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The TCJA's Expensing Provision Alleviates the Tax Code's Bias Against Certain Investments

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Key Findings

- The Tax Cuts and Jobs Act (TCJA), passed by Congress in December 2017, made significant progress in improving the cost recovery treatment of business investment by enacting 100 percent bonus depreciation for short-lived assets.

- This provision allows businesses to immediately deduct the full cost of short-lived investments, similar to the treatment of other business expenses, rather than stretching deductions over many years. However, it is only scheduled to be in full effect for five years, then phase down. It will expire in its entirety at the end of 2026.

- If the TCJA had featured permanent 100 percent bonus depreciation, instead of temporary, it would have been the most powerful pro-growth provision in the bill per dollar of revenue forgone. While the temporary provision does generate short-term economic growth, that growth dissipates by the end of the budget window as it sunsets.

- We estimate that making the TCJA bonus depreciation provision permanent would result in a 0.9 percent larger economy, a 2.2 percent larger private capital stock, 0.8 percent higher wages, and 172,300 additional full-time equivalent jobs.

- The 10-year revenue cost of permanence is $141 billion on a conventional basis; when accounting for additional economic growth, the 10-year revenue cost is $98 billion.

- Allowing 100 percent bonus depreciation to expire would increase the cost of making certain investments in the United States. Policymakers should consider making it a permanent feature of the tax code.

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Introduction

The Tax Cuts and Jobs Act (TCJA) made significant progress in improving the cost recovery treatment of business investment by enacting 100 percent bonus depreciation. Full expensing, or the immediate write-off of all business investment, is a key driver of future economic growth, and can have a larger pro-growth effect per dollar of revenue forgone than cutting tax rates.

The 100 percent bonus depreciation provision moves toward full expensing by allowing the immediate write-off of certain short-lived investments, but the provision will only be in effect for five years before it begins phasing out. To capture the long-run economic benefit of expensing, lawmakers ought to make it a permanent feature of the tax code and consider extending the provision to structures. This paper explains the tax code's bias against business investment, how the TCJA improved the tax treatment of certain types of business investment, and the growth and revenue impacts of making 100 percent bonus depreciation permanent.

Cost Recovery Treatment Short of Full Expensing Creates A Drag on Economic Growth

Under the U.S. tax code, businesses can generally deduct their ordinary business costs when figuring their income for tax purposes. However, this is not always the case for the costs of capital investments, such as when businesses purchase equipment, machinery, and buildings. Typically, when businesses incur these sorts of costs, they must deduct them over several years according to preset depreciation schedules, instead of deducting them immediately in the year the investment occurs.[1]

Delaying deductions means the present value of the write-offs (adjusted for inflation and the time value of money) is smaller than the original cost—how much less valuable depends on the rate of inflation and the discount rate. Table 1 illustrates how depreciation deductions play out over the lives of different classes of property. Delayed deductions effectively shift taxes forward in time (businesses face a higher tax burden earlier because they cannot fully deduct their costs), and the after-tax return on the investments decreases in present value. This results in less capital formation, lower productivity and wages, and less output.[2]

1 Scott Greenberg, "What is Depreciation, and Why Was it Mentioned in Sunday Night's Debate?" Tax Foundation, Oct. 10, 2016, https://taxfoundation.org/what-depreciation-and-why-was-it-mentioned-sunday-night-s-debate/.

2 Ibid.

TABLE 1.

Present Value Cost of Straight-Line Depreciation Allowance for a $100 Investment

	5-year asset	15-year asset	20-year asset
Expensing	$100.00	$100.00	$100.00
MACRS at 0% inflation	$92.97	$78.64	$75.50
MACRS at 2% inflation	$88.75	$69.32	$63.87
MACRS at 3% inflation	$86.77	$66.69	$59.07

Source: Author's calculations. Assumes half-year convention, 3 percent real discount rate, plus inflation.

For example, under the Modified Accelerated Cost Recovery System (MACRS), computer equipment is classified as five-year property.[3] If a firm purchased $100 million of computer equipment in a given year, instead of subtracting the entire expense when figuring its taxes in that year, it would only be allowed a partial deduction, with the remainder depreciated over the remaining life of the asset. The end result of limited deductions means the firm is only able to recover about $89 million of the full $100 million cost in present value terms. This treatment overstates the firm's profits by about $11 million, leading to an increase in tax liability on this "profit." Or, consider a business that spends $10,000 on shrubbery, classified as 15-year property.[4] At 2 percent inflation, this business would deduct just $6,900 of the initial investment cost over the life of the investment in present value terms. Understating the actual cost of an investment leads to a higher tax burden on investment, making anything short of full expensing a drag on economic growth.

