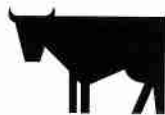


Reform of the
Domestic Market for
Dairy Produce

An Analysis of
Progress and Issues

Frank Scrimgeour



New Zealand Business Roundtable
November 1998

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FOREWORD

This study provides additional reasons why the government should avoid delay in implementing its decision to remove the statutory backing of producer boards.

Previous work sponsored by the New Zealand Business Roundtable (NZBR) on the consequences of granting export monopolies to producer boards has pointed to inefficiencies associated with the exclusion of competition in export marketing.¹ These inefficiencies should be sufficient reason for immediate action on deregulation.

This report suggests that the New Zealand Dairy Board's export monopoly has also tended to deter competition on the domestic market and has contributed to high domestic prices of milk and some other dairy products in New Zealand.

This study is, in some respects, exploratory. In particular, the price surveys on which the study is based have their limitations. Even if measurement errors are significant, however, this is unlikely to affect the broad conclusion that the *domestic retail prices of milk and some other dairy products* are much higher than would be expected in the light of the low cost of milk production in New Zealand. They also appear to be out of line with domestic and international butter price relativities. Similarly, while the study does not claim conclusive proof that high domestic prices are attributable to the New Zealand Dairy Board's export monopoly and its exemption from Commerce Commission scrutiny, the evidence raises questions which warrant further investigation.

The existence of a regulatory environment which enables protected agricultural producers to benefit from hidden transfers from consumers might not be remarkable in some countries. For a country like New Zealand, which is justifiably proud of the reputation for policy transparency that it has earned through policy reforms since 1984, the continued existence of such transfers should be unacceptable. The deregulation of the domestic milk market has benefited consumers but the gains appear to have been limited by the controls that have been kept in place on export sales of dairy products. In the interest of New Zealand consumers it is time for these to go as well.

R L Kerr
Executive Director
New Zealand Business Roundtable

¹ For example ACIL, 1992; Tasman Asia Pacific and ACIL, 1996; and Bates, 1997.

EXECUTIVE SUMMARY

- 1 The past decade has seen substantial changes in the domestic market for dairy products. The range of products has broadened and the number of competing brands has increased, partly as a result of deregulation which commenced in 1985. It has also been a period when prices for dairy products have risen for domestic consumers. Since 1988, yoghurt prices grew at 2.6 times the rate of the 'all foods' Consumers Price Index (CPI), milk at 1.8 times, cream at 1.3 times, and cheese at 1.1 times. The price of butter grew at about the same rate as the all foods index.
- 2 New Zealand consumers pay as much or more for most dairy products as consumers in the United Kingdom, the United States, France and Ireland, all of which maintain high barriers to import competition to protect their domestic industries. It is only for butter and cheese that New Zealanders pay lower prices than consumers in the other countries surveyed.
- 3 The margin for processing, distribution and retailing of liquid milk, estimated at 95 cents per litre, is surprisingly high in New Zealand. After making allowances for Goods and Services Tax (GST) and the costs likely to be involved in processing, marketing and retailing, there is a substantial residual, possibly as much as 22 percent of the retail price, not accounted for. The farm to retail margin in New Zealand (NZ\$0.95 per litre) is also substantially higher than those estimated for the United States (NZ\$0.89 per litre) and Australia (NZ\$0.78 per litre).
- 4 There do not appear to be any strong grounds for attributing the high retail price of full cream milk and some other dairy products in New Zealand to the market power of retailers. There is no reason to expect the market power of milk retailers to be greater in New Zealand than in the United States and Australia, and no reason to expect retailers to exercise any market power disproportionately in respect of some dairy products, rather than raising prices of all dairy products or all foods.
- 5 The high retail price of milk in New Zealand is more likely to be attributable to the existing regulatory environment which provides the New Zealand Dairy Board with an export monopoly and exempts its dealings with dairy companies from Commerce Commission scrutiny. This regulation enables domestic prices to be controlled by diverting supplies to the export market. It is likely that the cooperative dairy companies have been the main beneficiaries of the transfers from consumers that this anti-competitive regulation has made possible.
- 6 The weight of evidence suggests that the current market structure for dairy products imposes significant costs on New Zealand consumers and firms. Even if these are only 10 percent higher for both regular and UHT milk and cream and 20 percent higher for yoghurt, this means New Zealand consumers pay about \$100 million extra per annum for dairy products.
- 7 Implementation of the government's decision to remove the statutory backing of producer boards will help to establish a more competitive market for dairy products within New Zealand. Recent legislation to remove the power of the New Zealand Dairy Board to set domestic prices is a step in the right direction, but competitive pricing of dairy products is unlikely to emerge while the Dairy Board's export monopoly powers and exemption from Commerce Commission scrutiny remain in place.

CHAPTER ONE

INTRODUCTION

The aims of this study are to examine the domestic pricing for New Zealand dairy products in the light of previous regulatory reforms and to consider possible reasons for high domestic prices.

This study is relevant to the government's May 1998 budget announcement that producer boards are to come up with proposals by 15 November 1998 on ways in which they can operate without statutory backing. In considering the timing and method of removal of the New Zealand Dairy Board's statutory backing it is important to consider the implications for domestic consumers as well as for producers of dairy products.

During the period since 1984, deregulation of many markets has enhanced the performance of the New Zealand economy. The domestic milk market was progressively deregulated during the period 1985 to 1993. Given the legislative reform that has occurred, substantial improvements might have been expected in terms of meeting consumer requirements, for example by offering a broader range of products or by reducing costs.

It is appropriate to examine the performance of the market during the period since deregulation to see if the anticipated improvements have occurred. A review of domestic pricing also provides an opportunity to reflect on the connection between exporting arrangements and domestic markets, and to consider whether further reforms would enhance the prospects of the New Zealand economy and improve the welfare of New Zealanders.

There are several other reasons why this study is important at this time. First, consumers have voiced complaints about perceived high prices in a land flowing with milk. Secondly, the development of the food manufacturing industry using milk products appears to be slow, given the volumes of milk available and the amount that is exported in commodity form. Thirdly, domestic consumption of dairy products (except butter) is surprisingly low compared with some other countries.

Given New Zealand's large and competitive dairy industry, per capita consumption of dairy products within New Zealand might be expected to be relatively high by world standards.² In fact, average consumption of milk and cheese is far below that in several other countries (Table 1). Fluid milk consumption is similar to levels in the United Kingdom and much less than in countries like Ireland and Sweden. Per capita cheese consumption is low compared to many of the high cheese consumption markets such as France and Sweden and is comparable with Australia and the United Kingdom. Only for butter is New Zealand per capita consumption high by international standards.³

² It is recognised that per capita consumption data should be interpreted with care given the differing incomes, prices and tastes in different countries.

