ANALYSIS OF SUCCESS ELEMENTS AND CHALLENGES IN THE IMPLEMENTATION OF CARBON PRICING INSTRUMENTS IN THREE COUNTRIES

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Background

The ongoing climate crisis the world is facing has led to the development of different strategies to mitigate climate change and reduce CO_2 emissions. Carbon pricing initiatives have been part of these strategies. Carbon pricing is an instrument that captures external costs of emissions and ties them to the source through a direct price. Carbon taxing and Emissions Trading Systems (ETS) are the most popular carbon pricing instruments used by governments and can be implemented on different scales. There are 70 carbon pricing initiatives implemented worldwide, covering 23% of global GHG emissions. Even though extensive resources exist to understand these instruments, it is hard to define which initiative works best for a country. The initiative selected will depend on the context and objectives related to each case. In addition to designing a carbon pricing scheme, it is important to examine the social, political, and economic reasons why some countries have successfully implemented it while others have not. By understanding the factors, we can learn from those examples and improve future efforts.
This paper analyzes the implementation of carbon taxes and ETS in three different jurisdictions with the intention of identifying key elements that lead to success and challenges.

Research Question

What explains the successful implementation of carbon pricing instruments in the countries where they were implemented? What explains the failure of these in countries where implementation was attempted but failed?

Methodology

This research paper followed the structure of a systematic literature review. The jurisdictions selected were Sweden, The United States, and Mexico since they have different approaches and instruments to compare. Sweden was one of the first countries to implement a carbon tax that is still in place and has reduced its emissions since its adoption. It is also part of the European Emissions Trading System (EU ETS). The United States has implemented local carbon pricing in California and some Northeastern states and has attempted to implement a national carbon price instrument. Mexico has a tax on the sale and import of fossil fuels and is currently implementing an ETS.

The research was conducted using topics such as the background of carbon pricing, mechanics of the policy tool, key elements for implementation, challenges of the implementation, and opinions about the policy instrument, among others. The framework used to compare the three case studies was inspired by three different papers found in the literature: Haites (2018), Narassimhan et al. (2018), and Khan and Johansson (2022). These three articles compared carbon pricing mechanisms considering different aspects.

The findings were compared using the categories of political elements, economic elements, social elements, business factors, international elements, and strategy and design.

Results

A successful implementation strategy of carbon pricing policies should:

1. Consider the political and economic environment in which the policy will be implemented.
2. Consider learnings from the implementation in other jurisdictions and use external consulting.
3. If possible, take advantage of general tax reform.
4. Involve key industries and individuals in the design of the policy.
5. Develop a comprehensive revenue allocation scheme.
6. Incorporate a strategy to adjust the carbon price gradually.

	Political Elements	Economic Elements	Social Elements	Strategic Elements
SWEDEN GDP: $ 636 bn GHG emissions: 41 $MtCO_2e$ Coverage of carbon pricing: 40%	– Country with low corruption that facilitated the carbon tax implementation. – Administration changes have not affected the tax.	– High-tax country – Importer of fossil fuel, no internal production. – Concerns about carbon leakage and capital investment flight.	– Society with high environmental awareness. – Citizens trust their government. – Some concerns about how the tax might affect consumers.	– Carbon tax presented in major tax reform. – High-emitting industries exempted. – Tax has increased over time, currently the highest in the world.
US GDP: $ 23 tn GHG emissions: 5,168 $MtCO_2e$ Coverage of carbon pricing: N/A	– Politically polarized country. – Democratic party has sent most of the carbon pricing initiatives. – International pressure to introduce more stringent policies to achieve reduction commitments.	– Capitalist par excellence country. – Aversion to introduce carbon pricing due to its economic effects. – Strong dependence on fossil fuels.	– Citizens are tax-averse. – Concern that carbon pricing will reduce fossil fuel production, causing job losses. – People have well-received existing regional policies due to their local environmental consciousness.	– The Regional Greenhouse Gas Initiative was introduced in states with successful performance in similar policies. – California Cap-and-Trade has gradually reduced the cap to allow stakeholders to adjust.
Mexico GDP: $ 127 bn GHG emissions: 444 $MtCO_2e$ Coverage of carbon pricing: 44%	– Current administration is changing policies regarding renewable energy. – Mexico's carbon tax was introduced before setting reduction targets, following international trends.	– First developing country to adopt carbon pricing. – Oil and gas sector is critical, with interest groups that are not in favor of the carbon tax. – Concern about the lack of expertise to manage ETS.	– Overall opportunity in the communication with all stakeholders. – Opportunity to better inform communities in carbon offsets projects about their rights.	- Carbon tax presented as part of a tax reform. - Opportunity to increase the value of the carbon tax. - Mexico's ETS was introduced in phases, using the expertise of international consultants.

Conclusions

Economic and political elements, such as the political environment, industry alignment, relevance of high-emitting economic sectors, and international influence, were identified as the most crucial for successfully implementing carbon pricing policies. Social factors such as environmental consciousness among the population and general opinion about taxes can also determine the success or failure of carbon pricing initiatives. Specifically, the successful implementation of the carbon tax in Sweden can be attributed to factors such as political stability, their general taxation system, and the population's environmental consciousness. Mexico's effective implementation of carbon pricing policies can be attributed to its adoption of international best practices and trends. On the other hand, the United States' inability to establish a national carbon pricing system can be directly linked to the country's political polarization and public opinion towards taxation. These three jurisdictions show diverse situations that affected policy implementation and that policymakers should study in their attempts to introduce carbon pricing policies, specifically carbon taxes and ETS.

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