

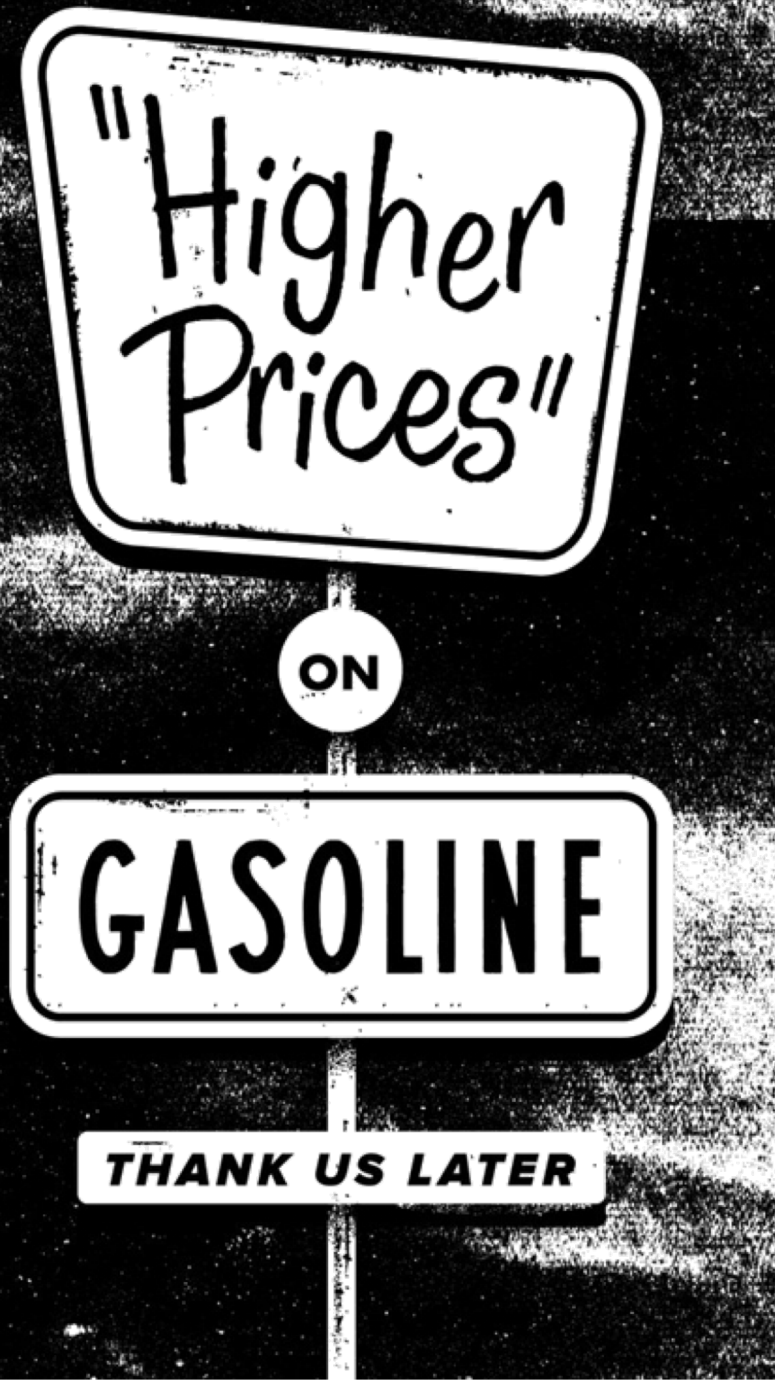
# Managing the impacts of energy price hikes on poor and middle-class households