³ Butter consumption may be higher in New Zealand due to the fact that the availability of margarine was restricted for many years.

These consumption figures raise the obvious question whether retail prices of dairy products in New Zealand are actually as low as they might be expected to be in a country which is renowned for low on-farm costs of milk production.

Table 1: Per capita consumption (kg) of dairy products 1996

	<i>Fluid milk</i>		<i>Butter</i>		<i>Cheese</i>
Ireland	190.20	New Zealand	15.77	France	21.41
Sweden	154.61	France	8.57	Sweden	16.70
Austria	142.26	Sweden	2.14	Finland	12.55
Finland	134.70	Finland	6.47	Austria	9.61
New Zealand	128.49	Austria	5.37	Australia	9.16
UK	128.32	Ireland	3.93	New Zealand	9.05
Australia	103.68	UK	3.22	UK	8.67
US	100.20	Australia	3.07	Ireland	5.89
France	75.38	US	1.95	US	4.44
Japan	41.30	Japan	0.75	Japan	1.35

Source: United States Department of Agriculture

CHAPTER TWO

DOMESTIC PRICING OF DAIRY PRODUCTS

Prior to reforms which commenced in March 1985, the domestic fluid milk market had been highly regulated since 1944. The regulations introduced towards the end of World War II were intended to ensure adequacy of supply and quality, and reasonable consumer prices. They had the effect of dampening incentives for adaptation over time as changes occurred in both producer technology and consumer demand. This resulted in a limited range of products available to consumers and inefficient use of capital.

Regulatory reform

During the period 1985 to 1993 the sector was progressively deregulated.⁴ Key components of the deregulation were:

- abolition of the domestic milk subsidy in March 1985;
- abolition of packaging controls in October 1996;
- abolition of production and pricing requirements in 1987;
- abolition of the New Zealand Milk Board in April 1988; and
- deregulation of the fluid milk market as from March 1993.

The deregulation led to rapid changes in the industry. Some of the obvious effects were:

- an increase in the range of products available to consumers;
- introduction of a wider range of milk packaging;
- contraction of the home milk delivery service;
- changes in ownership of milk processing and marketing facilities; and
- changes in contracts with farmers supplying milk.

The legislative reforms resulted in substantive changes in behaviour by farmers, milk processors and milk marketers which could be expected to have increased the efficiency of the sector.

Changes in domestic prices 1988-96

Over the last decade, dairy product prices have risen substantially more than general indices of food prices and consumer prices. Prices rose most quickly at the beginning and end of the decade and the most rapid increases have been for milk and yoghurt. This is apparent from Table 2 and Figures 1-5, which are based on the INFOS database of Statistics New Zealand.

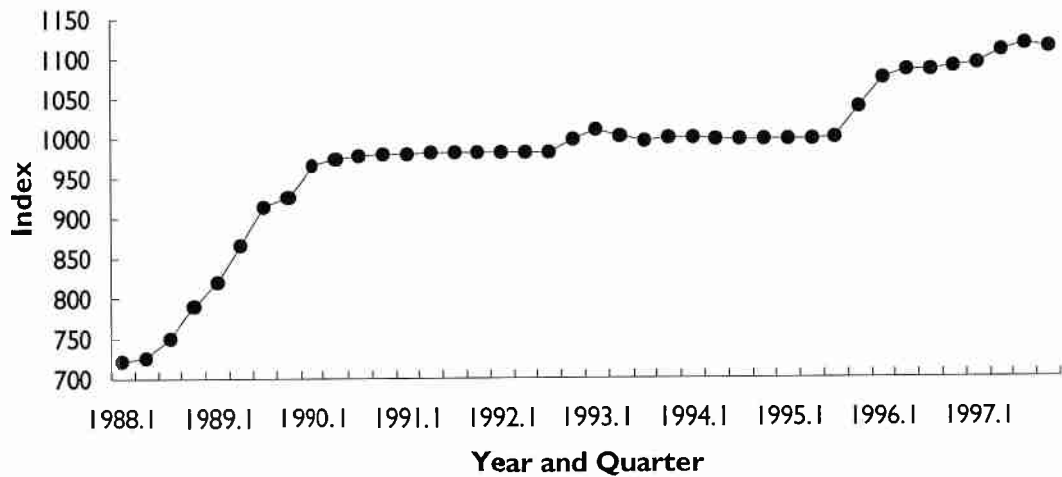
⁴ McCabe (1989) and Sandrey (1990) provide historical information and comment on the early reforms. Commerce Commission (1991) provides some more recent commentary.

Table 2: Price changes for domestic dairy products (%)

Period:	88:1-90:2	90:3-92:4	93:1-95:2	95:3-97:4	88:1-97:4
Milk	34.9	1.9	-1.2	11.2	53.9
Butter	11.7	3.3	1.1	9.9	27.0
Cheese	38.6	-2.3	-4.7	3.9	34.6
Cream	32.6	3.3	-1.2	2.3	40.6
Yoghurt plus other	28.2	27.5	6.9	8.5	80.2
'All foods'					
Consumers Price Index	21.7	2.1	1.6	3.2	30.4

