SCHOOLS BRIEF

The public purse

This brief in our series on the modern classics of economics looks at budget deficits. Mr Robert Barro's paper, one of the most influential of the past 20 years, argued that fiscal policy is impotent

ARE GOVERNMENT BONDS NET WEALTH? By Robert Barro. *Journal of Political Economy*, November 1974

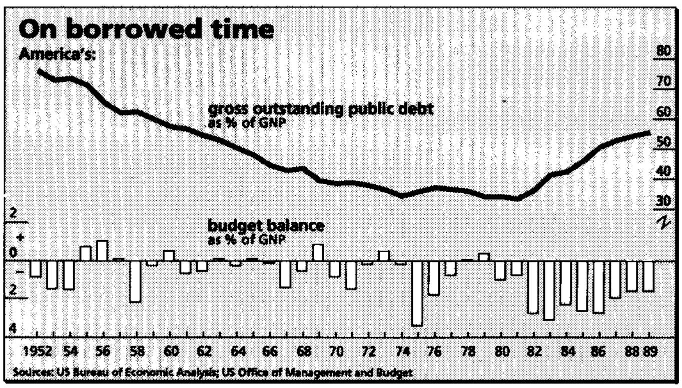
THE impact of government borrowing on economic activity has been a controversial issue in macroeconomics since the days of Adam Smith. Classical economists were almost unanimous in condemning public debt; they believed that a balanced budget was a sign of good housekeeping. Then along came Maynard Keynes, who argued that budget deficits could be used to inject extra purchasing power into the economy and so boost output and jobs.

This view formed the economic consensus until the 1970s. But the emergence of persistently large budget deficits in industrial economies during the past two decades (see chart) has provoked renewed interest in the theory behind fiscal policy. Indeed, to some extent matters have come full circle. Balanced budgets are back in vogue—at least in theory, if not in practice.

Today many Keynesians as well as fiscal conservatives accept that large budget deficits may be imprudent. One reason is that governments may be tempted to finance deficits by printing money, thereby fuelling inflation. Another is that investment may be crowded out as government borrowing pushes up interest rates. Most economists, however, believe the crowding-out is only partial, so increases in budget deficits will expand demand in the economy.

Enter Mr Robert Barro, now at Harvard University but in 1974 at the University of Chicago, armed with his celebrated paper, "Are government bonds net wealth?" His argument, much in keeping with the New Classical approach to macroeconomics, was that the case for public borrowing is flawed—not because borrowing is imprudent, but, far more controversially, because changes in the size of the budget deficit do not affect economic activity. It makes no difference, he argued, whether government spending was financed by borrowing (ie, by selling bonds) or by raising taxes.

Mr Barro had revived an idea first mooted in 1821 by David Ricardo, a nineteenth-century English economist—although Mr Barro failed to give him any credit in his paper. Today Ricardo's theory (that tax- and bond-finance are equivalent) is known to economists as the **Ricardian equivalence theorem**. Ricardo raised the idea as a theoretical possibility, then rejected its practical significance because he was sceptical of its assumptions.



The question whether it makes any difference if spending is financed by taxes or bonds boils down to this: do households count their holdings of government bonds as part of their **wealth**?

According to the conventional economic wisdom that ruled until the mid-1970s—the so-called neoclassical synthesis—a government can stimulate demand by increasing the gap between what it spends and what it raises in taxes. If it cuts taxes, consumer demand and (at least in the short term) total income will rise. The final increase in income will be bigger than the initial increase in the budget deficit because of the **multiplier**: when households spend the tax cut on goods they boost somebody else's income, which raises spending, and so on.

This simple theory offered no explicit account of how the government's budget deficit was to be financed. Implicitly, it assumed that the government would borrow. This would have two results. First, it would reduce **national savings** (because government borrowing is a form of dissaving). Second, it would raise interest rates, leading in turn to less private investment—the **crowding-out** effect. But this conventional theory was unclear about the effect that the private sector's increased holdings of bonds would have on aggregate demand.

The basic theory, it might seem, can be easily extended to close this gap. Suppose, for example, that the government cuts taxes by $100, and finances the resulting deficit by selling $100-worth of bonds. People would be left with the same amount to spend on goods as before: they have spent their $100 rise in net income (thanks to the tax cut) on bonds. But if the households who bought the bonds felt wealthier, they would decide to save less in other ways and spend more on goods. So the standard result that fiscal policy has an expansionary impact depends crucially on the hidden assumption that households treat government bonds as wealth.