The role of social protection

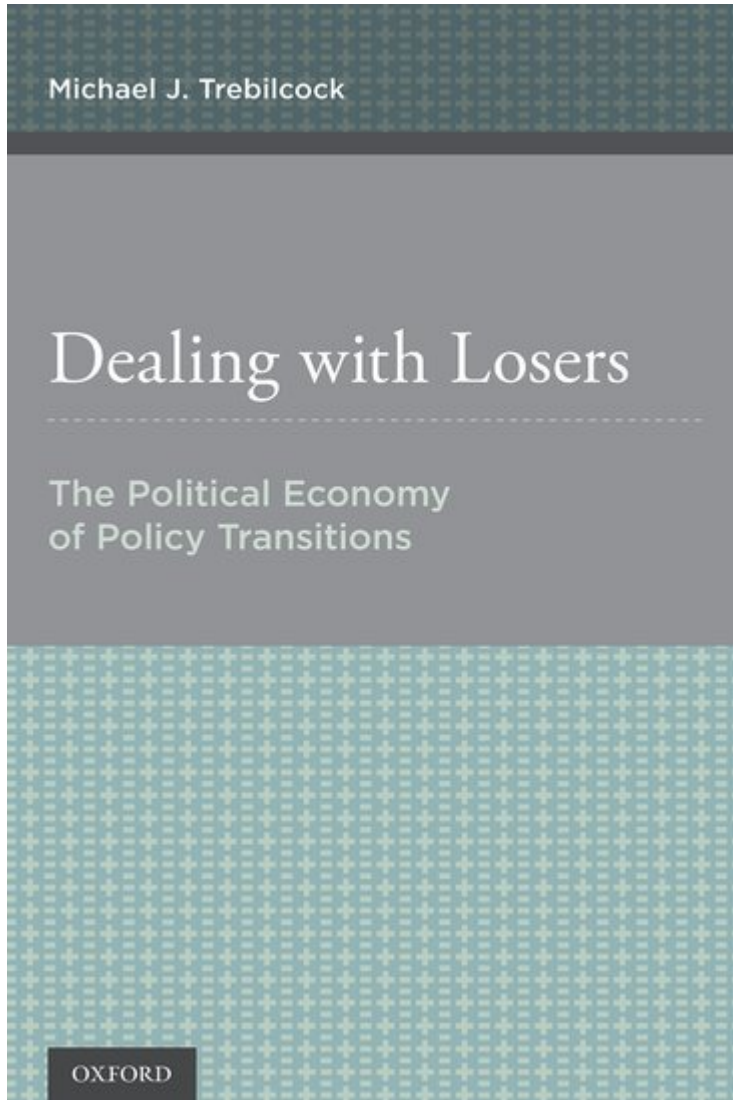
Adrien Vogt-Schilb

Climate Change Economist

[avogtschilb@iadb.org](mailto:avogtschilb@iadb.org)



# Ambitious policy reform requires taking care of the **political economy**



*The UK Slavery Abolition Act of 1833 paid 20 million pounds in compensation to plantation owners in British Colonies*

*about \$21 billion in present day value and almost 40 percent of the British budget at the time*

# Calls for carbon pricing...

*The carbon price consistent with achieving the **Paris Agreement** is at least **US\$40–80/tCO<sub>2</sub> by 2020** and **US\$50–100/tCO<sub>2</sub> by 2030**, provided a supportive policy environment is in place.*



Stiglitz, Joseph, and Nicholas Stern. 2017. *Report of the High-Level Commission on Carbon Prices*. Washington: World Bank Group: Carbon Pricing Leadership Coalition.

# ... and fossil fuel subsidy reform

- *Direct fossil fuel subsidies amounted to **\$330 billion** in 2015.*
- *Defined broadly to include undercharging for environmental costs and general taxes subsidies totalled **\$5.3 trillion** in 2015 (6.5% of global GDP)*
- *Removing broadly defined subsidies would:*
  - *Reduce global CO<sub>2</sub> emissions 21%*
  - *Reduce Air-pollution deaths 55%*
  - *Raise government revenues 4%.*



# However, the impact of energy price hikes on consumers can be problematic

Problem:



People price themselves out of energy products.

Problem because:

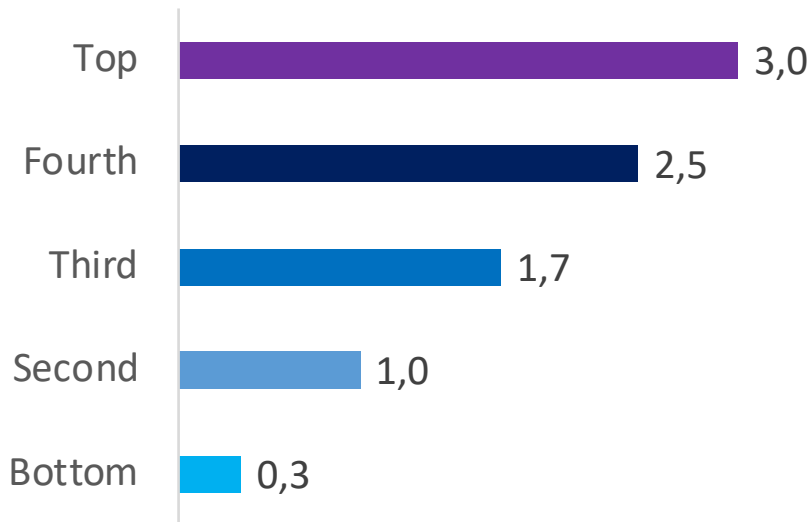
- It is a policy objective to protect **poor and vulnerable households**
- Consumers, especially the middle class, are **voters**

The background image shows a protest scene with numerous signs. Visible signs include "CARBON TAX REALLY", "NO CARBON TAX", "LIAR NO CARBON", "CUT FOREIGN AID GET OUT", "MY MOM IS", "THE CO2 GIG", "NO MORE", "JULIA", "NO CARBON TAX", "NO MANDATE NO CARBON TAX", "NO CARBON TAX", "Australian families can't afford it, Julia.", and "JULIA BILLARD". There are also yellow umbrellas in the foreground.

