FARMER CONTROL OF PROCESSING AND MARKETING

DOES IT SERVE THE INTERESTS OF FARMERS?

NEW ZEALAND BUSINESS ROUNDTABLE

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The New Zealand Business Roundtable is an organisation of chief executives of major New Zealand businesses. The purpose of the organisation is to contribute to the development of sound public policies that reflect overall New Zealand interests.

FOREWORD

Why is the New Zealand Business Roundtable interested in the question of whether farmer control of processing and marketing – that is, control by farmer representatives of firms involved in these activities – serves the interests of farmers?

Our interest stems from a concern that the attachment which many farmers show to farmer control of processing and marketing may be based on unrealistic expectations about the benefits of farmer control and unwarranted fears of external investment, rather than on objective assessments of economic benefits and costs. If the result is a less efficient pattern of ownership, national income is reduced relative to its potential and the interests of the general community are harmed.

Increasing numbers of New Zealand farmers are disillusioned with the averaging systems that have dominated large parts of the agricultural sector. They are frustrated by an inability to exercise the freedom to contract with potential purchasers that is enjoyed by other commercial enterprises. Yet some industry leaders still recite the old mantra that 'farmer control must be retained', as if it is self-evident that farmer control must benefit farmers.

The influence of the attachment to farmer control is evident in the fact that it has been mandated by government legislation over a long period in important agricultural industries in New Zealand. It is remarkable that this legislation has remained on the statute books for so long, given the extensive policy reforms since 1984 that have removed similar anti-competitive legislation from most other sectors of the New Zealand economy.

The government has now stated that removal of the statutory backing of producer boards is inevitable. It should occur without unnecessary delay. Any legitimate public policy objectives that have been previously pursued through producer boards can be achieved more efficiently through more specific legislative action. There is no valid reason why statutory barriers to competition which protect incumbent processing and marketing firms – such as the Dairy Board's export monopoly powers and the statutory restrictions on the transfer of ownership of its shares – should not be removed immediately.

It is possible that even after the removal of the statutory backing of producer boards, unrealistic expectations and unwarranted fears will continue to exert an influence on questions relating to farmer control. Any failure to make the best commercial decisions will depress farmers' incomes and constrain the economic opportunities available to large numbers of other New Zealanders.

This report assesses various arguments that farmer control serves the interests of farmers. Its conclusions reinforce the view that individual farmers should be free to choose whether or not to invest in the processing and marketing of their products. In these activities, as in most others, the best results are achieved when individuals with energy and initiative are free to find new approaches to meeting consumer needs, unfettered by misguided collectivism.

R L Kerr

Executive Director

New Zealand Business Roundtable

EXECUTIVE SUMMARY

- The cooperative form of ownership of agricultural processing and marketing firms is coming under increasing pressure because:
  - the world market for agricultural products is changing in ways that tend to disadvantage farmer-controlled firms that are organised along commodity lines;
  - the problems associated with 'bundling' of returns from off-farm investments in prices received by farmers are increasing;
  - with increasing capital requirements, farmers are less willing and able to assume the required investment risk;
  - the problems that members have in monitoring the firm's performance increase as cooperatives amalgamate and accumulate more members; and
  - the lack of transferability of ownership rights becomes increasingly untenable as the assets of cooperatives grow.
- Sweeping assertions that farmer control must benefit farmers, or that farmers are disadvantaged by selling to investor-owned firms, have no basis. Available evidence suggests that the domination of the dairy industry by farmer-controlled firms may have resulted in a reduction in prices received by farmers for raw material of 10–15 percent in recent years, relative to a situation of unfettered competition between investor-owned and farmer-controlled firms.
- The arguments that have been advanced in support of the view that farmer control enables farmers to maintain higher incomes are weak because:
  - control of marketing firms is not necessary for farmers to take advantage of any potential to obtain price premiums through product differentiation;
  - where investor-owned firms could theoretically exercise market power to reduce prices paid to farmers, they are constrained by the need to ensure reliable supplies of raw materials and discourage competitive entry into the market by rival firms; and
  - the argument that farmers may be disadvantaged by the tendency for investor-owned firms to focus on the most profitable parts of the market overlooks the contribution that competition can make in reducing costs in processing and marketing, and providing better products to consumers.
- There are stronger grounds for the view that farmer control has the potential to benefit farmers where the specific nature of the assets makes it particularly important for them to have secure market outlets for their products. However, farmer control is not the only solution to this problem, and it is not necessarily the most efficient one. In some circumstances long-term contracts or corporate farming may be more efficient.
- The economic benefits of farmer control are rarely sufficient to eliminate investor-controlled firms from processing or marketing activities when competition between different forms of business is not biased by regulations favouring farmer control. While it is arguable that farmers can sometimes benefit from control of the initial stages of processing, they are less likely to benefit when their capital is placed at risk in further value-adding activities that are several stages removed from agriculture.

- Restrictions on share transfer may help to ensure that farmer control is maintained, but they impose substantial costs on farmers by:
  - reducing the opportunities for farmers to diversify their asset portfolios and hence reduce the market values of farmers' shares; and
  - denying shareholders of poorly performing firms the potential for improved future earnings and higher share prices through transfer of control.
- A decision to remove restrictions on share transfer does not transfer control of a firm to external investors. It can only result in transfer of control if large numbers of farmers decide to sell their shares.
- The best test of whether farmer control serves the interests of farmers is whether farmer-controlled firms are able to survive open competition in markets for corporate control and in markets for raw materials. As shareholders in processing and marketing firms, farmers' best interests are served by unfettered competition in the market for corporate control. Farmers' best interests as suppliers of raw materials are better promoted by unfettered competition for these products than by attempts to restrict such competition.
- The important choices confronting farmers are about contestability:
  - Should the control of firms depend on the performance of the firm and the investment strategies of individual shareholders, or should restrictions on share transfer be maintained irrespective of the costs to individual farmers?
  - Should the normal market test of economic efficiency apply in markets for farmers' products, or should practices such as bundling of investment returns into payouts for raw materials be maintained in an attempt to discourage entry into the market by investor-owned firms?
- Farmers can benefit from control of agricultural processing and marketing firms under some circumstances. But farmer control is clearly counter-productive when it:
  - reduces competition for the products supplied by farmers; and
  - discourages investment dedicated to further processing of those products to meet international demand.

CHAPTER ONE

INTRODUCTION

New Zealand farmers have a long history of seeking to control the processing and marketing of agricultural products through cooperatives. An important distinguishing characteristic of these firms is that suppliers of the raw material are also the suppliers of risk capital.

Historical reasons for farmer control

Farmer control of processing and marketing of various agricultural products appears to have emerged for a variety of reasons in different countries. For example, in discussing the rapid growth of dairy product exports from Victoria (Australia) to England in the 1890s, the economic historian, Edward Shann, referred to the role of cooperative central butter factories as well as to the advent of refrigeration and the Danish cream separator. He implies that the cooperative butter factories were a desirable organisational innovation since they "turned out a more uniform and dependable product" than independent farmers making their own butter by hand churn.[1]

Similar factors may explain the introduction of cooperative butter factories in New Zealand. The author of the section on agricultural marketing in *An Encyclopedia of New Zealand* (1966) notes that while the first factories were established by private enterprise, cooperative enterprise quickly became popular when refrigeration showed the possibility of rapid future expansion in production. Reasons given for the popularity of the cooperative form of organisation include the hostility of farmers to what they viewed as 'the excess profits of the middleman', the success of similar movements in Denmark and Ireland and "the fact that the necessary capital probably could not have been raised by any other means".[2] It is not immediately obvious why investment in butter factories was not attractive to wealthy individual investors. One possible reason is that potential investors may have considered themselves vulnerable to collective action by farmers to withdraw supplies and set up processing cooperatives.

More generally, farmer-controlled processing and marketing cooperatives often have their genesis in periods of depressed prices, which induce farmers to take collective action in an attempt to improve their lot. In New Zealand, as in Australia, a great deal of this collective effort was directed at government regulation of marketing, including the establishment of producer-controlled marketing boards. Farmer-controlled processing and marketing cooperatives have been favoured by government regulation over a long period in some industries in New Zealand.[3] In the dairy industry a 1908 Act is said to

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1 Shann, 1930, p 343.

2 McLintock, 1966, p 491.

3 Cooperatives and statutory marketing are not always complementary. For example, the long period of domination of the Australian wheat industry by the Australian Wheat Board can be traced to the preference of many farmers in the inter-war years for government-backed organised marketing, rather than selling through either voluntary cooperatives or private grain merchants (Connors, 1996, pp 31, 32).

have "effectively ensured that all dairy manufacturers would be cooperatively owned by milk suppliers".[4]

Why have farmers acted collectively to obtain control over processing and marketing of their products? Part of the explanation may lie in the fact that some characteristics of farming tend to favour collective action to pursue common interests. These include:

- the common experiences and interests of farm owners – for example, family firms, knowledge of particular types of farming, common exposure to vagaries of the elements and a desire to reduce risks inherent in exposure to markets; and
- relative ease of communication because of geographical concentration and links to local communities where everyone knows everyone and has common involvement in community facilities, eg schools, sporting clubs.

However, this type of explanation does not take us far. Some observers suggest that other characteristics of farming favour individualism:

> Many people have noted that farmers are not by nature 'co-operators'. In many ways, the nature of farming has bred people who are independent individualists and, as owners of small businesses, strongly capitalistic.[5]

As an explanation for farmer control, the 'nature of farming' also fails to explain why New Zealand farmers appear to be more prone to take collective action than farmers in Australia. As David Trebeck observes, "Australia has never taken on the religion of single desk selling with quite the same fervour as New Zealand".[6] In addition, as Trebeck points out, substantial differences are apparent in farmers' attitudes toward the involvement of investor-owned firms in processing and marketing:

> Australian farmers seem to have fewer hang-ups about the involvement of conventional corporate players than their New Zealand counterparts, even though there is a strong history of statutory marketing in some industries. There is now quite a contrast between the level of corporate involvement in agricultural processing and marketing. Australian farmers seem to have a better appreciation that they 'buy marketing services' and competition is as important here as anywhere else.[7]

These differences between Australia and New Zealand can be partly explained by differences in industry composition. As discussed later, there are sound economic reasons why cooperatives have, historically, been able to hold their own in competition with investor-owned firms in some industries. Overall, the industry composition of agriculture in New Zealand has probably been more favourable to cooperatives than in Australia.

However, this explanation is incomplete. For example, it does not tell us why the New Zealand dairy industry is dominated by cooperatives, while investor-owned firms have a much stronger presence in the Australian dairy industry.

There is also an ideological factor that needs to be taken into account. One commentator suggests that at the end of the nineteenth century many of the owners of small farms in

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4 ACIL, 1992, p 97.

5 Greenwood, 1996, p 9.

6 Trebeck, 1996, p 4.

7 Trebeck, 1996, p 17.

New Zealand were "impatient of a nineteenth century laissez faire philosophy and they were hostile to what they regarded, rightly or wrongly, as the excess profits of the middleman, who seemed to be richly rewarded for little apparently useful work".[8] Similar attitudes were also common among owners of small farms in Australia. In both countries, such attitudes can be linked to collectivist ideas that were having an increasing influence over many aspects of economic life.

The ideology of farmer control – and the heavy government intervention that accompanied it – may be seen as a manifestation of prevailing attitudes and beliefs in the broader community. These attitudes and beliefs included:

- widespread distrust of the profit motive and competition;
- the belief that outcomes that are consciously designed (organised, controlled or stabilised) must be better than outcomes that emerge spontaneously (from decisions of large numbers of individuals and firms that are coordinated only by market prices); and
- the view that individual well-being depends on that of the group (hence a willingness to take part in collective action and accept majority decisions).[9]

The changing environment for agribusiness

In the past the regulatory environment in which farmer cooperatives and marketing boards have operated in New Zealand has typically given marketing boards pervasive powers, including in some instances an export monopoly. These powers have deterred competitive entry in processing and marketing by investor-owned firms.

This situation is gradually changing. As part of the policy reform process, there has been a move away from bestowing monopoly powers on marketing boards. This is opening the way for more competition in processing and marketing of agricultural products.

The world market is also changing. The following extracts are from a speech made by Donald McGauchie as president of the National Farmers' Federation of Australia. He draws out some important implications for countries like Australia and New Zealand of major changes occurring in the world market for agricultural products:

> For many reasons, the focus on our comparative advantages in producing broadacre, bulk commodities will shift towards products which can be differentiated through the addition of marketing services and intellectual property.
>
> Intellectual property, services and international investment are becoming increasingly important to trade in agricultural products, and we can expect them to become increasingly relevant … .

McGauchie illustrates his point by reference to the marketing of several products, including bananas:

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8 McLintoch, 1966, p 491.

9 The majority decisions that individual farmers were required to accept in order to pursue particular farming activities included compulsory investment through retained earnings in cooperatives.

> … the US grows practically no bananas, and yet it sells them on export markets. Three large food companies import the bananas, mainly from Latin America, and then sell them into the EU. But they don't just sell bananas – they sell consistent quality, specialised ships and ripening rooms, marketing, promotion, packaging, branding and completed paperwork (and all the processes in between). At the end of the process, the value of a single banana increases 7 times … .[10]

One implication of this transformation is that the skills required to market one agricultural product are similar to those required to market others in the same product category. This explains, for example, why the management team of Dairy Farmers, an Australian dairy cooperative, is dotted with people who have worked for the Coca Cola company (or Coca Cola Amatil), the most successful beverage marketer in the world.[11]

The transformation of the market for agricultural products is also having implications for the ways in which firms specialise and organise internally. A firm, or division of a firm, that gains the knowledge of and influence with customers necessary to market one product successfully is likely to be well placed to market other products in the same general category. Thus, for example, a firm, or division of a firm, that is successfully selling different kinds of milk (skimmed, flavoured, UHT etc) may have developed specialised skills and knowledge of particular markets that are relevant to selling other beverages such as fruit juices, bottled water and carbonated soft drinks.

The changes occurring in the markets for agricultural products are requiring a much more profound response than just clever advertising to enable products to be perceived differently by consumers. For example, increasing demand for convenience foods such as frozen meals and dairy desserts is requiring a substantially different approach to food manufacturing. Diversified food manufacturing firms such as Nestlé are often well placed to take advantage of such trends through investments and acquisitions.[12] By contrast, traditional food manufacturers, which are oriented along commodity lines, are threatened by the loss of their traditional retail markets for foods which consumers have to cook for themselves.

