The Federal Budget's Effects on Intergenerational Equity: Undone or Not Undone?*

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You are probably well aware of the view that we are impoverishing our young and future generations by our shortsighted budget policies. This allegedly is happening in at least one of two ways. One is the substitution of government consumption for private investment. The idea here is that when the government spends more for current services, such as for military personnel or welfare, this spending does not perfectly substitute for private consumption spending. Therefore, higher government spending is not offset dollar-for-dollar by lower private consumption spending. Higher government spending thus leads to higher total consumption (public plus private), which crowds out investment. And lower investment means that future generations will have fewer goods available than they otherwise would.

The other way the federal budget allegedly affects the welfare of the young and future generations is the shifting over time of the tax burden. Their welfare supposedly is reduced when the government lowers taxes and replaces the lost tax revenue with debt, what we know well as deficit financing. This forces our children and future generations to pay higher taxes in order to pay the interest on the debt. Thus, as long as the government leaves its spending plans unchanged, lower taxes today imply higher taxes in the future, so that future generations will foot the bill for today's government expenditures.

Those who listened carefully heard me say that the effects of federal budget policies I just described are *alleged.* In fact, the validity of these effects is being hotly debated among economists and public policymakers. Some don't think high government spending is leading to too little investment; and others don't think the burden of taxes is being shifted to future generations. How can that be?

In my talk today, I want to try to answer that question by discussing the basic issues in these debates, but I want to concentrate mainly on those issues related to deficit financing and its implications for tax shifting. I choose to focus on the financing issue because I think that's the most relevant to current policy and that's where the debate is sharpest. I then want to assess the empirical support for the different views on tax shifting. Finally, I want to review the implications of these views for budget policy. As we'll see, how budget policy can affect the welfare of future generations is still a very open issue. And even if we accept a particular view about how budget policy affects intergenerational equity, we still need a leap of faith to prescribe how budget policy should be changed in order to improve it. Nevertheless, I take that leap, based primarily on my analysis of the evidence, and I suggest that the prudent policy is to put our budget deficits on a declining track.

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On Crowding Out

The issues behind the crowding-out effects of government spending deal more with what is actually occurring than what is theoretically possible. Clearly, U.S. government spending has increased over the last decade—from about 19 percent of the gross national product (GNP) in fiscal year 1974 to about 24 percent in fiscal 1986. And there seems to be little dispute that government consumption spending theoretically can drive out private investment spending and thus alter the evolution of the economy's capital stock. Some people, though, don't seem to think this has been happening, at least in a way to concern future generations.

These people seem to have one of two arguments in mind. One is that we had been investing too much in the first place, so if the government has crowded out some investment, that's all to the good. Less investment will make us and future generations better off, they argue. This position is supported by some economic theories that say an inefficiency of too much saving and investment can occur in an economy. Because of the inefficiency, it would be possible to reduce the amount being saved and invested and still increase the amount being consumed by each generation. According to these theories, a symptom of this inefficiency is that the real return on capital is low relative to the economy's real growth rate. Those who make this argument thus point to the very low market interest rates adjusted for inflation (measures of the real rate of return on capital) that the U.S. economy experienced between 1948 and 1982 as evidence that there had been too much investment.

A second argument made by those unconcerned about crowding out is that the increased government spending has been not so much for consumption as for investment purposes. All we are witnessing, they say, is the substitution of government investment for private investment. If what they say is true, then there are no obvious effects on the welfare of future generations.

It is in fact difficult to determine the extent to which increased government spending has been for consumption as opposed to investment. Do defense expenditures added today, for instance, just protect current generations, or do they also ensure that our country will remain free for future generations? And do additional welfare payments made today just benefit the current recipients, or do some payments, such as WIC (Women, Infants, and Children) and school meal programs, also lead to healthier, more productive members of society who will benefit our economy in the future?

To sum up, the issues behind the debate about increased government spending are tough, but an awareness of them should make us a bit cautious about policy proposals to cut government consumption and spur private investment. These proposals may be wise, but it is not a foregone conclusion that they are.

