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# Crude Oil Curtailment and Collusion:

## Heterodox Trade War Strategies for Canada

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## EXECUTIVE SUMMARY

This paper examines two non-traditional retaliation strategies that Canada could employ in response to U.S. import tariffs during a trade war: i) crude oil production curtailment and ii) potential exemptions to Canada's *Competition Act*. Unlike traditional retaliatory tariffs or export restrictions, these measures could provide economic benefits to Canada rather than exacerbating the negative impacts of U.S. tariffs.

Crude oil curtailment, a practice historically employed in Alberta during periods of economic stress, would involve reducing production to drive up crude oil prices. This approach could enhance industry profitability and increase provincial revenues through higher royalties, offsetting some of the economic strain associated with U.S. tariffs. The effectiveness of this measure depends on how well Canadian policymakers can co-ordinate production adjustments to achieve optimal price levels.

The second strategy involves exempting oil producers from section 45 of the *Competition Act*, which currently prohibits collusion. Granting a temporary exemption would allow crude oil firms to co-ordinate production cuts, similar to strategies that state-controlled oil companies and cartels use. By collectively reducing supply, Canadian oil producers could drive up prices, improving industry-wide profitability and provincial revenues. However, this approach presents significant risks, including the potential for co-ordination failures among firms, long-term cartel behaviour beyond the intended trade war response and increased domestic consumer costs. Furthermore, it may provoke additional U.S. retaliatory actions, as past legislative efforts in the United States have sought to counter crude oil export cartels.

Both strategies offer advantages over more conventional retaliation methods. Unlike export restrictions, which could depress prices, production curtailment and collusion would help Canadian producers capture higher revenues while shifting the burden of U.S. tariffs onto American consumers. Also, an export tax, while generating government revenues, does not strategically shift the economic burden in Canada's favour to the same extent.

Both strategies operate on the principle that making Canadian supply more elastic will shift the tariff burden onto U.S. consumers. The effectiveness of either strategy largely depends on the elasticity of demand. In the short run, it is likely that U.S. demand is relatively inelastic, suggesting these strategies will be quite effective. In the long run, if the U.S. industry redeploys capital to substitute to other suppliers, demand will become more elastic and the strategy may lose efficacy.

The political ramifications of these measures also require careful consideration. Implementing policies that appear protectionist or anti-competitive could undermine Canada's commitment to free-market principles and invite public backlash. Also, a shift towards co-ordinated oil production may lead to unintended long-term consequences that may require additional regulatory scrutiny and increased government involvement in market operations.

While this paper does not advocate for any specific course of action, it highlights the need for policymakers to consider innovative and pragmatic responses to U.S. trade aggression. Crude oil curtailment and competition law exemptions present unconventional but potentially effective strategies for mitigating the adverse effects of tariffs while safeguarding Canada's economic interests. Both strategies are preferred to export restrictions and export taxes. Nonetheless, their success in compelling U.S. policy changes remains uncertain and further analysis is required to fully assess their implications before implementation.

# 1 INTRODUCTION

The concept of a trade war is not new in economics, nor is the toolkit that is generally employed by nations engaging in such. But for the last 250 years, the arc of economic policy has generally bent away from protectionism and towards a realization that gains from trade allow for improvements in human flourishing.

It is not a coincidence that Adam Smith's seminal work, *An Inquiry into the Nature and Causes of the Wealth of Nations* (Smith 1776) was published in the same year (1776) that the United States declared its independence from the British Empire. Both events occurred no less than three years after the Boston Tea Party: a protest by American colonists precipitated by the British Parliament's attempt to impose a direct tax on the colonies to raise revenue, while exempting the British East India company from those tariffs.

It is no surprise then that Smith (1776) includes a discussion of trade war strategies which is no less relevant today than it was a quarter of a millennium ago:

> The case in which it may sometimes be a matter of deliberation how far it is proper to continue the free importation of certain foreign goods, is when some foreign nation restrains, by high duties or prohibitions, the importation of some of our manufactures into their country. Revenge, in this case, naturally dictates retaliation, and that we should impose the like duties and prohibitions upon the importation of some or all of their manufactures into ours. Nations, accordingly, seldom fail to retaliate in this manner.
>
> [...]
>
> There may be good policy in retaliations of this kind, when there is a probability that they will procure the repeal of the high duties or prohibitions complained of. The recovery of a great foreign market will generally more than compensate for the transitory inconvenience of paying more for some kinds of goods over a short period. To judge whether such retaliations are likely to produce such an effect, does not, perhaps, belong so much to the science of a legislator, whose deliberations ought to be governed by general principles, which are always the same, as to the skill of that insidious and crafty animal vulgarly called a statesman or politician, whose councils are directed by the momentary fluctuations of affairs. When there is no probability that any such repeal can be procured, it seems a bad method of compensating the injury done to certain classes of our people, to do another injury ourselves, not only to those classes, but to almost all the other classes of them.