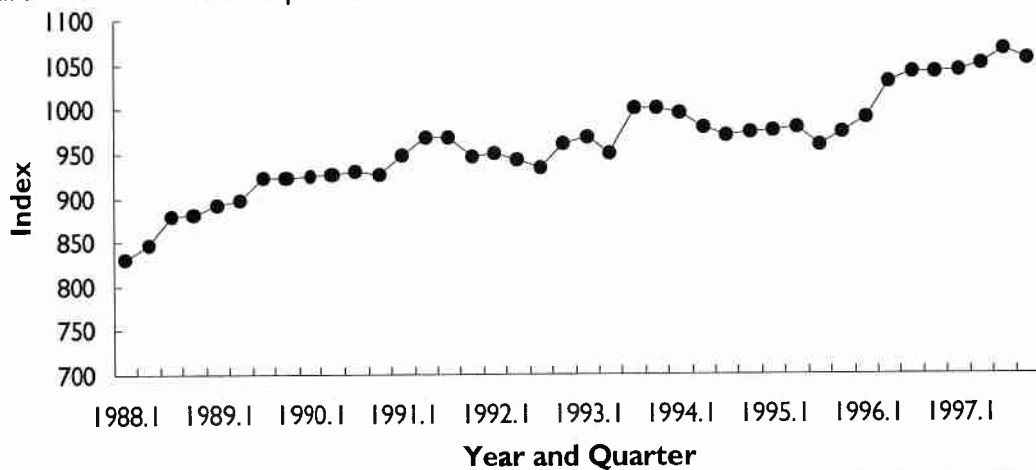
Source: INFOS

Figure 1: Domestic milk price index



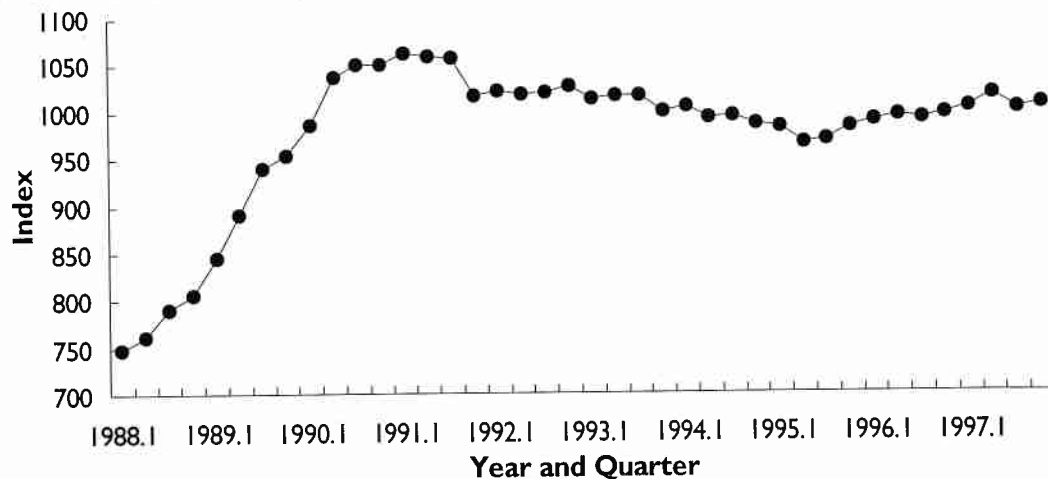
Source: INFOS

Figure 2: Domestic butter price index



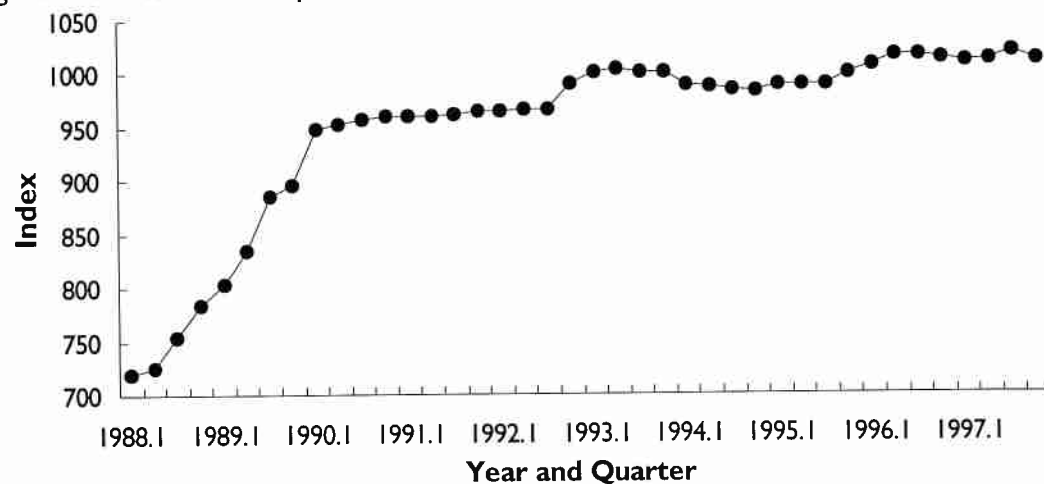
Source: INFOS

Figure 3: Domestic cheese price index



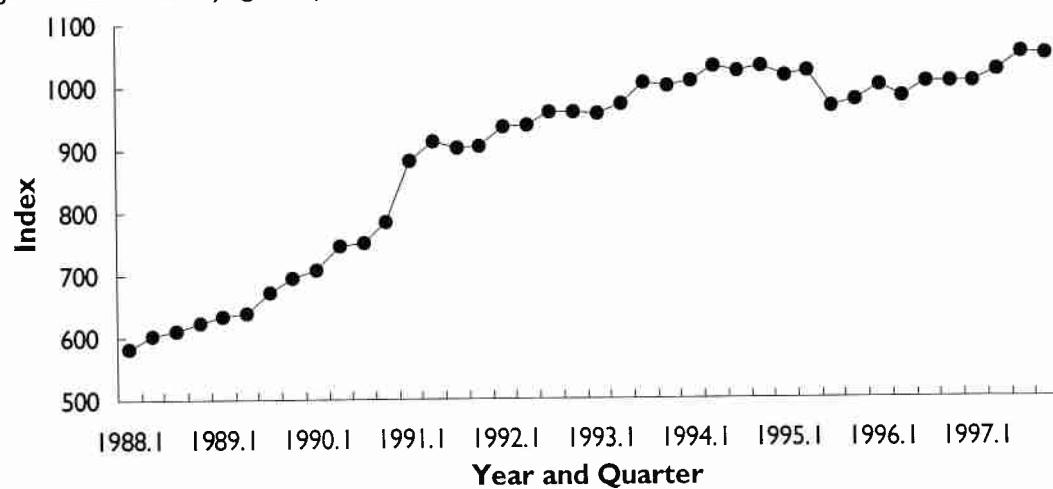
Source: INFOS

Figure 4: Domestic cream price index



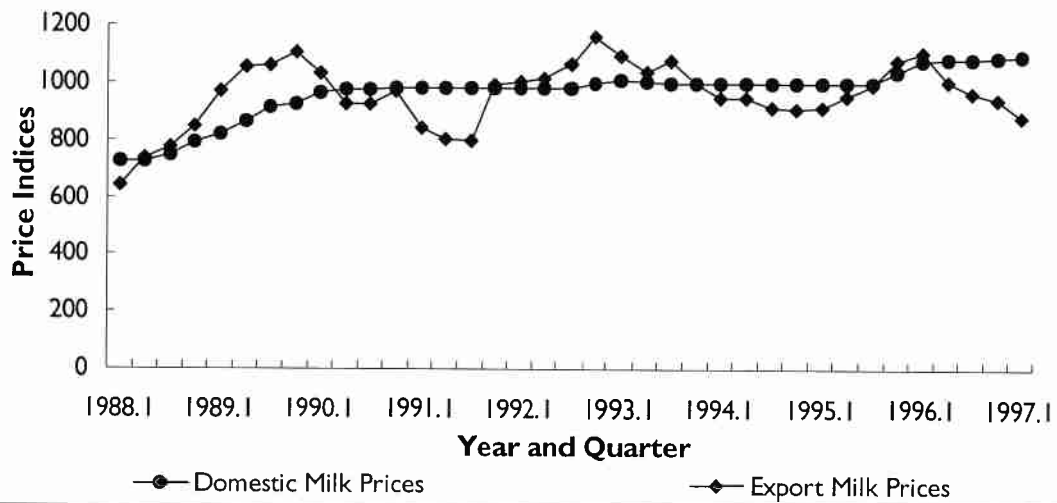
Source: INFOS

Figure 5: Domestic yoghurt price index



Source: INFOS

Figure 6: Changes in domestic and export milk price indices 1988–97



Source: INFOS

It would be reasonable to expect a strong correlation between domestic dairy product prices and international prices. In order to see this relationship, indices for domestic milk prices and a weighted average of export prices for milk were plotted in Figure 6. The results show that domestic prices have not been closely related to export prices. They have been much more stable than export prices. Further, while there has been no obvious trend in export prices since 1988, there has clearly been an upward trend in domestic prices.

Retail prices for dairy products in New Zealand

During April 1997, the author surveyed prices for consumer dairy products in supermarkets in the four main centres of Auckland, Hamilton, Wellington and Christchurch. The unweighted average product prices recorded in each centre are reported in Table 3 (columns 1–4) along with the national unweighted average (column 5), the national standard deviation (column 6) and the national coefficient of variation (standard deviation divided by mean – column 7).

This survey enables prices to be compared regionally, nationally and internationally on a preliminary basis. It allows estimation of the margin dairy companies and retailers receive for processing and marketing.

The survey results show similar prices (a coefficient of variation less than 0.10) for dairy products throughout the country. Interestingly, milk and cream are most expensive in Auckland and Hamilton which are close to the major milk producing Waikato province while butter, cheese and yoghurt are most expensive in Christchurch.

Significantly, the advent of house brands since deregulation has benefited consumers.⁵ The average house brand price for two litres of milk nationwide is \$2.51 compared with \$2.69 for the average Anchor price – a difference of 6.7 percent. There is a similar

⁵ Assuming the price differences are not just evidence of price discrimination.

