Potential Impacts of Duty Drawbacks on U.S. Wine Production and Trade

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What are Drawbacks?

Drawbacks are a rebate of various *duties and taxes paid on imports* when a firm *exports* substitutable goods.

Year 1   Year 1-5

Firm A imports wine from Country Z

Firm A pays duties and federal excise taxes

Firm A exports substitutable U.S. wine to Country Y

Firm A files a drawback claim

Firm A receives 99% of duties and federal taxes paid on the imports from Country Z
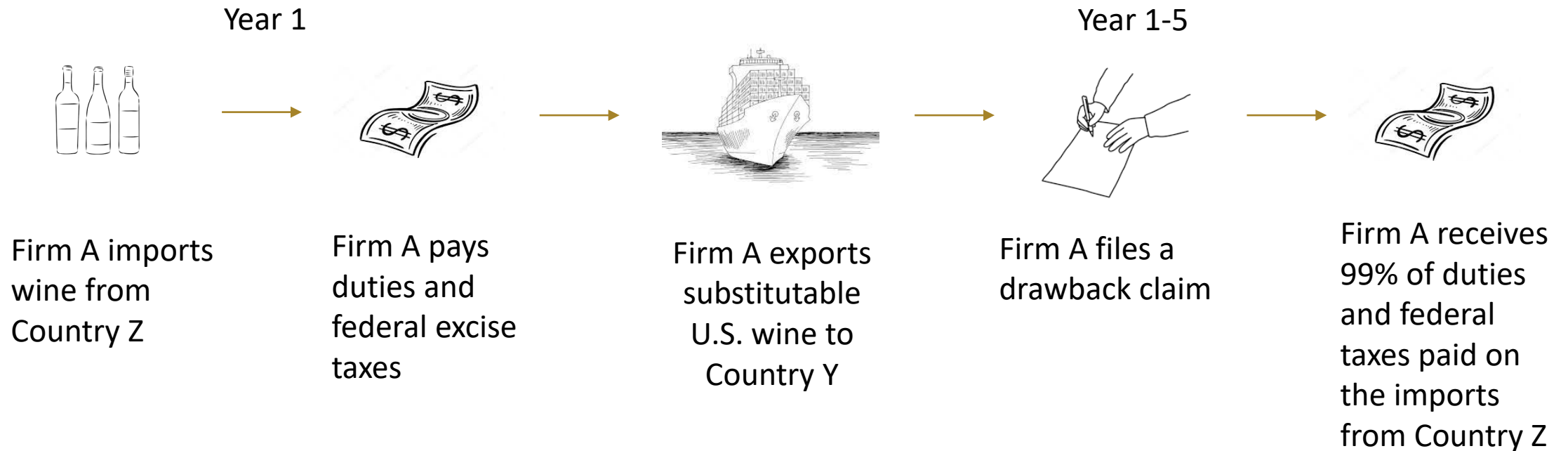
What are Wine Drawbacks?

Wine drawbacks can use the usual substitution requirements or can use a wine-specific carveout: for table wine (≤14% alcohol by volume) the claimed imports and exports must:

- Be the same color, and
- Have no more than 50% variation in price

Wine drawbacks can rebate:

- Import tariffs (0–14 cents per liter based on source and container)
- Federal taxes (28.3 cents per liter)

Motivation

Drawbacks are a unique policy instrument because they directly link imports and exports at the firm level. They may have **different effects** than just lowering a tariff.
- Do we need to take drawbacks into account when modeling tariff reductions and FTAs?

Wine drawbacks include a substitution carveout that is **less restrictive than the default** HTS matching, making it a great product to focus on.

We have current **wine drawback claims data**, improving our ability to model and analyze the effects.

Our first foray uses partial equilibrium modeling to help answer two questions:
- How have drawbacks changed wine **import sources and export destinations**?
- How have drawbacks impacted the production share of **large vs small wine producers** in the United States?

Data

DataWeb 10-digit imports (HTS) and exports (Sched-B) by source/destination.

◦ Value and quantity. Use average unit values as model prices.

Drawback claims and liquidation used for validation but not currently as an input.

◦ We can see claims which are linked to specific imports/exports. Includes anonymized claimant ID so we can see if some claimants use drawbacks more often than others.

◦ We see dates and HTS numbers but *don't* see source/destination or most other shipment information.

