

The Price Impact of Canadian Retaliatory Tariffs

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Discussion by Kunal Sangani

How Much Do Tariffs Raise Prices?

- The 100 billion dollar question:

WSJ The Wall Street Journal

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How much tariffs raise prices is complicated because various factors affect the “pass-through” of such duties to customers.

Mar 2, 2025

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- Challenging question:
 - Extent of pass-through for tariffed products?
 - Untariffed products may be indirectly exposed through imported inputs.
 - Domestic products may also raise prices if competitors tariffed.

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What can we identify?

Some other observations

What Can We Identify?

- The authors use the introduction and removal of tariffs in Canada as a laboratory.
- Rich data! High-frequency retail prices for...
 - Tariffed US imports.
 - Untariffed US imports.
 - Non-US imported substitutes.
 - Domestic substitutes.
 - Domestic non-substitutes.
- Given all these data, what can we identify?

Potential Outcomes Framework

- Suppose change in marginal cost of good i in HS code h from country c is

$$d \log mc_{ihc} = \delta_h + \alpha_c + \tau_{ihc} + \varepsilon_i.$$

- And suppose firm's prices reflect own costs and pricing-to-market:

$$d \log p_{ihc} = \rho d \log mc_{ihc} + \Omega \mathbb{E}[d \log p_{jhc} | h].$$

- Effect of tariffs on aggregate price change is:

$$\mathbb{E}[d \log p_{ihc} | h] = \frac{\rho}{1 - \Omega} \mathbb{E}[\tau_{ihc} | h].$$

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- Claim: Given data on $d \log p_{ihc}$ for different goods, we can identify ρ , but not Ω .

Potential Outcomes: What Can We Identify?

	From US	Domestic (or non-US)
Tariffed HS-code	$\rho(\mathbb{E}[\delta_h h \in T] + \alpha_{US} + \tau) + \Omega \mathbb{E}[d \log p_{ihc} h \in T]$	$\rho(\mathbb{E}[\delta_h h \in T] + \alpha_{CAN}) + \Omega \mathbb{E}[d \log p_{ihc} h \in T]$
Not tariffed	$\rho(\mathbb{E}[\delta_h h \notin T] + \alpha_{US}) + \Omega \mathbb{E}[d \log p_{ihc} h \notin T]$	$\rho(\mathbb{E}[\delta_h h \notin T] + \alpha_{CAN}) + \Omega \mathbb{E}[d \log p_{ihc} h \notin T]$

- Difference between tariffed goods and domestic (or non-US) substitutes:

$$\rho(\tau + \alpha_{US} - \alpha_{CAN}).$$

- Difference between untariffed goods and *their* domestic substitutes:

$$\rho(\alpha_{US} - \alpha_{CAN}).$$

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- Thus, **double differences-in-differences** estimate identifies ρ .

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- *“The estimation of the effects of tariffs[...] is based on the differences-in-differences approach, where we use Domestic non-substitutes as the control group.”*
- Tariffed goods vs. domestic non-substitutes:

$$\rho\tau + \Omega(\mathbb{E}[d \log p_{ihc} | h \in T] - \mathbb{E}[d \log p_{ihc} | h \notin T])$$

$$+ \rho \underbrace{(\alpha_{US} - \alpha_{CAN})}_{\substack{\text{Non-random} \\ \text{assignment of tariffs} \\ \text{to countries}}} + \rho \underbrace{(\mathbb{E}[\delta_h | h \in T] - \mathbb{E}[\delta_h | h \notin T])}_{\substack{\text{Non-random} \\ \text{assignment of tariffs} \\ \text{to HS-codes}}}.$$

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- Can we identify Ω ? *“The other three groups are used for identifying the indirect effects of tariffs, or spillovers.”*
- Any hope to identify Ω would use variation across HS-codes in exposure to tariff.
- But since tariffs not randomly assigned to HS-codes, confounded with different δ_h .

Potential Outcomes: What Can We Identify?

