

## Lower greenhouse gas emissions not necessarily due to climate policy

By Tim McManan-Smith · February 18, 2025

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The global reduction in greenhouse gas emissions is due less to policy than to social, economic, and technological change, new research by Vienna University of Economics and Business (WU) has found.

Studying the greenhouse gas emissions of all countries in the Organisation for Economic Co-operation and Development (OECD) between 1995 and 2022, Jesus Crespo Cuaresma, Professor of Economics at WU, and Talis Tebecis, also of WU, discovered 7,500 "structural breaks" in emissions, or shocks in emissions that cannot be accounted for by economic, social and technological factors.

Some sectors – such as road transport – saw a large number of "structural breaks" and therefore a large change due to policy. In other areas – such as lime or cement production – were very little affected by structural breaks.

Further analysis of these structural breaks and the policies which caused them could help to identify "role model countries" or "best practice policies" based on those countries or policies with the most or largest negative structural breaks. This would then inform decision making about the most effective climate policies going forward, based on a systematic and holistic approach to measuring climate policy effectiveness.

Jesus Crespo Cuaresma, head of the WU Department of Economics, commented on what the data could do for climate policy research going forwards, "When it comes to identifying the best policies, the devil is often in the detail. That's why we go down to such a detailed level of analysis and look at 37 different sectors and all major greenhouse gases, not just CO<sub>2</sub>."

The study was published in the journal *Scientific Data*, a journal of the Nature Publishing Group.