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Title: Poverty and Distributional Effects of Carbon Pricing in Low- and Middle-Income Countries
– a Global Comparative Analysis

We present the (to our knowledge) first consistent cross-country analysis of the income effects of carbon pricing and their possible drivers. Carbon pricing has been recognized as an efficient means to mitigate climate change and to raise public revenues to finance sustainable development. Even though concerns about adverse distributional implications for the poor are one of the most important political challenges for carbon pricing, the existing literature reveals ambiguous results. We assess the expected incidence of carbon pricing in 87 mostly low- and middle-income countries, building on a consistent dataset and method which combines household expenditure with energy-extended input-output data. Furthermore, we identify possible drivers behind different distributional outcomes. Our results show that for countries with per-capita incomes of below USD 10,000 per year (at PPP-adjusted 2011 USD) carbon pricing is, on average, progressive and entails modest income effects for the poor. We also develop two novel decomposition techniques to show, first, that the absolute burden on the lowest income group crucially depends on a country’s carbon intensity, less on specific consumption patterns, and, second, that distributional outcomes are primarily determined by this group’s expenditure share on energy, rather than on food, goods, or services. Finally, we argue that an inverse U-shape relationship between energy expenditure shares and income explains why carbon pricing is more likely to be regressive in countries with higher income. These findings have important policy implications: since higher-income countries have more capacities to redistribute, mitigating climate change, reducing economic inequality, and raising domestic revenue are not mutually exclusive, even in low- and middle-income countries.