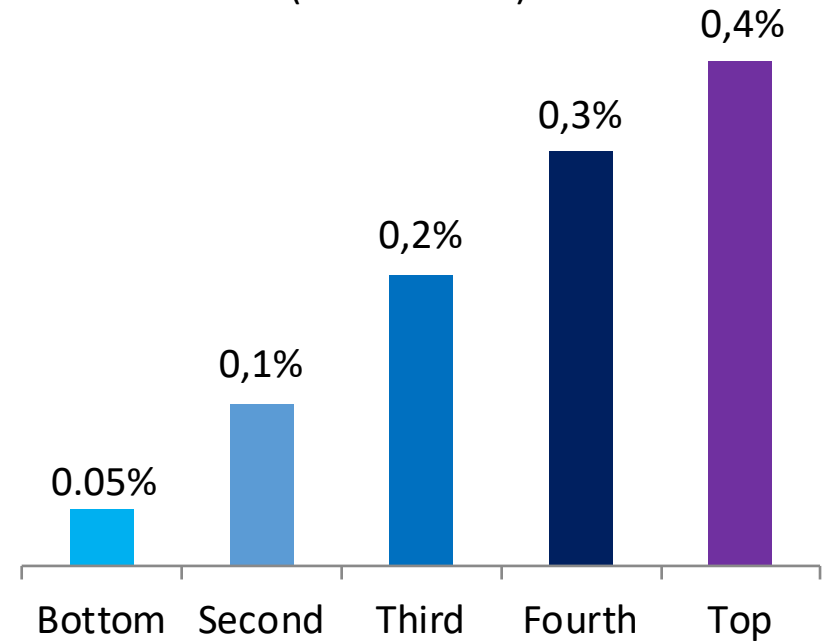
Are energy price hikes  
progressive or regressive?

# Chilean example: it may *seem* at first that gasoline price hikes are *progressive*...

Current spending on gasoline and diesel  
(% of income)



Cost of a 25c/L increase in gasoline prices  
(% of income)



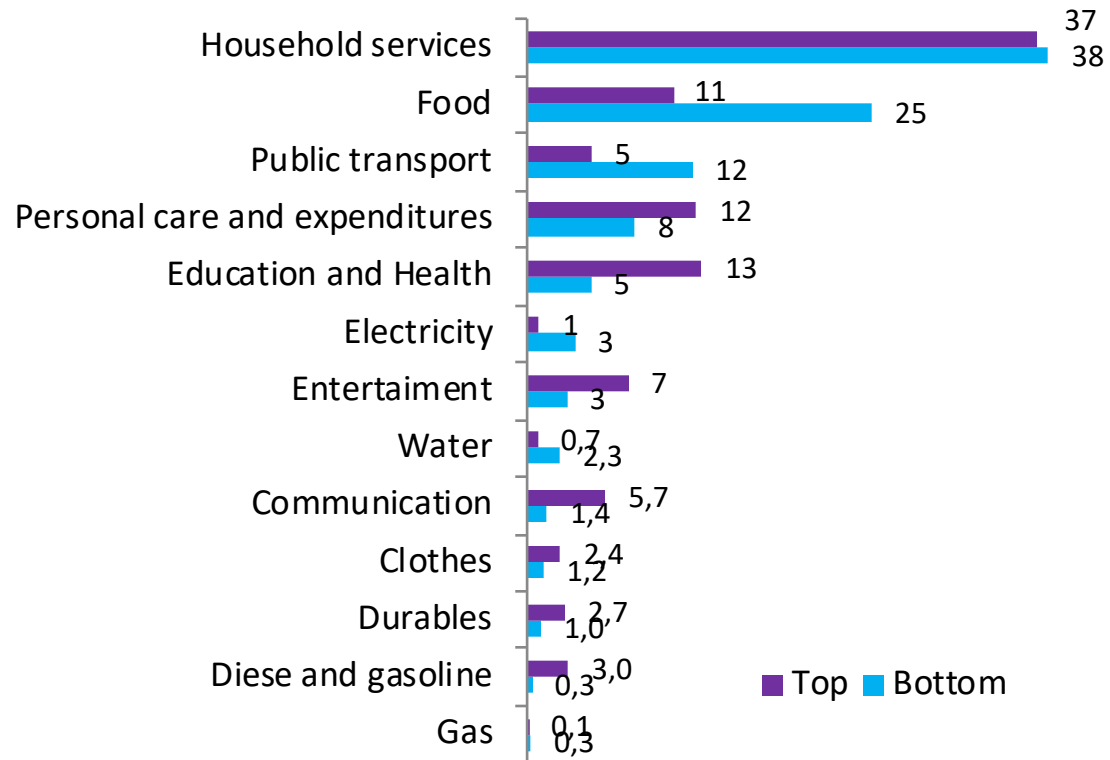


# ...but gasoline price hikes have an indirect impact on all consumption items...

Price hikes in all goods due to gasoline price increase (% of current price)

