

Abstract

In addition to the effect of paying for emissions, a cap-and-trade program creates an exposure to permit prices. This exposure depends on the difference between the permit allocation and the optimal emissions of the firm. Firms with an important discrepancy between the two will be more exposed to changes in permit prices. For example, a firm with an allocation higher than its emissions will receive higher positive cash inflow if the price of permits increases, whereas a firm whose emissions are higher than its allocation will have higher cash outflow if the price of permits increases. In the margin they are both paying the same for pollution but the cash flow consequences of the allocation are different. We exploit this variation in permit cash flow to identify a new channel by which cap-and-trade programs can affect firm decisions: with financial constraints, firm investment can be related to the permits cash flow. Using data from investor-owned utilities participating in the US SO₂ program, we find that for smaller firms the permit cash flow is important and is related to capital expenditures. Smaller firms with a high permit cash flow invest more than firms with a lower permit cash flow. For larger firms this effect disappears. This result is consistent with smaller firms in this industry facing financial constraints.