (2017). As noted by Gale et al (2018), the Tax Foundation model assessment were an outlier.
[9] See Penn Wharton Budget Model (2017).
[10] See Page et al (2017).

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1.0 percent of GDP in 2018 and 1.1 percent of GDP in 2019.[11] Since typically federal receipts increase (even as a share of GDP) during strong economies, there seems little doubt that the reduced tax revenues are a result of the changes in tax law.

Figure 1 shows the tendency of revenues to increase relative to GDP during expansions, but that is not the trend of recent years, and 2018 shows a clear dip down, despite very strong macroeconomic fundamentals. The unemployment rate for 2018 (2019) averaged 3.9 (3.7) percent, down from 4.4 percent in 2017.

Figure 1: Total Federal Receipts as a Share of GDP, 1981-2019



Source: US Federal Reserve FRED database. Monthly receipt data through December 2019 are included here, aggregated for the annual totals, which are then compared to GDP. Recessions are shaded.

Deterioration in the budget deficit will be even more troubling than these tax cuts imply on their own, since spending is also on an increasing trajectory. The aging of the baby boom generation will increase federal expenditures on Social Security and Medicare substantially over the coming decade; expenditures on each program are projected to increase by more than one percent of GDP over the coming ten years.[12]

Thus, even absent these deficit-financed tax cuts, the United States government was on a trajectory of increasing debt to GDP ratios; however, that trajectory has worsened

[11] Revenue data are from the US Department of Treasury, "Monthly Receipts, Outlays, and Deficit or Surplus, Fiscal Years 1981-2019". Last accessed on 1 February 2020 at https://www.fiscal.treasury.gov/reports-statements/mts/current.html. GDP data are from the Fred database, https://fred.stlouisfed.org/series/GDP, last accessed 1 February 2020.

[12] Medicare increases from 3.5 to 5.1 percent of GDP from 2018 to 2028; Social Security increases from 4.9 to 5.9 percent of GDP. See Table 3-1 of the CBO's Budget and Economic Outlook: 2019 to 2029. January 2019.

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substantially due to the new tax law. There are three important problems associated with these increased deficits at this particular moment in time.

First, recessions always come. The United States is enjoying a very long expansion, the longest in modern U.S. history. While this expansion began after a very deep recession, it is unlikely to continue forever. When it ends, inevitably, it would be ideal if the federal government undertook expansionary fiscal policy in response, to reduce the magnitude of the recession. The deficit will certainly increase automatically due to lower tax receipts and higher spending on means-tested programs as well as unemployment insurance. However, additional discretionary stimulus is also advised, particularly in today's macroeconomic climate, which begins with monetary policy in an unusually policy-constrained stance, due to our persistent low interest rate environment. This leaves little room for interest rate reductions as expansionary monetary policy measures.[13]

However, policy-makers may feel constrained by our large (and growing) debt when they respond to the next recession, and thus they may be tempted to take an inadequately expansionary fiscal stance at that time. While there is little sign of rising interest rates, a falling U.S. dollar, or other practical constraints on the U.S. government's ability to borrow, the specter of rising debt burdens can reduce political appetite for deficits, even during tough times. Indeed, in the Great Recession, policy-makers were arguably far too timid in their response for precisely this reason.

Therefore, running up deficits when the economy is strong, *especially* to pay for tax cuts, is unwise. A better use of deficit-finance would be to make public investments in infrastructure or education, both of which will pay future dividends that help justify deficits. In the case of infrastructure, deferring road and bridge maintenance is likely to make future tax burdens *higher,* when those investments are finally made. And investments in human capital (such as education) also pay future dividends since tomorrow's taxpayers have higher earnings as a consequence. However, tax cuts do not satisfy these future-oriented arguments.[14]

Second, deficits inevitably have three possible future consequences: higher tax burdens, greater spending cuts, or even more deficits (with their own future consequences). This shifts the burden of financing the state from current to future generations. Already, older members of our population are getting a much better deal in terms of government benefits relative to tax payments than are younger members. Thus, it would be ideal to not worsen this intergenerational inequity. Further, earlier generations benefited from a time of more inclusive growth; typical households saw a doubling of incomes between the end of World

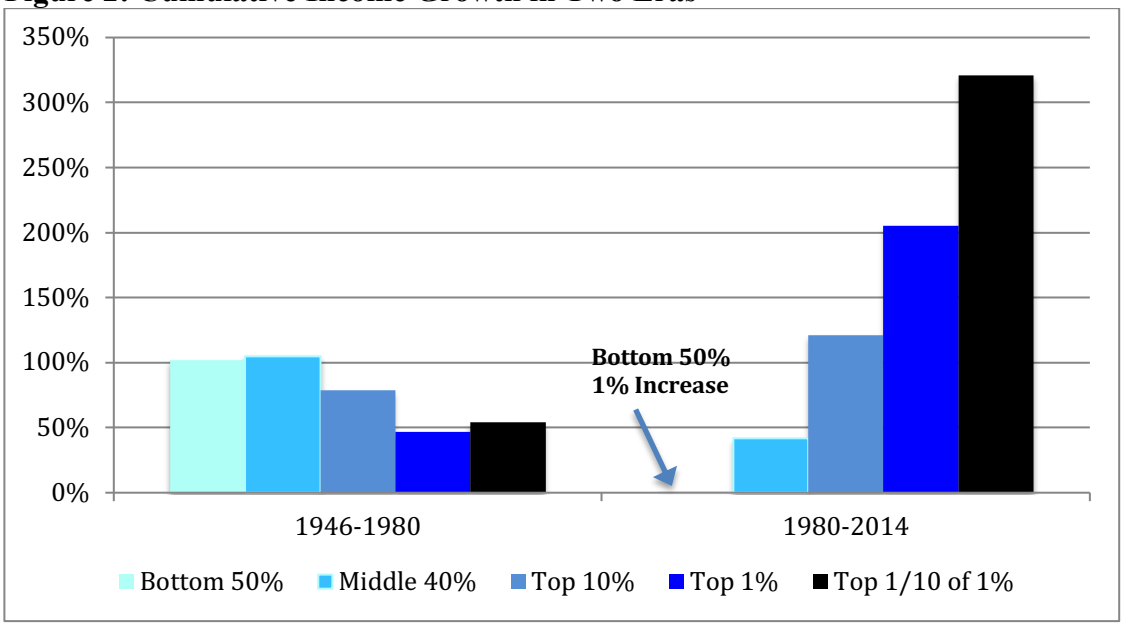
[13] In addition, the Federal reserve system has many assets on its balance sheet due to prior rounds of unconventional monetary policy, known as quantitative easing. While this is not a formal constraint, it may also reduce the zeal of monetary policy markers for further expansion of central bank assets. For a graphical depiction of central bank balance sheets, see: https://www.federalreserve.gov/monetarypolicy/bst_recenttrends.htm

[14] Some might argue that corporate tax cuts are future-oriented if they spur substantially greater private investment; this claim will be addressed in Section III below.

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War II and 1980; in comparison, growth in incomes for typical families since 1980 has been anemic, despite strong economic growth, due to rising income inequality.

Figure 2: Cumulative Income Growth in Two Eras



Source: Piketty, Saez, and Zucman (2018).

Third, deficits constrain our ability to fund urgent priorities. Many priorities urgently require increased spending, including investments in the nation's infrastructure, investments in green research and development, and investments in education and healthcare.

Beyond these areas, we also have longstanding fiscal commitments to our retired population, whose financial impact is swelling in the coming years; as noted above, Social Security and Medicare spending increases by over 2.5 percent of GDP over the coming decade.[15]

While it is tempting to find quick ways out of this fiscal conundrum, there are no easy answers. Despite decades of experimenting with supply-side economics, tax cuts have never paid for themselves. And the ideas of Modern Monetary Theory (MMT) likewise provide no easy way around these tradeoffs. Of course, there is widespread agreement that it is helpful to be able to borrow in your own currency. In addition, today's low interest rate environment means that borrowing to make future investments (in, e.g., infrastructure or research) makes good sense, even if borrowing to pay for tax cuts is another matter. There is also longstanding agreement that deficit-finance makes good macroeconomic sense during recessions.

[15] See Table 3-1 of the CBO's Budget and Economic Outlook: 2019 to 2029. January 2019.

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All that said, deficits still involve tradeoffs, and there are serious limits to how expansionary fiscal policy can be. When a government undertakes expansionary fiscal policy when the economy is already operating at its capacity (full employment), the Central bank may raise interest rates in order to offset the undue stimulus to the economy, either reducing investment or increasing the trade deficit.[16] If they neglect to manage aggregate demand in response, or simply fund government spending by printing money, inflation will ensue.

Some MMT theorists have suggested that the Federal reserve should accommodate deficit-financed spending, and that government can simply pay for its debts by printing money.[17] While inflation may ensue, they note that tax increases could be implemented to offset incipient inflation. However, that logic simply moves the deficit reduction to a later stage in the process, rather than eliminating the need to consider deficits in general. In addition, it is unwise to put Congress in change of managing inflation; it stretches the bounds of reason to imagine a Congress eager to pass tax increases under such circumstances.[18]

In summary, there is no escaping the fact that the deficit-financed tax cuts under the TCJA come with several serious consequences; they make it more difficult to respond to the next recession, they worsen intergenerational inequality, and they make it more difficult to pay for urgent fiscal priorities.

III. Income Inequality

As Figure 2 (above) clearly shows, the US economy has changed in important ways over the prior generation; whereas economic growth used to be felt broadly throughout society, since 1980, increasing income inequality has meant that only those at the top of the distribution are experiencing gains in standard of living that meet the expectations set by the earlier period.

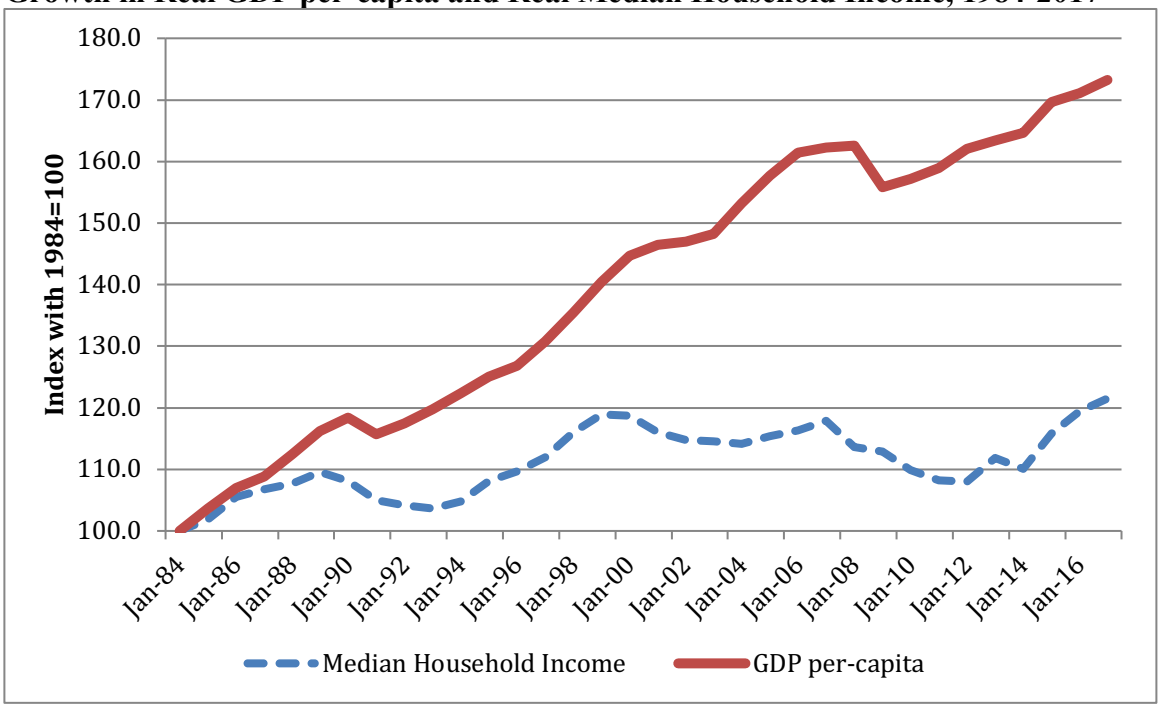
This phenomenon of income inequality also shows up as a divergence between the growth rate of per-capita GDP and the growth rate of median household incomes, as shown in Figure 3. Real GDP per-capita has grown by more than 70 percent between 1984 and 2017, whereas growth in median household incomes has increased by about 20 percent, a far more paltry increase.[19] In years when economic expansion is particularly robust (the late

[16] Capital inflows are attracted by higher interest rates. This appreciates the dollar, causing a larger trade deficit.
[17] It is hard to generalize regarding the claims of MMT; it is difficult to pin down the theory as a set of well-defined principles with a clear model of how the economy works behind them.
[18] We count on the Federal Reserve to "remove the punch bowl" despite strong political temptations to keep the party rolling, since the institution is designed to be more distant from short-term political considerations. Central bank independence, and a relatively more technocratic staff, help keep monetary policy farsighted, ideally avoiding the perils of runaway inflation.
[19] Household size has decreased over this time period, so that may (somewhat) diminish concerns about relatively stagnant household income. Still, it is important to bear in mind that households also share some overhead costs, such as housing and utilities.

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1990s, 2014-2017), the two series increase at a similar pace, but in other years, the pace of median income growth lags behind.

Figure 3:
Growth in Real GDP per-capita and Real Median Household Income, 1984-2017



Source: Federal Reserve Economic Data.

These divergent trends occur since the top 10 percent, and even the top 1 percent, are earning a much higher share of all national income now than they were a generation ago, while the shares of the bottom 90 percent are shrinking.

Table 1: Pre-tax Income Shares, 1980 and 2014

	1980	2014
Bottom 50%	19.9 %	12.6 %
50-90th percentile	45.9 %	40.4%
Top 10%	34.2 %	47.0 %
(Of which, Top 1%)	(10.7 %)	(20.2 %)

Source: World Inequality Database, accessed 15 March 2018. https://wid.world/

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There are many hypothesized causal factors behind these changes, several of which I discuss in detail in Chapter 2 of my recent book.[20] These include factors such as transformative technological change, the rising role of market power, increased international competition, changes in social norms, and economic policy changes that have increased incentives for those at the top to earn more income.

This economic situation is damaging for a number of reasons. First, economic growth is far less meaningful for the well-being of society when it does not impact the standard of living of many in society. Not only do the economic gains of those in the bottom 90 percent of society fall short of expectations, but the comparison between their fate and the economic privilege of those at the top creates discontent.

Concentrated economic power also begets political power. Power disparities reduce the responsiveness of economic policy to the needs of typical workers, further fueling the sense that the economy is "rigged" and that our democratic institutions are not functioning as intended.