Table 3: Domestic consumer dairy product prices (April 1997)

		Unweighted average product prices				New Zealand		
		<i>Hamilton</i>	<i>Auckland</i>	<i>Wellington</i>	<i>Christchurch</i>	<i>average</i>	<i>SD*</i>	<i>CV**</i>
		\$	\$	\$	\$	\$	\$	
Milk (2 litre)								
Anchor	all 2 litre	2.71	2.73	2.70	2.61	2.69	0.05	0.02
	Calci-extr	2.81	2.82	2.87		2.83	0.03	0.01
House brand	all 2 litre	2.51	2.55	2.53	2.46	2.51	0.03	0.01
	Calci-extr			2.74		2.74	0.00	0.00
Local	all 2 litre	2.63	2.64	2.64	2.68	2.65	0.02	0.01
	Calci-extr	2.89	2.84			2.87	0.03	0.01
Other	all 2 litre			2.69		2.69	0.00	0.00
	Calci-extr	2.84	2.85	2.72		2.80	0.06	0.02
Cheese (1 kg)								
Anchor	Tasty	8.51	9.09	9.75	10.22	9.39	0.65	0.07
	MEC***	7.34	7.60	8.59	8.81	8.09	0.63	0.08
	Grated	5.34	4.96	5.10	5.23	5.16	0.14	0.03
Mainland	Tasty	8.87	8.69	9.44	9.76	9.19	0.43	0.05
	MEC	7.17	7.37	7.32	7.59	7.36	0.15	0.02
	Grated	4.07	4.12	4.49	4.42	4.28	0.18	0.04
Tararua	Tasty	8.91	9.01	9.43	9.49	9.21	0.25	0.03
	MEC	7.38	7.62	7.13	7.99	7.53	0.32	0.04
House brand	Tasty	7.73	8.36	7.85	7.76	7.93	0.25	0.03
	MEC	6.66	6.92	6.66	6.61	6.71	0.12	0.02
	Grated	4.39	4.47	4.87	4.36	4.52	0.20	0.05
Other	Tasty	8.02	8.35	9.43		8.60	0.60	0.07
	MEC	6.55	6.55	7.56		6.89	0.48	0.07
	Grated	4.51	4.52	4.68		4.57	0.08	0.02
Butter								
Anchor	salted	2.02	2.06	2.07	2.15	2.08	0.05	0.02
	semi-soft	2.46	2.54	2.68	2.58	2.57	0.08	0.03
Fernleaf	salted	2.04	2.07	1.97	2.14	2.06	0.06	0.03
	semi-soft	2.46	2.50	2.57	2.72	2.56	0.10	0.04
Tararua	salted	2.05	2.03	2.00	2.11	2.05	0.04	0.02
	semi-soft	2.65	2.62	2.58	2.67	2.63	0.03	0.01
House brand	salted	1.95	1.97	1.96	1.98	1.97	0.01	0.01
UHT milk (1 litre)								
Anchor	all	1.29	1.31	1.42	1.43	1.36	0.06	0.05
Devon	all	1.42	1.51	1.52	1.47	1.48	0.04	0.03
Wwatch	trim	1.28	1.49		1.48	1.42	0.10	0.07
Yoghurt								
FreshnFr	1 litre	4.20	4.23	4.65	5.13	4.55	0.38	0.08
	6 pack	4.84	4.82	4.78	5.78	5.06	0.42	0.08
Yoplait	1 litre	4.40	4.23	4.16	4.84	4.41	0.26	0.06
	6 pack	4.91	4.93	4.90	5.34	5.02	0.19	0.04
Ski	1 litre	4.05	4.08	4.43	4.68	4.31	0.26	0.06
	6 pack	4.75	4.76	5.03	5.38	4.98	0.26	0.05
Swissmaid	6 pack	5.04	4.98	5.74	6.63	5.60	0.67	0.12
Cream								
Anchor	300 ml	1.31	1.30	1.22	1.23	1.27	0.04	0.03
House brand	300 ml	1.20	1.23	1.17	1.18	1.20	0.02	0.02
Local	300 ml	1.24	1.23	1.22	1.26	1.24	0.01	0.01

* standard deviation

** coefficient of variation (SD divided by the mean)

*** mild, edam and colby

Source: Author's survey

Table 4: International comparison of leading brand retail dairy prices as a percentage of New Zealand average price