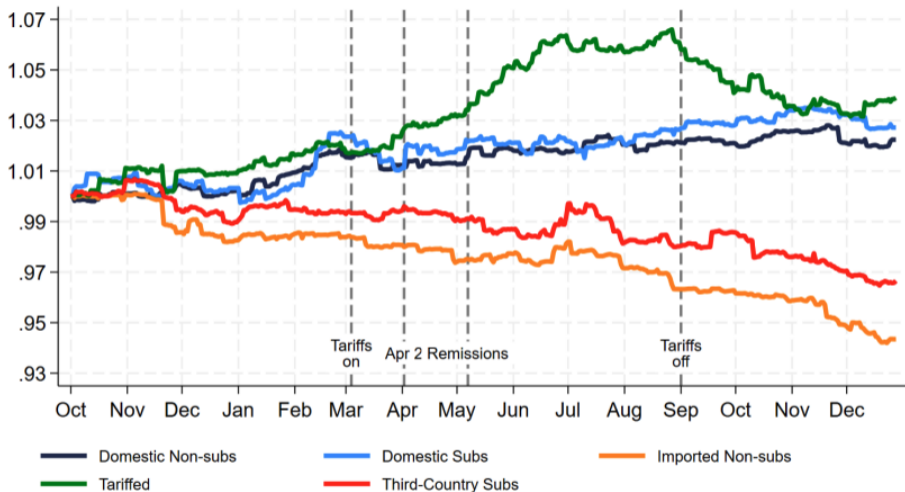


Figure: Figure 3(a): Price movements by product groups.

Potential Outcomes: What Can We Identify?

- Surprise to me: despite rich data on different categories of products, limited by the fact that tariffs targeted to specific products and specific country.
- Enough to measure ρ !
- For \$100B question, still one parameter short (Ω).
- Need **both** for estimating effect of Canada's tariffs and counterfactuals.
- To identify Ω , would further need strong assumption (or quasi-exogenous variation) on assignment of tariffs to products.

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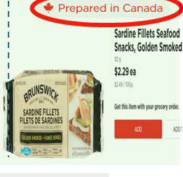
Some other observations

1. Indirect exposure.
2. What goes up must come down?
3. Durable shocks travel fast.
4. Tell your customers about tariffs?

#1: Indirectly exposed products

	Tariff	Substitutes	Non-substitutes	Non-substitutes
Imported	 <p>Tariff</p> <p>Orange Juice, No Pulp 1.36 L \$8.72 ea \$0.64 / 100ml</p> <p>Get this item with your grocery order.</p> <p>ADD</p>	 <p>Light Blood Orange, Sparkling Fruit Beverage 6 x 500 mL \$8.99 ea \$0.50 / 100ml</p> <p>Get this item with your grocery order.</p> <p>ADD</p>	 <p>Black & Decker 1.7L Stainless Steel Jug Kettle 1 ea \$45.00 ea \$55.00 \$0.00 / 100ml</p> <p>Get this item with your grocery order.</p> <p>ADD</p>	
Domestic		 <p>Prepared in Canada</p> <p>Juice Orange Pulp Free Bottle 1.36 L \$7.69 ea \$0.60 / 100ml</p> <p>Get this item with your grocery order.</p> <p>ADD</p>		 <p>Prepared in Canada</p> <p>Sardine Fillets Seafood Snacks, Golden Smoked 1 ea \$2.29 ea \$1.41 / 100g</p> <p>Get this item with your grocery order.</p> <p>ADD</p>

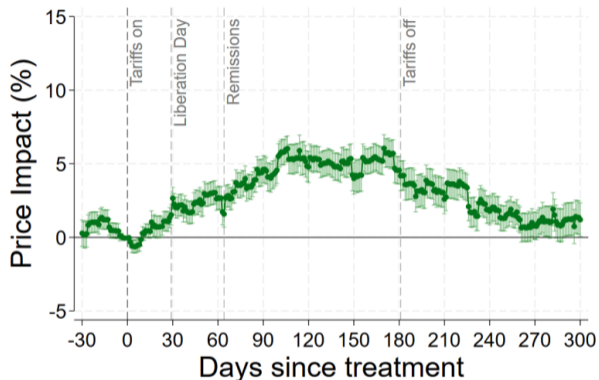
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Where do the oranges in Simply Orange® come from? ^