While popular discontent may be understandable, it also risks the embrace of ultimately destructive economic policies. For example, nationalistic economic policies that cast foreigners as the problem have been a popular theme of the Trump administration, and similarly populist discontent with EU immigration policy fueled Brexit.[21]

Yet regardless of the source of these labor market trends, the tax system is a powerful tool for addressing inequities. For example, the earned income tax credit can create negative tax rates at the bottom of the income distribution. By increasing the generosity of the earned income tax credit, the tax system can help move income towards those that have not benefited from the economic growth of recent decades. Similarly, for those that have seen dramatic income growth, more can be expected in terms of tax payments. By carefully closing loopholes that allow the wealthy to classify their income in more lightly-taxed forms, more revenue can be raised without relying on excessively high tax rates.[22]

And, of course, tax revenue is also vitally important in funding urgent priorities that can help address the needs of workers and the bottom 90 percent: infrastructure, R&D investments, education, and healthcare.

Unfortunately, the TCJA is a wrongheaded response to rising economic inequality. Not only do the tax cut benefits mostly accrue to those at the top of the distribution, but those at the bottom get almost no tax cut. In addition, the deficit-financed nature of the tax

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[20] See Clausing, Kimberly. *Open: The Progressive Case for Free Trade, Immigration, and Global Capital*. Harvard University Press. 2019.

[21] The dangers of protectionism and immigration restrictions for inclusive prosperity are the subject of chapters 3, 5, and 8 of Clausing (2019).

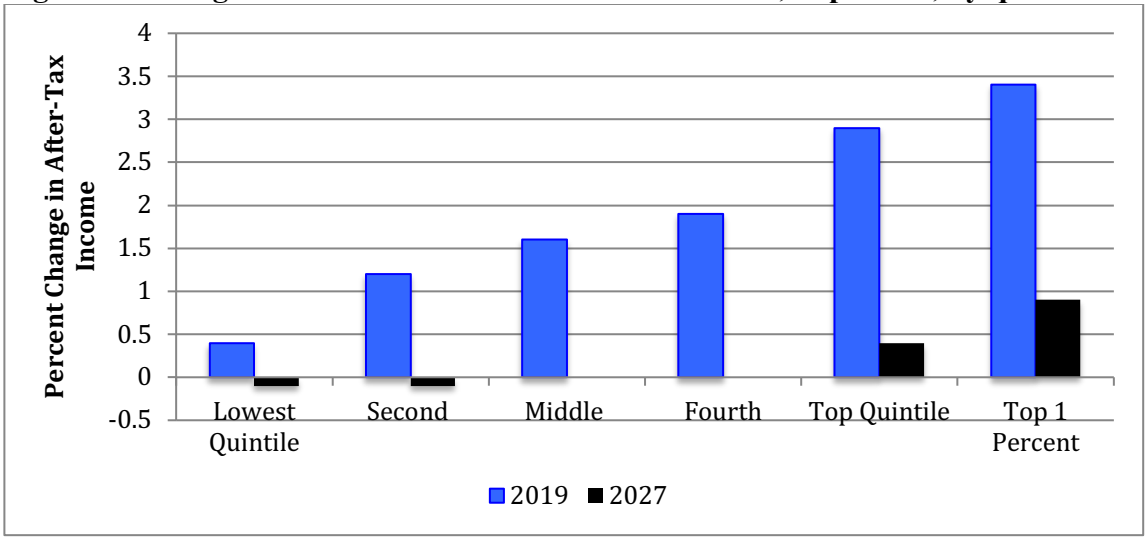
[22] It is particularly problematic to raise tax rates on one type of income without considering the tax avoidance response, since wealthy taxpayers are adept at rearranging their economic affairs to minimize tax burdens. By focusing on harmonizing the disparate tax treatment of different forms of income, more revenue can be raised at reasonable, uniform tax rates.

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legislation implies either less revenue for our urgent future priorities or higher future tax burdens.

The nonpartisan Tax Policy Center (TPC) did distributional analyses of the legislation; the main results are shown in Figure 4.[23] For those in the bottom four quintiles, the modest gains in after-income in the first year of the legislation disappear by the tenth year of the legislation, due to the expiration of the individual tax cuts. The corporate tax cuts that remain primarily benefit those at the top of the distribution.

Figure 4: Changes in After-Tax Income due to the TCJA, in percent, by quintile



Source: Tax Policy Center (2017, 2018)

Due to the income differences across groups, the dollar differences are more dramatic. Table 2 shows the changes in tax payments in the two years. For the bottom 80 percent of the population the tax cut averages $795 in 2018 and becomes a small tax increase ($15) by 2027, whereas the top 1 percent get tens of thousands of dollars in tax cuts in both periods.

Table 2: Changes in Tax Payments, 2018 and 2027

	2018	2027
Lowest Quintile	-60	30
Second Quintile	-380	40
Middle Quintile	-930	20
Fourth Quintile	-1,810	-30
Top Quintile	-7,640	-1,260
Top 1 Percent	-51,140	-20,660

Source: Tax Policy Center (2018)

[23] See Tax Policy Center. "Distributional Analysis of the Conference Agreement for the Tax Cuts and Jobs Act." 18 December 2017. The numbers are unchanged in the June 2018 Tax Policy Center publication, Gale et al (2018).

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The JCT has also done distributional estimates but these are more difficult to interpret since they are divided by income group rather than by quintile.[24] For taxpayers with incomes below $20,000 in 2019, tax cuts average $55. For taxpayers with incomes above $500,000, tax cuts average $35,370. By 2027, taxpayers with incomes below $20,000 pay an additional $175 in tax, while those with incomes above $500,000 still receive tax cuts of $6,290. Regardless of how you cut it, these tax cuts are tilted toward the top.

One source of controversy surrounding the distributional effects of the legislation concerns the effects of business tax cuts on wages. The Joint Committee on Taxation concludes that, in the short run, 100 percent of business taxes fall on owners of capital, whereas in the long run 75 percent of corporate income taxes and 95 percent pass-through business taxes fall on owners of capital.[25] The Tax Policy Center assigns 20 percent of the burden to labor, 20 percent to capital (normal returns), and 60 percent to shareholders, due to supernormal returns on capital.[26]

Other mainstream models, including those of the Congressional Budget Office and the U.S. Treasury, also conclude that the corporate tax mostly falls on capital or shareholders, with workers only bearing a small minority of the tax.[27] Nonetheless, administration economists have persisted in a much more rosy outlook for workers from the corporate tax cuts, implying that they could even see wage gains as high as $4,000 to $9,000 as a result.[28]

There are two mechanisms that could result in labor receiving benefits from business tax cuts. First, companies with excess profits may choose to share the tax windfall with their workers. There is some evidence of this mechanism in the European context, particularly using German data, but of course labor market institutions are quite different in Germany than in the United States, as there is a stronger role for labor in business decisions.[29] Further, this mechanism should result in nearly immediate gains in wages from the business tax cuts, yet early evidence shows little changes in wages in the early data post-TCJA.

A second mechanism would take more time to assess. This mechanism relies on the general equilibrium models of corporate tax incidence in an open economy, which allow labor to benefit form corporate tax cuts if those tax cuts result in increased domestic investment, which raises the marginal productivity of workers, and then results in higher wages. Unfortunately, careful cross-country analyses of these mechanisms has failed to reveal clear evidence in support of higher wages in countries that have lowered corporate

[24] See Joint Committee on Taxation. 18 December 2017. JCX-68-17. The same numbers are also reported more recently in Joint Committee on Taxation. 25 March 2019. JCX-10-19.
[25] See Joint Committee on Taxation (2013).
[26] See Nunns (2012).
[27] For background on CBO methodology, see Congressional Budget Office (2012), p. 16-18. For a discussion of the Treasury assumptions, see Cronin et al (2013); under the Trump administration, the Treasury working paper version was removed from the Treasury website.
[28] Council of Economic Advisers (2017).
[29] See, e.g., Fuest, Piechl, and Siegloch (2018).

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tax rates. A particularly thorough overview of the data and literature in this area is provided in Clausing (2012, 2013).

In the present US context, there are several practical issues that could stand in the way of labor benefitting from corporate tax cuts. First, we are in a period where there is a glut of capital, interest rates are very low, and debt-financed investment is actually subsidized through the tax system. (Conventional models of corporate tax incidence assume that investment is equity-financed.) In that context, it is not clear how strong the investment response will be. Second, even if investment responds, given the trend towards labor-displacing automation, it is not clear that, for the economy as a whole, labor demand will increase. Finally, at present, there appears to be a less tight link between labor productivity and wage growth than in prior times. This loose link may have something to do with the hyper-competitive nature of many modern labor markets, the declining economic power of labor relative to capital, and the rising role of company market power in many industries.[30]

It is instructive, though not conclusive, to consider other major countries that have run this experiment. Figure 5, panels (a) to (d), show the four rich countries with GDP exceeding $2 trillion in 2017 that have cut corporate taxes substantially since 2000: the UK, Japan, Germany, and Italy. I chose these countries because they are the entire set of high-income countries with large economies that have steeply reduced corporate taxes; US GDP exceeds $19 trillion in the same year.

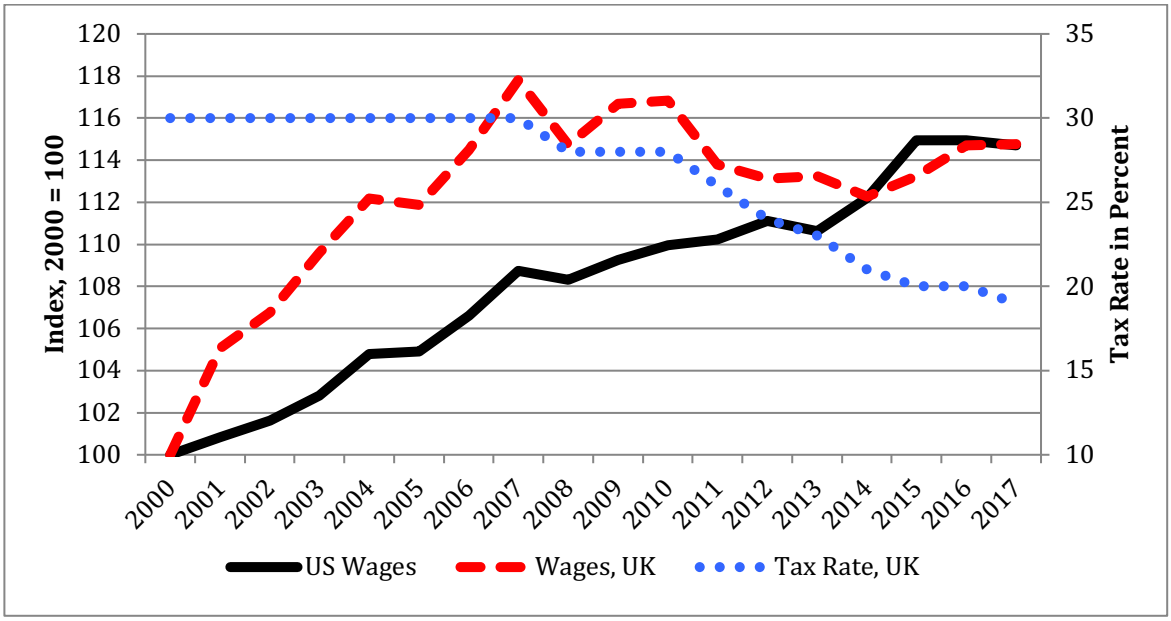
In all cases, wages are indexed from a constant local currency average wage series from the OECD; US wage growth is shown as a comparison; the US statutory corporate tax rate was constant over this time period, at 35 percent.

Still, the simple experience of the UK, Japan, Germany, and Italy shows the lack of clear relationship between corporate tax rates and wage growth. In the UK, wages grew more strongly than in the United States, but not during the years of the corporate tax cuts. In Japan and Italy, wage growth has been slow, regardless of the corporate tax cuts. In Germany, recent wage growth has been stronger, coincident with a second round of corporate tax cuts, whereas the first round was not coincident with wage growth.[31]

[30] For a discussion of these factors, see Chapter 2 of Clausing (2019).
[31] Both the UK and Japan adopted a territorial tax system in 2009.

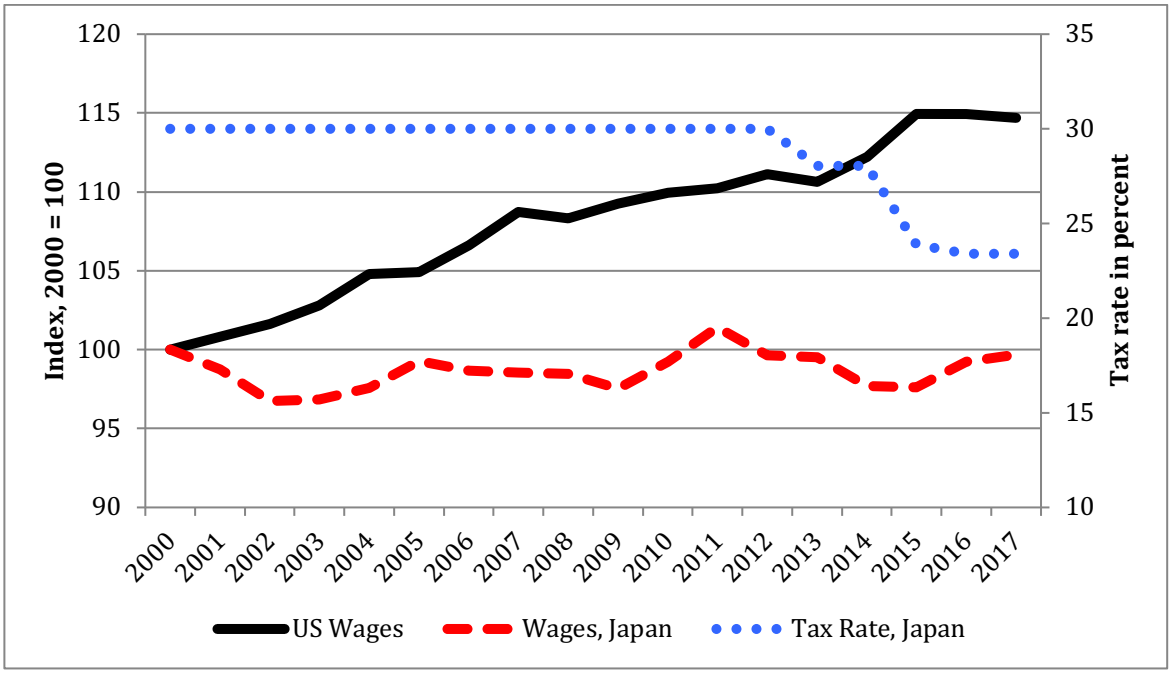
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Figure 5A: UK, Wages and Corporate Tax Rates, 2000-2017