Since his election in November 2024, President-elect Donald Trump threatened to impose a 25-per-cent tariff on all Canadian to U.S. imports.

Following his swearing in, Trump's administration went so far as announcing the imposition of such tariffs on February 1, 2025 and subsequently delaying their enforcement in an announcement on February 3. Trump has offered four separate justifications for these tariffs. The first, which is the official reason indicated on the February 1 executive order, is that Canada has failed "to devote sufficient attention and resources or meaningfully coordinate with United States law enforcement partners to effectively stem the tide of illicit drugs" across the Canada/U.S. border (White House 2025). The second relates to Trump's stated desire to reduce the trade deficit that the United States runs with Canada. This justification is consistent with a paper written by Miran (2024) in which the author (Trump's pick for chair of the American Council of Economic Advisors) discusses the use of tariffs to combat trade imbalances. The third justification relates to public statements Trump made on the use of "economic force" to make Canada the "51st state" (Seal 2025).

The fourth justification is subsidiary to Trump's proposal to replace the U.S. federal income tax with tariffs as a revenue source (Luhby and Sullivan 2024).

In response to the threat of a trade war, the Canadian government announced measures to reduce cross-border flows of illicit drugs including the appointment of a fentanyl "czar" (Government of Canada 2024). Canadian First Ministers have also discussed other strategies for how Canada might respond to these tariffs. Public statements include an indication that First Ministers are committed to counter-tariffs on specific goods (Government of Canada 2025) and to committing Canada to meeting NATO spending requirements (Prime Minister of Canada 2025).

However, none of these steps addresses the core logic in Miran (2024), wherein the most prominent goals of tariff implementation are indicated as raising public revenue and reducing U.S. trade deficits. Outside of the First Ministers' meeting, federal government ministers have also publicly speculated about cutting off energy exports (Van Dyk 2025) and levying export taxes on energy exports (Chase, Stone and Cryderman 2024).

Alberta Premier Danielle Smith (2025) has responded to these ideas with contempt, stating that "Alberta will simply not agree to export tariffs on our energy or other products, nor do we support a ban on exports of these same products." This is not surprising. Bitumen royalties alone accounted for 20 per cent of Alberta public revenues in 2023–2024 with other energy royalties bringing that number to 26 per cent (Government of Alberta 2024). Alberta comprises the dominant share (>85 per cent) of total Canadian crude oil production (Canada Energy Regulator 2024b) and the majority of domestic Canadian crude oil (>80 per cent) is exported rather than consumed domestically (Canada Energy Regulator 2024a). In addition, fully restricting exports would cause substantial job losses and a dramatic reduction in gross provincial income. Put simply, Alberta would bear 80 per cent of the economic costs of retaliation via energy export restrictions or taxation (not including the tax revenue generated), despite having only 12 per cent of the national population (Statistics Canada 2024b) and only 15 per cent of national GDP (Statistics Canada 2024a).

Nonetheless, the energy sector, and in particular crude oil exports, are a natural focus for politicians and policymakers considering non-tariff trade war retaliation options. The exports comprise the majority of consumers of Canadian crude oil and in the regions we export to — mainly the Midwest (PADD 2) and Rocky Mountain areas (PADD 4) — Canada is the dominant supplier. As a result, this is an industry where damaging the consumer disproportionately impacts U.S. consumers and the impact is a non-trivial portion of their consumption. That said, there is a lot of room for policy discussions between "business as usual" and "full export restrictions."

In the remainder of this paper, I will discuss the potential for two (similar) policy choices that would simultaneously soften the domestic impact of 25 per cent U.S. import tariffs and inflict proportional costs onto the U.S. economy: crude oil production curtailment and potential competition law exemptions.

Before proceeding, I want to remind the reader of the Adam Smith quote above; specifically, the article where Smith discusses who should, and more importantly, who should not, be making decisions related to retaliation in a trade war. The purpose of this paper is not to advocate for or against retaliation or similar actions, but rather to suggest a strategy for consideration by Canadian politicians and statespersons. Applied economic theory, while useful for the context of likely economic impacts, does not lend itself well to a judgment on whether a specific course of retaliation will elicit a concession in a trade war (particularly where Trump is concerned). Smith recognized that in 1776, and in my estimation that has not changed after 250 years of growth in the discipline.