Miscellaneous wine information.

◦ Differences in definitions and aggregation means these other data don't always link nicely to trade data.

U.S. Wine Trade
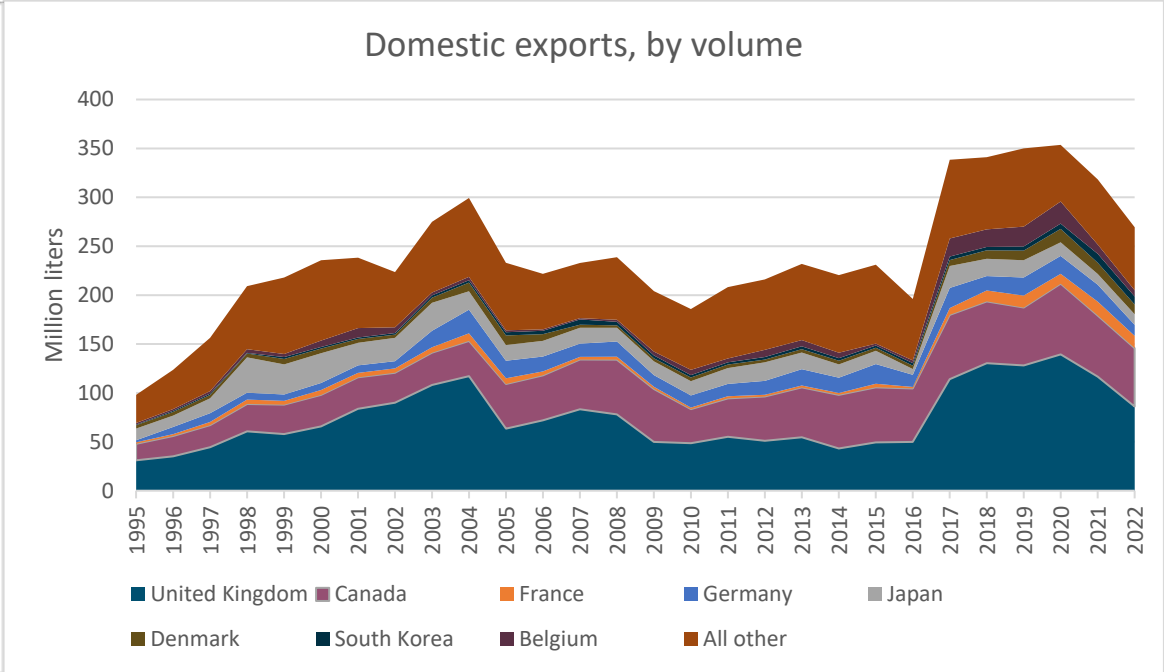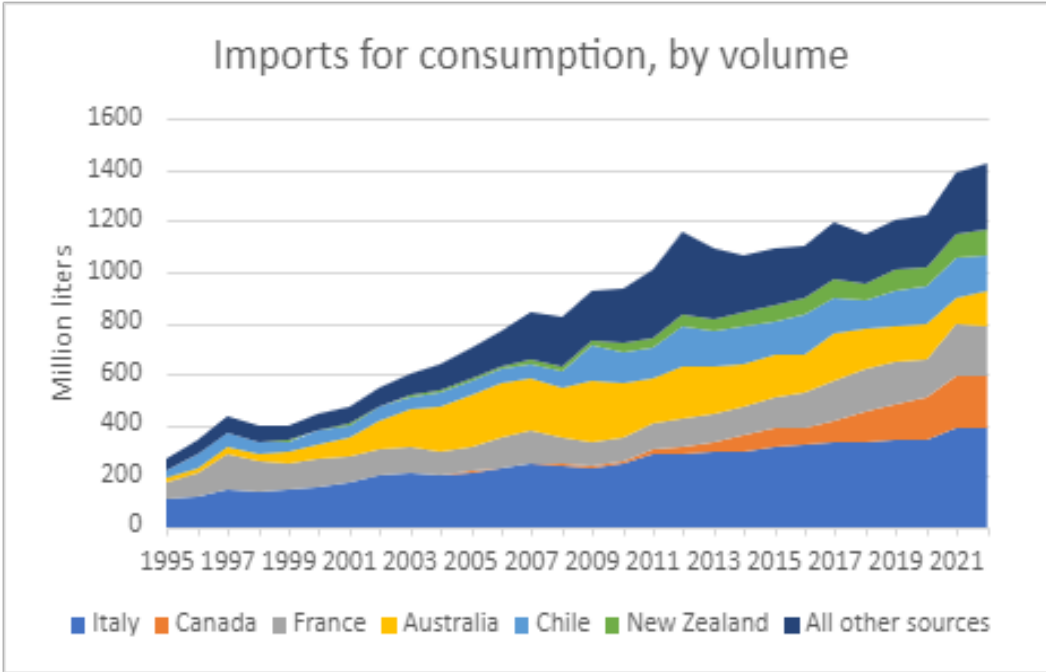
Wine Drawback Utilization