Manufacturers can respond to such changes in a variety of different ways:

- investing in further value-adding activities;
- becoming more closely integrated with other food manufacturing concerns;
- focusing on niche markets or the supply of industrial raw materials and intermediate goods; or
- even deciding to discontinue production.

How individual firms respond will depend on a range of factors, including in some instances restraints imposed by the cooperative form of ownership.

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10 McGauchie, 1997.

11 *Business Review Weekly*, November 25, 1996, p 56.

12 For example, the takeover by Nestlé of the ice-cream, yoghurt and dairy dessert brands of Pacific Dunlop, an Australian manufacturing firm, provided an opportunity for Nestlé to enter rapidly growing segments of the market in a way that complemented its existing businesses. The large Italian dairy group, Parmalat, also seems to be poised to undertake substantial acquisitions in Australia as a springboard for expansion in the Australian and Asia-Pacific markets.

CHAPTER TWO

THE PROBLEMS OF COOPERATIVES[13]

The existence of cooperatives in competitive environments in which they are not favoured by government regulation suggests that, under some circumstances, this form of business ownership may be as efficient as alternatives such as investor ownership. It is not surprising, therefore, that various studies, including one undertaken by Ernst & Young for the New Zealand Dairy Board, conclude that there is nothing in the structure of cooperatives that makes them essentially inferior to investor-owned firms.[14] However, this says nothing about the relative efficiency of cooperatives in industries where regulation has shielded this form of business ownership from competition. Furthermore, rather than focusing on comparative performance at a point in time, it is important to look at the underlying forces that are shaping the ways in which businesses are organised.

The cooperative form of ownership of agricultural processing and marketing activities is coming under increasing pressure because of:

- distortions resulting from 'bundling' of investment returns in prices received by farmers for the commodities they supply;
- increasing capital requirements and limits on the ability and willingness of farmers to assume the required investment risk;
- increasing problems of monitoring performance as cooperatives become larger; and
- problems arising from lack of transferability of ownership rights.

Bundling

The bundling of returns from farmers' investments in cooperatives into the payout they receive for farm produce can give rise to two forms of inefficiency:

- first, bundling tends to bind farmers to cooperatives, even when they could obtain higher returns by selling to a competing firm and investing elsewhere; and
- second, bundling tends to distort farmers' allocation of resources in favour of the commodity which is subject to bundling.

Bundling binds farmers to cooperatives by making it impossible for them to obtain a return on their investment unless they continue to supply the cooperative. This weakens the competitive pressures under which cooperatives operate by making it difficult for investor-owned firms to enter an industry.

The result of this distortion can be a combined return to farmers, including the price for their produce and the return on their capital, which is lower than they could obtain by selling their produce to an investor-owned firm and investing their funds elsewhere. Unless cooperative ownership is mandated by government legislation, it is always possible for the farmers who own cooperatives to rectify this situation. However, in a

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[13] The material in this section draws heavily on a recent speech by Roger Kerr (1997).

[14] Ernst & Young, 1995.

situation where an industry is dominated by cooperatives which engage in bundling, as in the case of the New Zealand dairy industry, there are no benchmarks readily available that farmers can use to assess what returns they would be able to obtain in a competitive market.

The resource allocation distortions that arise from bundling the returns from farmers' investments in cooperatives into the price they receive for produce were highlighted in the 1992 ACIL report.[15] With bundling, the return that farmers receive for additional production exceeds the market value of that additional production (revenue obtained by the cooperative for additional sales less costs incurred). Since farmers base their production and investment decisions on the returns they obtain on alternative uses of resources, they will tend to devote additional resources to production of commodities which are subject to bundling at the expense of other farm products.[16]

The cost to the New Zealand economy of the price distortions associated with the bundling of returns from on-farm milk production and off-farm investments in processing and marketing into one payment have been estimated at $145 million per annum.[17] The price distortion associated with the bundling of the premium return on New Zealand's preferential quota access to the European Union has been estimated to result in a further annual cost to the New Zealand economy of approximately $23 million.[18] The total annual cost to the New Zealand economy of both forms of bundling would be higher than $168 million (145 + 23) because this makes no allowance for the adverse effects of bundling in shielding cooperatives from competition from investor-owned firms. On the basis of the price comparisons presented in chapter 4, it is possible that the total cost of bundling to the New Zealand economy could be as high as $480 million.[19]

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15 ACIL, 1992, pp 23–25 and pp 115–119.

16 The effect of returns from marginal units of milk production on production decisions of dairy farmers can be illustrated by reference to the responses of farmers to different pricing structures in the Murray Valley irrigation area of Australia. Farmers on the New South Wales side of the river have received a lower price for marginal units of milk production than those on the Victorian side of the border. The New South Wales farmers have received a lower price for production in excess of a quota, whereas the Victorian farmers have received an averaged price for all their milk production. The financial performance of farms, in terms of rates of return on capital invested, is similar in both states, but farmers in Victoria have chosen to use more intensive production techniques, involving higher stocking rates and greater levels of irrigation. This has resulted in both higher costs per cow and higher milk yields per cow for the farms in Victoria than for those in New South Wales. See ABARE, 1997.

17 Tasman Asia Pacific and ACIL, 1996.

18 Bates, 1997, pp 18, 19.

19 The original estimates of the cost to the economy of bundling were based on the assumption that the bundled payout includes a return on farmers' off-farm assets comparable with the return they could earn on other off-farm investments. If the actual return obtained is lower than this, the effect of the resource allocation distortion will have been over-estimated, but bundling will have been associated with an even larger efficiency cost due to inefficient use of capital. If bundling has the effect of reducing the return on farmers' off-farm assets from 10 percent per annum to 4 percent per annum (as implied by the price comparison in chapter four), the total cost to the New Zealand economy of resource use inefficiency associated with bundling could be as high as $480 million (the sum of a cost of resource misallocation of about $60 million and a cost of resource use inefficiency of about $420 million).

The bundling problem is compounded by the obligation that cooperatives have to accept extra output from suppliers. Cooperatives are obliged to expand their processing capacity and investment in marketing to support the additional production resulting from bundling. This results in a redistribution of dividends from the cooperative in favour of new suppliers and suppliers who are expanding their production levels. As noted by Roger Kerr, despite various attempts to impose levies on additional production in the dairy industry, the effect of bundling is that "by increasing their production, suppliers capture an increased share of the value of other shareholders' off-farm investments".[20]

The problems arising from bundling have been increasingly recognised within the New Zealand dairy industry. Murray Gough, a director of Kiwi Dairies and a former chief executive of the New Zealand Dairy Board (NZDB), acknowledges that:

> It would be better and far more profitable if we could find a way to pay out value-added profits (which don't go up because of extra milk) in a way which doesn't result in farmers getting the wrong signal about how much milk is worth as a raw material.[21]

In a draft discussion document the Dairy Section of Federated Farmers comments as follows:

> The reality is the only way to address the problem is to separate farmers' ownership of their off-farm investments from their milk production. This can only be done by issuing farmers shares in the companies and Board not linked to supply.[22]

Access to capital

Farmer cooperatives rely on the suppliers of raw materials to provide equity capital. This tends to raise their cost of capital relative to investor-owned firms. As capital investment in cooperatives by individual farmers increases relative to the size of their total asset portfolios, the risks involved in further investments must eventually rise sharply.

In practical terms, what this means is that the ability of cooperatives to finance their expansion is limited by internal cash flow. This can be a major problem when major new investments are contemplated. For example, access to capital appears to be imposing a constraint on the ability of cooperative dairy companies to move away from bulk commodity lines into differentiated consumer products, despite the fact that these companies already retain a substantial proportion of their earnings for future investment. Under existing cooperative structures "farmers alone must assume all investment risk as residual stakeholders and they are, in effect, involuntary investors in processing and marketing".[23]

As owners of a cooperative, the returns that farmers receive are the residual left over after meeting all costs of processing and marketing. In the event of a downturn in prices at the consumer level, cooperative ownership results in an exaggerated decline in returns to farmers. If returns on investment in a new venture are below initial expectations, the full effect of this is transmitted back to the returns received by farmers. The decline in returns as a result of such factors is even more substantial if the cooperative has borrowed to finance these investments.

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20 Kerr, 1997, p 6.

21 Gough, 1997, p 97.

22 Federated Farmers, Dairy Section, 1997, p 13.

23 Kerr, 1997, p 7.

The question of whether processing and marketing of New Zealand dairy products are constrained by limited access to additional risk capital is now being debated within the industry. For example, Gough suggests that the capacity of the NZDB to develop its added-value business is constrained because "it is unrealistic to expect all farmers to want to commit to hundreds of millions of dollars for investments which may have only a marginal link to marketing of their milk".[24] The Dairy Section of Federated Farmers suggests:

> Shortage of capital will increasingly become a problem without changed attitudes. The Board is currently at a 40% equity to assets ratio and needs more capital that cannot be provided by farmers at current payout levels. Competitors with fewer capital constraints may increasingly be more of a threat in the future. The shortage of capital may be greater than we realise depending on how quickly we want to grow or access new opportunities.[25]

It is possible that the problem that cooperatives have in obtaining access to sufficient risk capital may even restrict their capacity to engage in joint ventures with other firms. While the Australian dairy industry has attracted large amounts of outside capital in recent years, including through joint ventures, it is possible that two of the major domestically owned participants, Murray Goulburn and Bonlac, have nevertheless been constrained by their cooperative status. According to Helen Cameron, a person with experience at senior levels in both the finance and food industries, these cooperatives have been "unable to take maximum advantage of opportunities which currently present themselves in processing and marketing of higher value-added product to the rest of the world as their debt levels are too high, thus constraining expansion". She suggests that this "restricts their ability to invest in joint manufacturing ventures with offshore partners, or even to acquire domestic assets such as the recent sale of the dairy assets of Pacific Dunlop".[26]

Monitoring and accountability

The problems which owners of cooperatives have in holding boards and managements accountable for performance are similar to those encountered by the owners of any firm in which ownership is shared among a large group. Small agricultural processing cooperatives may be less affected by such problems than investor-owned firms in which shares are held by many members. When cooperatives have a relatively small number of members who transact frequently with the firm and live in close proximity to each other, the costs that members incur in informing themselves about the operation of the firm and communicating among themselves are likely to be relatively low.

However, even for small cooperatives these potential advantages can be offset by the effects of provisions such as equal voting rights. Under equal voting rights, the members who have most to lose financially from poor management do not necessarily have much influence over the strategies adopted by the firm. It is possible for farmers who supply most of the cooperative's raw materials to be outvoted by more numerous suppliers who account for only a small proportion of raw materials.

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24 Gough, 1997, p 97.

25 Federated Farmers, Dairy Section, 1997, p 4.

26 Cameron, 1996, p 11.

Equal voting rights can also encourage political activities by members to ensure that business practices are maintained which benefit some groups of suppliers at the expense of others. For example, in some instances, farmers who produce standard varieties of fruit have been paid the same price as producers of newer varieties for which consumers are prepared to pay a premium.

Directors of cooperatives often have greater difficulty in maintaining an appropriate strategic focus than directors of investor-owned firms. The following comments by Niel Black, former director of Bonlac Foods, are relevant:

> When looking back on the popular concept of a co-operative director – part field manager, part manager, part lightening rod – it is tempting to ask how proprietary companies, which lack such shining talent, can ever compete with us!
>
> Perhaps the answer is that their directors, albeit in foreign parts, are addressing policy matters rather than truck routes, store prices or local hiring and firing.[27]

As a cooperative becomes larger it generally becomes more difficult for members to hold the board and management accountable. ACIL has pointed out that members of cooperatives may actually exercise less effective control over boards and managements than the shareholders in ordinary joint stock companies "because of deficiencies in performance indicators and the lack of negotiability of the capital they hold in 'their' board or cooperative".[28]

Shareholders who are unhappy with the performance of an investor-owned company have the option of selling shares (without changing their occupation). Movements in share prices send powerful messages to the board and management. The recent departures of the chief executive of BHP and both the chair and chief executive of Brierley Investments Limited (BIL) reflect the power of such messages.

Weak accountability to shareholders can result in large cooperatives being dominated either by their managements or by industry politicians. If managers are in control, much depends on the leadership qualities of the individuals concerned – the firms may function in a highly professional manner and be difficult to distinguish from investor-owned firms, or they may become excessively bureaucratic. The consequences of domination by industry politicians are more predictable. In order to maintain popularity with farmers, the directors of large cooperatives often engage in activities that would not meet normal commercial tests of efficiency. For example, farmers' funds are used in public relations activities to convince farmers that it is in their interests for statutory monopolies to be maintained. Stunts such as export sales that are uneconomic may also be undertaken on occasions in an effort to impress farmers about the ability of the cooperative to dispose of the product.

An increase in the size of any group often creates more difficulty in reaching agreement about such matters as objectives and strategies to be pursued. In the case of agricultural cooperatives, increasing size often creates the potential for larger divergences between the interests of different classes of members, for example producers in different regions. The process of collective decision-making can have high transactions costs in the face of heterogeneous interests. As Henry Hansmann states, "there is a strong incentive for

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[27] See Greenwood, 1996, p 57.

[28] ACIL, 1992, p 36.

individuals to form coalitions to shift benefits in their direction" and "efforts to form and break such coalitions may consume substantial effort".[29] The consequences of this can include a tendency to defer important decisions until some crisis makes them unavoidable.

Large cooperatives, like other large firms, have to contend with the potential for excessive centralisation of decision-making to result in large information costs, including costs of poor decisions that do not make adequate use of the particular knowledge available to employees of the firm. Like other large firms, they also have to contend with the potential for decentralisation of decision-making to result in greater agency costs, including decisions that diverge from the interests of the firm's owners. In making trade-offs between these information costs and agency costs, cooperatives are at a disadvantage relative to investor-owned firms because they attempt to pursue objectives other than profit-making.[30] It is difficult for firms with complex objectives to avoid the information costs associated with excessive centralisation of decision-making. In order to contain the agency costs associated with decentralisation of decision-making, it is necessary to be able to implement control systems that provide simple measures of performance and reward employees accordingly.

