Congress: Make Expensing of Machinery and Equipment Permanent, ASAP

By Stephen J. Entin & James Carter

Some of the most economically beneficial features of the 2017 Tax Cuts and Jobs Act (TCJA) were enacted on a temporary basis to hold down the revenue cost during the 2018-2027 budget window. These provisions are due to expire over the course of the next few years, unless extended by Congress.

One key TCJA provision expiring soon is the "expensing" provision that allows businesses to immediately deduct the full cost of the machinery and equipment they buy, instead of depreciating the assets over time. Expensing is set to phase out between 2023 and 2027.[1] Revenue is not profit. Profit is revenue less the cost of earning the revenue. Most business expenses, such as labor compensation, state and local taxes, energy, materials, etc., are immediately deductible from revenue at the time they are paid. Capital investment costs, however, must by law be stretched over time, subjecting that input to higher effective tax rates, and holding down investment.[2] Putting all inputs on an equal footing requires immediate deduction for all costs as they occur.

According to the Tax Foundation, expensing has a more powerful impact on investment and capital formation (machinery; industrial, commercial, and residential buildings; and other structures) than other types of tax changes, per dollar of government revenue gain or loss. Expensing reduces the tax on new investment in the United States, while other tax rate changes and credits are spread over earnings from U.S. income from foreign assets, land, and other sources of business income.[3]

Expensing creates economic benefits in both good times and bad, and thus should not just be viewed as a recession-fighting tool to turn off and on. Nevertheless, it is particularly important to extend it now rather than later. The economy is currently teetering on the edge of recession, and inflation is raging. Expensing boosts investment and shelters it from inflation. Letting expensing expire now would be the worst possible timing.

[1] The Act specifies that businesses may expense 80% of an investment in 2023, while depreciating the remaining 20% over time. The expensing portion would fall to 60% in 2024, 40% in 2025, and 20% in 2026. Expensing would be gone by 2027.
[2] R&D outlays used to be expensed, but the 2017 Tax Cuts and Jobs Act now requires them to be amortized over five years. Eliminating amortization would temporarily reduce revenue in the first half of the federal budget window, but it would raise GDP and revenue longer term. See "Delaying R&D Amortization Costs Less but Generates Little Economic Benefit Compared to Full Cancellation," Tax Foundation, Washington, DC, available at: https://taxfoundation.org/r-d-amortization-changes/
[3] The Tax Foundation Taxes and Growth Model calculates the direct effect of tax changes on the cost of acquiring addition capital assets, the resulting changes in the quantity of capital, productivity, wages, employment, and output. See the different results for various tax changes in "Options for Reforming America's Tax Code 2.0," Tax Foundation, Washington DC available at: https://taxfoundation.org/tax-reform-options/

LOSING EXPENSING WOULD HURT EVERYONE

Allowing expensing to expire would sharply raise the cost of new equipment, thereby reducing the amount of equipment businesses can afford to maintain and employ. With less equipment in use, workers' productivity and wages would be lower than they could and ought to be. Wages and salaries, which are the largest component of national income, track labor productivity closely. Workers are therefore the biggest beneficiaries of the rise in productivity, output and national income resulting from expensing. They would be the biggest losers if it were to expire. Expensing also benefits savers by raising the returns to saving, and it benefits consumers by reducing the cost and increasing the supply of goods and services.

Workers, savers, and consumers would not be the only losers if expensing were to end. Ironically, the government would lose too, because (as explained below) expensing is one of the very few tax reductions that boost economic activity enough to result in higher revenues down the road. By the end of the 10-year budget window, extending expensing permanently would lift tax revenues above the baseline forecast, due to higher wages and employment.

WHY IT MATTERS SO MUCH

Like justice, a deduction delayed is a deduction denied. A dollar of cost deducted from sales five or 10 or 20 years from now is not worth as much as a dollar today.[4] Depreciation deductions (capital consumption allowances) lose value to two effects, the real time value of money (about 3.5% a year after taxes since the 1950s) and inflation (running at 8.6% over the last twelve months as of May 2022). The longer the tax life of the asset, the more the real present value of the depreciation stream falls short of the upfront cost of the asset. The higher the inflation rate, the worse the shortfalls become. Depreciation understates the real cost of equipment, buildings, and all other depreciable capital. It overstates taxable income, boosting effective tax rates. Investments must earn more to cover the added taxes. Investors reject capital projects that cannot leap the added tax hurdle.