Restating from above:

> There may be good policy in retaliations of this kind, when there is a probability that they will procure the repeal of the high duties or prohibitions complained of. [...] To judge whether such retaliations are likely to produce such an effect, does not, perhaps, belong so much to the science of a legislator, whose deliberations ought to be governed by general principles, which are always the same, as to the skill of that insidious and crafty animal vulgarly called a statesman or politician, whose councils are directed by the momentary fluctuations of affairs.

## 2 CANADA'S COMPETITIVE OIL MARKET: A UNIQUE CONTEXT

Canada and the United States are distinct from other major oil-producing nations in that we allow (and mandate) competition in the sector rather than managing national crude oil production through a state-owned oil company. Other countries with large crude oil reserves typically manage national production through a state-owned oil company. The disparity is clearly illustrated by a ranked list of countries showing the state-owned oil company and indicating its overall oil reserves.

**Table 1: Countries Ranked by Crude Oil Reserves**

| Rank | Country | State Owned Company | OPEC Member | Reserves (Billions of Barrels) |
|---|---|---|---|---|
| 1 | Venezuela | Petróleos de Venezuela | Yes | 304 |
| 2 | Saudi Arabia | Saudi Aramco | Yes | 267 |
| 3 | Iran | National Iranian Oil Company | Yes | 209 |
| 4 | Iraq | The Iraq National Oil Company | Yes | 201 |
| 4 | Canada | N/A | No | 170 |
| 6 | United Arab Emirates | The Abu Dhabi National Oil Company | Yes | 113 |
| 7 | Kuwait | Kuwait Petroleum Company | Yes | 102 |
| 8 | Russia | Rosneft | Yes (OPEC+) | 80 |
| 9 | United States | N/A | No | 74 |

Source U.S. Energy Information Administration (2024)

Canada and the United States are the only two countries in the top 12, and the only two countries with more than 30 billion barrels in reserve, that do not have a state-owned oil company controlling national production. They are also the only two countries in this group that are not members of OPEC or OPEC+. The importance of state-owned enterprises in this context relies on the recognition that state-owned enterprises and cartels (like OPEC and OPEC+) are able to make strategic decisions regarding production and supply levels to drive up prices or stabilize markets based on government policy objectives.

In contrast, Canadian and U.S. oil industries are governed by competitive market dynamics, with private companies competing against one another in an open market. The decision to maintain a competitive oil market in Canada and the United States is a deliberate choice, rooted in the belief that free markets lead to more efficient and beneficial outcomes for both producers and consumers. By fostering competition, these countries aim to balance the interests of oil producers, who seek profit maximization, and consumers, who benefit from lower prices and market-driven competition.

However, while the choice to support competitive markets is economically sound under typical conditions, it is important to understand how this framework interacts with strategic production decisions.

## 3 MARKET POWER AND THE ROLE OF COLLUSION

In a truly competitive industry, individual firms have limited market power. A single producer in such a system cannot unilaterally reduce production to increase prices, as other firms will likely step in to fill the gap, thus keeping prices stable. If a company tried to cut production on its own in order to drive up market prices, it would quickly lose market share to competitors who could profitably expand their own output to meet demand. This is how competitive markets work to ensure prices can't rise in a meaningful way as a result of any single firm's unilateral actions.

However, this is not the case for large state-owned oil producers or powerful coalitions of firms like OPEC. These economic agents possess sufficient market power to reduce production significantly, driving up prices without fearing a loss of market share. This strategic control of production levels allows these entities to balance output restrictions with the desired price increases, capitalizing on their size and market influence.

The functioning of cartels like OPEC is more complicated and often characterized by infighting and individual members trying to cheat on collusive agreements. However, the basic principle remains: large, state-backed producers and international cartels can exert significant influence over market prices through co-ordinated production cuts. When acting optimally to maximize their own profits, these agents will reduce production to drive up prices. They will do this until the point where any further increase in prices is more than offset by the reduction in quantity. But even if they aren't totally optimizing production for profitability (as may be the case for a cartel like OPEC, which needs to balance the potentially disparate objectives of its members), production levels will be lower than if the market was being served by many competing companies rather than a single (or small number) of large producers.

## 4 THE CANADIAN DILEMMA: LIMITING COLLUSION TO PROTECT CONSUMERS

In Canada, the federal *Competition Act* prevents firms from colluding to artificially reduce production and raise prices. Collusion harms consumers by allowing firms to co-operate in ways that reduce supply and increase prices, as explained in the preceding section. The *Competition Act* aims to prevent this by ensuring that producers cannot co-ordinate actions that would lead to higher prices for consumers. It prevents the domestic creation of exactly the kind of cartel OPEC embodies internationally.

