

THE CASE FOR CORRECTIVE TAXATION**

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TH**ERE** is, indeed, such a thing as a free lunch, and that free lunch comes through corrective taxation. Oliver Wendell Holmes said that "Taxes are what we pay for civilization." I would add that in addition to being what we pay for civilization, taxes should also be what we pay to *preserve* civilization. The notion of Pigovian or corrective taxes to address externalities is, of course, standard in economic theory and environmental economics, and an economist's discussion of pollution is considered incomplete if it does not carry a set of prescriptions for internalizing the marginal social costs of such an activity.

Corrective taxes should be the preferred choice in our perennial search for new revenues. Simply put, all taxes discourage something. Why not discourage bad things such as pollution and rent-seeking, rather than good things, such as working and saving? The U.S. obsession with neutrality has gone perhaps a step too far in emphasizing—when discussing revenue as distinct from a given policy issue—the importance of a fair tax system, placing too little emphasis on the very basic question—what can we discourage that we'd actually be just as happy trying to discourage? It is true that the record of tax expenditures has been, on the whole, an unhappy one, so ample justification exists for a general presumption in favor of neutrality. So what is needed is "corrective taxation," which, although it doesn't completely capture the notion of the opposite of tax expenditures, means selective taxes on things that we want to discourage.¹

There are three reasons why corrective taxes, applied to things that we want to discourage, encounter fewer of the kinds of non-neutrality objections that arise with tax expenditures. The first is that ineffective tax expenditures, that encounter inelasticity on the relative margin and do

not change behavior, are costly. They are a waste of government revenue to no good objective. But, an attempt to discourage alcohol consumption or polluting activities by raising taxes, if unsuccessful because the relevant demand or supply curve is inelastic, is non-distortionary. Such taxes are desirable as they raise revenues in a non-distorting manner. A second important part of the argument against tax expenditures is that they really function like an expenditure program but unlike any expenditure program that the Congress could ever be induced to enact, and that tax expenditures are convenient mechanisms for hiding subsidies to special interests. Whatever the merits of that argument, it is much weaker, in the case of selective taxes that discourage illegal or otherwise socially undesirable activities. In such cases, it serves the broad public interest for which economists speak, and the opposition will have no difficulty mobilizing and making its presence known. So the presumptive arguments about how our democracy should operate may call into question the notion of tax expenditures, but it in no way calls into question the notion of specific taxes directed at things that we want to discourage. A third, and closely related, point is that corrective taxes, unlike tax expenditures, are amply reversible. In the case of tax expenditures, capitalization is a profoundly important principle. The political economy of tax reform is much better understood with the realization that the people who objected to removing tax deductions were not primarily the wealthy businessmen, but were also other businesses which benefited from expenditures associated with such deductions. A legitimate equity issue with respect to reform is created, where people have made investments in response to a provision, which they could reasonably expect to be permanent. There is an equity issue associated with pulling the rug out from under them. The strength of that equity issue is

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often less than the strength it receives in the political process, but it is a legitimate one. If we ever were to decide to reverse a corrective tax and, say, reduce the taxation on gasoline, reduce the taxation on alcohol, or reduce a pollution tax if the greenhouse effect in fact proved to be a swine flu epidemic of the 1990s, that same issue would hardly arise. The issue of pulling the rug out from under people who had made large investments, would be much less compelling in this instance.

So it seems to me that the general presumption against nonneutrality is much weaker in the case of corrective taxes. Indeed, there is a compelling *a priori* argument for small taxes on things that we wish to discourage, e.g. pollution. The distortion from taxes is proportional to the square of the tax rate. Or, put differently, marginal taxes get more and more costly as the tax rate rises. It's also true that abatement activity has the exact opposite property. The first bit of abatement is likely to be more beneficial than the second bit of abatement and the third bit of abatement. That means that when forcing small amounts of abatement at the cost of small amounts of nonneutrality, there is an overwhelming presumption of success.

The tendency to discuss corrective taxation in the context of policy issues, whether it's health or pollution, rather than in the context of the annual grab bag for revenue, leads us to let the best be the enemy of the good. If someone weighs 300 pounds, it is really not very important for him to decide whether 220 or 180 would be an optimal weight. In just the same way, action with respect to carbon taxes, should not await a fuller understanding of the "greenhouse effect," or a fuller calculation of its costs and benefits. We have no idea what the right level of environmental taxation is. But that doesn't stop us from being able to make very firm judgements about which way one should move, starting at zero. A totally compelling case exists for a small carbon tax in the United States—a \$10-a-ton carbon contents tax. Such a tax on carbon emissions would raise roughly \$13 billion a year and would add about three cents a

gallon to the price of gasoline. It would also raise the relative price of coal in relation to other fuels, such as oil and natural gas. For coal fired electricity, it would raise the price of electricity on the order of 4 or 5 percent.

Is there a case for imposing such a tax? The case for revenues is compelling. I'm not going to debate here whether the \$13 billion that a \$10-a-ton carbon tax would raise would be better spent on making schools work again, fighting drugs, whether it would be better spent on providing much-needed tax relief to middle-income families, whether it would be better spent on providing important new incentives for capital formation, or whether it would be better spent on revitalizing the civil service. I don't know the best way to spend \$13 billion. Civil servants may think that higher salaries would be a particularly attractive way of revitalizing the civil service. But a compelling use for \$13 billion no doubt exists just about anywhere on the political spectrum, especially if it comes as a free lunch.

