

How do households spend carbon tax rebates?

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Background: Carbon taxes (and regulatory charges!) in Canada

BC (2008)

- CIT & PIT cuts
- *Low-income rebate*

AB (2016)

- “Green” spending
- *Low-income rebate*

Canada (2018)

- *Universal rebate*

Fee and dividend in the US?

OPINION | COMMENTARY

Economists' Statement on Carbon Dividends

Bipartisan agreement on how to combat climate change.

THE WALL STREET JOURNAL.

V. To maximize the fairness and political viability of a rising carbon tax, the revenue should be returned directly to U.S. citizens through equal lump-sum rebates. The major beneficiaries, who are most vulnerable, will benefit financially by receiving more in "carbon dividends."

TODAY'S DEBATE | Editorial This editorial reflects the opinion of this publication's Editorial Board.


Climate change: Put a price on carbon pollution, then refund the money to consumers

Carbon tax proposal has backing from Republican luminaries and is more likely to achieve common ground than the most sweeping 'Green New Deal': Our view

The Editorial Board USA TODAY

Published 4:30 p.m. ET Feb. 19, 2020 | Updated 5:22 p.m. ET Feb. 19, 2020

Do lump sum rebates affect consumer behaviour?

- **Economists:** *“as a lump sum rebate the incentive to reduce emissions remains because the change in relative prices from the tax remains intact!”*
- **Other people:** 

Motivation



Terence Corcoran ✓

@terencecorcoran



Andrew, get a grip. The carbon tax is a manipulated boondoggle that pretends to incentivize behaviour and then pretends to give people their money back, therefore negating the incentive. People are not stupid.

Terence Corcoran is Senior Columnist and Editor of Canada's flagship financial newspaper (The Financial Post)

Source: Twitter.com, 18 Oct 2018 [emphasis added]

Motivation



Andrew Scheer ✓

@AndrewScheer

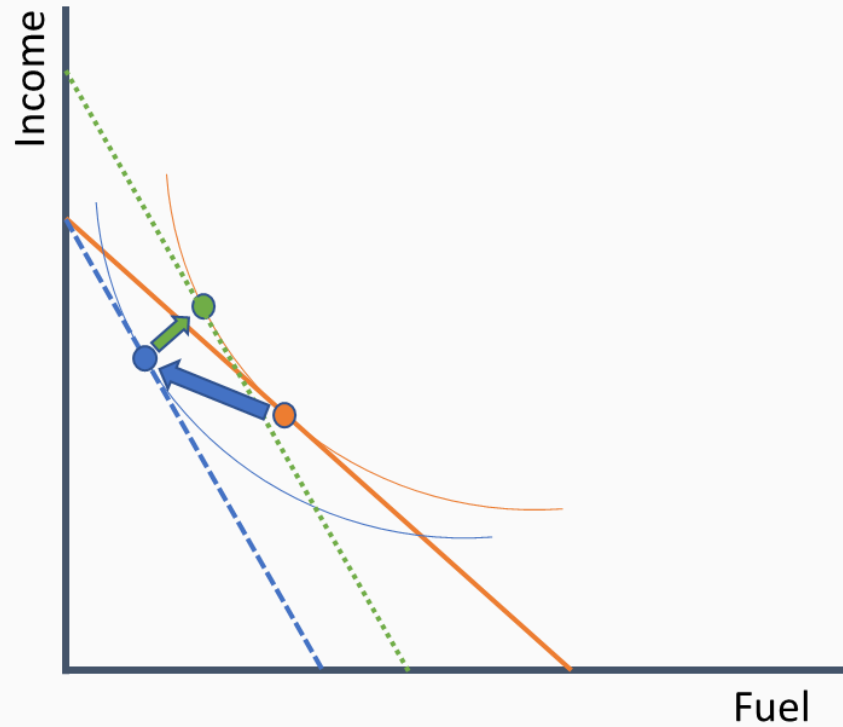
Justin Trudeau's Carbon Tax is a scheme to increase government revenue to pay for his out-of-control spending. His 'rebate' is a shell game that will neither help the environment nor save Canadians any money. WATCH LIVE: facebook.com/AndrewScheerMP...