Under the old depreciation schedules, the tax code assigns machines, equipment, and other short-lived assets tax lives of three, five, seven, 10, 12, 15, or 20 years. Most fall into the five-year and seven-year categories. Assets with these lives of 20 years or less are eligible for expensing. Residential structures have 25-year lives, while for commercial and industrial structures, it is 39 years. Some types of infrastructure (tunnels, ports) have even longer tax lives. Structures are not included in the expensing provision.

Under expensing, an asset costing $100 gets an immediate cost allowance (depreciation deduction) of $100. Revenues are not taxable until they exceed the full cost of the asset. Future inflation has no effect on the value because the businesses can use the deduction right away. But under depreciation, even with no inflation, the present value of the deduction stream of a $100 investment in an asset with a five-year tax life is only about $92. At 3%

[4] People do not value a future dollar as highly as a dollar in hand today. A dollar in hand could be invested and earn a return, growing over time. The present value of a future dollar is the amount one would have to invest today for it to reach a dollar in the future year in question. A dollar not available until next year must be reduced by a discount rate reflecting the real time value of money (normal historical real return on capital) and inflation. If the discount rate is 5%, a dollar next year has a present value of $1/1.05, or $0.952, because $0.952 invested to day x 1.05 would equal $1 a year from now. Similarly, a dollar two years from now has a present value of $1/1.05^2, or $0.907. The higher the discount rate and the longer the delay, the less is the present value of the future dollar. MBAs are taught to calculate the value the stream of after-tax income from a potential investment to determine if it will recover its cost and yield a reasonable profit. Delaying costs accelerates taxes and reduces the present value of the projected after-tax earnings, causing some projects to be unprofitable, and taken off the table.

inflation, the value of the write-off drops to $86; that is, $14 of the future revenue generated by the asset is taxed as profit, when in fact it is still merely covering the real $100 cost. At 5% inflation, the value of the five-year write-off drops to $82. At 8% inflation, the write-off is worth only $77, and $23 of the revenue stream needed to cover the asset's cost is mischaracterized as profit and is subject to tax. For the seven-year asset, the write-off values on a $100 asset are $89 at zero inflation, $81 at 3% inflation, $76 at 5% inflation, and $70 at 8% inflation.

PRESENT VALUE OF DEPRECIATION ALLOWANCE PER $ OF INVESTMENT

		INFLATION RATE:			
		0%	3%	5%	8%
WITH EXPENSING:		$1.00	$1.00	$1.00	$1.00
WITH DEPRECIATION					
FOR ASSET	3 yrs	$0.95	$0.91	$0.89	$0.85
TAX LIVES OF:	5 yrs	$0.92	$0.86	$0.82	$0.77
	7 yrs	$0.89	$0.81	$0.76	$0.70
	10 yrs	$0.85	$0.74	$0.68	$0.60
	12 yrs	$0.82	$0.70	$0.63	$0.55
	15 yrs	$0.78	$0.64	$0.57	$0.49
	20 yrs	$0.72	$0.56	$0.49	$0.40
	25 yrs	$0.67	$0.50	$0.42	$0.34
	39 yrs	$0.55	$0.37	$0.30	$0.23

The table assumes a real after-tax discount rate of 3.5% for the normal time value of money (basic after-tax real return on capital for most of the post-Korean War economy). The present values of the capital cost consumption allowances (depreciation) over the lives of the assets always equal 100 cents per dollar of outlay under expensing. Under depreciation, the values fall with longer asset lives and higher inflation rates. Calculations by author.

ECONOMIC GAINS FROM PERMANENT EXPENSING OF MACHINERY AND EQUIPMENT

The Tax Foundation reports the economic and budget consequences of various tax changes in its Tax Reform Options Book. It estimates that making expensing permanent would add 0.5% to GDP over time, increase hours worked by the equivalent of 86,000 full-time jobs, and boost the wage rate by 0.4% across the board. After-tax incomes would be 0.4% higher at all levels of income in the bottom 80% of the income distribution, and about 0.5% to 0.6% higher at higher incomes, including the portions of the gains going to workers and savers. The private sector capital stock would be 0.9% higher (about half a trillion dollars).[5]

[5]See Options for Reforming America's Tax Code 2.0, option 7, Tax Foundation, Washington DC, April 19, 2021. Available at Options for Reforming America's Tax Code | Tax Foundation

TEMPORARY REVENUE COST FOR A PERMANENT REVENUE GAIN

Extending expensing would cost the government revenue in the first few years, but it would raise revenues longer term. The economic gains to the people are achievable with no permanent sacrifice of government revenue. It would be a win-win-win-win situation; workers, savers, consumers, and the government would all gain.

