

Nordhaus' Carbon Tax: An Excuse to Do Nothing?

A commentary on "Economic Issues in Designing a Global Agreement on Global Warming", an address by William Nordhaus to the Copenhagen conference on climate science, March 10-12 2009

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Alarmed by the lack of urgency in the international climate change debate, a number of scientists convened a conference in Copenhagen in March 2009 to bring to public attention the results of the latest scientific research.² Many of those involved viewed the 2007 Fourth Assessment Report of the IPCC as out of date and conveying inadequately the seriousness of the threat of global warming. It was curious, therefore, that the scientists most worried about the lack of action should have invited to give a keynote address one of the most influential voices calling for caution and moderation, Professor William Nordhaus.³

A reading of Nordhaus' analysis, both his conference paper and the recent book on which it is based,⁴ leaves the impression that climate change is not a serious problem, and certainly not serious enough to warrant any urgent or significant policy response. Although he opens his book with the statement that "global warming is a serious, perhaps even a grave, societal issue",⁵ the whole tenor of the analysis is to urge caution and delay. He emphasises both the high cost of reducing emissions and the "meager" state of our knowledge about the damage warming might cause. He argues that humans have adapted in the past and that some parts of the economy—"such as air-conditioned houses"—will not be affected.⁶ He believes that, while some countries will suffer from climate change, other countries may benefit from it.⁷

These judgments all follow from the particular perspective Nordhaus brings to the climate change debate, that of neoclassical economics. He begins by describing global warming as an "externality", that is, an unintended effect on a third party not involved in a market transaction. Although this seems natural to a neoclassical economist, to characterise human-induced climate change as a "market failure" frames climate change in narrow economic terms and then represents global warming as a glitch in the operation of an otherwise perfect system. It thereby becomes a technical problem rather than a social or moral one. In this view, global warming cannot be due to overconsumption by the rich, or our disregard for the natural environment, or the rapacity of corporations and the failure of governments to rein them in. The solution

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² <http://climatecongress.ku.dk/>

³ William Nordhaus, "Economic Issues in Designing a Global Agreement on Global Warming", an address to the Copenhagen conference on climate science, March 10-12 2009.

<http://climatecongress.ku.dk/speakers/professorwilliamnordhaus-plenaryspeaker-11march2009.pdf/>

⁴ William Nordhaus, *A Question of Balance: Weighing the Options on Global Warming Policies*, Yale University Press, New Haven, 2008

⁵ Nordhaus, *A Question of Balance*, p. 2

⁶ Nordhaus, *A Question of Balance*, p. 5

⁷ Nordhaus, *A Question of Balance*, p. 6

is not social change or a reorientation of our attitudes to the natural world; the answer is merely to perfect the market.

Discarding fairness

The carbon tax proposal put forward by Professor Nordhaus is both unfair and unworkable. He identifies a number of undoubted problems with cap-and-trade schemes without acknowledging that many of them arose because of the inescapably difficult nature of international negotiations that must accommodate the perspectives and interests of some 200 diverse nations.⁸ Nordhaus appears to assume that all of the thorny problems of how to divide up responsibility for emission reductions would somehow vanish with his proposed carbon tax. “Under this approach”, he writes, “countries would agree to penalize carbon emissions at an internationally harmonized ‘carbon price’ or ‘carbon tax’”.⁹ Just like that.

The idea of a harmonized tax rate contradicts the universally endorsed ethical basis of the UN Framework Convention on Climate Change, which commits all parties to protect the climate system “on the basis of equality and in accordance with their common but differentiated responsibilities and respective capabilities.”¹⁰ A uniform carbon tax would be as unfair as a flat rate income tax.

The principle of common but differentiated responsibilities led to the division between Annex I (rich) and Annex II (poor) countries and the initial obligation on the former to cut their emissions first. So how would Bangladeshis or Ugandans react to the idea that they should from the outset pay the same rate of tax on fossil fuels as people in the United States and Australia, the ones who created the global warming problem? There is no principle of justice that Nordhaus could invoke to defend a system that penalises the innocent and subsidises the guilty. If the Obama Administration took to Copenhagen a position based on a uniform carbon tax it would be seen by developing countries as yet another attempt by rich countries to evade their responsibilities, and would fracture the trust between developed and developing nations painstakingly built over the last decade, the thread on which any future agreement hangs.

