

Supply-Management and Price Ceilings on Production Quota: Future or Folly?

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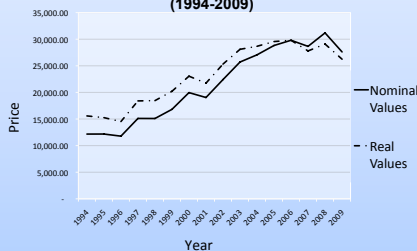
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Problem

- Since the inception of supply-management, the Canadian Dairy industry has relied on production quotas to restrict access and regulate output volume.
- A quota exchange is used to facilitate the transfer of quota between producers.
 - Each province has its own exchange, independent of the others.
- This study focuses solely on the Ontario exchange.
- By 2006 the unit price of production quota had increased drastically, nearly tripling in value since the mid-90's.
- Some felt that high quota values had surpassed the productive value of the asset and were hindering the industry in several ways:
 - Increased cost of expanding production
 - Barrier to new entrants
 - External criticism/perceptions
- This led to the Dairy Farmers of Ontario (DFO) intervening on the exchange in order to stop and reverse this price trend.

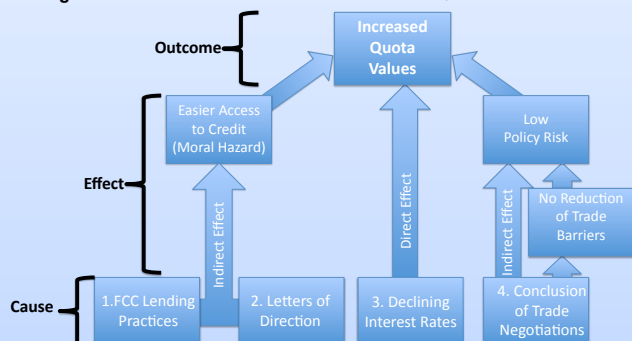
Figure 1: Real and Nominal Quota Values in Ontario (1994-2009)



Causes

1. FCC Lending Practices
 - Permitted the use of quota as collateral which allowed for easier access to credit
2. Letters of Direction
 - A policy which acts as creditor insurance
3. Declining Interest Rates
 - On average, since 2000 the prime interest rate has declined by 0.5% each year
4. Conclusion of Uruguay Round Trade Negotiations

Figure 2: The Causes and Effects of Increased Quota Values

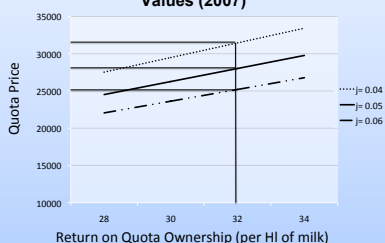


- FCC lending practices and Letters of Direction indirectly stimulated the growth of quota values by:
 - Allowing farmers to use their existing quota holdings as collateral on loans.
 - Letters of Direction decrease the risk of loan default, making dairy producers relatively more attractive to lenders.
- Low interest rates made it cheaper for farmers to borrow money.
- Minimal liberalization of the dairy sector after the conclusion of the Uruguay Round trade negotiations signaled the sustainability of supply-management.

The Role of Decreased Policy Risk

- The term 'policy risk' refers to the perceived risk associated with investing in quota – i.e. if it was thought that supply-management was going to end policy risk would be high.
- Holding constant:
 - Interest rate at 6% (r)
 - Quota Rent at \$32/hl
 - Growth Rate at 1% annually (g)
- Increasing the policy risk only slightly results in decreased prices:
 - at 4%, CV = \$31 461.28
 - at 5%, CV = \$28 020.20
 - at 6%, CV = \$25 204.78

Figure 3: The Effect of Policy Risk on Quota Values (2007)



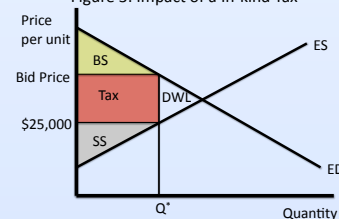
Message: Policy risk or the perceived sustainability of supply-management influences quota prices

DFO Intervention

In response to escalating quota values, the DFO intervened on two occasions:

1. **Progressive Transfer Assessment (November 2006-July 2009)**
 - The rationale behind this policy was that speculation was causing the price increase.
 - The policy imposed an 'in-kind' tax on producers selling quota in order to fix the unit price received by sellers at \$25 000.
 - The tax was then redistributed, based on one's quota holdings, to all producers in the industry
 - Buyers were permitted to bid freely which allowed the market to determine the purchase price.
 - It was believed the policy would remove speculative behaviour from the exchange, while allowing those producers with the highest willingness-to-pay to acquire quota
 - However, it failed to curb the quota price escalation on the exchange, which suggests that speculation did not have as significant a role as the DFO anticipated. This led to the policy being replaced in July 2009.

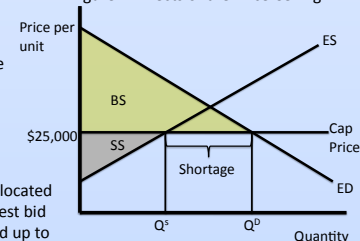
Figure 3: Impact of a In-kind Tax



2. **Cap policy (July 2009 – Current)**

- The policy establishes a price ceiling which establishes the price at \$25 000/unit for both sellers and buyers.
- With the price ceiling below the natural equilibrium in the market (Figure 4), more producers are willing to buy quota due to the lower price
- If a shortage occurs distribution of available quota occurs in two rounds:
 - Round 1: the first 50% of quota supplied is distributed in 0.1 kg increments
 - Round 2: the remaining quota is allocated pro rata to producers with the highest bid up to 10% of their current quota holdings.

Figure 4: Effects of the Price Ceiling



Welfare implications

- Under the Progressive Transfer Assessment:
 - 7.6% of total welfare is lost due to the tax (DWL/total welfare)
 - Buyers of quota suffer 2.26 times more loss in welfare than sellers (Change in CS/Change in PS)
- Under the Cap policy:
 - Costs sellers \$0.48 for every dollar gained by buyers (change in CS/change in PS)
 - It costs \$1.08 to transfer \$1.00 to quota purchasers (DWL/change in CS)
- **Message:** the Cap policy is a highly inefficient means of transferring welfare from sellers to buyers.

Conclusions

- Under both policies the quantity supplied decreases since fewer producers are willing to supply the market at the lower price (Figures 3 and 4).
- DFO intervention achieved its objective but results in a loss of welfare (Dead Weight Loss) equal to 4.1 million or 2% of Ontario Farm cash receipts in 2007.
- Progressive Transfer Assessment is preferable to the Cap policy since it allocates the available quota to those who value it the most, and maintains efficiency in the market – i.e. no stagnation.

Policy Recommendations

1. Lower the milk price
 - Reduces quota rents (milk price – marginal cost), which could in turn reduce the return to quota.
2. Institute a fixed tax rate (of around 2%) on all purchases of ongoing operations or transfers through on the exchange
 - Two-quota system where different types of production quota establish the right to produce for different milk prices.
3. Revise Letters of Direction and remove all intervention on the exchange
4. IF the only two policy options are the Progressive Transfer Assessment or a Cap policy, then the former is preferable since producers with the highest willingness-to-pay can acquire the available quota.



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