Source: Organization of Economic Cooperation and Development (OECD) Database

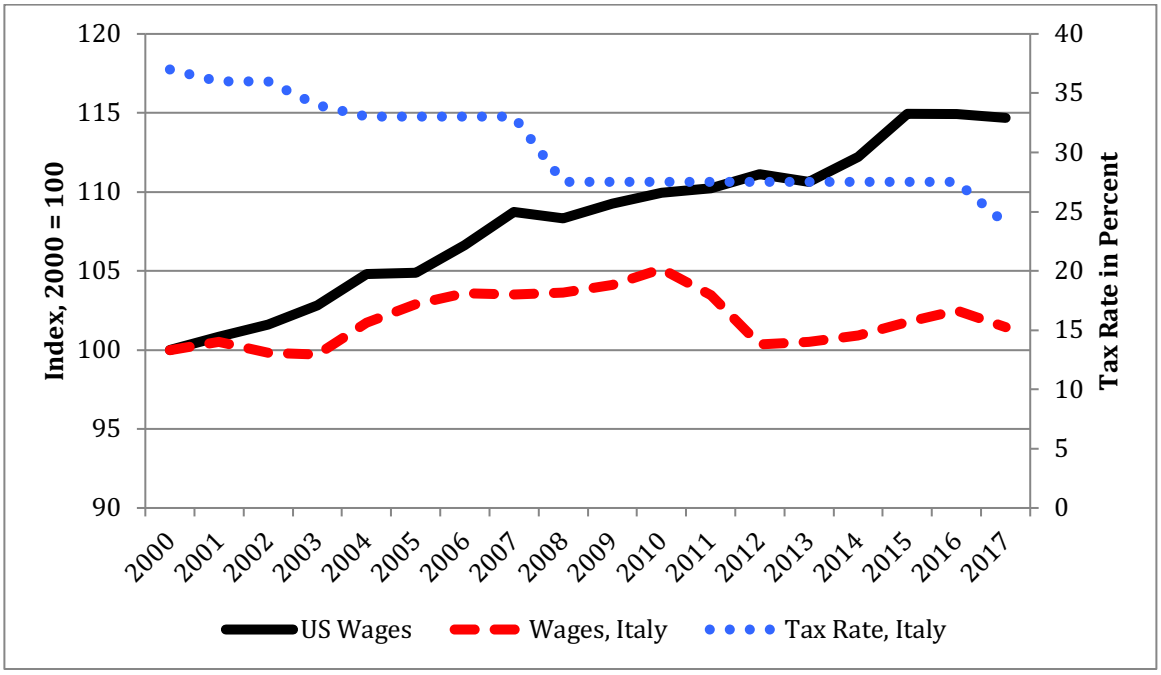
Figure 5B: Japan, Wages and Corporate Tax Rates, 2000-2017



Source: Organization of Economic Cooperation and Development (OECD) Database

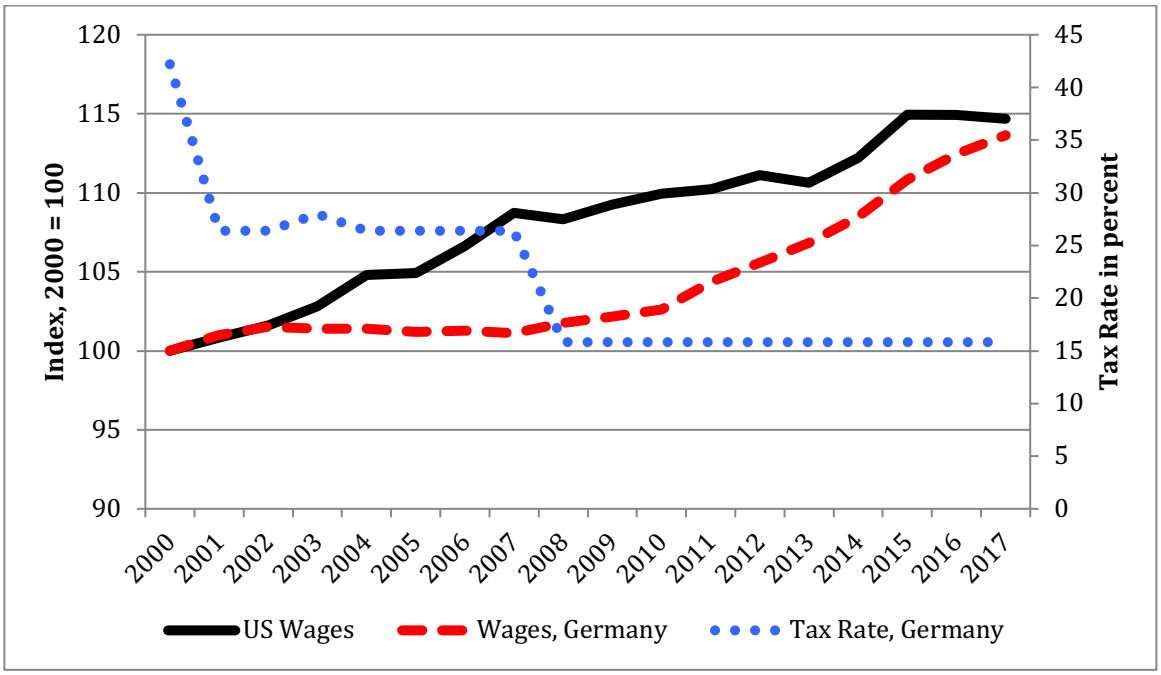
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Figure 5C: Italy, Wages and Corporate Tax Rates, 2000-2017



Source: Organization of Economic Cooperation and Development (OECD) Database

Figure 5D: Germany, Wages and Corporate Tax Rates, 2000-2017



Source: Organization of Economic Cooperation and Development (OECD) Database

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Of course, *many* other things are often changing at the same time, which is why it is better to do careful econometric analyses that control for other variables; I do this exercise in Clausing (2012, 2013) with every major source of wage data, every major source of tax rate data, and multiple types of specifications. The picture that emerges from such careful analysis is that there is simply no statistically robust relationship between corporate tax variables and countries' wage growth. This finding is evident in both regression results and in simple scatter-plots and bar graphs.

While some of the earlier studies in this area had shown larger wage effects, in many cases the largest effects were from studies that were not ultimately published, and some of these results were found to be quite fragile in Clausing (2013).

On the other hand, there are high-quality studies that rely on subnational data that show that labor bears a larger burden of the tax. For example, Suarez Serrato and Zidar (2016) find that workers bear 30 to 35 percent of the corporate tax burden in the US state context; of course, capital may be far more mobile across US states than across countries, and that could be one explanation for their finding. Fuest, Piechl, and Siegloch (2018) find that labor may bear 50 percent of the corporate tax burden in the sub-national German context; in addition to the greater mobility of capital in the subnational context, this finding may also result from the rent-sharing mechanism, given the greater bargaining strength of labor in the German context. Indeed, they find near-zero wage effects for foreign firms, firms that operate across jurisdictions, and larger firms, likely due to the weaker bargaining power of labor in those contexts.

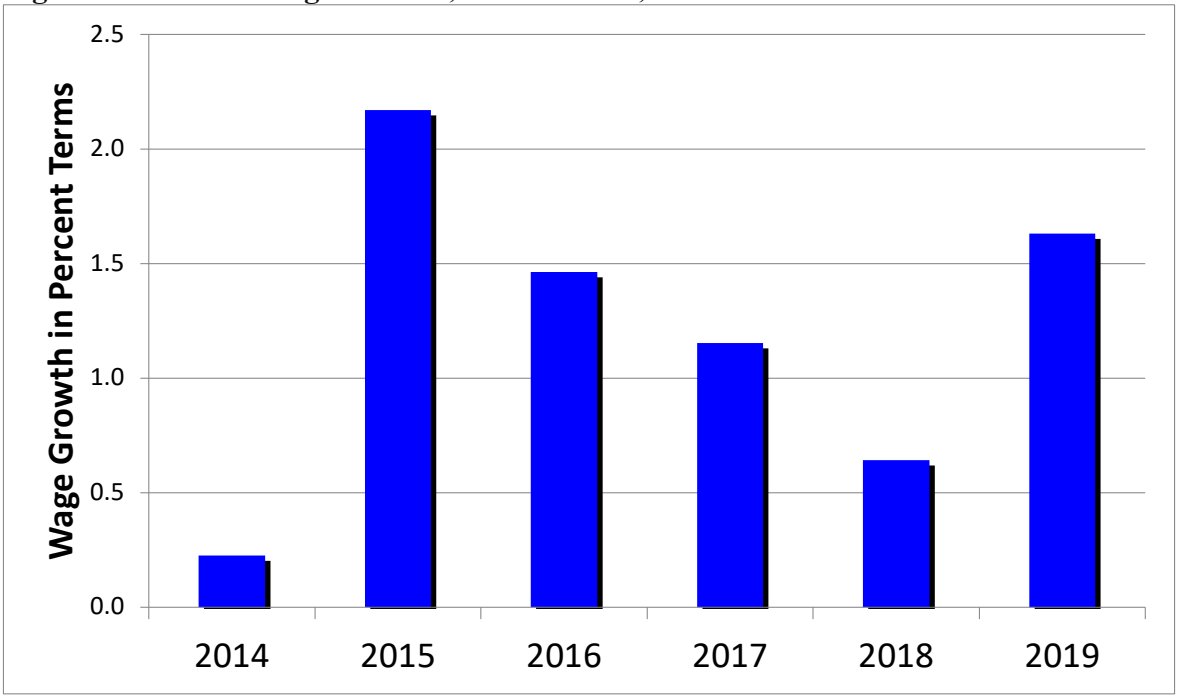
We only have one year of data since the tax law changed, but early US evidence does not suggest quick wage gains from the legislation, thus casting doubt on the rent-sharing mechanism, which should be nearly immediate. Figure 6 shows annual wage growth. 2018 wage growth is positive, and thus better than the years coming out of the Great Recession, but it is slower than the pace of wage growth in 2015, 2016, and 2017. 2019 wage growth is similar to that in 2015-17.[32]

However, there is more evidence of gains to shareholders. With Trump's election, and the promise of future corporate tax cuts, the stock market likely priced in this probability as events unfolded, rising strongly in 2017. The Dow Jones Industrial Average (DJIA) Index rose by 25 percent in 2017. In contrast, 2018 was a volatile year, and the stock market closed about 8 percent down. In 2019, it surged again, rising by 26 percent. Figure 7 shows the DJIA index since 2014.

[32] This series is provided in real terms. Considering instead the nominal average hourly earnings of all employees over the same period, adjusting to real terms using the CPI-U, real wage growth averaged 0.9 percent in the post-TCJA years (2018 and 2019) and averaged 1 percent in the five years pre-TCJA. Regardless of data series, there is no noticeable impact of the TCJA on wage growth.

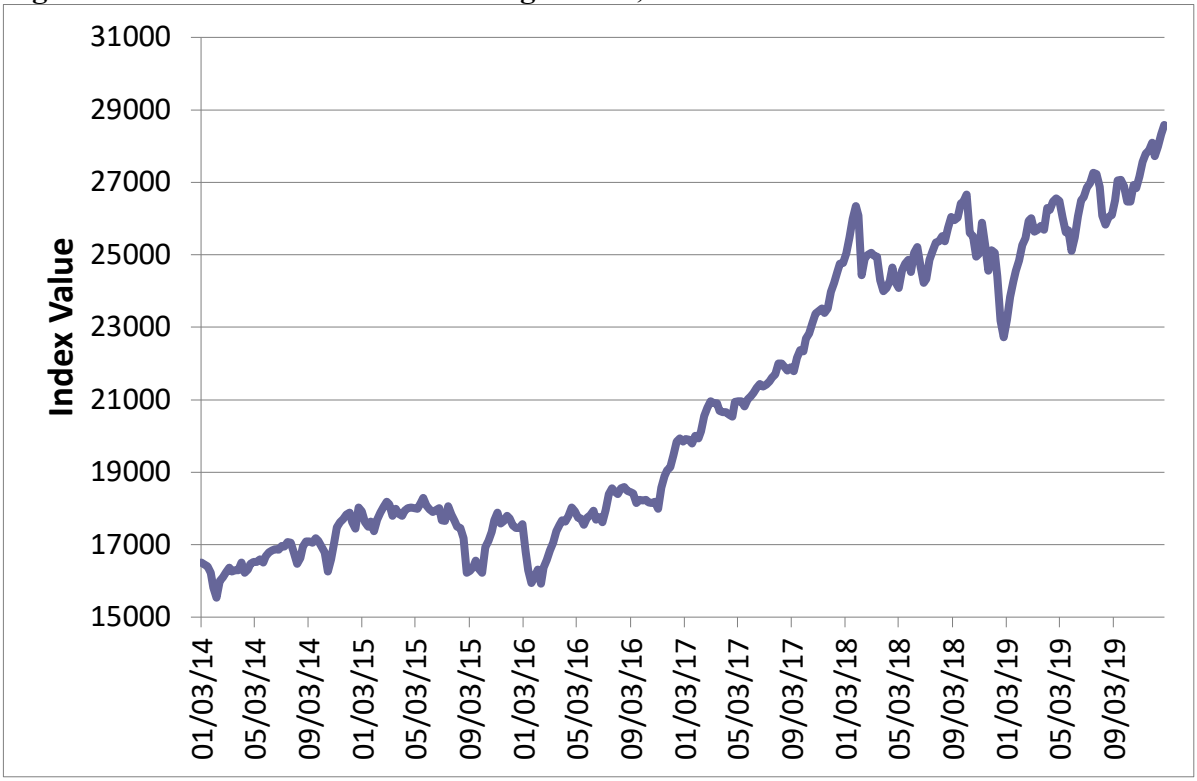
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Figure 6: US Real Wage Growth, Annual Rate, 2014-2019



Source: Federal Reserve Economic Data. Median usual weekly earnings, for those employed full time.

Figure 7: Dow Jones Industrial Average Index, 2014-2019



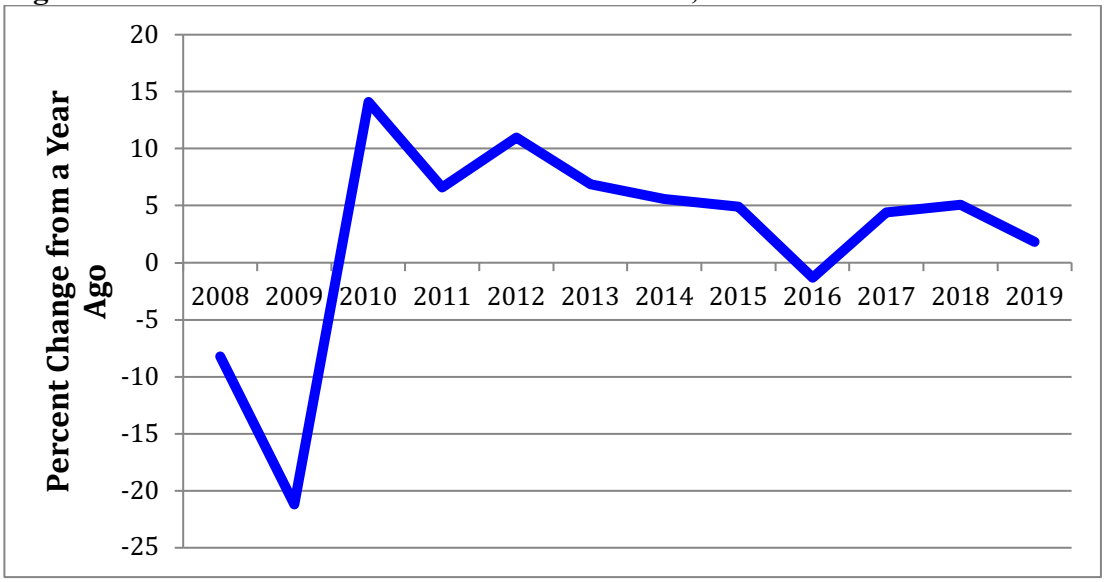
Source: Federal Reserve Economic Data. Observations are weekly, ending Fridays.