It seems likely that the increase in size of New Zealand's cooperative dairy companies will result in greater problems for farmers in holding boards and managements accountable for performance. Amalgamations in recent years have substantially increased the size of these firms and the potential for different groups of owners to have conflicting interests. Furthermore, amalgamations have substantially reduced competition between cooperatives and hence have made it more difficult for farmers to compare the board and management performance of different cooperatives. The situation has been described by Gough:

> With 2 companies now handling 75% of NZ's milk, and further rationalisation probable, it is becoming difficult, if not impossible, for suppliers to measure company efficiency. …
>
> Whereas dairy company competition was a vital driver for efficiency in the past, there will be much less benefit to be gained by suppliers from this in the future. We are likely to have only 3 or 4 companies which will not really compete, and whose competitive performance will be almost impossible to measure.[31]

John Isles suggests:

> Size and growth may represent the biggest threat to co-operatives. As they become larger, then the personal identification of the co-operative may tend to become weaker or at least perceived to be so.[32]

Isles argues that observed differences between the performance of cooperatives and investor-owned firms may have more to do with management than the structure of their ownership, but he also suggests that "the management of a co-operative is potentially much more difficult than that of its corporate counterpart":

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29 Hansmann, 1988.

30 The concept of trade-offs between information costs and agency costs is explained more fully in Jenson and Meckling (1995).

31 Gough, 1997, pp 97–98.

32 Isles, 1998, p 49.

> Management may be under pressure to service markets or areas which its corporate counterpart would decline to service because they were not profitable. The nature of the co-operative may mean that producers can place pressures on management and it takes a strong-minded board and manager to resist this.[33]

One manifestation of the management problem is the difficulty which cooperatives have in providing managers with appropriate incentives for efficient performance. First, there is the problem of defining what constitutes efficient performance in an organisation which is attempting to balance the interests of different suppliers of raw materials against the interests of all owners in the efficient use of capital. Second, the need for managers to balance multiple objectives means there is no simple objective measure available which can be used to monitor the performance of managers and to reflect this in their remuneration. By contrast, investor-owned firms have a single, well defined objective – to maximise the net present value of the firm – and a simple method (observing changes in share prices) to monitor the extent to which that objective is being achieved.

In recent years many investor-owned firms have introduced changes in the composition of executive remuneration packages with a view to giving executives stronger incentives to look after the interests of shareholders. It is becoming increasingly common for a substantial proportion of executive remuneration to be in the form of company shares or options, and some companies are requiring executives to buy and hold shares. To take a food company example, Campbell Soup requires all executives to hold shares in that company valued at 50 percent to 300 percent of base salary, depending on the executive's position. Increasingly, cooperatives are competing against firms whose managements have very powerful financial incentives to further the interests of their shareholders.

There have been moves in New Zealand dairy cooperatives to adopt performance indicators that put greater emphasis on measurable achievements. But this seems unlikely to overcome the increasing problems that members of cooperatives encounter in monitoring the performance of boards and managers. Managers who perform well in achieving targets, such as reducing average costs of manufacture, increasing sales or increasing market share, are not necessarily increasing the wealth of the owners of a firm.

Lack of transferability of ownership rights

Transferability of ownership rights is inconsistent with the *custodial* concept of ownership of cooperatives, which requires that each generation of "members inherit benefits (in the form of the co-operative's assets and equity base) established by previous generations".[34] In combination with the principle that membership should be open to all, the custodial concept implies that new members would have access to the capital built up by previous owners without having to pay for it, and that people leaving the cooperative would receive no compensation for their share of the assets they leave behind.

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33 Isles, 1998, p 45.

34 Greenwood, 1996, p 60.

These principles become progressively less sustainable as the assets of cooperatives grow. The ability of new members to 'free ride' on existing members dilutes the rate of return to existing members and creates a disincentive for them to provide additional capital.[35]

The New Zealand dairy industry no longer supports new members of cooperatives accessing capital built up by previous members without having to pay for it. New members are now charged an entry fee. The fee partially constrains the members' incentives to expand production, as occurs under the bundling of dividends from investment in cooperatives into the price of milk.

However, current arrangements still do not enable farmers to adjust the amount and composition of their investments in dairy processing and marketing in accordance with their individual circumstances and preferences. It is not much compensation for dairy farmers who sell their farms and leave the industry to be able to recoup some of the value of the compulsory investments made on their behalf because returns on them have been capitalised into land prices. This form of compensation can only occur while returns from dairying determine the price of land – that is, while returns from dairying exceed those from alternative forms of land use. There is not likely to be much compensation available from this source for farmers who might want to leave the industry following a slump in demand for dairy products, which could occur at some time in the future.

The increased willingness of the dairy industry to contemplate separating farmers' ownership of their off-farm assets from their milk production, and allowing farmers to sell dairy company and NZDB shares, may be motivated partly by a recognition of the costs to farmers of lack of transferability of ownership rights. Immediate access to funds invested in cooperatives would be of more benefit to many farmers than the capitalisation of the dividend component of returns into the value of land suited to dairying. Many farm families may consider that maintaining large investments in the processing and marketing of dairy products deserves lower priority in the management of their funds. Higher priority uses of funds could include debt reduction, on-farm investments, diversification of asset portfolios to reduce the risks involved in having a high proportion of assets invested in the dairy industry, and other forms of investment such as education of their children.[36]

There are some obvious parallels between the problems being encountered by farmer cooperatives and those being encountered by financial mutuals (see box 1). However, members of farmer cooperatives and financial mutuals are adopting divergent approaches to resolving these similar problems. Policyholders in financial mutuals are showing virtually no reluctance to demutualise, despite being aware that after listing "the possibility of a takeover may increase".[37] By contrast, farmers are often reluctant to

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35 Lack of transferability also results in what Michael Cook describes as a "horizon" problem because the member's residual claim on the net income generated by investments made by a cooperative is often shorter than the productive life of those investments. Cook argues that this can provide a disincentive to invest in areas such as research and development (Cook, 1995, pp 1156–1157).

36 Research by Sandra Martin suggests that dairy farmers, like most other farmers, tend to give a high priority to keeping debt low as a risk management strategy. See Martin, 1996, p 37.

37 AMP, 1997.

give up their control of processing and marketing, and many appear to fear that the listing of shares on stock markets will make takeovers easier. Proposals which are being mooted within the agricultural sector to address the weaknesses of farmer cooperatives are generally based on models which seek to protect these firms from takeover and to maintain farmer control.

This raises the question of why many farmers appear to be so concerned to maintain control of off-farm activities. Is the desire of many farmers to retain control based merely on outmoded ideologies and unwarranted fears? Alternatively, is farmer control a means to pursue objectives that have some contemporary relevance? Do the benefits which farmers obtain by maintaining control outweigh the costs that they incur by shielding these firms from competition?

Box 1: Demutualisation of insurance companies involves similar issues

In presenting the proposal to convert the Colonial Mutual Life Assurance Society into a listed investor-owned company, the chair of the company made several statements that, with appropriate word substitutions, could be applied to many farmer cooperatives.

The chair noted that the interests of members in their capacity as patrons of the firm and their interests in their capacity as owners were diverging:

> Policyholders … do not normally want the performance of their policies to be dependent on the success of operating subsidiary businesses of the company. To restructure, so that policyholders' interests are solely in the performance of their policies, should enable a better focus for both policyholders and company alike.

On problems related to raising capital, the chair of Colonial pointed out:

> In a mutual structure, additional capital can only be found through surpluses emerging and retained from the business itself. If Colonial is to be able to take advantage of opportunities as they arise, without putting policyholders' interests at risk, it needs to have a shareholder base to which to look, and which will be keen to see growth and profitability increase.

On the question of accountability for performance, the chair stated:

> … if the Company is to be a strong and vital organisation, its board and management must be, and be seen to be, accountable to a group of owners who require performance. Certainly, policyholders are interested in the performance of their policies, but they have no real reason to be concerned beyond that. While in some ways it may be comfortable for directors and management to have no vitally interested group seeking performance, such comfort is not desirable. Our view is that, if policyholder members exchange their membership rights for shares which they can hold or sell as they wish, the most favourable climate for success will be created. It will leave the board and management accountable to shareholders for overall performance, while still having to manage investments prudently to honour commitments to policyholders.

The Proposal to Demutualise of the Australian Mutual Provident Society contains similar comments and also refers to problems arising from lack of transferability of ownership rights:

> As a Member, you are an owner of AMP. However, you are unable to sell your membership rights; there is no clear value for them; and you lose your membership rights when your policies terminate – for any reason.
>
> The Proposal to Demutualise will provide you with Shares in AMP Limited in exchange for your membership rights in AMP. This will allow you to crystallise the value of your membership rights (AMP, 1997, p 30).

CHAPTER THREE

THE IDEOLOGY OF FARMER CONTROL

A point of view that is based on ideology – a set of principles – is not necessarily inferior to one based solely on pragmatic considerations. The validity of the ideology of farmer control depends on the validity of the beliefs and general principles on which it is based.

Until little more than a decade ago collectivist ideology had a pervasive influence throughout the New Zealand economy. Since the mid-1980s, however, there has been a sharp move away from government-sponsored collectivism and widespread acceptance of profit-motivated activities in many areas previously dominated by government.

Many farmers now see the industry politics and the ideology of farmer control as increasingly irrelevant to the business of farming. Nevertheless, distrust of the profit motive and competition remains a factor to be reckoned with in parts of the agricultural sector. Some people still argue that farmer control must benefit farmers. Some people associated with the dairy industry still claim that while increased involvement of investor-controlled firms might bring some short-term benefits to farmers, before long this would result in a situation where competition among farmers would cause them to become "marginalised" and "turn their children into peasants".[38]

Such claims are often made without reference to relevant international evidence. For example, Australia's experience of involvement of investor-controlled firms in the market milk sector and of multinationals in the export sector of the dairy industry is relevant to any assessment of such claims. Available evidence conflicts with the view that Australian dairy farmers are being marginalised or turned into peasants.[39]

The lingering concerns of some farmers about profit-motivated processing and marketing activities may be based partly on the belief, discussed in the next chapter, that circumstances in particular industries may enable processing and marketing firms to exercise market power to the detriment of farmers. These concerns also appear to be based on beliefs that:

- farmers do not compete with each other when they sell their produce to farmer-controlled firms that are not motivated primarily by profit-making; and
- moves to profit-motivated processing and marketing would not be consistent with fundamental values held by farmers.

The belief that farmer control eliminates competition

The view that farmer control of processing firms enables farmers to avoid competing with each other is an illusion. Market prices depend on supply and demand. Farmers are always competing with each other in the sense that an expansion in total supplies

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38 See, for example, views expressed by Chris Kelly, New Zealand Dairy Board group manager, reported in *Dairy Exporter,* July 1997, p 66; and Neil Walker, in *Dairy Exporter,* September 1997, p 98.

39 Farm incomes and investment expenditures have increased substantially in the Australian dairy industry over the past decade. See Gleeson, 1998.

usually results in a decline in prices paid for supplies, whether processing is undertaken by farmer-owned firms or investor-owned firms. Irrespective of whether or not New Zealand dairy farmers control processing and marketing, the returns they obtain from additional production of milk depend on the level of export prices for dairy products less processing, transport and selling costs.[40] Prices obtained by farmers for the supply of raw materials only differ between these alternatives if there are substantive differences between them – such as different levels of processing costs, potential for abuse of market power, or payment systems that provide different incentives for farmers to expand their production.

In fact, when the farmer-controlled alternative involves bundling of dividends from farmers' investments in processing into the price of milk, as occurs at present, competition among farmers is less healthy from an industry perspective than that which would occur among investor-owned firms involved in processing. With bundling, individual farmers are in competition with each other to expand production because, as explained in chapter two, cooperatives are obliged to accept the extra milk produced and the additional cost of processing this milk is borne by other farmers. This type of competition tends to drive down the dividend component of farmers' returns; in other words, it diminishes the benefits that farmers can expect to obtain through ownership of shares in processing companies.

Competition to meet consumer requirements is increasingly being viewed by farmers as highly desirable, whatever organisational form is adopted. Many farmers are unhappy to see their product lumped in with inferior products produced by other farmers. In his report on Australian dairy cooperatives, Chris Greenwood reports that participants in a number of overseas study tours of cooperatives have returned to Australia with the message that "one of the distinguishing features of successful co-operatives in all industries in diverse parts of the world is adherence to strict quality payment systems".[41]

Past experience suggests that investor-controlled firms are more likely than farmer-controlled firms to seek to meet market requirements by offering incentives for farmers who meet particular specifications regarding quantity and quality of product, and time of delivery. However, farmer-controlled firms appear to be becoming more aware of the costs of attempting to suppress this form of competition and are adopting similar incentive systems themselves.

The belief that profit motivation is inconsistent with farmers' values

Trebeck suggests that in Australian rural industries "romantic attachment to the principle of cooperation has long since been mugged by the reality of competitive life". He observes that "rural cooperatives have had great difficulty in maintaining member loyalty when better priced alternatives have been on offer, even for short periods".[42]

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40 If farmers own the facilities used for processing and transport, it is acknowledged that they would receive a return on this investment, but if they did not own these facilities they would receive a return from some alternative use of the funds concerned. As discussed in the next chapter, it is likely that the returns that farmers obtain from existing investments in processing cooperatives are lower than they could obtain from alternative uses of their funds.

41 Greenwood, 1996, p 23.

42 Trebeck, 1996, p 17.

Some observers have implied that such behaviour may reflect a change in fundamental values. For example, Murray Fulton suggests that there are some indications that the prevailing culture in the United States and Canada is becoming more individualistic and that farmers, along with other sections of the community, are becoming less supportive of cooperatives and the notions of communal property rights that are associated with them.[43]

There are good reasons why many farmers would not view a shift in fundamental values toward less cooperation and increased individualism as entirely benign.[44] However, a move away from industry politics and collectivist approaches does not necessarily involve a fundamental shift in values.

The idea that markets are in conflict with cooperation is a misconception. Markets actually provide an efficient means for large numbers of people in many different places to cooperate voluntarily and to coordinate their production activities for mutual benefit. The contrast that is often made between competition and cooperation has been aptly described by Kerr as a case of "bogus alternatives": "a market economy is characterised by a higher quality of cooperation *and* competition than an economy dominated by government".[45]

Rather than reflecting a change in fundamental values, it is likely that rejection of collectivist approaches merely reflects a recognition that goods and services can generally be produced more efficiently by other means. The poor performance of many government agencies in commercial activities has provided ample reason for people to become disenchanted with public ownership as a means to deliver services.

