The Future of U.S. Climate Policy: Prices vs Quantities Five Decades Later

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Proposal for
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In 2007, I was asked by the leadership of the Brookings Institution's Hamilton Project to write a paper outlining a national emissions trading program to reduce U.S. carbon dioxide (CO_2) emissions to help address the threat of global climate change. I responded that I would prefer to write broadly about carbon-pricing instruments, including what I considered to be the symmetric instruments of a carbon tax and a carbon trading program. But the Hamilton Project personnel said no, they would find someone else to write about carbon taxes, and they wanted me to "make the strongest case possible for" what is today called a cap-and-trade system. I did so, and in the process I came to be identified (and to some degree became) an advocate for CO_2 cap-and-trade. For better or for worse, during the Obama administration transition, my Hamilton Project paper became the starting point for the design of the administration's proposed CO_2 cap-and-trade system that became part of the failed Waxman-Markey legislation.

A decade later, I want to approach this question the way I wanted to in the first place, reflecting my teaching on the subject, in which I treat both instruments fairly, examine their merits and challenges, without favoring one or the other. As I write this proposal, I have no idea where the theoretical and empirical evidence would lead in terms of conclusions, but in keeping with NBER requirements, there would be no policy recommendations.

The paper I propose to write for the NBER Environmental and Energy Policy and the Economy Conference, would tentatively be titled, "The Future of U.S. Climate Policy: Prices vs Quantities Five Decades Later," and would consist of five parts. First, in the introduction, I would very briefly state the motivation for the paper, namely the importance of global climate change, the current reality of U.S. inaction at the Federal level, and my conviction that any truly meaningful, economy-wide U.S. climate policy will likely need to have carbon-pricing at its core, either in the form of a carbon tax or a cap-and-trade system. The paper will review the available evidence to identify the merits and limits of each approach – both normatively and positively, and both theoretically and empirically.

The second part of the paper would examine the normative theory of policy instrument choice as it applies to a U.S. climate policy. This would include very brief reviews of the major

options: conventional instruments, including regulation (CAFE standards, the Clean Power Plan), subsidies (tax credits), and hybrid regulation-market instruments (renewable portfolio standards, the Clean Power Plan, and low carbon fuel standards); and market-based instruments, including taxes and cap-and-trade (with some brief reference to offset or emission-reduction-credit systems). Most important in this second part of the paper, I would examine what normative theory can tell us about taxes versus cap-and-trade for CO_2. This examination would likely begin with an assessment of the abundant symmetries between the two approaches, and then turn to the key differences, including the "Weitzman rule" (1974) applied to a stock externality (Kolstad 1996, Newell and Pizer 2000), administrative costs and compliance, distributional factors, and any other differences.

In the third part of the paper, I would turn to an examination of the positive theory of policy instrument choice as it applies to U.S. climate policy. This would include demand-side analysis (Stigler 1971, Pozeman 1974, Peltzman 1976, Becker1983), supply-side analysis (Kalt and Zupan 1984, Shepsle and Weingast 1994, etc.), and synthesis in the form of equilibrium analysis, employing the metaphor of a political market (Keohane, Revesz, and Stavins 1998). By applying this positive theory of policy instrument choice in the environmental realm to the choice between carbon taxes and cap-and-trade, I would seek to assess what positive theory can tell us.

The fourth part of the paper would examine empirical evidence, that is, what experience can tell us, first with regard to empirical evidence regarding normative instrument choice, including lessons learned from experience with taxes and cap-and-trade, and remaining uncertainties due to insufficient experience or analysis. Then, I would turn to empirical evidence regarding positive instrument choices, including again lessons learned from experiences with cap-and-trade and taxes (and attempts at both in the climate context), as well as remaining uncertainties regarding positive instrument choice.

The fifth and final part of the paper would provide an assessment of the path ahead, based upon conclusions from the normative and positive analyses – both theoretical and empirical – and ongoing uncertainties and implications for further research.