Boosting Growth as the UK Leaves the European Union

By Stephen J. Entin

- After Brexit, the UK must prioritise its economic competitiveness. Developing a better, more pro-growth tax system is an important part of that.
- The most cost-effective pro-growth tax policy the UK could adopt is full expensing – immediate, first-year write-offs for business investment in plant and machinery.
- Switching to full expensing has transition costs, because it means new capital being immediately expensed while some old capital is still being depreciated. However, these transition costs are temporary.
- As the cost of capital is reduced, businesses invest more, leading to higher incomes and consumption, and growth in associated tax revenues. US modelling suggests that total government revenue should exceed existing "baseline" projections after about 7 years of full expensing.
- Ideally, full expensing would be extended to capital investment in buildings and structures as well as in plant and machinery. But the upfront revenue cost of doing this would be high.
- Adopting "Neutral Cost Recovery" for new buildings would be an affordable pro-growth alternative. This would mean continuing to write off investment over a long period of time, but adjusting the remaining basis each year by inflation plus three percent.

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Introduction

Now that the UK has left the EU, it needs to pay more attention to the international competitiveness of its economic policies. Fortunately, a few simple tax changes could make the UK a more competitive location for producing goods and services for the world market.

The most cost-effective tax reform would be to adopt immediate expensing (first-year write-off) for purchases of equipment as a permanent feature of the UK tax system. The same should apply to structures, but with some qualifications.

If a start-up business, or one with low earnings, cannot use the full write-off immediately, the deferred write-off should be adjusted annually for inflation plus about 3 percent to reflect the real time value of money. This adjustment maintains the same present value of the deferred write-off as expensing.

Depreciation of an asset over time for tax purposes exposes the write-off to loss of value from inflation and the real time value of money. The value of the resulting write-off is less than the full up-front cost of the asset, resulting in a higher reported profit and a higher tax burden. Relative to expensing, depreciation reduces the return on capital and retards capital formation.

Britain's depreciation schedules are among bottom third of developed nations, falling well short of allowing complete recovery of the cost of assets before laying a tax on a business's revenue. Bringing UK capital allowances up to the full cost of assets would be a way for the Exchequer to lower the cost of capital assets, boosting capital formation, labor productivity, wages, and employment in the UK. Production costs would fall, enhancing the UK's global competitiveness.

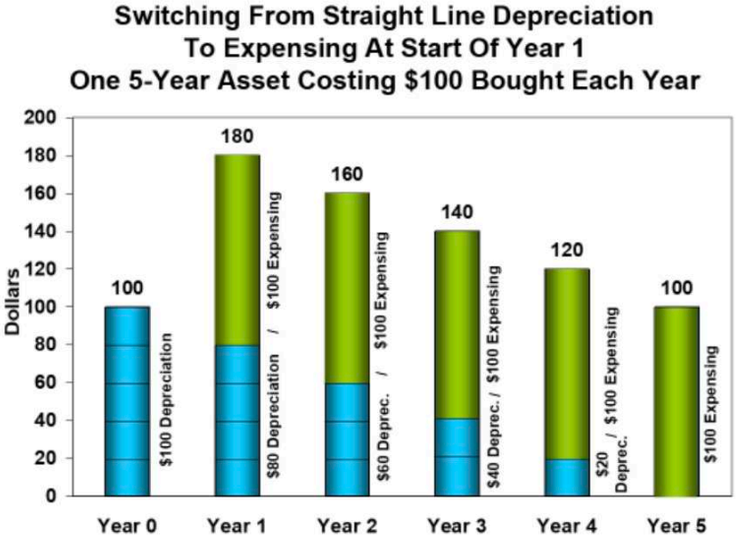
Total government revenue would exceed the "baseline" projection under old law by about the 7th year (based on the U.S. case). Within one or two years after that, revenues would be high enough to cover the added interest outlays on the additional government debt incurred in the transition, resulting in an improvement in the total budget balance. Revenues would continue to rise to allow the repayment of the added debt within about a decade thereafter. Expensing is one of the very few types of tax reduction that result in higher total government revenue over time.

There is no more cost-efficient type of tax change that more directly lowers the cost of additions to the capital stock.

Transition cost of switching to expensing

The transition cost to the government budget of adopting expensing is significant but temporary. Long term, it raises revenue.

Initially, allowing expensing for new assets raises the amount of depreciation allowances because the total cost of new assets is written off immediately, and some remaining deprecation of old assets is still in play. As old assets go through their allowances over their asset lives, total write-offs return to roughly the same level as before the change-over. Government revenues fall, then recover. (There is a small net increase in write-offs and a small residual loss of revenue if the capital stock is rising over time.) The following chart shows an example of the staggered write-offs of a group of five-year assets each costing $100 before and after the switch to expensing.



If the capital stock is in a steady state (with replacement only), the new investment in any class of asset in a year ($100 in the example) is almost exactly equal to the lagged write-offs of earlier purchases of that type of asset ($20 for each of the assets bought in the last five years). Once old assets have disappeared, aggregate write-offs return to old-law levels. If the capital stock is growing over time, new investment in a year is a bit larger than the lagged write-offs. This would leave a small rise in write-offs and loss of revenue each year from switching to expensing. The revenue loss from business taxes would be dwarfed by the rise in revenue from taxes on higher wages and consumption.

