Taxing Business: The Tax Cuts and Jobs Act and What Comes Next

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ABSTRACT

We review the major business tax changes in the Tax Cuts and Jobs Act of 2017 (TCJA), with two major findings. First, some TCJA provisions promoted efficiency by reducing and compressing the range of marginal effective tax rates on new investments across asset types, financing methods, and organizational forms. Second, many aspects of the Act's passthrough, corporate, and international tax provisions were designed poorly. We propose a variety of reforms that repeal and reform various business tax provisions of TCJA and would raise revenues while making business taxation more efficient, more equitable, and more resistant to profit shifting.

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Taxing Business Under the Tax Cuts and Jobs Act

I. Introduction

Contrary to popular belief, the Boston Tea Party, a cornerstone of America's founding narrative, was not a protest against British taxation in general. It was a reaction to a corporate tax loophole that protected the interests and market power of the British East India Company.[1]

Almost 250 years later, Americans are still concerned about unfair business tax rules. In Pew and Gallup polls over the past 15 years, about two-thirds of respondents believe that corporations and high-income households do not pay their fair share of taxes.[2] Over the same period, in any given year, about one-third of corporations with assets exceeding $1 billion, and two-thirds of other corporations, paid no federal income tax (Figure 1; Joint Committee on Taxation 2020). This includes years before the Tax Cut and Jobs Act (TCJA) of 2017, which significantly cut taxes on corporations and pass-through businesses (the vast majority of whose profits accrue to high-income households). Not surprisingly, TCJA did not improve Americans' view of tax fairness—poll results continue to hold (Figure 2).[3]

Concern with business taxation is well-founded. How a country taxes its businesses is central to its economic performance. Businesses employ workers, make investments, develop innovative production techniques, and provide goods and services to each other and to

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[1] Thorndike (2005, 2010); Keen and Slemrod (2021).

[2] Gallup (2021), Pew (2015). See also the discussion in Gale (2019, chapter 6).

[3] Consistent with these findings, TCJA was unpopular with the public. The average of the five major polls on the topic around its passage found its approval rate at just 32%--lower approval even than the last two major tax *increases*, under George H.W. Bush and Bill Clinton (Enten 2017). This is borne out in data from Gallup (2021). Indeed, two Republican members of Congress—Chris Collins of New York and Lindsey Graham of South Carolina—felt compelled to explain publicly that they had to vote for TCJA, or their donors would stop contributing (See Marcos 2017 and Savransky 2017).

consumers. But the issues can be more complex than they first appear, for several reasons. First, the nation's business landscape is remarkably diverse, and corporations are taxed differently from "pass-through" entities. Second, although businesses remit taxes to the government, they *don't* bear the ultimate burden of taxes—people do. Businesses pass along the cost of their taxes to consumers by raising prices, to workers by lowering wages, or to their owners and shareholders by reducing returns. Third, the impact of business taxes depends not only on the headline tax rate, but also on the various provisions that change the tax base—interpreted as either "incentives" or "loopholes," depending on the lens. The impact also depends on the level of compliance and enforcement, which varies significantly across business types. Fourth, many businesses compete and conduct operations on a global scale.

The TCJA aimed to create supply-side incentives for firms to invest more, hire more, be more productive, pay workers more (Council of Economic Advisers 2017). The Act created the most substantial changes in business taxation since, at least, the Tax Reform Act of 1986.[4] The major domestic business-related provisions include a 20% deduction for certain forms of income earned through unincorporated businesses, a historic drop in the corporate tax rate from 35% to 21%, and a variety of changes that shift the base toward cash-flow taxation for both corporations and pass-through entities.

On the international front, TCJA created a modified territorial system. It eliminated tax on repatriations of actively earned profits by foreign affiliates to U.S. parent companies (coupled with a one-time transition tax on previously accumulated but unrepatriated actively earned foreign profits). To help protect the integrity of the territorial system, reduce profit shifting, and

[4] Public Law No. 115-97 is commonly called the Tax Cuts and Jobs Act, but the official title is "An Act to Provide for Reconciliation Pursuant to Titles II and V of the Concurrent Resolution on the Budget for Fiscal Year 2018."

encourage companies to locate profits and real activity within the United States, TCJA also created an alphabet soup of international tax changes—that relate to global intangible low-taxed income (GILTI), foreign-derived intangible income (FDII), and the base-erosion anti-abuse tax (BEAT).

This paper reviews issues with the design of the business tax changes and discusses ways to reform the tax rules, including President Biden's new proposals.[5] The motivation is that TCJA's historic and sweeping changes merit close examination as researchers and policy makers consider what steps to take next. In a companion paper, Gale and Haldeman (2021), we examine aggregate evidence through 2019 and conclude that the supply-side incentives generated by TCJA's business tax proposals had little or no impact on investment, business formation, wage growth, or profit shifting.

Section II focuses on pass-through businesses—providing background information, identifying the major relevant changes in TCJA, and discussing their designs. We find that the newly created 20% deduction for pass-through income makes arbitrary distinctions, generates inequity on both horizontal and vertical equity grounds. It is unlikely to be effective in stimulating investment and business formation. In any given year, most business income results from investments made in the past. By cutting the (effective) tax rate on income rather than providing direct subsidies to new investment, the pass-through deduction will finance windfall gains to business owners who made investments in the past and generate a smaller "bang for the buck." In addition, one justification for the pass-through deduction was that it was necessary, in

[5] Previous analyses of TCJA include Auerbach (2018), Barro and Furman (2018), CBO (2018a), Furman (2020), Gale et al. (2019), Gale and Haldeman (2021), Gravelle and Marples (2019, Holtz-Eakin (2020), Rubin and Francis (2020), Slemrod (2018), Wagner et al. (2020), and a series of blogs organized by Aparna Mathur (American Enterprise Institute 2019).

the face of corporate rate reductions, to avoid increasing distortions across organizational forms. Thus, the pass-through deduction and the problems it causes can be seen as an added cost of the corporate tax reforms described below.

While acknowledging that all tax policies that affect corporations are closely related, we nonetheless divide the analysis in sections III and IV between domestic and international tax policy changes. Section III explores domestic changes. We provide background on corporate taxes and describe the changes in TCJA. We report evidence that the highly publicized difference between marginal effective tax rates (METRs) on new corporate and pass-through investments was, in fact, quite small (3 percentage points or less) but that the difference in METRs on debt- versus equity-financed investment was quite large. We review evidence that TCJA reduced the level of METRs and the dispersion in METRs on new investment across asset types, financing methods, and organizational forms. We also argue that TCJA reduced the automatic stabilizer role that the tax system has traditionally played.

Section IV describes and analyzes the international tax provisions in TCJA. We highlight the flaws created in new provisions of the law aimed at curbing international tax avoidance and explain why the changes to repatriation rules are unlikely to affect investment and wages.

As section V discusses, regulations played an outsized role in the implementation of TCJA both because the legislation was hurried and contained a significant number of mistakes and ambiguities, and because several provisions—including the pass-through deduction and many of the international provisions—had no precedent in prior law. We find that the Department of the Treasury overstepped its authority in several of its regulatory rulings. As a result, the law in practice provides bigger tax cuts in general, and to banks and real estate in particular, than those authorized by Congress.

Section VI concludes by discussing alternative directions for business tax policy. We argue that business taxes should be more neutral, more certain, less complex, and better enforced. In practical terms, this means that the pass-through deduction should be eliminated, the corporate tax should be reformed toward a cash-flow tax, the GILTI provisions should be considerably reformed, and the FDII provisions and BEAT should be repealed. These conclusions share many similarities with President Biden's new proposals but differ in several important ways as well.

II. Pass-Through Businesses

A. Background

About 95 percent of American businesses—accounting for more than 60 percent of business income—are structured as "pass-throughs" rather than as standard (or "C") corporations. In general, income and deductions from these entities pass through to the owners and affect the owner's income (and deductions) under the personal income tax rather than under the corporate income tax.[6]

Pass-throughs come in many forms. Sole proprietorships are owned and often operated by a single person. Partnerships allow two or more people or entities to own a business, with substantial flexibility as to the allocation of income and deductions. Sole proprietorships and partnerships can also be structured as limited liability corporations (LLCs). S-corporations face restrictions on the number of owners and—unlike partnerships—must allocate income proportional to each owner's share, though the income does not have to be distributed. Although

[6] Given the complexity of the tax system, it should not be surprising that the sentence in the text is not literally true in all cases. For example, a corporation can be a partner in a partnership, in which case the partnership income (less deductions) attributed to the corporation is taxed at the corporate rate.

no pass-through entity is required to pay the corporate income tax, LLCs and S-corporations nevertheless enjoy the benefits of limited liability that C-corporations receive.[7]

Most sole proprietorships are small businesses, typically owned by moderate- and middle-income households and accounting for less than half of the owner's income.[8] Nevertheless, non-corporate business income is concentrated among the largest firms, and almost all the largest pass-throughs, often organized as partnerships and S-corporations, are owned by the very wealthy. Over 98% of business income earned by partnerships and S-corporations accrues to households in the top income quintile, with the top 1% earning 71% and the top 0.1% earning 33% (Tax Policy Center 2020b). The concentration of business income among large firms is also pronounced. Businesses with annual receipts above $50 million represent about 0.4 percent of S-corporations and partnerships, but they earn almost 40 percent of all receipts among those types of organizations.[9]

Pass-through owners have traditionally received preferential tax treatment on business earnings relative to wages (Gale and Brown 2013, Toder 2020). First, under section 179, they can expense—that is, fully deduct in the first year—their qualified investments in equipment and software up to a limited amount ($500,000 per year before TCJA, $1 million per year as of 2018).[10] Expensing confers significant tax benefits. It generates a marginal effective tax rate of

[7] LLCs may opt to be taxed as corporations (Krupkin and Looney 2017). In addition, limited partnerships are often set up with the general partner (the only member not eligible for limited liability) a corporation, so that everybody in the partnership has limited liability

[8] Tax Policy Center (2020a, 2020b), and Gleckman (2016). In 2020, almost 40 percent of all business tax returns were sole proprietors whose income was less than $91,200 (in the third quintile or lower). For almost all of these, business income was a small fraction (much less than half) of their total income.

[9] IRS (2017). See also Keightley (2012); Krupkin and Looney (2017); Tax Policy Center (2016).

[10] Tax Policy Center (2018). Although all businesses are eligible for section 179 expensing, the rule is typically considered a subsidy for small businesses because the benefits phase out between investment levels of $2.5 million and $3.5 million.

zero on new equity-financed investment and, combined with the deduction for interest payments, it generates a *negative* effective tax rate on new investments that are financed at least partly with debt. Second, capital gains on a business owner's "sweat equity" are treated very generously; this income is not taxed until the business is sold, and, even then, it is taxed at preferential rates as a capital gain. And if the owner holds the business until death, the "sweat equity" is never taxed under the income tax and is only taxed under the estate tax if the value reaches millions of dollars.

Pass-throughs have grown enormously in number and size since the early 1980s. In 1980, pass-throughs represented 83 percent of businesses but only 25 percent of net business income. By 2015, those figures had risen to 95 percent and 63 percent, respectively (Figure 3; Internal Revenue Service 2015). Much of this change can be traced to a more favorable tax treatment of pass-throughs relative to corporations. For example, the Tax Reform Act of 1986 reduced the top corporate income tax rate from 46 to 34 percent, but it reduced the top marginal tax rate on individual income from 50 to 28 percent. This substantially increased the incentives for businesses to organize as pass-throughs rather than corporations.[11] Other factors include the liberalization of rules regarding the ownership of S corporations and expansion of limited liability rules under state law to non-corporate businesses.[12]

The rise in pass-through income relative to corporations and the decline in individual income tax rates relative to corporations has cost the government increasing amounts of revenue over time, exceeding $100 billion per year before TCJA (Cooper et al. 2016). The rise of pass-

[11] The United States generally provides more favorable tax treatment to pass-throughs than other countries do. For example, Austria, Belgium, Canada, Italy, Mexico, Poland, and Spain require a business to incorporate and face the corporate income tax if they wish to have limited liability (U.S. Department of the Treasury 2007).

[12] Burnham (2012), Sullivan (2011) and Gale and Brown (2013).

through income also accounts for a significant share of the rise in reported income going to the top 1 percent over time. The share of income going to the top 1 percent doubled from 10 percent to 20 percent from 1980 to 2013; pass-through income accounted for 40 percent of that increase (Cooper et al. 2016, Smith et al. 2019, 2020).