On Shifting the Tax Burden

I now want to leave the crowding-out debate and turn to my main topic: shifting the tax burden to future generations. The debate about tax shifting centers on whether the alternative tax and debt combinations that a government can use to finance a given stream of expenditures matter for intergenerational equity. This issue seems particularly relevant today: When the federal deficit rose from roughly 2 percent of GNP before 1982 to 5 percent after, almost the whole increase was due to the Reagan administration's tax cut, which caused the direct loss of tax revenue and the rise in interest payments on the resulting federal debt. The issue, then, is whether this change in budget policies, if we consider it a *permanent* change, will adversely affect the welfare of future generations.

Economists who debate this issue generally have the same realistic world in mind: The population is assumed to be composed of overlapping generations; each individual lives for a finite time; and at each time, new individuals are born. These economists disagree, however, on a particular point: how current generations are assumed to provide privately for future generations.

Two Views: YOYO and COOL

There are two main views on how private provisions are made for future generations. According to one, parents provide for their children when they are young and living at home, but do not provide for them when they get older and leave home. I'll call this the *you're-on-your-own* view. The parents' reasons for not making bequests to their children could be several:

- The parents' current welfare may not depend on their children's future welfare (they just don't care).
- The parents may care about their children's future welfare, but think the children will be morally better off providing for themselves.
- The parents may care, but expect their children to be wealthy enough in the future to make bequests unnecessary.

The other view, as you may have guessed, is just the opposite: parents provide for their children both when

they are young and living at home *and* when they get older and leave home. The parents make bequests to their children, because making the children better off in the future increases the parents' welfare today. For better or worse, I'll call this the *count-on-our-loot* view.

These two views give sharply different answers to the question, Are the Reagan tax cut and resulting deficits impoverishing future generations? The you're-on-your-own view of the world says yes. According to it, people spend the proceeds of the tax cut rather than putting them aside for future generations. Thus, a cut in taxes with no change in monetary policy increases the supply of government debt without an offsetting increase in private savings. This results in a higher real interest rate; higher inflation; and a current-account deficit, as foreigners are enticed to buy some of our debt. Future generations are made worse off by this tax policy because they are forced to pay the interest on the debt either through higher explicit taxes, such as the income tax, or through higher implicit taxes, such as the inflation tax. In contrast, the count-on-our-loot view says no. According to it, the time profile of taxes and, hence, deficits is irrelevant to intergenerational equity. By putting aside savings for future generations, the private sector will simply undo changes in the government's budget financing policy. In order to understand this potential to undo a policy change, let's consider two examples.

□ *Example of Undoing: I*

First, consider a simple example closer to home. Have you ever had cement curbs put in your neighborhood and then been charged with a special assessment? Your city government will typically provide you with two payment alternatives:

- You can pay in total up front.
- You can pay in equal annual installments over a number of years.

If you choose the first option, you may have to borrow from your local bank and pay off the bank loan over a number of years. In this case the city pays the curb construction firm, and the city incurs no debt. If instead you choose to pay off the assessment over a number of years, the city must borrow to pay off the construction firm and then bill you for the payments it must make on the debt. In this case the city runs a deficit and must borrow.

If, however, the rate at which the city borrows is no different from the rate at which you borrow from your bank, these two payment alternatives are equivalent. For the first alternative, you borrow directly to pay the city, which pays the construction firm, and then you must repay your debt. For the second, the city borrows and pays the construction firm, but then you must pay the city's debt. For either alternative, the firm gets paid up front and you make precisely the same payments. The only difference is whether you're paying off your loan or the city's. For this example, you undo the city government's borrowing in the market by an offsetting change in your borrowing at a bank.

It seems crucial in this example that the length of the government debt is less than your lifetime, because then for any alternative, you're the one who bears the costs. Now let's consider a second, broader example—that of federal debt, which essentially has indefinite maturity.

□ *Example of Undoing: II*

Let's suppose the federal government gives you the option of paying for expenditures on a tax-as-you-go basis or paying each year only the annual cost of servicing debt issued to finance the expenditures. If you have a you're-on-your-own view (and I realize that the acronym for this view is YOYO) about future generations, you will choose the second option, because it lets you push some of the costs of the expenditures onto them through debt servicing.