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Also of note, stock buybacks hit record levels in 2018.[33] Stock buybacks are one sign that the corporate tax cut windfalls of the TCJA were not simply directed toward new investment spending. Many companies lacked significant new investment opportunities, and instead chose to return the tax savings to their shareholders.

Gross domestic private investment has been far stronger than it was during the Great Recession, but the percent increase in investment has been quite comparable in 2018 to other recent years, as shown in Figure 8. Investment in 2019 was lower than typical investment in years prior. Data for other series, such as property, plant, and equipment investment in manufacturing, as well as gross fixed capital formation, display very similar patterns.[34]

Figure 8: Real Gross Private Domestic Investment, 2008-2019



Source: Federal Reserve Economic Data.

In addition to the corporate tax rate cuts in the TCJA, the law also allowed full expensing of new investment on a temporary basis, and that undoubtedly provides a short term stimulus to new investment, in part since companies may want to accelerate planned investments to take advantage of the temporarily more generous tax treatment. Of note, the revenue cost of expensing, relative to the corporate tax cuts, was far more modest. Also, expensing targets only the normal return to new capital investment, rather than rewarding older capital investment, or excess returns above the normal rate of return. Therefore, expensing is often a better policy tool (than corporate rate cuts) for encouraging new investment.

Still, International Monetary Fund economists have argued that the investment response to the Tax Act was more sluggish than expected, a finding that Koop et al. (2019, p.2) attribute to "a lower sensitivity of investment to tax policy changes in the current

[33] See, e.g., Yardeni et al (2019).
[34] All data are from Federal Reserve Economic Data (FRED) database.

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environment of greater corporate market power". They also discuss a role for increased uncertainty.

In short, there is nothing in the early data, or the larger literature, to suggest that JCT and TPC need to revise upward their assumptions regarding the small share of the corporate tax that is borne by labor. Therefore, it seems straightforward to take their estimates as our best guess as to how the legislation is likely to affect the distribution of after-tax income in the United States. And, unfortunately, their verdict is clear. Despite over 35 years of increasing income inequality and relative wage stagnation, this legislation actually compounds economic inequality.

Beyond the tax cuts, there is another important provision in the legislation that worsens economic outcomes for most Americans: the repeal of tax penalties enforcing the individual mandate for the Affordable Care Act. This provision was presumably included in the legislation both as a deliberate attempt to sabotage "Obamacare" as well as a way to finance larger tax cuts. The JCT score placed the savings at over $300 billion over ten years, due to fewer federal subsidies that would be required for low-income people purchasing health insurance.

Absent the mandate, fewer people will have health insurance. The CBO estimated that mandate repeal would mean that millions fewer Americans would have health insurance by 2027.[35] This increases the economic insecurity of those at the bottom of the income distribution, who will experience worse health outcomes and a higher risk of medical bankruptcy.

This change also weakens the structure of the Affordable Care Act, since fewer people in the insurance pool will increase premiums for the remainder. When people wait until they are sicker to seek healthcare, healthcare is more expensive for the system as a whole, raising premiums. Already, there has been a noticeable effect on 2019 premiums.[36] Higher health insurance premiums work against the modest tax cuts that are received in the lower and middle parts of the income distribution, eliminating any possible gains in disposable income for these groups. In fact, the predicted increase in health insurance premiums was estimated to be several times the size of the typical tax cut for families in the bottom 60 percent of the income distribution.[37]

Within the TCJA, there are also ample missed opportunities. The child tax credit maximum was expanded from $1,000 to $2,000, but since it is not fully refundable, the expansion did little to help those at the bottom of the income distribution, whereas the credit was expanded to reach more upper-income taxpayers. In addition, the child tax credit was limited to those with social security numbers, leaving undocumented children behind.[38]

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[35] See Congressional Budget Office (2017).
[36] See Kamal et al (2018).
[37] This is true for all US states with available data. For a complete comparison of these figures, see the appendix of Huang (2019).
[38] See the February 2019 Congressional Testimony of Chye-Ching Huang, Huang (2019) for more on these flaws.

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IV. Efficiency

Tax systems exist in order to raise revenue for the state, and a progressive tax system can also help reduce inequalities in the distribution of income. Beyond these goals, the tax system should also aim to be efficient, by avoiding unnecessary distortions and waste. Of course, some distortion is typically inevitable, since taxation discourages the activities that are taxed. The only exceptions are head taxes, which are both non-distortionary (since they are unavoidable) and inequitable, and Pigouvian taxes, which are taxes that work to counteract negative market failures. A carbon tax is an example of a Pigouvian tax; such a tax reduces carbon emissions in a socially desirable (and efficient) way, since markets left to their own devices generate inefficiently high quantities of carbon emissions.

However, since Pigouvian taxes are typically not sufficient to finance the needs of the state, and head taxes are rightly rejected for being inequitable, most countries rely on income or consumption taxes. These taxes inevitably discourage economic activities such as working (and, in the case of income taxes, saving), since they reduce the economic gains associated with these activities.

The TCJA cuts many taxes; in that respect, its colloquial title is accurate. According to the JCT's 10-year estimates, the corporate tax cuts totaled over $650 billion (net), the pass-through tax cuts totaled over $250 billion (net), and the individual tax cuts were also substantial. This section will consider the efficiency effects of these types of tax cuts, recognizing that positive tax rates for these types of taxes are required in order to raise adequate revenues within the US tax system. (Thus, we can not simply say that any tax cut is intrinsically good.)

First, consider the corporate tax cuts. Some have argued that capital should be taxed more lightly than labor on efficiency grounds, and early theoretical models in economics buttressed this argument, since they showed that capital taxes could be quite distortionary. However, modern models including more realistic assumptions indicate that the optimal capital tax rate could be at least as high as the optimal labor tax rate.

For example, while early work such as Atkinson and Stiglitz (1976) suggested a zero tax on capital, later work by both authors concluded otherwise, and both took policy positions that were in stark contrast to this result.[39] The more realistic assumptions that create a positive role for capital taxation include differences in the ability to earn returns on capital, a role for inheritance, imperfect or incomplete capital markets, and uninsurable shocks to rates of return. There is also a political economy rationale for capital taxation, in order to avoid extreme redistributions of wealth due to unchecked inequality.[40]

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[39] See, e.g., Atkinson and Stiglitz (2015), the most recent edition of their text *Lectures on Public Economics*, as well as Stiglitz (2012) and Atkinson (2015).

[40] For examples of papers with these arguments, see Conesa, Kitao, and Drueger (2009), Piketty and Saez (2012, 2013), and Farhi, Sleet, and Werning (2012). Recently, Straub and Werning (2019) show that optimal capital tax rates are higher than those found in the early literature, even when relying on the very same theoretical models.

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Excess returns to capital above the normal market return, resulting from market power or rents, also create a powerful rationale for capital taxation. Since much of the capital income tax base reflects these excess returns, that implies a far higher ideal rate of capital taxation. In most models, taxes on *excess* profits do not diminish the incentive to invest, although they may affect risk-taking behavior. Evidence from the US corporate tax base indicates that a rising share of the tax base, now likely over 3/4 , is comprised of excess returns.[41]

Thus, the tax system should keep a robust role for capital taxation for efficiency purposes, bearing in mind that most taxes (aside from head taxes and Pigouvian taxes) generate some inefficiencies. To ensure adequate capital taxation, the corporate tax is a vital tool, since about 70 percent of US equity income goes untaxed by the US government at the individual level.[42]

Prior to the TCJA, the corporate tax system provided wildly different tax treatments for the normal return to capital investments, with equipment facing large negative tax rates if debt-financed, and positive rates if equity-financed. Post-TCJA, and with full expensing provisions (which are temporary), the normal return to equipment investments faces a zero tax rate if equity-financed, and continues to face a negative tax rate if debt-financed.[43]

Indeed, in the presence of expensing, the corporate tax falls only on excess returns to capital, thus reducing the argument for such a low corporate tax rate. However, there remain arguments for a low corporate rate for international competitiveness reasons. If capital can move abroad in response to taxation, that lowers the optimal capital tax rate. Issues surrounding the international mobility of capital are addressed in Section V. For now, it is important to remember that the elasticity of the tax base is itself a policy variable; choices about tax regimes affect the ability of capital to move to avoid taxation.

At present, the current corporate tax system does not burden ordinary (equipment) capital at all, and it lightly taxes (at rates lower than top labor rates) the excess return on such capital. Thus, from an efficiency perspective, the tax system is under-taxing both the normal return to capital as well as excess returns. Developments in the theory of capital taxation suggest that higher tax rates are likely optimal. Beyond that, the empirical literature has failed to show any clear relationship between capital tax rates and efficiency outcomes. Therefore, the TCJA has moved our tax system away from ideal capital taxation, by unduly lightening the tax burden on corporate income.

The TCJA also raises over $300 billion from a one-time tax on the prior foreign earnings of US multinational companies, at either 8 or 15.5 percent, irrespective of whether profits are repatriated. The 15.5 percent rate applies to liquid assets, and others are taxed at 8 percent. The tax is payable over 8 years, back-loaded, so that most payments occur in years 6, 7, and 8.

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[41] See Power and Frerick (2016).
[42] Burman, Clausing, and Austin (2017).
[43] See, e.g., the calculations from Tables 1-5 of Gravelle and Marples (2018).

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The foreign earnings that face the deemed repatriation tax would have normally been taxed at the prior US rate (35 percent), less any foreign tax credits, upon repatriation. Thus, the TCJA tax treatment represents a tax cut relative to prior law. From an efficiency perspective, there is no good argument for a tax-break on earnings that have already been earned. Indeed, there are good arguments for higher than normal taxes on prior earnings, since one can not discourage something that has already happened! (However, one does risk probabilistically affecting expectations about future tax policy increases.)

The TCJA also provides large-pass through business tax cuts, totaling over $250 billion over ten years, the combination of $414 billion in cuts due to a 20 percent pass-through income deduction and an offsetting revenue gain of $150 billion from disallowing some losses. These provisions, like the individual tax cuts, expire at the end of 2025. One intention of these provisions was to "give something" to the pass-through business sector, alongside the large corporate tax cuts. This neglects the idea that businesses could always incorporate if they wanted to qualify for the corporate tax treatment, although there may be costs associated with undoing that decision.

Like the corporate tax cuts, these pass-through tax cuts also favor capital income relative to labor income, lowering the overall tax burden on capital. Taxpayers with sufficient flexibility, and particularly those at the top, will have a greater incentive to disguise labor income as business income in order to benefit from lighter tax treatment.

Beyond these concerns, the pass-through deduction took on a rather particular form, since the drafters of the legislation went out of their way to favor some professions relative to others. Those professions that won lighter tax treatment included real estate, oil and gas, manufacturing, and architecture, while those that did not qualify for the pass-through deduction included medicine, law, accounting, consulting, and professional sports. There was no rationale provided for such distinctions, and some have suggested that they stemmed from a "tribal" desire to reward industries based on their presumed political affiliations. Regardless of motive, it is clear that the industrial favoritism of the provision is inefficient, since it artificially moves resources toward the tax-favored industries and away from the other industries. In addition, the pass-through provisions are also predicted to lead to a great deal of wasteful tax planning as businesses that would otherwise not qualify for the deduction seek to rearrange their business structure so that they might nonetheless qualify. Shaviro (2018) describes these concerns in far greater detail.

The individual tax provisions show no clear efficiency improvements, beyond the fact that lower rates generally reduce the inefficiency of labor taxation. However, since these lower rates are deficit-financed, they may well imply higher tax rates in the future, with associated increases in inefficiency.

Under the law, due to the higher standard deductions, the share of taxpayers that itemize will shrink substantially, reducing the tax preferences for home mortgage interest, state and local taxes, high medical expenditures, and charitable deductions.[44] There are good arguments for limiting some of these tax incentives, particularly the home-mortgage

[44] See estimates from Tax Policy Center (2018).

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interest deduction. Yet eliminating these tax incentives for some taxpayers, while leaving them intact for the (typically wealthier) taxpayers that still itemize, does not satisfy principles of good policy design, as discussed by Viard (2019). For example, wealthier households that continue to benefit from the home mortgage interest deduction are unlikely to change their home ownership rates due to the tax preference, whereas less prosperous prospective homeowners are now less likely to benefit from the home mortgage interest deduction, since they are less likely to itemize.

Among those that itemize, state and local tax deductions are limited to $10,000 under TCJA. This is a clearly progressive tax increase, since the limit burdens richer taxpayers more as their tax payments increase, but this provision also has some odd design features. The provision raises tax payments more (all equal) for those who live in high-tax states. The fact that many high-tax states are also "blue" states has raised further suspicion of political motives.

This provision also "double-taxes" some income, since a taxpayer that is over the cap of $10,000 will have to pay federal tax on income that has already been paid (in tax) to the state or locality.[45] Of course, a second layer of tax is not substantively different from a higher tax; the number of times income is taxed is less meaningful that the total tax burden faced by that income. For a taxpayer in the top (now 37 percent) bracket, in a state with a 10 percent income tax, this provision would increase the tax rate on their marginal dollar by 3.7 percent.

The doubling of the estate tax exemption threshold reduces the number of estates paying the estate tax from less than 2 in 1,000 estates to less than 1 in 1,000 estates. This is likely the most regressive change in the tax code, as it only benefits the top 2/10 of one percent of estates. While in theory this provision could encourage savings from those seeking to accumulate estates, it also reduces incentives for labor and savings for those that inherit.[46]

In sum, while there are elements of the TCJA that increase efficiency, the corporate and pass-through business tax cuts unduly preference capital income. In addition, the pass-through tax cuts introduce new distortions between different forms of pass-through business income. The individual tax cuts, as a group, do not have clear efficiency effects. Lighter tax rates now will likely be offset by higher tax rates in the future, and many of the other provisions have conflicting effects.

[45] This is not as unusual as it seems. For example, state income taxes often include in their tax bases income that includes federal tax payments.

[46] Because heirs will be richer, they will want to consume more of all normal goods (goods for which consumption increases with income). Normal goods include leisure and present consumption (as a whole). Thus, heirs will work less and save less.

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V. The Offshoring of Multinational Activity Before and After TCJA

Prior to the TCJA, there were two large concerns about the US system for taxing international corporate income, with competing implications. The first concern came from U.S. multinational company interests, who argued that the US tax system was not "competitive", since the US statutory rate was relatively high (in comparison with other countries) and the US government purported to tax the worldwide income of its resident companies, whereas most foreign countries' tax systems purported to exempt foreign income from taxation, under "territorial" systems. The second concern was that aggressive profit shifting by multinational companies was eroding the corporate tax base.