10:20 AM · Oct 23, 2018 · TweetDeck

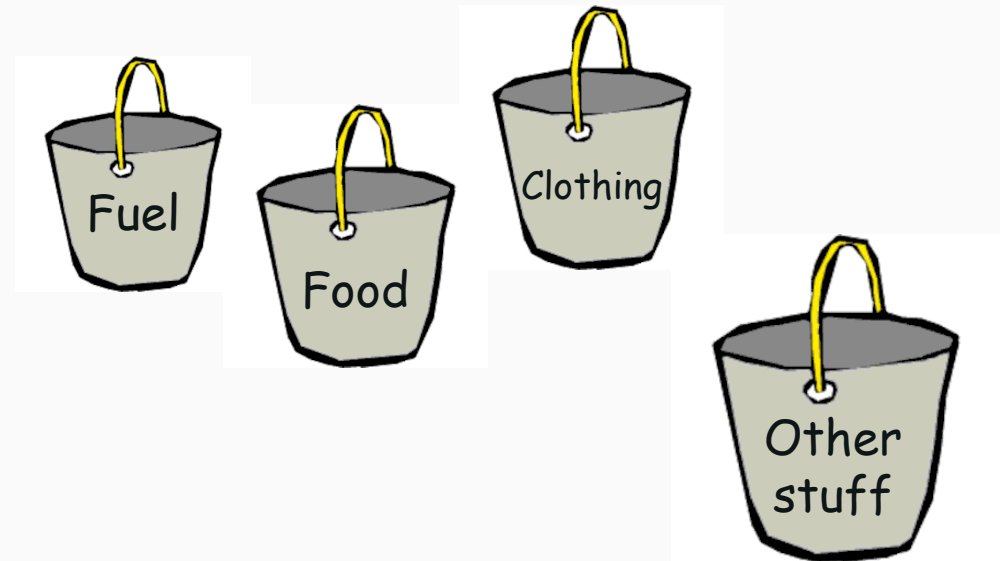
Source: *Twitter.com*, 23 Oct 2018 [Emphasis added]

How do households *actually* respond to rebates?

Rational optimizing consumers?



Mental accounters or satisficers?



Carbon tax rebates

Three plausible outcomes:

1. Households treat rebates as any other cash
 - 🧐
2. Households use rebates to maintain status quo spending
 - mental accounting model
3. Households use rebates to “take climate action”
 - labelling effect of ‘Climate Action Tax Credit’)

Evidence in the literature

Heating payments in the UK (Crossley, JPubEcon 2015)

- On-bill credits given to those with age > 60
- *Find robust evidence of a behavioral effect of labeling*
- On average households spend 47% of the payment on fuel
- If the payment were treated as cash, would expect households to spend 3% of the payment on fuel

Evidence in the literature

Food stamps in the U.S. (Hastings and Shapiro, AER 2019)

- The marginal propensity to consume SNAP-eligible food (MPCF) out of SNAP benefits is 0.5 to 0.6
- The MPCF out of cash is much smaller
- *Reject hypothesis that households respect the fungibility of money*
- A model with mental accounting can match the facts

Evidence in the literature

- Child benefit payments in Canada (Jones et al., CJE 2019)
 - Families spend benefit income on direct and indirect inputs to education and health outcomes as well as basic household needs
 - Families *decrease* expenditures on restaurant food, tobacco products, and alcohol.

Evidence in the literature

No empirical research into how households spend rebates associated with **carbon taxes**

Heating, nutrition, child benefits:

- Policy makers may *want* the labelling effect to drive behavior

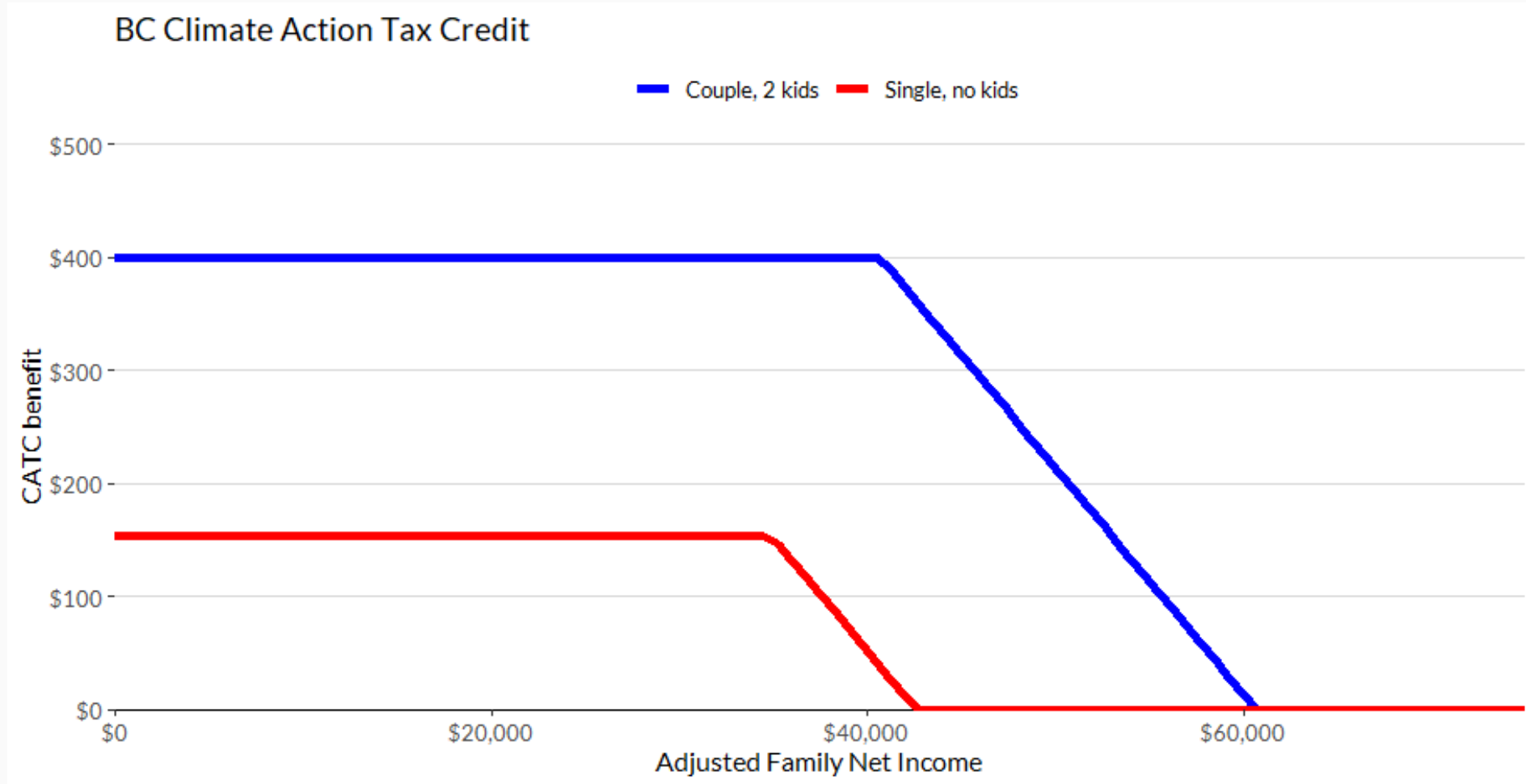
Carbon taxes:

- Policy makers do *not want* to dampen the substitution effect!

