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greenhouse gas reduction

## Influence of Austria's climate policy modest

If you add up the effects of all climate measures taken by Austrian politicians, they have reduced greenhouse gas emissions by a maximum of 2.5 percent compared to 2005 levels. This is the result of calculations by researchers at the Vienna University of Economics and Business (WU). A further analysis argues for more targeted measures.

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The recent history of greenhouse gas emissions in this country follows a flat, inverted V: From 1995 to 2005, the curve went up, reaching a historic high of 79 million tons in 2005. From then on, it went down in a bumpy line by about 20 million tons, or 26 percent, until 2023. In their figures on CO2 emissions, the two WU researchers Talis Tebecis and Jesús Crespo Cuaresma focus on emissions that are attributable to fossil fuels of all kinds, since this accounts for the majority of total greenhouse gas emissions, according to the analysis written by Tebecis.



Using a new statistical method they have developed, the two scientists aim to find out what such reductions are ultimately due to. This involves eliminating effects that are purely due to the overall economic development of the gross domestic product (GDP), the population development in a country or general technological progress, as Crespo Cuaresma explained to the APA. The effects of the Covid-19 lockdowns, with their enormous temporary reductions in the transport sector, for example, can also be eliminated using the "reverse causal analysis approach".

What remains are striking fluctuations in the emissions data, "which are most likely due to climate policy," said Tebecis in a WU press release on the method presented in the journal "Scientific Data": "These statistical outliers can often be linked to specific political measures."

Our data set can therefore serve as a basis for checking the effectiveness of climate measures."

## Inactive in comparison to other countries

When applied to Austria, their effectiveness appears extremely limited. Rather, the figures support the view that the country has largely benefited from overarching economic-technological-demographic trends or the implementation of EU guidelines - a factor that is repeatedly criticized by experts. How little greenhouse gas savings are "homemade" is shown, for example, by the fact that scientists in this country have identified only 62 statistical events between 1995 and 2021 that can be attributed to political measures: "Compared to the other EU countries, this is very few - in Germany, for example, there were 131 and in Ireland as many as 261," says Tebecis. Countries such as Israel, the USA, Hungary and Poland were similarly inactive as Austria.

According to the researchers, the "statistical breaks" found in this way - which can potentially be attributed to climate policy measures - only resulted in "a reduction in CO2 emissions of less than 2.5 percent of Austria's total annual emissions, based on the 2005 level." If you compare this with the goal of reducing domestic emissions by 48 percent by 2030 compared to 20 years ago, the targets are far below the desired values. Even if Austria were to implement all planned measures by then, it would only achieve a reduction of around 35 percent. Overall, much more needs to be done politically to bring the country to the legally binding savings target, stresses Tebecis.

## differences in economic sectors

In terms of the various economic sectors, the metal industry, which is known to have the highest emissions intensity, saw the most savings based on national or EU regulations. The team also found significant savings in refineries, biomass and waste incineration plants, and in the electronics industry. Little, however, was done in the areas of electricity and heat generation, waste water treatment, and manure management.

From this it can be deduced that more precisely coordinated measures are needed for different economic sectors in order to really drive forward the reduction. In addition, politics should primarily focus on those sectors in which the most greenhouse gases are emitted. In this country, these are the transport and transit sector, the electricity and heat industry, the production and construction sector and the housing sector.

Ultimately, it is also important to ensure that regulatory measures are not watered down or undermined by state regulations. The analysis for Austria was supported by the "eXplore!" initiative of the B&C Private Foundation.

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