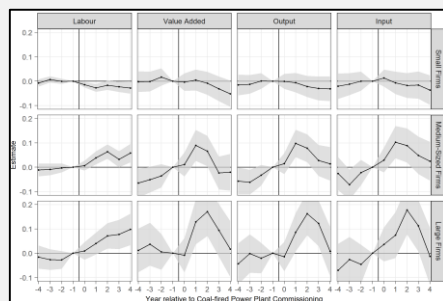


How can we reconcile effective climate policy and economic development?

It is challenging.

Burning coal promoted industrial development in Indonesia.

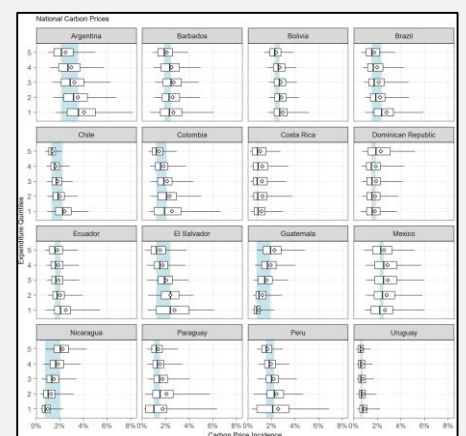
- How do coal-fired power plants affect industrial development?
- I combine **firm-level manufacturing data** with geospatial information on scheduled and installed power plant capacity
- I use a stacked difference-in-difference approach
- Identification rests on quasi-exogenous timing of power plant commissioning
- I find **heterogeneous effects** for different firms
- Coal-fired power plants have benefitted mostly **large firms**



- In Indonesia, coal propelled industrial development.
- Complementary industrial policy required for phasing out coal globally.

Climate policy entails distributional consequences.

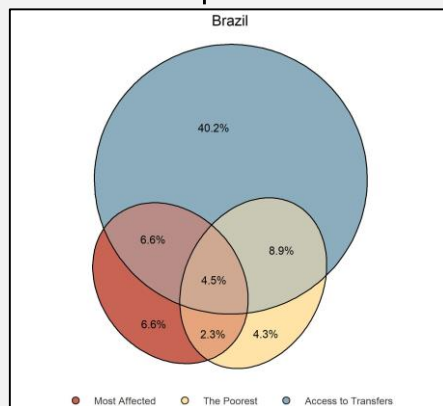
- Climate policy affects different consumers differently
- I combine **household-level expenditure data** with **multi-regional input-output data** to calculate the **carbon intensity of consumption** for 1,5M households in 80+ countries
- I use statistical methods to analyze household characteristics associated to higher levels of carbon intensity of consumption
- Identification of households with carbon-intensive consumption can help to design complementary **transfer schemes**



→ Addressing distributional consequences can increase **public acceptance** of climate policy.

Existing transfer schemes cannot help to compensate all households with carbon-intensive consumption.

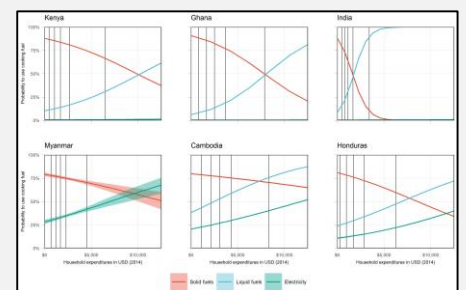
- Frequent call to utilize existing transfer schemes to compensate households for climate policy
- I analyze household-level **income and consumption** data for 16 countries in Latin America
- I use statistical methods to analyze which households would be heavily affected by carbon pricing, but **lack access** to existing transfer schemes
- Access gaps can affect millions of households
- I compile alternative, country-specific options to reimburse households



→ Climate policy which is efficient and fair requires sound institutional capacities.

Taxing fossil fuels can increase hazardous consumption of firewood and charcoal.

- Carbon pricing increases the price for fossil fuels and electricity
- In response, households may consume (untaxed) **biomass for cooking**
- Consuming biomass has **severe impacts** on health, productivity, education and sustainable land use
- We estimate **price elasticities of demand** for cooking fuels in six low- and middle-income countries
- We use household-level expenditure data
- We find **substitution** from fossil fuels towards biomass



→ **Supplementary policies** might be warranted, i.e., providing access to clean fuels and technologies, subsidizing basic amounts of LPG, sustainable forestry programs, information campaigns,...

- Decarbonizing energy systems in industrializing economies requires **complementing industrial policies**
- Sustaining public acceptance for implementing climate policy requires **addressing distributional concerns**
 - Compensate households for losses.
 - Potentially target households with high carbon intensity.
 - Address potentially occurring side effects.