Welcome to the first student edition of the FARE Share Newsletter. This is a collection of research and articles by students and graduates in the Department of Food, Agricultural and Resource Economics (FARE). They tackle current issues in the dairy industry, including the efficiency of supply management and the Ontario quota exchange market.

Phil Cairns, Senior Policy Advisor, Dairy Farmers of Ontario also provides an industry perspective on the topic.

Our back page previews a FARE study that poses the question: are government transfers to agricultural producers higher when governments of the right are in power? Read on to find out the answer.

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The FARE Share Newsletter features research and analysis from students in the Institute for the Advanced Study of Food and Agricultural Policy in the Department of Food, Agricultural and Resource Economics (FARE).

Supply management remains the most controversial agricultural policy in Canada. Since the 1960s, Canadian dairy production has been limited by production quota, which is bought and sold on provincial quota exchanges. Supply management allows dairy farmers to constrain the quantity of milk, thereby increasing the price and creating above-normal profits.

These profits come at a social cost that economists term “deadweight loss.” In the case of dairy farming, deadweight loss is created because there are consumers who are willing to purchase milk at a price slightly lower than grocery store prices. Further, there are farmers who can profitably supply milk at this price outside of the quota system. By preventing this mutually beneficial transaction, supply management creates a loss to society.

A second issue is the competitiveness of the Canadian dairy industry. Critics of supply management claim the quota system shields producers from competition, reducing the efficiency of the industry. Supporters of the system argue that quota exchanges ensure that quota will flow to the most efficient producers.

In a recent study with Dr. Getu Hailu, FARE Associate Professor, we analyzed the efficiency of dairy farmers in Ontario and New York State between 2006 and 2008. Dairy farms in the United States are not restricted by any quota system, and in the period of our sample, New York farmers received significantly less government support than their counterparts in Ontario. We found, on average, New York farmers are 11% more cost efficient than those in Ontario. This implies that if farms in the two regions faced the same prices, the cost of production for New York farmers would be 11% lower.

The differences in efficiency can be explained by the over-capitalization of Ontario farms, and their over-reliance on homegrown feed. Although New York farms in our sample are on average 75% larger than Ontario farms, we found that size is not important in explaining differences in efficiency between the two regions.

The research shows that the deadweight loss of supply management, while significant, understates the true costs of the program. By reducing competition, the quota system appears to induce poorer managerial decision-making. This inefficiency is passed along to consumers through the pricing formula used by the Dairy Farmers of Ontario (DFO), which bases 40% of price changes on changes in the cost of production.

Canada’s system of supply management has become a thorny issue in recent trade talks, and both Liberals and Conservatives have suggested its removal. The results of this study suggest the Canadian dairy industry would benefit from a period of more vigorous domestic competition, before being exposed to world markets.

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Canadian Dairy Commission and the OMAF – University of Guelph Partnership.
The quota question

By Alex Cairns, FARE Graduate

It’s widely known that the Ontario dairy industry uses production quotas to regulate supply and to achieve the Canadian Dairy Commission’s mandated milk price. Over the years, a combination of efficiency gains and larger farms has led to staggering high milk production quota values. Between 1994 and 2006 increases in quota values began to accelerate beyond what was perceived to be their intrinsic value. In October 1994, the right to produce a kilogram of butterfat per day cost $12,377.69, by October 2006 it had almost tripled to $30,995.00. (See chart.)

This astounding increase in a mere 12 years, resulted in the DFO intervening on the quota exchange. The milk marketing organization was motivated by a concern over the massive cost imposed on new or expanding producers, and the potential financial consequences to highly capitalized dairy farmers if interest rates spiked upwards or trade concessions resulted in lower milk prices.

The million-dollar question is: what caused this prolonged escalation in prices? One theory is “speculation.” In other words, producers were viewing quota as an investment, rather than a productive asset. As a result, an in-kind tax was implemented on quota sales in November 2006. It allowed producers to bid freely on the exchange offering whatever price they were willing to pay, but restricted the price received by those selling their quota to $25,500. The idea was that if speculation was driving the escalation in prices then limiting the price received by sellers would bring quota prices down anecdotally; one would not be willing to pay $500,000 for a house if they knew they could only sell it for $250,000 later. By June 2009, however, high quota prices persisted despite the constrained resale value, suggesting that speculation was not the fundamental force driving prices.

