The Coalition of Finance Ministers for Climate Action

Facilitating socially responsible carbon pricing policies: the global Carbon Pricing Incidence Calculator (CPIC)

Environment for Development Initiative

A contribution to the 'Compendium of Practice from a Global Community of Ministries of Finance and Leading Organizations: Economic analysis and modeling tools to assist Ministries of Finance in driving green and resilient transitions'

Topic: Modeling tools relevant to Ministries of Finance

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Access the full Compendium at www.greenandresilienteconomics.org

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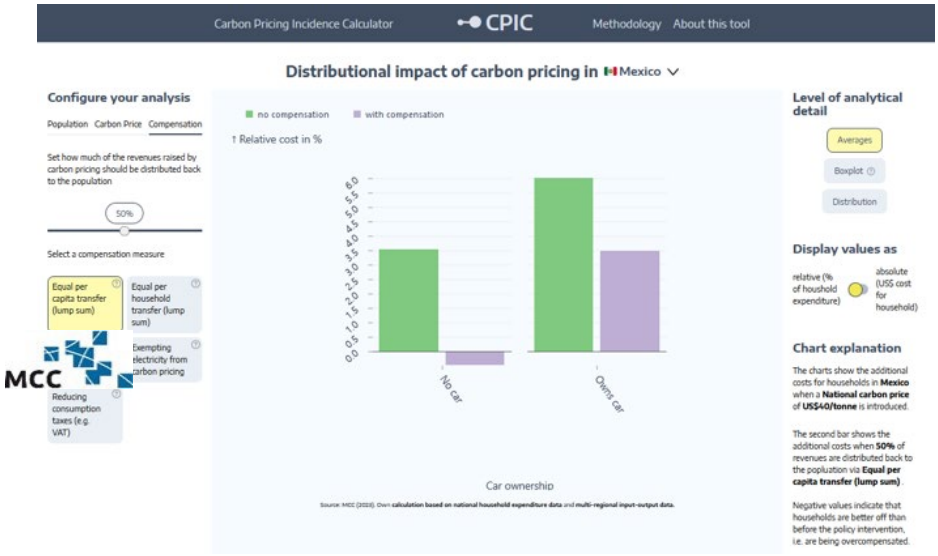
About the tool

The Carbon Pricing Incidence Calculator (CPIC) is an interactive web tool that allows the vertical and horizontal distributional consequences of carbon pricing and various compensation measures to be explored, currently for 88 countries. The tool calculates the additional costs to households after a carbon price is introduced, i.e., the carbon pricing incidence.

The CPIC is designed to provide insights for a broader policy dialogue on the design and implementation of carbon pricing schemes. It helps to facilitate a deliberative policy dialogue to make resulting policies politically and socially acceptable. It targets a broad audience of societal stakeholders, including policymakers, civil society, and media in an accessible manner. By supplementing policy analysis, the CPIC can help address socially unbalanced outcomes of carbon pricing. It can be used to explore different carbon pricing scenarios and stylized redistribution mechanisms and to compare the distribution of additional costs in or between different groups of the population in the selected country.

Methodology and policy process

Figure 1. The global Carbon Pricing Incidence Calculator (CPIC) (Version 1.0)



Source: Steckel, J., Missbach, L., and Schiefer, T. (2023). http://www.cpic-global.net

The CPIC is based on a large body of peer-reviewed literature and uses a robust methodology that combines country-level household budget surveys and multi-regional input-output data (GTAP).[1] At the time of writing, the tool features household data from around 1.5 million households in 88 countries.

The interactive tool was developed in an iterative process with MoFs and other relevant stakeholders in multiple pilot countries, including Mexico and Uganda, and supported by the German Development Cooperation (GIZ). Staff were trained to use the CPIC, enabling them to produce ad hoc results and evaluate stylized scenarios, facilitating inter- and intra-ministry dialogue, and helping governments to take informed decisions. Further, the underlying data can be used to conduct more detailed country-specific analysis of various carbon pricing schemes and compensation measures. Besides its use in the policy process, the CPIC enables civil society to have access to information on distributional

1 GTAP, Global Trade Analysis Project. Find the full description of the methodology and related publications at www.cpic-global.net/methodology

impacts of carbon pricing in an accessible manner and can therefore support a rational, fact-based discourse.