Welcome Brazilian Co-operative Companies

Co-operatives in New Zealand: the particular case of dairy*

Lewis Evans

Professor of Economics
Victoria University of Wellington
Research Fellow, NZ Institute for the Study of Competition and Regulation

Prepared for the
Brazilian Cooperatives Delegation

3 September 2012, Wellington

* Acknowledgement: some pictures have been taken directly from public documents

(http://iscr.org.nz)
Outline

• Co-operatives in New Zealand

• Co-operatives in New Zealand Dairy
  – Short history to 2000
  – Deregulation in 2000
  – Interaction between regulation and performance in 2001-2010
  – Dairy co-operative Issues today 2010-2012
Co-operative or Investor firms

• Many firms are a hybrid mix of cooperative and investor organisation

• Mix changes over time with changes in
  • technology
  • substitutes, consumer tastes, and
  • capital and labour markets

• The best test of the appropriate organisational structure is the survivor of competition, with legal and regulatory neutrality
New Zealand Co-operatives

- Are in many industries including,
  - agriculture: dairy, meat processing, fertiliser, irrigation
  - supermarkets, electricity lines
  - insurance, finance and banking

- The Co-operative Association reports 55 members about half of which are in agriculture

- Are treated as companies very similarly to investor firms, except for
  - variation in tax treatment of dividends
  - variations in company rules that allow co-op-structure
New Zealand Co-operatives

• Arise as solving combinations of:
  • contracting for reliable service
  • potential market power concerns
  • economies of scale in transactions costs
  • having an industry with a collective voice

• Have changed dynamically
  • competing with other organisational forms
  • with firms switching between cooperative and investor organisation.

• Have a significant presence where there are many stakeholders: e.g. agriculture, insurance and some forms of banking
Importance of NZ Dairy

• Share of NZ exports
  • 1890 7%
  • 1920 22%
  • 1930 42%
  • 2012 25%

• In 2012
  • NZ produces 2-3% of world milk supply
  • NZ exports 95% of milk produced

• NZ produces a very low share of milk supply in any one country, so has negligible market power in world markets despite large share of world trade
NZ Dairy Share of World Trade

New Zealand Share of Global Dairy Product Exports

Source: United States Department of Agriculture.
## Evolution of Dairy Processors

<table>
<thead>
<tr>
<th>Date</th>
<th>Number of Co-operatives (%)</th>
<th>Export</th>
<th>Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>1882</td>
<td>Co-ops starting Investor firms</td>
<td>First frozen shipment</td>
<td>Quality + marketing + price control</td>
</tr>
<tr>
<td>1920s-50s</td>
<td>220-240 (&gt; 50%)</td>
<td></td>
<td>Quality + marketing + price control</td>
</tr>
<tr>
<td>1960s-1980s</td>
<td>100=&gt;20 (100%)</td>
<td>1 Exporter (co-op)</td>
<td>+ subsidies</td>
</tr>
<tr>
<td>1980s</td>
<td>1 Exporter (co-op)</td>
<td></td>
<td>De-regulation of whole economy</td>
</tr>
<tr>
<td>2000</td>
<td>4 (100%)</td>
<td>1 Exporter (co-op)</td>
<td>De-regulation of dairy</td>
</tr>
<tr>
<td>2001</td>
<td>3 (100%)</td>
<td>competitive</td>
<td>De-regulation of dairy</td>
</tr>
<tr>
<td>2012</td>
<td>3 (50%)</td>
<td>competitive</td>
<td>Revise regulation</td>
</tr>
</tbody>
</table>
Evolution of Milk Suppliers
Increase in Size and Decrease in Number
2001-2011: 50% increase in size
Whole Economy NZ Deregulation 1980s
Affected Agriculture:

- Removal of subsidies in 1985 led to
  - immediate reduction in agricultural profitability; recovery in the 1990s
  - major change in agricultural product mix
  - major adjustment away from “uneconomic” use of inputs
  - major enhancement in productivity and quality

- Deregulated agriculture without subsidies 1980s-2012; with increasing environmental regulation

- Dairy de-regulation not complete by 2000.
Dairy Issues in 2000

1. The presence of a single-desk exporter: the Dairy Board

2. The single desk restricted
   1. coordination between foreign customers and domestic supply
   2. Competition between existing co-ops and potential investor entrants

3. Desirable for “workable” competition in 3 Markets
   1. in the farm-gate milk market
   2. in the milk products market (which is competitive because selling in foreign markets)
   3. in the domestic (fresh and confectionery) products market

4. Required removal of the single-desk exporter
Dairy De-regulation 2000/1

2000

Export Markets

Dairy Board

2 co-ops (96% milk) + 2 co-ops (4% milk)

2001

1 co-op (96% milk) Fonterra

Export Markets

2 co-ops (4% milk)
Fonterra in 2001

Constitution

- Fair-value share price
  Shareholders’ council chooses FVS Valuer
- Subordinated milk price
- Shares
  - only held by suppliers
  - 1 class of share
  - 1 share per kg/milk solids

Board

14,000 suppliers

Shareholders’ Council
Fonterra 2001 Fair Value Pricing

Valuer Calculation

Gross revenue
Less operating costs
Less capital costs
Surplus = factory-gate payment for milk only
Why Regulate in 2001?