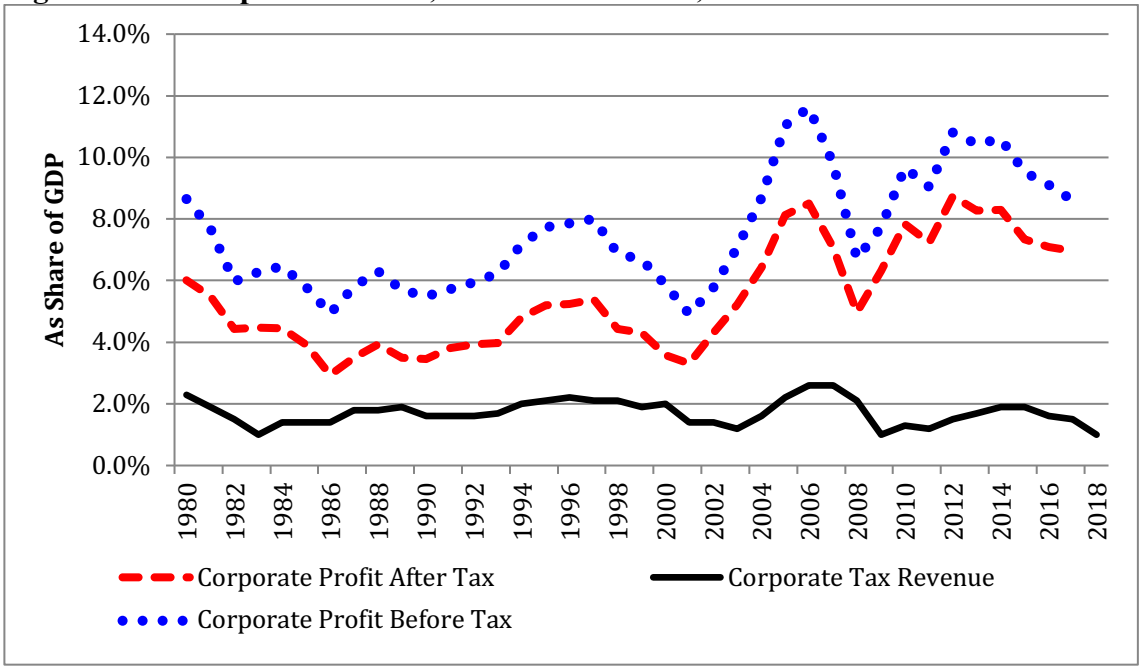
Regarding the competitiveness concern, both the high US statutory tax rate and the "worldwide" nature of the US tax system had more bark than bite. A narrow US tax base lowered effective rates far below the statutory rate (of 35 percent), and US multinational companies often achieved particularly low effective rates due to aggressive offshore profit shifting. With respect to the "worldwide" system, the US government raised almost no revenue from the taxation of foreign income, since tax was not due until repatriation, and companies were adept at shielding foreign income from US tax by using foreign tax credits or simply waiting for more favorable tax treatment. Waiting paid off: there was a holiday in 2005 (with repatriation allowed at a 5.25 percent rate), and there was also favorable treatment of prior foreign earnings in the TCJA, where earnings were taxed at 8 or 15.5 percent.

In reality, most countries operate far from either end of a spectrum between "pure" territoriality (with no claims on any form of foreign income) and a "pure" worldwide system (where foreign income would be treated the same as domestic income, and taxed immediately). Indeed, it is unclear whether the old US system (which purported to be worldwide) or the new US system (which is purportedly territorial) is more "territorial". The new US territorial system still taxes some foreign income, and the foreign income that is taxed is taxed immediately.

Was the old US tax system insufficiently competitive? By many metrics, US multinational companies were "competitive". Figure 9 shows that US corporations earned historically high after-tax profits, 50 percent higher relative to GDP in recent years than in the closing decades of last century. Corporate tax revenues, on the other hand, were relatively stable as a share of GDP.

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Figure 9: US Corporate Profits, and Tax Revenues, 1980-2018



Source: Federal Reserve Economic Data (Profits), Congressional Budget Office (Revenue).

US-headquartered companies also occupied a disproportionate share of the Forbes Global 2000 lists of top global companies, shares far outweighing the US share of world GDP.[47] Further, US multinational companies were adept at profit shifting, often using clever legal and accounting arrangements to achieve single-digit effective tax rates. Due to a narrow corporate tax base as well as profit shifting, US corporate tax revenues were typically about fifty percent lower (as a share of GDP) than those in peer countries.[48]

Yet, while there was scant evidence that competitiveness was a serious problem, there was abundant evidence that corporate tax base erosion was a large and increasing problem. By 2017, the US government lost over $100 billion a year due to the profit shifting of multinational companies. More than half of all foreign earnings were booked in just seven very low-tax havens, and profits relative to GDP in such countries reached clearly implausible magnitudes.[49]

From this starting point, the TCJA attempted to address both competitiveness and tax base erosion problems, regardless of the inherent inconsistency between the two desiderata. Those seeking competitiveness wanted lower tax burdens for multinational income, and those worried of tax base erosion typically aimed for higher tax burdens on the same income. Toward the competitiveness goal, the TCJA dramatically lowered the corporate

[47] See Clausing (2016, 2018).
[48] For details on the competitive position of US multinational companies, see chapter 7 of Clausing (2019). The large scale of pass-through businesses in the United States also contributes to lower corporate tax revenues, and pass through businesses also generate tax avoidance concerns; see Cooper et al (2016).
[49] For a discussion of the evidence, see Clausing (2020a).

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tax rate from 35 percent to 21 percent. In addition, the TCJA adopted territoriality as the default stance for the US tax treatment of foreign income, exempting foreign income from taxation.

However, toward the corporate tax base protection goal, the TCJA did not allow all foreign income to be exempt from taxation. Beyond the first ten percent return on assets, the GILTI (for global intangible low-taxed income) minimum tax applies, taxing companies' foreign income when the foreign tax rate falls below a threshold. A second add-on minimum tax, the BEAT (for base erosion anti-abuse tax) also applies; together these taxes raise about the same amount of revenue that the other international provisions lose. Table 3 summarizes the key TCJA provisions that affect the corporate tax base.

Table 3: International Incentives Before and After the TCJA

	Before TCJA	After TCJA	Effect on Profit Shifting	10 yr JCT Score, $b
Statutory Corporate Rate	35	21	Reduced incentive to shift out of US base	-1,349 (net: -654)
Tax Treatment of Foreign Income	No tax until repatriation, then 35 less foreign tax credit[50]	Not taxable unless subject to minimum tax	Increased incentive to shift out of US base	-224
Global Minimum Tax	N/A	0 until threshold, then 10.5; up to 13.125 if blended with income from higher tax countries[51]	Reduced incentive to shift profits to havens; increased incentive to earn in other countries	112
Foreign-Der. Intangible Income Deduction (FDII)	N/A	Tax preference for profits from export sales above threshold return on assets	Likely to have negligible effect	-64
Base Erosion and Anti-Abuse Tax (BEAT)	N/A	Add-on minimum tax when payments to foreign related parties exceed threshold	Reduced incentive to shift income out of US base	150

Note: Revenue numbers are from the December 18, 2017 tables provided by the JCT (JCX-67-17).

[50] Lighter rates may apply, or be anticipated, due to holidays, anticipated holidays, or expectation of future favorable treatment upon transition to a new tax system. Permanently reinvested earnings are not taxed in the United States, but might be expected to encounter deemed repatriation tax upon transition to a territorial system.

[51] These rates are scheduled to increase after 2025, to 13.125 and 16.4 percent. This analysis ignores interaction effects between the provisions.

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Table 3 indicates clearly that the net effect of the international provisions is nearly a wash (a small revenue loss) whereas the rate cut reduces revenue substantially.[52] As a consequence, the international provisions were a disappointment to many. From the perspective of the multinational business community, the corporate tax base protections were more onerous than expected; they would have preferred a purer territoriality. Whereas from the perspective of those worried about tax avoidance and corporate tax base erosion, including this author, the lack of any revenue gains from the international provisions was disappointing, particularly from a starting point where the US government was losing so much revenue due to profit shifting.

Moreover, the law introduced troubling new incentives to offshore real economic activity (such as investment and jobs). For instance, for the GILTI, the first ten percent return on assets in exempt from the minimum tax. This means that additional *physical* investments of plant and equipment in low-tax countries reduces the bite of the GILTI tax, providing a direct incentive for offshoring real economic activity.[53]

In addition, TCJA introduced a new export incentive, the FDII, that *also* encourages the offshoring of real investment.[54] The FDII provides a tax break for profits from US export sales. But, since the tax preference is only given for export income *above* a certain return on assets, the more US assets (all else equal), the less likely the company will qualify for the break. Thus, this provision also rewards the offshoring of US assets.

Comparing tax treatment under GILTI and FDII, holding other factors constant, it is typically preferable for a company to serve the US market from a tax haven, since both foreign and US income receive a tax preference. Further, increased physical assets increase the amount of tax-free income abroad, but have the opposite consequence at home. Indeed, both GILTI and FDII directly encourage the offshoring of plant and equipment; this is a new feature of tax law and a perverse consequence of the TCJA. Beyer et al. (2019) provide early evidence of increased foreign investment in the wake of TCJA that is consistent with these offshoring incentives.

Under both current and prior law, there are tax incentives for shifting paper profits (distinguish plant and equipment). Under prior law, profits earned in tax havens were not taxed by the United States until repatriation, growing tax-free in the meantime; such profits

[52] Horst (2019) reports an admittedly preliminary analysis of the revenue effects of TCJA's international provisions, concluding that their revenue impact will be disappointing relative to JCT estimates.

[53] From a company perspective, the strength of this incentive depends on the assumed rate of return, the tax treatment of investment abroad, and the foreign tax rate. Whether offshoring makes sense for particular investments depends on the interplay of these factors.

[54] Many believe that this FDII provision may not be compatible with WTO obligations due to the preference for export income, although there is some ambiguity regarding that issue, as discussed in Sanchirico (2018). However, the FDII is unlikely to be an effective way to encourage US intellectual property activity or to buttress the tax base, and its ineffectiveness may obviate the urgency of a WTO challenge.

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often qualified for favorable tax treatment upon repatriation (due to the 2005 holiday or the lighter repatriation tax under the TCJA).

Under the new law, the incentive for profit shifting has increased for some companies and circumstances, and decreased for other companies and circumstances. As Table 3 summarizes, the net budget effect of the international provisions implies that little progress has been made at reducing the revenue costs of profit shifting; some provisions worsen the problem, whereas others make it better. Moving to a territorial tax system should increase the incentive to shift profits, since there will be no tax due upon repatriation for income with territorial treatment, yet both the US rate reduction and the base protection measures (GILTI and BEAT) should reduce profit shifting incentives.

Among these factors, the statutory rate change is more minor than it seems, since the vast majority of the revenue lost due to profit shifting occurs with respect to the lowest tax rate countries, as documented in Clausing (2020a). (Simply put, if you can get to 2 percent, why pay 21 percent?) On the other hand, the BEAT should unambiguously reduce profit shifting incentives, since it is triggered by excess payments to related foreign parties, a key mechanism for profit shifting.

The effects of the GILTI are particularly subtle. The tax is administered on a global basis, such that tax credits from earnings in high-tax countries can offset GILTI tax due on haven income. For companies with excess foreign tax credits, such that all GILTI tax is offset, the new law should increase profit shifting activity, since marginal dollars of income in haven countries will not trigger GILTI tax (due to the excess credits) and will also not face tax due upon repatriation. Also, the first ten percent return on physical assets does not trigger GILTI tax, so companies have an increased incentive to shift profits abroad until that threshold is reached, since there will be no GILTI tax and no tax upon repatriation.

Still, for companies without excess foreign tax credits that face the GILTI tax, profit shifting incentives are clearly reduced. Indeed, the difference in the possible tax treatment of income abroad is highly compressed relative to prior law. The GILTI raises the lowest possible tax rate for excess income (beyond the 10 percent return on assets) to 10.5 percent, and the GILTI also simultaneously reduces the "bite" of most higher-tax foreign tax payments, since those can be used to offset GILTI tax, due to the global-averaging that occurs before the minimum tax is applied.

Unfortunately, the global nature of this minimum tax creates its own set of perverse tax incentives. For companies without excess foreign tax credits, when they earn a dollar of income in Bermuda, it should generate 10.5 cents of GILTI tax, since there will not be sufficient tax credits from operations in high-tax countries to offset the GILTI tax due. For such a company, consider the tradeoff between earning an additional dollar in the United States (with our new 21 percent tax rate) or India (with a 30 percent tax rate). If the dollar is earned in the United States, the two dollars generate 31.5 cents in tax (10.5 cents from the GILTI on the Bermuda income and 21 cents from the US tax). If the additional dollar is instead earned in India, the two dollars generate 30 cents in tax, paid to the Indian

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government, since the tax credits from the Indian tax payment more than offset any GILTI due on the Bermuda income.

This simple example illustrates two important features of the GILTI tax that arise from its global nature. First, for companies without excess credits, it should reduce profit shifting to havens by compressing the possible tax difference between high and low tax foreign countries, which are diminished by the GILTI. Tax differences between the United States and havens are also reduced; those will no longer exceed 10.5 percent (the US rate less the GILTI rate).

Second, for companies without excess credits that have haven income, the US becomes the *worst* place to book income, even relative to other high-tax countries, since US income does not offset GILTI tax but foreign income does. Indeed, Clausing (2020a) shows that unless the foreign tax rate reaches 52.5 percent, foreign income is tax-preferred in comparison with US income for such companies.[55] While this is an undesirable result for US government revenue, it is nonetheless helpful to other non-haven countries that have their own tax avoidance problems. Indeed, it is possible that the GILTI could be a step forward for international cooperation in this area.

However, the GILTI could be far more effective in protecting the US corporate tax base. Analysis within Clausing (2020a) shows that a per-country minimum tax would generate far more US revenue and lead to a much greater reduction in haven country income, since the minimum tax consequences of haven income would no longer be blunted by credits from other foreign income.

Unfortunately, evidence so far shows little immediate effect on the flow of US affiliate foreign income from haven countries. In 2018 and 2019, the first two years the TCJA was in effect, US multinational companies booked an amount equivalent to 1.5 percent of GDP in seven havens, an identical ratio as the average of the five years immediately preceding TCJA (2013-2017).[56] In absolute terms, from 2017 to 2019, earnings in these seven havens increased from $471 billion to $534 billion, and the share of all foreign earnings in those seven havens was stable, at about 61 percent. Figure 10 shows the longer trends of US MNC earnings in the big seven havens, as a share of US GDP and as a share of foreign earnings; the data post-TCJA (2018 and 2019) are nearly indistinguishable from the years prior to TCJA.

Of course, as with other elements of the law, it may take time for the full effects to materialize. Beyond that, the polices of other countries are not standing still, in ways that will continue to impact the incentives for both offshoring real activity (plant and equipment and jobs) as well as the shifting of paper profits.