Nordhaus criticises the Kyoto Protocol’s phased introduction of emission targets using modelling results showing total costs of abatement rising sharply if some emitters do not participate.¹¹ He is therefore in no position to mollify poor countries by advocating for them a lower rate or later starting date for the carbon tax. In his scheme, every nation must set the same rate at the outset. In the tradition of neoclassical economics, the distribution of income, and by extension the distribution of the burden of abatement costs, is taken as a given. Indeed, in his recent book Professor Nordhaus compares the prevailing distribution of incomes with “the eating habits of marine organisms”,¹² suggesting the level of inequality in any society follows from some biological law rather than government policies and social structures, a view common in economics but rejected by most other social scientists.

⁸ Incidentally, as a matter of history it was the US government at Kyoto, under the influence of market-oriented economists, that insisted on inserting cap-and-trade into the Protocol.

⁹ Nordhaus, “Economic Issues in Designing”, p. 4

¹⁰ <http://unfccc.int/resource/docs/convkp/conveng.pdf>. Article 3.3

¹¹ Nordhaus, “Economic Issues in Designing”, p. 3

¹² Nordhaus, *A Question of Balance*, p. 15

Discounting the future

If Nordhaus' advice prevailed, any carbon tax would almost certainly be set at a rate much lower than the one science indicates is needed to avert dangerous climate change. That would undoubtedly be so if the rate were taken from Nordhaus' economic modelling, because the model reflects his own philosophical position, one that breeds caution. The Stern Review urged more rapid carbon abatement by arguing that climate policy should be based on a low discount rate because we should treat the welfare of future generations on a par with our own and to do otherwise is "ethically indefensible".¹³ In reply, Nordhaus accused Stern of abandoning accepted economic principles, writing a "political" document, making "extreme assumptions" and reaching "extreme findings", even suggesting that in commissioning the report the Blair Government was "perhaps stoking the dying embers of the British Empire".¹⁴

While carried out as a dispute over where to set the discount rate, the underlying argument between Stern and Nordhaus is over the ethical status of private markets. Like most neoclassical economists, Nordhaus believes implicitly that our private behaviour in the marketplace always represents our true preferences so that whatever the market generates is value-free and sacrosanct. Thus in considering the long-term impacts of policy we must use the discount rate determined by our behaviour in private markets, even if that means the interests of future generations disappear from the analysis. Any discount rate other than that thrown up by the market is regarded as "normative", a code-word in economics meaning biased and invalid. Yet the belief that the market is value free has been comprehensively debunked.¹⁵

Whatever the future might hold, Nordhaus argues, it is not legitimate to try to second-guess the market, going so far as to propose that people may "come to love the altered landscape of the warmer world",¹⁶ which suggests a disregard for those who will be driven from their lands by rising seas and famine. It reflects a kind of market absolutism: what people do in private markets today is the only valid evidence of what they value. In such a world, if people were really concerned about losing their homelands it would be reflected now in their market behaviour. It may indeed be rational for the people of Tuvalu to begin planning to evacuate their island home, but that does not make it right that they must do so nor absolve rich countries of the duty to try to prevent it.

Of course, accepting a discount rate generated by private market behaviour means endorsing as somehow natural and therefore unchallengeable the prevailing distribution of income and wealth. This is a moral judgment, yet by comparing the prevailing distribution of incomes with a biological law Nordhaus commits two well-known philosophical mistakes—the "is-ought" error (shifting imperceptibly from describing what is to deeming what ought to be) and the "naturalistic fallacy" (the assumption that what is natural is good and right).

¹³ Nicholas Stern, *The Economics of Climate Change: The Stern Review*, Cambridge University Press, Cambridge, 2007, p. 35

¹⁴ Nordhaus, *A Question of Balance*, pp. 167, 169, 217, 174

¹⁵ Within a vast literature see, for example, Herman Daly and John Cobb, *For the Common Good: Redirecting the Economy toward Community, the Environment, and a Sustainable Future*, 2nd Edition, Boston: Beacon Press, 1994 and Richard B. Howarth, 'Discount rates and sustainable development', *Ecological Modelling*, 92, 263-70, 1996.