• Fonterra with 95% of the farm-gate milk market: virtually a monopoly

• Fonterra a monopoly and supplier co-operative:
  • so will not lower the wholesale price of milk to suppliers
  • but may overprice the milk to suppliers

• Bundling dividend and milk price may for periods
  • Produce a relatively high milk price
  • Inhibit legitimate competition
Why Regulate in 2001

Desirable to have workably competitive markets: despite Fonterra’s market share

• Regulatory neutrality for competition among coops and investor firms

• Test the relative efficiency of firms and organisations; including Fonterra

• Allow by competition alternative company strategies to emerge if they are economically efficient
Regulation of Fonterra in 2001

• Given that Fonterra’s constitution provided, “fair value share” pricing, the regulations were

  Fonterra must
  1. accept seamless entry and exit of suppliers (with notification) with their fair value share capital
  2. supply up to 400m litres to other processors if demanded

  Fonterra is free to set its own milk price

• Regulation in place as long as Fonterra’s market share remained high
Regulation produces workably competitive milk price

• Supplier ability to enter or exit with their capital “fairly” priced induced Fonterra to set competitive milk price

  • Milk price high and share price low: induce excess supplier entry (on these terms)
  • Milk price low and share price high: induce supplier exit

• Aided by co-operative managerial tensions e.g. treating suppliers equally throughout New Zealand
Fair Value Share Price Regulation 2001-2010
NZ Milk Production Grew by 25%

Amount of Milksolids Processed (million kgs)

- 2001/02: 1,152
- 2002/03: 1,191
- 2003/04: 1,254
- 2004/05: 1,213
- 2005/06: 1,267
- 2006/07: 1,316
- 2007/08: 1,270
- 2008/09: 1,393
- 2009/10: 1,438
There was Entry 2001/2-2009/10

Independent Processor Share of Milk Purchases from Farmers
New Zealand Overall

Source: Fonterra estimates.
Particularly Entry by Investor Firms 2001/2 - 2009/10

Quantities of Raw Milk Purchased from Farmers by Independent Processors

Source: Fonterra estimates.
Fonterra and Other Firms’ Milk Processing Volume Grew: Fonterra Lost Market Share (2002-2009/10)
What about NZ Consumers 2000-2011?

Domestic Fresh Milk Price vs Export Price

Global Dairy Prices for WMP and New Zealand Fresh Milk Prices

Sources: GlobalDairyTrade, Statistics New Zealand; Reserve Bank of New Zealand.
The Farm Suppliers’ Milk Price
Indices of export and Supplier Milk Price 2000-2011
2007 – 2012 Features

• Fonterra introduced milk product auctions in 2008
  – Frequency, contracts and product coverage develop to 2012
  – Prices used in valuing the Fair Value Share
• NZ Stock Exchange introduces dairy futures 2011
• Fonterra performance was mixed:
  – low retained earnings
  – Some improvement in efficiency
  – Grew, but with reduced market share
Fonterra Concerns 2007 - 2012

- Share redemption risk because suppliers have the right to leave with the fair value of their capital paid out
  - Internal risk: due to annual production fluctuations inducing redemption or take up of shares at the FVS price that also varied
  - External risk: due to other processors/farm activities attracting suppliers away from Fonterra

- Milk required to on-sell to other processors:
  - Amount was expanded to 600m litres
  - Pricing disputes:
  - Amounts transferred to other competing exporters long term
Others’ Concerns 2007 - 2012

• General: that Fonterra had concerns and might change its internal processes and Fair Value Share-pricing; since it was not enforced by regulation

• Investor firms (also consumers): mainly about Fonterra milk price setting

• Lack of development of a milk market
  – to support domestic fresh and confectionery product processors and
  – The incentive for the development of a milk market given that milk is provided under regulation from Fonterra
Milk (Under regulation) Purchased from Fonterra by Other Processors 2004/5-2009/10
Fonterra solutions
2007 - 2012

• 2007 Fonterra rejected a manufacturing/marketing subsidiary joint with minority investors
• 2010-12 Developed Trading among Farmers: TAF
  – Retains vertically integrated cooperative structure and control
  – Changes the form of redemption risk:
    • Fonterra not required to buy supplier shares
    • Departing suppliers sell their shares in a market
  – Links shares to investor traded instruments to provide
    • Liquidity in shares
    • Superior (independent) value of shares
    • Another source of capital
Fonterra changed in 2010

2010

Fixed the share price pending the next phase of corporate restructuring

Board

suppliers

Compulsory Voting Shares (VS)
1kg MS = 1 share

Voluntary Non Voting
Dry Shares ≤ 20% VS

Means tradable subject to restrictions
Fonterra
(Shareholders’ Council retained)

2012-13! Trading Among Farmers

Present situation
- Legislation in place for TAF
- Includes Commerce Commission inspection of milk price
- If TAF fails return to the previous regulation
- Fonterra preparing to start TAF
- Liquidity and reasonable price would maintain open entry and exit of suppliers

Compulsory Voting Share (VS)
1kg MS = 1 share

Plus option of additional 20% shares

Board

suppliers

Shareholders’ Market
Exchange for Trades among suppliers

Shareholders’ Fund
Backs shares with (non voting) Units 1:1

Units held & traded by the public
Final Comment

- Co-operative form and investor forms continue to be tested by competition in New Zealand dairy

- Under the Dairy Regulation of 2001
  - testing has occurred without regulating the actual price of milk: despite an almost monopoly co-op.
  
  - This was only possible with the co-operative form

- Co-operative and investor firms are likely to co-exist where they have different strategies; but in New Zealand dairy we wait and see
Thank you
and best wishes on your tour
Sources


