

Allocating Emissions Permits: Theory and (Preliminary) Evidence

Abstract: The allocation of emissions permits in "cap-and-trade" programs is an increasingly contentious policy design issue. In theory, how emissions permits are allocated can significantly affect who will bear the costs and how efficiently the required emissions reductions will be achieved. Previous theoretical analysis has extensively characterized the efficiency and distributional implications of alternative permit allocation regimes. This paper addresses the empirical question: Is this theory borne out in practice? A simple analytical model illustrates some essential theoretical relationships between permit allocation design choices and product market outcomes. Data gathered from a multi-state emissions trading program (the NOx Budget Program) are used to analyze these relationships empirically. Within this program, delegation of permit allocation responsibilities to participating states and the seasonal nature of compliance requirements generate significant spatial and temporal variation in allocation regimes and related incentives. I use this variation, together with detailed facility-level data, to identify the effects of permit allocation incentives on firms' operating decisions. Very preliminary results suggest that firms may not be responding to allocation incentives in the way that theory predicts.