But if you have a count-on-our-loot (I apologize, but COOL) view, your attitude toward the two payment options will be different. If you want to help out your heirs as well as yourself, you might still choose the second option but undo its negative effects on their welfare. You might say that by choosing to pay only the annual debt service, you are saving yourself $\$X$ relative to the tax-as-you-go option. So you'll take that saving of $\$X$, invest it, and bequeath the whole investment to your heirs. By saving and bequeathing the reduction in your taxes, you undo the effects that your lower taxes would have had on future generations. They will still be faced with higher taxes, but the extra money you bequeath them will exactly cover their higher tax payments.

The principle that comes out of this example is that when each generation considers not only its own welfare but also the welfare of future generations, it will undo the effects of the lower taxes on intergenerational welfare by saving more and bequeathing the proceeds to future generations. The bequests link the generations into infinitely lived families so that the lifetime of a family is at least as great as that of any government debt instrument.

To summarize, if current generations don't want to

help out future generations, then a cut in taxes today will shift some of the tax burden for current government expenditures to future generations. But if current generations do want to help out future generations, they will increase their savings, bequeath the savings to their heirs, and so undo a tax cut's intergenerational equity effects.

Some Evidence Favoring YOYO

Which of these views, YOYO or COOL, seems most consistent with the data? The evidence is not decisive, but I think it leans in the YOYO direction.

Admittedly, most formal economic literature tends to side with the count-on-our-loot view. Studies usually find that consumption does not depend on taxes, so that a tax cut would simply lead to more private savings. There are studies, however, which dispute that finding. In fact, the December 1986 issue of the *American Economic Review* has a series of articles which debate this question with no clear winner.

The economic literature on this debate, however, is suspect. It does not distinguish between temporary and permanent tax cuts and generally does not include observations past 1982. In our examples we saw that the different tax shifting effects would only show up with permanent policy changes. For even with the you're-on-your-own view of the world, a government debt with a shorter maturity than the lives of individuals—which would be the case with temporary tax cuts or deficits—could be undone by the actions of private individuals.

The real test of these views, then, comes with the Reagan tax cut of 1982, which we might consider permanent. According to the count-on-our-loot view, after the tax cut occurred, we should have seen an upsurge in private saving to undo the government dissaving without an increase in real interest rates or a large increase in foreign funds coming into the United States. Instead, of course, we saw no increase in savings, a sharp increase in real interest rates, and large inflows of foreign funds. In fact, what happened was that private savings did not grow to offset the increase in government dissaving, the increase in total debt caused real interest rates to rise, and the debt was financed to a large extent by foreign funds—the flip side of which is our large trade deficit. These happenings are all consistent with the you're-on-your-own view.

An Analysis: The YOYOs Dominate

If you buy my judgment that the you're-on-your-own view is the most correct interpretation of the current situation, where does that leave us? First, we face a puzzle. By meeting here to discuss the effects of government policies on the future, we have evidence that people do care about the welfare of future generations. So why do the data suggest that you are not investing your savings from lower taxes and bequeathing the proceeds to your children? I can only speculate about a possible reason: Some of you are doing those things, but a significant number in our economy aren't.

My reasoning is that our economy includes both types of individuals: the you're-on-your-own crowd and the count-on-our-loot crowd. But the qualitative effects of a tax cut on the economy are determined by the you're-on-your-own group. When a tax cut occurs, this crowd is made wealthier and consumes more. In contrast, the count-on-our-loot crowd tries to undo the tax cut's effects on their heirs, but the actions of the you're-on-your-own crowd frustrates their efforts. If count-on-our-loot people simply invest their tax savings and make bequests of the proceeds, their consumption will be left unchanged, but total consumption will increase as the you're-on-your-own crowd increases its consumption. Thus, total investment will decline. Although the count-on-our-loot crowd's actions will offset their children's future debt-servicing costs, their actions will not offset the income loss their children will suffer due to the reduction in investment.