So if it wasn’t speculation, what actually caused the escalation in quota values? Using a capital-asset pricing model, Alex Cairns, FARE graduate, and Karl Meilke, Professor Emeritus, FARE demonstrate that the answer is multi-dimensional. First, due to the implementation of a policy known as the “letter of directions,” a voluntary agreement in which DFO guarantees the repayment of the loan, dairy producers were viewed as low-risk borrowers by lending institutions. This, coupled with record-low interest rates, resulted in low borrowing costs permitting farmers to pay higher prices. Our results also suggest that there was a catch-up phase in quota values as perceived policy risk – the risk of supply management being eliminated receded. Despite high barriers to trade, all previous challenges to supply management have resulted in few concessions of market access. Furthermore, all major political parties still support it. From the perspective of dairy farmers, the decline in policy risk ensured that the returns to quota ownership would be sustained and could justify further investment in quota.

Financial support for this project was provided by the Canadian Agricultural Trade Policy and Competitiveness Research Network.

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FARE Talk

Enlightening discussions about contemporary topics relevant to food, agricultural, and resource economics

Assessing agricultural policy

It is generally accepted that agricultural policies such as subsidies and quota systems are established primarily to benefit the farmer and aid in rural economic development. Assistant Professor Barrett Kirwin from the University of Illinois’ Department of Agricultural and Consumer Economics looked critically at this premise in two recent case studies from the United States. He recently sat down with Brady Deaton, Jr., FARE Talk host and Associate Professor, to discuss his findings.

In an article for the *Journal of Political Economy*, Kirwin presented his research on farmland ownership, motivated by the question: to what extent do agricultural subsidies end up benefiting farmers? For decades economists had been reporting to
Does regulating quota hold back efficient producers? Although the switch away from supply management to free market structure has reported large gains in efficiency in some cases (e.g., the United States tobacco industry), it is unclear whether the removal of supply management will have the same effect on the productive efficiency of the Canadian dairy industry.

A recent study by Rebecca Elskamp, PhD student, and Getu Hailu, Associate Professor, FARE, that examined quota purchases and sales by Ontario producers showed that the provincial quota exchange has been facilitating the transfer of quota towards efficient producers, meaning that the quota market may not be as inefficient as previously suggested.

The study estimates cost and scale efficiencies of a sample of Ontario dairy producers between 2003 and 2005. Producers who purchased quota during that time period had, on average, higher cost- and scale-efficiency scores relative to producers who had sold quota or had not participated in the quota exchange. Approximately 54% of the farmers in the “buyers” category attained a cost-efficient level above the sample mean of 66%, while 80% attained scale-efficiency levels above the sample mean of 86%.

The results of the study indicate that the effect of scale efficiency on producers’ likelihood of purchasing quota is positive and significant, suggesting that farms with larger-scale efficiency tend to buy more milk quota. On the other hand, results suggest that cost efficiency may not affect the decision to participate in the quota exchange, as cost efficiency didn’t explain any variations in quota purchases or sales.

Furthermore, the research shows that farms with underutilized barn space, and farms with a recent history of quota purchase are more likely to purchase quota. This result, coupled with the positive scale-efficiency effect, indicates that producers are responding to performance measures rooted in the scale of the operation.

The findings in this study identify that the “unregulated” Ontario quota exchange is efficient in transferring quota from less scale efficient to more scale efficient producers, and points to the need to reconsider - make a U-turn - the quota price cap policy as it would hold back farm-level productive efficiency gains. Under the current quota price cap, the efficient exchange of quota is jeopardized by the recent sharp decline in trade facilitated by the quota exchange. In addition, the price cap may have severely impaired producers who began expansion of milking facilities prior to this change in policy, as producers are unable to purchase large quantities of quota necessary to reach full capacity and exploit economies of size under the current quota price cap.

Financial support for this project was provided by the Canadian Agricultural Trade Policy and Competitiveness Research Network, which is funded by Agriculture and Agri-Food Canada, the OMAF – University of Guelph Partnership, and the Canadian Dairy Commission.

Congress that the majority of agricultural subsidies were winding up in the hands of landowners rather than the actual farmers; their requests to change the policy were consistently ignored suggesting the possibility of heavy landowner influence among policy makers. In fact, Kirwin was surprised to learn that nearly half of the farmed acres were owned by non-farmers. He was eventually granted access to farm-level data from the United States Department of Agriculture (USDA) and, after careful analysis, was able to draw a surprising conclusion: “Contrary to what has been presumed for decades, instead of the full subsidy dollar going to landlord (through rental fees)... (he) was really only getting 20 cents on the dollar. It wasn’t even close.”