Delivering the gold standard in fresh, pure taste is important to us at the Simply Orange Juice Company. This means that we source oranges from the USA, Brazil and Mexico at different times of the year to provide you with the best-tasting product possible. Oranges are a seasonal crop and the specific varieties of oranges we select for Simply Orange® don't grow year-round. We use as much "in season" juice as possible from the USA, Brazil and Mexico in order to bring you our best tasting juice, 365 days a year.

#2: What goes up must come down?



(a) Tariffed

Figure: Figure 4(a): All tarified goods.

- “After most of the Canadian retaliatory tariffs were removed on September 1, 2025, their relative price effects were completely reversed by grocery retailers (within a month or so), and by appliance and electronics retailers (within three months or so).”
- “By contrast, the effect persists for the household goods retailer, where they are at around 2/3 of its peak by the end of 2025.”

#2: What goes up must come down?

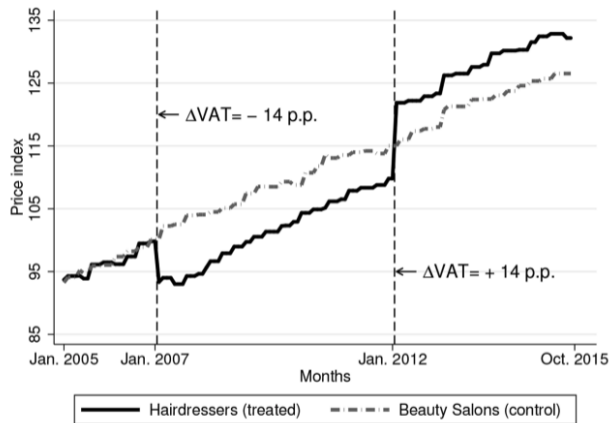


FIG. 1.—Finnish hairdressing sector VAT reforms. This figure shows the price of hairdressing services and beauty salons before and after the 14 percentage point hairdressing services VAT cut in January 2007 and the 14 percentage point VAT hairdressing services hike in January 2012.

- Benzarti, Carloni, Harju, and Kosonen (2020) on VAT cut and reinstatement in Finland.
- “Once the VAT rate applied to Finnish hairdressers is increased back to its original level, prices remain higher than for the control group 3.5 years later in spite of the VAT rates being equal for both groups. [...] This suggests that the market equilibrium depends on the history of tax changes.”

#2: What goes up must come down?



The Beige Book

Summary of Commentary on
Current Economic Conditions by
Federal Reserve District

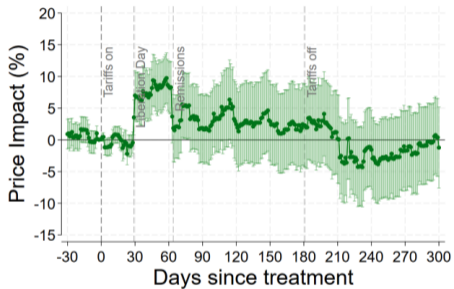
May 2025

Prices

Prices rose modestly as in the prior reporting period. Costs rose, including those for firms' inputs, such as metals, concrete, parts and equipment, as well as costs for imported merchandise for retail sale, insurance, and utilities. As a result, many businesses raised their final prices. In some cases, firms explicitly included a separate tariff line for items or contingencies in their price quotes and contracts. One contact observed that price increases that had been implemented in anticipation of certain tariffs were not rolled back once those tariffs were removed.