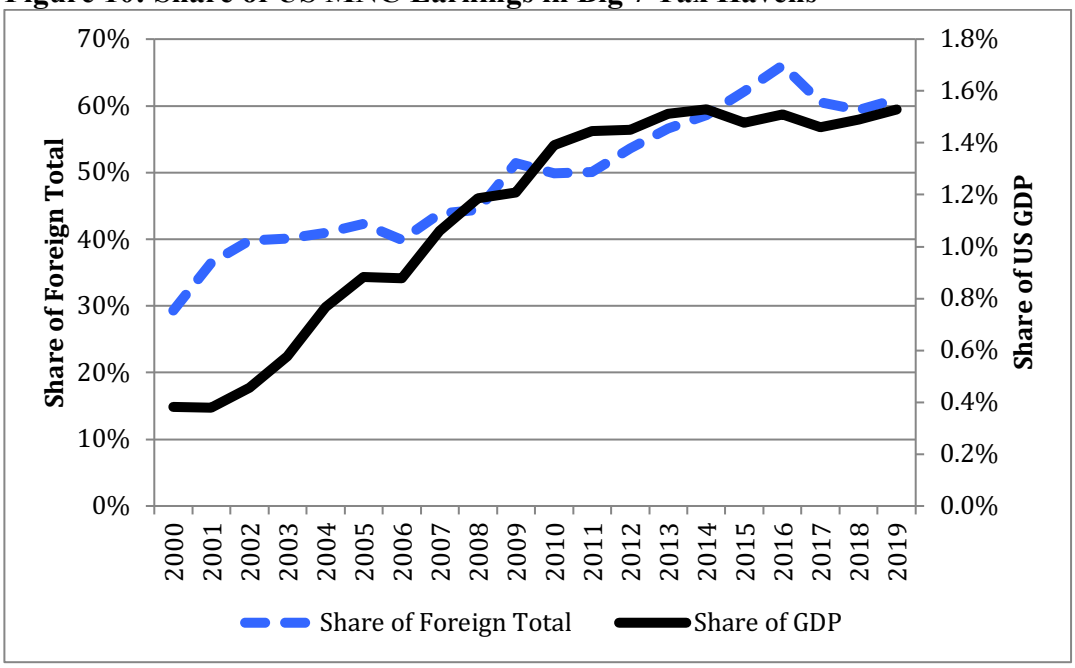
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[55] This is because the foreign tax rate becomes $.105 + .2*t_f$, where t_f is the foreign tax rate. Only 80 percent of foreign tax payments are creditable.

[56] These data include the seven largest havens in the BEA direct investment database: Bermuda, the Caymans, Ireland, Luxembourg, the Netherlands, Singapore, and Switzerland. The data show only those earnings attributed to US shareholders; earnings are shown after payments of foreign tax.

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Figure 10: Share of US MNC Earnings in Big 7 Tax Havens



Note: Data are from the US BEA. Data for 2019 are based on the first three quarters of data scaled by (4/3). The big seven havens are: Bermuda, the Caymans, Ireland, Luxembourg, the Netherlands, Singapore, and Switzerland.

VI. Tax Administration

The TCJA was sold as providing substantial simplification. On the business side, that argument is nearly impossible to make due to the complexity surrounding the new pass-through income deduction as well as the complexity of the new international tax rules. On the individual side, there is a stronger case for simplification. For example, the Tax Policy Center estimates that the number of tax units that would itemize in 2018 declined from 37 million (under old law) to 16 million under TCJA. JCT has predicted a decline from 46.5 million itemizing returns in 2017 to 18 million in 2018.[57]

For those that are no longer itemizing, they will no longer need to keep records of their charitable contributions, home mortgage interest payments, or property tax payments. (State income tax record-keeping is still needed for filing state income taxes.) While those simplification gains are not zero, they are also not large. For those used to itemizing, keeping track of these items was not difficult, and if the decision to itemize is borderline, one needs to track these numbers regardless.[58]

[57] For data, see Tax Policy Center (2018) and Joint Committee on Taxation (2018), Table 5.
[58] As one anecdotal piece of evidence, I help several friends with their taxes. When some ended up not itemizing, it really did not save more than a minute or two per return. And record-keeping costs for these items are quite minor.

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In addition, much fanfare was made about reducing the complexity of the tax forms and shortening the main form, the 1040. However, the 1040 form was redesigned by moving common items off the main form and into a new schedule 1 that feeds into the 1040. Since schedule 1 includes items like state tax refunds, schedule C income, capital gains, and unemployment compensation, many taxpayers were simply confused by the need for the new form, and they were required to fill out and submit more forms in total. In general, simplification on the individual side was typically either small or non-existent.

On the other hand, there is no question that the business income provisions of TCJA made our tax laws more complex. For pass-through businesses, there are many hurdles for determining whether one's business income is "qualified business income" in order to benefit from the 20 percent pass-through deduction. A Wall Street Journal tax reporter, Richard Rubin, even made a comic video detailing aspects of this complexity.[59]

As mentioned above, the disparate treatment of different industries furthers the complexity by increasing the incentive for clever tax planning or organizational changes to take advantage of the deduction. Shaviro (2018) doesn't mince words, describing the pass-through provision as achieving "a rare and unenviable trifecta, by making the tax system less efficient, less fair, and more complicated. It lacked any coherent (or even clearly articulated) underlying principle, was shoddily executed, and ought to be promptly repealed." Despite this advice, a flawed legislative process was followed by a flawed regulatory process, and the complexity clearly remains.[60]

The international tax provisions are also tremendously complex. In part, this complexity stems from inevitable conflicts between two competing desiderata in the legislation: (i) encouraging the "competitiveness" of US-based multinational companies by exempting their foreign income from US taxation (a so-called "territorial" system) and (ii) protecting the corporate tax base from erosion due to increased profit shifting.

The US international tax system has often been described as stupefying and mind-numbing in its complexity. However, this new slew of acronyms (GILTI, FIDII, and BEAT) together with existing complexities surrounding foreign tax credits, expense allocation, interest deduction limitations, and other provisions, make our international tax system only more complex. In the early days of the legislation, experts at top accounting firms were simply flabbergasted by the intricacies of the new law, and often confessed that they were not certain of its ultimate impact on their client taxpayers. Colorful byzantine flowcharts were generated to try to analyze the net impact of the law, but the sheer complexity made clarity elusive. Even as the effects of the legislation began to clarify, the answer was most often "it depends".

All that said, one has some sympathy for the drafters of the law. Given the constraints provided by the fact that multinational companies separately account for income and

[59] The video is available here: https://www.wsj.com/video/series/talking-taxes/want-a-20-business-deduction-here-are-the-obstacles/3CB05210-036E-4FFF-AD91-7DA08EE6D06A

[60] For details on the regulatory process, see Oei and Osofsky (2019).

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expenses in each country of operation (instead of being treated as a unitary whole), complexity is unavoidable if one is striving to couple a "territorial" tax system with corporate tax base protections. As troubling as the GILTI and the BEAT may be in terms of complexity, the legislation is better with these provisions than it would be without them; the provisions do provide some limits on tax avoidance.

VII. Fixing The TCJA

The prior sections systematically analyze five flaws with the TCJA: (i) the law finances tax cuts with deficits, reducing our ability to respond to the next recession and to fund urgent fiscal priorities, (ii) the law worsens the inequality of after-tax incomes, reinforcing nearly four decades of increasing income inequality and slow wage growth (iii) the law fails to improve efficiency, worsening the present under-taxation of capital, (iv) the law encourages offshoring of plant and equipment while failing to make a substantial dent in our large profit shifting problem, and (v) overall, the tax law makes the tax system more complex.

Given the magnitudes of the aforementioned flaws, one simple solution would be to simply repeal the law. In this section, I instead suggest more incremental changes, repealing some provisions and building on others, with the overall goal of not just reversing the damage caused by the TCJA, but improving tax law relative to its pre-TCJA starting point.

Table 4 shows the net revenue effects of these suggested changes, including both individual and business tax changes. The ten-year revenue scores are calculated for the same window that JCT used to estimate the ten-year revenue effects of the TCJA.

Some of the legislative changes under TCJA are so harmful that repeal is the right answer. For instance, repealing the pass-through deduction would make the tax system simpler, fairer, and more efficient, so that is an easy call. Reinstating the prior tax treatment of estates (by undoing the doubling of the exemption) and of top incomes (by raising the top brackets) seems similarly straightforward. Also, the ACA individual mandate enforcement needs to be reinstated.

In other areas, there are tougher judgments. One might keep the lower tax rates on the lower brackets in order to provide some tax relief to groups that have experienced slow wage growth. It is also tempting to restore personal exemptions (which make tax burdens more sensitive to family size) while lowering the standard deduction, even if more people itemize.

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Table 4: Incremental Changes to the TCJA

	Under TCJA	Suggested Change	Implied 10 yr Score, $b
	Major Individual Provision Changes		
Increase Top 4 Brackets by 3 Percentage Points	24/32/35/37	27/35/38/40	+ 669 [61]
Exemption/Deduction Changes	No exemptions; higher deductions	Restore exemptions; remove higher deduction	-1212 +720
Repeal Pass Through Deduction	20% of Qualified Business Income is Deductible	Repeal Deduction; keep new loss rules	+ 415
Change Child Tax Credit	higher phase out (200/400K); required SSN; refundable for $1400 of $2000	phase out at lower incomes; remove SSN requirement; fully refundable	- 30 [62]
Return to Prior Estate Tax Thresholds	Doubled Exemption	Prior Law	+ 83
Restore ACA Mandate	Removed penalty for non-insurance	Restores prior law	-314
	Major Corporate Provision Changes		
Statutory Corporate Rate	21	28	+700
Global Minimum Tax	Global tax at 10.5; up to 13.125 if blended	Per-country tax at 21; remove exemption for first 10% return	+ 360 [63]
Repeal Foreign-Der. Intangible Income Deduction (FDII)	Tax preference for profits from export sales above threshold return on assets	Repeal FDII	+ 64 [64]
Total Revenue Effect			+1,455

Note: Most revenue numbers are from the December 18, 2017 tables provided by the JCT (JCX-67-17).

[61] This triples the revenue forecast from a ten-year estimate from CBO for the period 2019-2028 that is based on a one percentage point increase. Behavioral responses could modify this very slightly downward, to the extent that they are larger for a 3 percent increase.

[62] Extending to those without SSN is only $30 billion. The cost of full refundability could be offset by lowering the income threshold at which the CTC phases out. (It is now $400,000 for joint filers, but it was lower pre-TCJA.)

[63] See Appendix A (below) for details. This estimate is based on Clausing (2020a), Appendix C.

[64] This uses the actual JCT score. Revenue effects of repeal in an upcoming budget window would be far higher since the FDII deduction loses more revenue over time in the JCT score.

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While the increased size of the child tax credit is also a sensible way for the tax code be responsive to family size, the expanded child tax credit should ideally be made fully refundable and not tied to citizenship status, in order to help those families that are more economically vulnerable. It was also unnecessary to expand the credit in a way that made it more generous at the top end. (Many more high-income families were able to claim the child tax credit post TCJA.)

I do not have a strong preference regarding the exemption/deduction trade off. Under TCJA, the combination of removing exemptions and raising the standard deduction raised about $500 billion; that revenue was used to offset some of the revenue-losing tax cuts of the TCJA. Indeed, that revenue gain was similar to the revenue cost of expanding the child tax credit, so the drafters of the legislation may have been seeking a different way to make tax burdens sensitive to family size.

In Table 4, both exemptions and the prior standard deduction are restored, but if those changes are forgone, that would provide about $500 billion in additional revenue, which could either be returned to low- and middle-income taxpayers (perhaps with a further expansion of the child tax credit) or used to fund important fiscal priorities. Eventually, the role of itemized deductions should be rethought, but that is left for another day.[65]

Under TCJA, the corporate tax changes were permanent, and without further law changes, they would remain. Rather than repeal these provisions, I suggest building on them to create a corporate tax package that reverses the revenue-loss from these provisions. The corporate tax cuts from TCJA lost about $650 billion over ten years, setting to one side the repatriation tax revenues, which were a tax break relative to prior law. The changes I suggest below would instead raise about $500 billion over ten years, a difference of $1.1 trillion relative to the TCJA. This includes an increase in the statutory rate to 28 percent as well as a more robust minimum tax. Also, the FDII is repealed.[66]

The robust minimum tax differs in several substantial ways from the current global minimum tax. First, since it is a per-country minimum tax, it would not have the perverse feature of the prior minimum tax, whereby high-tax foreign country income was preferable to US income. Second, since all haven income would trigger immediate US tax, income shifting to havens would be immediately discouraged for all US companies (whereas global averaging blunts this disincentive). Finally, I suggest a rate that is ¾ that of the US

[65] It is not ideal to tax-subsidize the purchase of certain goods (mortgage interest, charity, etc.) at a rate that is sensitive to the income of the taxpayers in question. One useful reform might be to limit the tax benefit of such deductions at the higher brackets to be the marginal rate at a lower tax bracket. Such a reform would raise substantial revenue; see Department of the Treasury (2016). More generally, it would be sensible to convert more deductions into tax credits. For example, all taxpayers could get a tax credit for 20 percent of their charitable contributions, rather than being able to deduct charitable contributions from their income.

[66] The FDII provision loses revenue; it is also unlikely to achieve its goal of encouraging intellectual property development in the United States; see Sanchirico (2018). In addition, since favorable tax treatment is conditional on exporting, it may be inconsistent with international trade law.

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rate, matching the original TCJA corporate rate; the lower rate than the US rate is meant as a compromise, given possible concerns about international comparisons and competitiveness.[67]

While this is one possible way to structure a minimum tax, there is also an argument for simply leaving the tax as a global minimum, but raising the rate to the US rate. That *may* raise even more US revenue, and the harmonization of the foreign rate with the US rate eliminates some of the perverse incentives associated with the global feature of the minimum tax, since there is no overall advantage associated with having foreign income relative to domestic income.[68] This approach may have administrative advantages over the per-country system with different rates.

Either reform to the minimum tax might could remove the exclusion for the first ten percent return on assets, and the FDII should be repealed. Together, those two changes would eliminate the incentive to offshore physical assets that was embedded in the TCJA.

Both types of reforms to the minimum tax, however, might be expected to increase pressure on the US tax base from corporate inversions. Thus, I would suggest that such a minimum tax be accompanied by strong anti-inversion measures, and that the BEAT be retained, and perhaps even strengthened, to further reduce such incentives. Anti-inversion measures might usefully include a management and control test, an exit tax, and a higher ownership threshold for determining foreign ownership.[69]

These simple measures would undo most of the flaws of the TCJA, while also improving tax law relative to pre-TCJA law. In particular:

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[67] From the perspective of foreign non-haven countries, a per-country minimum tax adoption by the United States would come with both advantages and disadvantages relative to current law. On the one hand, their higher tax rates would no longer have the offsetting advantage of offsetting GILTI tax for US multinational companies, so the tax sensitivity of US companies would increase. However, since profit shifting to havens would be less advantageous than under a global minimum tax, and since some of that shifting is also at the expense of foreign non-haven countries, this would provide an offsetting benefit. In Clausing (2020a), I show that these two effects are roughly offsetting in size, so foreign non-haven countries need not have a large preference about the form of the US minimum tax.

[68] The relative revenue effects are unclear since cross-crediting under global taxes reduces revenues relative to per-country taxes (at the same rates), yet a higher rate would increase revenues. For particular companies, the relative tax burden of the two minimum taxes would depend on the distribution of profits across countries. For example, if a company has a large amount of both haven income and high-tax country income, they could conceivable pay less minimum tax under a 28 percent global tax than they would under a 21 percent per-country tax.

[69] See Shay (2014), Kleinbard (2014), and Clausing (2014) for more on anti-inversion measures. For the United States, one possible rule is that a U.S. resident company would be defined to include both U.S.-incorporated firms and foreign firms with their mind and management in the United States. Foreign firms that have some managerial presence in the United States and that use the U.S. dollar as their functional currency would face a rebuttable presumption that they are U.S. firms. See Kleinbard (2017).