Similarly, there are good reasons why farmers could be expected to have diminishing attachment to farmer control of processing and marketing activities, without undergoing any change in fundamental values:

- The time and organisational skills that farmers volunteer to monitor and govern processing and marketing firms under their collective control are valuable resources. When these resources are devoted to services which could be provided efficiently by normal commercial organisations, they are not available for other activities – including contributions to community welfare, cultural and sporting activities in which non-profit organisations have a comparative advantage.[46]
- The links between agricultural processing and marketing cooperatives and local rural communities are becoming more tenuous as these firms become larger as a result of amalgamations and their production is centralised to achieve economies of scale.

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43 Fulton, 1995, pp 1149–1151.

44 'Individualism' is interpreted here in a derogatory fashion to imply reduced altruism, increased selfishness, diminished interest in the well-being of future generations etc.

45 Kerr, 1998, p 295.

46 Some observers have suggested that in the past there was a widespread perception among farming communities in New Zealand that people who were elected to represent farmers on cooperatives and marketing boards were engaged in a particularly meritorious activity. Membership of producer boards was apparently widely viewed as a pinnacle of achievement.

- As many sons and daughters of farmers now move into occupations where they have no dealings with agricultural cooperatives, communal and non-transferable ownership rights provide fewer benefits to family members than the founders of cooperatives would have envisaged.
- The issues involved in investing in cooperatives have changed. There is a greater risk in having a substantial proportion of assets tied up in ventures that are a long way removed from farming than in maintaining investments in local businesses that are involved in transportation of raw materials and early stages of processing.

To sum up, the argument that farmers are disadvantaged when the profit motive is allowed to play its normal role in processing and marketing of agricultural products has been shown to be based on misconceptions. There is no substance in the belief that farmer control must benefit farmers.

The question of whether farmers and their descendants are likely to benefit from organisation structures designed to ensure that the control of firms will remain in the hands of farmer representatives should be considered in the light of particular circumstances. It is possible that under some specific circumstances farmer control of processing and marketing activities may provide identifiable economic benefits to farmers. Relevant economic arguments are considered in the next chapter.

CHAPTER FOUR

ECONOMIC ARGUMENTS FOR FARMER CONTROL

Claims are often made that farmer control of processing and marketing enables farmers to obtain higher and more secure incomes than they would otherwise enjoy.[47] The most common arguments advanced in support of this position are:

- that obtaining a larger share of the consumer's dollar through ownership of processing and marketing firms enables farmers to obtain higher incomes; and
- that ownership of processing and marketing firms provides farmers with more secure market access for their products.

Increasing the farmer's share of the consumer's dollar

It is frequently observed that as consumer demand has shifted toward more highly processed products, an increasing proportion of the consumer's dollar accrues to activities beyond the farm gate. The Dairy Board argues that farmer ownership and control of processing and marketing enables farmers to "create and capture the added value after the milk leaves the farm for their own and the national benefit".[48] Others have suggested that farmer control of marketing has the potential to increase returns to farmers by applying technology and branding to achieve profitable differentiation for their products in the marketplace.[49]

By investing in the processing and marketing of their products, farmers could reasonably expect to obtain a higher proportion of the consumer's dollar that is spent on food. But it does not follow from this that the investment needed to maintain farmer control of processing and marketing firms results in higher incomes for farmers. The effect that farmer control has on farmers' incomes depends primarily on whether farmers obtain a higher risk-adjusted return from this investment than they could obtain from alternative avenues of investment.

The issues involved have been presented clearly in *The Economist*, in the context of a discussion of the circumstances under which manufacturers benefit from investment in "getting closer to their customers":

> Regardless of their profits, manufacturers should move into distribution only if they can do the job better for themselves (eliminating duplicated costs, exploiting synergies and what have you), or if they can thereby rig the market (say, by hampering other producers' access). In the first case, shareholders and the economy at large are better off; in the second, only shareholders gain. But if neither is true, the manufacturer-cum-distributor will at best add only ordinary profits from distribution (acquired at a price) to old profits from manufacturing – and in short will be bigger, but no better off.[50]

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47 Cook (1995, pp 1158, 1159) has identified a range of circumstances under which collective action to achieve farmer control of processing and marketing may be warranted on economic grounds. The factors which appear most relevant to New Zealand are covered in the following discussion.

48 New Zealand Dairy Board, undated, p 2.

49 See, for example, Gough, 1997, p 96.

50 *The Economist,* February 28, 1998, p 18.

In general, the returns obtained by farmers on investments made compulsorily through the retained earnings of farmer-controlled firms could be expected to be lower than they could obtain from alternative uses of these funds. There are two main reasons for this judgment:

- in common with the owners of other businesses, farmers can often obtain highest returns from additional investment in their own business, where their capital is combined with their own expertise and they incur minimal monitoring costs to ensure that it is deployed efficiently for their benefit; and
- where firms are able to obtain funds without having to compete for them in the capital market, they have less incentive to use those funds in ways that will yield maximum returns.

In addition, where investment strategies involve differing degrees of risk it is important for investors to take account of this in comparing rates of return. In order to be compensated for the greater risks they are required to incur from compulsory investments in farmer-controlled firms, farmers would need to receive a substantially higher return than they could obtain from a diversified investment portfolio.

What returns do New Zealand dairy farmers obtain from farmer control?

If farmer control results in higher incomes it would be reasonable to expect that New Zealand dairy farmers would obtain either higher product prices or a higher return on their investments in processing and marketing cooperatives than they could obtain on alternative off-farm investments. In fact, a comparison of prices received by New Zealand and Australian dairy farmers suggests that New Zealand farmers obtain a relatively poor return on their investments in processing and marketing (see table 1).

This comparison is based on averages for four years to minimise the potential for bias from sensitivity of results to the periods chosen for comparison. In order to minimise possible bias from industry assistance arrangements, the Australian price chosen for comparison is the farm gate price of milk for manufacturing in New South Wales,[51] adjusted for the industry assistance arrangements applying to the manufacturing milk sector of the industry.

After deducting the component of returns attributable to industry assistance and converting to New Zealand dollars, the average price obtained by New South Wales dairy farmers in the four years ending June 1997 is estimated to be 335 cents per kg of milk solids. Over a similar period, the average price received by New Zealand farmers is estimated to be slightly higher, at 358 cents per kg of milk solids.[52]

However, the price that New Zealand dairy farmers receive for their milk also incorporates the dividends they obtain from ownership and control of processing and

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[51] New South Wales is chosen because quota arrangements in that state mean that the price farmers receive for manufacturing milk is not averaged with the price they obtain for market milk.

[52] The average New Zealand price of 358 cents per kilogram of milk solids was converted to cents per litre on the basis of information published in New Zealand Dairy Board, 1996, p 4.

Table 1: A comparison of farm gate milk prices in Australia and New Zealand

	Average for 4 years to June '97	
NSW farm gate milk price[a]	26.7	Aus. cents per litre
Less industry assistance[1]	2.1	Aus. cents per litre
Net NSW farm gate price	24.6	Aus. cents per litre
Net NSW farm gate price[2]	28.4	NZ cents per litre
Net NSW farm gate price[3]	335	NZ cents per kg milk solids
NZ farm gate payout[c d]	358	NZ cents per kg milk solids
Estimate of rate of return on equity in Dairy Board and companies assuming price paid for milk equivalent to NSW price:		
Estimated off-farm component of payout	23	NZ cents per kg milk solids
Off-farm component as percentage of payout	6%	
Estimated average off-farm component[4]	12,657	$ per farm
Plus earnings retained by Dairy Board and companies[5]	5,876	$ per farm
Estimated total return on off-farm dairy investment	18,533	$ per farm
Potential value of equity in Dairy Board and companies[6]	360 to 460	$000 per farm
Estimated rate of return on off-farm investment	4 to 5%	per annum
Comparison of prices obtained for milk assuming rate of return on off-farm assets of 10% per annum:		
Estimated NZ farm gate price paid for milk	283 to 303	NZ cents per kg milk solids
Price discount relative to equivalent NSW price	10 to 15%	

Notes

[1] Based on Australian Industry Commission estimates of assistance to manufacturing milk.[b]
[2] Currency conversion is based on average exchange rate for the four years.[c]
[3] Conversion is based on New Zealand Dairy Board data.[d]
[4] Based on average milk revenue per factory supply dairy farm.[e]
[5] Based on New Zealand Dairy Board estimates that average retained earnings equal 3% of total payout.[f]
[6] Upper limit of range based on Ireland Wallace estimate of potential aggregate value of farmers' equity of $6.8 billion for 1992.[g]

Sources

[a] Australian Dairy Corporation, *Dairy Compendium 1997,* December 1997.
[b] Industry Commission, *Submission to the New South Wales Dairy Industry Review,* June 1997.
[c] Reserve Bank of Australia, *Bulletin,* various issues.
[d] New Zealand Dairy Board, *Facts and Figures 1995/96.*
[e] Ministry of Agriculture (MAF), *Situation and Outlook for New Zealand Agriculture,* June 1997.
[f] Speeches by Sir Dryden Spring, reported in *Dairy Exporter*, March 1998.
[g] Ireland Wallace & Associates, *New Zealand Dairy Industry Off-farm Assets,* Report to New Zealand Business Roundtable, April 1994.

marketing firms. If New Zealand farmers had been paid an equivalent Australian price for their milk, this would have left about 23 cents per kg of milk solids, or about 6 percent of the farm gate price of milk, as a return on these off-farm investments.[53]

After taking account of earnings retained by the Dairy Board and dairy companies, the rate of return obtained by farmers on their off-farm dairy investments is estimated to have been 4–5 percent per annum. This is much lower than the return farmers could have obtained on alternative investments.[54] In the absence of the premium resulting from the EU butter quota – which is not available to Australian farmers – the rate of return on off-farm dairy investments would have been only about 2–3 percent per annum.[55]

Another way to look at the possible effects of farmer control on returns obtained by farmers is to estimate the price they are paid for milk, on the assumption that they receive an average market rate of return (assumed to be 10 percent per annum) on their off-farm investments in the dairy industry. The results, shown in table 1, suggest that the price that New Zealand farmers receive for their milk has been 10–15 percent below the equivalent price paid to New South Wales farmers. If the premium on export sales to the European Union is deducted, on the grounds that this is a bonus not available to Australian farmers, the estimated price discount relative to the NSW price is 14–19 percent.

It is not obvious how the low rate of return that New Zealand dairy farmers have received on investments in processing and marketing cooperatives could be consistent with investment strategies that make efficient use of farmers' funds. It is difficult to escape the conclusion that the high degree of farmer control that exists in the New Zealand dairy industry is depressing the incomes of farmers.

The evidence suggests that proponents of farmer control may need to reconsider the arguments that have led them to believe that it results in higher incomes for farmers. The main arguments that have been advanced to support the view that farmer control benefits farmers are considered below.

The product differentiation argument

It is often contended that control of processing and marketing of farmers' products enables farmers to obtain a higher return from investment in these activities than from other avenues for non-farm investment. One reason given for this is the potential for

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53 This may understate the NSW price because there is evidence that the fat content of New Zealand milk is higher on average than that of Australian milk. A comparison using Australian information on fat content per litre suggests that the equivalent New South Wales price per kg of solids could actually have been higher than the New Zealand payout, implying negative dividends from ownership and control of cooperatives.

54 The rate of return obtained is also lower than that obtained on dairy and food industry investments in other countries. Nestlé achieved an average return on capital of 11 percent in the four years ending 1997. Max Ould, managing director of National Foods, suggests that Australian dairy manufacturers have received a return on assets of about 12 percent in recent years, somewhat higher than Australian food manufacturers (10 percent). He acknowledges that dairy manufacturers' returns may be inflated by the effects of regulation and that returns obtained on the export market have been lower than those on the domestic market (Ould, 1998).

55 The premium associated with the EU butter quota is estimated to be worth about $118 million per annum, equivalent to about 4 percent of the average farm gate payout (Bates, 1997, p 18).

control of these activities to enable farmers to profit from differentiation of their produce in the marketplace. It is argued that, by being exclusive suppliers of raw material for a branded product that consumers view favourably, farmers may be able to obtain a premium above the market price otherwise obtainable.

However, this will not provide a net benefit to farmers unless their raw material inputs actually have characteristics that are highly valued by consumers. When raw materials are homogenous and undifferentiated in the eyes of consumers of the final product, processing firms that do not purchase them from the lowest cost source of supply are disadvantaged relative to their competitors. In this situation any price premium that farmers are able to extract as exclusive suppliers of raw material is likely to be more than offset by a reduction in the profits they can obtain as owners of the brand in question.

New Zealand farmers do not need to own or control firms engaged in processing and marketing in order to contribute to advertising campaigns that draw the attention of consumers to any superior characteristics of products made from their raw materials. Separation of decisions to invest farmers' funds in advertising campaigns from the commercial operations of farmer-controlled marketing firms would give farmers a clearer picture of the returns they obtain from different types of investment. It seems likely that such information would lead farmers to be more sceptical about the potential to improve their incomes through investment in advertising of final products sold to consumers.[56]

Any benefits that New Zealand farmers may be able to obtain by selling through farmer-controlled processing and marketing firms need to be weighed against the potential costs incurred when these firms have export monopolies. By discouraging investor-owned processing and marketing firms from establishing in New Zealand, it is likely that the Dairy Board's export monopoly has reduced the extent of value-adding activities to which New Zealand dairy products are subject prior to export.

As suppliers of raw material, farmers can benefit substantially from increased investment in domestic processing. When producers of branded final goods make substantial investments in New Zealand, they are likely to become tied to the use of local sources of raw materials. By discouraging the involvement of investor-owned firms in domestic processing, farmers deny themselves many of the benefits that flow from the development of clusters of related industries. The importance of these benefits is emphasised by Michael Porter:

> Once a cluster forms, the whole group of industries becomes mutually supporting. Benefits flow forward, backward and horizontally. Aggressive rivalry in one industry spreads to others in the cluster, through spin-offs, through the exercise of bargaining power, and through diversification by established companies. … Interconnections within the cluster,

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[56] Farmers are often over-optimistic about their potential to benefit from investments in product differentiation at consumer level and are not sufficiently aware of their potential to benefit from adoption of more efficient management practices by farmer-controlled firms, until major problems emerge. This may reflect a tendency for farmer control to politicise the management of firms by diverting attention away from normal bottom-line considerations; like all forms of politics, industry politics tends to favour dramatic gestures over the more mundane considerations involved in adopting and maintaining efficient management practices.

