Saving the climate with economic policy?

The nine most promising instruments of climate policy, examined at the Schwartz Center for Economic Policy Analysis at the New School for Social Research in New York

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1. CO2 taxes

If you emit a ton of CO_2, you must pay taxes: this is the oldest and simplest means of climate policy. Around 14 percent of CO_2 emissions worldwide are subject to such taxes, but mostly only mini taxes of less than ten dollars per ton. Climate effects can only be expected if you start at a minimum of $ 40/ton, amount at least doubled after an introductory phase. Sweden has been successful with this: there the CO_2 tax has been raised to $ 130 since 1991, emissions decreased by a quarter, the economy continued to grow.

Advantages: Well calculable costs and income.

Disadvantages: CO_2 taxes can be passed on to prices: companies raise their prices, in the end the consumer pays. The poorer are particularly affect, which is also politically difficult to digest. This can be easily remedied from an economic perspective. The Canadian province of British Columbia, for example, has designed a revenue-neutral CO_2 tax: when governments increase CO_2 tax, it decreases income tax. Direct repayments to citizens have been proposed also in the United States.

Cooperation effect: Downside. Without international agreements, there is a threat of a trade dispute as soon as CO_2 taxes might also levied through import taxes.

2. Emissions Trading

Emissions trading worldwide covered around 20 percent of global greenhouse gas emissions in 2019. Such systems have been set up in around 40 countries and more than 20 cities, states and provinces - from China to the world's largest implementation: in the EU.

Advantages: You can precisely control the amount of CO_2 by the number of certificates and allowances issued.

Disadvantages: The systems are complicate to manage, and the prices are volatile. In the EU, it can be seen that a number of economic sectors that produce a lot of CO_2 were immediately excluded from emissions trading, such as iron and steel and the auto industry. A result of lively lobbying - and bad for the climate.

Cooperation effect: Downside. It is difficult to connect the very different systems in many parts of the world. Theoretically, this could benefit everyone: the market would get bigger, prices would become more stable. But it would quickly become too expensive for developing countries if the price of a ton of CO_2 emissions were to converge worldwide.

3. Green bonds

More solar and wind power, climate-friendly infrastructure, more research, skilled worker and engineering training. The OECD estimates that the necessary investments for the climate transitions is from five to seven percent of the global social product, that is, at five to six trillion dollars. So-called green bonds could finance a lot of it.

They work like this: States, regions, cities, the IMF or a development bank issue bonds, and this capital is invested in climate protection. These agents can also provide guarantees for bonds from companies in the climate-friendly economy. Green bonds have been around for a long time, but they will have to become even more attractive for institutional investors such as pension funds in the future. In 2019, $ 257 billion green bonds were issued worldwide, mainly in the U.S. and Europe, and increasingly also in China. But the potential is estimated at around $ 1.5 trillion.

Advantages: Cheaper capital for everyone who implements climate-friendly projects. State support is necessary because the capital market alone has high risk premiums on climate-friendly investments, at least today. But States can afford it, and they even get some out of it, because by issuing such papers or guarantees they achieve economic policy goals: economic stimulus, for example, or promoting innovation. That would even be a particularly good export strategy for Germany. In Germany, capital cost is very low and there is a lot of know-how in green technology.

Disadvantages: If you are not careful, public debt will get out of hand

Cooperation effect: Ideal. Big incentives for cross-border investments by big investors.

4. CO2 Sinks

Forests, green roofs in the cities, artificial systems for extracting CO_2 from the air, premiums for foregoing forest deforestation: "Negative CO_2 emissions" is everything that can draw CO_2 from the air. To date, too little has been invested in this area. Here, CO_2 absorption is an important way to break an old connection: Up to now, more economic growth has almost automatically led to more CO_2 pollution. For this to really change, however, significantly more of the generated social product would have to be put into such projects.

Advantages: A report by the International Climate Council (IPCC) claims that global reforestation efforts could offset as much CO_2 as the whole of China is blowing up.

Disadvantages: Private investors are difficult to win.

Cooperation effect: Good. Many countries that are eligible for afforestation have large areas but little income. A coalition of States, multilateral organizations, foundations and commercial certificate dealers could bring benefits for all sides through international cooperation.

