

Term Paper

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Making the political economic case for significant carbon pricing

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Introduction

As a consequence of anthropogenic climate change, the global surface temperature has increased by 1.2°C compared to pre-industrial levels (IPCC, 2021). In the Paris Agreement, 200 countries agreed to limit global warming to “well below 2°C pre-industrial levels and to pursue efforts to limit temperature increase to 1.5°C” (High-Level Commission on Carbon Prices, 2017). However, according to the IPCC, the global surface temperature is expected to continually increase until 2050 at the very minimum (IPCC, 2021). Moreover, if CO₂ emissions are not drastically reduced during the next few decades, global warming will exceed 1.5°C and then 2°C before the end of this century (IPCC, 2021). Hence, severe policy interventions will be necessary in order to limit global warming to 1.5°C (Rogelj, Shindell, Jiang, Fifita, Forster, Ginzburg, Handa, Kheshgi, Kobayashi, Kriegler, Mundaca, Séférian, and Vilariño, 2018). One such policy intervention is carbon pricing (Rogelj et.al., 2018). Carbon pricing can be done in two different ways: through carbon taxation or through a cap-and-trade system (Haites, 2018; Rogelj et.al., 2018). This paper is mainly concerned with carbon taxation, which involves the government deciding on which activities should be subject to a carbon tax and how high that tax ought to be (Haites, 2018).

In the following sections, I will make the case for a significant carbon pricing system which encompasses all forms of carbon emissions. Firstly, drawing on the IPCC 2018 special report, I argue that carbon pricing will be necessary in order to ensure cost-effective 1.5°C pathways (Rogelj et.al., 2018). Secondly, I argue that implementing a carbon tax has the benefit of generating revenue which could then be used to serve broader social goals (Carl & Fedor, 2016). Thirdly, I argue that in order for the carbon tax to be effective, it would need to be relatively high, much higher than it currently is (Haites, 2018; Ripple, Wolf, Newsome, Gregg, Lenton, Palomo, Eikelboom, Law, Huq, Duffy, & Rockström, 2021). Fourthly, I argue that the carbon tax would need to encompass all forms of emissions, and that subsidies would need to be removed. Based on the prior arguments, I conclude that an extensive carbon pricing system which encompasses all forms of emissions and involves a significant carbon tax would be conducive to facilitating a cost-effective pathway towards achieving the goals laid out in the Paris agreement.

Main section

The main reason for putting a price on carbon emissions has to do with cost-effectiveness. According to the High-Level Commission on Carbon Prices, carbon pricing is the most cost-effective regulatory approach to reduce GHG-emissions (High-Level Commission on Carbon Prices, 2017). In a similar vein, the IPCC special report from 2018 declares that carbon pricing will be necessary in order to achieve cost-effective 1.5°C pathways (Rogelj et.al., 2018). By making it more expensive to pollute, carbon prices disincentivizes economic activities which involve significant quantities of carbon emissions, while it incentivizes sustainable economic activities (High-Level Commission on Carbon Prices, 2017). More specifically, carbon pricing would make carbon heavy investment, production, and consumption more costly. This would in turn incentivize investors, producers, and consumers to make more sustainable economic choices (High-Level Commission on Carbon Prices, 2017). For instance, a carbon tax is likely to induce the implementation of energy efficiency measures, as well as a switch to less emission-intensive fuels and products (Haites, 2018).

Secondly, a carbon tax would generate tax revenue which could be used by the government to serve broader social goals. For instance, the tax would likely lead to higher energy costs. In order to offset the macroeconomic impacts of higher energy costs, the revenue could simply be refunded to businesses and individuals in the form of tax cuts or rebates (Carl & Fedor, 2016). This could be done by means of mailing citizens and corporations flat checks, as is the case in Switzerland (Carl & Fedor, 2016). Alternatively, the revenue could be used to support low-income families who would be particularly vulnerable to higher energy costs (Carl & Fedor, 2016). Additionally, the revenue could be used on green public investments, such as subsidizing renewable energy, subsidizing energy efficiency, and climate adaption strategies, thereby facilitating a switch to a greener economy (Carl & Fedor, 2016).