> often unanticipated, lead to perceptions of new ways of competing and new opportunities. The cluster becomes a vehicle for maintaining diversity and overcoming the inward focus, inertia, inflexibility, and accommodation among rivals that slows or blocks competitive upgrading and new entry.[57]

Market power arguments

The belief that control of processing and marketing enables farmers to increase their share of the consumer's dollar is sometimes based on market power arguments. For example, there is a fairly common view among farmers that because investor-owned processing and marketing firms have an incentive to buy raw materials at the lowest possible price, they will "play one farmer off against another" and reduce the prices paid to farmers. Dairy Board executives encourage the view that if multinationals were to become substantial players in the New Zealand dairy industry, "farmers would soon become marginalised if processors began shopping around and purchasing at the cheapest price".[58]

Farmer-controlled firms are rarely able to improve farmers' incomes by raising prices paid to farmers above levels paid by investor-owned firms. Attempts by farmer-controlled firms to maintain prices above those paid by competitors tend to reduce the rate of return that farmers obtain on their capital below that on alternative investments.[59]

In general, fears that investor-owned firms would be able to reduce prices paid to farmers by playing one farmer off against another have no more substance than the view of some trade unions that individual employment contracts would enable employers to reduce wages by playing one employee off against another. Where prices and wages are determined by competitive market forces, firms are unable to reduce input prices and wages below prevailing market levels without losing both input supplies and employees.

There are circumstances in which lack of competition may enable processing and marketing firms to exercise market power at the expense of farmers. Where there are substantial economies of scale in processing and farmers are producing a bulky and perishable product, they may have limited options, in the short term, other than to sell to the nearest processing firm. On the basis of evidence of relatively high levels of concentration in processing of many agricultural products, it is sometimes asserted that the exercise of oligopoly or oligopsony power by processing firms is a significant problem for farmers.[60]

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57 Porter, 1990, p 86.

58 See, for example, Kelly, 1997, p 66.

59 There is some evidence that this has been occurring recently in meat processing in New Zealand. For example, AFFCO, an investor-owned meat processing firm which competes with cooperatives, recently stated: "On occasions during the season AFFCO attempted to align livestock prices with market returns and suffered consequential market share loss. This was preferable to incurring further operating losses which have quite clearly been carried by other North Island processors" (AFFCO, 1997, p 3).

60 For example, Richard Rogers and Richard Sexton (1994) have used such evidence to argue that markets for raw agricultural products in the United States are likely to be structural oligopsonies and that this is likely to result in large farm retail price spreads.

However, the fact that there may be few processors of particular products in particular areas does not necessarily mean that market power is being exercised at the expense of farmers. Even if a processing plant is highly profitable and buys raw materials at a lower price than its competitors in other locations, this is not conclusive evidence that market power is being exercised at the expense of farmers. The profits earned by the firm may reflect the firm's wise investment decision in establishing the plant in a location where it has been able to obtain raw materials relatively cheaply, because production of alternative commodities is less profitable to farmers in that area. Rather than being disadvantaged, the farmers selling to this processor may be obtaining a higher return on the use of their resources than would otherwise be possible.

Where economic conditions exist that might enable processing firms to exercise market power at the expense of farmers, few firms would be prepared to adopt such a risky strategy. There are several reasons for this:

- the longer-term profitability of processing firms often depends on maintaining a reliable and loyal group of suppliers;
- abnormal profits may attract competitive entry, which may merely involve a rival firm in extending its collection area;[61]
- if it becomes more profitable for farmers to use their land for other purposes, expensive processing plant will be under-utilised;
- exercise of market power may contravene competition law; and
- in the circumstances in which processors might theoretically be able to exercise market power at the expense of farmers, they are often vulnerable to countervailing collective action by farmers.

Where farmers in particular localities have suspected investor-owned firms of exercising market power to depress prices of raw materials, this has sometimes resulted in collective decisions by farmers to withhold supplies pending renegotiation of contracts. Such hold-up situations are relatively rare, however, presumably because processors and farmers recognise the potential for such disputes to be costly to both sides.

Farmer control does not necessarily prevent market power from being exercised at the expense of farmers. New Zealand farmers may have more reason to be concerned about the uncompetitive practices of some of the firms which they ostensibly control than about the potential for investor-owned firms to exercise market power at their expense in contestable markets.

The economic consequences of the exercise of market power do not disappear just because representatives of farmers sit on boards. Under some circumstances, monopoly rents may be captured by the firm's managers and employees or dissipated through poor investment decisions. A particular problem arises where farmer control results in firms being shielded from profit-motivated competition. This removes many of the

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[61] The cost a rival firm would incur in extending its collection area often represents only a small percentage of the price it pays for supplies. In Australia it is common for dairy factories to obtain supplies from farms that are a considerable distance away. For example, some milk from Tasmania is transported to Warrnambool and Mildura in Victoria for processing.

disciplines that normally help directors to ensure that the business of the firm is being conducted in the best interests of its owners. For example, along with the Dairy Board's export monopoly, practices such as linking supply of product to ownership of shares and bundling of investment returns in the prices farmers receive has enabled 'farmer-controlled' firms to deter competition from investor-owned firms in the dairy industry. In the absence of competition for their supplies, farmers have little alternative other than to accept whatever remains after production and marketing costs have been met.

Fear that the entry of investor-owned firms might depress prices received by farmers appears to be particularly strong in the New Zealand dairy industry. This may be because the existing structure, which is dominated by farmer-owned cooperatives, has resulted in a diminishing number of large processing facilities, leaving most farmers with little alternative other than to supply the nearest processing plant. By contrast, the larger presence of investor-owned firms in the Australian dairy industry has resulted in a greater diversity of potential market outlets for many farmers. In some instances, processing firms collect milk from collection areas in the proximity of rival firms and transport it over long distances to their own facilities.

In the Australian dairy industry, farmers and investor-owned firms, such as National Foods and Pauls, have been able to deal with each other under longstanding relationships without a great deal of difficulty – in many instances without formal contractual protection of either party. Some large multinational firms are now also heavily involved in the Australian dairy industry. Australian dairy farmers' representatives do not appear to be unduly concerned about the involvement of investor-owned firms in the industry. For example, while Pat Rowley, chair of the Australian Dairy Industry Council and the Australian Dairy Farmers Federation, argues that the competition that cooperatives provide to proprietary companies is beneficial to farmers, he has also stated that: "The Australian dairy industry has welcomed the investment of the world 'players' Kraft, Nestlé and more recently Parmalat from Italy".[62]

The 'cream skimming' argument

It is sometimes contended that while the entry of investor-owned firms may benefit some farmers in an industry dominated by farmer-controlled firms, remaining farmers would be disadvantaged in two ways:

- first, the new entrants to the market would focus on the most lucrative parts of the market; and
- second, the loss of throughput would leave the processing and marketing assets of the farmer-controlled firms under-utilised and reduce the profitability of these firms.

It is said that while some farmers might benefit from the potential to sell their product at a higher price, others would suffer from a decline in the market value of their off-farm assets.

Such reasoning has sometimes been used to justify arrangements that bind individual farmers to farmer-controlled firms. A relevant example is the arrangements in the New Zealand dairy industry under which farmers are required to hold shares in cooperatives proportional to the milk solids they supply, while returns from the investments that

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[62] Rowley, 1997, p 42.

the cooperatives make on their behalf are bundled into a combined payout depending on the volume of milk solids supplied.

The essence of this argument for retaining bundling is that, as investors in a dominant cartel, dairy farmers may gain collectively from practices which shield the cartel from competition. In assessing this argument, a number of factors need to be taken into account:

- Competition is a spur to improved efficiency. It is likely that competition from investor-owned firms would result in improved performance by farmer-controlled firms.
- While the value of farmers' off-farm investments in dairy cooperatives is substantial, it is less than 30 percent of the value of their total dairying assets. The future financial well-being of farmers is much more strongly tied to the value of their farms than to the future of the cooperatives.
- To the extent that anti-competitive arrangements are successful in denying investor-owned firms access to milk supplies in New Zealand, this provides an added incentive for investors to locate in Australia or some other country where they are able to obtain supplies. By seeking to protect their investments in processing and marketing from domestic competition, New Zealand farmers are encouraging their overseas competitors to expand production.
- Without continued reinforcement from the Dairy Board's export monopoly, it is doubtful whether retaining bundling would be sufficient to prevent entry of investor-owned firms. The price comparisons shown in table 1 suggest that it may soon become profitable for a potential investor to offer farmers an attractive price for milk even if bundling is maintained. Given relatively low returns on alternative agricultural pursuits, there may also be the potential for investor-owned firms to obtain supplies by encouraging additional farmers to enter the dairy industry.

The arrangements under which farmers are required to own shares in dairy cooperatives proportional to the milk solids they supply are currently backed by legislation. It is a requirement of the Dairy Board Amendment Act (No. 2) 1996 that the shares of the "qualifying companies" (which have owned the board since 1996) must be held by "supplying shareholders", broadly in proportion to their supply of milk solids to the company.[63] This means that if a cooperative dairy company decides to convert to investor ownership, or even to contract to obtain milk from farmers who do not wish to invest in the cooperative, it would have to sell its Dairy Board shares. This raises two problems: these shares could only be sold to "qualifying companies"; and after relinquishing its Dairy Board shares, a firm in this situation would still need the Dairy Board's permission to export.

Legislation that favours particular businesses or forms of business organisation by shielding them from competition inevitably results in less efficient use of resources by those organisations. Providing a cooperative with an export monopoly for dairy products makes no more sense than providing an export monopoly for any other product to an individual firm.[64] Penalising the owners of a cooperative if they decide to relax share ownership requirements makes no more sense than would penalising members of a

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63 See section 2A.

64 Arguments for retaining the Dairy Board's export monopoly were considered in Bates (1997).

union which had been attempting to maintain a 'closed shop' for deciding that union membership need no longer be compulsory.

It seems unlikely that the statutory backing for anti-competitive business practices in the dairy industry will be retained for much longer. Removal of this legislation may not result immediately in major changes in terms of entry by investor-owned firms, or in the ability of the individual owners of farmer-controlled firms to access the capital invested in those firms. But it will open the way for changes to occur in these directions.

Given the high probability that existing firms engaged in processing and marketing of dairy products will be subject to increasing competition, from both international and domestic sources, the farmers who own these firms are faced with a choice. They can maintain a defensive posture in an attempt to deter competition, or they can modify the structure of the firms they own to accommodate competition by eliminating bundling, making shares transferable and welcoming external investment.

If farmers choose the first option, there may be little change in the short term, but the 'destructive' forces of competition that some of them fear will ultimately be unleashed if existing firms become increasingly uncompetitive. This would result in under-utilised assets and a decline in the value of farmers' investments in cooperatives.

If farmers choose the second option, it will be easier for competitors to farmer-controlled firms to enter the industry initially, but increased competition will provide incentives for existing firms to lift their performance. In turn, this will help to protect the value of farmers' investments in processing and marketing. More importantly, greater investment and improved efficiency in processing and marketing would increase the demand for the produce of New Zealand dairy farmers.

Is farmer control the best way to ensure a secure outlet for product?

Gough suggests that most New Zealand dairy farmers want "sufficient control over the basic processing and marketing of milk to ensure a secure outlet – and one which will pay a fair price".[65] This concern about ensuring secure market access appears to be particularly strong among dairy farmers. It is partly attributable to factors mentioned earlier in this paper – factors which appear to give New Zealand dairy farmers little choice other than to supply the nearest processing facility. Another consideration is the need to make substantial investments in fixed assets, such milking sheds, that have limited alternative uses other than in dairying.

Farmers' concerns about maintaining market access are sometimes played on by people with a vested interest in preventing investor-owned firms from becoming substantial players in the New Zealand dairy industry. For example, one Dairy Board executive suggests that multinational processors "would decide how much milk they wanted and would not be interested in taking any more. Or conversely, farmers would be penalised if they fell below their required volumes".[66]

It seems likely that if a substantial number of farmers wanted a processor to agree to accept all production for a period at a uniform price, then it would be in the interests of

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65 Gough, 1997, p 96.

66 Kelly, 1997, p 66.

the processor to offer such an option within a menu of possible contracts. In any case, it is in the mutual interests of both farmers and processors for incentives to be given to farmers to reduce variability of supplies since this results in additional processing costs and can create problems in meeting consumer requirements. As already mentioned, adherence to payment systems under which price varies according to quantity, quality and timing of delivery is increasingly becoming recognised as a desirable practice, even for cooperatives. The market reality – that greatest rewards go to participants in production and marketing chains which are responsive to the requirements of consumers – has to be faced even when processing and marketing activities are controlled by farmers.

A potential problem in ensuring a secure outlet for product may arise when farmers make substantial transaction-specific investments, such as construction of milking sheds.[67] Such investments can pose a problem if a processor decides to discontinue its relationship with a farmer and there are no other potential outlets for the farmer's product.

The important issue is whether farmer control of processing and marketing provides the best solution to this problem. Control by the suppliers of the raw material is not the only solution and is not always an efficient solution. In some instances the problem can be dealt with more efficiently through long-term contracts than through vertical integration. Where vertical integration is efficient, backward integration by processors is often more efficient than forward integration by owners of the raw material.

A useful framework for considering the relative efficiency of alternative forms of ownership of firms has been developed by Hansmann.[68] Hansmann suggests that ownership (the formal right to control the firm and appropriate its residual earnings) generally rests with a single group of the firm's patrons (suppliers of factors of production such as capital, labour or raw materials). The essence of his argument is:

> Efficiency will be best served if ownership is assigned so that total transaction costs for all patrons are minimised. This means minimising the sum of both costs of market contracting for those patrons who are not owners, and the costs of ownership for the class of patrons who are assigned ownership.[69]

The relative size of transactions costs associated with farmer control and investor control of a processing firm hinge on a comparison of:

- any costs of market contracting that can be avoided through farmer control; and
- any additional costs of ownership that may result from farmer control.

Avoidable costs of market contracting

There are several possible circumstances under which market contracting can result in costs which may be avoidable through farmer control of the processing firm:

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67 This is an example of 'asset specificity'. As the term is used by Oliver Williamson: "asset specificity refers to durable investments that are undertaken in support of particular transactions, the opportunity cost of which investments is much lower in best alternative uses or by alternative users should the original transaction be prematurely terminated" (Williamson, 1985, p 55).