Since the U.S. is the largest consumer of Canadian crude oil (absorbing approximately 80 per cent of Canadian exports), the *Competition Act* in effect protects both American and Canadian consumers from potential collusion by Canadian producers. The *Competition Act* effectively limits the potential profits of Canadian oil producers in order to protect both Canadian (20 per cent) and American (80 per cent) consumers from price manipulation.

While this protective framework is generally beneficial to the aggregate North American economy, it also means that Canadian oil producers are unable to pursue the kind of collusive market power-oriented profit-maximizing strategies used by state-controlled enterprises in other nations.

## 5 STRATEGIC CURTAILMENT OF OIL PRODUCTION

The title of this paper indicates that curtailment and collusion are heterodox strategies. Here, in section 5, I admit that this is at least partly disingenuous framing. Curtailment has been used at least three times by the Alberta government, albeit in circumstances not typically described as a trade war.

In 1980 the federal government implemented a petroleum and natural gas revenue tax (PGRT) as part of the infamous National Energy Program (NEP) and the province responded with production cuts.

The PGRT was "set at a rate of 8% of net operating revenues related to the production of oil and gas, including income from oil and gas royalty interests …'' Alberta's reaction was immediate and negative. Two days after Ottawa introduced the NEP, then-premier Peter Lougheed announced cutbacks in conventional oil production (a total of 180,000 b/d, to be implemented in three stages from November 1980 to July 1981) and the cessation of any approval for new tar sands projects (MacFadyen and Watkins 2014, 331).

The provincial government successfully caused economic damage to Eastern Canada (through higher prices), requiring the federal government to provide price relief through a special compensation charge.

The province again restricted production via well shut-ins briefly in 1985 and 1986 due to a pipeline capacity issue. During this time, Alberta pro-rated output from light crude fields because it was not feasible to shut in heavy wells.[1] Finally, faced with insufficient export capacity and climbing WTI to WCS differentials in 2018 (i.e., domestic prices falling substantially relative to U.S. hub prices) the Alberta government again mandated production cuts, or curtailment on Alberta producers. The abstract from Schaufele and Winter (2023) provides a succinct yet sufficiently detailed summary of the policy, its implementation and its results:

> In January 2019, the Canadian province of Alberta enacted limits on crude oil and bitumen production. These production controls, a policy referred to as curtailment, represent a shift for a government that historically avoided market intervention. The policy was designed to shrink a growing and prolonged price differential between the Western Canadian Select price of oil, the key benchmark for Alberta's heavy oil production, and the West Texas Intermediate benchmark. The curtailment created artificial scarcity, shrinking the price differential from more than $40 USD per barrel in November 2018 to less than $15 USD per barrel in February 2019. In the process, this policy transferred market surplus from refiners, mainly those in the US Midwest, to producers in Alberta. We review this large-scale market intervention and calculate the magnitude of the economic transfer. We find the curtailment increased producer surplus by $659M CAD per month and reduced consumer surplus by $763M per month. At the margin, every $1 reduction in consumer surplus translates into a $0.71 gain in producer surplus. We further show that if the Government of Alberta's objective was to maximize short-run producer surplus, it should further scale back production, setting the curtailment rate at 25% rather than the initial 8.7%.

[1] This assertion is based on personal correspondence with Robert Skinner and corroborated in part by Hollingsworth and Snider (1986). Timeliness of publication prohibits attempts to search for more archival corroboration.

These prior experiences do not exactly mirror the current circumstances; however, they do stand as evidence that the restriction of output to drive up prices is more than a theoretical concept when it comes to the Alberta market. The open question, which theory can help anticipate but only experience can prove, is whether curtailment will benefit the province (and result in higher prices) in this case.

With respect to a trade war, curtailment works by replicating the kind of industry-wide profit-maximizing strategies that would occur under a profit- maximizing state-owned oil company or an industry cartel (in the absence of the *Competition Act* provisions prohibiting that outcome). If effective, higher prices resulting from reduced production could help boost provincial revenues through increased royalties. This would harm domestic consumers through higher consumer prices, but the additional implied public revenues would likely be sufficient to more than offset that harm.