¹⁶ Nordhaus, *A Question of Balance*, p. 19

In a philosophical move with no justification, neoclassical economists unthinkingly convert ethical arguments into potential changes in money incomes.¹⁷ They cannot imagine another realm of decision-making in which people act as citizens concerned with collective interests and long-term effects, rather than consumers and investors determined to maximise short-term private gain. If we recognise this non-market realm, we have to accept that we may not always prefer what we choose because we may have “second-order preferences”, preference for certain preferences that describe the world we would prefer to occupy even though we succumb to various impulses and temptations in practice.¹⁸ This explains why we may do nothing to reduce our own greenhouse gas emissions yet vote for governments that promise strong measures to require us all to cut emissions. Reducing ballot box behaviour to supermarket behaviour deprives us of our citizenship.¹⁹ In the end, Nordhaus’ policy prescriptions based on cost-benefit analysis and discount rates set in private markets allow us to be consumers only and never citizens. If there are no citizens there is no democracy.

Inviting more delay

The process of negotiating an international treaty under which all nations agree on how to resolve something as politically fraught as climate change is long and arduous. Every gain is precious. The process under the Framework Convention drawing all nations into an agreement to constrain carbon emissions now has great momentum, even if progress has been intermittent and slow. Whatever the merits of a carbon tax over cap-and-trade (and there are several in principle), to suggest now that the Kyoto framework should be discarded is a recipe for several more years of delay. The case would have some merit if the world had the luxury of several more years to arrive at a perfect system, but we don’t, a fact established even more firmly by the climate scientists at the March Copenhagen meeting.²⁰

Thus for some of those who want no action, arguing for a carbon tax has become the tactic *du jour*. They know that if a carbon tax emerged as a serious proposal in global negotiations, every contentious question of fairness would be reopened and nations would have to spend, quite literally, years working through the implications. Imagine the arguments about the rate at which the carbon tax should be set, and the inevitable process of bidding it down. It would be no easier than the horse-trading that led to the emissions targets at Kyoto. And every difficulty that has weakened the effectiveness of cap-and-trade systems, both in the Protocol and in national schemes, would apply to a carbon tax.²¹

If a harmonised carbon tax were adopted globally and the US Congress had to legislate to enact it, it is unlikely the 2,340 energy lobbyists in Washington²² would sit back and declare “Our hands are tied by an international treaty”. There would be

¹⁷ See Mark Sagoff, *Price, Principle, and the Environment*, Cambridge University Press, 2004

¹⁸ See especially David George, *Preference Pollution*, University of Michigan Press, Ann Arbor, 2001.

¹⁹ Sagoff, *Price, Principle, and the Environment*.

²⁰ http://climatecongress.ku.dk/newsroom/congress_key_messages/

²¹ Nordhaus seems to acknowledge this when he writes of a harmonised tax: “In reality, as with any system, reality will depart from the ideal, but it is useful to keep the conceptual ideal in mind when designing the system” (“Economic Issues in Designing”, p. 5). He then goes on to dismiss cap-and-trade because it does not match the ideal in practice.

²² Marianne Lavelle, “An Army of Lobbyists Readies For Battle on the Climate Bill”, *Yale Environment 360*, 16 March, 2009.

enormous pressure for exemptions, tax holidays, special deals, compensation and so on. The gasoline price increase alone would probably see domestic legislation sink, thereby wrecking the international agreement. The choice is not, as Professor Nordhaus presents it, between a flawed cap-and-trade system and a perfect carbon tax; it's between a flawed cap-and-trade system now and a flawed carbon tax at some point in the future.

Who bears the risk?

In addition, the carbon tax rate would need to be renegotiated regularly and, with the science of climate change becoming more exact and more worrying, the rate would in all likelihood have to escalate rapidly. Here we get to the most important advantage of a legislated limit on emissions over a tax on emissions. Although governments are always pressured to insert loopholes, a cap sets a binding limit on the quantity of emissions, so that the price of carbon fluctuates in response to market conditions. The carbon tax alternative raises the price of fossil fuels by a fixed amount and allows the quantity of emissions to fluctuate. Those more concerned about global warming want certainty for the atmosphere so that the fluctuations are absorbed by the economy. Those who put a premium on business certainty and want the environment to absorb the risks are less concerned about global warming.