A perennial issue regarding pass-throughs concerns their role in job creation and innovation. Most employers are small businesses—which in turn are predominantly pass-throughs of one form or another—and many employees work for small pass-through businesses. But commonly made claims to the effect that "most new jobs are created by small businesses" can be misleading, as they conflate young firms and small firms.[13] While both young firms and small firms tend to be pass-throughs, *young* businesses account for a significant share of job growth and innovation (Toder 2020 and CBO 2020c). Businesses less than five years old and the innovation they generate are important sources of productivity for the economy.[14] In contrast, for small businesses as a whole, employment growth is not as common; as most small businesses age, they do not hire many, if any, new workers (Hurst and Pugsley 2011). Thus, policies aimed at young firms are likely to have greater bang-for-the-buck in terms of innovation and employment than policies that subsidize all small businesses.

Another issue is the reality that people can use businesses to avoid and to evade income taxes. Partnerships seem to invite opportunities to shelter income and avoid taxes. A partnership can be owned, in part or whole, by other partnerships, foreigners, corporations, tax-exempt entities, trusts, etc. According to a recent study, partnership income is "opaque" and "murky"

[13] See Haltiwanger, Jarmin, and Miranda (2010) and Gale and Brown (2013).

[14] Decker et al. (2014). Over the past few decades, the rate of entry into entrepreneurship and employment in new businesses has declined (CBO 2020c).

(Cooper et al. 2016). The study found that 20 percent of partnership income goes to partners that could not be traced in tax return data, and another 15 percent is earned in circular partnerships, a group of partnerships that collectively own each other.[15] Both of these findings suggest the possibility of evasion. IRS analysis indicates that the evasion rate on partnership income is about 11 percent, compared to just 1 percent on wages.[16]

For sole proprietorships, the evasion rate is substantially higher; only 44 percent of sole proprietorship income is reported to the government (Internal Revenue Service 2019). It is unclear how much of the shortfall is due to outright cheating or to confusion about the tax laws.

On average, the underreporting of pass-through income—that is, tax evasion—cost the government at least $110 billion annually from 2011-2013.[17] This represented about 0.7 percent of GDP in that period, or roughly $146 billion in the 2019 economy. As a way of gauging the magnitude and importance of this shortfall, we note that it is almost as large as the annual revenue loss from TCJA; static and dynamic estimates indicate that TCJA lowered revenues by about 0.8—1.0 percent of GDP in its first full year, 2018 (Congressional Budget Office 2018a).

B. Changes in TCJA

The major TCJA changes regarding pass-throughs include (1) the reduction in individual

[15] Cooper et al. (2016). The average federal income tax rate on partnership was under 16 percent (pre-TCJA), substantially lower than the top marginal tax rate owed by those in the top 1 percent, to whom most partnership income accrues. This is so first because a significant share of partnership income is received in the form of capital gains or dividends, which are taxed at preferred rates. Second, a substantial share (around 15%) of partnership income accrued to tax-exempt organizations or foreign entities that pay a low average effective rate. And third, partnerships with circular or indeterminate ownership on average pay an effective rate that is 1/3 lower than the average effective rate for all pass-throughs, suggesting avoidance or evasion. Additionally, partnership status provides significant flexibility about how, when, and to whom income and deductions are allocated, which can further reduce the effective tax rate.

[16] Internal Revenue Service (2019, Table 5). This is for tax years 2011-2013 and is based on the net misreporting percentage of nonfarm proprietorships.

[17] Internal Revenue Service (2019, Table 2). New research by Guyton et al. (2021) implies that the true revenue loss due to tax evasion in pass-throughs could be significantly larger.

income tax rates, (2) a new deduction for pass-through income under certain circumstances, and (3) changes to the business tax base that are similar to the changes made in the corporate tax. The first two changes expire at the end of 2025, the third set does not expire (See Table 1).

1. Individual Income Tax Rate Changes

The rate at which pass-through income is taxed is determined by individual income tax brackets. TCJA reduced individual income tax rates for most tax brackets and increased the thresholds for all but one income tax bracket (See Figure 4). The top marginal income tax rate was lowered from 39.6 percent to 37 percent and the threshold for reaching the top rate rose from $483,000 to $624,000 for a married couple filing jointly ($424,900 to $512,000 for singles).

2. Section 199A Deduction

Under the 199A deduction, joint filers with taxable income below $315,000 ($157,500 for singles) can receive a 20 percent deduction of their qualified business income (QBI), regardless of business type.[18]

At higher income levels, the size of the deduction for QBI depends on the taxpayer's income, business type, and the wages paid, and property owned by the business. In particular, for income from a "specified service trade or business," if taxable income is between $315,000 and $415,000 (for taxpayers who are married and filing jointly), the unlimited deduction for qualified business income phases out as income rises, and the deduction cannot exceed the applicable share of the greater of (a) 50 percent of W-2 wages paid by the business or (b) 25 percent of wages plus 2.5 percent of qualified property for the business. If taxable income is above $415,000, income from specified service trades or businesses is not eligible for the deduction.

[18] QBI is the net amount of income, gain, deduction and loss from any qualified trade or business, including income from partnerships, S corporations, sole proprietorships, and certain trusts. QBI excludes investment income, wages, and other items.

A specified service trade or business is defined as "a trade or business involving the performance of services in the fields of health, law, consulting, athletics, financial services, brokerage services, or any trade or business where the principal asset of such trade or business is the reputation or skill of one or more of its employees or owners, or which involves the performance of services that consist of investing and investment management trading, or dealing in securities, partnership interests, or commodities" (IRS 2018).

For all other pass-through businesses, qualified business income does not phase out, and the 20 percent deduction is partially limited over the \$315,000 to \$415,000 taxable income range by the greater of either (a) 50 percent of W-2 wages for the business or (b) 25 percent of wages plus 2.5 percent of qualified property for the business. However, the limit is gradually applied over the income range. For a more detailed explanation and examples of how deduction calculation varies across different economic situations (Gale and Krupkin 2018).

3. Other Base Changes

TCJA made several changes to the business income tax base—for both pass-throughs and corporations.[19] First, TCJA expanded expensing. Under prior law, businesses could deduct 50% of the cost of qualified business investments made in the current year, with that percentage phasing down through 2020 (after which it reverted to a deduction for economic depreciation). TCJA allowed 100% deduction of these investments—full expensing—through 2022 and phased out this deduction by 2027, returning to regular depreciation allowances (See Table 1). The law also doubled the section 179 expensing limit for qualified equipment and software from \$500,000 to \$1 million.

Second, TCJA limited interest deductions. Prior law generally allowed businesses to

[19] This section is adapted from Tax Policy Center (2018) and Gale et al. (2019).

deduct all interest paid from taxable income. TCJA limited the deduction for businesses with gross receipts over $25 million, who may now deduct interest only up to 30% of business income (increased by depreciation and amortization) before interest. After 2022, the increase for depreciation and amortization is eliminated (Pomerleau 2021).

Third, for most businesses the law eliminated net operating loss carrybacks and capped losses that could be carried forward. Under prior law, firms that lost money in the current year could carry back those losses for two years to claim credits for taxes paid earlier. Firms could also carry forward net operating losses for 20 years. TCJA eliminated loss carrybacks and capped the losses that could be carried forward to 80% of taxable income for corporations and $500,000 for pass-through business owners jointly filing ($250,000 otherwise), though these losses are now able to be carried forward indefinitely. Fourth, TCJA eliminated the domestic production activities deduction. See Table 1 for more details.

C. Discussion

Because of the potential interactions between policies toward pass-throughs and corporations, we focus here on the 199A deduction and defer to the next section discussion of other effects of the pass-through changes.

The new qualified business income deduction for certain pass-throughs is complex, but one outcome is very straightforward: it dramatically reduces the top effective marginal tax rate on qualified business income. Under prior law, the top income tax rate was 39.6 percent. TCJA reduced this nominal rate to 37 percent, but the deduction reduces the rate on qualified business income to 29.6 percent.

The 199A deduction creates numerous problems. First, the rules are inequitable, violating the norms of both horizontal equity and vertical equity. Regarding the former, the deduction implies that a taxpayer's liability depends not only the level of income but the form that it takes—wages, qualified business income, or unqualified business income. Regarding the latter, the benefits of the deduction are weighted very heavily toward very high-income taxpayers. JCT (2018) found that 44% of the direct tax benefits in 2018 (rising to 52% by 2024) would go to taxpayers with incomes greater than $1,000,000 per year (Joint Committee on Taxation 2018). A TPC study found that 55% of the direct tax benefits in 2018 would go to households in the top 1% of the income distribution and more than 27% would go to the top 0.1%. Recent research indicates that roughly 15-18 percent of taxes on pass-throughs are passed on to workers, with the rest being borne by owners (Risch 2020). Adjusting for this factor, at least 36 percent of the benefits went to taxpayers with annual income above $1 million (based on the JCT study) and at least 45% of the benefits go the top 1% (based on the TPC study). Based on tax return data for 2018, among those who claimed the deduction, the average amount was $3,136 for taxpayers with adjusted gross income (AGI) below $200,000 but rose to $157,000 for those with AGI above $1 million and $1.04 million for taxpayers with AGI above $10 million (Sullivan 2020b).

Second, the deduction will have low "bang for the buck" in terms of investment and employment. Evidence suggests that sole proprietors do raise investment and hire more workers when marginal tax rates on those activities are lower (Carroll et al. 1998a, 1998b. 2000). And as discussed in the next section, TCJA will reduce the cost of investing on average for pass-throughs (but not in all cases—debt-financed investment will be more expensive as will investments in research and development). But business income in a given year is largely the result of investments made in the past. By cutting the tax rate rather than providing direct subsidies to new investment, the new deduction will provide some incentive to invest now by reducing the cost of new capital investment, but much of the revenue loss will finance windfall gains to business owners who made investments in the past, which won't increase current investment. A direct subsidy to new investment would have avoided the windfall gains and provided a bigger bang-for-the-buck.

The distinction between using rate cuts to subsidize returns on old investments and directly subsidizing new investment is crucially important given the role of young firms in increasing innovation, discussed above. Rate cuts do not help young firms very much because they typically don't have a lot of income from past investments, precisely because they are young. Subsidies for new investment would be more targeted.

Turning to employment effects, it turns out that under several sets of circumstances, taxpayers can claim the 199A deduction without increasing employment. While that condition is true of many tax rules, it is an inconsistent feature of a bill originally called the "Tax Cuts and Jobs Act."

The potential effects of the deduction on investment and employment are further dulled by two factors. First, the high rate of evasion for pass-through income means that much pass-through income was already untaxed under pre-TCJA law and will likely remain so under TCJA. Second, the deduction is complicated and hence may be little used. A Treasury Inspector General for Tax Administration investigation suggested that a main reason why so many people failed to claim the deduction was its complexity (TIGTA 2020). Presumably, take-up will rise over time, yet almost three years after the law was enacted, there was still considerable ambiguity about how to treat various forms of income and expense under section 199A rules.[20]

That the new deduction is complicated provides more avenues for sophisticated business owners to capture the tax savings via re-arranging and relabeling their investments and expenses

[20] Foster (2020). For evidence that complexity reduces corporate behavior, see Zwick (2021).

rather than by making new net investments. In one example, called "cracking," doctors or lawyers split (crack apart) their operations into two companies: one that provides medical or legal services, and another that contracts with the service provider and acts as a leasing firm that owns all the property and equipment.[21] TCJA regulations, discussed in section V below, put a limit on such activities. As another example, the rules create incentives for people to relabel wage income as business income as a tax avoidance strategy. Under the so-called "Gingrich-Edwards" loophole (which existed pre-TCJA), owners of S corporations pay payroll taxes on their "reasonable compensation" but not on the rest of their income from business, encouraging them to under-report reasonable compensation and thus avoid payroll taxes (Rosenthal 2016). The new pass-through deduction exacerbates that incentive in most circumstances by increasing the difference between the overall taxation of wage income and business income (for exceptions, see Sullivan 2018a).

III. Corporations and Domestic Tax Issues

A. Background

About 5 percent of American businesses, comprising about 37 percent of business income as of 2015, are organized as C-corporations, including almost all the largest and most well-known businesses in the country (IRS 2016). Unlike pass-throughs, corporations face a separate tax on their profits. Corporate payments to shareholders are also subject to the individual income tax.

