

Can Policymakers Time the Ending of Macroeconomic Incentives?

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[1] In the push toward adopting the Job Creation and Worker Assistance Act of 2002, both Republicans and Democrats supported allowing a portion of physical capital expenses to be deducted or expressed immediately. Among the reasons this acceleration of depreciation allowances was so popular on both sides of the aisle is that when done on a temporary basis, it initially puts a lot more money out to businesses than it eventually costs the U.S. Treasury.

[2] In this series of notes, I want to examine some of the implications of this type of incentive -- in particular, the difficulty that has now been set into the law when this temporary incentive ends. First, however, it is worth viewing why the up-front advantages are so appealing.

[3] An immediate write-off of capital expenses of 30 percent is equivalent in some economic models to a reduction in the effective rate of tax on that capital of 30 percent. Under a large number of simplifying assumptions (for example, depreciation otherwise allowed represents the true change in value of an asset over time), the effective corporate tax rate on that capital would be reduced from 35 percent to 24.5 percent. To put it otherwise, a 35 percent tax rate applies to 70 percent of the investment and a zero rate applies to the other 30 percent.

[4] Concentrating on the reduction in effective tax rate, however, masks the large amount of tax dollars immediately passed onto the business. Take a very simple example where an asset costing \$1,000 is normally written off over five years using the MACRS schedule (for example, see column in table for 2002). With an up-front 30 percent write-off of costs, a firm gets deductions in the first year of \$440 (\$300 plus one-fifth of remaining basis of \$700) instead of one-fifth of total cost (or \$200).

[5] However, payback is soon required. A deduction that is accelerated into the current period cannot be taken later. More deductions today for a particular investment mean fewer deductions tomorrow. Perhaps the easiest way to think about the incentive is to treat it as an interest-free loan from the government. The additional cash flow to the business is equal to the loan amount plus the interest that does not have to be paid. But despite the interest subsidy, the loan amount must be paid back. During the repayment period, money flows back into the Treasury coffers.

[6] Table 1 further shows how this plays out for a firm that invests \$1,000 in five-year property for three straight years using the MACRS depreciation schedule. Compared to current law, its deductions are considerably larger -- \$240 extra in the first year, \$144 in the second, and \$86 in the third. But now look what happens in the fourth year, when the write-off opportunity suddenly ends. Deductions actually fall by \$188 relative to old law. When the comparison is made year over year, the largest change is in that fourth year when the firm's additional deductions fall by \$274 (+86 to -\$188).

[7] The main point of this table is to show that in the early years, net cash flow is positive, although even by the second year there is a loss of deductions that were accelerated on the first investment. New investments for the next two years result in net additional deductions by the firm, but that soon is to end. By the fourth year, the cash flow switches suddenly and becomes very negative. One can see a somewhat equal and opposite trend in revenue estimates by the government on the cost of this type of incentive. The revenue losses are large initially, but then decline and after a few years there are annual revenue gains.

[8] Suppose that the business in the example expects to earn 10 percent a year on a capital investment of \$1,000 in this asset. Again, I am going to simplify the analysis by assuming that other revenues produced by the asset offset the old law depreciation costs. If the asset is purchased at mid-year, that implies \$50 of net

income in the first year on which a tax of \$18 would be owed barring any additional tax break. The extra \$240 of deductions, however, temporarily reduces corporate taxes by \$84. That is, the Treasury's extra cash infusion to the business by itself would be far in excess of both the initial income earned on the asset and the tax otherwise owed on that income. On a pure cash flow basis (taxes divided by net financial income), its effective tax rate on that asset would appear to be quite negative, rather than the positive 24.5 percent rate we noted above.

[9] In effect, there is something here to please all sorts of macroeconomic incentive advocates, especially those most focused on what they can get today -- leaving tomorrow's problems for tomorrow. Those who believe that macro-incentives should take the form of a lowering of the effective tax rate on new capital get what they want. Consumption tax advocates also see this enactment as setting a precedent for expensing, one component of a transformation of the income tax to a consumption tax. But those who like to put money out in the economy on a temporary basis may be happiest of all because they get a large cash infusion relative to the amount of eventual revenue loss. In effect, supply-siders ("lower effective marginal tax rates"), consumption tax advocates (expensing investment), and the Keynesians (get the money out) can find and did find reasons to support the temporary partial expensing of physical capital investment.

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