

Rethinking New Zealand Dairy

Keith Woodford
Independent Consultant and Hon. Professor of Agri-Food Systems
Lincoln University
New Zealand

*A presentation to the Law and Economics Association
of NZ
Wellington
14 September 2015*



The Starting Point

The context:

The NZ dairy environment is changing. Markets are changing due to changing consumer demand and disruptive technologies. In addition, new regulatory systems will mean that the physical environment will no longer be an unpriced externality. However, much of the NZ dairy industry is currently caught like a possum in the headlights, with key industry groups paralysed by group think and an apparent inability to reshape to face the future.

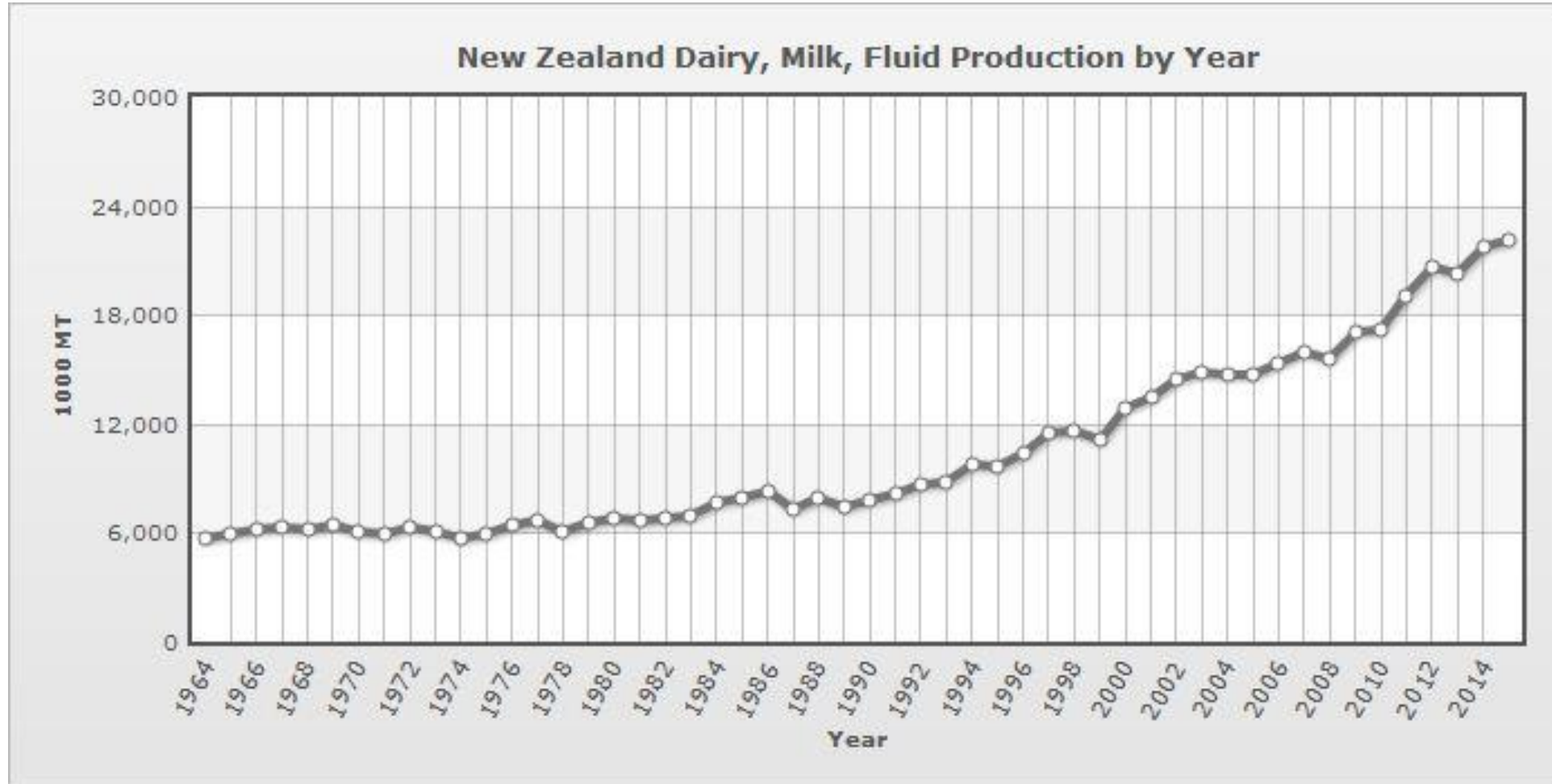
The call to action:

There is need for an informed debate as to alternative strategies. The starting point is to understand the current environment (economic and bio-physical) and forthcoming disruptive events (technology, consumer preferences, integrated value chains, nutrition).