Post-TCJA, the corporate income tax rate of 21 percent applies to the domestic income and passive foreign income (under Subpart F) of U. S. corporations and the U.S. income of

[21] There are many more ways enterprising taxpayers can use this provision to reduce their taxes. For details and examples, see Kamin et al. (2018).

foreign corporations with permanent establishments in the United States. (Provisions relating to the tax treatment of foreign source income and international flows are discussed in section IV). The tax applies to corporate profits, calculated as gross business income (from the sale of goods and services, rents, royalties, interest, dividends, etc.) minus business costs that include employee compensation, supplies, advertising, a limited amount of interest payments, non-federal taxes, repairs, bad debts, and depreciation of assets (the decline in the value of an asset over time). The law allows firms to immediately deduct 100 percent of their investments in equipment, a feature that is scheduled to phase out under current law between 2023 and 2026, at which point firms will return to deducting depreciation under previous rules. Firms may deduct net operating losses for up to 80 percent of taxable income and carry forward unused losses indefinitely but may not carry back any losses.[22] Corporations also benefit from a variety of tax expenditures—most prominently the reduced tax rate on income from controlled foreign corporations and the accelerated depreciation of equipment—and may use tax credits, chiefly for foreign income taxes paid, to reduce their tax liability further (Sammartino and Toder 2019).

Because of the plethora of deductions and credits in the corporate tax, in any given year many of the nation's largest corporations pay no corporate income tax, as described in the introduction. Nevertheless, big businesses account for almost the entire revenue yield of the corporate income tax. In 2013, for example, firms with more than $2.5 billion in assets accounted for just one out of every 1,800 corporations but remitted 70 percent of all corporate income tax payments (IRS 2016).

[22] Before TCJA, net operating losses (NOLs) could be carried back; firms losing money could obtain cash refunds for taxes paid in the previous two years. TCJA eliminated carry backs. The Coronavirus Aid, Relief, and Economic Security Act of 2020 temporarily reinstated five-year net operating loss carrybacks, and lifted the 80% of taxable income limitation, but only for tax years 2018—2020.

Although corporations remit taxes to the government, they do not bear their economic burden. Rather, they pass it along to people, through higher prices, lower wages, smaller dividends, or other adjustments. A large and varied literature examines these issues.[23] The Congressional Budget Office (2018d), Joint Committee on Taxation (2013), the U.S. Treasury (Cronin et al. 2012) and the Tax Policy Center (Nunns 2012) allocate between 18 and 25 percent of the burden to workers and with the rest divided between all capital owners and shareholders (depending on conclusions about the share of corporate returns that represent rents as opposed to normal returns).

If shareholders and owners of capital bear most of the burden, the corporate tax is very progressive when the burden is assigned to households by income level. CBO (2018d) estimates that households in the top 1 percent of the income distribution (including wages and capital income) bear almost half of the burden.

Almost all advanced countries have a corporate income tax separate from their personal income tax. A corporate tax helps the nation tax returns to stocks held by foreigners and tax-exempt entities like non-profits, pension plans, and retirement saving plans. Nevertheless, as discussed below, the corporate tax raises a host of issues. It affects organizational form by taxing corporate entities differently from pass-throughs. It distorts financing choices by subsidizing debt (the payments on which are deductible) relative to equity. It affects payout options by taxing dividends more heavily than stock repurchases or retained earnings. The pre-TCJA statutory tax

[23] See Auerbach (2006, 2018) for review of the issues. More recent work has used innovative methods, but it is unclear whether the results apply to national U.S. taxes. Suarez Serrato and Zidar (2018) and Fuest, Piechl, and Siegloch (2018) find that workers bear more of the burden—30-35 percent and about half, respectively—but focus on state-level and municipal-level corporate taxes, where it would be expected that workers bear a larger share of the burden than they would for national taxes because capital is more mobile across states than across countries. Jane Gravelle (2017), Jennifer Gravelle (undated) and Gravelle and Marples (2021) provide additional important insights.

rate of 35 percent was high relative to other countries and thus encouraged firms to locate operations, profits, and headquarters in other countries.

Even before TCJA, corporate tax revenues had fallen dramatically over time as a share of the economy (Figure 5). The long-term revenue decline between 1950 and 1986 was primarily driven by a decline in corporate profits during that period but is also attributable to changes in the tax code that reduced the average tax rate on those profits, especially more generous capital recovery provisions (Auerbach and Poterba 1987). Tax planning and tax avoidance are also a part of the picture. First, setting up a business as a pass-through entity is the clearest way to avoid the corporate tax, and pass-through activity has grown dramatically (Figure 3), as discussed above. Second, international tax avoidance involving profit shifting (discussed in section V) has increased.

B. Changes in TCJA

TCJA converted the graduated corporate tax with a top rate of 35 percent into a flat-rate tax of 21 percent. The Act also repealed the corporate alternative minimum tax. As with pass-throughs, the ability to expense investments is phased out by the end of 2026, while the limitations on interest deductions and modifications to net operating loss carrying are permanent. TCJA permanently repealed the domestic production activities deduction and temporarily maintains the expensing of research and experimentation expenditures but requires that these expenses be amortized over five years starting in 2022. See Table 1 for more details.

C. Discussion

1. The Top Corporate Statutory Rate

Pre-TCJA, the top statutory corporate income tax rate and the effective tax rate on new investments had been higher than in the US than almost all other OECD countries (OECD 2019a).

The 2017 tax act reduced the combined federal and subfederal statutory rate to just slightly below the OECD average combined (national plus subnational) rate (Figure 6; OECD 2018). This makes U.S. investments more competitive than they had been pre-TCJA, but at a higher revenue cost and lower "bang for the buck" than would have occurred via provision of new investment incentives.

2. Double Taxation and Differences in Effective Tax Rates

Ideally, taxes should not influence business choices, other than to discourage such external costs, such as pollution, or encourage external benefits, such as investments in non-firm-specific human capital. Such a tax system would allow investment choices to be made for business reasons, leading to the best level and allocation of investments for the economy. Under a neutral system, the marginal effective tax rate (METR) on each type of new investment would be the same, regardless of asset type, financing, business organization, etc. The METR measures the combined effect of individual and corporate taxes on an investment's returns. To calculate the METR, analysts measure the difference between the pre-tax return and post-tax return and then divide that difference by the pre-tax return.

In the pre-TCJA standard textbook set-up, the returns to corporate equity holders were taxed twice: the corporation paid taxes on its profits, and individuals paid taxes when they received the profits as dividends or sold their stocks and realized capital gains. Double taxation raised the effective tax rate on corporate investments financed with equity. This raised the cost of making such investments, which reduced the level of investment and hence the size of the economy. It also gave pass-through businesses more favorable tax treatment than corporations and encouraged corporations to retain earnings rather than pay dividends. Because interest payments to debt holders were deductible for businesses, but dividend payments to shareholders were not, the tax system created a bias toward debt financing.

Nevertheless, the traditional emphasis on double taxation overstated the problem. Almost no corporate income was fully double-taxed. First, a large share of corporate profits was never taxed. Many corporations were able to pay much less than the statutory tax rate of 35 percent on their profits because they could take advantage of a wide array of legal tax avoidance mechanisms. Second, even when corporations paid tax on all their profits, the taxation of dividends and corporate capital gains at the individual level is light. About three-quarters of stock is held by parties that are not subject to dividend or capital gains taxation—tax-exempt entities, foreigners, or retirement saving plans (Gale 2002, Rosenthal and Austin 2016).[24] And among those who are subject to dividend or capital gains taxation, individuals paid a tax rate of no more than 23.8 percent on realized capital gains and dividends, and even then, income taxes on capital gains could be deferred until the asset was sold, or eliminated by holding until the owner's death, in each case further reducing the effective tax rate.

Several studies examine how TCJA affected the METR on new investment—or, equivalently, the user cost of capital—and generate broadly similar results.[25] We describe the pattern of findings, focusing on those in CBO (2018b) and reported in Table 2. Before TCJA, the METR on new corporate investment was higher than the METR on new pass-through investment, but only by a small amount. CBO (2018b) estimated that the ETR on corporate investment in 2018 would have been 27.3% under pre-TCJA law, compared to 24.0% for pass-

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[24] In traditional (i.e., non-Roth) retirement plans, received dividends and accrued capital gains are taxed when withdrawals are made, but the tax burden is offset, partially or wholly, by the deduction on the initial contribution. If the tax rate that applied at contribution is the same as the tax rate that applies at withdrawal, the effective tax rate on all investment returns to the account is zero. (Burman and Gale 2019).

[25] Barro and Furman (2018), CBO (2018b), DeBacker and Kasher (2018), Gravelle and Marples (2019).

throughs (Table 2).[26]

In contrast, the differences in METRs for debt- versus equity-financed projects were enormous before TCJA. Within the corporate sector, the METR was 34.4% for equity-financed investments and below zero (-23.4%) for debt-financed projects, a difference of more than 57 percentage points. Among pass-throughs, the difference was smaller—36 percentage points—but still remarkably large. This finding implies that differences in the tax treatment of alternative methods of financing should have been a much more substantial concern than differences in overall taxation of corporate and non-corporate businesses.

The numerous changes made in TCJA generally reduced differences in the METR across business types, asset types, and financing options. First, the difference between the METR on corporate investment and pass-through investment declined post-TCJA. The 3.3 percentage point excess of the METR on corporate versus pass-through investment is eliminated. The TCJA reduced both rates, lowering the METR to 19.9 percent for corporations and 20.1 percent for pass-throughs. Thus, in terms of overall METR, corporate rates are about the same—indeed, slightly lower—than pass-through rates, on average (Figure 7).

Second, the difference between the METR on equity- versus debt-financed investment declined substantially after TCJA. For corporations, the pre-TCJA 57 percentage point difference in the METR for debt- versus equity-financed investments was reduced to less than 14 percentage points. For pass-throughs, the differential fell by 20 percentage points (Figure 7).

Third, the METR on equipment fell slightly more than the METR on structures. For corporations, the METR fell by about 8 percentage points on equipment and 7 percentage points

[26] DeBacker and Kasher (2018) finds an even smaller difference, estimating a 28% METR for corporate investment and a 27% METR for pass-through investment.

on structures. For pass-throughs, the METR fell by about 9 percentage points on equipment and 3 percentage points on structures.

Fourth, overall METRs on intellectual property investments declined (even though they started from a negative number) for both corporations and pass-through. This is largely due to the METR on equity-financed intellectual property declining even though the METR on debt-financed intellectual property increased. Thus, the METR spread between equity- and debt-financed intellectual property greatly declined. For corporations, this decline was smaller than that in equipment in structures, while for passthroughs this decline was larger than that in structures but smaller than that in equipment. In CBO (2018b), the study whose results are shown in the table, the decline in the METR for intellectual property was somewhat smaller than for equipment and structures. In other studies, the decline in METR for intellectual property was substantially less than for equipment and structures (Table 3).[27]

<u>3. Organizational Form</u>

The sharp drop in the top corporate statutory rate has raised concerns that many pass-through businesses would convert to corporate status to shelter funds. A substantial literature shows that entities' choices regarding organizational form are sensitive to tax considerations.[28] TCJA made corporate ownership more attractive relative to pass-through ownership.[29] And,

[27] Even after TCJA, there remain large differences between the taxation of owner-occupied housing and other structures. Equity-financed owner-occupied housing for the small proportion of homeowners who still itemize deductions faces negative effective tax rates because the income that owners receive by renting to themselves is not taxed, but the homeowner can take deductions for mortgage interest. The increased METR on debt-financed owner-occupied housing was largely due to the usage reduced mortgage interest deduction. This, in turn, reflected a substantial reduction in the number of taxpayers who itemized their deduction, due to the substantial increase in the standard deduction. (Gale et al. 2019).

[28] See Gale and Brown (2013), Burnham (2012), Carroll and Joulfaian (1997), Goolsbee (1998), Goolsbee (2004), Gordon and MacKie-Mason (1990), Luna and Murray (2010), and MacKie-Mason and Gordon (1997).