		<i>Australia</i>	<i>UK</i>	<i>US</i>	<i>Japan</i>	<i>France</i>	<i>Ireland</i>
Pasteurised milk							
Full cream	(3-3.7% fat)	96		101	202	104	103
Light	(1-2% fat)	113		101		97	106
Trim	(0.5% fat)	113		101			106
Non-fat	(0.1% fat)	113		93			
Cheese							
Block	Cheddar	88	137	150		149	141
	Edam	122					160
	Colby	115		175			
Grated	Cheddar	182		319		249	242
Butter							
Salted		104	186	242	436	208	189
UHT milk							
Full cream	(3-3.7% fat)	90			198	92	
Light	(1-2% fat)	83				99	
Trim	(0.5% fat)	86				100	
Yoghurt							
Portion pack		65	98	107	161	49	103
Family pack (1 litre)		77		125	119	38	92
Cream (40% fat)							
Fresh (300 ml)		88			497	104	

Source: Author's survey

difference with cheese prices. The average house brand price for one kilogram of tasty cheese nationwide is \$7.93 compared with \$9.26 for the average price for Anchor, Mainland and Tararua - a difference of 14.3 percent. The difference for mild, edam and colby cheese is 12.4 percent (\$6.71 against \$7.66) and for grated cheese 4.2 percent (\$4.52 against \$4.72). For butter and cream, house brands are also cheaper - butter by 4.5 percent (\$1.97 against \$2.06) and cream 5.5 percent (\$1.20 against \$1.27).

It appears that consumers in all cities surveyed have significant choice (more than three brands) when purchasing cheese but less choice for milk, cream, butter and yoghurt (three brands or less and often not the full range of product available for each brand). However, there did not appear to be significant volumes of UHT milk being sold. This is surprising given the importance of UHT in overseas markets.

International comparison of retail dairy prices

During April 1997, consumer prices were surveyed in other countries to see how they compared with New Zealand prices.⁶ Data was obtained from supermarkets in Australia, the United Kingdom, Japan, France and Ireland. Prices were recorded for both leading brands and discount brands and these were compared with New Zealand price data. The comparisons are reported in Tables 4 and 5.⁷

The international comparison shows New Zealand retail prices (except for butter and cheese) to be similar to those paid in other countries, except for Japan where prices are much higher. Some details are noted below.

International prices of leading dairy brands

The results, as reported above, show that, relative to New Zealand:

- full cream milk is priced similarly in Australia, the United States, Ireland and France;
- UHT milk is cheaper in Australia and in France;
- yoghurt is markedly cheaper in France and Australia, and is comparable in the United Kingdom and Ireland;
- cream is cheaper in Australia;
- cheese is more expensive everywhere except for cheddar cheese in Australia; and
- butter is more expensive in all the other markets surveyed.

These results indicate that although New Zealand consumers have access to butter and cheese at favourable prices, the same is not true for cream, full cream milk, UHT milk, and yoghurt. A similar pattern is also reflected in the availability and price of discount brands of dairy products.

International prices of discount dairy brands

The results as reported in Table 5 show:

- milk other than non-fat milk is cheaper in the United Kingdom;
- UHT milk is generally cheaper in Australia, the United Kingdom and in France;
- yoghurt is generally cheaper in all countries surveyed, including Japan;
- cream is cheaper in Australia and in France;
- cheese is more expensive everywhere except for cheddar cheese in Australia; and
- butter is more expensive in all the other markets surveyed.

New Zealand consumers rarely benefit from price discounting of dairy products in supermarkets. In Australia, the United Kingdom, the United States and other countries, discount brands have a major share of the market and in-store promotions are very common.

⁶ The cities, stores and survey date are available on request from the author.

⁷ The survey undertaken was small and only represents prices at one point in time. However, in the absence of better data it is useful evidence as to retail prices in different countries.

Table 5: International comparison of discount brand retail dairy prices as a percentage of the New Zealand average price

		<i>Australia</i>	<i>UK</i>	<i>US</i>	<i>Japan</i>	<i>France</i>	<i>Ireland</i>
Pasteurised milk							
Full cream	(3-3.7% fat)		86	108	194		102
Light	(1-2% fat)		86	108	233		102
Trim	(0.5% fat)			108	193		
Non-fat	(0.1% fat)		110	109	159		
Cheese							
Block	Cheddar	60	184	188			162
	Edam	124	130	289		203	192
	Colby			189			
Grated	Cheddar	198		249		204	
Butter							
Salted			187	212	369	185	193
UHT milk							
Full cream	(3-3.7% fat)	79	68		185	105	
Light	(1-2% fat)	72	89		138		
Trim	(0.5% fat)	75			144	65	
Yoghurt							
Portion pack			95	87			82
Family pack			103		89	35	
Cream (40% fat)							
Fresh		74	144	262		89	179

Source: Author's survey

This study compared the price differentials in April 1997 between leading brands and discounted products in other countries with the discounts available by buying house brands rather than leading brands in New Zealand. The price differentials observed are reported in Table 6 and show that there are much larger discounts available in other markets.

Margins for processing and marketing in New Zealand

In New Zealand the average consumer price for milk in April 1997 was \$2.69 for two litres, or approximately \$1.35 per litre. Table 7 suggests how this \$1.35 may be distributed among farmers, dairy companies and retailers. The average price for milk at the farm gate for the 1996/97 season was approximately \$3.70 per kilogram of milk solids (which equates to a farm gate price of approximately \$0.31 per litre. To this may be added premiums paid for milk produced over the winter. On average the farm gate price for fluid milk is not more than \$0.40 per litre. The dairy company receives the retail price for the milk less Goods and Services Tax (GST) and the retail margin. Assuming a retail margin of 30 percent, the gross return to the dairy companies is approximately \$0.92 per litre and the margin for processing and marketing is of the order of \$0.52 per litre.

Table 6: Price differentials observed (leading brands versus discount brands)

	<i>New Zealand</i> %	<i>Other countries</i> %
Milk	7	10 Japan
Cheese	16	42 Australia 32 US 28 France
Butter	5	20 Japan
UHT milk	0	35 France 13 Australia
Yoghurt	0	25 Japan 19 US 9 Ireland
Cream	6	21 Australia 19 France

Source: Author's survey

This margin seems surprisingly large if processing and marketing are competitive activities returning only normal profits. Further, if this figure is compared with the cost of goods sold for all milk handled by the New Zealand Dairy Group, the reported cost is \$2.62 per kilogram of milks solids⁸ or approximately \$0.22 per litre. This suggests that if the processing and marketing costs for fluid milk are no greater than the comparable costs associated with manufactured milk products (with all the associated capital investments), dairy companies may gain an additional profit of \$0.30 per litre. An additional profit of this magnitude would represent about 22 percent of the retail price of milk.