Thirdly, the carbon price would need to be relatively high in order to be effective. Up until now, carbon taxes have had limited effects. Studies looking at European countries who have implemented a carbon tax tend to find that the carbon tax only contributed to incremental reductions in GHG-emissions when compared to business as usual. Furthermore, the overall GHG-emissions in these countries actually continued to rise (Haites, 2018). This reflects the relatively inelastic demand in the sectors where the carbon tax was implemented (Haites, 2018). According to the High-Level Commission on Carbon Prices, the carbon price would need to be at least US\$40-80/tCO₂ by 2020 and US\$50-100/tCO₂ by 2030 in order to be consistent with limiting global warming to well below 2°C (High-Level Commission on

Carbon Prices, 2017). Limiting global warming to 2°C could indeed be done with a lower carbon price in the near future, but it would require other policies and/or higher carbon prices later. Consequently, a higher carbon price would likely make for a more cost-effective pathway towards limiting global warming to 2°C (High-Level Commission on Carbon Prices, 2017). Despite this, as of 2020, the average price per tonne of carbon dioxide was relatively low, sitting at US\$15.49 (Ripple et.al., 2021). Thus, the carbon price would need to be increased manifold in order to be an effective tool for reducing carbon emissions (Ripple et.al., 2021).

Fourthly, the carbon pricing system would need to encompass all forms of emissions in order to be as effective as possible. The limited effects that carbon taxes have had up until now could also be attributed to extensive tax exemptions and tax reductions for emission intensive trade exposed industries (Haites, 2018). As of 2020, there was a total of 61 different carbon pricing initiatives, 31 of which were ETS and 30 of which were carbon taxes. In total, these different carbon pricing initiatives only covered 22% of GHG-emissions (World Bank, 2020). Furthermore, as of 2020, the world spent US\$181 billion on fossil fuel subsidies (Ripple et.al., 2021). Such subsidies effectively function as negative carbon pricing by rewarding the very activities which a carbon price is meant to disincentivize (High-Level Commission on Carbon Prices, 2017). Consequently, subsidies are likely to inhibit the desired adjustments (Haites, 2018). Giving extensive tax exemptions, tax reductions, and subsidies to carbon heavy industries defeats the very purpose of having a carbon tax to begin with. As such, fossil fuel subsidies need to be removed and the carbon pricing system needs to be expanded to include all forms of emissions.

Conclusion

Constructing a system in which only a small minority of emissions are subject to carbon pricing, where the carbon price is relatively low, and in which fossil fuels are subsidized by hundreds of billions of dollars is simply not conducive to reducing carbon emissions. It might be easier to muster the political will to implement a carbon pricing system which is not too extensive, where the prices are low, and where certain industries are protected. However, this would undermine the very point of implementing a carbon price in the first place. If a carbon price is to be an effective tool for disincentivizing economic activities that are harmful to the climate, then it must necessarily hurt to emit large quantities of GHG-emissions. Protecting

certain industries from carbon pricing would simply allow them to carry on with business as usual and would not provide any incentives for them to change towards more sustainable forms of production. Similarly, if consumer goods are not subject to a carbon price, then the consumers have no economic incentive to consume in a more sustainable way. Thus, if we are to use a carbon pricing system, then the pricing system needs to be extensive, and the price needs to increase drastically in order for the incentives to be effective. The ideal solution would be removing all fossil fuel subsidies, introducing an extensive carbon pricing system which encompasses all forms of emissions, and using the tax revenue that is generated from the carbon tax on offsetting the worst macroeconomic impacts of the resulting increase in higher energy prices, as well as making public investment in green sectors. In this way, an extensive carbon pricing system, including a high carbon tax, would be conducive to facilitating a cost-effective pathway towards achieving the goals laid out in the Paris agreement.

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