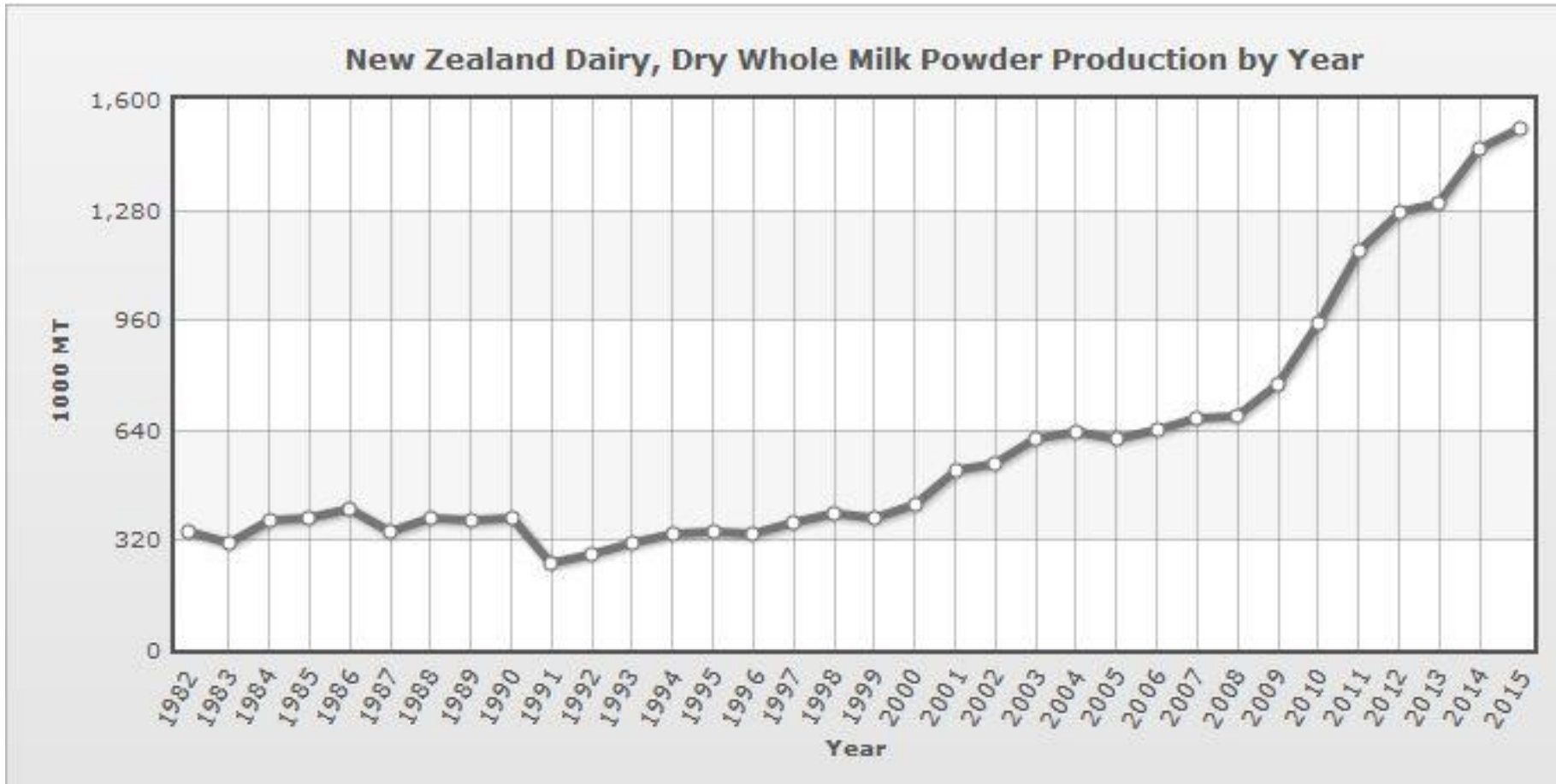
A defining characteristic of NZ dairy systems is seasonality of production