For a historical example, consider the 1986 tax reform, which illustrates that cost recovery treatment, not just the headline tax rate, affects the cost of capital and matters for economic growth. The 1986 law reduced the corporate tax rate from 46 percent to 34 percent, which lowered the cost of capital. However, the law also changed cost recovery by lengthening depreciation schedules, which increased the cost of capital. The net effect of the 1986 tax reform was an overall increase in the cost of capital, partially due to the negative changes made to cost recovery, which reduced investment incentives and explains why the 1986 law did not lead to increased private investment.[5][6]

Intuitively, this makes sense. When a business decides whether to make an investment, it adds up the cost of doing so, including taxes, and weighs that cost against the revenue expected over the life of the asset. Cost recovery systems that fall short of full, immediate expensing deny the investor a tax claim for part of the cost of production.[7] The disallowed portion of cost recovery understates actual costs and thus overstates profits, which leads to a greater tax burden and increases the cost of making an investment.

3 Internal Revenue Service, *Publication 946 (2017), How To Depreciate Property*, https://www.irs.gov/publications/p946#en_US_2017_publink1000107538.

4 Ibid.

5 Scott Greenberg, John Olson, and Stephen J. Entin, "Modeling the Economic Effects of Past Tax Bills," Tax Foundation, Sept. 14, 2016, https://taxfoundation.org/modeling-economic-effects-past-tax-bills/.

6 Alex Muresianu and Kyle Pomerleau, "The Economics of 1986 Tax Reform, and Why It Didn't Create Growth," Tax Foundation, July 17, 2018, https://taxfoundation.org/economics-1986-tax-reform-didnt-create-growth/.

7 Stephen J. Entin, "The Neutral Cost Recovery System: A Pro-Growth Solution for Cost Recovery," Tax Foundation, Oct. 29, 2013, https://taxfoundation.org/neutral-cost-recovery-system-pro-growth-solution-capital-cost-recovery.

Ultimately, this means that the corporate income tax is biased against investment in capital assets to the extent that it makes the investor wait years or decades to claim the cost of machines, equipment, or factories on their tax returns.

The Tax Cuts and Jobs Act Improved Cost Recovery Treatment

The Tax Cuts and Jobs Act significantly improved the ability of businesses to recover the costs of their investments by enacting 100 percent bonus depreciation. This provision allows businesses to immediately deduct the full cost of eligible investments, as they would with any other business expense, rather than stretching deductions over many years.

The types of property eligible for 100 percent bonus depreciation are assets with cost recovery periods of 20 years or less. This includes short-lived investments in property, such as machinery and equipment, removing the tax code's bias against these specific capital investments. However, the provision excludes long-lived capital investments, such as structures, meaning the tax code remains biased against these investments.

The provision is scheduled to be in effect for five years before it begins gradually phasing out at the end of 2022. Beginning in 2023, the provision would be reduced by 20 percentage points each year, for example, dropping to 80 percent in 2023, 60 percent in 2024, and so on until it expires entirely at the end of 2026.[8] The Joint Committee on Taxation (JCT) estimates on a conventional basis that the availability and subsequent phasing out of 100 percent bonus depreciation will reduce federal revenue by $86.3 billion over the next decade.[9]

The temporary nature of the provision will incentivize businesses to make their investments sooner, while they can deduct the full cost, rather than later, when they must take depreciation deductions over longer periods. Thus, the provision will pull some investments forward, leading to faster growth in earlier years that slows back down as the provision expires in later years.[10]

If the TCJA had featured permanent 100 percent bonus depreciation, instead of phasing it out after five years, it would have been the most powerful pro-growth provision in the bill. However, while the temporary nature of the provision does generate short-term economic growth, that growth dissipates by the end of the budget window after it sunsets.[11]

8 Scott Greenberg, "Tax Reform Isn't Done," Tax Foundation, March 8, 2018, https://taxfoundation.org/tax-reform-isnt-done/.

9 The Joint Committee on Taxation, "Estimated Budget Effects of the Conference Agreement for H.R. 1, the 'Tax Cuts and Jobs Act,'" Dec. 18, 2017, https://www.jct.gov/publications.html?func=startdown&id=5053.

10 Kyle Pomerleau, "Economic and Budgetary Impact of Temporary Expensing," Tax Foundation, Oct. 4, 2017, https://taxfoundation.org/economic-budgetary-impact-temporary-expensing/.

11 Scott A. Hodge, "Ranking the Growth-Producing Provisions in the House and Senate Bills," Tax Foundation, Dec. 11, 2017, https://taxfoundation.org/ranking-growth-producing-tax-provisions-house-senate-bills/.

Growth and Revenue Impact of Making 100 Percent Bonus Depreciation Permanent

On a permanent basis, 100 percent bonus depreciation would generate long-run economic growth. Full expensing can encourage more investment growth per dollar of forgone revenue than a corporate rate cut because its benefits go to new capital only, whereas benefits of a corporate rate are split between old and new capital.[12]

TABLE 2.