[29] Although it is true that TCJA reduced the corporate income tax rate substantially, focusing on just the top marginal rates can be misleading. The choice of entity should depend on average tax rates (on a uniform income technically, virtually nothing prevents business taxpayers from switching from pass-through to corporation status—they only need to check a box on their tax form. Thus, post-TCJA, some S Corporations owners may well prefer to organize their businesses as C Corporations.[30]

Several factors, however, limit the attractiveness of such a conversion. First, the pass-through deduction described above reduces the top rate on qualified business income to 29.6 percent. Businesses that qualify for that deduction would find conversion to C status less attractive, other things equal. Third, there is significant uncertainty surrounding the tax situation for business owners. There is no guarantee that the lower corporate rates will last. Democrats had proposed corporate tax rates in the range of 25-28 percent and universally opposed TCJA. And all the provisions applying specifically to pass-through businesses expire after 2025. The uncertainty delays decisions to change entity form, especially when the uncertainty is combined with rules that, for example, require changes in accounting or forbid a corporation from electing S status for five years after selecting C status.[31] Finally, a substantial number of firm-specific facts and circumstances that can affect the election choice.[32]

4. Automatic Stabilizers in the Tax System

measure) under each organizational form. Using this criterion, the treatment of pass-throughs changed disadvantageously relative to C-corporations under TCJA, at least for large pass-throughs. That is, because the corporate tax is flat at 21 percent and the individual income tax is progressive with significantly higher top brackets, there will be a threshold income level above which an owner would prefer to incorporate rather than maintain pass-through status. TCJA reduced that threshold income level, and thus encouraged more firms to incorporate.

[30] Kamin et al. (2018); Looney (2017). For example, a simple calculation suggests the possibility of using corporate funds to shelter income. If income is generated in a pass-through, is not eligible for the section 199A deduction, and the owner is in the top tax bracket, the marginal tax burden would be 40.8% (= the top personal income tax rate, 37%, plus the 3.8% net investment income tax, NIIT). In contrast, if the owner invests through a corporation with the profits paid out as dividends at the highest individual rate (20%), the tax burden would be 39.8% (= .21+.238(1-.21)). To the extent that the owner can defer realization of the income, the effective tax rate under the corporate option would be even lower.

[31] Borden (2018).

[32] Borden (2018); Halperin (2018); Johnson (2018); Repetti (2018); and Henry, Plesko, and Utke (2018).

Other things equal, it would be desirable for the tax system to be counter-cyclical, cushioning economic downturns by reducing taxes more than proportionally relative to the decline in income and moderating booms by raising taxes more than proportionally relative to the increase in income. TCJA, however, moves in the opposite direction, making taxes more pro-cyclical. This will increase the severity and duration of future recessions.

In particular, by expanding expensing and limiting interest deductions, TCJA moved the business tax base in the direction of a cash-flow tax (Auerbach 2010; Gale and Listokin 2019). While this has many desirable properties, it also makes business taxes more procyclical – that is, it exacerbates the business cycle. Businesses invest more during booms than during downturns. Deductions for depreciation of investments are spread out over time and therefore are smoother over the business cycle than investment is. Under expensing, in contrast, businesses deduct the whole investment in the year it was made, and thus take relatively bigger deductions during booms and smaller deductions for during downturns. This reduces their taxes during booms and raises their taxes during downturns, relative to a depreciation regime. Thus, moving from depreciation to expensing increases the pro-cyclicality of the tax system. To the extent that firms retime expenditures to minimize taxes (as in Zwick and Xu 2018), there is additional amplification due to taxable income being more positive in booms. Note also that adopting full expensing eliminates the possibility of using that option as a counter-cyclical tool should a recession occur.

Limiting the deduction available for interest payments, and especially tying the limit to corporate income, also has a similar effect. When corporate income falls, as it does in recessions, allowable interest deductions will also fall, which will effectively raise taxes on companies during downturns.

Eliminating the carryback of net operating losses also makes firms more cash constrained during downturns, exacerbating fluctuations in the business cycle.[33] Firms with losses during recessions will no longer be able to claim refunds for previous tax payments and therefore will face tighter cash constraints than they otherwise would. Indeed, recognizing this, to help struggling firms, the CARES Act in 2020 suspended the 80% limitation on NOL deduction, and reinstated carrybacks, for tax years 2018—2020.

IV. International Tax Issues

A. Background

International economic issues have grown dramatically in recent decades as communications and other technologies have made the world smaller and firms larger and as tariffs have generally come down. For example, the sum of exports and imports has increased from around 9.6 percent of GDP in 1966 to 26.5 percent of GDP in 2016 (Bureau of Economic Analysis 2018). Over the same period, foreign profits rose from 6.3 percent to 31.1 percent of the total profits of U.S. corporations (Auerbach 2018).

There is no perfect way to tax foreign income. Traditionally, analysts have considered two canonical approaches.[34] Under a territorial system—sometimes called "source-based"—each country taxes the net income that companies earn within the borders of the country (the "territory") but does not tax net income earned abroad. This system, however, creates undue incentives for domestic corporations and foreign corporations operating in a high-tax host country to shift income out of the host country and expenses (deductions) into the host country.

[33] Other provisions of the tax law, discussed later, including the subsidies for foreign-derived intangible income (FDII), rise during booms and fall during recessions, accentuating the business cycle rather than counterbalancing it. See Dowd and Landefeld (2018).

[34] See Shaviro (2018b) for the various ways that this dichotomous characterization is inadequate.

These incentives can be blunted to some extent by a variety of adjustments, including taxing passive income (interest, rents, royalties) that companies earn abroad, imposing a minimum tax on resident companies' worldwide profits, or setting restrictions on how companies can allocate income or expenses across countries.

Under a worldwide system—sometimes called "residence-based"—a country taxes the worldwide income of companies that legally reside there (and their foreign affiliates) as well as the earnings in that country of non-resident corporations. This can create double taxation of a domestic corporation's investments in other countries. To offset this extra burden, countries with world-wide systems typically provide credits for foreign taxes paid and/or defer taxation of actively earned foreign income until it is "repatriated"—distributed to the home country parent company.

No country has a pure worldwide or territorial system; almost all OECD countries implement some variant of a territorial system. Before TCJA, the United States had what was often called a modified worldwide system. U.S. corporations paid tax on all their worldwide income, received a credit for foreign income taxes paid, and could defer taxes on actively earned foreign income until the funds were repatriated. The foreign-derived passive income of U.S. corporations was taxed on a current basis. (The U.S. profits of foreign corporations with physical presence in the U.S. were also subject to tax.). This way of taxing foreign income was complex and raised little revenue. It gave firms multiple incentives and ways to reduce taxes on their domestic earnings by shifting income and production overseas and shifting expenses to the US. It gave American multinationals strong incentives to postpone repatriating foreign earnings. U.S. companies held more than $2.6 trillion in accumulated previous earnings in their foreign affiliates in 2015 (Joint Committee on Taxation 2016). It even gave firms opportunities to avoid taxes on their foreign-derived passive income (Office of Tax Policy 2017). Profit shifting cost the U.S. government $100 billion or more in annual revenues (Clausing 2020a and CBO 2018a). In the years approaching 2017, much of the income of United States multinationals was booked in the seven largest tax havens, where it is implausible that companies have real profits of that magnitude, especially because all the countries are small.[35]

These concerns at the very least made the US tax regime much closer to a territorial regime than its "modified worldwide" headline would have suggested (Office of Tax Policy 2017). In 2010, for example, U.S. corporations paid $27 billion of residual tax on foreign earnings while reporting profits of $930 billion, for an average tax rate of about 3 percent (Office of Tax Policy 2017). Jason Furman, chair of President Obama's Council of Economic Advisers, famously referred to the pre-TCJA rules as a "stupid territorial" system, rather than a modified worldwide system, because like a territorial system it raised little revenue from foreign source income, yet unlike a territorial system it imposed distortions associated with deferring actively earned foreign income and created enormous complexities (Furman 2014).

B. Changes in TCJA

The TCJA created what might be called a modified territorial tax system. It is easiest to think of the changes in three parts: (1) the specification of a pure territorial system; (2) a transition rule addressing the accumulated past foreign earnings of U.S. corporations that had not been repatriated before TCJA; and (3) adjustments from a pure territorial system designed to reduce tax avoidance and profit shifting. The revenue effects of specific international provisions can be found in Table 1.

[35] See Clausing (2020a). The seven largest tax havens are Bermuda, the Cayman Islands, Ireland, Luxembourg, the Netherlands, Singapore, and Switzerland.

The specification of a pure territorial system simply involves the notion that domestic and foreign corporations continue to owe U.S. taxes on the profits they earn in the United States but do not owe taxes on the profits they earn abroad. (Technically, this involves exempting from taxation all dividends that domestic corporations receive from their foreign affiliates or subsidiaries.)[36]

To transition to the new system, TCJA created a new "deemed repatriation" tax for previously accumulated and untaxed earnings of foreign subsidiaries of U.S. firms equal to 15.5 percent for cash and 8 percent for illiquid assets.[37] Companies have eight years to pay the tax, with a back-loaded minimum payment schedule specified in the law.

As noted above, pure territorial system can give firms strong incentives to shift real activity and reported net income out of the U.S. and into low-tax jurisdictions overseas. As a result, TCJA contained a series of provisions that were intended to reduce the extent to which companies could avoid U.S. taxes. First, subpart F is retained. At the risk of oversimplifying and subject to a variety of qualifications, subpart F requires that foreign-earned passive income is taxable on a current basis.

Second, TCJA imposed a 10.5 percent current minimum tax on a new measure called Global Intangible Low-Taxed Income (GILTI). Intangible income, of course, is difficult to measure and TCJA defines it—both for GILTI and in other instances—as a residual: all income

[36] In practice, this means any foreign company the domestic corporation owns more than 10% of. (Whether a foreign company is an affiliate or a subsidiary depends on what share is owned by the domestic parent company. A company is an affiliate if it has between 10 and 50 percent parent ownership; a company is a subsidiary if it has greater than 50 percent parent ownership.)

[37] As Gleckman (2018) and Rubin (2018a) have highlighted, this distinction is not a bright line, and leads to arbitrary results in practice. For example, in Peru, liquid markets exist for live chickens, making their status under the TCJA uncertain.

above a given return on tangible assets. In particular, GILTI is defined as all profits earned abroad that exceed 10 percent of the adjusted basis in tangible depreciable property, measured on a global (rather than country-by-country) basis.[38] Companies can use 80 percent of their foreign tax credits, also calculated on a worldwide basis, to offset this minimum tax, making the GILTI provision applicable—in principle—only for companies whose global foreign tax rate is less than 13.125 percent. The GILTI tax rate increases from 10.5 percent to 13.125 percent for tax years 2026 and later, making the tax applicable—in principle—for companies where the global foreign tax rate is less than 16.406 percent, again with exceptions.

As it turns out, however, because of expense allocation rules and other factors, some companies with foreign tax rates above the thresholds listed above faced taxes on GILTI. In response, in July 2020, the Treasury Department issued the so-called “high tax” exemption, which removes any GILTI tax burden for firms with global foreign tax rates in excess of 18.9%.[39]

Third, while the GILTI provisions provide a “stick” to encourage firms not to place intangible assets overseas, another provision provides a “carrot” to encourage firms to hold intangible assets in the U.S. Specifically, TCJA provides a deduction for foreign-derived intangible income (FDII). As with GILTI, intangible income is defined as a residual: profits originating from sales of goods and services abroad, in excess of an assumed return of 10% on depreciable tangible property used in generating those profits. The deduction for FDII is 37.5 percent through 2025 and 21.875 percent thereafter. Accounting for this deduction, FDII is taxed

[38] The calculation only includes the property of subsidiaries with positive profits.

[39] See Rubin (2018b, 2019, 2020b) for further explanation and Cummings (2020) for a critique of the high-tax exemption.

at a rate of 13.125 percent through 2025 and 16.406 percent thereafter, instead of the 21 percent rate applied to other domestic profits.

Fourth, TCJA imposed a new base erosion and anti-abuse tax (BEAT) on the sum of the corporation's taxable income calculated without permitting deductions for payments made to foreign affiliates (excluding costs of goods sold).[40] The BEAT rate was 5% in 2018, rose to 10% in 2019, and will rise again to 12.5% in 2026. Corporations pay the larger of the regular corporate tax or the BEAT. The BEAT limits the ability of both and U.S.- and foreign-resident multinationals to shift profits out of their U.S. affiliates. BEAT is applicable only if the firm has more than $500 million in annual receipts and more than 3 percent of their total deductions are for payments made to their foreign affiliates and subsidiaries (Shaviro 2018c).

C. Discussion

Some of TCJA's most significant changes applied to the taxation of foreign source income and international financial flows. Shaviro (2018a) argues that analysis of such changes should be "lenient in spirit" because the old system was so flawed. Nevertheless, it is important to understand the major components of the new system and how they operate.

Although the current-period taxation of foreign passive income is a continuation of prior law, eliminating the deferral of taxation of foreign active earnings and imposing a one-time repatriation tax is a fundamental change in the tenor of the tax system, even if the impact of such effects on investment and jobs is likely to be small, as discussed in Gale and Haldeman (2021).