To summarize: The effects of a permanent tax cut and the resulting deficit financing are qualitatively what we expect from the you're-on-your-own view. This is because the effects we observe are essentially the sum of the neutral effects of the COOLs and the nonneutral effects of the YOYOs. The nonneutral effects dominate. Such a policy change thus benefits people who do not make bequests to their children, because they gain income which they do not turn over to their heirs. Such a policy change harms people who do make bequests, however, because even if they turn over all their tax savings to their children, it won't be enough to maintain their children's future welfare.

A Cautious Recommendation

This analysis leads me to cautiously recommend the adoption of budget policies to gradually reduce the federal deficit. Caution is required for at least two reasons. First, frankly I'm not sure I have the right solution to the puzzle of why the effects of current budget deficits are not being undone. A different solution may well lead to a different recommendation. But even if my solution is correct, my recommendation is not right or wrong. A reduction in deficits would lead

to winners (the COOL crowd) and losers (the YOYO crowd). We should remember that any recommendation about such policies involves a value judgment.

Nevertheless, I must say that I do favor some reduction in the federal deficit. This is primarily because my view of the YOYO crowd's dominance suggests that the change would help solve some current economic problems. For a given monetary policy, my view suggests that a reduction in the deficit would lead to a decline in the total supply of debt and hence to a lower real interest rate. A lower real rate would help many private borrowers currently in financial distress. Also, the decline in debt would let us rely less on foreign financing, which would lower the trade deficit. This in turn could lower pressure to erect costly trade barriers. Finally, I must admit, I favor a reduction in the federal deficit for a more personal reason: This may surprise you, but I am not a YOYO.

Suggested Reading†

On the Econometrics of Budget Deficits

Aschauer, David Alan. 1985. Fiscal policy and aggregate demand. *American Economic Review* 75 (March): 117–27.

Barro, Robert J. 1986. U.S. deficits since World War I. *Scandinavian Journal of Economics* 88 (No. 1): 195–222.

Brunner, Karl. 1986. Fiscal policy in macro theory: A survey and evaluation. In *The monetary versus fiscal policy debate: Lessons from two decades*, ed. R. W. Hafer, pp. 33–116. Totowa, N. J.: Rowan and Allanheld. Also, Reprint Series No. C-152, Center for Research in Government Policy and Business, Graduate School of Management, University of Rochester, New York.

Evans, Paul. 1987. Interest rates and expected future budget deficits in the United States. *Journal of Political Economy* 95 (February): 34–58.

Kormendi, Roger C. 1983. Government debt, government spending, and private sector behavior. *American Economic Review* 73 (December): 994–1010.

Kormendi, Roger C., and Meguire, Philip. 1986. Government debt, government spending, and private sector behavior: Reply. *American Economic Review* 76 (December): 1180–87.

Miller, Preston J. 1983. Examining the proposition that federal budget deficits matter. In *The economic consequences of government deficits*, ed. Laurence H. Meyer, pp. 3–24. Economic Policy Conference Series, Center for the Study of American Business. Boston: Kluwer-Nijhoff.

Modigliani, Franco. 1986. Comment on R. J. Barro, "U.S. deficits since World War I." *Scandinavian Journal of Economics* 88 (No. 1): 223–34.

Modigliani, Franco, and Sterling, Arlie. 1986. Government debt, government spending, and private sector behavior: Comment. *American Economic Review* 76 (December): 1168–79.

On Models With Different Bequest Assumptions

Barro, Robert J. 1974. Are government bonds net wealth? *Journal of Political Economy* 82 (November/December): 1095–1117.

Laitner, John P. 1979. Bequests, golden-age capital accumulation and government debt. *Economica* 46 (November): 403–14.

Sargent, Thomas J. 1987. *Dynamic macroeconomic theory*. Chapters 7 and 8, pp. 231–334. Cambridge, Mass.: Harvard University Press.

Wallace, Neil. 1978. Models of overlapping generations: An exposition. Manuscript. University of Minnesota. December.

†This list provides sources of research related to the ideas presented in Stern's speech. After the speech was given, it was discovered that the article by Laitner (1979) presents a model which basically reaches the same conclusions spelled out in Stern's analysis.

The views expressed herein are those of the author and not necessarily those of the Federal Reserve Bank of Minneapolis or the Federal Reserve System.