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1. The law no longer adds to deficits and debt. The revenue raised by the measures in Table 4 is enough to counter all additional deficits from the TCJA. This leaves the government with more flexibility to respond to the next recession or to fund other urgent fiscal priorities.
2. The law no longer makes the tax system more regressive; on the contrary, the changes above are progressive relative to prior law. Those in the bottom of the distribution still retain their TCJA tax cuts, and they benefit from the enhanced child tax credit, as well as its expanded refundability and applicability. Regressive reductions in health insurance subsidies (due to the provisions weakening the ACA) are reversed. The tax code will continue to be sensitive to those with large families since exemptions are restored.

   At the same time, more is asked from those at the top. Both estate tax cuts and high-income tax cuts are reversed, and the net increase in the corporate tax will disproportionately burden shareholders. Since capital income is far more concentrated that labor income, these changes will be felt at the top of the income distribution.
3. The changes in Table 4 reduce the inefficient preferences for capital income (which is often rents, or above normal returns to capital) by strengthening corporate, pass-through, and estate taxation. The repeal of the pass-through deduction eliminates the new inefficiencies caused by favoring some sectors over others.
4. Offshoring is no longer directly encouraged by the FDII and the GILTI. Profit shifting is taken far more seriously by strengthening the minimum tax on foreign income.
5. The complexities of the pass-through deduction are eliminated. However, corporate taxation remains complex, and individual taxation is slightly more complicated for those that itemize. (However, this source of complexity is overstated.)

These suggestions do not tackle the controversial cap on state and local income tax deductions. I can see arguments for removing that cap, which would cost $668 billion by JCT scoring methods. Note that the revenue cost of increasing the AMT exemption amounts and phase out thresholds under TCJA (637 billion) is nearly the same size, so if both TCJA changes were reversed, the combination would be approximately revenue neutral. Other changes would likely be even more desirable.[70]

Finally, it is important to note that Table 4 is merely suggestive of possible revenue effects. There are surely interactions between the provisions above that would affect the numbers of Table 4, if estimated by JCT experts. Thus, this table should be viewed as an indication of approximate magnitudes and not as the final word on how this combination of law changes would affect revenues. Even the JCT is uncertain about exact magnitudes!

[70] The state and local tax deduction cap is a progressive tax law change, since the tax increase falls on higher-income taxpayers. However, critics have noted that this tax increase falls disproportionately on taxpayers in states that have relatively generous state-level public good provision, suggesting that a distributionally-neutral increase in top tax rates might be preferred to the state and local tax deduction cap. Another possible reform would be to replace the cap by instead limiting all itemized deductions to a lower tax rate (such as 25 percent), or by simply replacing such deductions with uniform credits that do not depend on the taxpayer's marginal tax rate.

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VIII. Building a Better Tax Reform

The prior section demonstrated that the essential flaws of the TCJA are relatively easy to fix, and one can do better than simply repealing the entire bill. Indeed, one can eliminate the additional deficits of the TCJA while making the tax code more progressive than it was beforehand. It is also possible to combat profit shifting and eliminate the misguided offshoring incentives of the TCJA.

This section moves forward from that starting point, laying out a rough sketch of a larger scale tax reform that would make our tax system more compatible with the challenges of today's global, technologically sophisticated economy. In particular, there are three daunting policy problems can all be addressed together through a comprehensive tax reform.

First, as discussed in Section III, we've experienced over 35 years of increasing income equality and relatively stagnant wage growth.[71] While the economy as a whole has performed admirably, with strong growth in GDP per-capita, typical households have seen less economic progress. Several key forces are jointly responsible for the subdued wage growth of those in the bottom 2/3 of the population: technological change that rewards those with high educational attainment while harming those with less education, increased market power of companies relative to workers, increased international competition, changes in social norms, and important changes in economic policy.

Second, our tax system is not suited to either the global nature of modern business activity nor the rising share of capital in national income. For example, 70 percent of US equity income goes untaxed by the US government at the personal level, leaving business taxation an essential role in capital taxation. Yet corporate taxation is leaky; loopholes allow many profits of multinational companies to escape taxation.[72] Discrepancies between the tax treatment of corporate and pass-through business activity also distort the choice of organizational form and further reduce the business tax base.[73] Business taxation, estate taxation, and personal capital taxation could all be usefully strengthened.

Third, climate change is a singular threat, posing grave threats to the livability of our planet.

In Chapter 10 of my recent book, I lay out the broad contours of a "grand bargain" tax reform that would simultaneously respond to all three challenges, and I build on Section

[71] These challenges are discussed in chapter 2 of Clausing (2019), alongside a thorough discussion of the causal factors that have contributed to these troubling labor market trends.
[72] See Burman, Clausing, and Austin (2017) regarding the low share of US equity income that is taxed by the US government. See Clausing (2020a) regarding the profit shifting of multinational companies.
[73] See Cooper et al (2016) regarding the loss of revenue due to the prior favorable tax treatment of pass-through business income prior to the TCJA. Of course the TCJA creates its own inequities in this domain, as described above.

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VII to suggest a similarly comprehensive reform here.[74] A grand bargain brings disparate constituencies together. In this plan, those on the left may appreciate the response to climate change as well as the greater progressivity of the tax system, while those on the right may appreciate that tax rates can be lower, and our tax system more efficient, if we close loopholes and rely on new revenue sources.

What are the building blocks of a better tax reform? A good starting point is the list of incremental changes in Section VII. The corporate tax provisions of Section VII toughen the minimum tax substantially, helping protect our corporate tax base from the serious erosion caused by international profit shifting. Together with the repeal of the pass-through deduction, these provisions do a better job of taxing capital income in a global economy.

But, it is useful to go further. The plan in Table 5 also addresses income inequality, wage stagnation, and climate change. An expansion of the earned income tax credit boosts incomes at the bottom and middle of the US wage distribution. Tackling loopholes, increasing capital taxation, and a stronger estate tax all address top-end income inequality. The additional tax contributions from those at the top of the income distribution are meant to ensure that all sources of income get taxed at reasonable rates, reducing inefficient tax distortions and increasing revenue. Ideally, all forms of income (received by the same person/entity) would be taxed at the same rate, and these reforms move the tax system toward that goal. Finally, the carbon tax provides a new source of revenue, and it responds to the world's most important market failure.

Table 5: A Better Tax Reform

	Possible 10yr Revenue, in billions of USD	
TCJA Changes (Table 4 Above)	+ 1,455	Offsets revenue loss due to TCJA
New Changes		
Expansion of Earned Income Tax Credit/Child Tax Credit	- 2,450	
Carbon Tax, rising over ten years from $5 to $50 per metric ton CO^2	+ 1,100	On Net, New Changes are Revenue Neutral
Changes to Capital Taxation	+ 700	
Reductions in Loopholes and Enhanced IRS Enforcement	+400	
More Robust Estate Tax	+ 250	

[74] See Clausing (2019).

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As a package, the changes of the prior section eliminate the deficits caused by TCJA. The reforms suggested here could be pursued on either a revenue-neutral basis or on a revenue-increasing basis. Keeping revenues constant still implies a baseline of increasing debt to GDP ratios, due to the aging of the baby boom generation and our prior commitments to Social Security and Medicare. A revenue-positive reform would allow the funding of other urgent priorities (without resorting to even more deficits) or deficit and debt reduction; either would leave us in a better starting place when the next recession arrives.

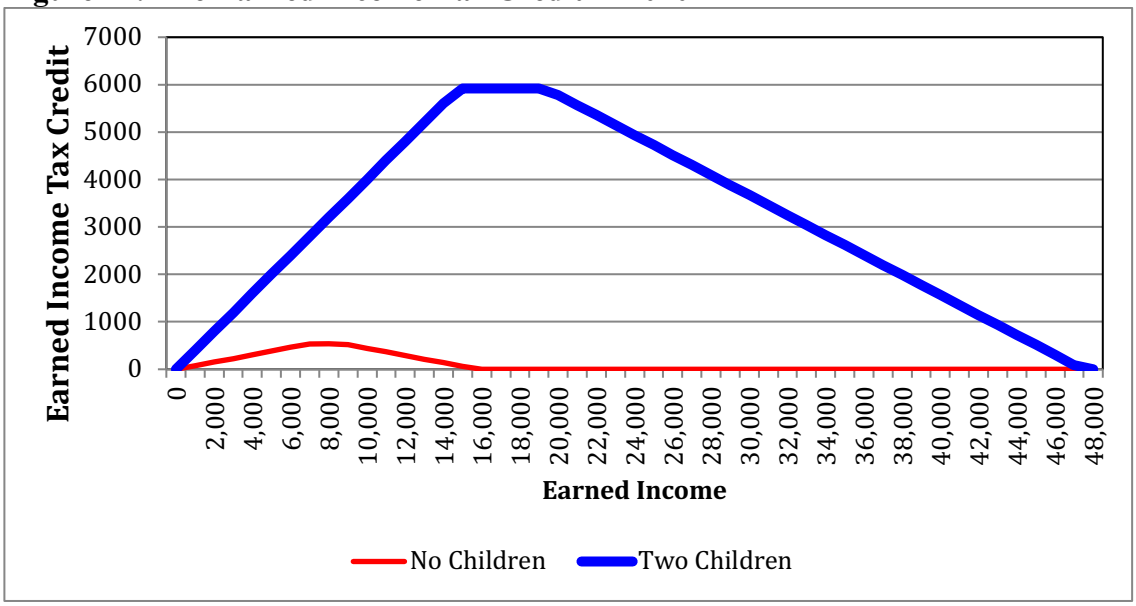
The suggestions of Table 5 are relatively modest, although the politics will still be difficult. In appendix B, I consider a larger scale version of the same reforms. While that version of these reforms appears less politically feasible now, it is a useful comparison in case the range of possibilities expands.

Consider each of the five main tax measures in Table 5. First, the earned income tax credit (EITC) is an efficient and well-designed anti-poverty tool, justifiably supported by many thinkers and policy-makers on both sides of the political spectrum. The EITC subsidizes work, since it provides negative tax rates for those with low incomes.

Indeed, the earned income tax credit illustrates why the tax system is a powerful redistributive tool, capable of ensuring that gains in GDP translate into gains in income for most members of society. To increase wages at the bottom of the income distribution, the earned income tax credit can be expanded to be larger and more generous for childless workers, extending benefits higher up the income ladder.

At present, the EITC is far more generous for those with children than for the childless. For example, Figure 11 shows that for those with two children, the EITC can add over $5,900 to their income, whereas for childless workers the maximum EITC is only $538.

Figure 11: The Earned Income Tax Credit in 2020



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While some have argued that the EITC is unduly complex and difficult to administer, an alternative formulation could simultaneously reduce administrative burdens and reach more people. In particular, the EITC could extend to all workers regardless of the number of children, and the child tax credit could be expanded in tandem to help those with children. It would be important to make the child tax credit fully refundable so that parents received the credit even if their incomes were too low to owe tax that year. Like the EITC, the child tax credit could be phased out to avoid reaching those with higher incomes who are relatively well off.

Despite the political popularity of the universal basic income in some circles, the EITC is a much better way to move resources toward those who need them the most. In contrast, the *universality* of the basic income make it very expensive. Even a modest $12,000 per American UBI would cost an amount ($3.9 trillion) greater in size than the entire tax revenues of the federal government in 2018 ($3.3 trillion).[75]

One nice feature of the earned income tax credit is that it is directed at the true nature of our labor market problems. The unemployment rate has been quite low, standing at 3.5% as of December 2019, but the problem faced by many workers over the past few decades is that many jobs do not pay well. If you work full time at the federal minimum wage, you earn $14,500 per year, an amount that would put workers below the federal poverty line if they support even one dependent. The earned income tax credit can make a huge difference for such workers.

Second, consider the carbon tax. My proposal would gradually phase in a carbon tax of $50 per metric ton, increasing the carbon tax by $5 each year for ten years. Thus the revenue for the ten year window ($1.1 trillion) masks an increase in revenue, such that by the end of the window the carbon tax would be raising $200 billion a year. The phase in would be a useful way to reduce disruption as the market adjusted a more correct price of carbon. This revenue estimate is from the Congressional Budget Office estimate of a $25 per ton carbon that that would be in place over the entire ten year period.[76] I consider a larger carbon tax in the Appendix B proposal.

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[75] A hybrid option would retain the phase out of the EITC as incomes rose but would include a lump-sum initial credit, not dependent on work. In the diagram above, the credit would start at some positive amount, even with zero hours of work, and then rise less steeply. This hybrid option lacks the universality of a classic UBI (since higher-income people would no longer receive it), and unlike the EITC, it removes the link between the initial benefit and work. Some favor this structure since it would be more helpful for those that could not find work. Still, unemployment insurance and disability insurance are intended to help with economic hardship due to many sources of joblessness. Also, because of the additional expense associated with not "phasing in" the tax credits with income, other features (such as the credit per hour of work and the maximum credit) would need to be less generous, for any given budget cost. This would reduce the wage subsidy element of the EITC.

[76] See Congressional Budget Office (2018c). Here I assume that a phased in carbon tax that would average the same rate over ten years would raise the same revenue; however, ongoing revenues under this carbon tax would be higher. The CBO estimates allow behavioral response (i.e., less carbon) in their estimates; that tax would be indexed for inflation. There is of course some

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Unlike most taxes, a carbon tax *increases* efficiency since the market left to its own devices would overproduce carbon, since markets ignore the external costs associated with climate change and global warming. However, a carbon tax provides a powerful price signal encouraging all businesses and consumers to reduce their carbon footprints. A carbon tax also makes alternative energy sources and green technology more cost-effective, as traditional energy sources relying on carbon become increasingly expensive in comparison. This incentivizes innovation and the development of new technology. Of course, it would also be sensible to devote more public spending to these goals, given the urgency of this policy priority.

For political reasons, it may be wise to tighten the link between the carbon tax and tax relief. While the package above would be a direct way to make sure that tax benefits went to those who most needed them, many have argued that simply returning the carbon tax to Americans on an even per-capita basis (as a carbon "dividend") might help build political support for this critically important policy step.

Since carbon would still be more expensive, the environmental aims would continue to be realized, even if the tax revenue were simply turned directly back to the people. And, if the revenue were handed back on an even per-capita basis, estimates suggest that 70 percent of Americans would be better off, since the rich consume more carbon than the poor (in total).[77] If such a step were necessary to build support for the carbon tax, that is definitely preferable to no action. However, combining the carbon tax with the reforms in Table 5 is more intellectually appealing, since the earned income tax credit is a more direct method of moving resources toward those with the most need, whereas a uniform per-capita carbon dividend is less targeted.

Third, capital taxation can be further buttressed to level the playing field between capital and labor income. At present, capital gains and dividends are taxed preferentially relative to wage income. As discussed in sections III and IV above, there is no strong theoretical foundation behind this policy stance, nor is there solid empirical evidence in favor of light capital taxation. However, there is evidence that the capital share of income is rising and that capital income is far more concentrated than labor income, both arguments for greater capital taxation. The suggested incremental reforms in Table 4 move in this direction by strengthening business taxation. But there are also useful reforms on the individual level.