The 2006 Alberta prosperity bonus cheques (colloquially known as "Ralph Bucks") are illustrative here. High North American natural gas prices in 2006 prompted the Alberta government under Ralph Klein to pay out $400 prosperity bonus cheques to any Alberta resident who filed a tax return. Analysis indicates that these payments (fully funded by the resulting increase in royalties) more than compensated Alberta consumers for the higher natural gas prices (Fellows, Tombe and Boyd 2018). That said, the bulk of these revenues would accrue to the Alberta government while a large proportion of the affected consumers reside in other provinces.

## 6 *COMPETITION ACT* EXEMPTIONS

While curtailment has the benefit of historical precedent under the Lougheed government in 1980, the Lougheed and Getty governments in 1985/86 and the Notley and Kenney governments in 2019/20, it does require action on the part of the Alberta government. Should we have reason to consider policies that could be unilaterally imposed by the federal government, then we could consider policy choices that would otherwise help the industry mimic outcomes that would be produced by curtailment.

As indicated above, the *Competition Act* prohibits the type of collusion that would be required for the industry to work together to maximize joint profits (rather than each firm unilaterally attempting to maximize its own individual profits).

Specifically, section 45 of the *Competition Act* (R.S.C., 1985, c. C-34) states:

> 45 (1) Every person commits an offence who, with a competitor of that person with respect to a product, conspires, agrees or arranges
>
> (a) to fix, maintain, increase or control the price for the supply of the product;
>
> (b) to allocate sales, territories, customers or markets for the production or supply of the product; or
>
> (c) to fix, maintain, control, prevent, lessen or eliminate the production or supply of the product.

The act further states:

> Every person who commits an offence under subsection (1) [...] is guilty of an indictable offence and liable on conviction to imprisonment for a term not exceeding 14 years or to a fine in the discretion of the court, or to both.

However, if the sector were to be granted an exemption from this provision until the U.S. lifts the tariffs prompting this response, the industry could attempt a collusive outcome. This temporary exemption would allow producers to engage in co-ordinated production curtailment, mimicking the type of strategic behaviour seen in state-controlled oil companies and cartels. In this scenario, oil producers could reduce output, thereby driving up prices, while the provincial governments (mainly Alberta) would benefit from higher royalty revenues anyway. The same arguments about offsetting the economic strain on domestic consumers described in the prior (curtailment) section would continue to apply here.

In addition to being an action that the federal government could unilaterally take, this approach has one small notable advantage over provincial government curtailment.

The advantage is that the colluding firms may be better positioned to choose the level of aggregate production that would maximize industry profits. This would be true if the colluding firms are better informed about the shape of the export and domestic demand curves compared to provincial governments. However, there are several disadvantages involved in attempting to use collusion as a trade war strategy.

Even exempt from prosecution, firms may be unwilling or unable to collude. The potential inter-firm relationships are by no means predictable, and it is possible that even with a desire to collude and freedom from prosecution, co-ordination costs or some other related institutional element would impose a co-ordination failure on these firms.

Collusion may also work too well and could have consequences that last beyond the current trade war (if it ends). By establishing inter-firm relationships that facilitate collusion, a policy intended for short-term application may lower co-ordination costs to the point where future collusion becomes more likely even under the threat of prosecution.

The creation of a single collusive entity in the sector also raises the possibility of market segmentation, wherein the effective cartel is able to price-discriminate, offering specific buyers different prices without the ability to arbitrage. Should this happen, it is possible that domestic consumers (who may have more inelastic demand) would face larger price increases when compared to export consumers.

Collusion also risks further escalating U.S. aggression. While this is true of any trade war retaliation strategy, the U.S. has drafted legislation specifically to combat crude oil export cartels (United States Congress 2023). Similar legislation has been introduced 16 times since 2000 without success, having met heavy resistance from the U.S. oil industry (Learsy 2012). However, it is possible that the U.S. would react differently to a new cartel forming in Alberta.

## 7 THE BENEFITS OF PRODUCTION REDUCTIONS OVER EXPORT RESTRICTIONS

The most important element of both policies (curtailment or exemption from competition legislation) is that they adjust production at the firm level rather than trying to constrain industry exports.

Unlike export restrictions or cutting supply off entirely, curtailment or collusion offer clear benefits to the Canadian economy because they mitigate competition between firms for the remaining market. This boosts public revenues and private profits while shifting the tariff burden onto consumers (most of whom are in the United States).

An export tax would similarly generate domestic public revenues but would do so at the expense of consumers and producers. Production reductions and an export tax would both create dead-weight loss, but the export tax option doesn't shift the burden of this deadweight loss towards consumers, meaning the Canadian economy feels more of the burden.

Export restrictions will also fail to achieve the same effects, as domestic producers would continue to compete with each other, leading to price reductions rather than increases and exposing Canada to more of the burden.