No free lunch

The main flaw, as Mr Barro pointed out, is that this view ignores **future tax liabilities**. When the government sells bonds to finance a tax cut, a sensible man will realise that at some time in the future he will face higher taxes to cover the interest payments and eventually to repay the debt. Government borrowing only postpones taxes. Households, basing their spending decisions on lifetime post-tax earnings, will feel no better off. They will save their tax cut rather than spending it, to prepare for future tax bills.

The policy implications are far-reaching. If everybody recognises that their tax bills have simply been deferred, then any increase in government borrowing will be offset one-for-one by a rise in private savings, leaving total national savings unchanged. There will be no expansion in consumption, no multiplier effect on income, no crowding out of investment. Economic activity will be exactly the same as if the government had balanced its budget.

Before Mr Barro's paper, many economists would have accepted that expectations of future taxes prompt consumers to save more, but they would have insisted that the offset is partial. People do not live for ever; some will die before the bonds need to be repaid. If the higher taxes needed to service public debt fall partly on future generations, today's taxpayers will indeed be better off and will spend more.

Mr Barro was brave enough to question that view. Suppose today's taxpayers are linked to future generations through bequests, he said. Then Ricardian equivalence might hold, after all.

The argument goes as follows. Consumers care about future generations and derive pleasure from their children's consumption as well as their own; in turn, their children will care about their own children, and so on. Because of this **intergenerational linkage**, today's taxpayers act as if they will live for ever. If the government increases its budget deficit, taxpayers know that their children will face higher tax bills; they will therefore aim to leave them bigger legacies. To do that, they will need to save more.

For non-economists, the greatest challenge posed by the Barro theory is to take it seriously long enough to dismiss it out of hand. The idea of the infinitely forward-looking, altruistic parent seems crazy. At first, even economists struggled not to laugh. However, in 1980 one of the cleverest New Keynesian economists, Mr James Tobin of Yale University, did take the trouble to marshal the theoretical case against Mr Barro:

- Some households are childless,

Fitting the theory to the facts

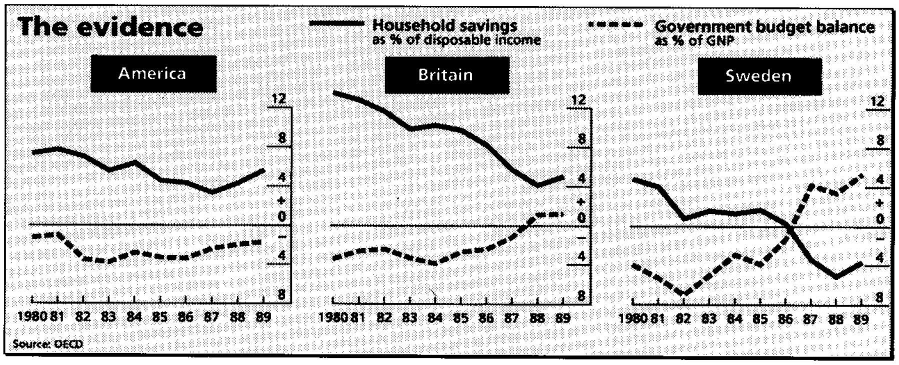
EFFORTS to prove or disprove Mr Barro's equivalence theorem have generated almost as much controversy as the idea itself. The empirical research remains inconclusive, mainly because it is difficult to distinguish the effect of changes in government debt from other influences.

Perhaps the most damning evidence against Mr Barro in the 1980s comes from America's so-called twin deficits. A country's current-account deficit is, by definition, the gap between domestic savings and investment. From this it follows that if private savings and investment remain unchanged, then a rise in the budget deficit (government dissaving) will lead to an increase in the current-account deficit. This is exactly what happened in America in the first half of the 1980s. If Ricardian equivalence had been true, America's private savings should have risen to offset government borrowing. Instead they fell. Defeat for Mr Barro? Not necessarily. The so-called neo-Ricardians say that private savings were reduced by other factors, such as lower inflation; it was just a coincidence that the budget and the current-account balances moved into the red together.

Mr Barro can point to impressive evidence of his own. Many studies have found no correlation between interest rates and budget deficits, as his theory would suggest. Better still, in the 1980s private savings often moved to offset a change in the government's budget deficit. In Britain, Sweden, Australia and Denmark budgets moved from deficit into surplus, but this rise in government savings was more than offset by a fall in private savings (see chart).