The three new innovations—GILTI, FDII, and BEAT—are clearly intended to combat corporate efforts to avoid US taxes. While this goal is important, it is unclear how effective these

[40] The tax is only levied on corporations with average annual gross receipts of at least $500 million and those that have made related party deductible payments exceeding 3 percent of the corporation's total deductions for that year. For this purpose, regular corporate tax liability is post-foreign tax credit, but pre-R&E tax credit.

provisions will be and what costs and problems they will create. The new provisions create novel categories of income and expenses that will take years for corporations and the government to sort out. Firms' efforts to find ways around these provisions will add compliance costs and require more IRS enforcement resources. The provisions contain some obvious flaws and interact in complicated and unforeseen ways.

1. GILTI

The definition of GILTI, for example, has nothing necessarily to do with intangible income. It simply defines the tax base as all active foreign income less a 10 percent return on foreign tangible assets. Essentially, the law applies "rough justice," implying that, for every firm, the foreign income from a country that is above 10 percent of the basis of foreign tangible assets in that country is attributable to intangibles and should be subject to a minimum tax.[41]

Something like this approach may well be necessary in the complex and difficult-to-verify world of transfer pricing and profit shifting, but the specific design of the GILTI provisions creates several problems. First, the tax may miss its mark (intangible income) either by over- or under-estimating profit shifting. Second, the 10% presumptive normal return on tangible assets seems quite high, in a world with extremely low interest rates. Because 10 percent is so far above prevailing nominal returns, the exemption may encourage businesses to shelter investment income by locating tangible assets—such as factories—overseas.

Third, because it is based on worldwide average tax rates rather than per country taxes, the GILTI provisions give firms incentives to shelter income in other countries via cross-crediting techniques (Sullivan 2019a). Firms with excess foreign tax credits (that is, firms with

[41] Rosenthal (2017) offers an alternative interpretation.

profits in high-tax foreign countries) have incentives to shift profits to havens. Firms with low foreign tax rates have incentives to invest in operations in high-tax foreign countries. By creating incentives to invest in foreign tangible assets and engage in cross-crediting, the GILTI provisions motivate behavior directly opposed to the stated goal of bringing economic activity back to the United States. Clausing (2020) has called the GILTI provisions an “America last” approach.

Finally, there are complicated interactions between the GILTI provisions and the BEAT, potentially substantially increasing overall tax liability and/or marginal tax rates for corporations with complex or service-oriented supply chains (Sullivan 2018b and CBO 2018a).

2. FDII

The FDII provisions are supposed to subsidize the creation of exportable goods and services that use intangible capital housed in the United States. Kamin et al. (2018) argue that if it works as intended, it would be in violation of WTO rules as an export subsidy. The good news, then, is that it probably will not work as intended. In fact, the deduction can be claimed even if there is (a) no production in the United States, (b) no intangible capital deployed in the United States, and (c) no foreign sale—other than a “round trip” provision, in which a firm sells a product to a foreign company that makes minimal changes to it and sells it back into the United States (Sanchirico 2018). Round-tripping appears to be legal under the statute and in any case is extremely difficult to police.[42]

Sullivan (2020e) points out another flaw—the FDII provisions can be used to export intellectual property. That is, in sharp contrast with previous export subsidies, the FDII provisions subsidize the export of intangible capital, even though they were intended to keep such capital in the country.

[42] Shaviro (2018c), Schler (2017), and Sanchirico (2018).

Dharmapala (2019) notes that because FDII depends on generating extra-normal returns relative to their domestic tangible capital, it gives firms incentives to *reduce* their domestic tangible capital stock and thus claim more income as FDII. This implies, also, that the FDII provisions tax monopoly profits at a lower rate than normal returns, when economic theory implies that the opposite pattern would be preferable (Sullivan 2020f).

These concerns would be minimized if FDII were small. Sullivan (2020d) finds, however, that FDII accounts for at least 29 percent of corporate profits in 2018 and possibly significantly more.

The FDII and GILTI provisions are supposed to work together, as "carrot" and "stick," respectively, to encourage the location of intangible capital in the United States, but the underlying problems in their design, bring into question whether these provisions will succeed in meeting their goals (Avi-Yonah 2018).

3. BEAT

BEAT is intended to reduce firms' exploitation of transfer pricing rules. To limit firms' ability to shift U.S.-source income to low-tax foreign countries, BEAT is a new minimum tax that disallows the deduction for certain payments that US firms make to their foreign affiliates (or that foreign corporations' affiliates housed in the US make to their parent company). While limiting transfer-pricing abuse is a laudable goal, there are numerous problems with the way BEAT aims to reach this target.

First, BEAT taxes the gross deductible payments (other than costs of goods sold) going out of the country, not the part of such payments that differs from arms-length pricing. If it works as intended, BEAT will hurt the significant number of big businesses that use global supply chains, even if they are not engaging in abusive transfer pricing, since it implicitly assumes that the correct transfer price is zero in all cases (Shaviro 2018b, 2018c).

Second, while it taxes all deductible payments (other than cost of goods sold) going out of the country, it ignores all transfer pricing issues for flows into the country. Sullivan (2018c) likens the BEAT to police giving a speeding ticket to any car going one direction on a highway regardless of its speed, while ignoring all traffic going the other direction, no matter how fast it may be going (Sullivan 2018c). The motivation for BEAT was in large part to address what could not be addressed with GILTI: profit shifting by foreign parents with U.S. subsidiaries. Thus, at one level, this asymmetric treatment makes sense. On the other hand, substantial opportunities remain for profit shifting. A firm cannot avoid BEAT by increasing expenses paid to foreign affiliates, but it can by lowering receipts from them. In addition, the exemption for costs of goods sold gives firms an additional way to hide transfer pricing within inventory sales—for example, by bundling other components into the cost of goods sold.

For these and other reasons, Sullivan (2018b) refers to the BEAT as "an object of scorn and bewilderment." Shaviro (2018c) calls it "maddeningly complex." Herzfeld (2018) notes its inconsistent effects across industries and states that it is "wreaking havoc among a wider group of taxpayers than inbound multinationals" that were the target of the rules. In practice, while BEAT was expected to raise significant revenue, it has raised quite little. The tax is readily evaded by re-writing contracts and by reclassifying expenses as the cost of goods sold (JCT 2021).

4. Repatriation

As described above, TCJA imposed a one-time tax (to be paid over eight years) on previously accumulated foreign earnings, while eliminating taxes on repatriating future foreign earnings. This is one of the most fundamental and most misunderstood aspects of the Act. It is fundamental because it shifts the U.S. to a territorial system (with the additional avoidance mechanisms described above). It is misunderstood because a common but mistaken conception—among the public, CEOs, and even some economists—is that repatriation involves "bringing the money back" to the U.S.

Repatriation, for tax purposes, is not a geographic concept. Repatriation refers to rules that require corporations to recognize income for tax purposes before they take certain actions—like repurchasing shares or paying dividends. Almost all the $2.6 trillion in accumulated but unrepatriated foreign earnings before TCJA was already in the U.S. economy. Companies with large stocks of overseas earnings—such as Apple, Microsoft, and Google—report that the vast majority of those earnings are held domestically, for example, in U.S government and agency securities, corporate debt, or mortgage-backed securities (Looney 2017; Gale and Harris 2011).

As a result, the new repatriation rules should not be expected to generate much new investment. This conclusion is strengthened when it is noted that firms with large overseas earnings—again, like Apple—already possessed record levels ($1.84 trillion) of domestic liquid assets before TCJA (Moody's Investors Service 2017). Their domestic investment opportunities were not constrained by a shortage of cash.

Consistent with these conclusions, evidence suggests that a temporary tax holiday on repatriations in 2005 led firms to increase share repurchases and dividend payments, but not to raise investment or create more jobs, even though firms were nominally required to use the funds to create domestic jobs or make new domestic investments to get the tax break (Dharmapala, Foley, and Forbes 2009; Blouin and Krull 2009).

V. Regulations

Regulations are often overlooked in economic analysis of tax policy. For TCJA, however, the regulatory process and outcomes were particularly important. Congress enacted the law with haste, which created gaps, ambiguities, contradictions, and mistakes, and the Act's novel features—including section 199A, GILTI, BEAT, and FDII—left little precedent to guide regulators. The resulting regulatory process was lengthy and created significant uncertainty and controversy. Many legal experts believe that the regulations significantly changed the interpretation of the tax law—at times overstepping regulatory authority and at times directly contravening provisions of the statute. In addition, the regulations substantially increased the revenue loss from the Act, raising the overall budgetary costs above the level authorized by the legislation.

The roots of the regulatory problems with TCJA lie with the legislature. TCJA was introduced and enacted in a matter of weeks, with no hearings. The rushed process was in stark contrast to the years-long process of passing previous major tax changes like the Tax Reform Act of 1986 (Kysar 2020). By bringing the bill to vote so quickly, Republicans left little in the way of legislative history or context on which to base regulatory choices (Kysar 2020). The rushed legislative process also allowed a number of provisions with obvious errors to be passed into law, as well as several provisions whose foreseeable effects seemed to contradict legislative intent (Oei and Osofsky 2019).

Following enactment of new tax laws, Treasury develops and publishes draft regulations, accepts public comment during a designated period, and then issues final rules. In practice, there is extensive formal and informal feedback given to Treasury and the IRS over the course of many months, even before the public comment period. Even under the best of circumstances, issuing regulations can be an opaque and lengthy process.

But the regulatory process under TCJA was not undertaken in the best of circumstances and led to several problematic outcomes. Rules governing the pass-through deduction were not issued until January 2019, more than a year after the law was enacted. Rules governing the GILTI provisions were first issued in June of 2019, and preliminary rules governing the BEAT were not issued until December 2019. By the end of 2019, two years after TCJA's passage, Treasury had issued more than 1,000 pages of regulations but finalized guidance on GILTI and FDII would remain unavailable until July of 2020 and finalized guidance on BEAT was only released in September of 2020.[43]

Regulatory delay creates uncertainty about future tax rules, which typically constricts economic behavior, especially given that regulatory decisions can have huge impacts for firms (Baker, Bloom, and Davis 2016). For example, IBM incurred $1.9 billion in unexpected GILTI liability in 2019. Other multi-nationals faced issues like eligibility for foreign tax credits that affected their profits by hundreds of millions of dollars (Francis and Rubin (2019).

Second, the regulations were inconsistent with the statute in several ways, weakening the base-expanding features of the tax law and providing some substantial and seemingly arbitrary windfalls to certain industries. For example, the regulatory exclusion of banks from BEAT liability had no basis in the statute and accounted for a $50 billion reduction in projected revenue for the government (and a big win for the banks) over the ten-year window.[44] Likewise, it is widely believed that Treasury overstepped its authority by allowing an exemption for GILTI tax liability for those taxpayers with an effective foreign tax rate of 18.9% or above.[45]

Treasury also directly contravened provisions of the 199A pass-through deduction. The

[43] See IRS (2020a, 2020b, and 2020c) for regulatory history of the provisions.

[44] Kysar (2020**).** The banks would presumably disagree with this characterization, and some have described this as an ordinary regulatory outcome. See Holtz-Eakin (2020).

[45] Taxpayers could face such rates because of interactions with prior law regarding the distribution of foreign tax credits, which left some taxpayers with high effective foreign tax rates liable for GILTI. Kysar (2020).

statute made the deduction unavailable to a few named professions including law, medicine, and brokerage services, as well as any pass-through whose business depended "primarily on the reputation or skill" of the proprietor. Treasury rules made several industries eligible for the deduction that clearly, according to the statute, should not have been. For example, the regulations made real estate and insurance brokers eligible for the deduction, even though "brokerage services" were designated by the statute to be ineligible (Kysar 2020).

Treasury's inappropriate regulatory choices substantially raised the revenue cost of the bill. TCJA was enacted under reconciliation procedures—that is, under Congressional rules that allow bills to pass the Senate with a bare majority if they fit within a budget resolution, which specifies permissible amounts of estimated revenue loss. TCJA's revenue loss was to be no greater than $1.5 trillion and JCT's estimates of the bill when it passed fit within that constraint (Joint Committee on Taxation 2017). But with Treasury's regulatory choices, CBO boosted its estimate of the 10-year direct revenue cost of the bill by $433 billion, causing the bill-plus-regulations to exceed the $1.5 trillion mark (Congressional Budget Office 2020). Almost half of the increase in revenue loss can be attributed to Treasury's BEAT bank exclusion (Congressional Budget Office 2020).

