

Summers on sustainable growth

In this letter, a reply to our Economics Focus of May 9th, the World Bank's chief economist defends the application of economics to the environment

SIR—You accept too credulously the arguments of those who criticise economic approaches to the environment. Certainly, the idea of sustainable development has drawn attention to environmental problems that were ignored for too long. But there is no intellectually legitimate case for abandoning accepted techniques of cost-benefit analysis in evaluating environmental investments, either by using abnormally low discount rates or, worse yet, by invoking special criteria regarding sustainability.

The argument that a moral obligation to future generations demands special treatment of environmental investments is fatuous. We can help our descendants as much by improving infrastructure as by preserving rain forests, as much by educating children as by leaving oil in the ground, as much by enlarging our scientific knowledge as by reducing carbon dioxide in the air. However much, or little, current generations wish to weigh the interests of future generations, there is every reason to undertake investments that yield the highest returns.

That means holding each investment, environmental and non-environmental, to a test of opportunity cost. Each project must have a higher return (taking account of both pecuniary and non-pecuniary benefits) than alternative uses of the funds. Standard public non-environmental investments like sewage-treatment facilities, education programmes, or World Bank transport projects have returns of more than 10%. Most private investors apply even higher "hurdle rates" in evaluating investments, generally 15% or more, because higher-return alternatives are available.

Once costs and benefits are properly measured, it cannot be in posterity's interest for us to undertake investments that yield less than the best return. At the long-term horizons that figure in the environmental debate, this really matters. A dollar invested at 10% will be worth six times as much a century from now as a dollar invested at 8% (see table).

The premise that our first priority should be to do more for our descendants is, anyway, debatable. Surely it is ethically relevant that our grandchildren will in all likelihood be much better off than we are. While nobody can accurately predict long-term growth rates, remember that standards of living are three times higher than 60 years ago in the United States,

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seven times higher in Germany and almost ten times higher in Japan. Should my American grandparents have reduced their standard of living, when life was considerably more nasty, brutish and short than now, to leave raw materials in the ground for my benefit?

To think so implies an odd morality. What is the better course for rich countries: to put more aside for a posterity that will be far richer than we are, or to do more to help the world's poor now? I, for one, feel the tug of the billion people who

Miraculous interest

The value over time of \$1

for:	invested at:	
	8%	10%
10 years	2.2	2.6
20	4.7	6.7
30	10	17
40	22	45
50	47	117
75	321	1,272
100	2,200	13,781

subsist on less than \$1 a day in 1992 more acutely than the tug of future generations.

Some environmentalists talk about stewardship. They say we have an obligation to pass on to our children what has been passed on to us. Of course, we all wish our children to be better off than we are. But any investment that would make the difference between rising and falling living standards would pass a cost-benefit test at standard discount rates.

The reason why some investments favoured by environmentalists fail such a test is that their likely effect on living standards is not so great. Take the most serious global problem—climate changes from greenhouse gases. In the worst-case scenario of the most pessimistic estimates yet prepared (those of William Cline of the Institute for International Economics), global warming reduces growth over the next two centuries by less than 0.1% a year. More should be done: dealing with global warming would not halt economic growth either. But raising the spectre of our impoverished grandchildren if we fail to address global environmental problems is demagoguery.

Some suggest that whatever happens to an economy's productive potential, it is

always wrong to damage any part of its natural patrimony irreversibly. But what is irreversible damage? Clearly, cutting down some trees and burning some scarce natural gas is all right, because sufficiently close substitutes are available. At the other extreme, no sane person would favour causing the extinction of hundreds of species to build a dam, if other poverty-reducing strategies were available. In every case, the question returns to trade-offs between costs and benefits. Chanting the mantra of sustainability is not enough.

In applying the standard cost-benefit paradigm to the environment, however, two issues do come up.

First, some advocate treating environmental investments differently, on the grounds that they are alternatives to consumption, not to other investments. This partly depends on how additional environmental spending is financed. But that is essentially a political judgment. Honest analysts should not endorse projects if proposals yielding higher returns are available. And given the extremely high interest rates at which most of the world's consumers are willing to borrow, consumption should not in any case be lightly sacrificed.

Second, it is argued that environmental damage is both uncertain and possibly irreversible. The right way to allow for the unusual riskiness of environmental decisions is to estimate the benefits of environmental investment generously, making special allowance for the value of options that they preserve. However plausible it may seem to reduce the discount rate to allow for risk, this reflects an elementary fallacy. To apply a specially low discount rate merely increases the weight attached to risks in the distant future as compared with risks in the near future—which makes no sense.

Environmentalists who point to the damage done by dams, power plants and roads evaluated according to standard economic criteria have a point. The answer does not lie in blanket sustainability criteria, or in applying special discount rates, but in properly incorporating environmental costs into the appraisal of projects. The grim fact is that no careful analysis was done of many of the projects which environmentalists condemn. The world's problem is not too much cost-benefit analysis, but too little that is done well. Plenty of environmental improvements can pass rigorous cost-benefit tests. There is no need to cook the books.

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