68 Hansmann, 1988.

69 Hansmann, 1988, p 273.

- If transactions require specific investments by one of the parties, this involves a risk of loss if the other party wishes to re-negotiate or to exit from the relationship. Farmers may lose substantially if the firm decides to suspend production or to obtain supplies from some other source. The firm may lose substantially if supplies of raw material diminish, for example because farmers decide to use their assets for some other purpose.
- In other situations where there is potential for the firm to exercise market power relative to farmers, or vice versa, this has an effect similar to a tax on the transactions concerned.
- Market contracting can be costly if the quality of the raw material varies in ways that are not readily measurable, but which may be influenced by the supplier. This situation involves asymmetric information. Examples that are difficult to detect or measure objectively may include some effects on the quality of raw materials of poor hygiene standards or of chemical contamination. Under these circumstances, profits from sale of the processed product may be influenced by the actions of individual farmers that are difficult to reward or penalise adequately through normal market mechanisms.

Additional costs of ownership

While farmer control may, under some circumstances, reduce the cost of market contracting between the firm and its suppliers of raw materials, this is only one side of the total picture. It is also necessary to examine how farmer control affects the costs of ownership.

In general, the ownership of a firm by suppliers of raw materials is likely to increase the costs of ownership of the firm. Some of these possible increases in costs of owner–ship have already been discussed in chapter two and will only be mentioned briefly below:

- Farmer control can result in relatively high costs of decision-making because different groups of farmers can have divergent interests as suppliers of raw materials.
- The costs to owners of monitoring the performance of managers (and agency costs associated with managerial opportunism and slack performance) may be increased because managers are likely to have unclear or ambiguous objectives. Rather than being required to maximise shareholder value, as in the case of investor-owned firms, they are likely to be required to balance the interests of owners as investors and as suppliers of raw materials. Under these circumstances managers are likely to have plenty of excuses for poor performance.
- One way in which farmer-controlled firms often seek to advance the interests of suppliers is by purchasing as much raw material as farmers wish to offer at a uniform price, irrespective of the effects this may have on the profitability of processing and marketing. This means that the objective of management is often seen in terms of minimising cost for given total output. Michael Jensen and William Meckling comment on the effects of such a strategy:

  > Minimising cost for given total output often seems to degenerate into a system where managers are rewarded for minimising *average* cost per unit of output. And in the absence of a quantity constraint, measuring performance by average cost per unit of output will virtually never be consistent with firm value maximisation. A decision manager with

> such an objective will strive to achieve the output quantity that minimises average cost even though it bears no relation to the value-maximising quantity.[70]

This probably explains why some farmer-controlled firms have developed a culture in which economic efficiency has been viewed almost exclusively in terms of achievement of scale economies.[71]

- Where farmer control of a large firm is guaranteed by restrictions on share transfers, the firm's management is likely to be in a more powerful position relative to shareholders than in a typical investor-owned firm. This frees management from some of the market disciplines that normally prevail and involves a greater risk that inefficient management practices will become entrenched in the firm. This point is discussed further in chapter five.
- Information costs may be higher. When objectives are unclear, it is more difficult for decision-making to be delegated to employees who have the most ready access to relevant knowledge. This can result in firms adopting management systems which sacrifice firm value in order to avoid difficult decisions. For example, quality management systems adopted by farmer-controlled firms tend to focus on aspects that can be measured objectively and to avoid the necessity for employees to apply subjective criteria. This may be because it would be more difficult for employees of farmer-controlled firms to resist pressure from suppliers (who are also their employers) to accept sub-standard supplies.
- The limited ability of farmer-owners to diversify risk may result in a relatively high cost of capital to the firm. As a consequence, the firm may be unable to take advantage of potentially profitable opportunities for further investment.

The willingness of a farmer-controlled firm to seek external equity capital does not guarantee a supply of low-cost capital. When ownership is shared between suppliers of raw materials who maintain control and external investors who are minority shareholders, the external investors may have reason for concern that management decisions are biased in favour of farmers. External investors may also incur high monitoring costs in ensuring that their share of profits is not dissipated to provide additional benefits to farmers.

Hansmann suggests that while most investors in widely held investor-owned firms have very little direct influence over decisions made by the firm, they derive considerable protection (lower monitoring costs in protecting their capital) from the absence of any other class of owners "with interests contrary to theirs".[72] He explains:

> By virtue of having ownership, the patrons in question are assured that there is no *other* group of owners to whom management is responsive. It is one thing to deal with managers who are nominally your agents but serve you poorly; it is another to transact with managers who are actively serving owners with an interest clearly adverse to yours.[73]

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70 Jensen and Meckling, 1995, p 15.

71 The merger of cooperatives in the dairy industry has been motivated by economies of scale. A similar focus on the achievement of economies of scale to service the commodity trade occurred in the meat industry in the early 1980s.

72 Hansmann, 1988, p 284.

73 Hansmann, 1988, p 276.

Box 2: The Pivot wrangle

The ongoing problems of Pivot, an Australian agricultural cooperative, illustrate how ambiguity over the question of whether farmer-controlled firms conduct business for the benefit of patrons or shareholders can result in costly conflicts.

Pivot has been in the fertiliser business for over 75 years, but is now also involved in a range of other commercial operations including grain trading, flour milling, baking and manufacture of stock feed. Pivot is an unlisted public company and in many respects is run as a normal commercial enterprise. However, its 42,000 ordinary shareholders receive rebates, which represent a distribution of the profits of the firm, calculated according to the number of shares they hold and the amount of fertiliser they purchase.

Pivot has followed a policy of retaining a relatively high proportion of its earnings for re-investment.

The central issue in the ongoing dispute within Pivot has been the manner in which accumulated retained earnings of $175 million should be distributed. The board proposed that retained earnings should be distributed to shareholders in proportion to current shareholdings. This proposal was challenged by a rival group who wanted the funds distributed to shareholders according to their patronage of the cooperative over the past nine years.

The dispute spilled over into questions relating to board representation which were taken to the Victorian Supreme Court following the annual meeting of shareholders in December 1997. In reporting the court's decision, *The Australian Financial Review* (2 February, 1998) states that it "effectively swings the board's control" to the group of shareholders who wanted funds distributed according to patronage.

This may not be the end of this story, but developments to this point suggest that it is not always safe for shareholders in farmer-controlled firms to assume that the rewards they receive from the business will be proportional to the amount of their capital that is at risk. Any uncertainty over the rights of external investors could be expected to make it costly for farmer-controlled firms to raise equity capital from external sources.

Hansmann implies that the benefits that suppliers of capital obtain from the absence of any other class of owners with contrary interests are important in explaining the prevalence of investor ownership of firms. Box 2 provides an example of the problems that can arise when a firm is serving more than one class of owner.

Summing up

The preceding discussion shows that whether it is efficient for farmers to control processing and marketing firms depends on the balance between the avoidable costs of market contracting and the additional costs involved in ownership by input suppliers. It is hazardous to draw conclusions from an analysis of just one side of this equation. This applies, for example, to the assertion that "if the farm output is highly variable and unpredictable … the most efficient method of organising production is to make the owners of the farm output the residual claimants; ie, a cooperative should be formed".[74]

[74] Fulton (1995, p 1146) suggests that this is an implication of Barzel's (1989) property rights theory. Barzel argues that the greater a party's ability to affect the return an asset can generate, the greater will be the share of the residual that party will assume. Fulton's reference to variability and unpredictability of output is related particularly to quality and appears to be based on the view that farmers would be less likely to cheat on quality if this would disadvantage other members of a cooperative than if the people disadvantaged were shareholders in an investor-owned firm.

It is not possible to decide whether a cooperative is the most efficient method of organising production without also considering possible effects on ownership costs of control by input suppliers and adoption of a cooperative form of ownership.

For simplicity, the foregoing discussion of the avoidable costs of market contracting and additional costs of supplier ownership has assumed that farmers are faced with a choice between, on the one hand, maintaining farmer control and, on the other hand, selling their produce under short-term contracts to investor-owned firms. In fact, a variety of other organisational alternatives are also available.

The high costs of market contracting tend to favour other forms of vertical integration, including backward integration by processors or marketing firms, as well as farmer control. Where quality control is an issue, monitoring arrangements made possible by backward integration may be more effective than the moral suasion that cooperatives are presumed to be able to exercise to encourage members to maintain standards.

In considering the costs associated with various forms of vertical integration it should also be noted that ownership of farms by processing firms can result in increased monitoring costs. This is because this form of ownership may weaken the strong incentives for efficiency that exist when farms are managed by the people who own them.[75] Nevertheless, the worldwide trend toward 'corporate farming' in an increasing number of agricultural activities suggests that this disadvantage of backward integration is now frequently more than offset by economic advantages.

There are also organisational options that lie somewhere between independent farmers selling to investor-owned firms and vertical integration. For example, the requirements of both buyer and seller for security may be achieved through long-term contracts, plus (as in other areas of business) some goodwill and loyalty on both sides. The goodwill element is important. Legal contracts are costly to enforce and cannot readily cover contingencies that are not foreseeable. Attempts to specify obligations of the parties in great detail can result in a loss of flexibility and add significantly to transactions costs.[76]

The discussion in this chapter suggests that there are good reasons why the success of farmer-controlled firms, under conditions where they compete on even terms with investor-owned firms, is strongly influenced by the characteristics of the industries in which they operate.[77] The characteristics that may favour farmer control include:

- transaction-specific investments that make it particularly important for farmers to have secure outlets for product, and quality requirements that make it important for processors to have regular and reliable suppliers;

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75 As with the other examples of vertical integration discussed above, this illustrates the point made by Grossman and Hart (1986, p 716) that "integration shifts the incentives for opportunistic and distortionary behaviour, but it does not remove those incentives".

76 As Neil Kay emphasises, stable hierarchies have the important advantage of providing an orderly foundation for making future decisions. However, he also points out that the need for a stable hierarchy to make future decisions does not necessarily determine the boundaries of the firm. For example, in some circumstances, the need for hierarchy can be met by joint venture arrangements (Kay, 1997, p 55).

77 This is not to deny the importance of factors which influence the success of any business, such as the competence of management.

- production technology and costs favouring relatively small-scale farming activities rather than vertically integrated factory farming operations; and
- processing and marketing activities that require relatively modest amounts of risk capital.

The ultimate test of the economic efficiency of any method of organising production is its ability to survive against competition from other forms of organisation without assistance from governments, or adoption of anti-competitive business practices by a dominant firm or cartel. Where investor-owned firms have not been prevented from competing with farmer cooperatives, the available evidence on relative efficiency is ambiguous.[78]

Farmer cooperatives have had good survival records under competitive market conditions in some industries. But, even in those industries, the economic benefits of farmer control do not appear to have been of overwhelming significance relative to the alternatives. For example, in the Australian dairy industry the economic benefits of farmer control have not been sufficient to displace investor-owned firms, and it is becoming increasing difficult to distinguish the activities of successful cooperatives from those of investor-owned firms.[79] It is likely that the presence of investor-owned firms has provided a spur to farmer cooperatives to adopt efficient practices.

By contrast, the New Zealand dairy industry is dominated by cooperatives shielded from the normal market tests of efficiency. This is primarily because investment returns are bundled into the payout for milk. As discussed earlier, this discourages competition from investor-owned firms.

If there are sound economic reasons for farmer-controlled firms to dominate an industry, then there is no need for farmers to maintain anti-competitive practices such as bundling. There is no reason why a farmer-controlled firm would not be able to exploit economies of scale in processing or marketing if this enabled it to obtain a competitive advantage relative to investor-owned firms. If farmer-controlled firms do not fully exploit potential economies of scale in a competitive market environment, it is likely to be because the advantages of increased size are outweighed by some other factor, such as the difficulty of responding to the requirements of a broader range of market segments.

Farmers' interests are not well served when the ownership and control structures of firms engaged in processing and marketing are immune from the normal market test of ability to withstand competition. The returns that farmers receive as suppliers of raw materials depend to a large extent on minimising the costs of processing and marketing,

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78 A survey article by Richard Sexton and Julie Iskow covering studies of the economic efficiency of cooperatives in the United States concludes: "there is little credible evidence to support the common perception … that investor-owned firms are more efficient than comparable cooperatives. Evidence to support a contrary perception is, however, also limited" (Sexton and Iskow, 1993, p 24). The fact that the cooperatives receive some public support in the United States (for example, favourable tax treatment and access to credit) suggests that they have not needed to be as efficient as investor-owned firms in order to survive.

79 For example, cooperatives engage in joint processing ventures in Australia with foreign concerns such as Meiji Milk Products, Mitsubishi and Snow Brand.

and on how closely the product offered to consumers meets consumers' requirements. Where competition is constrained, there is a high probability that the costs of processing and marketing will be higher, there will be fewer satisfied customers and returns to farmers will be reduced.

It is short-sighted for farmers to attempt to maintain collective control of processing and marketing through practices such as restricting ownership of shares or bundling investment returns in payments for farm produce. While these practices appear to protect farmers' investments, as time goes by they may allow farmer-controlled firms to become increasingly uncompetitive. Before long, the bundled return offered by farmer-controlled firms may fall below the returns that rival investor-owned firms are able to offer for supplies of raw material, so competitive entry into the market may occur despite bundling. Rather than acting to protect shareholder wealth, such practices are more likely to result in under-utilised assets and a decline in the value of farmers' investments.

CHAPTER FIVE

THE BENEFITS OF UNRESTRICTED SHARE TRANSFER

There have been substantial moves in New Zealand, particularly in the meat industry, toward corporatisation of farmer cooperatives. This is occurring to an even greater extent in Australia, with proposals for listing a large number of farmer-controlled firms, including the Australian Wheat Board and some major cooperative dairy companies, on the Australian Stock Exchange (ASX). In both countries, however, many corporatisation proposals involve restrictions on share transfer that are designed to maintain farmer control.

Nature of common restrictions on share transfer

Various kinds of restriction on the transfer of shares have been used by firms (and governments in some countries) in an attempt to constrain the circumstances under which transfer of control can occur. These arrangements include:

- multi-layer ownership structures under which groups of owners act collectively rather than individually (for example, ownership of a controlling interest by a cooperative as in the case of Wesfarmers, a major company listed on the ASX, and the Kerry Group in Ireland);
- classes of shares that can only be transferred to people with certain qualifications (for example, in the case of Namoi Cotton and GrainCorp, recently floated on the ASX, key voting powers are allocated to a special class of shares which can only be held by farmers);[80]
- imposing limits on the number of shares that may be acquired (in Australia, cooperatives that have converted to companies sometimes impose a limit on the number of shares that investors can acquire, and they enforce the limit by curtailing voting rights or requiring divestment of securities by those whose holdings breach the set limit);[81]
- the existence of a 'founder's share' with special voting rights (for example, the capital structure of Wesfarmers includes a one dollar founder's share that has special voting rights and is subject to the approval of members of Westralian Farmers Co-operative Limited at five-yearly intervals); and

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80 Air New Zealand shares are also divided into two classes, with ownership of one of these classes being restricted to New Zealanders.