Data and empirical approach

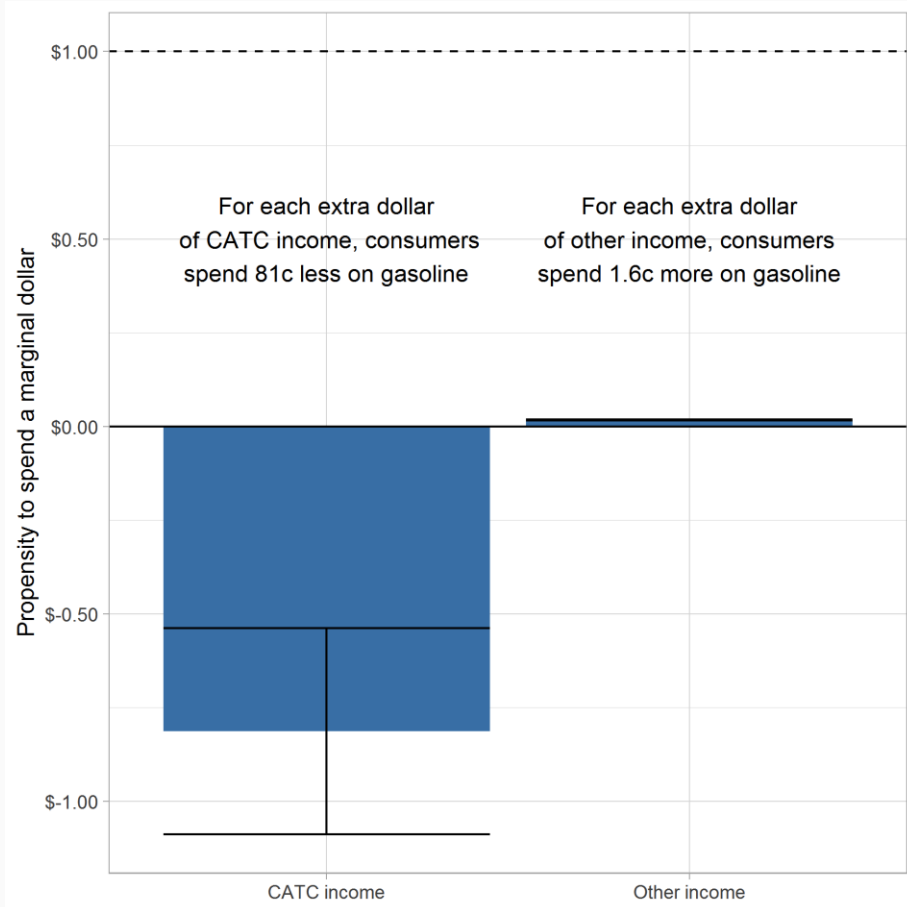
- Household level spending data on various categories linked to tax data
 - Detailed income and benefit information
 - Spending on gasoline, natural gas, electricity, public transport, etc.
- Identification: Use a **triple-differences** approach
 - Below/above income threshold for eligibility [**income**]
 - Pre/post start of BC carbon tax in 2008 [**time**]
 - Household in BC or other (untreated) province [**region**]