Today, when Kirwin presents this paper, he frequently hears anecdotes confirming that rental rates are more often determined by the unique personal relationships between landowner and farmer, rather than the projected productivity of the farm acreage or the estimated subsidy.

“Quota policy is always subject to review,” says Cairns. “There is no plan to review it right now, but circumstances can change.”

Phil Cairns, Senior Policy Advisor with Dairy Farmers of Ontario (DFO), agrees with the findings of the study conducted by Elskamp and Hailu and says it reflects other important research conducted at the University of Guelph over the years. “The current cap limits production efficiencies,” concurs Cairns, but he is quick to add context to the situation: “We didn’t implement the price cap in 2009 because we wanted to encourage poor efficiency.” He cites the rapid acceleration in quota price during the late 2000s as the primary reason.

“We were very concerned that the prices were getting out of hand. Quota was appreciating 16 percent per year. It was becoming very problematic. Fortunately, the price cap has cooled things down,” he says.

Cairns agrees that the key value of a quota exchange is that it allows quota to flow to more efficient producers. So is DFO considering a U-turn on its quota price cap policy?

“Quota policy is always subject to review,” says Cairns. “There is no plan to review it right now, but circumstances can change.”
Kirwin also conducted collaborative research examining what happened in Kentucky before and after the tobacco quota system ended. The goal of this research effort, published in the American Journal of Agricultural Economics, was to evaluate the impact quotas had on production. He learned that, as in the case of the farm subsidies, the owner of the quota was not always the farmer. Restrictive rules from the 1930s-era program meant that many less productive farms remained in business, while areas with greater productivity were capped in their production targets.

This changed significantly in 2004 when the United States government ended the quota program. Initially, its effect in the lead-up time was to keep many under-producing farms active; non-farmers with quota were entering the market in anticipation of buy-out dollars coming from the government. But when the system finally ended, there was a huge reallocation where almost all tobacco production stopped in some regions, and those that had higher production potential ramped up to offset limits set previously by quotas. After the dust settled, the net result was a significant boost in productivity – 44%.

To listen to the complete conversation and other podcasts, visit the FARE website: http://www.uoguelph.ca/fare/FARE-talk/index.html#policy.

A new study shows liberal fiscal policies for agriculture are common under Conservative leadership. Tor Tolhurst and Shuang Li, M.Sc. students, FARE and John Cranfield, Professor, FARE examined the seemingly contradictory nature of Conservative fiscal support for farmers. Known for espousing small government and fiscal conservatism, Conservative governments in Canada have instead shown a consistently “leviathan” approach to agriculture.

The researchers examined data – specifically the number of Conservative-held seats in parliament relative to direct and indirect federal transfers – over a 25-year period from 1986 to 2010 using figures from the Organization for Economic Co-operation and Development. They also included controls for state of the agricultural economy, trade negotiations, importance of agricultural trade and the general state of the Canadian economy.

The study demonstrated a statistically significant and positive relationship between transfers to agricultural producers and conservative party power. The researchers then went on to ask the natural follow-up question, “Why are governments of the right – against party ideology and rhetoric – leviathan for agriculture?” They outline several theories espoused in research literature, including: successful, well-organized farm group lobbying; vote pandering; and the relationship between the tax burden of farm support relative to national income, among others.

But these theories don’t address the question of “why Conservative parties?” in particular. For this, the researchers found a number of authors who support the notion of a long history of agrarianism that took root over time. This trend was developing at the same time that Liberal parties were aligning themselves with urban and labour interests.

The researchers concluded that these theories might be overly simplistic due to the complexities of the ever-changing makeup of political parties in Canada. Instead, they pointed to their data that suggests the best use of political resources was to capture social conservative and fiscal liberals among agricultural producers. More specifically, investment in agriculture equaled votes from individuals in the margins.

It might surprise some Canadians to know how much of their taxes go to support those in the agriculture industry; it might surprise them even more that the data supports the reality that Conservative governments are often the leviathan for the industry.

“Investment in agriculture equaled votes from individuals in the margins.”

Source: OECD and Parliament of Canada