	%
Public transport	6.3

Household budget



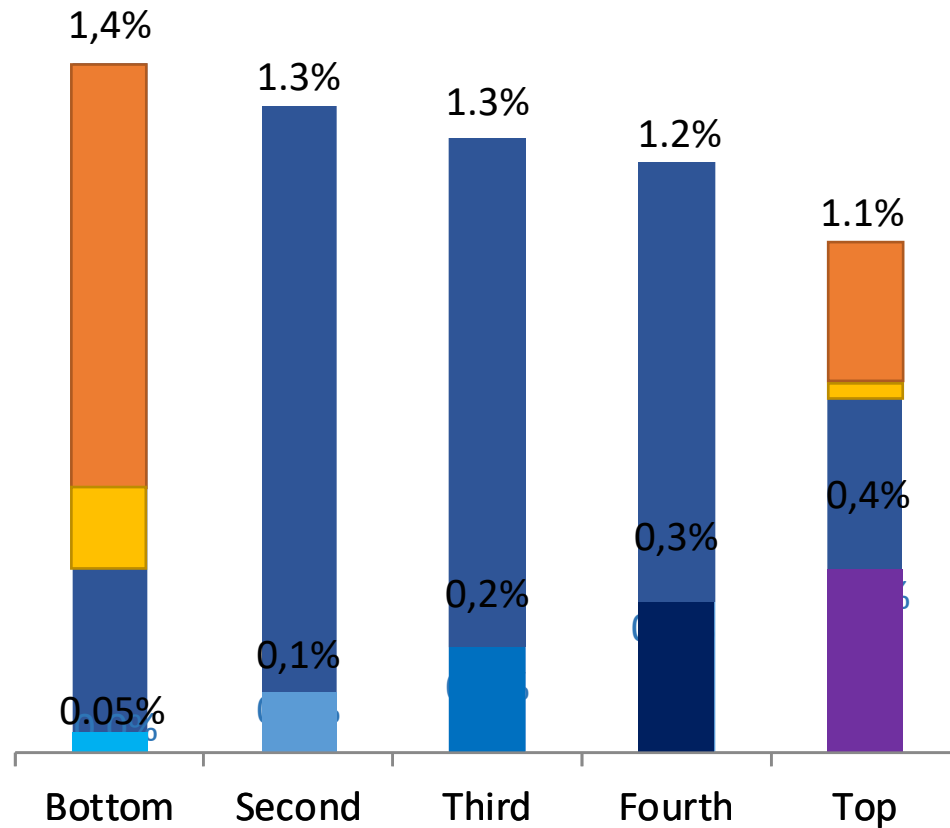


...such that the total, direct + indirect, impact of gasoline prices hikes tends to be regressive



Public transport


Food



Indirect impact

Direct impact



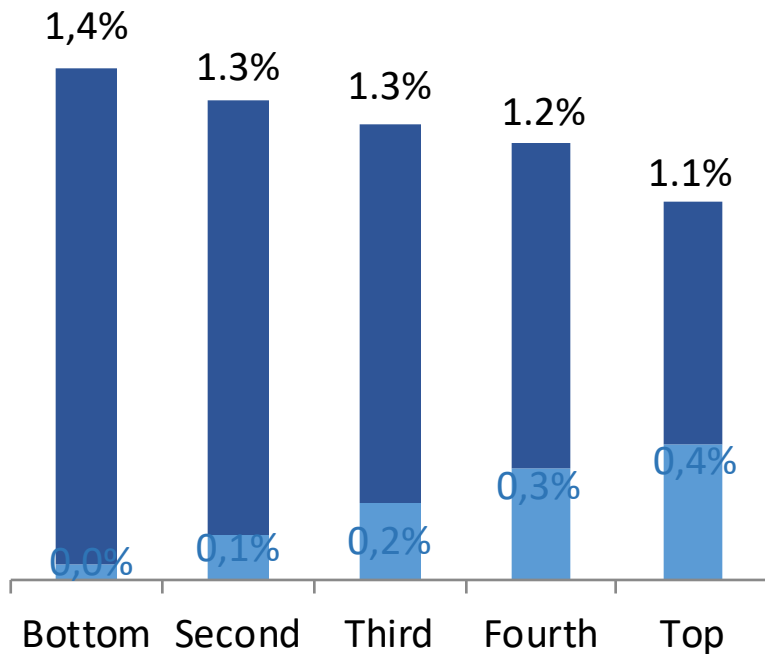


Regressive vs progressive  
may matter less than  
**how to *manage* the impacts**  
of price hikes on consumers

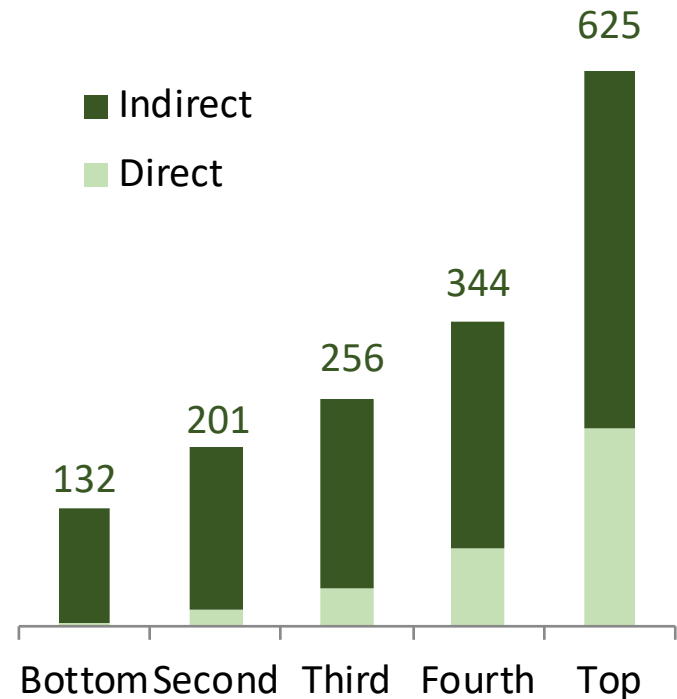
# While poor consumers are affected most relative to their income, rich consumers pay the bulk of energy price hikes...