81 The ASX now allows the listing under certain conditions of firms which limit the holdings of shareholders to not less than 5 percent. See ASX, 1997, Part B, p 2.

- takeover regulations imposed by governments, such as the Australian regulation (currently under review) which prohibits share acquisition above a statutory threshold of 20 percent unless a full takeover offer is made.[82]

Current corporatisation proposals in New Zealand

There are examples of farmer cooperatives in New Zealand, as in other countries, which have been converted directly to investor ownership, without any restrictions on tradeability of shares. This is the approach followed, for example, in the case of AFFCO, a meat processing firm which converted from a cooperative to a listed company in 1995.[83] In the event, major shareholders of AFFCO have stayed relatively stable and some important shareholders have farming interests.[84] AFFCO is of the view, however, that success in the market "must be forwarded on a mature and cooperative supplier/processor relationship rather than through farmer ownership".[85]

A similar approach has been followed by PLC Industries, New Zealand's largest egg marketer and major feed miller, which was formed as a cooperative in 1942. In March 1998, 83.5 percent of shareholders voted for conversion to a public company, without restrictions on size of shareholdings or voting rights. It is reported that the directors' majority view was that "voting or shareholding restrictions would impede the commercial ability of the new company".[86]

The proposal put forward by John Luxton, the present minister of commerce, for ownership and control of marketing and processing in the dairy industry could also enable shares to be traded without restriction at some time in the future.[87] This proposal allows:

- 51 percent of shares in a new marketing organisation to be allocated to current shareholders in the Dairy Board (the cooperative dairy companies);

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82 New Zealand law does not impose such requirements and only a few firms have opted for provisions which would give a majority of shareholders a veto over takeovers. The New Zealand Stock Exchange's takeover code required listed companies to choose one of three options for inclusion in their constitutions by 31 December 1995. By that date, 127 companies had determined which regime they would choose: 19 chose an 'insider only' provision which requires a report from independent directors where the offer comes from the company's officers; 103 chose a 'general notice and pause' provision which requires three days' notice of an offer; and only five companies opted for a 'minority veto' provision which requires shareholders who did not receive an offer or received a lesser offer to hold a meeting to approve the acquisition (Fitzsimons, 1996, p 325).

83 Existing farmer shares were converted, along with debt from banks and other lenders, into equity. Over 50 meetings with farmer groups were held to encourage investment, but farmer ownership was not regarded as essential.

84 The major shareholders are Toocooya Nominees, PDFM, Dairy Meats and Green & McCahill. Toocoya and Green & McCahill are regarded as private farmers, the Dairy Meats connection is synergistic with bobby calf processing and PDFM is a major British pension fund investor.

85 AFFCO adds: "It is more important that each participant in the supply chain extract real and consistent value than necessarily have equity relationships" (AFFCO, 1997).

86 *The National Business Review*, March 6, 1998.

87 See Luxton, 1998.

- 49 percent of shares to be allocated directly to dairy farmers and tradeable without restriction; and
- the possibility of corporatising the cooperative dairy companies at some time in the future.

In a discussion paper published in October 1997, the Dairy Section of Federated Farmers also proposed that tradeable shares be issued. Under this proposal, however, farmer control would be maintained by ensuring that total shares issued to 'outsiders' does not exceed a certain percentage. The proposal has a lot in common with models used by various cooperatives around the world, including Wesfarmers (a diversified company which originally had a focus on providing services and merchandise to the rural community in Western Australia), the major dairy cooperatives in Ireland, and Dairy Vale (a dairy processor based in South Australia which was the first Australian dairy cooperative to adopt a structure enabling farmers to sell shares on the open market).

By contrast, other organisational models being discussed in the dairy industry retain severe restrictions on the transfer of shares. John Storey, chair of the New Zealand Dairy Group, has proposed moving the main commercial activities of the Dairy Board into a separate marketing organisation that would be owned by processing cooperatives, as at present. Another proposal would involve the creation of a single monopoly processor and exporter under farmer control, through amalgamation of the Dairy Board and all dairy cooperatives. This latter proposal appears to be motivated, in part, by a feeling that farmers have become 'disenfranchised' as a result of ownership and control of the marketing firm by a progressively smaller number of processing cooperatives.

Benefits of an unrestricted market in shares

It is important to recognise that establishing an unrestricted market in the shares of a firm does not take anything away from its present owners. After shares become fully negotiable, farmers would initially retain 100 percent of ownership. If all existing owners see it as in their interests to continue to hold their shares, farmer ownership would remain at 100 percent. The only way ownership by farmers can fall below 100 percent is if some farmers decide to sell some shares because they consider an alternative use of funds will provide them with greater benefits.

Unrestricted share transfer has several specific benefits:

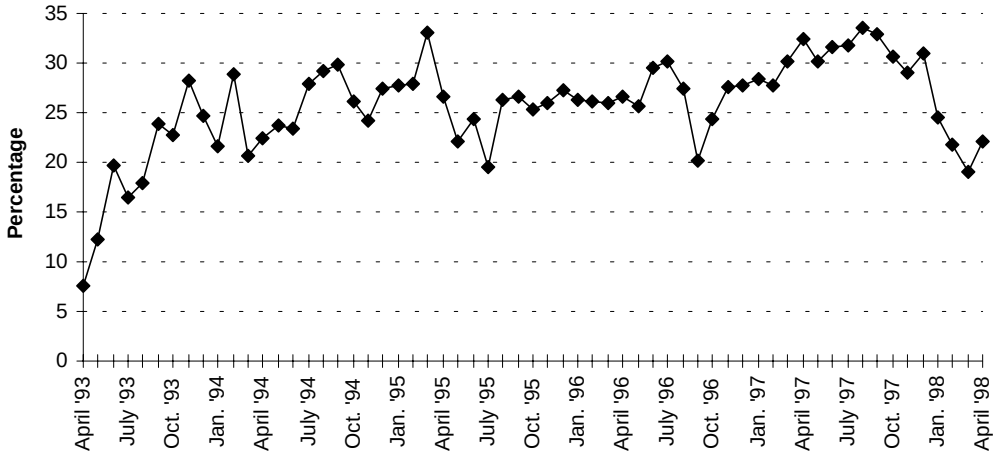
- potential for higher share prices;
- more efficient organisational architecture;
- improvements in management efficiency through the threat of takeover; and
- potential for transfer of control to improve earnings per share.

Each of these points will be discussed in subsections below.

Potential for higher share prices

The potential for shareholders to benefit from the removal of restrictions on share transfer is illustrated by the difference in prices of the two classes of Air New Zealand shares. For foreign aviation policy reasons, shares in Air New Zealand were split into two classes in order to ensure that the majority of shares remain in the hands of New Zealanders: Class A shares can only be held by New Zealanders, whereas Class B shares can also be

Figure 1: Price discount on Air New Zealand Class A shares



held by foreigners. It might be thought that since both classes of shares participate equally in profits, the differences between the prices of A and B shares would be small. In fact, the price of A shares has generally been substantially lower (at times more than 30 percent lower) than the price of B shares (see figure 1).

The most likely explanation for the persistent divergence in the prices of Air New Zealand A and B shares is the constraint placed on New Zealanders' opportunities to diversify their portfolios by the requirement that 51 percent of the company has to be owned by New Zealanders. In the absence of this constraint, New Zealanders would hold fewer Air New Zealand shares in their portfolios. The lower price of the A shares reflects the higher rate of return required by New Zealand investors in order to be induced to include a higher proportion of Air New Zealand shares in their portfolios.

An even greater restriction on opportunities to diversify is involved when agricultural processing and marketing firms are listed on stock markets under arrangements which require that certain classes of shares can only be held by farmers. In many instances, shares in these firms will represent a substantial proportion of farmers' investment portfolios. Accordingly, it is likely that the price of shares that can only be held by farmers will have to be substantially lower than the price of freely tradeable shares in order to provide rates of return sufficient to compensate for the risks involved in maintaining unbalanced portfolios.

In addition, the existence of two classes of shares in the case of farmer-controlled firms could be perceived by external investors as increasing the risk that they might be disadvantaged relative to farmers. David Williams, executive director of Hambros Corporate Finance and chair of Farm Pride Foods,[88] has suggested that these structures produce an inevitable conflict of interest between the A class farmer shareholders, who want the business to pay them the highest possible returns for their produce, and the B class investors, who want the firm to make the highest possible profits. This would reduce the valuation that external investors place on shares – in other words, it would increase the cost of capital to the firm. Williams has estimated that such structures are likely to involve a price to earnings discount on shares of at least 10 percent, compared with an

88 Farm Pride Foods is a public company listed on the ASX. It was formerly the Victorian Egg Industry Cooperative Ltd and, before that, the Victorian Egg Marketing Board.

alternative method of maintaining farmer control, namely placing a cap on the proportion of shares that can be held by any one owner.[89]

The discount on the share price would be even larger if the comparison is made between a situation involving two classes of shares and one in which share transfer in unrestricted.

Efficient organisational architecture

As noted in chapter four, the 'costs of ownership' of a firm are increased where managers are required to balance the interests of owners as investors and their interests as suppliers of raw materials. Restrictions on share transfer can also hinder adoption of efficient management practices by distorting share prices, which normally provide the best indicator of the extent to which a firm is meeting the objectives of its owners as suppliers of capital.

The economics and management literature on organisational design, which owes a great deal to work by Jenson and Meckling, emphasises that the behaviour of firms depends on three factors:

- the assignment of rights to decide and take actions within the firm;
- the system to evaluate the performance of individuals and business units; and
- the methods of rewarding individuals.[90]

In brief, "successful firms assign decision rights in ways that effectively link decision-making authority with the relevant information for making good decisions".[91] Large firms which operate in unstable environments characterised by intense foreign competition are likely to find it difficult to remain profitable without a high degree of decentralisation in decision rights. But decentralisation of decision rights results in increased agency problems:

> When assigning these decision rights … top management must also ensure that the company's performance evaluation and reward systems provide decision makers with appropriate incentives to make value-increasing decisions.[92]

It is difficult for company directors to ensure that performance evaluation and reward systems provide appropriate incentives when information on shareholder value does not exist or is distorted by restrictions on share transfer.[93] It is important for the

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89 Reported in Cathy Bolt, 'Rural floats put the bush on the bourse', *The Australian Financial Review*, 23 March, 1998.

90 See, for example, Jenson and Meckling (1995) and Brickley, Smith and Zimmerman (1995). It has been suggested (Kay, 1997, p 53) that viewing a firm in contractual terms obscures the possibility that markets and hierarchy may have different comparative advantages in relation to qualitatively different types of decision. However, Jenson and Meckling recognise explicitly that decisions within a firm are normally made by a process in which decision management (rights to initiate and implement recommendations) and decision control rights (rights to ratify initiatives and monitor implementation) are assigned to different individuals. Their approach enables attention to focus on the question of how different types of decision should be made.

91 Brickley, Smith and Zimmerman, 1995, p 22.

92 Brickley, Smith and Zimmerman, 1995, p 22.

93 Share market volatility does not invalidate the use of shareholder value in employee remuneration. It is not difficult to make adjustments to remove the effects of volatility due to general changes in investor sentiment, reflected in movements in share price indexes.

performance component of the remuneration of individual employees to vary, where possible, according to factors that individuals or groups of employees can influence directly. However, in the absence of reliable information on the relationship between possible performance indicators and shareholder value, the choice of relevant indicators is just guesswork. The potential for costly mistakes is even greater where investment returns are bundled into payouts to suppliers. In that situation a reliable measure of the profitability of the firm is not available.

The threat of takeover is a spur to efficiency

The threat of takeover provides a useful discipline on management performance. It gives incumbent management teams an added incentive to direct their efforts toward lifting current and future earnings of a firm (and hence improving share prices).

In addition, the potential for a transfer of control to occur if the performance of the management team slips at some time in the future provides shareholders with greater security regarding future earnings per share. This reduction in downside risk can be viewed as a form of insurance that makes the shares more valuable. There are good reasons why the market should place a lower value on the shares of a firm that is shielded from the market for corporate control, even if the current management team in charge of the firm is widely considered to be relatively efficient. When a firm is shielded from takeover, there is a higher probability that managerial inefficiency will become entrenched at some time in the future.

Against this, it is sometimes argued that the threat of takeover causes management teams to devote their efforts to short-term tactics designed to lift share prices, at the expense of developing longer-term strategies to improve future earnings potential. While some managers have been known to adopt a short-term focus in response to the perceived threat of takeover, it is questionable whether such tactics can succeed in raising share prices. For example, when managers boost current profits by deferring expenditures that are necessary to the future growth of earnings, investors are likely to become aware that this is happening and place a lower valuation on shares. Little evidence of short-term focus has been uncovered in empirical investigations reported in the finance literature.

Potential for transfer of control to benefit shareholders

The benefits of a takeover are most obvious where incumbent management teams are inefficient – whether as a result of incompetence, adventurism, allowing poor work practices to persist or some other factor. Under such circumstances, transfer of control provides a means by which a new group of board members and senior managers can implement new strategies.[94] Takeovers may also be motivated by other considerations, such as the opportunity to realise cost savings by merging two businesses, or the economies of scope obtained by extending a firm's activities into related areas. Examples of the latter in the agricultural context could include mergers between single product activities (such as the marketing of apples and pears and kiwifruit), and mergers between New Zealand agricultural processors and marketers and overseas firms handling similar products with the aim of extending product ranges or facilitating supplies to customers

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[94] More generally, there is an incentive for a takeover or merger to occur where the value of the combination of the firms concerned is greater than their value as separate entities.

on a year-round basis. Such forms of business reorganisation are prevented or impeded by the statutory arrangements applying to New Zealand's trading boards.

Where changes in control occur through purchase of shares in the market, bidders are required "to put their money where there mouth is" by buying additional shares. No similar discipline applies when a change of control occurs as a result of political activity, as when shareholders of a poorly performing cooperative vote in a new set of board members.

