Expert: Climate protection policy does not have a negative economic impact

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The benefits of strict climate policies are often underestimated in public debate, while the costs are generally overestimated, says Lucas Bretschger. Climate protection does not have a negative impact on economic development.

Climate policies will permanently affect the structures of our economies. Fossil-intensive companies and households will be required to adapt, and this will entail certain costs. The public debate is dominated by the view that consistent climate policies are "extremely expensive." However, this is a distorted perception.

As I explained in a recent article in the journal Ecological Economics, the costs are generally overestimated. In any case, an excessively narrow view of the cost argument does not help the issue. Such thinking ignores the diverse economic benefits of climate policy measures, and implicitly builds on misleading assumptions that fail to recognize fundamental economic relationships.

Benefits ignored

An assessment of climate policies should not only look at the costs, but also consider the benefits and gains that arise from the availability and application of new energies and technologies. This also includes learning effects in new markets, which offer important advantages for companies in international competition. The additional benefits in the form of positive health effects thanks to improved air quality are also quantitatively significant. Furthermore, climate policies reduce the risk of write-offs on fossil investments in the decarbonisation process.

It is also worth noting that policy can take individual cost perceptions into account: if revenue from an environmental policy is redistributed back to the population, there is almost no cost to the economy. If money flows into environmentally relevant projects, it is a useful investment. And finally, I have not addressed the primary benefit of climate policies—mitigating climate change helps us to avoid excessive damage to our planet, which after all is the international community's shared goal.

A comprehensive but correct approach to cost

A macroeconomic cost assessment of climate policies has to include a large number of effects, which undoubtedly make it more difficult to perform an accurate technical analysis. This may be the reason why simple formulas that appear to estimate the effects have become increasingly common. These include in particular the "IPAT" and "Kaya" identities—two simple equations that break down the environmental impact of an economy into multiplicative components: population, income, technology and the pollution intensity of energy. According to this logic, these four factors are the main drivers of greenhouse gas emissions.

The identities are used to argue that in the case of given values for technological progress, pollution intensity and population growth, total emissions are proportional to income development. In other words, if emissions are to fall significantly, income growth must be dramatically reduced and even slide into negative territory. What a huge price to pay!

Why are the identities so misleading? The problem is that they ignore important causal relationships, and arbitrarily emphasize certain forces while completely ignoring others. The approach contradicts the "first principles" of economics, particularly resource economics and the contributions of Paul Romer, Michael Kremer and William Nordhaus, all of whom have received the Nobel Memorial Prize in Economics.

More realistic costs

My study shows that introducing just a single additional factor to the simple identities—referred to as "input substitution"—turns the statement completely on its head, in principle making climate policies available free of charge.

However, since this extension does not fix the problem that important economic relationships are suppressed, I have replaced the identities with a theoretically consistent approach based on basic insights from production and innovation theory, thereby introducing the missing causal relationships. I use this to derive an alternative formula that is still simple, but theoretically and empirically sound.

Incomes continue to rise

As a result, having a strict climate policy slows down economic growth and income development only moderately, without pulling it into negative territory. Reduced income is therefore not necessary when it comes to achieving climate goals. This is good news for emerging economies and less developed countries in particular, as they are dependent on seeing living standards improve. And, as we know, richer countries are also concerned about not paying too much for climate protection.

More information: Lucas Bretschger, Getting the Costs of Environmental Protection Right: Why Climate Policy Is Inexpensive in the End, *Ecological Economics* (2021). DOI: 10.1016/j.ecolecon.2021.107116

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