There are two possible qualifications to this estimate of the additional profit that dairy companies receive on sales of milk on the domestic market. First, it is possible that the retail profit margin is greater than 30 percent. However, retail profit margins obtained in some parts of Australia are known to be substantially less than 30 percent – margins obtained by retailers under price regulation in New South Wales and the Australian Capital Territory (ACT) are 12 percent and 16 percent respectively.⁹ The possibility that in New Zealand high profits may accrue to retailers rather than to dairy companies is discussed in Chapter 3.

Second, it is possible that costs incurred by dairy companies in processing and marketing of fluid milk are greater than for manufactured dairy products. Costs incurred in processing and wholesale distribution of fluid milk in New South Wales have been about NZ\$0.34 per litre.¹⁰ Even with costs at this level, the additional profit accruing to dairy companies would still amount to \$0.18 per litre, or 13 percent of the retail price.

⁸ See New Zealand Dairy Group Annual Report 1997, p 30.

⁹ Sheen, 1998, p 16.

¹⁰ Sheen, 1998, p 16.

Table 7: Costs and margins for New Zealand fluid milk

<i>Information source</i>	<i>Code</i>		<i>\$/litre</i>
Survey	A	Retail	1.35
Inland Revenue	B	GST	12.5% 0.15
A - B	C	Retail price pre GST	1.20
Assumed	D	Retailer's margin	30.0% 0.28
C - D	E	Wholesale price	0.92
Residual value	F	Company profit	48.2% 0.30
H + I	G	Company costs	0.62
Dairy Co. accounts	H	Processing & marketing	0.22
Dairy Co. accounts	I	Farm gate price	0.40

Source: Author's estimates

International comparison of margins for fluid milk

There is evidence that the margin for processing and marketing of milk in New Zealand is substantially higher than in Australia and the United States. The results of a comparison, reported in Table 8, show a difference in the order of 6-17 cents per litre.

Table 8: International comparison of processing and marketing margins for milk, 1997

		<i>NZ</i>	<i>Australia</i>	<i>United States</i>
Retail prices	<i>\$NZ/litre</i>	1.35	1.29	1.37
Farm prices	"	0.40	0.51	0.48
Processing and marketing margin	"	0.95	0.78	0.89
Processing and marketing margin (%)		70	60	65

Information sources: Retail price information is from the author's survey. The source of farm price information for New Zealand is as for Table 7. Farm price information for Australia is from Gleeson, 1998 and that for the United States is from Manchester and Blayney, 1997.

Processing and marketing margins vary substantially between different regions in both Australia and the United States, but available evidence suggests that average margins in New Zealand have been outside the range of variation in either of these countries. In the eastern states of Australia, processing and marketing margins for milk are estimated to have ranged from about 53 percent in Queensland to about 67 percent in Victoria.¹¹ Processing and marketing margins for 28 cities in the United States are estimated to range from about 33 percent to about 68 percent.¹²

¹¹ These estimates are based on farm gate prices for market milk published by the Australian Dairy Corporation 1997 and retail price estimates submitted to the recent ACT review of milk marketing regulation (Sheen, 1998) by the Milk Authority of the ACT.

¹² Ignoring the two outliers, the remaining observations are in the range 48-63 percent. These estimates are based on a survey undertaken by the US General Accounting Office (GAO), 1998. The GAO survey provides information on the price spread between the retail level and announced prices of raw milk offered by cooperatives. The GAO estimates were adjusted by addition of a constant factor (5.4 percent) to account for costs incurred by cooperatives, for example in collection of milk from farmers.

CHAPTER THREE

REASONS FOR HIGH DOMESTIC PRICES

The evidence presented in the preceding chapter shows that retail prices of full cream milk and some other dairy products are no lower in New Zealand than in countries where the costs of milk production are known to be much higher. There is strong evidence that processing and marketing margins for fluid milk are much higher in New Zealand than those generally prevailing in Australia and the United States.

This raises the obvious question: "How could high retail prices be sustained in New Zealand, given that the cost of milk production is so low?". In a competitive market, the actions of entrepreneurs seeking out profitable business opportunities could be expected to ensure that the price at which processors offer dairy products for sale on the domestic market would approximate export parity levels. This could be expected to result in substantially lower retail prices in New Zealand than in countries whose domestic dairy industries are protected by high tariffs and other import barriers imposed by governments.

Retail prices for dairy products in New Zealand depend on consumer demand, price and income elasticities, the supply of dairy products in New Zealand, and the Goods and Services Tax (GST). The supply of product comes from domestic production and imports. The domestic supply of product depends on the price responsiveness of farm production (supply elasticities), the quantity of product exported, and any restrictions in the supply chain. The supply of imported product depends on foreign production, transport and associated costs, and any tariffs or other trade policy distortions.

Two possible explanations for high domestic prices for dairy products in New Zealand are worth exploring:

- they may be attributable to high retail margins; or
- they may be attributable to high margins obtained by the cooperative dairy companies.

There does not seem to be any reason to expect retailers to be able to exercise a great deal of market power in selling dairy products in New Zealand. Major supermarkets compete with each other, with convenience stores and with home delivery services. There is some evidence that retail margins for milk in some Australian states have been squeezed by price regulation, but there is no obvious reason to expect retail margins in New Zealand to be greater than those applying to sales that are free of price regulation in either Australia or the United States. As noted earlier, average processing and marketing margins in New Zealand are outside the range of variation that occurs in both Australia and the United States.

As a possible explanation of high retail milk prices, the alleged market power of retailers is difficult to reconcile with differences in the relationship between retail prices of milk and other dairy products in New Zealand and other countries. If New Zealand retailers have an abnormally high degree of market power, there is no obvious reason to expect they would exercise it disproportionately in respect of milk, when raising prices of all

dairy products or all foods by a smaller percentage would be less noticeable. As mentioned earlier, the retail price of some dairy products, for example butter, is much lower in New Zealand than in most of the other countries surveyed.

The retail price of butter in New Zealand is broadly in line with what it might be expected to be in a country with comparative advantages in dairying. Countries in which the consumer tax equivalent (CTE) of protection provided to domestic dairy industries is relatively high tend to have relatively high retail butter prices.¹³ In Japan, where the price of butter is more than four times that in New Zealand, the estimated CTE of the dairy industry was 74 percent in 1994. In the European Union and the United States, where the price of butter is about double that in New Zealand, the estimated CTE of the dairy industry was 51 percent and 46 percent respectively. In Australia, with an estimated CTE of 30 percent in 1994, the retail price of butter was above that in New Zealand, which had an estimated CTE of zero.

