
Case Study #5: Accelerated Depreciation

By

Michael Schuyler, PhD & Stephen J. Entin

These results are part of an eleven-part series, *The Economics of the Blank Slate*, created to discuss the economic effects of repealing various individual tax expenditures. In these reports, Tax Foundation economists use our macroeconomic model to answer two questions lawmakers are considering:

1. What effect does eliminating these expenditures have on GDP, jobs, and federal revenue?
2. What would be the effect on GDP, jobs, and federal revenue if the static savings were used to finance tax cuts on a revenue neutral basis?

Key Points:

Switching from the current accelerated depreciation (MACRS) to the Alternative Depreciation System for non-corporate businesses would:

- Increase tax revenues by \$7 billion on a static basis;
- Reduce GDP by \$59 billion;
- Actually reduce revenues by \$6.4 billion on a dynamic basis;
- Reduce employment by the equivalent of approximately 68,000 full-time workers; and
- Reduce hourly wages by 0.3 percent.

Altering the depreciation system and trading the static revenue gains for individual rate cuts would:

- Allow for an across-the-board rate cut of 0.7 percent;
- Reduce GDP by \$48 billion per year;
- Reduce federal revenues by \$11 billion on a dynamic basis;
- Reduce employment by the equivalent of approximately 6,000 full-time workers; and
- Reduce hourly wages by 0.3 percent.

Businesses can recognize most of their labor costs on their tax returns when they incur the costs but must typically deduct their investment costs over many years.¹ Because of inflation and the time value of money, the stretched out write-off of investment costs forces businesses to understate their investment costs in present value terms and thereby overstate their true incomes.

Under a consumed income, or personal expenditure, tax, investment costs would be deducted when they occur, which is the optimal treatment for reaching the most economically efficient level of capital formation. Under an income tax adhering to the Haig-Simons definition of income, investment costs would be written off only as investments lose economic value over time. Economic depreciation has two problems. First, it is impossible to measure, because similar assets in different uses wear out or become obsolete at different rates. Second, the concept ignores the cost of locking up money in an asset from the date of its purchase, which reduces investment.

The primary capital cost recovery system in the tax code for the last quarter century has been the Modified Accelerated Cost Recovery System (MACRS). MACRS delays cost recovery compared to expensing under an optimal consumed income tax but is accelerated compared to a Haig-Simons income tax. The Joint Committee on Taxation writes that it "classifies as tax expenditures cost recovery allowances that are more favorable than those provided under the alternative depreciation system [ADS] (sec. 168), which provides for straight-line recovery over tax lives that are longer than those permitted under the accelerated system."² ADS may be even slower than economic depreciation.

What would be the growth consequences if MACRS were scrapped in favor of ADS and the tax dollars this would supposedly generate were then used to pay for a cut in marginal individual tax rates?

To answer this question, we used the Tax Foundation's dynamic simulation model. Because the current discussion centers on individual income taxes, the simulations assumed the shift from MACRS to ADS applied only to non-corporate businesses—the proprietorships and partnerships that report income under the individual income tax. (The direction of the results is similar, but the numbers are much larger, when the switch in the cost recovery system is also assumed to apply to corporations.)

We began with the conventional assumption that total economic activity is fixed, regardless of what happens to taxes, and estimated the revenue effect of replacing MACRS with ADS. Under this static constraint, the

¹ There are some exceptions to the slow write-off of capital costs. Many small businesses can expense investment expenditures under Section 179 of the tax code. In 2013, the bonus expensing provision, which is slated to expire at the end of the year, lets many businesses expense 50 percent of new equipment purchases.

² Joint Committee on Taxation, *Estimates of Federal Tax Expenditures For Fiscal Years 2012-2017*, JCS-1-13, Feb. 01, 2013, at 6, <https://www.jct.gov/publications.html?func=select&id=5>.

model estimated that requiring non-corporate businesses to switch from MACRS to ADS would add \$7 billion to individual income tax receipts. (See Chart 1.)

More realistically, however, businesses would respond to heavier taxation of capital income at the margin by investing less, until the expected after-tax return on new investment rose enough to compensate for the more

punishing tax treatment. In the dynamic simulation, the capital stock would drop 1.1 percent. Wages and work hours would decline 0.3 percent and 0.1 percent, respectively, because workers would have less capital to work with and would be less productive. GDP would fall \$59 billion due to the reductions in capital and labor inputs. The smaller economy would more than wipe out the static revenue gains, and the tax increase would actually shrink federal revenue by approximately \$6 billion. This is one of the few instances in which a tax increase would lose revenue.