- New Zealand dairy is dominated by seasonal production (following the pasture production curve) and production of commodities. In the past this has served New Zealand very well. Other countries do not do this.
- One of the consequences of seasonal production is that on average, processing plants are only utilised at about 55% of annual capacity. Most overseas dairy industries utilise their processing capacity at about 90%.
- *In maximising production efficiency we have sacrificed processing efficiency*

Between 2000 and 2015, NZ dairy production increased by 76%



But NZ production of whole milk powder, which is now by far the main product, and the easiest to make, has increased since 2000 by a much greater factor of 3.6

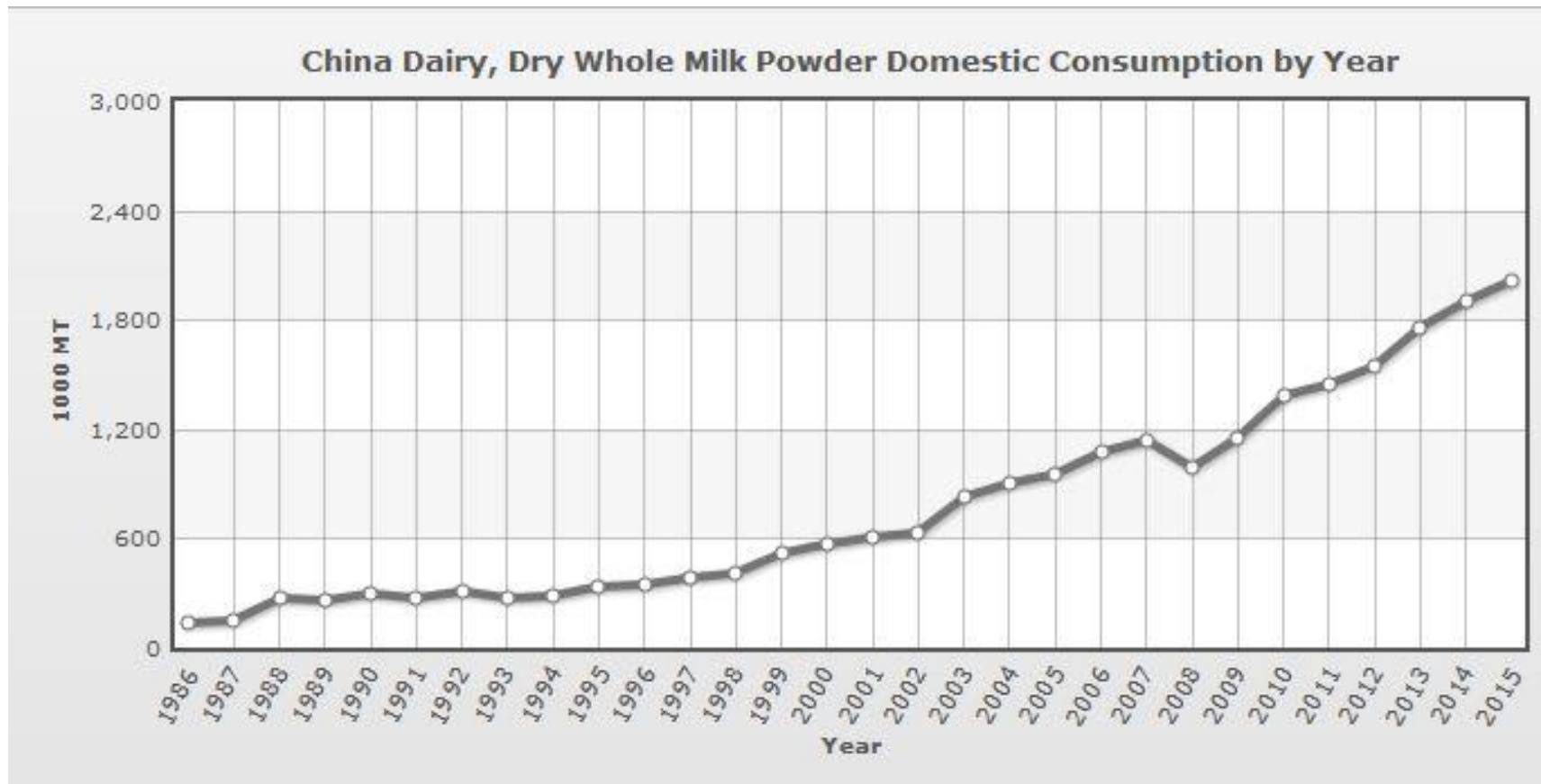


Seasonality payments

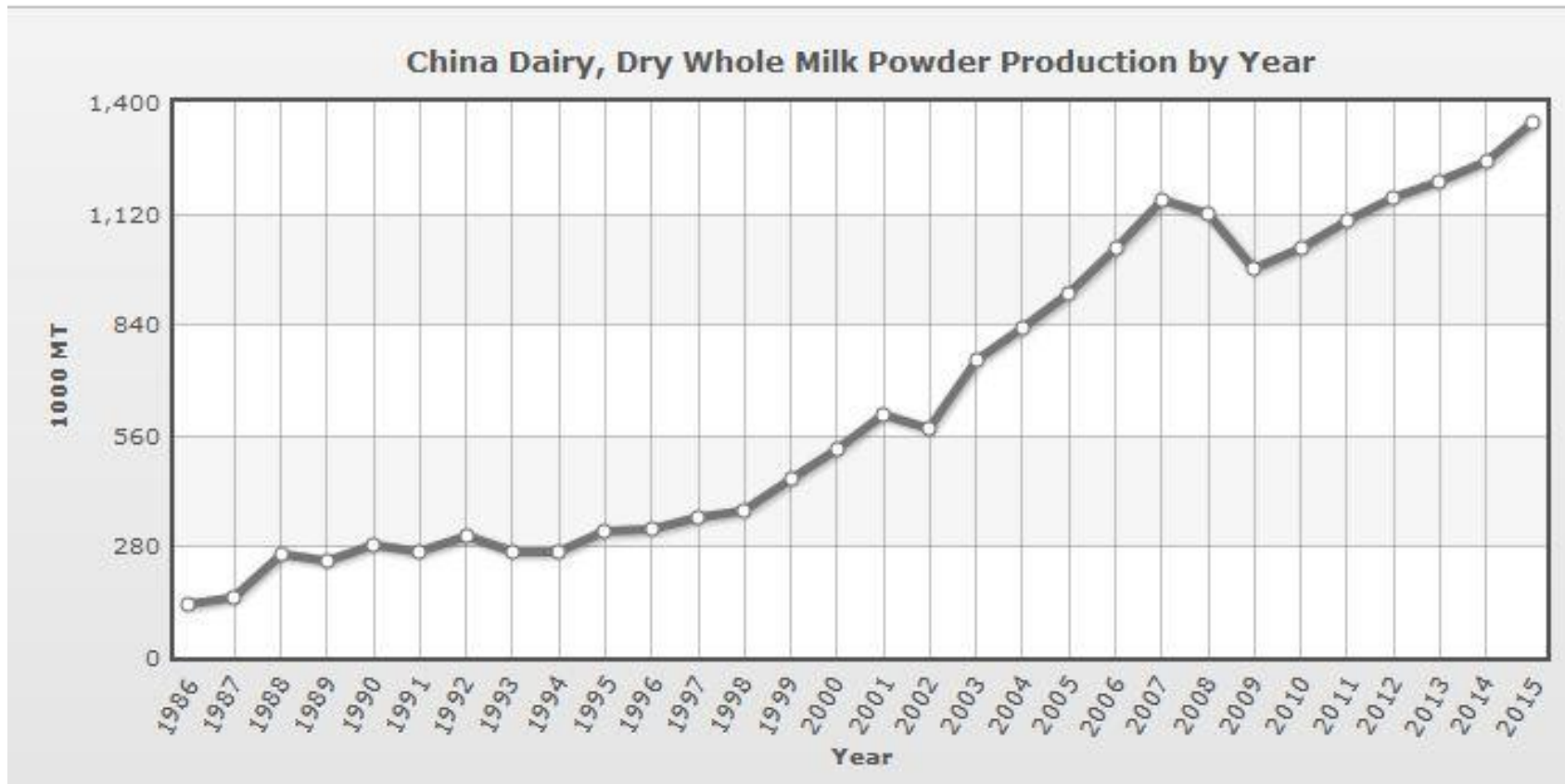
- This season Fonterra will pay its farmers 51c less per kg MS for milk produced during the peak months of September to December 2015 compared to other months of the 2015/16 season. (Last year, the first year of this payment system, the figure was 52 c.)
- This figure of 51c is Fonterra's estimate of the costs it has to recoup given the cost of installing additional 'stainless steel' for collection and processing of peak milk into WMP (the basic commodity).
- These costs would be higher for any product other than WMP.
- Even with WMP, it is not clear as to whether all the costs of seasonality are included.
- It is no coincidence that Fonterra has been shifting the focus of its infant formula production to Darnum park in Australia, given the importance of all-year round production.
- *Seasonal production and WMP go together*