A number of instances where Treasury regulations contravened the statute appear to have been the product of successful industry lobbying (Kysar 2020). The rule-making process is vulnerable to influence of this kind, because it accounts primarily for the voices of taxpayers (in this case, corporations), rather than the general public interest.[46] Before the public comment period there is no limit on the kinds of contact that regulators can have with those who wish to

[46] This is because a concerned citizen or group not directly burdened by the rules would have no standing to sue. See Kysar (2020).

weigh in on their preferred interpretation, and the content of these meetings and correspondence are not made public (Oei and Osofsky 2019). Indeed, both the pre-comment and comment period in the case of TCJA were dominated by industry voices and corporate taxpayers and featured almost no advocacy in the public interest (Oei and Osofsky 2019; Drucker and Tankersley 2019). And even if Treasury were to make decisions that were on balance neutral with respect to taxpayers (in this case, corporations), the ultimate outcome after years of legal appeals would favor the corporations. The companies have legal standing to contest any rule that is unfavorable to them. But ordinary citizens—even though they would benefit from higher overall revenue—do not have legal standing to challenge unduly generous regulations in favor of corporations.

While there is widespread acknowledgement that Treasury faced a difficult task in writing regulations for TCJA, there is also widespread criticism of the regulatory choices, even among those who generally support the regulations.[47] For example, Herzfeld (2020a) argues that the industry and corporate advocacy may have led to several sensible and efficient regulations. But Herzfeld (2020b) says that "Treasury's sweeping vision of the international tax regime enacted by the TCJA—which it has repeatedly said is the basis for the new anti-avoidance rules—is nowhere to be found in the act's legislative history. Nor is it supported by any of the policy proposals articulated in the decade before the TCJA's enactment that collectively formed the basis for U.S. enactment of a territorial system of taxation." Likewise, Rosenbloom (2020), who argues that Treasury did "a heroic job" nonetheless also notes that "...once the statutory language is no longer an anchor, where does Treasury turn? It appears to have some wholly

[47] For criticism by those who do not support the regulations, see Drucker and Tankersley (2020) and Driessen (2020). Drucker and Tankersley (2020) point out that the regulatory process was directed by people who used to work for private law firms, helping large corporates avoid taxes on foreign source income and note other ties between industry and the regulation writers.

internal, and entirely unarticulated, sense of how far is too far."

VI. Conclusion

The business tax reforms in TCJA were largely motivated by concerns that business taxation was too burdensome on businesses and workers, and that the tax system discouraged companies from locating, investing, and reporting profits in the United States. The Act cut the corporate tax rate from 35% to 21%, provided a 20% deduction for certain forms of pass-through income, moved the business tax base toward a cash-flow measure, eliminated the taxation of repatriated foreign earnings (with a one-time transition tax on previously accumulated but unrepatriated foreign earnings) and enacted the GILTI, BEAT, and FDII provisions.

Some of TCJA's reforms promote efficiency, primarily by reducing and compressing the range of METRs on new investments across asset types, financing methods, and organizational forms. But many other reforms are either ill-conceived or substantially flawed. How should policymakers respond?

Making the temporary provisions in TCJA permanent would be expensive – costing about $1.7 trillion in revenues between 2026 and 2040 (Page et al. 2020). And it would generate little of policy value. In prior work (Gale et al. 2019, Gale and Haldeman 2021), we show the following: TCJA was regressive; the Act reduced revenue; its effect on GDP is difficult to tease out of the data; investment growth rose after TCJA was enacted, but was driven by trends in aggregate demand, oil prices, and intellectual capital that were unrelated to TCJA's supply-side incentives; growth in business formation, employment, and median wages slowed after TCJA was enacted; and international profit shifting fell only slightly.

In light of these findings, instead of extending or leaving in place the business tax provisions of TCJA, policy makers should focus on fixing the mistakes made in TCJA. For example, the overarching problem with the 20% pass-through deduction is that it does not reflect any underlying, organized economic principle. The deduction functions as an "incoherent and unrationalized industrial policy," creating distinctions that often do not have a sound basis in tax law, and that create unnecessary opportunities for tax avoidance (Shaviro 2018c). But perhaps the most damning aspect of the deduction is that growth of business formation fell in 2018 and 2019 relative to prior years, even though the economy was strong. Repealing the deduction (or letting it die when it expires in 2025) would eliminate the revenue cost, remove an enormous windfall gain that accrues overwhelmingly to extremely high-income households, reduce the discrepancy between tax rates on wages and non-corporate business income, and lessen tax administration problems.

The corporate reforms in TCJA probably went too far in terms of the rate reduction and not far enough in terms of base adjustment. An attractive alternative to TCJA's regime would combine (1) raising the corporate tax rate to 25 percent, (2) allowing expensing—full first-year write-offs of investment in equipment, structures, and inventories—and (3) eliminating the deduction for interest payments. The rationale is straightforward. Eliminating the interest deduction sets debt and equity financing on equal footing and removes the tax system's distortion in favor of debt. Combined with full expensing, the changes would set the marginal effective tax rate on all new investments to zero.[48]

This has three important implications. First, it lowers the effective tax rate on (most)

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[48] This may seem counterintuitive because the tax rate is 25 percent but expensing effectively makes the government a silent partner in the investment. A firm that invests a dollar in a project this year gets a 25-cent deduction (the government's "contribution"). If, say, the project pays off to the tune of $2 next year, the government gets 50 cents in taxes. Both the firm and the government get the same return—in this case, 100 percent—on their investments. The government's "investment" takes the form of granting a full deduction in the first year and receiving tax revenues in subsequent years.

investments. Second, it eliminates all distortions in effective tax rates across new investments, which would generate economic benefits. Third, it makes the United States very competitive internationally. For all three reasons, it would expand the size of the economy.[49]

Once the effective tax rate is zero, raising the statutory rate to 25 percent would reduce the extent to which the tax system provides windfall gains, which are expensive and unproductive, to previous investment. To be clear, average tax rates and statutory rates matter. They affect firms' cash flow, cross-border investment choices, incentives for profit shifting, and, if interest is deductible, leverage. But a 25 percent rate would not be uncompetitive relative to other advanced countries and would offset less than one third of the rate reduction from 2017. It merits emphasis, again, that the large changes in corporate taxation in TCJA appear to have had little effect on investment and profit shifting, at least through 2019 (Gale and Haldeman 2021).

The bottom line with respect to the various international provisions in TCJA is that profit shifting has only declined slightly post-TCJA and foreign investment by U.S. multinationals has increased. This attests to the ineffectiveness of the provisions and should motivate a rethinking of the structure of international tax rules.

For example, the concept of a global minimum corporate tax has been a constant and reasonable theme of recent international tax proposals, dating back at least to the Obama Administration and Dave Camp's proposals. An effective global minimum tax would eliminate the "race to the bottom" and eliminate benefits to corporations booking profit in low-tax jurisdictions.

The GILTI provisions in TCJA attempt to partially fulfill this role, but they are poorly

[49] See Barro and Furman (2018) who estimate the impact on economic growth. A similar proposal is described in Gale (2019) and Furman (2020a).

designed and need significant changes. Eliminating or reducing the tax exemption of foreign returns—currently equal to 10% of foreign tangible assets—would remove the incentive for firms to increase low-return physical capital investments overseas. Applying GILTI provisions on a country-by-country basis rather than a global basis would be more consistent with the nature of a minimum tax and would eliminate the creation of "America Last" incentives, in which firms with profits in high- (low-) tax foreign countries may have more incentives to invest more in low- (high-) tax foreign countries rather than in the United States. As of 2016, firms are already required to report their income, expenses, and taxes on a per-country basis, so there is no reason GILTI could not be calculated on a per-country basis. And raising the effective tax rate on GILTI (technically, reducing the 50% deduction) would help further, because so much of the foreign profit of American multinationals is allocated to tax havens with extremely low rates (Clausing 2020a, Saez and Zucman 2019; Clausing, Saez, and Zucman 2021).[50]

One could go further still. Clausing, Saez, and Zucman (2021) argue that in addition to its standard taxation regime, the government should collect a minimum tax on a country-by-country basis from each multinational corporation—without GILTI's 10% deemed return.

The BEAT, like the GILTI provisions, is meant to reduce profit shifting, but it is incredibly blunt. An effective check on profit shifting should consider both inward- and outward-bound flows and should consider deviations from an appropriate transfer price not deviations from a price of zero. BEAT should be reformed to adhere to sensible profit shifting rules or it should be repealed.

[50] There are other technical changes worth considering, some in conjunction with the changes listed in the text and some on an independent basis, including providing for carryforward of foreign tax credits, adjusting the proportion of foreign taxes that are creditable, and changing the disregard of GILTI losses in the computation of aggregate GILTI. For further discussion of GILTI reforms, see Sullivan (2019a) and the previous installments in that series.

The FDII provisions are the latest version of a long line of failed export subsidies. As discussed above, the rules create (presumably unintended) incentives to reduce investment in the U.S. and to export intellectual property. The tax benefits associated with FDII can be obtained without producing or using intangible capital in the U.S. or even making a real export sale (not counting "round-tripping"). And the provisions are quite expensive. They should be repealed.

Biden Administration proposals bear many similarities to the proposals above (Treasury 2021). The Administration would raise the corporate rate to 28 percent rather than 25 percent but would not move further in the direction of a cash-flow tax. The Administration's proposals for GILTI and FDII are very similar to ours, and the Administration's SHIELD program – which would essentially modify BEAT to allow deductions for expenses paid to affiliates in high-tax countries – is one example of how BEAT could be constructively modified. The Administration has also argued in favor a global minimum tax and a minimum tax on book income.

Looking more broadly at international tax structure, one possibility is to move not just to a cash-flow tax, as advocated above, but to combine a cash-flow tax with border adjustments—exempting tax on export sales and imposing taxes on imports—to generate a destination-based cash-flow tax (DBCFT, Auerbach 2010). Moving to a DBCFT would make the United States an even more attractive place to invest because it would tax sales, not profits, in the United States. It would eliminate a host of complexities in international tax policy and eliminate all US tax incentives for American firms to move profits, productions, or headquarters overseas. But it also comes with significant complications.[51] Full consideration of the DBCFT is beyond the scope of

[51] Implementing a DBFCT raises the specter of the government giving large refunds every year to major corporations that exported significant amounts. And, despite some popular claims, border adjustments will not raise long-term revenue; currently, the United States imports more than it exports, so a border adjustment—which taxes imports and exempts exports—would raise money in the short run, but in the long run, to the extent that exports and imports must roughly balance, so the US would lose money in future years on a border adjustment (Viard 2017). In addition, if it raised exchange rates significantly, border adjustment would give an enormous tax cut—several

this paper.

Finally, considering the regulatory issues that arose in the implementation of TCJA, policymakers should consider creating a regulatory ombudsman who would have standing to challenge regulations that are inconsistent with law but favor the taxpayer in question at the expense of the general public.

trillion dollars—to foreign investors in the United States, at the expense of American taxpayers, and it would wreak havoc on the finances of countries that borrow in US dollars. If it did not raise exchange rates significantly, the price of imports to America would rise substantially, which would hurt low-income people in the United States (Blanchard and Furman 2017).