Chart 2 shows the results if the assumed static revenue gain were used to pay for an across-the-board cut in individual income tax rates.³ Tax rates could be cut 0.7 percent. (For example, the 15 percent bracket could become 14.9 percent, a 0.7 percent reduction.). Our model estimates that the marginal rate cut would help the economy but not by enough to undo all of the damage from the cost recovery

shift. The model also estimates that the rate cut would mostly, but not entirely, pay for itself, which would slightly widen the federal revenue loss. This shift would be a loser for both the economy and the federal

Chart I. Switching to the Alternative Depreciation System (ADS) for Noncorporate Business
Effects on Federal Revenue and GDP

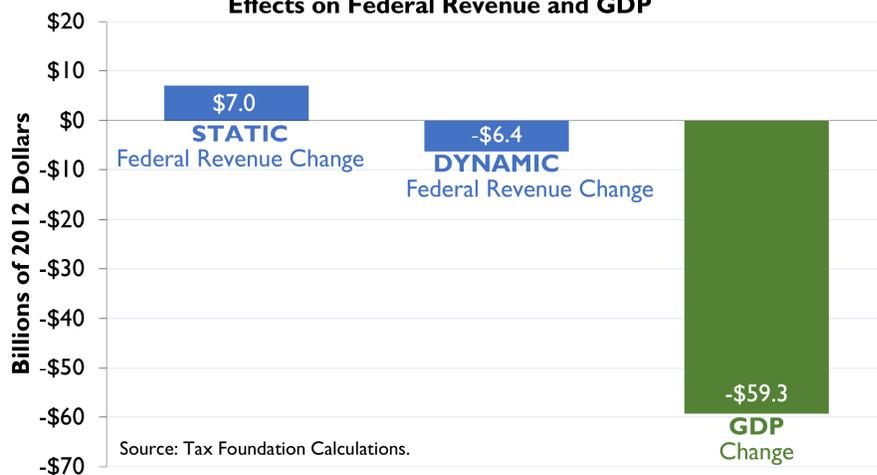
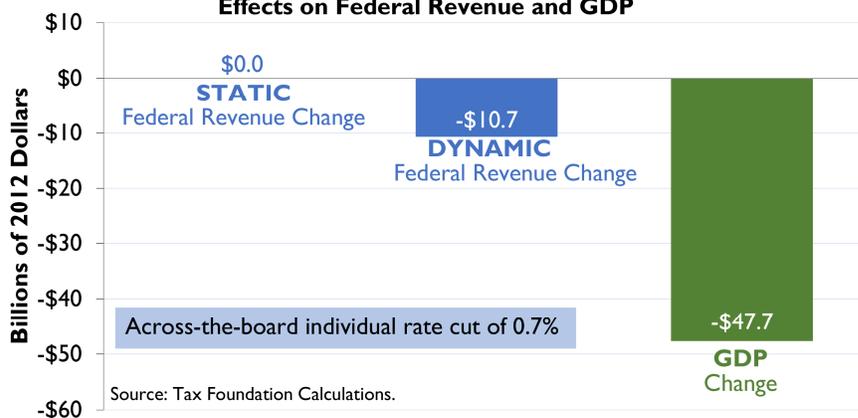


Chart 2. Using the Static Revenue Gain from Switching to ADS for Noncorporate Business to Pay for an Across-the-Board Rate Cut
Effects on Federal Revenue and GDP



³ We assume proportional cuts in all of the ordinary income tax bracket rates but no cuts in the lower tax rates on capital gains and qualified dividends.

purse because it would, on balance, raise taxes on capital income, which is extremely sensitive to the expected after-tax rate of return.

Finally, we determined the impact of these scenarios on employment and wages. We found that the change from MACRS to ADS for non-corporate business would reduce employment by the equivalent of about 68,000 full-time workers and cut hourly wages by 0.3 percent. With the rate cut offset, employment would decrease by the equivalent of about 6,000 full-time workers and hourly wages would fall by 0.3 percent.

©2013 Tax Foundation

National Press Building
529 14th Street, N.W., Suite 420
Washington, DC 20045

202.464.6200

www.TaxFoundation.org

About the Tax Foundation

The Tax Foundation is a 501(c)(3) non-partisan, non-profit research institution founded in 1937 to educate the public on tax policy. Based in Washington, D.C., our economic and policy analysis is guided by the principles of sound tax policy: simplicity, neutrality, transparency, and stability.