Cost of a 25c/L increase in gasoline prices...

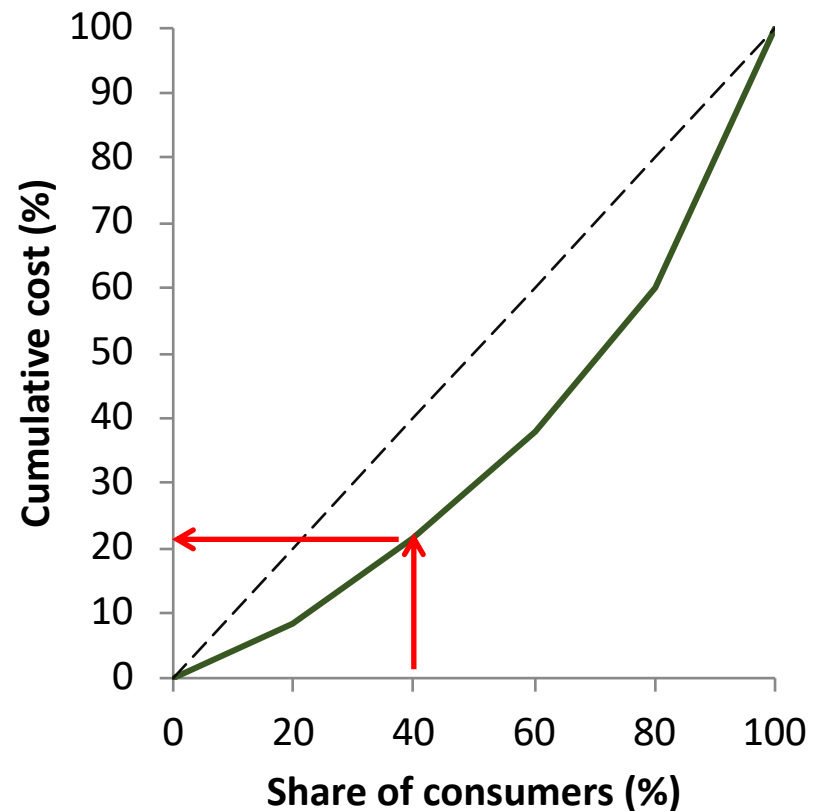
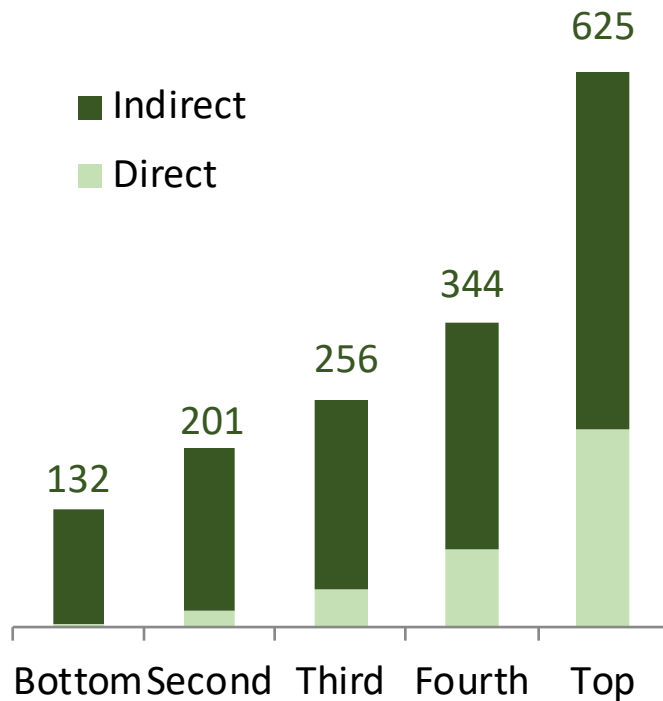
...relative to household's income



... in absolute terms (millions of dollars)



...a small fraction of fiscal revenues  
from energy taxes or subsidy removal is thus  
sufficient to **compensate poor and vulnerable  
consumers**





