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CONVERSATIONS 1: Climate Change

Fiscal Measures When Climate Negotiations are not Feasible

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Peak oil is not a real problem but a very instructive model. If we were running out of fossil fuels, as the peak oil people claim, what would happen? Well, fossil resources have owners; so, recognizing the impending scarcity, they would raise prices and we would simply be faced with a high and rising price. This is Natural Resource Economics 101.

A high price acts to stimulate alternatives, savings, and efficiency and, in turn, overcome scarcity so that we never run out of resources. Once, in the 1980s, the Club of Rome discussed running out of metals like lead. That never happened—because of the price mechanism. Economics works in the case of 'peak oil issues'.

However, the price mechanism does not always work—for example, when there are no property rights, the market mechanism cannot operate. This is the case of climate change—when we burn oil, we also use the assimilative capacity of the ecosystem to deal with carbon dioxide, which is scarce, but has no owner. Therefore, the real problem is not scarcity of oil but the stability of the atmosphere at a carbon content that keeps the climate in a state that is tolerable for humans (Watson 2018).

People ask: Why do we not just mandate renewables and efficiency investments? But how is the ordinary housewife, carpenter, or Tata engineer going to know exactly how much insulation to use or exactly what technology to buy if there is no price signal to guide them? The world needs a high and rising price signal for fossil fuel, but we are forced to create this

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signal through political agreements at the international level. We can estimate the necessary size. If the economy were to grow by 6 per cent per year and we need to cut emissions by 2 per cent per year (around 50 per cent in 40 years), then it is necessary to increase the real price by 10 per cent per year. This is the simple part. It is the implementation that is complicated—not because of the underlying science, but because sovereign states must negotiate, and they do not agree on the distribution of burdens.

During the decade from the signing of the Kyoto Protocol in 1997 until the Copenhagen Summit in 2009 (the 15th Convention of Parties to the United Nations Framework Convention on Climate Change), world policymaking focused on quantitative targets. The Kyoto Protocol established legally binding commitments for the reduction of various greenhouse gases (GHG)—such as carbon dioxide (CO2), methane, and nitrous oxide—produced by Annex I nations as well as vaguer commitments for all Member countries. With various exceptions, one strong norm for setting individual country commitments was 'grandfathering'—the notion that future emission rights should be in proportion to past emissions. Another way of saying this is that a certain baseline was set and uniform percentage reductions were required from that baseline.

Grandfathering is not ethically acceptable for all parties. Still, it has been a starting point for negotiations.[1] In these negotiations, low-income countries regularly claim lower reductions or even increases in emissions to compensate for the fact that they have 'not yet' reached some level of desirable 'development' (Desai 2018). India has even suggested that historically accumulated emissions should be equalized, which would mean that countries that were early to industrialize, like the UK, would already have 'used up' their emission rights. Low-income countries typically argue for equal per capita allocations (accumulated either over time or annually). The trouble is that many developed economies do not find even the requirement of equal emissions per capita and per year acceptable. Consider the two large countries with the most extreme positions: the US and India.

Table 1 shows a 'world' consisting of just two countries: the US and India. The first column shows approximate emission levels for India and the US

[1] Under the Kyoto Protocol, industrialized countries were supposed to reduce their total GHG emissions by 5.2 per cent compared to 1990, but national limitations on reduction ranged from 8 per cent for the European Union and some others, to 7 per cent for the US, and 6 per cent for Japan. Russia was not required to reduce emissions at all. Some countries, such as Australia and Iceland, were allowed to increase emissions. Thus, grandfathering was not applied exactly or strictly on all countries (in which all countries were required to make exactly the same reductions), but it formed the norm or baseline from which some small adjustments were made.

in 2012 with a total of 9,400 metric tons of CO2-equivalent. Now, the world needs to cut total emissions by 50 per cent quite quickly. With grandfathered rights, both countries would have to reduce their emissions by 50 per cent. That would, of course, preserve the inequality, as the US—despite having a much smaller population than India—has always used more than twice as much carbon as India. This appears very unfair to many people, and generally unacceptable to India, which would prefer at least equal per capita emissions.

Equal per capita emissions would make for very different allocations, since India has over 17 per cent of the world's population and the US just over 4 per cent (since we are dealing with future population numbers, the numbers are not exact or certain). Under this allocation, India could increase its emissions somewhat, while the US would have to reduce emissions by 85 per cent rather than by 50 per cent. This might satisfy some people's fairness criteria, but it is so unacceptable to the US that it will never happen.

Country positions as far apart as those of India and the US can become a true impediment for dialogue, since it is almost better for each party to feign disinterest in any discussion than to risk compromising its position in a bilateral negotiation. Earlier negotiations over global commons issues, such as the Law of the Sea, took many decades of negotiations before the current laws were agreed on and codified. The trouble is that this time, with the climate, we simply do not have so many decades—it is imperative that we start reducing emissions very soon.

Table 1: Allocation by Grandfathering or by Per Capita Allocation

Country	Current	Grandfathering	Per Capita
US	5400	2700	1000
India	2000	1000	2700
Total	7400	3700	3700

Source*:* World Bank (2018)

Naturally, a fair solution would have been best. But if fairness is not achievable and the alternative is severe climate change, guess who will be the most affected? Unfortunately, it will again be India, which is so hot that an extra 5°C will cause tremendous damage. It is in this context that the suggestions to negotiate taxes instead of quantities should be seen.

A green tax reform would not imply major costs to India. The Indian state has to tax something to earn revenue. Taxing fossil fuels may be preferable to taxing income or property or levying a value-added tax, as all of these have substantial problems of introducing wedges in the economy or leading to practical resistance. The revenue from taxing fossil fuels would stay in India and help lower other taxes and oil imports and benefit the booming

renewables industry. So, a fossil fuel tax would benefit countries that import fossil fuels and that have renewable energy potential. If all countries tax fossil fuels, climate change might be sufficiently mitigated, and no country will lose because all businesses will face high carbon prices everywhere. The playing field will be level. Such a tax reform will have a *negative* cost in many countries.

Instead of taxing productive inputs or mobile resources—such as technology, which we need to encourage—we should tax fossil fuels, which have negative health and environmental consequences. A common critique is that this would hurt the poor, but that does not mean this critique is correct. In fact, it appears to come from fossil fuel lobbyists. In reality, in low-income countries, mainly the relatively affluent consume fossil fuels. In society, the poor have a lower consumption share in their budget for fuel compared to the richer deciles; thus, a fossil fuel tax is much better for the poor than a value added tax or other, more general taxes.

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