Opinion: Climate change solutions require collaboration between politicians, scientists and entrepreneurs

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Most Canadians agree something should be done about climate change. Yet, even though there is tremendous pressure on politicians to *do*

something, widespread discontent usually follows whatever action they may take.

How can governments balance the desire for climate action with the usual discontent that follows any major climate regulation? Looking to the past reveals key insights.

Half a century ago, the depletion of planetary natural resources was also a major concern, alongside the perceived implications this would have for economic growth.

Indeed in 1990, the biologist Paul Ehrlich lost his famous bet against economist Julian Simon when he predicted ten years earlier that prices of raw materials would increase over the long-term due to limited supply and increased demand. This outcome did not come to pass.

At the same time, the reverberations of the government-supported work of biologist Norman Borlaug, who helped usher in the Green Revolution, were still being felt.

Simply put, gloomy Malthusian predictions of population collapse overlooked arguably more fundamental factors of human ingenuity and technological innovation—perhaps because their impact is so hard to predict and quantify.

While natural resources may be limited (and the ecosystems we rely upon are fragile), alternative sources of energy can be perfected and new cultivation methods can be invented. Governments should remember the work of Borlaug and the insights it provides into promoting innovation when looking to address the climate crisis.

Taxing carbon

Concern about climate change caused by greenhouse gas emissions has grown exponentially since Simon and Ehrlich first made their wager in 1980. So much so that the 2023 United Nations Climate Change Conference (COP28) ended with a statement of intent and pledges to move away from fossil fuels and reduce carbon emissions.

One commonly discussed mechanism to do so are carbon pricing schemes, or a carbon tax.

It is generally accepted among economists that carbon pricing schemes such as taxing pollution, subsidizing reductions in pollution, or establishing markets for emission rights, would help reduce emissions. These schemes can easily be justified on the basis that emissions are a textbook example of an "externality," or a side effect of some economic activity on third parties.

Would such a move be effective, though? The available evidence shows that carbon taxes set at reasonable levels have a limited to sometimes insignificant effect on individual behavior, although there are variations across sectors and countries.

This limited effectiveness, and the fact that Canada only accounts for 1.5 percent of global greenhouse gas emissions, suggests the planned massive increase of this tax by the Canadian federal government would have a very limited effect on global carbon emissions. It might also increase inequalities across the population, as some households will be more impacted.

Moreover, substantial increases in carbon taxes to account for the social cost of externalities can permanently antagonize a fraction of the population with regards to climate policies, and even trigger popular protests.

A planned increase in gasoline taxation triggered the widespread "gilets jaunes" protests that paralyzed France for months. The current context is perhaps even more explosive due to high levels of inflation and rising housing costs paired with higher interest rates.

Considering this delicate political balance, it is perhaps not surprising that governments often make bold claims about the importance of mitigating climate change without actually doing much.

When they take action, as Justin Trudeau's government did, they are criticized about the negative consequences for the energy sector, public finances and the division of power between federal and provincial governments. In the end, their decisions may also depend on electoral considerations.

What shall they do? Wise politicians should remember the power of their words and set up proper incentives and infrastructure for the adoption of new technologies. By shaping the public discourse and hinting at future policies, they can direct the attention of scientists and entrepreneurs to specific issues who are better placed to find solutions to environmental problems.

Simply put, the limits of political possibility mean governments can only do so much. It is essential that governments use their power to not just regulate, but incentivize innovation.

Promoting innovation

In the next few years, the advancements could be the widespread adoption of solar power, nuclear power, carbon capture and electric cars. In a few decades, it could be nuclear fusion, some type of geo-engineering, space-based solar power or another technology unimaginable today. At least if the electric grid is updated accordingly.

This is something that governments can either hinder or facilitate. Other useful measures include investing in scientific research, as well as science, engineering and business education, and ensuring innovative firms can receive financing by cultivating a well-developed financial sector.

Likewise, mechanisms such as carbon taxation may be useful not primarily because of their direct effects on carbon emissions, which are limited, but rather because the signals that they send will spur technological innovation and the phasing-out of existing technologies. Through their words and actions, governments can help shape the direction of technological innovation.

To fight climate change and other challenges, the world needs space and support for scientists who will revolutionize the technological environment and more entrepreneurs and financiers to help these technologies reach their full potential.

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