FEDERAL RESERVE SYSTEM

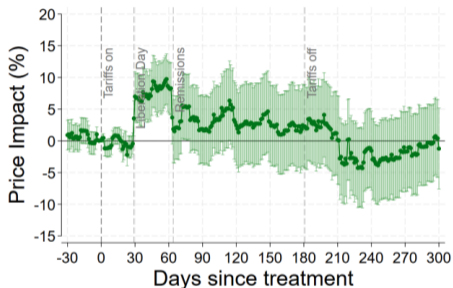
#3: Durable Shocks Travel Fast



(a) Appliance Retailer

- Virtually no pass-through for 30 days.

#3: Durable Shocks Travel Fast



(a) Appliance Retailer

- Virtually no pass-through for 30 days.
- Credible story: Pass-through depends on expectations about duration.
- “Large shocks travel fast.” Durable shocks too?
(Cavallo, Lippi, Miyahara 2024.)
- Durability vs. certainty?

#3: Durable Shocks Travel Fast

- Given path of shocks $\{d \log mc_t\}_{t=0}^{\infty}$, desired reset price (around steady state) is

$$d \log p_0^{\text{reset}} = \rho^* \sum_{t=0}^{\infty} \omega_t d \log mc_t,$$

where ρ^* is desired pass-through of permanent shock and ω_t weights add to one.

- E.g., with Calvo friction δ and discount rate β , $\omega_t = [1 - \beta(1 - \delta)][\beta(1 - \delta)]^t$.

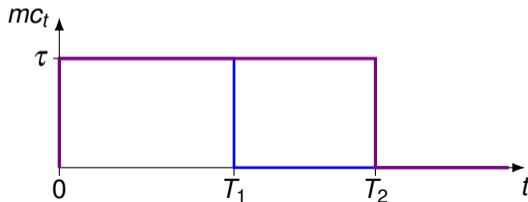
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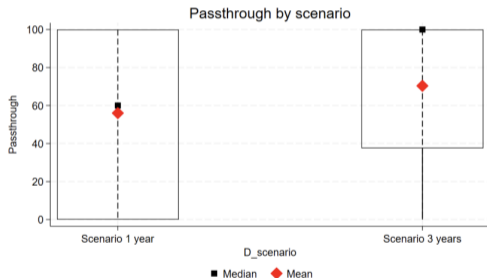
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$$\frac{d \log p_0(T_2)}{d \log p_0(T_1)} = \frac{\sum_{t=0}^{T_2} \omega_t}{\sum_{t=0}^{T_1} \omega_t}$$

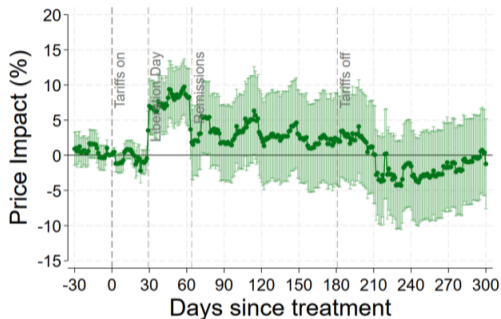
#3: Durable Shocks Travel Fast

Figure D1. Pass-through of tariffs by scenario



- For tariff expected to last 1 year: 0.59.
- For tariff expected to last 3 yrs: +0.20.
- \Rightarrow Chance of Δ price in 1 year is 0.59. (7.2% hazard per month).
- \Rightarrow Chance of Δ price in 3 years is 0.79. (2.8% hazard per month in years 2–3).
- A fruitful way to elicit price stickiness!

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#4: Telling Your Customers

- Kahneman, Knetsch, and Thaler (1986): Customers see cost-based increases as fair.

Acceptable

Question 7. Suppose that, due to a transportation mixup, there is a local shortage of lettuce and the wholesale price has increased. A local grocer has bought the usual quantity of lettuce at a price that is 30 cents per head higher than normal. The grocer raises the price of lettuce to customers by 30 cents per head.