Global Issues: WMP

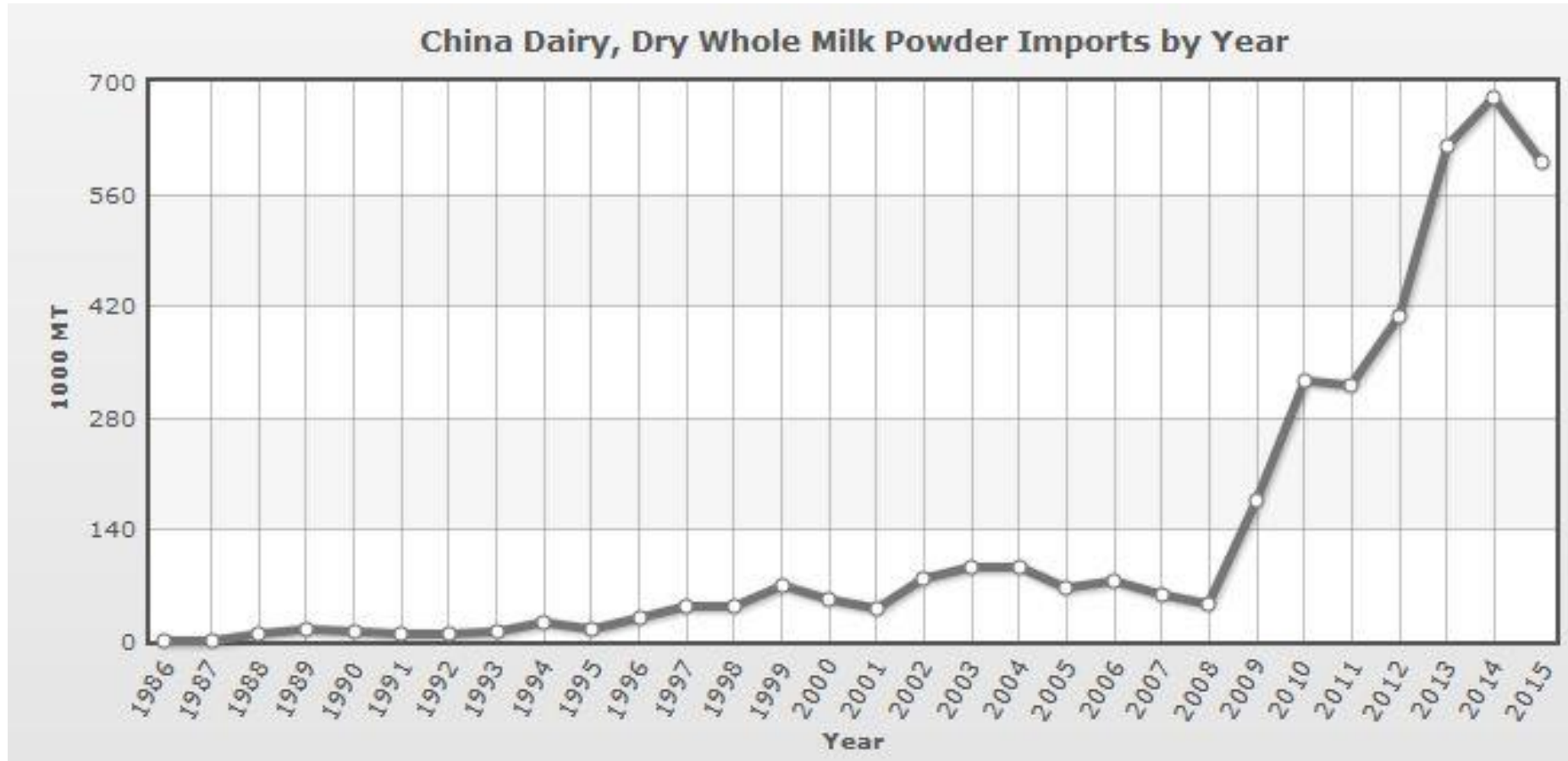
There is only one big international consumer of WMP – it is China (at about 2 million tonnes per annum and 40% of world WMP consumption; then comes Brazil at about 0.6 million tonnes and the EU at 0.45 million tonnes).