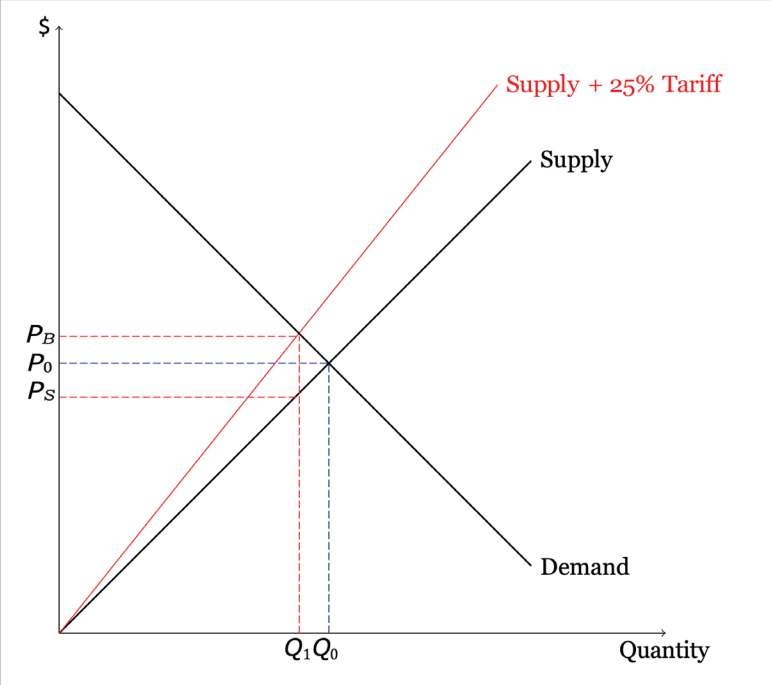
Curtailment and collusion would both require careful consideration of the political ramifications, particularly in light of Canada's commitment to free- market principles and the potential for public backlash. Domestic prices would rise under either policy (assuming the policy is effective). While reducing output is likely a net positive to the Canadian economy, there will be gains and losses that will not be equally distributed.

## 8 A SHORT TECHNICAL EXPLANATION

Typical principles textbook models for tariffs and trade focus on the importing country (who levies the tariffs on imports) rather than the exporting country. If we consider the impacts of a U.S. tariff placed on Canadian to U.S. trade, we can model this the same way we would think about a proportional tax on a supplier in a standard supply and demand model.

To illustrate these points, let's work with a simplified hypothetical market. Start by assuming a standard demand-and-supply relationship with upward sloping supply and downward sloping demand. The imposition of a 25-per-cent tariff imposed by an importing country (demand) on an exporting country (supply) can then be depicted as in Figure 1.

## Figure 1: Putting a Tariff on a Typical Export Market




The imposition of a 25-per-cent tariff rotates the supply curve such that, for any point on the original supply curve, the new supply curve (in red) shows a price 25 per cent higher for the same quantity of output. In a typical market with upward sloping supply and downward sloping demand, the tariff introduces a change in the equilibrium outcome to a lower quantity ($Q_0 \rightarrow Q_1$) while also increasing the price paid by (foreign) buyers ($P_0 \rightarrow P_B$) and reducing the price received by domestic sellers ($P_0 \rightarrow P_S$). Note that the new buyer price ($P_B$) is 25 per cent higher than the new seller's price ($P_S$) and that the burden of the tariff is shared by sellers (who receive a lower price) and buyers (who pay a higher price).

The share of tariff burden borne by buyers (in the U.S.) and sellers (in Canada) depends on the relative elasticities of demand and supply (this is analogous to thinking about the relative slope of the demand and supply curves at the current equilibrium price and quantity).

