



Climate change and the false case for haste

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When President Barack Obama addresses the United Nations Climate Summit on Sept. 23, you can bet that he will be calling for immediate, substantial reductions in greenhouse gas emissions. But is the time for action now?

The White House has claimed that the cost of delaying action on climate change would be greater than if actions were undertaken now. Therefore, the U.S. should move quickly to enact regulatory measures to reduce greenhouse gases. But there is a fatal flaw in the reasoning: the climate issue does not fit the framework in which an early start implies lower costs.

That framework requires three basic conditions to be met. First, we need to know with a high degree of certainty what the optimal policy target is and when it needs to be reached. Second, we need to be sure that no influential new information will be arriving in the near future that might affect our view on an optimal policy target. Third, we need to have an accurate picture of the range of risks associated with acting or not acting.

Firstly, defining the optimal policy regarding greenhouse gas emissions has eluded governments for over 20 years. If there is going to be any policy response, it only makes sense at a global level, but global cooperation is unlikely. Even if it could be achieved, the more fundamental problem is that carbon dioxide, or CO₂ (the greenhouse gas targeted under climate policy), is very difficult and expensive to reduce in quantities that matter for climate.

Unlike soot and particulate matter (better known as carbon pollution) there are no scrubbers to capture CO₂ and nowhere to put it once it is captured. Reducing CO₂ emissions pretty much requires cutting fossil fuel use, which is very expensive in an industrial economy. And at the scale of the global climate, only massive global reductions are large enough to have a measurable effect on climate. But only tiny reductions are affordable.

In other words, affordable measures are ineffective, and effective measures are unaffordable. Anyone picking a target and timetable for CO₂ reductions (such as 20 percent by 2020) is, therefore, simply making an arbitrary guess.

The second question relates to the first. What might be the benefits of a 20 percent CO₂ cut? To answer, we have to agree on the economic harm associated with the emissions. But, unlike carbon pollution, CO₂ itself is not harmful; it only matters to the extent that it affects long-term weather patterns, and that is a notoriously difficult question to answer.

Scientists use computer models of the climate to study the problem. For about the past 20 years, models have been predicting far too much warming in response to CO₂ emissions compared to what has actually been observed. In fact, notwithstanding President Obama's erroneous claim in November 2012 that temperatures are increasing "faster than was predicted," global warming all but stopped in the late 1990s, even though CO₂ emissions rose faster than expected thereafter.

Having finally begun to grapple with the widening divergence between models and reality, the climate science community has recently floated dozens of different theories and conjectures, some of which imply pretty major revisions to the understanding of natural variability and the role of greenhouse gases in temperature change. The claim that the "science is settled" never made sense for climate, and is now completely untenable in light of the wild profusion of new theories to explain the mismatch between models and data.

However, this presumably is a temporary situation. We should expect that, over the next few years, progress will be made on the issue, and the theories will be winnowed out as they get tested against the data. In other words, new information will emerge, and it may fundamentally change our understanding of the social costs of CO₂ emissions.

Meanwhile, the empirical evidence clearly points to the likelihood that the effects will be revised downward, not upward. It, therefore, is impossible to claim that we are in a position today to know what we will believe in a few years about the optimal policy target.

The third issue gets at the question of risk. If economic models are carefully calibrated against real-world data, and, on that basis, they show that the costs of over-reacting are small while the costs of under-reacting are large, we might still identify an optimal policy target notwithstanding the remaining uncertainties.

Unfortunately, economic models of climate policy are not calibrated to climate data at all; instead, they are calibrated to climate models – the very models now being rethought in light of their significant overestimation of warming in recent decades. If climate models showing a large effect from CO₂ emissions get winnowed out, it will have direct consequences for economic analysis since those models contribute to the upper end of the range of expected social costs of carbon.

The arguments for hasty action on greenhouse gases do not hold up. This is a case where there is a positive value to waiting for the policy-relevant scientific information we know will be emerging in the next few years, before committing to a long-term course of action.

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