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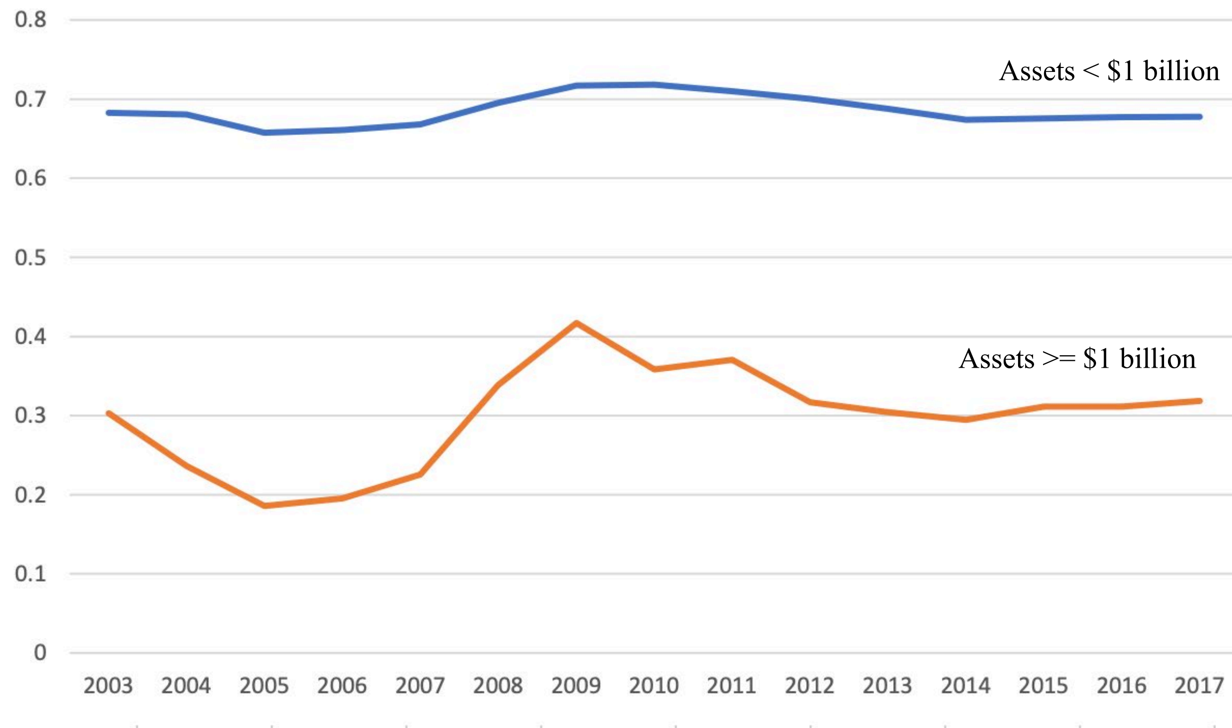
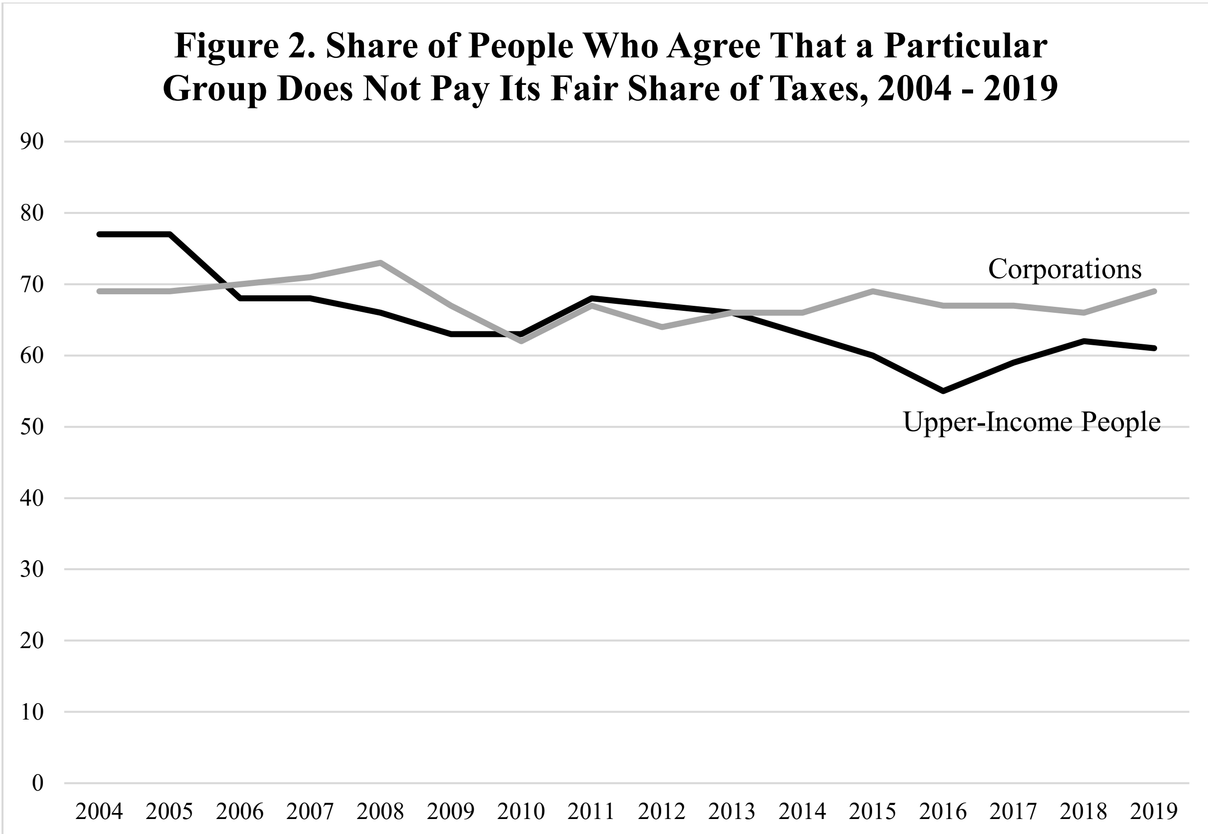
Figure 1. Share of C Corporations Reporting Net Zero Corporate Income Tax Liability, 2003 – 2017

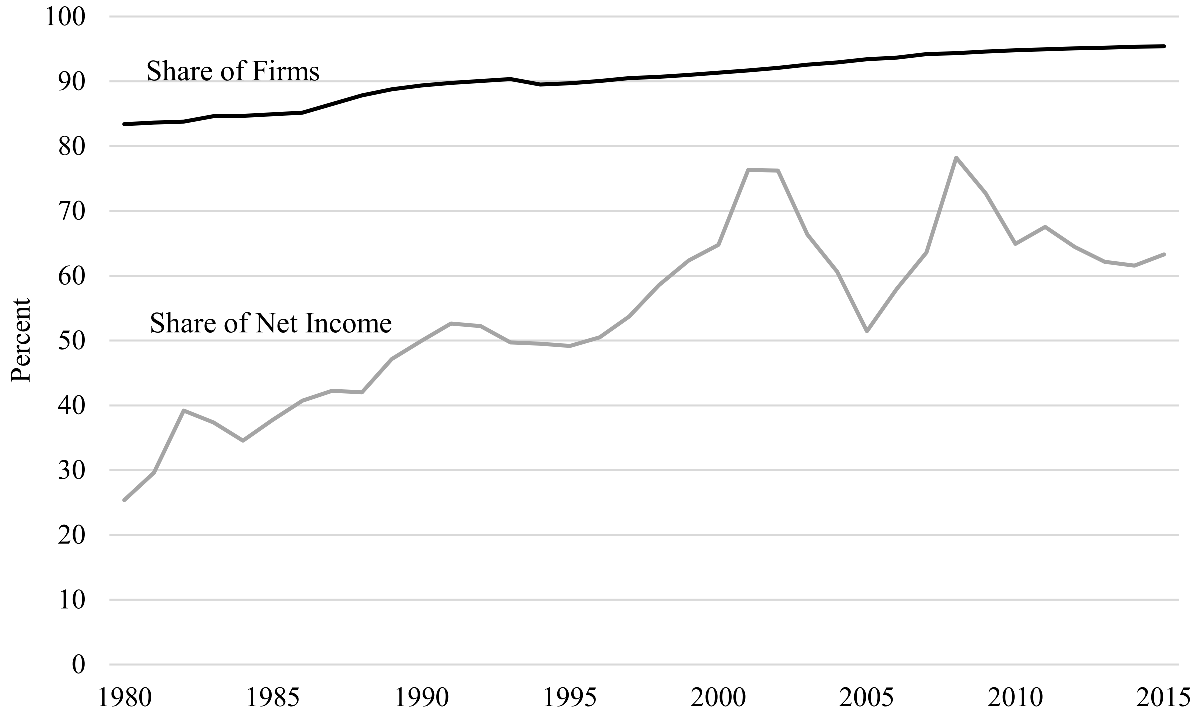


Source: JCT (2020).



Source: Gallup (2021).

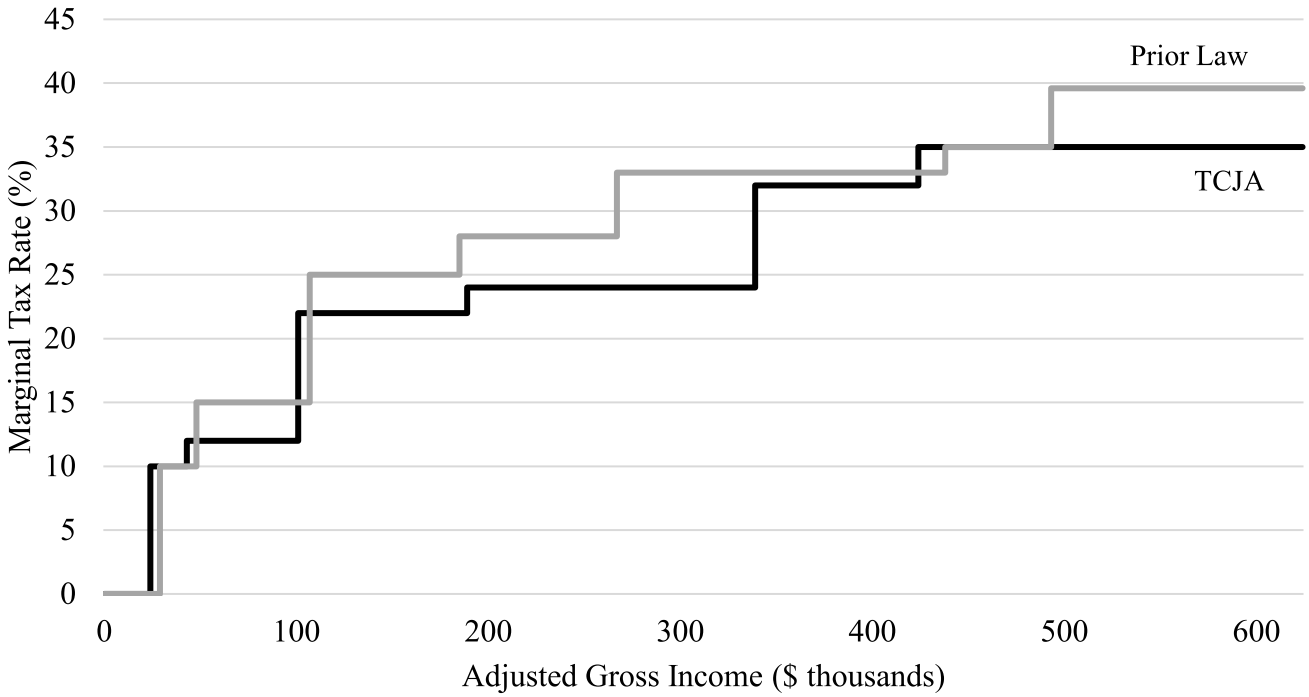
Figure 3. Pass-Through Share of Firms and Net Income, 1980-2015



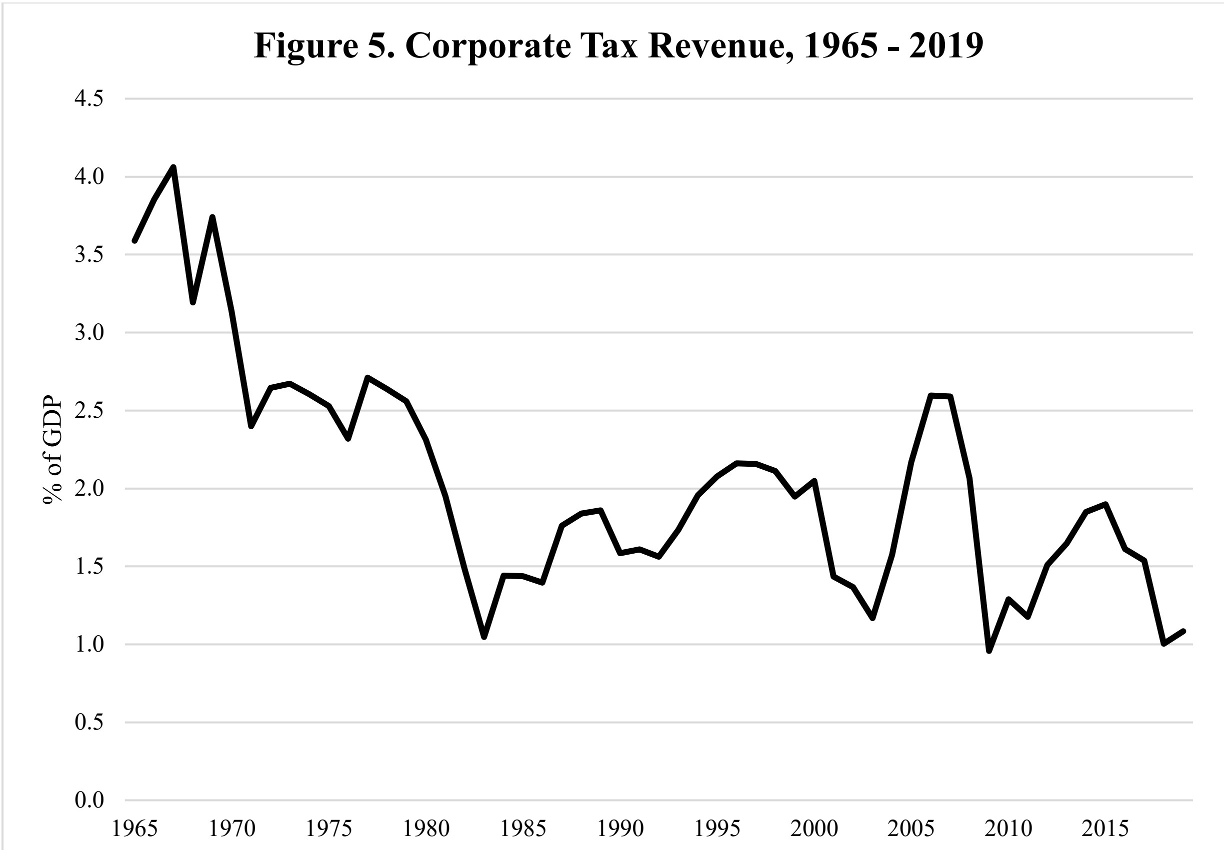
Source: Internal Revenue Service (2015).