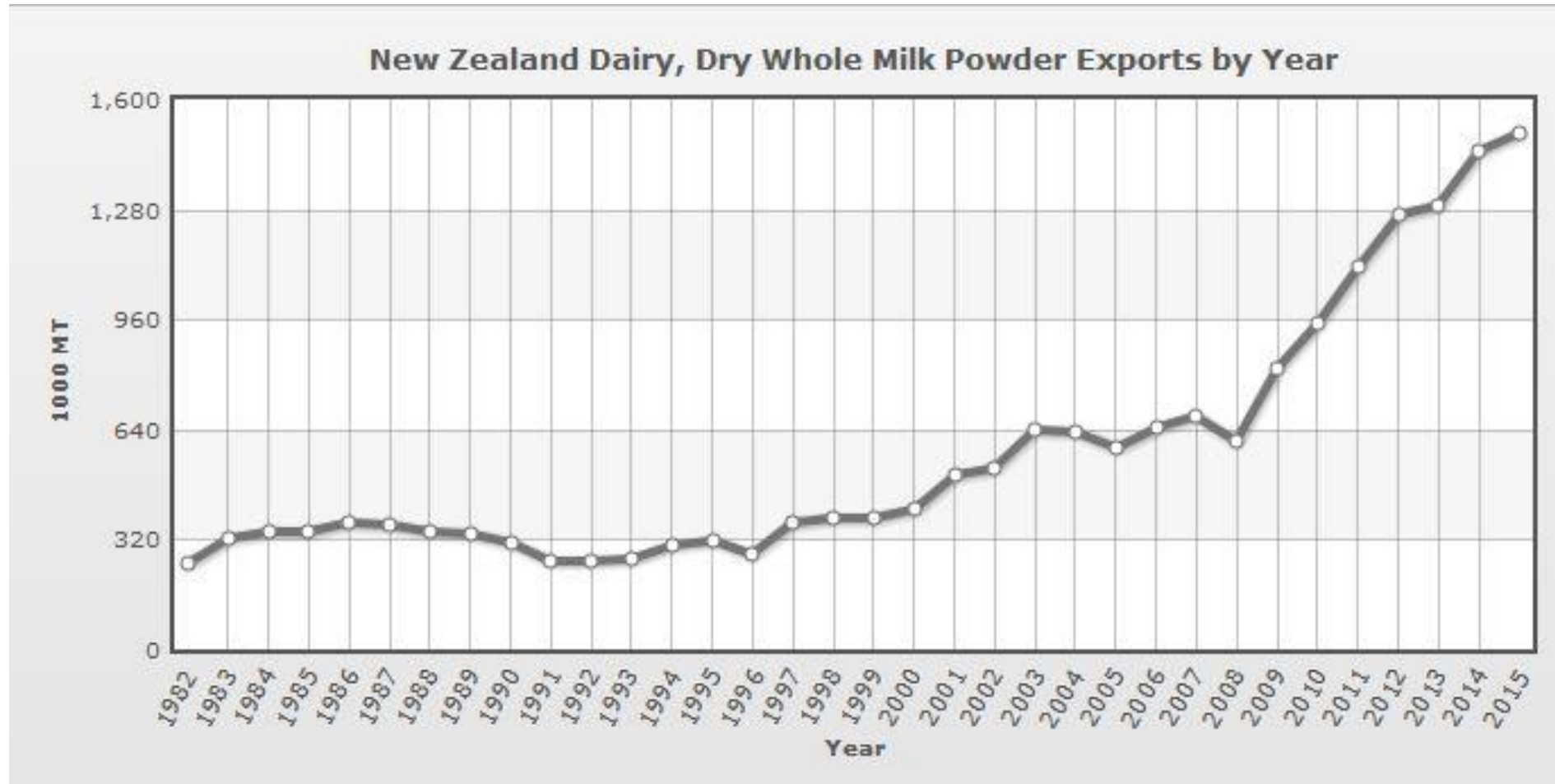
There are two big producers of WMP – New Zealand (about 1.5 million tonnes and China about 1.3 million tonnes. Then comes the EU at 0.8 million tonnes and Brazil at about 0.6 million tonnes.)



There is one big importer of WMP – China (currently at about 600,000 tonnes, down from 700,000 tonnes. Next comes Algeria at 170,000 tonnes, and then a myriad of countries, all under 100,000 tonnes).