Still, some worry about the possible double taxation of equity-financed investments if both business and individual capital taxation are strengthened. There are several reasons why such worries are overstated. First, debt-financed investments are not double-taxed, since

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controversy over the exact external cost of carbon, and estimates vary substantially. See, e.g, Pindyck (2019), who finds that the social carbon cost estimates of most experts averages quite a bit higher than $50 per metric ton, although $50 per metric ton is closer to government estimates. For example, the US EPA lists a social cost of carbon for 2020 of $62 at a 2.5 percent discount rate or $42 at a 3 percent discount rate. (Estimates are sensitive to the discount rate since many of the costs of climate change are felt in the future.)

[77] See Horowitz et al (2017).

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they are typically subsidized through the corporate tax system. Second, 70 percent of equity income is not taxed at the individual level by the US government, as noted in Burman, Clausing, and Austin (2017). Third, due to the generous treatment of new investments (for example, full expensing of equipment under present law), the business layer of taxation mostly falls on excess profits, profits above the normal return to capital. Even prior to full expensing of equipment investment, over 75 percent of the corporate tax base was comprised of excess profits.[78] Thus, as discussed in Section IV, efficiency considerations surrounding excess taxation are likely to be minimal.[79]

Following revenue estimates from the Department of Treasury and the Congressional Budget Office, I suggest four main reforms.[80]

i. Couple a four-point increase in capital gains and dividends tax rates with reforms that would undo the step-up in basis at death for capital assets. Presently, step-up in basis leaves much capital appreciation untaxed and also causes investors to retain assets too long for tax purposes. Eliminating step-up in basis will increase the revenue gain from any capital gains tax increase, since higher tax rates increase investors' desire to hold assets until death. [~ $250 billion over ten years]
ii. Ensure that all business income of high-income taxpayers is subject to the 3.8 percent Medicare tax through either the net investment income tax or the self-employment contributions system. Extend self-employment taxes to all owners of professional services businesses. [~ $300 billion over ten years]
iii. Limit retirement contributions by capping the total employee/employer contribution to $50,000 per year, capping IRA contributions, and not allowing Roth IRA conversions for high-income taxpayers. [~ $100 billion over ten years]
iv. Limit deferral of capital gains on "like kind" businesses or investment properties. [~$50 billion over ten years]

Fourth, I suggest increased IRS enforcement as well as additional loophole closures that would raise $200 billion over ten years in total. Repealing the carried interest loophole would raise $20 billion, requiring derivatives to be marked to market with ordinary treatment of gains/losses would raise about $20 billion, reducing fossil fuel tax breaks would raise about $40 billion, and greater IRS enforcement resources alongside a better

[78] See Power and Frerick (2017).
[79] There are ways to make the corporate tax even more efficient, and Furman (2020) is a particularly nice proposal. However, if instead the tax system evolves toward higher capital taxation *without* expensing, it might be useful to eventually consider proposals for integration, such as allowing shareholders tax credits for corporate taxes already paid on the underlying income.
[80] All numbers are approximate, and it is important to account for inflation and income growth in the period between the CBO/Treasury analyses and implementation. Estimates for i, ii, and iv are based on estimates from US Treasury (2016); estimates for iii are from the CBO (2018c).

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targeting of those resources would raise about $320 billion.[81] After decades of poor funding, the IRS needs far more resources to administer the tax code.[82] Giving the IRS the resources they need, and focusing enforcement in the areas where it will be most productive, can raise both taxpayer morale and government revenue.

Finally, I suggest provisions that allow for a more robust estate tax. Simply restoring the estate, gift, and generation-skipping transfer tax parameters from 2009 would raise over $200 billion; other minor provisions closing estate tax loopholes make the total closer to $250 billion.[83]

Appendix B also considers larger revenue-raising proposals for capital taxation, IRS enforcement, and estate taxation. These follow recent suggestions from Batchelder (2020) and Sarin, Summers, and Kupferberg (2020).

All of these numbers are approximate. While based on numbers from similar estimates from the Treasury and the CBO, interactions between provisions and the effects of intervening changes in the law are difficult to estimate. Both inflation and ensuing economic growth since the studies in question undoubtedly raise these estimates. Table 5 should be treated as merely illustrative of the rough magnitudes of revenue increases that such law changes are likely to generate.

Still, the broad outline of this reform is possible, and tax rates are not dramatically higher than they were pre-TCJA; for most people, they are lower! Distortions between different forms of income, different industries, and different locations of income are all reduced. The tax system is made far more progressive by strengthening capital taxation and providing tax relief for those with lower incomes. Climate change is addressed in a way that helps fund tax relief for lower-income Americans.

None of these proposals require a fundamental rethinking of our basic system of taxation; all of these changes have been considered before and would be relatively simple to legislate. Since these reforms do not require lengthy periods of technical study prior to implementation, they could be implemented relatively swiftly, although it is wise to allow adequate time for debate and reflection.

In the long run, we should strive for more innovative solutions to our tax policy problems. For example, as I've noted elsewhere, formulary apportionment would be a useful fundamental reform of international corporate taxation.[84] However, it is also a reform that would benefit from international cooperation as well as careful study of technical implementation issues. Likewise, a destination-based cash-flow tax would be best

[81] Aside from the IRS numbers, the remainder of the estimates are based on US Treasury (2016). The IRS numbers are a more modest version of proposals from Sarin and Summers (2019).
[82] See Kiel and Eisinger (2018) for more on the underfunding of the IRS.
[83] Estimates are based on US Treasury (2016).
[84] See Avi-Yonah and Clausing (2008) and Clausing (2020b).

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implemented within a framework of international cooperation and with adequate time to address the challenges of technical implementation.[85]

Also, there is room for more innovation and boldness in terms of expansions to the earned income tax credit. As one example, Burman (2019) suggests a massive expansion of the earned income tax credit, raising the credit to 100 percent matching, raising the maximum credit to $10,000, pairing with an expansion of the child tax credit, and indexing the maximum credit to gains in GDP per-capita. Since this plan costs over $1 trillion per year when it is fully phased in, Burman pairs it with an 11 percent value-added tax to achieve revenue neutrality. The combination is strongly progressive, and it results in substantial poverty reduction. However, given the scale of the change as well as the need for a VAT, that proposal will also require time.

Depending on political decisions regarding the ideal role of the state, the government may need more revenue than the above proposals generate, and Appendix B suggests additional revenue options. Still, these proposals provide a solid foundation from which to raise additional revenue, and rates can be raised (or lowered) across the board from this starting point. More generally, it is important to remember that spending, as well as taxation, has distributional consequences; the fiscal system needs to be viewed as a whole.[86] As one example, the social security system is progressive as a whole (including both benefits and taxes), even though the payroll tax that finances it is regressive.

IX. Conclusion

With respect to every important tax policy desideratum, we can do a lot better than Public Law 115-97 (the TCJA). There are five central ways in which the new tax law moves the tax system away from ideal tax policy principles. First, the legislation finances tax cuts with deficits. Deficits are not always bad; they can be quite helpful in times of recession, and future-oriented public investments in infrastructure or human capital may justify defraying some of their tax costs into the future. However, the increasing deficits and debt under the TCJA risk displacing other urgent fiscal priorities as well as justifying a more timid fiscal response to the next recession.

Second, in a time of worsening income inequality, TCJA provides far larger tax cuts for those at the top of the distribution than others, both relative to incomes and in absolute terms. Tax cuts for the bottom 3/5 of the income distribution turn into tax increases over time. Further, even in the first year of the legislation, for most Americans the tax cuts' modest boost to their after-tax incomes is far outweighed by the higher costs of health insurance premiums, due to the deliberate weakening of health insurance markets under the TCJA.[87] Also, despite ebullient claims from Administration economists that the corporate

[85] See Avi-Yonah and Clausing (2017).
[86] See Kleinbard (2015) for far more on this question.
[87] The TCJA repealed the tax penalty for going without health insurance. As more Americans go uninsured, that increases both their own financial vulnerability (due to the high costs of illness or medical bankruptcy) and the insurance premiums for those remaining in the insurance pool. The

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tax cuts would ultimately cause large wage gains, there is no evidence that buttresses such assertions – either presently or in the larger body of data from past experience.

Third, by cutting taxes dramatically for capital income, including corporate income, pass-through business income, and estates, the tax law exacerbates the under-taxation of capital in our tax system. Contemporary research provides scant theoretical rationale for lighter capital taxation, especially since excess (above-normal) profits are now a big part of the capital income tax base. Also, there is no empirical evidence that reducing capital taxation creates broad benefits for the economy as a whole. Cuts in capital taxation do exacerbate increased income concentration, since capital income is far more concentrated than labor income.

Fourth, the legislation makes limited (if any) progress on the substantial problems of profit shifting and corporate tax base erosion. There are conflicting incentives within the international provisions of the TCJA; on net, the international provisions do not raise revenue relative to prior law.[88] In addition, the TCJA introduces *new* incentives for the offshoring of physical assets, since increasing assets in low-tax countries enables foreign income to be more lightly-taxed. In contrast, increasing assets in the United States reduces the tax benefits associated with the new export subsidies in the law. Overall, the post-TCJA tax system tilts the playing field in favor of earning foreign income and making foreign real investments.

Finally, any modest simplification gains on the individual side of the TCJA are more than offset by increased complexity on the business side; both the new pass-through deduction and the new international provisions are enormously complex. Further, the planned expiration of many provisions in the law, as well as the planned changes in tax rates, R&D amortization, and other provisions, will increase uncertainty, complexity, and the budget costs of the legislation (if provisions are extended).

With so many flaws in the new tax law, it is tempting to simply repeal and start fresh. Yet the new law provides a useful starting point for reforms that might improve tax law relative to pre-TCJA law. The law can be made far more progressive by keeping the tax cuts that benefit the lower end of the income distribution, reinstating the enforcement of the individual mandate, and expanding the (now larger) child tax credit to be fully refundable and to apply to more low-income taxpayers. These changes can be coupled with changes that eliminate tax cuts for those at that top, repeal the pass-through deduction, raise the corporate tax rate, and toughen the minimum tax. This package of incremental changes would eliminate the additional deficits created by the TCJA while making the US tax code substantially more progressive than it was before the TCJA.

These changes can also address profit shifting and the under-taxation of capital income. In terms of profit shifting, the minimum taxes on international income under TCJA are a

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Joint Committee on Taxation estimates that the TCJA will reduce government spending on subsidies for health insurance for low-income Americans by over $300 billion.

[88] This ignores the revenue from the repatriation tax on prior foreign earnings; that provision is a tax break relative to prior law.

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useful starting point, but they can be strengthened to work better. To counter the under-taxation of capital income, stronger business taxation is essential, since 70 percent of US equity income is untaxed by the US government at the individual level.

The aforementioned reforms address most of the flaws of the Tax Cuts and Jobs Act. However, there is still room for more comprehensive tax reform. In Section VIII, I suggest a reform that would strengthen incomes at the bottom and middle of the income distribution through an expanded, reformed earned income tax credit. The proposal is revenue neutral; it is funded with the proceeds of a new carbon tax, stronger individual capital and estate taxation, the closing of loopholes, and better tax administration and enforcement.

This larger reform responds to several serious threats we are facing at the present moment in economic history. The world's most important market externality is climate change, and a carbon tax is a crucial way to respond to that challenge while also funding other urgent priorities.

Beyond climate change, our most serious economic problem is the failure of the last four decades of economic growth to deliver broadly shared economic gains to society at large. The tax system is a powerful tool for promoting more inclusive growth, if we have the will to use it. By increasing the progressivity of the tax system, and by making the rewards to work greater for those in the bottom parts of the income distribution, we can ensure that gains in GDP benefit most Americans while also funding our fiscal priorities.

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Appendix A: Estimating the Revenue from a 21 percent Per-Country Minimum Tax

To calculate the amount of revenue that would be raised from a per-country minimum tax at 21 percent, I follow the method described in Clausing (2020a), Appendix C. The analysis is based on two data sources: the direct investment income series reported by the US Bureau of Economic Analysis and the country by country income series reported by the US IRS Statistics on Income.

Table A1 shows simple mechanical estimates of the revenue gain associated with higher per-country minimum taxes for these data series. The method behind this table is simple. For each country with an effective tax rate below the minimum tax rate, the difference between the minimum tax rate and the country's effective tax rate is multiplied by the profit in that country. Two-thirds of the resulting revenue is allocated to the United States, reflecting the fact that US multinational companies undertake about two-thirds of their economic activity in the United States.

The remaining revenue ends up in other non-haven countries, due to reduced profit shifting from all non-haven countries under the minimum tax. Due to a reduced incentive to shift profits, the pattern of taxable profits across countries is likely to change, more closely reflecting the underlying location of economic activity. Thus, havens will lose tax base and non-havens will gain tax base. Thus, over time, the U.S. minimum tax revenue will partially show up as increased domestic corporate tax base (rather than minimum tax revenue), due to adjustments in the distribution of taxable profits.

Table A1: US Revenue from a 21 Percent Per-Country Minimum Tax in 2017

Direct Investment Income Series (balance of payments data; adjusted to be pre-tax)	Full Country-by-Country Sample (without stateless income)	Average of Full and Positive Profit Country-by-Country Sample (without stateless income)
$30b	$41b	$53b

To calculate a ten-year revenue estimate, I average these three estimates, account for four percent nominal growth in foreign earnings over the ten-year window, and subtract the revenues that would otherwise be earned by our current global minimum tax. That generates a ten-year revenue estimate of $360 billion.

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Appendix B: A Bolder Tax Reform

Table B1: Higher Revenue Version of Table 5 Reforms

	Possible 10yr Revenue, in billions of USD	
TCJA Changes (Table 4 Above)	+ 1,455	Offsets revenue loss due to TCJA
New Changes		
Expansion of Earned Income Tax Credit/Child Tax Credit	- 4,000	
Carbon Tax, rising over ten years from $50 to $100 per metric ton CO^2	+ 3,000	Leaves $2.1 trillion for urgent fiscal priorities
Changes to Capital Taxation	+ 1,100	
Reductions in Loopholes and Enhanced IRS Enforcement	+1,100	
Inheritance Tax	+ 900	

This reform includes more aggressive revenue raisers in addition to more spending on the EITC/CTC. It also leaves $2.1 trillion for urgent fiscal priorities. While these will of course be determined by the Congress, the challenge of climate change presents a compelling argument for allocating some of that spending toward climate mitigation as well as green R&D spending.

This proposal includes a much larger carbon tax, and a more aggressive attempt to raise revenue through IRS enforcement, following the proposals and estimates of Sarin and Summers (2019). The estate tax is replaced with an inheritance tax, whereby inheritances are taxed as ordinary income, with a $1 million exemption per heir, as proposed by Batchelder (2020). Step-up in basis and carry-over in basis would be eliminated. For inheritances under $10 million, deferral of tax liability on illiquid assets would be allowed with an interest charge. Inheritance income could be spread over five-years to minimize work disincentives from spiking tax rates.

Capital taxation is further strengthened as well, with an additional revenue gain of $400 billion. In addition to the reforms of Section VIII, capital gains rates are increased to ordinary top income tax rates, again coupled with eliminating step-up in basis. This reform also ends tax preferences for charitable giving for long-term appreciated assets. See Sarin, Summers, and Kupferberg (2020) for an estimate; my estimate is somewhat lower to account for interactions with the inheritance tax proposal.

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