Note: There may be double counting of income from certain passthroughs where partnerships or corporations are parties to the business

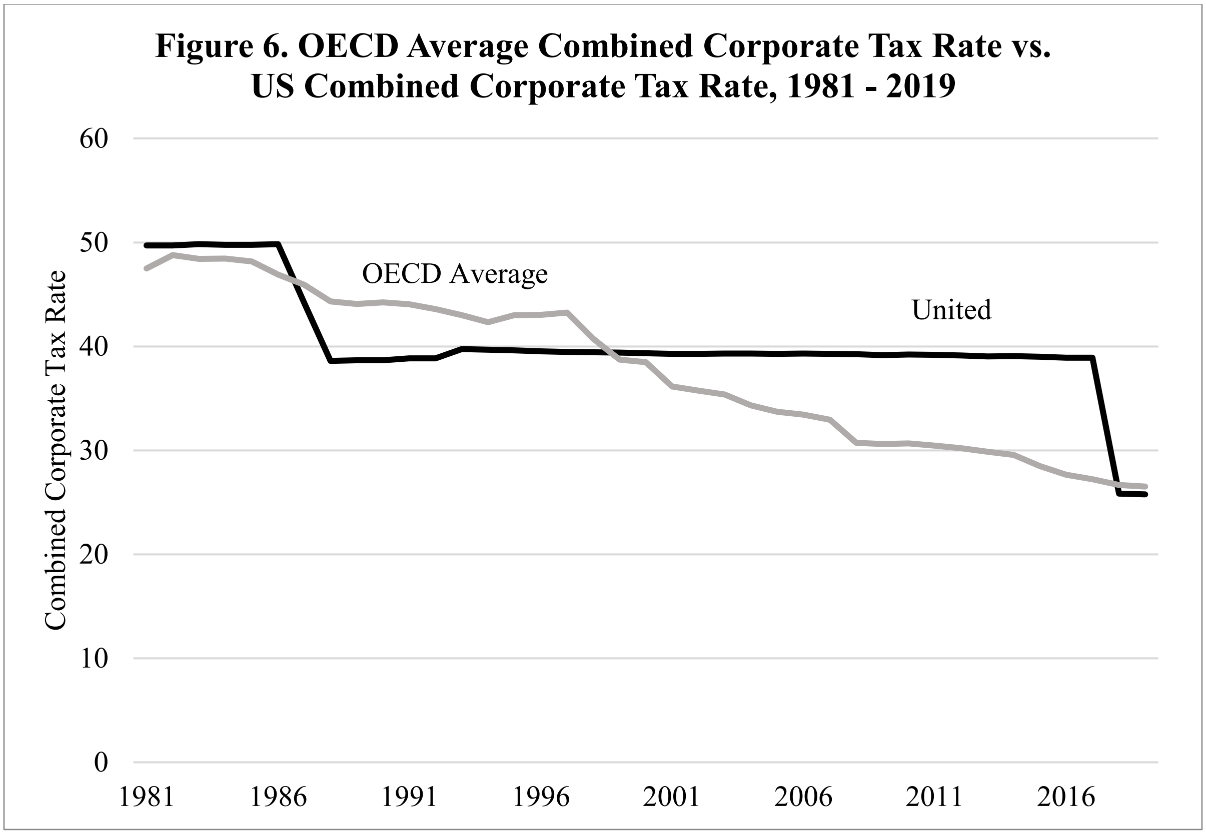
Figure 4. Marginal Tax Rates by Adjusted Gross Income Under TCJA and Prior Law, 2018



Notes: This graph shows the statutory marginal tax bracket as a function of income for a married couple filing jointly with two children. It does not include tax credits.

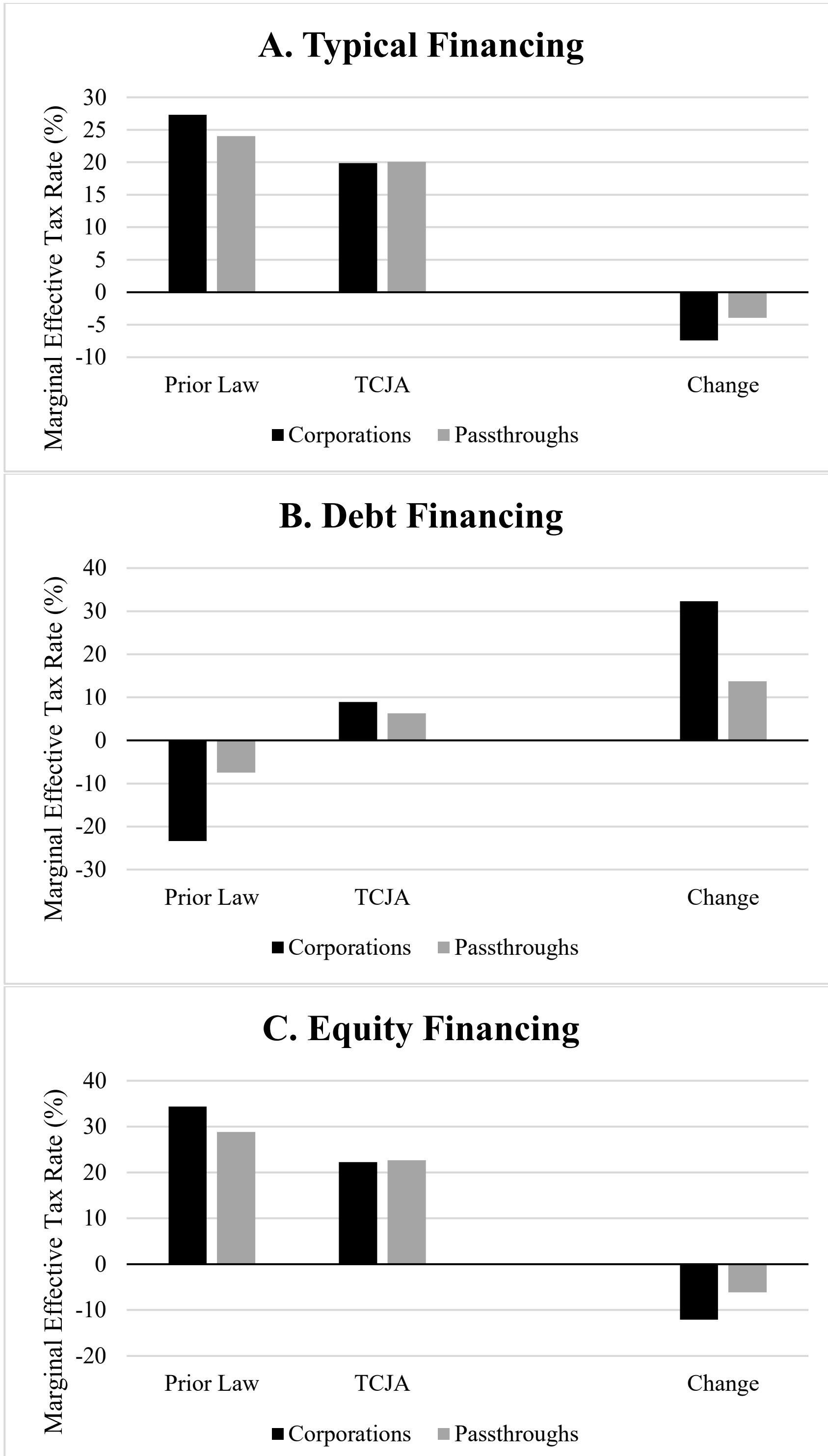


Source: CBO (2020b).



Source: OECD (2018, 2019).

Figure 7. Marginal Effective Tax Rates on New Investment Under Prior Law and TCJA, 2018



Source: CBO (2018b).

Table 1. Selected Provisions of the Tax Cuts and Jobs Act

Provision	Effective	10-Year Revenue Effect ($Billions)
10%, 12%, 22%, 24%, 32%, 35%, and 37% income tax rate brackets	2018 - 2025	-1,214.2
Allow 20 percent deduction of qualified business income	2018 - 2025	-414.5
Disallow active passthrough losses in excess of $500,000 for joint filers, $250,000 for others	2018 - 2025	149.7
Repeal of Alternative Minimum Tax on Corporations	2018 -	-40.3
21 Percent Corporate Tax Rate	2018 -	-1,348.5
Increase section 179 expensing to $1 million with phaseout beginning at $2.5 million	2018 -	-25.9
Extension, expansion, and phase down of bonus depreciation	2018 - 2026	-86.3
Limit net interest deductions to 30 percent of adjusted taxable income	2018 -	253.4
Modification of net operating loss deduction	2018 -	201.1
Repeal of domestic production activities deduction	2018-	98
Transition to territorial taxation of foreign profits	2018-	-223.6
Tax on deferred foreign income (8% on illiquid assets, 15.5% on liquid assets)	one time	338.8
Current year inclusion of global intangible low-taxed income (GILTI)	2018 -	112.4
Deduction for foreign-derived intangible income (FDII)	2018 -	-63.8
Base erosion and anti-abuse tax (BEAT)	2018 -	149.6
Total for Selected Provisions		-2,114.1
Total for entire TCJA		-1,456

Source: JCT (2017).

Table 2. 2018 Effective Marginal Tax Rates on Capital Income

	All Assets		Equipment		Structures		Intellectual Property		Owner-Occupied Housing	
	Prior Law	**TCJA**	**Prior Law**	**TCJA**	**Prior Law**	**TCJA**	**Prior Law**	**TCJA**	**Prior Law**	**TCJA**
C-Corporation - All	27.3	19.9	14.7	6.8	28	21.1	-1.5	-7		
Equity Financed	34.4	22.3	22.6	9.7	35.2	23.5	10.7	-1.2		
Debt Financed	-23.4	8.9	-38.2	-6.5	-20	10.7	-115.5	-37.4		
Pass-through - All	24	20.1	8.3	-1.2	25	21.7	-7.4	-15.7		
Equity Financed	28.8	22.7	13.7	2.4	29.8	24.3	2.2	-8.3		
Debt Financed	-7.5	6.3	-25.2	-20.5	-4.1	9.4	-90.2	-65.6		
Residential - All									-2.4	6.8
Equity Financed									-3.3	-0.4
Debt Financed									0.2	22.5

Source: CBO (2018b).

Table 3. Change in Costs of Capital Investment After TCJA

A. Change in Marginal Effective Tax Rates (percentage points)

	All Business			Corporations			Pass-throughs		
	Equipment	**Structures**	**Intellectual Property**	**Equipment**	**Structures**	**Intellectual Property**	**Equipment**	**Structures**	**Intellectual Property**
Congressional Budget Office (2018b)				-8	-7	-6	-9	-3	-8
DeBacker and Kasher (2018)				-10	-8	-1	-10	-7	-1
Gravelle and Marples (2019)				-9	-9	21	-14	-5	2

B. Change in User Cost of Capital (percent)

	All Business			Corporations			Pass-throughs		
	Equipment	**Structures**	**Intellectual Property**	**Equipment**	**Structures**	**Intellectual Property**	**Equipment**	**Structures**	**Intellectual Property**
Gravelle and Marples (2019)	-3	-12	3						
Barro and Furman (2018)				-3	-10	2	0	1	1