The change in write-offs is one of timing. More are taken at once, less later, for any given asset. The timing matters little to the government, which can borrow cheaply. However, bringing the write-offs forward, and pushing the tax on earnings back, increases discounted (present value) cash flow to the business buying the asset. This is the metric taught in every finance course in business schools to determine the feasibility of acquiring and employing the asset. Adopting expensing raises the discounted after-tax cash flow projected for investments, making them more attractive. More capital is created and employed within a few years of the adoption of expensing.

Extending expensing to structures

Structures are equally deserving of expensing as equipment. Indeed, the tax penalty on structures from long asset lives is far greater than for short lived equipment. The present value of the write-off of a forty-year asset is roughly 30 pence on the pound at modest levels of inflation, resulting in the taxation of a significant portion of the cost as if it were profit.

Previous UK policy on structures has been poor. To fund the cut in the corporate rate some years ago, the UK ended depreciation for structures. This was a horrible blunder. The depreciation was later reinstated, but with a very long 40-year life. The initial moves gave a tax cut to the financial sector and the City of London, at the expense of an investment slump in industrial parts of the UK, hurting the economies in those areas. Extending expensing, or its equivalent, to structures, would spread the economic gains over the whole country.

Adopting immediate expensing for structures is more difficult than for equipment, for three reasons:

- Structures are large outlays. Immediate write-off has a high up-front cost to the Exchequer. Also, revenues take longer to recover because the write-offs on older assets linger longer.

- Outlays for buildings tend to be large and lumpy; they are more likely to exceed a business's current sales, so that not all the write-off can be taken immediately. Net operating losses must be carried forward, and they must be increased by inflation and the real time value of money to keep their value.

- If new structures get more favorable treatment, old structures with 20 or 30 years of write-offs ahead of them may suffer a competitive disadvantage. This concern led the U.S. Ways and Means Committee to back off extending expensing to structures in the last U.S. tax reform.

If the near-term budget effect of expensing structures is the chief concern, it can be avoided.

- One can lower the near-term cost, while still getting the full incentive to invest, by adopting neutral cost recovery (NCRS) for new buildings. NCRS keeps the longer asset life, but it adjusts remaining basis each year by inflation plus 3 percent to reflect the time value of money. Write-offs are low initially, rising over time. The present value of NCRS write-offs is equal to immediate expensing. However, there is less short-term dip in revenue, but also no long run surplus.

- One could also avoid the near-term revenue dip by phasing in expensing, at the cost of delaying the economic gains, by reducing the asset life gradually. Shortening the life must be gradual to avoid making it attractive to delay investment to wait for more favorable allowances in later years. It requires avoiding a rise in the present value of delayed write-offs as the phase-in proceeds. From the perspective of the initial year of transition, present values of the future write-offs will be almost constant if asset life is reduced 2.5 years per year for 12 years, falling from the UK's present 40-year life to 10 years. Then reduce the life by 2 years per year for the next 3 years, to a 4-year life. Then cut the life one year at a time with expensing in the 18th year. This stability in the present value from year to year holds for reasonable discount rates between 5 and 10 percent. One could also phase in neutral cost recovery in a similar manner by granting two years of adjustment for remaining basis for new buildings placed in service in 2021, four years for buildings put in service in 2022, and so on, until full NCRS is reached in 2040. This would also delay the full economic advantage.

The disadvantage to old structures can also be ameliorated.

- If one is adopting NCRS, it could be granted to all remaining basis for all buildings over their remaining lives. This would be a bigger budget hit than allowing it for new buildings only. Alternatively, neutral cost recovery could be given to the remaining basis of old buildings if they reset their life back to 40 years to reduce the near-term revenue loss to the Treasury.

- Simply phasing-in a gradual reduction in asset life reduces the disadvantage of old structures. However, if new asset lives fall faster than one year at a time, the shorter lives on new assets would eventually overtake and drop below the remaining write-offs of many older buildings. In that case, one could permit the older buildings to match the reduced lives as they were overtaken by the phase-in. Alternatively, if immediate expensing were adopted for new buildings, one could give NCRS treatment to old buildings to give them equal footing.

Expensing is superior to economic depreciation

Expensing is not the standard treatment of capital in a broad-based income tax, which tends toward the use of “economic depreciation.” Economic depreciation is an estimate of the annual reduction in the value of an asset as it ages and either wears out or becomes economically obsolete, reducing its future income and value. Using only that drop in value each year for tax purposes, instead of the full purchase price in year one, is an artifice of the Haig-Simons definition of income as “the change in the ability to consume.” Haig and Simons reasoned that one could sell the asset at the end of the year and recoup some of its cost for other uses, including consumption. The approach ignores the cost of the time value of the money tied up in the machine from the date of purchase. They adopted this definition in part to promote the redistribution of wealth by over-taxing capital income. This approach is not economically optimal, and no one interested in higher wages and employment should have any compunction about abandoning it.

Further reading

Stephen J. Entin, “The Tax Treatment of Capital Assets and Its Effect on Growth: Expensing, Depreciation, and the Concept of Cost Recovery in the Tax System,” Tax Foundation Background Paper No. 67, https://files.taxfoundation.org/legacy/docs/bp67.pdf.

Daniel Bunn and Else Asen, “International Tax Competitiveness Index 2019,” https://taxfoundation.org/publications/international-tax-competitiveness-index.

For more on structures, see: https://taxfoundation.org/tax-treatment-structures-expensing

For more on NCRS, see: https://taxfoundation.org/neutral-cost-recovery-system-pro-growth-solution-capital-cost-recovery