5. Changing habits

Wealthy and middle-income people in wealthy countries have been changing their consumer behavior for years: they are interested in goods that produce less CO_2. They travel differently, buy different cars, are interested in "local food". Partially. Research shows that this change can be promoted very effectively with little money through education or advertising. In addition, in the USA and in Europe, this consumer behavior can be controlled by influencing prices and product standards.

Advantages: Inexpensive and effective.

Disadvantages: Little control over the exact effect.

Cooperation effect: Medium. Depending on the location, consumer behavior is shaped by culture and worldview. However, if urban middle classes habits change in places that shape culture - for example in the big cities in the USA or in Europe - this also affects trends elsewhere.

6. Let central banks go

Central banks are responsible first for the stability of money and the financial system, not for climate protection. However, some central banks now fear greater financial market risks from the rise in global warming. On the one hand, humanity will eventually step out of fossil fuels. This industry would then experience a crash. On the other hand, storms, floods and large fires cause huge new costs. Large insurers are reaching their limit. Central banks may have to intervene to stabilize major weather disasters in the future. That is why some economists are now proposing that central banks make preventive investments themselves in climate-friendly activities and see this as a stability policy. Central banks are already buying government and even corporate bonds as collateral. They would just have to be rearranged.

Advantages: The central banks counteract future stability risks from climate change at an early stage.

Disadvantages: Some argue that the mandate of central banks should be as narrow as possible. If central bankers are also supposed to protect the climate, this must at least be justified: for example, as a cost-effective policy to stabilize the financial system or to control inflation if prices rise after disasters.

Cooperation effect: Medium. The idea is now being discussed internationally at central banks. ECB chief Christine Lagarde has made climate protection a priority. A network of European central banks has been set up at Banque de France to coordinate such ideas and practices, and there is a lively exchange in the USA on the subject between the Federal Reserve Bank and the central banks in the states. Today there are practical applications in Bangladesh, India, Brazil and China.

7. Spanning generations

To save the climate, today's generations would have to be burdened with high climate-related taxes and other costs - but future generations will also benefit. With the correct fiscal instruments, part of these costs can be borne by future generations. Properly designed, very long-term green bonds can achieve this goal. This principle is already known from other industries. The New York water supply is based on this. Bonds were sold there, and the capital raised was invested in the mountains near New York Lakes. If the water flows into households, fees will be charged.

Advantages: Economically it has been proven that current and future generations benefit from it.

Disadvantages: Success depends on trust in such bonds. It is important that government debt remains under control overall

Cooperation effect: Good. Successful financing of this kind can serve as a role model for other countries. Long-term green bonds can be traded internationally.

8. Integrated portfolio management

The world economy is so inter-connected that today the returns and market values of one sector are closely linked to other sectors. Stock market values from the manufacturing sector are particularly strongly linked to the development in the fossil energy industry, which in turn depends on the oil price. If oil multinationals win, the rest of the industry often loses. This is a problem for portfolio managers and hedge funds who want to reduce the overall risk of the investments they manage. But climate protection can help. Economic activities based on renewable energies remove dependency: the development of securities from these sectors is more "de-coupled" from the fossil energy industry and sometimes move to the opposite direction. Therefore, green bonds can play a larger role in portfolios and achieve a more balanced mix there. Based on this knowledge, an own experimental fund was even set up at the University of Munich.

Advantages: Very market-compliant solution.

Disadvantages: So far, green securities have had rather low returns. This limits their use in portfolios.

Contagion potential: The more such instruments are used, the greater the demand for green bonds and the more liquid the market.

9. Green wealth taxes

Higher wealth taxes are currently being discussed in many countries, including in the current US pre-election campaign. In these times of rapid capital accumulation and large inheritances, many economists consider them essential to guarantee a social cohesion. However, a climate component could be built in here: higher wealth taxes and inheritance taxes on assets and industries that are harmful to the climate - i.e. oil production facilities, CO_2-intensive production, energy-inefficient buildings, and so on. Conversely, the taxes could be waived from wealth for the provision and use of renewable energies.

Advantages: Those who have a large fortune can choose in the future. Either he/she pays higher taxes - or he/she reallocates assets so that his assets benefit the climate.

Disadvantages: There will be avoidance strategies.

Cooperation effect: So far lack of success. International types of capital can withdraw certain types of assets. So higher wealth taxation requires more international tax cooperation and a fight against tax heavens. Only a few successes have been achieved recently.

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