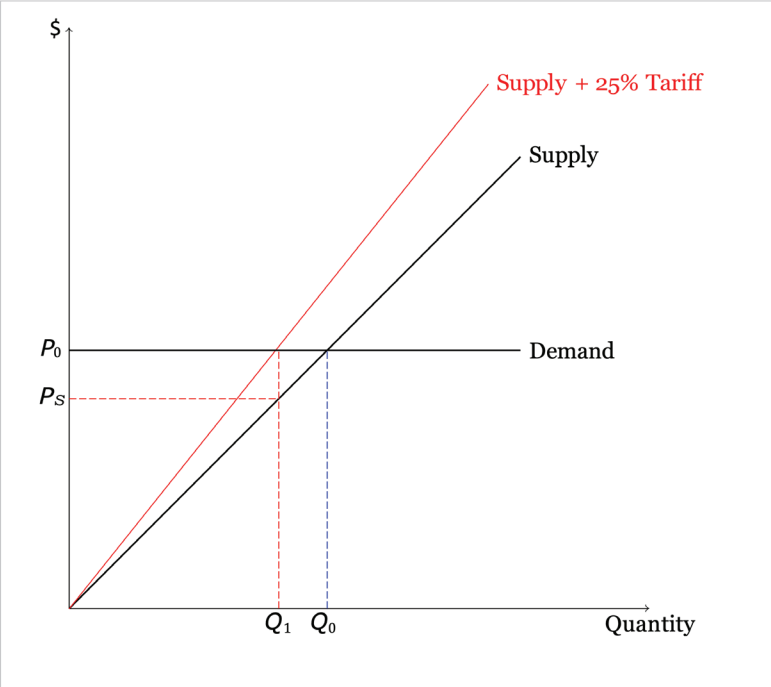
While there are good and credible estimates of the relative elasticities (Schaufele and Winter 2023, Table 3) the basic theory embodied in Figure 1 cannot tell us exactly how the burden will be shared between sellers and buyers. However, it does help in understanding how the slope of the demand and supply curves affects the distribution of the economic burden.

In early January, Trump claimed: "We don't need anything they have" in reference to his belief that the U.S. economy does not need to rely on goods imported from Canada (Radio-Canada International 2025).

If we assume that this statement is true and further hypothesize that American consumers are not willing to pay any more than they currently pay for Canadian crude oil exports, then we can modify Figure 1 to represent a trading relationship where Canadian exporters are price takers (meaning that no reduction or increase in quantity can change the price at which American buyers are willing to purchase Canadian goods).

In this hypothetical situation, regardless of domestic action to reduce output (through curtailment or collusion), the Canadian economy will bear the full burden of the tariff. I depict this in Figure 2.

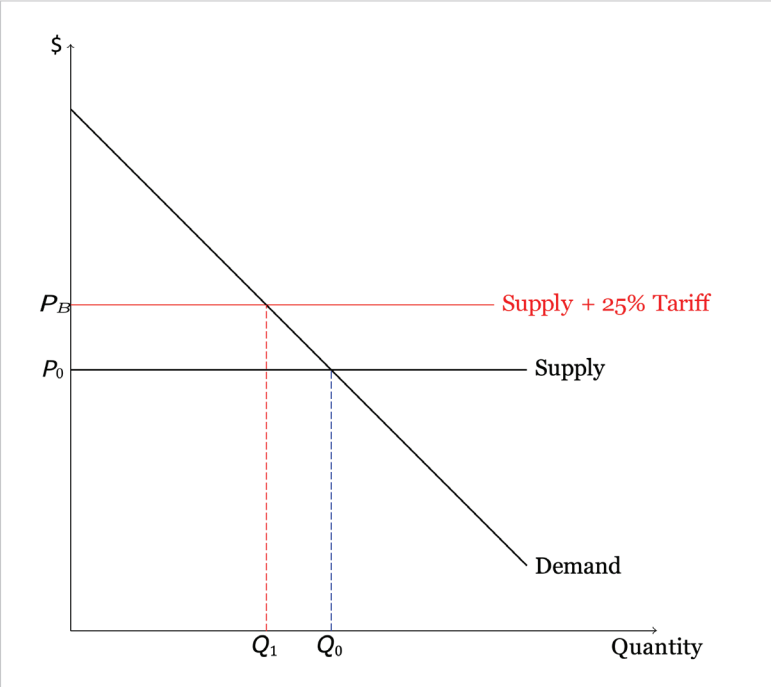
**Figure 2. Putting a Tariff on an Export Market with Perfectly Elastic Demand**




The imposition of a 25-per-cent tariff again rotates the supply curve such that, for any point on the original supply curve, the new supply curve (in red) shows a price 25 per cent higher for the same quantity of output. In an atypical market with upward sloping supply but flat (perfectly elastic) demand, the tariff introduces a change in the equilibrium outcome to a lower quantity ($Q_0 \rightarrow Q_1$) but this does not result in an increase in the price paid by (foreign) buyers. However, the tariff does induce a reduction in the price received by domestic sellers ($P_0 \rightarrow P_S$). Note that the buyer price (which remains unchanged) is 25 per cent higher than the new seller's price ($P_S$) and that the burden of the tariff is entirely borne by sellers (who receive a lower price).

Now let's consider the other extreme, another hypothetical situation wherein demand is still downward sloping and supply is perfectly elastic (such that sellers collude and agree not to reduce prices at all in the face of the tariff). This outcome is depicted in Figure 3.

