

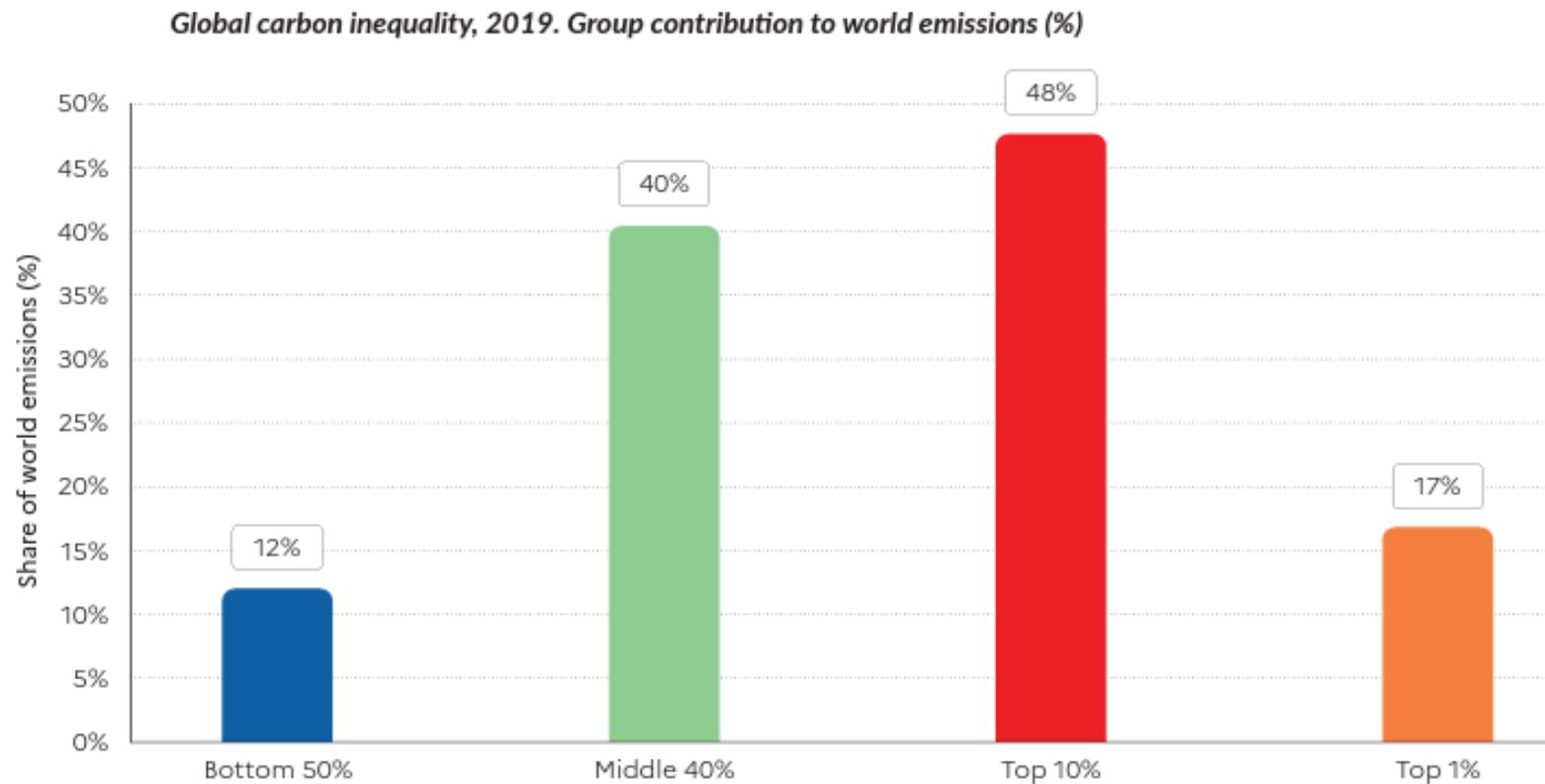
Economic and Social Analysis of Distributional Effects of Fossil Fuel Subsidies

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Inequality in emissions

World Inequality Report 2022



In Search For a Triple Win

Road to clean energy transition, reduced inequality, and alleviated poverty

Assessment of policies in 30 countries in 4 key sectors of energy production and use (buildings, mobility, power, and resource extraction) adopted during COVID-19 period in 2020-2021 (IISD, 2022)

3 policy categories at risk of increasing inequality while likely reducing poverty:



Airline bailouts



Subsidies to the EV purchases



Government support for energy-efficient retrofits in private housing

Fossil fuel subsidy impact over time (1)

Short-, medium- and long-term effects might differ

Production subsidies:

- Short-term increased energy security and employment
- Long-term: increased pollution impact on lower income groups, locked-in high-carbon pathway, hampered economic diversification efforts
- Growing inequality: production concentrated in certain regions, income mostly benefits the executives
- Some changes in subsidy forms during COVID-19

- However: cleaning-up old mines can reduce the risk of pollution, thus reducing poverty and creating economic opportunity



Fossil fuel subsidy impact over time (2)

Short-, medium- and long-term effects might differ

Consumption subsidies:

- Immediate relief for the households through temporary energy price reduction
- Increased long-term vulnerability to energy price shocks, incentivizing energy-intensive behaviour patterns
- Highly inequality-increasing
- Removal of such subsidies needs complementary policies to mitigate adverse short-term social effects



Beneficiaries of fuel subsidies

Unintended effect of government support

- Revision of 35 IMF and WB country studies (IMF, 2015)
- Cost of transferring \$1 to the poorest 40% via gasoline subsidies is about \$14
- 93% of gasoline subsidy “leaks” to the top 60%
- Top 20% of households get **six times** the benefit from subsidies as the bottom 20%
- Subsidies might be inaccessible to the lowest-income groups



Substantial leakage of subsidy benefits to the top income groups means that universal fuel subsidies are an extremely costly approach to protecting the welfare of poor households

Subsidy maps across the populations

Survey data from some states in India



- **Electricity:** the poorest 20% spent 12.8% income, the richest 20% only 3.7%.
~60% of subsidy benefits went to 40% richest households (Jharkhand - 2020)
- **Agricultural electricity subsidies:** the wealthiest farmers received 50%, the poorest farmers 30% (Haryana - 2022)
- **Liquified petroleum gas (LPG):** the richest 40% received 2/3 of government support (Jharkhand - 2021)
- **LPG subsidies** improved cleaner energy access for poor women – yet half of them got none due to continued use of biomass (Jharkhand - 2019)

Targeting the vulnerable

Energy consumption and expenditure patterns in Bangladesh



- **Energy products** consumption patterns:
 - Poor, low-middle income agricultural households: kerosene (irrigation), electricity
 - Rich, upper-middle, non-agricultural households: electricity, natural gas
- **Transport** expenditures for fuel consumption:
 - Predominant use of public transport by poor households and a significant share of other households
 - Private transport almost never used by poor households, yet constitutes 28-41% of transport expenditures for other households
- **Kerosene** consumption:
 - High price sensitivity for almost half of households
 - Price increase would impact men's incomes more than women's
 - Women are significantly more exposed to indoor air pollution due to kerosene use

Design considerations for better policies

Some questions about the subsidy design



- What is the principal objective of the program?
- What are the fuel consumption patterns among the populations and production sectors?
- What is the best way to target poor or vulnerable population?
- Can the program encourage rather than discourage a green transition?
- What is the reasonable review period for the program? What is the overall length?
- What could be the short-, medium- and long-term outcomes of the program?
- What is the broader policy context?

Thank You!

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