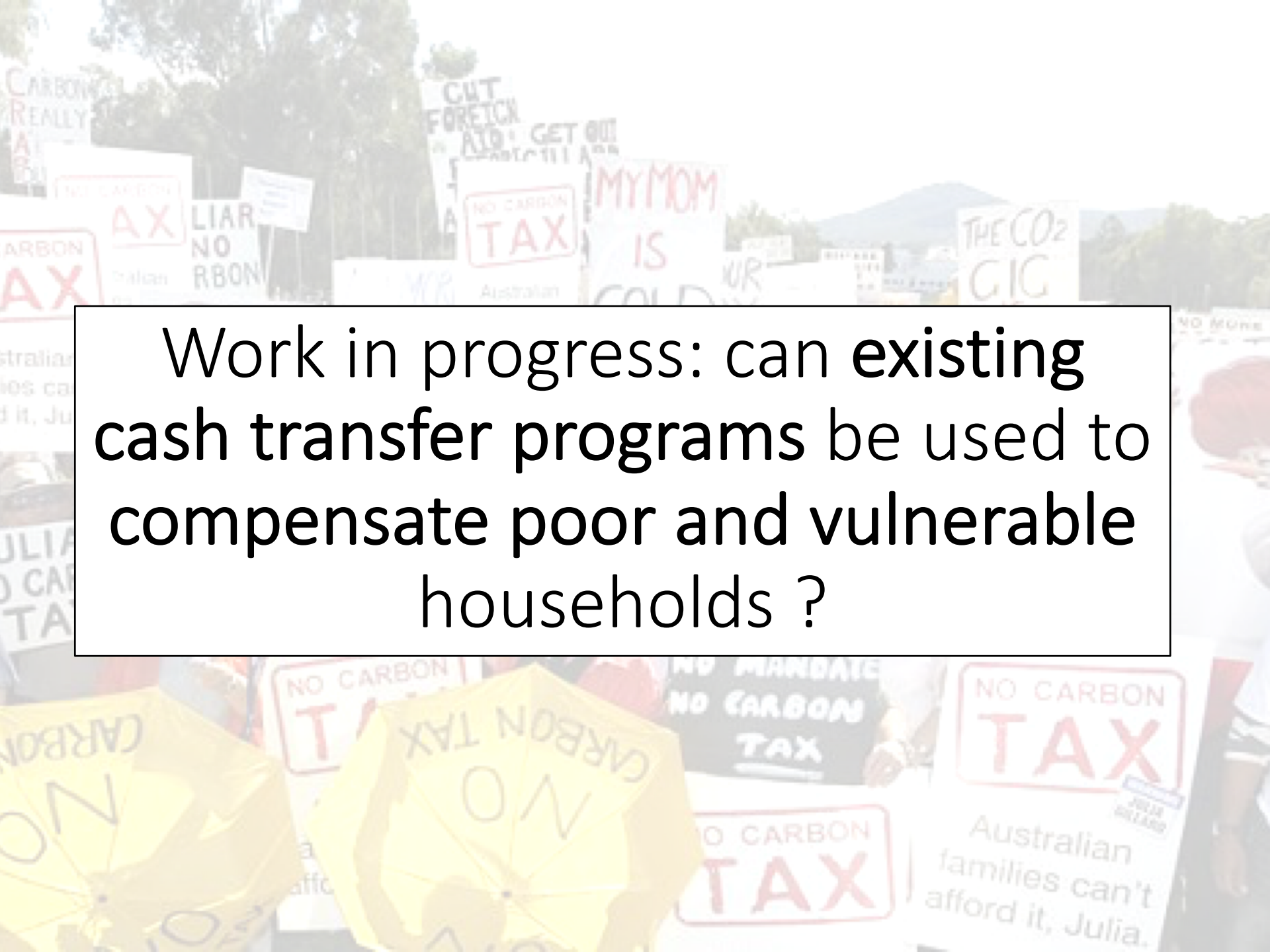
Over 11 LAC countries and 3 fuels, about 25% of fiscal revenues would in principle be enough to compensate poor households

		Bottom	Second	Third
Argentina	Diesel and gasoline	8.7	21.9	39.7
	Electricity	12.2	27.4	45.3
	Natural Gas and LPG	12.1	27.2	45.8
Bahamas	Diesel and gasoline	10.9	27.0	47.1
	Electricity	12.7	29.6	49.6
Barbados	Diesel and gasoline	5.3	14.1	25.9
	Electricity	8.5	20.5	35.6
Chile	Diesel and gasoline	8.5	21.4	37.8
	Electricity	12.5	27.3	44.3
	Natural Gas and LPG	10.9	27.6	47.4
Costa Rica	Diesel and gasoline	5.6	15.7	30.1
	Electricity	11.9	26.7	44.2
	Natural Gas and LPG	15.4	33.9	53.7
Ecuador	Diesel and gasoline	8.0	20.0	35.0
	Electricity	10.0	24.2	41.2
	Natural Gas and LPG	15.7	33.6	52.2
Guatemala	Diesel and gasoline	5.4	14.7	28.2

Vogt-Schilb, Adrien, Estefanía Marchán, Kuishuang Feng, and Klaus Hubacek. 2017. “Distributive Impact of Energy Subsidies and Reform.” In *The Other Side of the Boom: Energy Prices and Subsidies in Latin America and the Caribbean During the Super-Cycle* [Estefania Marchan and Ramon Espinasa Eds.], 71–100. Washington DC: Inter-American Development Bank.

In kind and in cash transfers have both been used to compensate vulnerable households





Work in progress: can **existing**  
cash transfer programs be used to  
compensate poor and vulnerable  
households ?