Neo-classical economists are trained to put the interests of business first, but most other people do not see the world that way. The commitment to put the interests of the atmosphere first is the greatest advantage of a quantitative limit over a carbon tax. We don't have the time to play around with the atmosphere by experimenting with tax rates until we get the desired response. Moreover, Nordhaus exaggerates the risks to business of carbon price volatility. His own figures suggest that volatility in carbon permit prices would be a little less than volatility in oil prices.²³ He says this is a bad thing, but in fact it is good news. Businesses around the world are accustomed to dealing with oil price volatility, and good managers of affected businesses would manage carbon price volatility in the same way.

Nordhaus rejects the argument that a carbon tax is inferior to a quantitative target because a tax cannot ensure the world reaches a particular climate goal. He claims that this alleged advantage of quantitative limits is "largely illusory"²⁴ because the climate science is so uncertain we do not know what goal to set.²⁵ This is a repudiation of the best climate science. (He even suggests, along with some sceptics, that there may not be *any* level of emissions that leads to dangerous interference with the climate system.²⁶) Moreover, the claim that we do not know enough to set a quantitative target is an explicit rejection of the precautionary principle, a foundational principle of the Framework Convention. Article 3.3 of the UNFCCC states:

²³ Nordhaus, "Economic Issues in Designing", pp. 5-6

²⁴ Nordhaus, "Economic Issues in Designing", p. 6

²⁵ On the other hand, the very wide uncertainty bounds Nordhaus estimates for the social cost of carbon does not prevent him advocating an economic goal in the form of a carbon tax rate. Nordhaus, "Economic Issues in Designing", Figure 2

²⁶ "We do not currently know what emissions would actually lead to the 'dangerous interferences' – or if there are 'dangerous interferences' ...". Nordhaus, "Economic Issues in Designing", p. 6.

Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures, taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost.²⁷

As Nordhaus' proposal repudiates the three most important principles of the Framework Convention—Article 3.1 on common but differentiated responsibilities, Article 3.2 on recognition of the “specific needs and special circumstances of developing country Parties”, and Article 3.3 on the precautionary principle—its effect can only be to sow suspicion and delay action.

Cold water for urgent action

Nordhaus' basic fear is encapsulated in his belief that “We might make a huge mistake”.²⁸ While others are worried that we might make a huge mistake by failing to respond adequately to the climate crisis, Nordhaus is concerned with the economy, insisting that anything but a cautious carbon tax approach would be a “reckless gamble”.²⁹ This is despite the fact that his own modelling confirms that the impact on income growth of even radical emission cuts would be disappearingly small. He estimates that implementing the Stern Review's proposals—which he judges to be “extremely expensive”³⁰—would in fact reduce the discounted value of future global income by less than one per cent.³¹

This paralysing cautiousness is reflected in Nordhaus' criticisms of the Stern Review, whose results he describes as “extreme”. He uses the results of his DICE model to conclude that adopting the path recommended by Stern would be worse than doing nothing at all to prevent global warming.³² Both the Stern proposal and that of Al Gore he describes as “worse-than-nothing”. While more serious measures may be needed in some decades, he urges “modest” measures now.

In sum, the Nordhaus carbon tax proposal contravenes globally agreed principles and plays into the hands of those opposed to urgent action on warming. To suggest that a carbon tax system would obviate the need for “highly politicized and uncertain negotiations” and that, by contrast, “a carbon-tax model provides a friendly way for countries to join a climate treaty” indicates that Nordhaus' carbon tax sits comfortably in a text book but has little relevance to the real world of climate policy.

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²⁷ <http://unfccc.int/resource/docs/convkp/conveng.pdf>

²⁸ Nordhaus, *A Question of Balance*, p. 6

²⁹ “To bet the world's climate system and global environment on an untested approach with such clear structural flaws would appear a reckless gamble.” Nordhaus, “Economic Issues in Designing”, p. 7.

³⁰ Nordhaus, *A Question of Balance*, p. 87

³¹ Nordhaus, *A Question of Balance*, Table 5.1

³² Nordhaus, *A Question of Balance*, p. 88