There is one big exporter of WMP – NZ. Currently about 1.5 million tonnes.
(Then comes the EU at about 0.45 million tonnes.)



How does China use all of this WMP?

- Some is for infant formula and follow-on nutritional formulas – perhaps 500,000 tonnes
- Some is used in manufactured products – e.g. yoghurt and food service.
- But large amounts, perhaps the majority, is used as reconstituted UHT milk (but not labelled as reconstituted, which legally it should be).
- [*Manufacturing UHT from reconstituted powder is cheaper than using local fresh milk.*]

WMP Conclusions:

- *NZ production and China's demand have grown together.*
- *There is no way current global production of WMP can be marketed at reasonable prices without China in the market in a big way.*
- *With current volumes, there is nowhere else to go!*
- *Apart from China, and to a lesser extent Indonesia, WMP is a declining category.*
- *WMP has been very profitable – largely because of China.*
- *Should NZ be so dependent on this one product category, which is declining in so much of the world?*

Other aspects of China dairy demand

- Imported UHT is a small but rapidly growing market segment. (400 million litres in 12 months to mid 2015, increased 100 fold in 7 years and continuing to grow; dominated by European companies, also Devondale from Australia; Fonterra is also present)
- Imported infant formula is also rapidly increasing (about 30% this year). NZ market share is 9% and declining. Synlait and Danone are the big players from NZ. The NZ decline in market share is linked to the botulism scare and other factors. European brands rapidly increasing market share.

Global production

- European milk production still increasing year on year (June production up 3.9% year on year; nearly all countries up, but Netherlands and Ireland the big movers). This is despite price declines of 20% in farm gate prices. [Europe is still in the early stages of adjustment of milk production quotas.]
- American milk production has also been increasing but growth may be tapering off. [American large scale dairy systems are internationally competitive, and these farmers are still making money without significant subsidies]

Fonterra

- Is a super-efficient processor of milk
- Is capital constrained
- Has lacked the culture to succeed at value-add

Other companies in NZ – about 17% market share

- Synlait (Bright, Campina Friesland, others)
- Tatura
- Open Country
- Westland
- Oceania (Yili)
- Yashili
- Danone
- Miraka
- Oravida and others

Disruptive events

- New Zealand's bio-physical environment and associated regulations.
- ESL milk
- Chinese online value chains and buying behaviours
- Chinese politics and economic policy
- A2 milk

Dairy of the future

- More branded products including UHT and ESL
- More non seasonal production
- More off-pasture wintering (housed cows)
- More overseas investment
- *These are a package*
- More online marketing in China (including NZInc / NZ Mall?)
- Also, everyone will shift to A2
- *To make these systems work we will need to develop 'pasture and housed-cow hybrid systems' where we are cost competitive. We can do it.*

The Role of Fonterra

- Fonterra is a disappointment
- But Fonterra will muddle on
- Fonterra will remain as a super-efficient processor
- Fonterra will continue to underpin the farm gate price paid by investor oriented companies
- Fonterra may succeed in food service
- Fonterra will continue to struggle in Australia
- Fonterra will continue to have brands but will never become a global leader in brands
- Should Fonterra shift to a two-company model? Maybe too late and now too difficult.