By contrast, retail milk prices do not appear to be related to industry efficiency levels in different countries. This can be seen by comparing milk and butter prices. In New Zealand it is only possible to buy about half as much milk for the price of 500 grams of butter as can be purchased in the United States, Japan and France.¹⁴ This difference may, perhaps, be largely explained by distortions resulting from the way industry assistance regimes operate in the latter countries, rather than by peculiarities of pricing in New Zealand.

However, such factors do not explain why the full cream milk to butter price ratio is also somewhat lower in Australia than in New Zealand. The retail price of milk might be expected to be higher in Australia as a result of regulatory arrangements in that country. Domestic market regulation in Australia results in farmers being paid a price for quota milk destined for the domestic fluid milk market which is about double the price they receive for manufacturing milk. With a price premium for market milk equivalent to that received by New Zealand farmers, it is estimated that the retail price of milk in Australia would be about 16 percent lower than at present.¹⁵ In that situation, the ratio of milk to butter prices would be about 26 percent lower in Australia than that applying in New Zealand under current arrangements.

There are at least two possible ways in which dairy companies may be able to appropriate abnormally high margins for processing milk in New Zealand. First, as explained in the Appendix, the New Zealand Dairy Board has had the power to fix prices under section 27 of the Dairy Board Act 1961. Legislation to remove this section was recently passed. Although this study uncovered no evidence that the Dairy Board engages in price fixing

¹³ The CTE is the *ad valorem* tax equivalent to total transfers from consumers resulting from market price support policies, less any transfers from taxpayers to consumers resulting from consumer subsidies. It is often expressed in negative terms as a consumer subsidy equivalent (CSE). CTE estimates quoted above are from OECD, 1996.

¹⁴ On the basis of retail prices in the survey the number of litres of milk purchased for the same price as 500 grams of butter in different countries is as follows: 3.7 in the United States, 3.3 in Japan, 3.1 in France, 1.7 in Australia and 1.5 in New Zealand.

¹⁵ The Productivity Commission has suggested that following deregulation of the domestic milk market at farm level in Australia, the farm gate price of market milk could fall by as much as A\$0.20 per litre, which represents about 16 percent of the retail price (Productivity Commission, 1997).

on the domestic market, its legal power to do so, in conjunction with its exemption from Commerce Commission scrutiny, has provided an environment in which collusion could readily occur in setting domestic prices.

Secondly, the Dairy Board may use its powers as an export monopolist to divert supplies from the domestic market, where demand is relatively price inelastic, to the export market, where demand is elastic. If the Dairy Board were to implement such a strategy without help from the cooperative processing companies, which supply the products exported by the board, it would incur large losses. The cooperative processing companies, the owners of the Dairy Board, may help by constraining their sales on the domestic market and diverting product to the board for export at a lower price.

If the Dairy Board and cooperative processing companies control domestic prices by diverting supplies to the export market, this would help to explain how it has been possible for domestic prices to increase in recent years while export prices have fallen. However, it remains to be explained how it is possible for the dairy companies to ward off potential competitors – from both external and domestic sources – who could profit by taking advantage of high domestic prices.

The potential for import competition to constrain prices on the domestic market has been limited by the natural protection provided by transport costs. It is possible for domestic suppliers of dairy products to raise domestic prices from export parity to import parity without attracting external competition. There is potential for import competition in products such as butter and cheese, and foreign firms, such as Bonlac, have entered this market in recent years. Natural protection for the most perishable products, such as milk, has prevented import competition. With technical advances increasing the shelf life for milk, it is possible that import competition will also be possible in respect of milk before long. In addition, technology in the manufacture of UHT milk has advanced to the point where its taste is difficult to distinguish from that of some types of fresh milk. In France and Italy, UHT milk now accounts for much more than half of total milk consumed. In South Australia, partly as a result of prices being about two-thirds the levels for fresh milk products, UHT milk now accounts for about 14 percent of total milk consumption.¹⁶

If current arrangements remain in place, it is reasonable to expect that import competition will have an impact on domestic retail milk prices at some time in the future. Meanwhile, natural protection of the domestic fluid milk market helps to explain why the ratio of milk to butter prices is relatively high in New Zealand.

The other potential source of competition that might be expected to reduce the domestic price of milk is competition from farmers seeking to bypass the dairy companies and supply retailers directly. There is little evidence to date of such a development. During this study one retailer was observed selling milk in this way at a price of \$1.00 per litre. This example bolsters the suggestion that there is a margin that could be exploited.

There are several possible reasons why retailers and farmers have not sought to bypass the dairy companies more consistently. One possibility is that the major supermarkets, which might have been expected to consider entering the processing business to appropriate some of the profits for their shareholders, may already be obtaining supplies from the dairy companies on relatively favourable terms. Alternatively, they may be

¹⁶ Ould, 1998.

deterred by the possibility that if they enter the processing industry on their own account, the dairy companies may retaliate by making them pay more to stock established brands.

Under existing regulatory arrangements it is also possible that major retailers may be deterred from entering the processing business because of doubts about the availability of reliable milk supplies. Farmers who decided to supply milk to firms other than the cooperative dairy companies would probably have to walk away from substantial off-farm investments that have accumulated through retained earnings of these cooperatives and the Dairy Board. In addition, the willingness of farmers to contract to supply milk to firms other than the cooperative dairy companies would depend, in part, on their ability to sell all the milk they produce over the long run. If farmers have a contract to supply a quantity of milk to the domestic market it is likely to be for a relatively fixed amount. Suppose, however, they experience a good season and produce extra milk. Farmers need to be able to sell this profitably. This may not be possible if they are not able to export the production. Under current legislation, any firm wishing to export dairy produce has to have the permission of the Dairy Board, which is owned by the cooperative dairy companies.

This discussion of possible explanations for high domestic prices for milk and some other dairy products has, necessarily, been conjectural. It does indicate, however, that the Dairy Board's export monopoly and exemption from Commerce Commission scrutiny could enable the cooperative dairy companies to obtain large margins from sales on the domestic market. As a possible explanation for high domestic prices, this is much more plausible than the alternative view that high prices can be attributed solely to the market power of retailers.

CHAPTER FOUR

PRELIMINARY ESTIMATE
OF EXTRA COST TO NEW ZEALAND
CONSUMERS

It is difficult to make precise estimates of the extra amounts paid by New Zealand consumers as a result of domestic prices of dairy products being maintained above export parity levels. This is because of the limited amount of information publicly available concerning processing and marketing costs.