The Long-Run Impact of Making the TCJA 100 Percent Bonus Depreciation Provision Permanent

GDP	+0.9%
Wage Rate	+0.8%
Private Business Capital Stock	+2.2%
FTE Jobs	172,300

Source: Taxes and Growth Model, August 2018

We estimate that making the 100 percent bonus depreciation provision in the Tax Cuts and Jobs Act permanent would increase the size of the capital stock by 2.2 percent and long-run GDP by 0.9 percent; the larger economy would result in a 0.8 percent increase in wages and 172,300 full-time equivalent jobs.

Making this provision permanent would lead to a revenue loss of $141 billion during the 2019 to 2028 budget window. However, it is important to note that those losses in revenue, while measured in a 10-year budget window, do not begin until the fifth year of the period when the provision would begin phasing down. The first five years of the budget window already include the provision in its baseline.

On a dynamic basis in the 10-year budget window, the revenue losses would be smaller than the revenue losses measured in a conventional model. Due to the added economic growth, there would be $43 billion in dynamic revenue reflow; this would not be enough to fully offset the revenue loss from extension. From 2018 to 2028, extending the 100 percent bonus depreciation provision would reduce federal revenues by $98 billion on a dynamic basis.

12 Kyle Pomerleau, "Why Full Expensing Encourages More Investment than A Corporate Rate Cut," Tax Foundation, May 3, 2017, https://taxfoundation.org/full-expensing-corporate-rate-investment/.

TABLE 3.

10-Year Revenue Impact (2019 to 2028) (billions of dollars)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2019-2028
Make 100% Bonus Depreciation Permanent	0	0	0	0	-9	-17	-24	-30	-33	-27	-141
Dynamic Revenue	0	0	0	0	0	2	4	8	12	16	43
Net Revenue	0	0	0	0	-9	-15	-20	-22	-21	-11	-98

Source: Taxes and Growth Model, August 2018

Extending 100 Percent Bonus Depreciation to Structures

The Tax Cuts and Jobs Act improved cost recovery for certain assets like machinery and equipment, but not for assets like structures. Structures, such as office buildings and factories, receive particularly unfavorable depreciation treatment under the current tax code, yet are a key part of the U.S. economy. Private nonresidential structures make up about 60 percent of the private nonresidential capital stock in the United States, so they deliver roughly that share of the contribution of private capital to GDP.[13] However, capital outlays for structures must be reported over long periods, long enough that it may discourage businesses from investing in structures in the first place.[14]

When a business purchases a structure, it must depreciate it over a period of up to 27.5 years for residential buildings or 39 years for nonresidential buildings.[15] There are several options lawmakers could use to improve this cost recovery treatment, including full expensing.[16] Both the upfront cost of moving to full expensing for structures and the question of how to treat older structures present challenges to improving this area of the tax code; however, there are policy solutions that would address these concerns.[17]

13 U.S. Bureau of Economic Analysis, "National Data: Table 4.1 Current-Cost Net Stock of Private Nonresidential Fixed Assets by Industry Group and Legal Form of Organization," https://bea.gov/iTable/iTable.cfm?ReqID=10&step=1#reqid=10&step=1&isuri=1.

14 Scott Greenberg, "A Proven Strategy for Boosting Investment," Tax Foundation, Feb. 17, 2016, https://taxfoundation.org/proven-strategy-boosting-investment.

15 Scott Greenberg, "Options for Improving Cost Recovery for Structures," Tax Foundation, Oct. 11, 2017, https://taxfoundation.org/options-improving-cost-recovery-structures/.

16 Ibid.

17 For a discussion of these policy options, see Stephen J. Entin, "Tax Treatment of Structures Under Expensing," Tax Foundation, May 24, 2017, https://taxfoundation.org/tax-treatment-structures-expensing/.

Conclusion

The Tax Cuts and Jobs Act made significant progress in improving businesses' ability to recover the cost of making investments in the United States by enacting 100 percent bonus depreciation. This provision does away with the need for depreciation schedules and simply allows businesses to deduct the cost of their investments in machinery and equipment as they would any other business expense. This lowers the cost of investing in these types of assets in the United States.

However, 100 percent bonus depreciation is scheduled to begin phasing out after December 31, 2022. If the provision does phase out, it would increase the cost of domestic investment in machinery and equipment. Making this provision permanent would lead to a 0.9 percent larger economy in the long run, a 2.2 percent larger capital stock, 0.8 percent higher wages, and add 172,300 full-time equivalent jobs. Permanence would reduce federal revenues by $141 billion ($98 billion on a dynamic basis) over the 10-year budget window. Lawmakers ought to explore ways to make the TCJA 100 percent bonus depreciation provision permanent well before it expires, as well as consider extending the provision to structures.