### Figure 3. Putting a Tariff on an Export Market with Perfectly Elastic Supply




The imposition of a 25-per-cent tariff shifts the supply curve such that, for any point on the original supply curve, the new supply curve (in red) shows a price 25 per cent higher for the same quantity of output. In an atypical market with downward sloping demand but flat (perfectly elastic) supply, the tariff introduces a change in the equilibrium outcome to a lower quantity ($Q_0 \rightarrow Q_1$) but this does not result in a decrease in the price received by (domestic) sellers. However, the tariff does induce an increase in the price paid by (foreign) Buyers ($P_0 \rightarrow P_B$). Note that the buyer price ($P_B$) is 25 per cent higher than the seller's price ($P_0$) and that the tariff's burden is entirely borne by buyers (who pay a higher price).

In reality, the export market for Canadian crude won't look exactly like any of these stylized models; however, elasticity estimates such as those in Schaufele and Winter (2023) suggest that the current supply curve slopes upwards and the demand curve slopes downward. What is more important is the fact that curtailment or collusion make the supply curve more elastic. In so doing, this makes the market look more like Figure 3 and less like Figure 1, shifting the burden of the tariff onto the (mostly foreign) buyers.[2]

In addition to the elasticity estimates in Schaufele and Winter (2023), there are some simple observations to support the assertion that U.S. demand for Canadian crude isn't perfectly elastic. Specifically, most Canadian crude exports flow into the U.S. Midwest, specifically an area designated as PADD 2.[3] Canadian imports represent the dominant supply of crude oil into PADD 2, accounting for over 2/3 of the available supply in that region. Canada also represents

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2 An additional departure from these simplified graphical models: collusion would change the initial pre-tariff equilibrium as well. Specifically, the intersection of the pre-tariff collusive supply curve and the demand curve would occur at a lower quantity and a higher price.

3 PADD is Petroleum Administration for Defense Districts. These districts were created during the Second World War to organize refined petroleum product supply.

the dominant crude oil supplier to PADD 4 (the Rocky Mountain region). Additionally, pipelines flowing into PADD 2 mostly come from Canada and the refineries in PADD 2 that currently accept Canadian imports are configured to accept heavy Alberta oil. They cannot be easily or quickly reconfigured to take alternative supplies. Pipelines exiting PADD 2 cannot be reversed without regulatory approvals and new capital investment. While PADD 4 is not a large market for Canadian exports, these exports also account for a significant proportion (nearly half) of PADD 4 demand (Canadian Association of Petroleum Producers 2024).

PADDs 2 and 4 do have some optionality for alternative supply. They may be able to move crude volumes into the region by rail, truck or barge up the Mississippi. However, each of these options may require new infrastructure (rail terminals, other new fixed and rolling stock infrastructure etc.).

Even with these options, it is unlikely that U.S. demand would be so elastic as to render this strategy ineffective in the short run. But there is a risk that undertaking the curtailment or collusion strategies could induce import market diversification strategies in PADD 2 and PADD 4, which may weaken the Canadian export position in the long run if and when tariffs are repealed.

## 9 CONCLUSION

This article presents two non-traditional methods of potential retaliation should Canada end up in a trade war with the United States.

Alberta has previously used curtailment and this option can only be implemented constitutionally at the provincial level. Alternatively, the federal government could temporarily exempt crude oil-producing firms from section 45 of the *Competition Act*. Doing so would allow producers to lawfully collude in an attempt to maximize industry profits rather than unilaterally attempting to maximize firm-specific profits.

It is possible such a policy change would have no effect, since creating the opportunity for lawful collusion would not necessarily motivate collusive behaviour. There is also a risk that such exemptions, offered in the short run as a trade war strategy, could increase the propensity for firms to unlawfully collude once the crisis presented by a trade war passes.

It is likely that reasonable levels of curtailment or successful industry collusion would lead to higher crude oil prices (in Canada and in PADDs 2 and 4 in the U.S.) while improving industry profits and increasing royalty revenues. However, these options need additional careful consideration prior to implementation. To be very clear: the purpose of this paper is not to advocate for any specific policy choice, but rather to encourage policymakers to consider these options as part of a trade war armoury and to recognize that they are far superior to the energy export tax and energy export constraint options currently being discussed.

While curtailment has been historically implemented in Alberta, the circumstances were different from the current situation and I can find no evidence of intentionally lawful collusion being implemented as a trade war strategy. As a result, these strategies are hypothetical and theoretical and should be treated as such. Theory can only take us so far.

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