One of the most interesting studies is by Mr Giuseppe Nicoletti at the OECD. He examined budget deficits and private savings in eight economies between 1961 and 1985. His numbers rejected the Barro theory for Japan, West Germany, France and Britain, but found a weak link between budget deficits and private savings in America and Canada, and a strong link in Italy and Belgium. Interestingly, Italy and Belgium have the most profligate governments; America and Canada have what many economists consider "unsustainable" budgetary positions. By contrast, in Japan, Germany, France and Britain—the four countries which disproved Mr Barro's theory—public debt is under control.

Perhaps, therefore, the link between government borrowing and private savings depends on the private sector's appraisal of the government's policies. If public debt is already worryingly high, as in Italy, then a further increase in borrowing is likely to trigger fears of a future tax increase, prompting consumers to save more. If, on the other hand, public debt is relatively modest, taxpayers will be less sensitive to budget deficits. It would be good if things worked like this. Fiscal policy would be impotent for fiscally reckless governments, encouraging them to mend their ways; prudent governments could continue to use budgetary policy to steer demand.



others simply do not care about their children's tax bills. They will spend their tax cuts.

- The Barro theory assumes that the current generation is able to leave a bequest of whatever size it chooses. But this is not always so. Some parents, knowing that their children are likely to end up better off than themselves, might prefer to leave a negative bequest—ie, debts. That would normally be difficult, but a budget deficit allows them to do just that: to pass debts to future generations. Some people will therefore happily spend a tax cut.
- Capital markets are imperfect. Individuals, especially those with no collateral, may not be able to borrow as cheaply as the government. Also young people who would like to borrow against high prospective earnings may find it impossible to borrow at all. They will therefore discount future tax liabilities at a higher rate than the interest on government bonds. The discounted present value of their future taxes will therefore be less than the value of today's tax cut, leaving them better off.
- Ricardian equivalence implies perfect foresight and information. In practice, future taxes and income are uncertain, so households may discount future taxes at a higher rate.
- Ricardian equivalence assumes that all taxes are lump-sum taxes; in practice most taxes depend upon income or spending and so have disincentive effects on economic activity. Tax cuts will therefore stimulate output.
- Parents may care only about the size of the bequest they leave to their heirs, rather than how much their heirs will be able to consume. If so, they will spend their tax cuts.

The perfect excuse

Why then has the Barro study proved so influential? One reason is that the theory was so elegant: by doing little more than laying bare a previously unexamined assumption, it threatened to overturn orthodox thinking on fiscal policy. Another is that Mr Barro's theory commands enough empirical support to give mockers pause for thought (see box).

But the most important reason for the influence of the Barro theory is that, in a less extreme rendering, it offers an insight that is almost certainly true. Never mind about the effect of a tax cut on future generations. Ask instead about the effect on today's consumers of a tax cut that is expected to be temporary. Taxpayers may well decide to save this year's tax-cut windfall if they believe it will be clawed back next year.

Recently, interest in Mr Barro's theory has, if anything, increased—especially in America. Conventional wisdom has long argued that America's budget deficit is harmful to the economy. It has been blamed for America's current-account deficit and high interest rates. Enter Ricardo. If, as Mr Barro argues, government borrowing cannot increase interest rates, crowd out investment or push up inflation, nobody need fret about America's public borrowing.

This illustrates why Ricardian equivalence is unpalatable to Keynesians and fiscal conservatives alike: it implies that deficit financing is not only impotent, but also harmless. Keynesians believe governments can influence aggregate demand; traditional fiscal conservatives believe that budget deficits harm the economy through higher interest rates or inflation.

In fact, even if Mr Barro's theory was right, governments could still do a lot of harm with their fiscal policy. The way in which governments finance their spending may not matter much, on Mr Barro's view, but if that spending is itself too high, then the economy's resources will be used inefficiently.

Today most economists still believe that fiscal policy does affect aggregate demand. They talk happily of "expansionary" or "contractionary" budgets. Do not be misled by that. Even those who scoff at the Ricardian-equivalence theorem have been influenced by it. Because of Mr Barro's extremism, economists have reluctantly re-examined their ideas. As a result, few expect as much from the active use of fiscal policy as they used to.