

World's largest study shows carbon pricing reduces emissions

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There is strong evidence that carbon pricing works to strongly reduce emissions, according to the world's largest study on the issue published by researchers at The Australian National University (ANU) and

Macquarie University today.

The study examined carbon emission trends from 142 countries since the commencement of [carbon pricing](#) in the 1990s. Among the countries examined, 43 had a carbon price of some type by the end of the study period.

The study shows that countries with carbon prices on average have annual growth rates of [carbon dioxide emissions](#) from [fossil fuel combustion](#) that are about two percentage points lower than countries without a carbon price.

"On average, carbon dioxide emissions fell by two percent per year over the period 2007-2017 in countries with a carbon price and increased by three percent per year in the others," co-author Associate Professor Paul Burke said.

"This is a five percentage point difference. Our study finds that about two percentage points appear to be due to the carbon price and the remainder is attributable to other factors—including improving technologies, renewable energy policies and differences in fuel tax rates. Using a variety of estimation approaches, we have found a statistically significant link between the adoption of a carbon price and reduced growth in [carbon emissions](#)."

Study co-author Professor Frank Jotzo said the findings provided a "crystal clear" message to governments all over the world—[carbon pricing](#) must be part of their plans to reduce emissions.

"The message to governments could not be clearer: carbon pricing works, and typically to great effect. Australia's emissions from fossil fuel combustion fell during 2012-14 when the carbon pricing mechanism was in place, then rose again and flatlined to 2019."

Associate Professor Burke said, "While a well-designed approach would include complementary policies such as support for low-carbon research and development, carbon pricing should ideally be the centerpiece of any serious emissions reduction strategy in a market-oriented economy. To get on a low-carbon development model, the evidence suggests that putting a price on carbon is a highly effective way to go."

The study was also co-authored by former ANU Ph.D. researcher Dr. Rohan Best, who is now based at Macquarie University.

"Putting a price on [carbon](#) should reduce emissions, because it changes relative prices in favor of cleaner options. The economic theory is rock solid. And now we have found strong evidence that the theory works and that you can see this process in practice across many countries around the globe," Dr. Best said.

The research is published in the journal *Environmental and Resource Economics*.

More information: Rohan Best et al. Carbon Pricing Efficacy: Cross-Country Evidence, *Environmental and Resource Economics* (2020). [DOI: 10.1007/s10640-020-00436-x](#)

Provided by Australian National University

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