# We take a closer look at cash transfers

## 1. Cash transfers have **good press globally**:

- ✓ **reduce poverty** (especially for women and girls)
- ✓ improve **school** attendance
- ✓ increase the uptake of **health** services
- ✓ improve **dietary diversity** and mass and weight indicators
- ✓ reduce stunting and **malnourishment**
- ✓ encourage **savings** and **investment** in productive assets and livestock
- ✓ foster **business creation**
- ✓ increase labor force participation for adults and **employment** rates
- ✓ reduce **child work**

Bastagli, et al. 2016. "Cash Transfers: What Does the Evidence Say? A Rigorous Review of Programme Impact and of the Role of Design and Implementation Features." *Overseas Development Institute*.

## 2. Most **LAC countries** have at least 1 cash transfer program

## 3. Cash transfer are **efficient** at **redistributing income** to poor households.

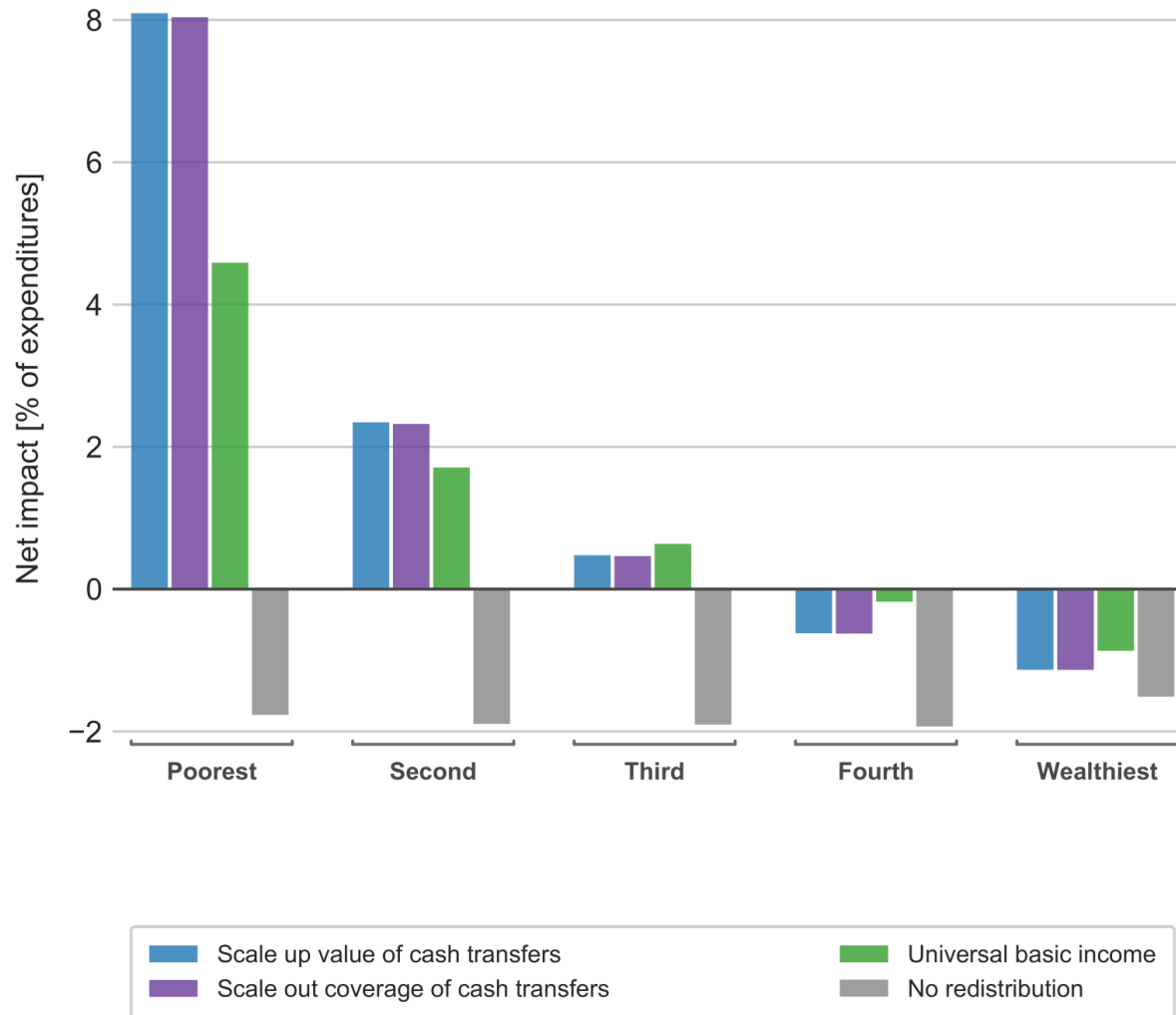
Robles, Marcos, Marcela G. Rubio, and Marco Stampini. 2015. "Have Cash Transfers Succeeded in Reaching the Poor in Latin America and the Caribbean?"