A preliminary estimate of the extra costs to consumers is provided in Table 9. On the basis of the international comparisons presented above, it is assumed that New Zealanders pay 10 percent more for full cream milk, cream and UHT milk and 20 percent more for yoghurt than they would pay if prices were set in a competitive market. It is assumed that there are no additional costs for butter or cheese. Even with these conservative estimates, consumers lose out by approximately \$30 per year on average per person and New Zealand consumers in total by approximately \$100 million per year. These estimates would be even larger if account were taken of the deadweight loss associated with reduced consumption due to the higher prices paid by New Zealand consumers.

Table 9: Preliminary estimates of extra costs paid by New Zealand consumers

	<i>Unit costs</i> (%)	<i>Per capita costs</i> (\$)	<i>Total NZ consumer costs</i> (\$m)
Milk	10	15.73	56.62
Cream	10	1.59	5.72
Yoghurt	20	7.59	27.32
UHT milk	10	1.63	5.88
Total		26.54	95.54

Source: Author's calculations

The relatively high price of dairy products sold domestically has adverse effects on consumers, particularly poorer consumers who spend a greater proportion of their income on food. It is likely that high prices have induced some consumers to reduce their purchases of dairy products.

It is possible that high domestic prices for dairy products have also impeded the expansion of local food and food product industries, apart from those activities controlled by the cooperative dairy companies. Despite the significant investment of dairy companies in producing added value products for international markets, large volumes of dairy products are still exported as low value commodities. It is not obvious that the cooperative companies are seeking opportunities to supply locally produced dairy

products to New Zealand food manufacturers at internationally competitive prices. It would be in the interests of farmers to ensure that dairy products are available to domestic food manufacturers at such prices. This would encourage the location of more investment in food manufacturing in New Zealand, using milk produced in New Zealand to supply world markets.

CHAPTER FIVE

CONCLUSIONS

The reform of the regulatory regime between 1985 and 1993 resulted in substantial changes in the domestic market for dairy products. A greater range of dairy products is now available and in the case of many items consumers can choose between competing brands, some of which position themselves as discount brands.

However, deregulation has brought no apparent price benefit to consumers, with prices for dairy products rising faster than the 'all foods' Consumers Price Index. The international survey of retail dairy prices undertaken for this study has shown that full cream milk, cream, UHT milk and yoghurt are available in other countries at lower prices than those paid by New Zealand consumers. Further, in some other countries consumers enjoy additional benefits because there are numerous in-store promotions and a greater share of the market is held by discount brands. Butter and cheese are the only dairy products available in New Zealand at generally favourable prices. The analysis of the high domestic prices for dairy products shows the margin between the farm gate and the customer is larger than in Australia and the United States.

Evidence presented in this report suggests that the domestic milk market in New Zealand is highly distorted. The level of retail milk prices, in particular, is impossible to reconcile with any plausible view of the prices that would be likely to prevail under normal competitive conditions in a country which is the world's lowest cost producer of milk.

An indication of the magnitude of the distortions is the fact that the retail price of full cream milk in New Zealand is higher than in Australia, despite anti-competitive regulatory arrangements in that country. Regulation in Australia - which is currently subject to review under national competition policies - has resulted in large transfers from milk consumers to those farmers who have been allocated quota to supply milk to the domestic market. In New Zealand, the total transfers from consumers are larger and the anti-competitive arrangements are less transparent, so it is less clear who benefits from them.

An examination of possible reasons why New Zealand consumers pay high prices for milk strongly suggests that this is attributable mainly to the existing regulatory environment which provides the Dairy Board with an export monopoly and exempts its dealings with cooperative dairy companies from Commerce Commission scrutiny. This regulatory environment has weakened competitive forces which could otherwise be expected to have brought closer the relationship between dairy product prices on domestic and export markets. It is likely that the cooperative dairy companies have been the main beneficiaries of this regulatory environment, through high processing margins on sales of milk.

A preliminary estimate suggests that the additional cost borne by consumers, as a result of domestic prices for dairy products being maintained above export parity, is of the order of \$100 million per annum. The existence of transfers of this magnitude provides an additional argument for action to be taken as soon as possible to remove the Dairy Board's export monopoly and its exemption from Commerce Commission scrutiny.

This report has suggested that in addition to protecting the Dairy Board from competition from other exporters, its export monopoly may facilitate diversion of supplies to the export market and thus contribute to a lessening of competition on the domestic market. Without freedom to export it will be difficult for firms, other than the existing dairy companies, to develop supply contracts with farmers (individually or in groups). This means that greater competition in supplying the domestic market may not be possible while the Dairy Board's export monopoly remains in force. In addition, it is important for early action to be taken to remove the Dairy Board's exemption from Commerce Commission scrutiny to enable the commission to combat anti-competitive behaviour in the dairy industry on the same basis as in other industries.

A P P E N D I X

Discussion of section 27 of the Dairy Board Act 1961 (rescinded 1998)

Section 27 of the Dairy Board Act 1961 provided that:

The Board may at any time fix, in respect of any approved class of dairy produce, a notional price which shall take effect from a date (not being earlier than the date on which it is fixed) the Board specifies. (s27 (2))

In effect the New Zealand Dairy Board was able to act as a price fixing agent in a way which is not possible for most products in domestic markets because of the Commerce Act 1986. The Dairy Board had power to set prices and substantial freedom as regards the periods for which prices were fixed:

Where the Board amends any notional price, it shall specify a period of such number of whole months as it thinks fit. (s27 (4))

It also had substantial freedom regarding the way in which prices could be enforced:

Where, in the opinion of the Board, any dairy produce is disposed otherwise than to the Board during a month that forms part of a period to which this subsection applies, the amount (if any) payable under subsection (5) of this section to the manufacturer that manufactured it shall be... (s27 (6))

The Act gave the Dairy Board freedom to enforce prices which related to the prevailing period or the preceding 12 month period.

The net effect of this legislation was fourfold:

- 1 It hindered the emergence of a competitive market for dairy products in New Zealand because in essence there was only one supplying firm, the Dairy Board, which supplied products via its de facto subsidiaries (the dairy companies).
- 2 In setting the domestic market prices, the Dairy Board had the freedom to charge prices in excess of international prices and so harm domestic consumers.
- 3 The maintenance of the higher domestic wholesale prices for dairy products discouraged the development of competitive food processing industries based on dairy products, because the Dairy Board, ie the price fixer, remained the only source of supply of New Zealand dairy products to companies set up outside the aegis of the board.
- 4 This arrangement was apparently protected by the New Zealand Dairy Board Act 1961 specifically exempting the board from the Commerce Act 1986 (see Dairy Board Amendment Act 1992 [No 101], s4).

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