($N=101$) Acceptable 79% Unfair 21%

Unfair

Question 1. A hardware store has been selling snow shovels for \$15. The morning after a large snowstorm, the store raises the price to \$20. Please rate this action as:

Completely Fair Acceptable
Unfair Very Unfair

Question 12. A severe shortage of Red Delicious apples has developed in a community and none of the grocery stores or produce markets have any of this type of apple on their shelves. Other varieties of apples are plentiful in all of the stores. One grocer receives a single shipment of Red Delicious apples at the regular wholesale cost and raises the retail price of these Red Delicious apples by 25% over the regular price.

($N=102$) Acceptable 37% Unfair 63%

Question 10. A grocery store has several months supply of peanut butter in stock which it has on the shelves and in the storeroom. The owner hears that the wholesale price of peanut butter has increased and immediately raises the price on the current stock of peanut butter.

($N=147$) Acceptable 21% Unfair 79%

- How fairness constrains pricing and pass-through: Rotemberg (2005, 2011), Eyster, Madarasz, and Michailat (2021).

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- What happens if you can tell your customers why prices are higher?

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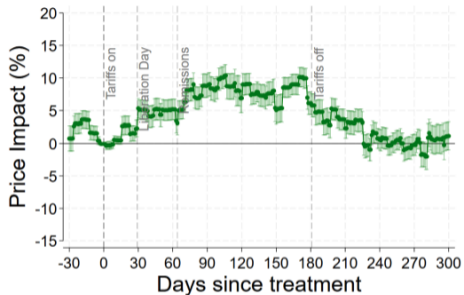


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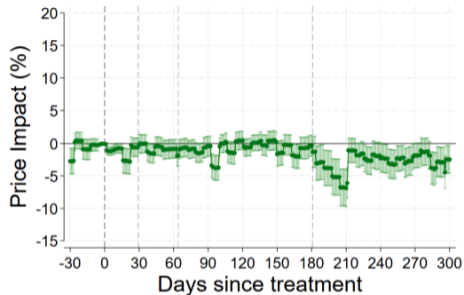
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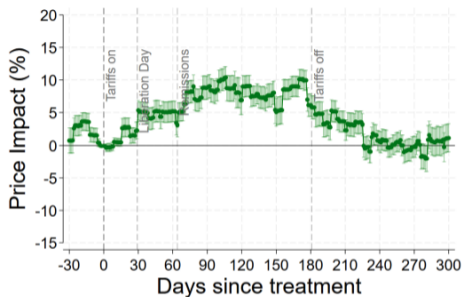
(a) Products with Tariff banner



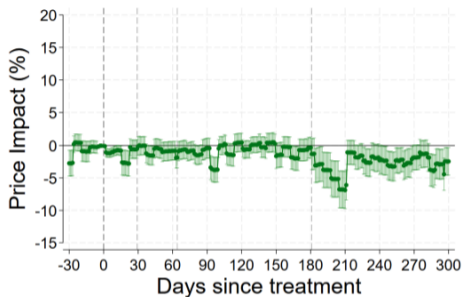
(b) Products without Tariff banner

#4: Telling Your Customers

- What happens if you can tell your customers why prices are higher?



(a) Products with Tariff banner



(b) Products without Tariff banner

- *“Banner use is likely endogenous[...] Food and beverages account for 84% of products in the group with tariff banner, [vs. 48%] in the group classified as tariffed but without.”*
- Compare same UPCs at retailers who use vs. do not use banner?

Summary

- The authors collect fantastic data to see tariff pass-through in action.
- Thought-provoking: Role of strategic complementarities, fairness, customer communication, asymmetry, shock duration, retailer heterogeneity, etc.

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- The authors collect fantastic data to see tariff pass-through in action.
- Thought-provoking: Role of strategic complementarities, fairness, customer communication, asymmetry, shock duration, retailer heterogeneity, etc.
- Many new natural experiments. How does this evidence update existing models?
 - Estimate key model parameters...
 - ...or tells us what models are missing!