Congressional budget scorers include the short-term tax increases from going back to depreciation and its delayed write-offs in their baseline revenue projections. The Tax Foundation estimates that extending expensing would reduce these forecast revenues by a cumulative $217 billion over the 2022-2031 ten-year budget window, assuming no beneficial changes to GDP ("static" economic assumptions). Allowing for expected gains in GDP from the extension, the revenue loss would fall to $110 billion ("dynamic economic assumptions). Over half of the 10-year revenue loss would be recovered due to higher output and incomes.[6]

BUDGET COST OF EXTENDING EXPENSING

BILLIONS OF DOLLARS

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
STATIC (NO GDP CHANGE)	0.0	-9.8	-18.1	-25.3	-31.5	-37.0	-29.5	-24.1	-20.3	-17.8	-217.0
DYNAMIC (WITH GDP EFFECTS)	0.0	-9.3	-15.1	-20.1	-22.8	-24.2	-14.5	-6.9	-1.1	3.8	-110.2

Source: Options for Reforming America's Tax Code | Tax Foundation

The annual revenue losses would be largest in the middle the decade as expensing drops to zero. As taxpayers claim the rising quantity of deferred deductions over time, the initial revenue gains would evaporate. The Tax Foundation table, above, shows that annual revenue loss from extending expensing would be only $6.9 billion by 2029, only $1.1 billion in 2030. The extension of expensing would be raising revenue by $3.8 billion in 2031 (on a dynamic basis). Gains in revenue would grow significantly thereafter. (These numbers will rise as CBO revises its economic and baseline revenue forecasts, and as the budget window is extended, but the pattern of a short-term revenue loss followed by permanent revenue gains will remain the same.)

IMPROVEMENTS TO EXPENSING

Some businesses are not currently earning enough to use the whole deduction provided by expensing. Some are start-ups; some are older businesses experiencing temporary losses. These businesses must carry forward the unused write-offs to a later date, which reduces their value. The initial up-front present value of these deferred deductions can and should be preserved by increasing the unused portions each year by a reasonable discount rate, which would be a typical 3.5% real rate of return on capital plus the rate of inflation. This would put a start-up on an equal footing with an established business.

[6] Ibid.

TREATMENT OF STRUCTURES

Structures are long-lived assets that are not eligible for expensing under current law, which is unfortunate because, as the previous table shows, they are the assets most adversely affected by the delays in taking the deductions for their costs, due to their long write-off periods. The present value of the depreciation deductions on a $100 investment in a 39-year building is only $37 at 3% inflation, and only $23 at 8% inflation. Buildings need very good earnings prospects to leap that kind of tax hurdle. Structures are two-thirds of the capital stock, and the economic benefits of improving their tax treatment would be commensurately large.

If we were starting a new tax system from scratch, expensing of structures would be ideal. However, transitioning to expensing for such long-lived assets would involve a large initial revenue drop. We would be writing off new buildings immediately while many years' worth of deductions on old buildings are still being claimed. The revenue loss would disappear over time, but it would take decades. Expensing for new buildings would also put existing buildings at a competitive disadvantage, and lead to resales and churning. There would also be a problem for many businesses which could not use the deductions immediately, because the cost of a large building project might exceed their current earnings, requiring a loss carry-forward.

For all these reasons, it would be prudent to adopt an alternative means of allowing a deduction for the full real cost of structures. NCRS (neutral cost recovery system) would continue to deduct the cost of assets over time. However, NCRS would increase the unused portion of the cost of an asset annually by a 3.5% real return plus the rate of inflation in the previous year. The effect would be to provide a deduction equal in present value to immediate expensing. The deductions would rise in nominal terms over time, as would the added GDP made possible by the gradual construction of additional buildings under the less punitive tax regime. Tax revenues from the added GDP would make the added depreciation deductions affordable for the government. The economic gains from extending neutral cost treatment to structures would be about twice those of expensing for equipment. To keep old structures competitive, Congress could raise their remaining deductions annually in the same manner, to preserve their real value against time and inflation.

CONCLUSION

Expensing of machinery and equipment is due to expire along with other provision of the 2017 Tax Cut. Expensing is one of the most important pro-growth provisions of that Act. Congress should make expensing permanent, as soon as possible, to end the uncertainty and to keep investment strong. This is especially important as investment struggles against the headwinds of rising interest rates, high inflation, and a potential recession. It is good long-term policy, not just a counter-cyclical tool, and should become a permanent part of the tax code. Expensing reduces the cost of equipment and machinery and raises the capital stock, thereby boosting productivity and wages. It helps savers by raising returns, and it helps consumers by reducing costs and increasing supplies of goods and services. Expensing is one of the few tax reductions that increases GDP by enough to fully recover the initial revenue reductions by raising wages and output. It is a win-win step for all concerned.

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