BC's Climate Action Tax Credit

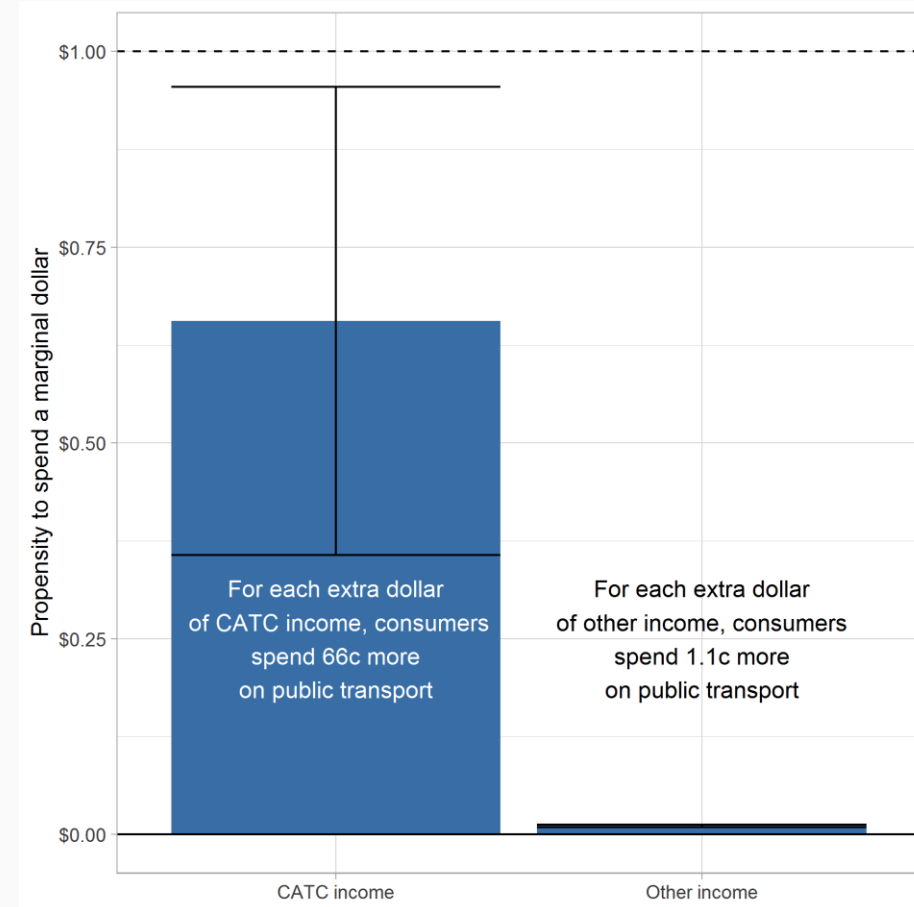


First results

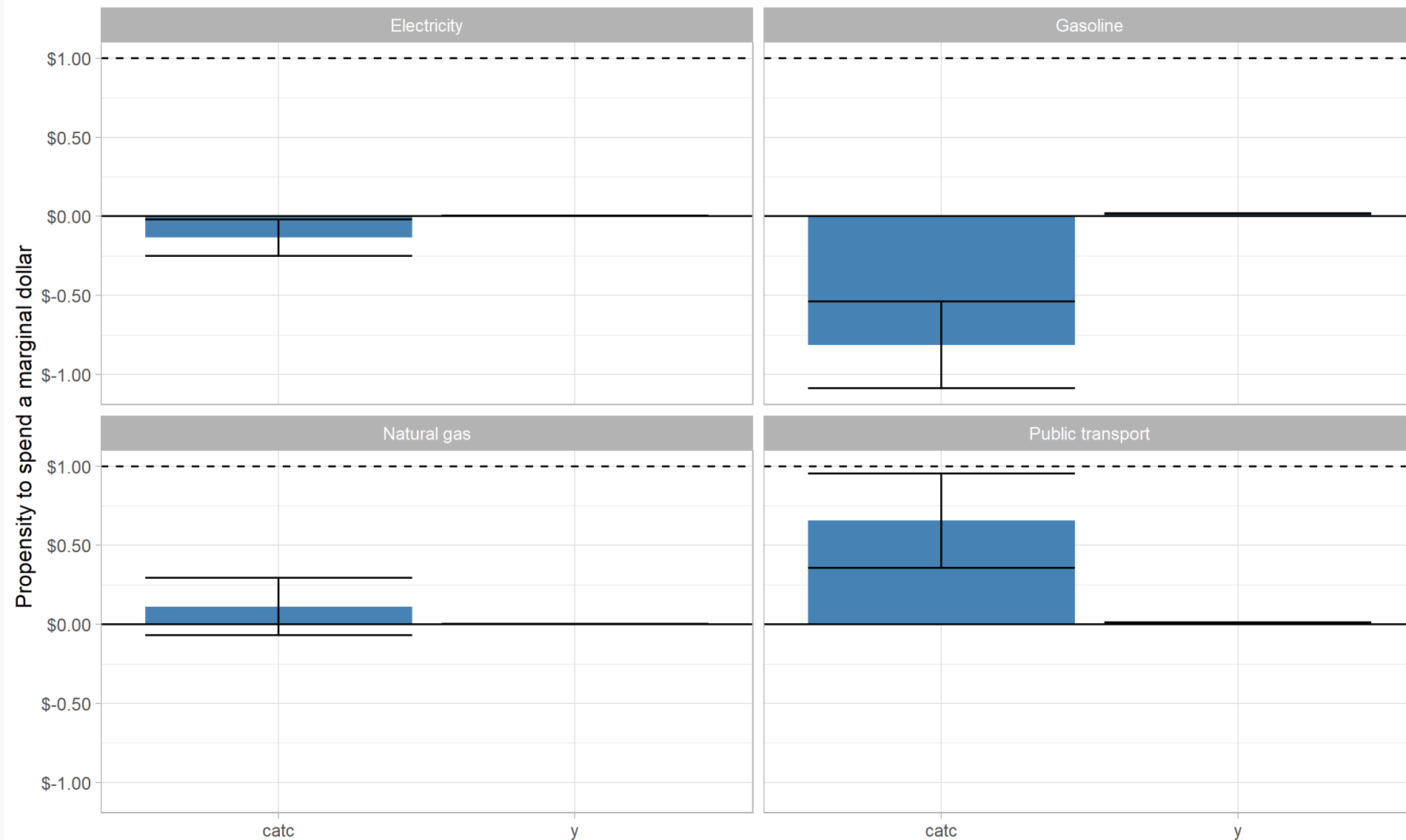
Gasoline



Public Transport



First results



Policy implications

- Rebate delivery:
 - British Columbia Climate Action Tax Credit delivered via quarterly cheque
 - Canada Climate Action Incentive delivered through tax system
- Rebate details:
 - UK winter fuel payments and US food stamps clearly link rebate timing and information to intended outcomes.
- ~~Unanswered~~ questions:
 - Does the rebate lead people to support the climate policy?