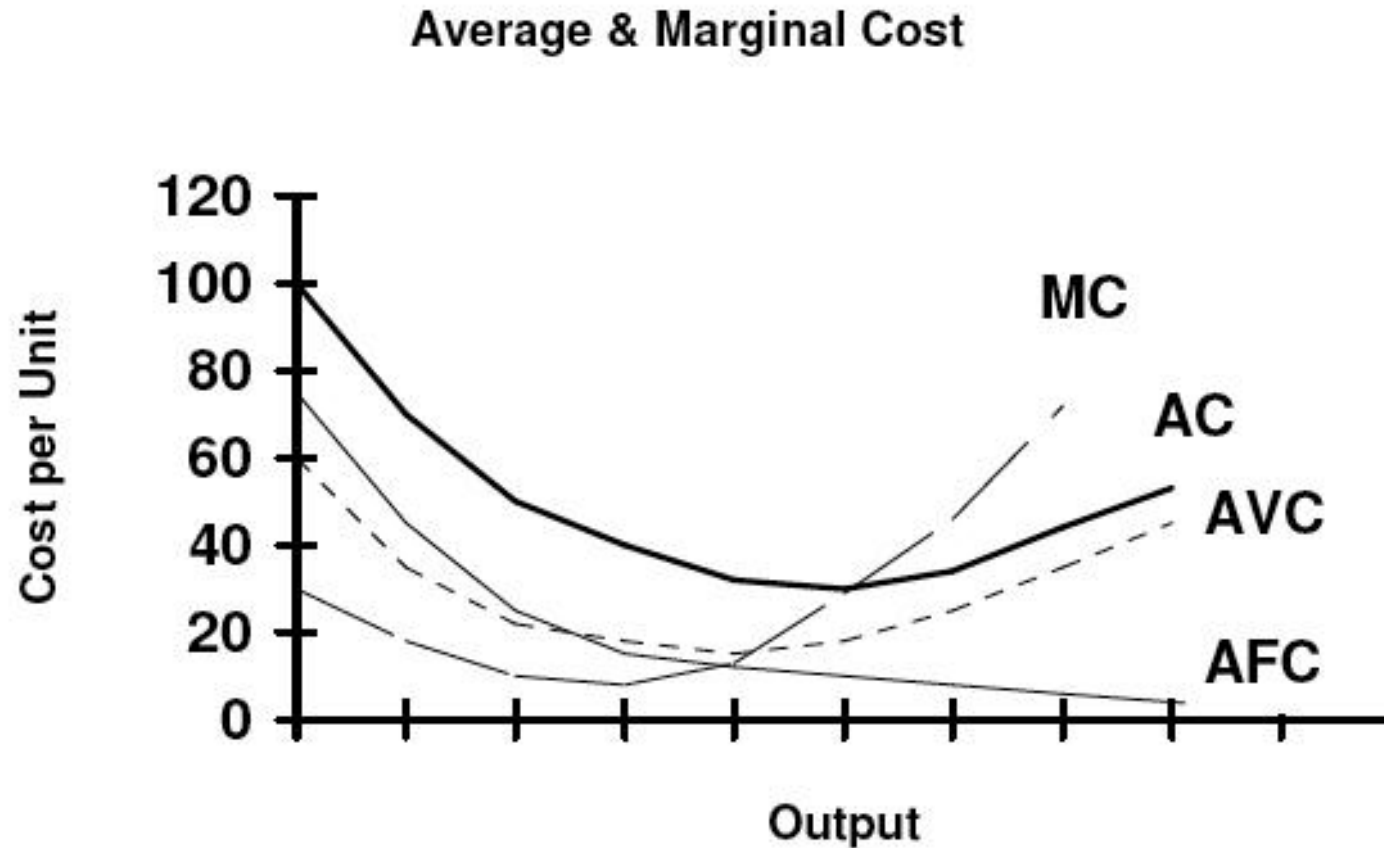
The Importance of DIRA

- If the DIRA regulations do not continue, with Fonterra as the default processor, then further investment and innovation will be stifled.
- Without DIRA, the retained market power of Fonterra will make it hard for new entrants to become established. Any farmer supplying such a company is taking a big risk as there is nowhere to go if the company fails. This is due to lack of competitive forces.

Is there an alternative to the all-season value-add model?

- Yes, we could revert to our traditional role as low cost seasonal producer of commodities
- In that context, cost minimisation is a valid strategy
- But chasing the economic optimum of $MR=MC$ is a journey where farmers never arrive because of long adjustment times
- Hence strategic management theory, as opposed to static economic theory, would suggest that minimising average costs is the way to go so as to maximise the chances of long term survival
- Some farmers are currently on a journey (led by DairyNZ fundamentalists) to reducing supplementary feed inputs. But this can be a minefield with 'sticky costs'. Even at low payouts, the marginal cost savings from reduction in supplements can be less than the loss of revenue
- These things have to be system changes (including cow numbers and labour) rather than tactical responses
- And low input systems are not necessarily low cost of production systems
- If NZ chooses to focus in future on a pastoral model of seasonal production then, as the physical environment becomes a priced externality, the industry will need to down-size considerably. Ouch!

For many farmers, marginal cost savings are less than marginal revenue loss (due to sticky costs), and $MC < AC$



Em tasol (That's it!)

<http://keithwoodford.wordpress.com>

Posts from Keith Woodford

*Commentary on agriculture, rural
development, and wider issues*



[Home](#) [About](#) [Photo Essays](#) [Rural Development](#) [The Fairfax Articles](#)