Taxing Carbon and Recycling the Revenue: Who Wins and Loses?

By Donald Marron, Eric Toder, and Lydia Austin

There is growing interest in taxing carbon dioxide to combat climate change and in recycling the revenues into tax cuts. Recycling options include cutting the corporate tax rate or paying an equal "dividend" to every American. A carbon tax would be regressive, imposing a larger burden, relative to income, on low-income households than on high-income ones. A $20 per ton tax would be a hit of 0.8 percent of pre-tax income for households in the bottom fifth of the income distribution, but only a 0.5 percent hit in the top fifth (panel A).

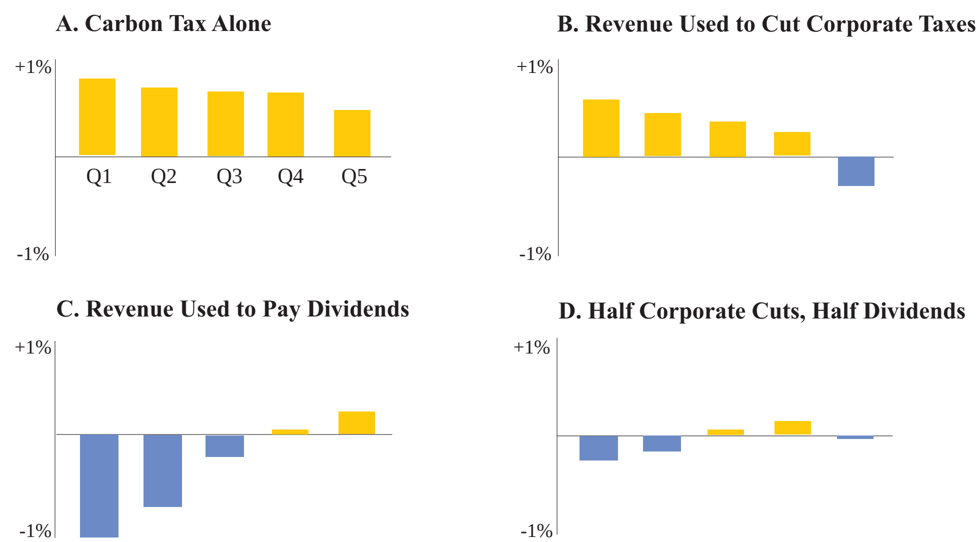
Cutting the corporate income tax would encourage domestic investment and offset some macroeconomic drag from a carbon tax. But doing so would be regressive. Using all carbon revenues to cut corporate taxes would leave households in the bottom 90 percent of the income distribution worse off — the burden from the carbon tax is larger than the gain from the corporate cut — while helping those in the top 5 percent (panel B; gains in the top 5 percent exceed losses in the next 15 percent, so the top quintile gains).

Tax and dividend, in contrast, would do little to offset the macroeconomic drag of taxing carbon but would be very progressive. Households in the bottom 60 percent of the income distribution would come out ahead, while high-income households would be worse off (panel C).

A 50-50 mix, using half of carbon revenues to cut corporate taxes and half to pay dividends, would be close to distributionally neutral. Low- and high-income households would come out slightly ahead, while those in the middle would come out slightly behind (panel D).

The Distributional Effects of Taxing Carbon and Recycling the Revenue

Net tax change as a share of pre-tax income.
Households are grouped into quintiles ranked by income from lowest (Q1) to highest (Q5).



Source: Donald Marron, Eric Toder, and Lydia Austin, "Taxing Carbon: What, Why, and How," The Urban-Brookings Tax Policy Center (2015).

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