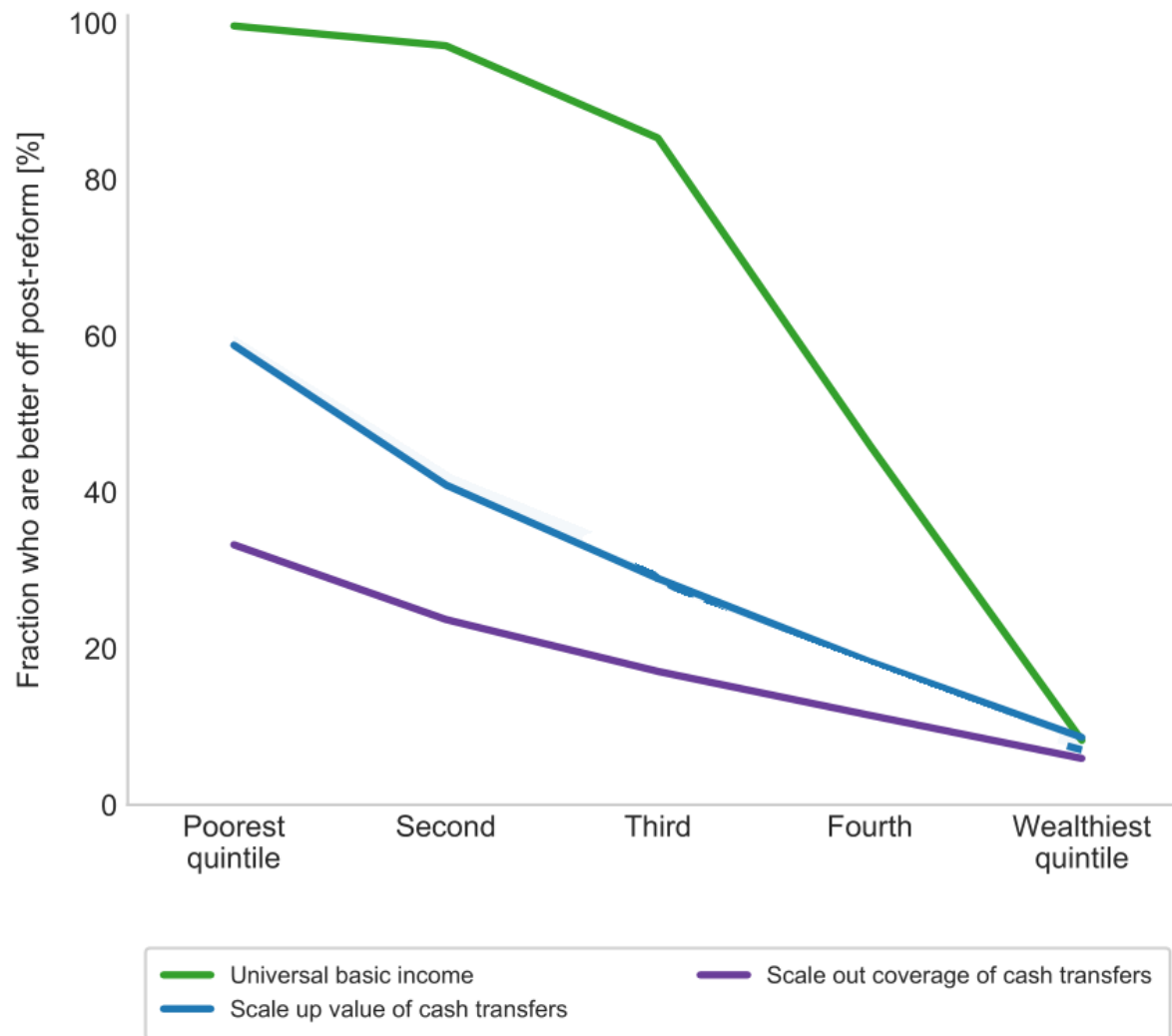
**Cadastro Único**  
Conhecer para incluir



# Scaling cash transfers *up or out* is an effective way to compensate bottom quintiles (Mexico)



# Scaling out coverage or creating new transfers could be one way to ensure no one is left behind (Mexico)



# Managing the impacts of energy price hikes on poor and middle-class households



Adrien Vogt-Schilb  
Climate Change Economist  
[avogtschilb@iadb.org](mailto:avogtschilb@iadb.org)

Read more:

Español: <http://lad.bg/jeMR30IDQkl>

Inglés: <http://lad.bg/Qu4b30IDQm1>

Feng, K., Hubacek, K., Liu, Y., Marchán, E., & Vogt-Schilb, A. (2018). [Managing the distributional effects of energy taxes and subsidy removal in Latin America and the Caribbean](#). *Applied Energy*, 225, 424-436.

## 1. Recycling a fraction of revenues from subsidy reform, energy taxes, or carbon taxes is enough to **compensate poor and vulnerable households**.

Average need to compensate bottom 40% of households:

- 19% of the proceeds of a gasoline and diesel tax
- 21% of the revenues from an electricity tax
- 27% of the revenues from natural gas and LPG prices

## 2. Existing cash transfer programs are **effective but imperfect** ways of doing so (work in progress)