The U.S. consumed 3,254.6 million liters of table wine in year 2018.
- ◦ Firms have 5 years after import to claim drawbacks.

Of that, 860.8 million liters were imported table wine.

Of that approximately 58.0 million liters of table wine were used for **drawbacks**.
- ◦ In terms of liters claimed, half a dozen claimants account for nearly all wine drawbacks.
- ◦ Utilization is higher for non-bottled (2+ liters) table wine.

Model Overview

Focusing on non-bottled wine (2+ liters) for initial analysis.

Parent companies (h) own several "brands" of wine.
- Brands are identified by source (i), destination (j), and tier of quality.
- Parent sets prices for each brand to maximize their total profits.

A small number of parent companies account for approx. 2/3 of imports and production, with smaller monopolistically competitive firms account for the rest.

Parent companies receive drawbacks based on their imports and exports.
- Maximize rebate by claiming higher duties from MFN sources first.

Demand Functions

U.S. consumers in the model have CES preferences over the brands available to them:

$$q_{hij} = a_{hij} p_{hij}^{-\sigma} P_j^{\sigma-1} K_j$$

- a_{hij} is a brand-specific demand shifter, p_{hij} is the brand-specific price, and K_j captures aggregate demand in destination j.
- σ is an elasticity parameter that captures substitutability across brands. Currently set at 3.0.

The price index P_j is set to 1.0 for foreign destinations and for the U.S. is calculated as:

$$P_0 = \left(\sum_{h,i} a_{hij} p_{hij}^{1-\sigma} \right)^{\frac{1}{1-\sigma}}$$

Parent Company Profit Maximization

Parent companies act as oligopolists and set the prices of all brands they own to maximize their total profits, taking into account that they can impact the price index due to their size:

$$\Pi_h = \left(\sum_{i,j} q_{hij}(p_{hij} - x_j - \tau_{ij} - m_{hij}) \right) + D_h$$

- x_j and τ_{ij} are the excise tax and import tariff, respectively. m_{hij} is the marginal cost of producing a unit of brand hij.

Parent-level drawbacks depend on imports and exports (γ is amount of rebate received, minus any marginal cost of using drawbacks).

$$D_h = \gamma[d_1(x_0 + \tau) + d_0 x_0]$$

- $d_1 = \min(\sum_{i \in MFN} q_{hi0}, \sum_{j \in J_1} q_{h0j})$
- $d_0 = \min\left((\sum_{i \neq 0} q_{hi0}) - d_1, (\sum_{j \in J_1} q_{h0j}) - d_1\right)$

Drawbacks Removed: Counterfactual Results

Trade Flow	Firm Type	Source Type	Destination Type	Change in Price (%)	Change in Quantity (%)
Exports	Large	USA	DB-eligible	4.6	-17.3
	Large	USA	DB-ineligible	0.0	0.0
	Small	USA	DB-eligible	0.0	0.0
	Small	USA	DB-ineligible	0.0	0.0
Imports	Large	MFN	USA	7.1	-10.9
	Large	FTA	USA	4.2	-10.0
	Small	MFN	USA	-1.1	11.8
	Small	FTA	USA	-1.1	11.8

Conclusions & Next Steps

Drawbacks are used for a small share of overall wine imports but we know that they are important for some subsets, particularly for bulk wine.

Model suggests that in the absence of drawbacks:
- Exports from large firms to drawback-eligible destinations would decrease.
- Imports by large firms would decrease, partially offset by increased imports by small firms.

How can we improve the current model?
- Can we account for lower drawback utilization seen in the data compared to what the model expects?

What other types of modeling and analysis can we use to answer these and other drawback questions?