What are the efficiency implications of raising \$13 billion with this tax? The approach proposed here would be to ask what sort of local movement would be desirable starting from where we are. Simple and crude arithmetic, without resorting to elaborate general equilibrium modelling, can provide some answers to this question. A simple formula used by elementary students in public finance teaches that the ratio of the dead-weight loss from a tax to the revenue that the tax collects is the product of the tax rate and the relevant elasticity. Thirteen billion dollars times a tax that is roughly 3 percent times an elasticity that is roughly one-half. The resulting number is in the neighborhood of \$100 million. That's not just in the statistical discrepancy in the GNP accounts or just in the rounding error in the federal budget. It's pretty close to being the rounding error in the IRS budget. Or, put differently, that dead-weight loss represents approximately two minutes and ten seconds of our national output. That, of course, must be compared with the benefits of the resulting expenditure, or the costs of raising taxes in some alternative

way. It is worth it? The answer obviously depends upon how much value is placed on the externality, i.e. from the benefits that would come from imposing carbon taxes. One way to think about it is to leave aside the important observation that the benefits from the first bit of abatement are much greater than the benefits from the average bit of abatement, and simply ask if \$100 million would reduce the carbon emissions problem by 2 percent. It follows that if you think of the problem as anything like a 1 percent of U.S. GNP problem, then achieving that two percent reduction at a dead-weight loss of \$100 million pays for itself overwhelmingly. In addition to the question of the greenhouse effect, the burning of fossil fuels also creates other pollution externalities. Recent estimates suggest that sulphur dioxides from burning of coal alone, not to mention power plant siting, or acid rain, would justify a tax of roughly \$30 per ton of carbon content. And, of course, there's the question of taxation of oil and its other uses. Related arguments for gasoline taxes to reduce congestion and automobile accidents and to charge for the provision of public infrastructure suggest that an additional three cents a gallon tax would almost certainly constitute a small step in the right direction.

In short, the efficiency case for a small carbon tax is overwhelming. Is there an equity case against it? I don't think there's even a remotely plausible one, for two reasons. First, when talking about a tax of roughly 1 percent of total tax collection, any distributional consequences that it might have are easily offset, and will be offset, by changes in the federal tax structure and federal budget over time. Second, the standard analyses that suggest that taken alone, a carbon tax might be regressive, are very implausible on a number of grounds. First, they often ignore intermediate use aspects and focus only on consumption by households where most carbon fuel is used to produce all kinds of goods, and then become a part of the cost of all goods. Second, if you measure people's well-being in the "right" way, using expenditure rather than income as a proxy, carbon tax incidence would be

approximately proportional. And the third and the most important point that is left out of such discussions, is that the supply of oil, natural gas, and in some sense coal is not perfectly elastic. Thus a significant fraction of the incidence of this tax would be on resource owners, the Ewings of Dallas and their counterparts, who have the ability to pay such taxes. A proper incidence study would take these considerations into account.

In short, distribution is not a reason to disregard a small carbon tax. What about the dislocative effects in the short run? Again, this is a small tax resulting in a 3 percent, one-time change in the price of oil and would still leave gasoline prices in the U.S. at less than a third of what they are in most Western European countries, and which would be smaller than the 15 percent standard deviation in the price of oil. The standard deviation of the price of coal may be somewhat less, but surely great enough that such a tax would not represent an undue dislocation. And after all, when discouraging activities that are harmful, the objective is in some sense to create a certain dislocation. And if just as much of the activity as occurred before continues to occur, the tax would have failed in achieving its objectives. In short, there is an overwhelming case for a small step in this direction the next time the federal government needs to raise revenue. Whether the case is so compelling that a larger tax is justified is open to an argument. Similarly equal treatment of all fuels is also open to debate. But the case for doing something of modest size soon is one that cannot be argued against.

Global Perspective²

The calculus just examined for the US would apply with equal force to any other OECD country, but in many parts of the world efficient energy pricing should be the foremost priority. The use of carbon per dollar of GDP in East Germany was roughly three and a half times the use in West Germany, and an updated estimate of East German GNP would probably double that ratio. The same is true in Czechoslovakia, Austria, Poland, and the

United States. And it's not hard to see why. Poland at one stage was on its way to becoming a principal exporter of tropical flowers because of the highly subsidized price of coal. The coal used in greenhouse heating in Poland could have been sold in world markets at ten times the domestic prices. Poland chose instead to sell it domestically and create a few jobs at substantial cost to the treasury. Thus the first thing the rest of the world needs to do is to move assiduously prices up to world levels in all countries. Another crucial element in the global approach is that if it becomes appropriate for an active agenda item to be a move away from the incremental approach to a world-wide approach, the consequences will be enormous. This helps to explain the emphasis on process rather than on very concrete proposals for action at this point. Contemplate a proposal that said that each human being on earth was entitled to put a certain amount of carbon into the sky, and that those constitute the initial endowment of rights to different countries, and then ask the question, if they bought and sold so that we could keep carbon emissions constant, how large would the transfer be? The answer is, the U.S.

transfer would be surely in excess of 1 percent, quite likely in excess of 2 percent of U.S. GNP, an amount that would dwarf current official development assistance. This suggests that such transfers are unlikely to take place in the near future. But if we take the global approach, we are looking at a complex negotiation process to work out a set of allocations. If we start small and take the desirable steps, maybe over time more elaborate mechanisms will be needed but then we would be better prepared to deal with such an eventuality. In conclusion, a strong case exists for corrective taxation in a wide variety of other areas, including "sin" and security transactions.

ENDNOTES

**The views expressed in this paper are those of the author and should not be attributed in any manner to the World Bank, to its affiliated organizations, or to the members of its Board of Executive Directors or the countries they represent.

¹"Revenues" are, in some sense, the opposite of expenditures, but that doesn't capture all my current meaning.

²A number of people, including my World Bank colleague Anwar Shah, are looking at this problem from a more global perspective, and we will have more to say about it over time.