A takeover bid often enables shareholders who wish to sell their shares obtain a higher price. There is overwhelming evidence that shareholders of target firms usually gain substantial benefits from takeovers. Peter Dodd and Bob Officer, who have worked extensively in this area, wrote in 1986:

> To our knowledge there has not been a single study examining the effects of takeovers that has documented evidence that, as a generality, the shareholders of target companies do not benefit from takeovers. This includes studies from around the world, using a variety of experimental techniques to examine the effect of takeovers.[95]

David Emanuel estimates that shareholders in New Zealand companies that were the subject of takeover offers in the period 1968 to 1985 obtained cumulative abnormal share performance (ie a premium relative to average market performance) of about 15 percent over a seven-week period spanning the date at which the takeover offer was announced.[96] In the case of successful takeovers, this abnormally favourable share performance continued over the following months, but when offers were unsuccessful the gains evaporated quickly. A study by Mandelbaum covering the period 1968 to 1990 also found that shareholders in target companies experienced positive gains.[97]

Dodd and Officer estimate that shareholders in Australian companies that were the subject of takeover offers (including unsuccessful offers) in the period from 1972 to 1985 obtained cumulative abnormal returns averaging about 22 percent over a seven-month period spanning the date that the target received its offer.[98] Philip Brown and Raymond da Silva Rosa estimate that in the period 1974 to 1995 shareholders in Australian target firms obtained an average abnormal return of about 25 percent over the seven-month period spanning the date that the target received its offer.[99]

The effects of anti-takeover devices

Anti-takeover devices cannot actually prevent the transfer of control if the owners of a majority of shares in a firm want to sell their interests in it. However, anti-takeover devices can increase the transactions costs involved in the transfer of control. As a result they may deter some potential bids and deny shareholders the opportunity to sell at a higher price.

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95 Dodd and Officer, 1986, p 132.

96 Emanuel, 1986, pp 179–181.

97 See Fitzsimons, 1996, p 321.

98 Dodd and Officer, 1986, p 146.

99 Brown and da Silva Rosa, 1997, p 4. The authors tested their results against the performance of a large number of 'control' portfolios to determine to what extent these results might be attributable to firm size or survivability characteristics rather than to takeover activity. The performance of the takeover targets was unsurpassed by any of the control portfolios.

Shareholders don't necessarily benefit from auctions

Many anti-takeover devices have the effect of preventing the transfer of control of a firm unless a formal offer is made to buy all shares. They thus encourage auctions for control by making it easier for other parties to contest the original bid by offering a higher price.

At first sight it may appear that such arrangements would be in the interests of shareholders because they encourage additional bidders to make offers for their shares. However, requiring formal takeover offers tends to discourage takeover activity by making it difficult for initial bidders to recover the transactions costs they incur. The Australian Treasury explains:

> The initial bidder incurs costs in identifying potential targets, investigating their affairs and determining how their management can be improved. Rival bidders may use the information disclosed by the initial bidder under the takeover provisions to identify and bid for potential targets. If an auction ensues, the initial bidder is unable to recover these costs. Rival bidders become 'free riders', using the information produced by the initial bidder and avoiding the search costs that the initial bidder bears. This can result in reduced incentives to engage in searching for potential targets and in less investment in information producing activities.[100]

If rules encouraging auctions for control were beneficial to shareholders, their introduction might be expected to result in an increase in the abnormal return (takeover premium) earned by shareholders in target firms. Evidence from Australia suggests that this takeover premium has declined substantially since the 20 percent threshold rule was introduced. Estimates by Brown and da Silva Rosa suggest that the average bid premium earned by target firms fell from about 30 percent in the decade ending 1985 to about 20 percent in the decade ending 1995.[101] The authors comment:

> The decrease in takeover related gains over the past decade to both bidder and target firms is consistent with impediments to takeovers making it more difficult for investors to gain from takeover bids.[102]

The literature relating to poison pills (devices commonly used by firms in the United States as protection against hostile takeovers) is sometimes cited as providing evidence that anti-takeover devices can improve the bargaining position of incumbent shareholders in target firms. Studies of takeovers in the United States have suggested that takeover premiums – the gap between acquiring firms' final offers and targets' pre-bid share prices – have been substantially higher on average for firms with poison pills than for other firms.[103]

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100 Australian Treasury, 1997, p 23.

101 Brown and da Silva Rosa, 1997, p 4.

102 Brown and da Silva Rosa, 1997, p 5.

103 These studies include one by Frederic Escherich of J P Morgan (quoted in *The Economist*, 24 February, 1996) of takeovers between 1988 and 1995 and one by Robert Comment and William Schwert (1995) covering the period 1975 to 1991. Comment and Schwert conclude that, on average, shareholders of target firms benefited from adopting 'poison pills', even after accounting for potential takeover deals that were not completed. However, in common with earlier studies, Comment and Schwert also found that the announcement of a 'poison pill' had an immediate negative effect on share prices. While this is consistent with deterrence of hostile takeovers, the analysis by Comment and Schwert suggests strongly that the decline in total takeover activity in the United States at the end of the 1980s was mainly attributable to the recession that occurred at that time rather than to increased use of poison pills. Numbers of takeovers in the United States have since revived despite the fact that poison pills continue to be used widely.

However, it is difficult to distinguish between cause and effect in this instance. There is evidence that pills have been adopted more frequently by poorly performing firms, that is, by firms for which takeover premiums might be expected to be higher in any case.[104] This is consistent with the view that anti-takeover devices are often adopted by incumbent managers to protect themselves from the consequences of a hostile takeover.

False expectations disadvantage shareholders

Anti-takeover devices can provide misleading signals to the market that companies are immune from takeover and thus lead to under-valuation of their shares. Shareholders who sell their interests in a firm widely believed to be immune from takeover can find that its share price subsequently rises because it becomes subject to a takeover bid. The following examples illustrate this point.

In the case of Wilson and Horton, the publishers of the *New Zealand Herald*, Brierley Investments Limited (BIL) was able to purchase sufficient shares to obtain a controlling interest in 1994, despite the widely held belief of share market participants that the Horton family had sufficient shares to maintain control of the company. BIL's assessment that implementing a new business plan would raise the market value of the company was subsequently endorsed by the Irish newspaper group, Independent Newspapers Limited. BIL was able to on-sell its 28 percent stake in Wilson and Horton to Independent Newspapers at a profit within six months of acquiring it. It seems reasonable to presume that shareholders who sold prior to BIL's purchase would have obtained a better price for their shares if more market participants had anticipated that the firm was not immune to takeover.

Dairy Vale, a South Australian dairy products group, adopted an elaborate structure to maintain control in the hands of a new farmer cooperative when Dairy Vale Investment Trust (DVL) was floated on the ASX in March 1995.[105] Arrangements were also made to enable shareholders in the original cooperative to convert their shares into holdings in DVL that could be sold on the share market. DVL was listed at A$1.10; the price rose to A$1.20 soon after and then fell substantially.

During 1997 the market value of DVL fell as low as A$0.75. It is probable that the price would have fallen even further in the absence of purchases by the Dairy Farmers group (ACF). ACF made a takeover offer for the operating company, Dairy Vale Foods, in October 1997, and at that time it claimed to hold a 53 percent voting entitlement in DVL. Following the ACF takeover offer, competing bids were made by other firms. ACF was announced as the successful bidder in February 1998, at a price equivalent to about A$1.28 per DVL share.

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104 Recent research by Atreya Chakraborty and Christopher Baum (1997) shows that the probability of a firm adopting poison pills is significantly higher if it has a low 'Tobin's Q', which is an indicator of the efficiency of a firm's use of capital. (For the purpose of this study, Tobin's Q is calculated as the ratio of the market value of common stock, preferred stock and debt to the estimated replacement cost of the firm's assets.)

105 Dairy Vale Foods Limited, which operates the business, is owned by a holding company, Dairy Vale Limited. The holding company is owned partly by Dairy Vale Investment Trust (the entity listed on the stock market) and partly by former shareholders in the original cooperative. The holding company is controlled by the milk supply cooperative, Dairy Vale Farmers Cooperative Limited (which can appoint three of the eight directors, whereas the Investment Trust can normally appoint only two directors).

It is reasonable to speculate that if Dairy Vale had adopted a conventional ownership structure, Dairy Vale would have encouraged wider investor interest in the purchase of these shares during 1996 and 1997, in anticipation that takeover offers might be entertained. If this had occurred, the farmer shareholders who sold securities in 1996 and 1997 would presumably have been able to obtain higher prices.

The consequences of obstinacy

Some of the models under consideration for corporatisation of farmer cooperatives in New Zealand may provide a signal to external investors that current owners would not be prepared under any circumstances to allow farmer control to be compromised.

The extent to which the market value of shares may be depressed as a result would vary greatly depending on the circumstances of each individual firm, including the potential for efficiency improvements and debt levels. It could also be expected to vary over time. There may be little impact on a firm's share prices at times when its financial performance is strong, but in periods of weak financial performance investors with an interest in obtaining control of the company will be discouraged, resulting in a larger fall in the share price than would otherwise occur.

The adverse impact on farmers' wealth of a restricted market for shares has the potential to be most severe at times when farmers have greatest need to liquidate off-farm investments. For example, consider a hypothetical situation where farmers may want to sell shares in a farmer-controlled processing and marketing firm during a slump in world demand for their products. Under such circumstances it would be reasonable to expect that the market price of those shares would be discounted by the prospect of lower future earnings by the firm concerned. In addition, however, the share price of such a firm would also be influenced at such a time by any doubts that may exist about its ability to service debt and to survive the slump in market demand.

Ultimately, if a farmer-controlled firm is experiencing financial problems this can lead to the loss of farmers' investments in processing and marketing. If owners of the firm are not willing to consider takeover offers that could resolve emerging liquidity problems, it is less likely that insolvency can be avoided. Paradoxically, the desire to maintain farmer control under any circumstances could lead to the loss of any influence beyond the farm gate.

Maintaining a cooperative structure does not provide a way for farmers to guarantee that they can maintain control while avoiding the risk of loss associated with restricted share transfer. The greater restrictions on transfer of cooperative shares may make the problem worse. It is more difficult for the supplier shareholders in a cooperative to escape the associated risk by reducing their investments in the firms concerned.

The bundling of investment returns into payouts for raw materials may help a cooperative to remain solvent during a market slump, but only by increasing the risks to individual farmers. Bundling may enable a cooperative to reduce or defer payments to farmers when it is experiencing liquidity problems. What this means, however, is that at a time when their farm businesses are most vulnerable because of depressed product prices, farmers may also have to contend with a negative return on their off-farm investments in processing and marketing.

CHAPTER SIX

CONCLUSIONS

It is arguable that control of processing and marketing has, historically, been of benefit to farmers in some agricultural industries in New Zealand. Over time, however, calls to maintain farmer control of the processing and marketing of agricultural products have become like the recitation of a mantra. The heavy involvement of the government in maintaining farmer control in some industries has reflected a collectivist ideology characterised by distrust of the profit motive and competition.

There are good reasons why farmers should discard the mantra of farmer control and assess on their merits the arguments for maintaining control of particular firms, including:

- the world market for agricultural products is changing in ways which tend to favour diversified food manufacturing firms rather than farmer-controlled processing firms that are oriented along commodity lines;
- the cooperative form of ownership is coming under increasing pressure because of the bundling problems associated with the increasing diversity of activities of processing firms, increasing capital requirements and risks, increasing difficulty of monitoring performance as firms become larger, and increasing problems arising from the lack of transferability of ownership rights; and
- sweeping assertions that farmers are disadvantaged in dealing with investor-owned firms because such firms are motivated by profit-making are both illogical and contrary to the experiences of farmers in industries and countries where they sell to investor-owned firms.

Farmers do not have strong grounds to believe that control of processing and marketing firms enables them to obtain higher incomes. While ownership of processing and marketing firms may enable farmers to obtain a higher proportion of the consumer's dollar, this can only lead to higher incomes for farmers if this form of investment yields a higher return than the alternative investments available to farmers.

If control of processing and marketing enables farmers to obtain higher incomes, this could be expected to show up in the returns of New Zealand dairy farmers, since this industry is dominated by farmer-controlled firms. In fact, the evidence suggests that dairy farmers would have been better off with the competition between investor-owned and farmer-controlled firms that occurs in Australia. After making appropriate adjustments for the industry assistance component of Australian returns and the return on capital incorporated in payouts to New Zealand farmers, it emerges that New Zealand farmers have been paid a price for their milk 10–15 percent lower than they could have received without existing restraints on competition.

The main arguments that support the view that farmer-control leads to higher incomes do not provide strong grounds for farmers to expect such a result because:

- if there is scope to obtain price premiums through product differentiation, farmers do not need to own or control processing and marketing firms to take advantage of this; and
- the market power argument has limited validity because even in situations where farmers appear to have no alternative other than to supply a local processor, the longer-term profitability of that firm is likely to depend on maintaining security of supply and discouraging competitive entry by rival firms by superior performance.

It has also been suggested that farmers could be disadvantaged by the entry of investor-owned firms into an industry dominated by farmer-controlled firms because this might leave farmer-controlled firms with the less lucrative parts of the market and under-utilised assets. This represents a pessimistic view of the potential for farmer-controlled firms to lift their performance in response to competition. If competition reveals that some investments in processing and marketing that have been made on farmers' behalf were misguided, this will hopefully provide a stimulus for wiser investment decisions to be made in future. In any event, the future incomes of farmers depend more strongly on the improvements in efficiency of processing and marketing activities that competition can bring than on the future of farmer-controlled firms.

Farmer control may potentially benefit farmers under some circumstances by providing them with more secure market access for their products (or by providing opportunities for processing that would otherwise not be available because potential investors are concerned about security of supply). However, farmer control is likely to be the best option only if the following conditions are met:

- normal market transactions between a firm and its suppliers are relatively costly, for example because one or both parties have to make substantial investments in long-lived assets, such as milking sheds, which have little value if transactions are terminated;
- there are high costs in attempting to resolve this problem through long-term contracts, for example because of the difficulty of anticipating relevant contingencies;
- there are high costs of resolving the problem through backward integration by investor-owned processors because of industry and product characteristics that favour relatively small-scale farming; and
- requirements for risk capital are modest, or there is a willingness to adopt organisational arrangements that reassure external investors that management decisions are unlikely to be biased in favour of the suppliers of raw materials.

Only a relatively small number of industries are likely to meet these conditions, and then only in relation to processing and marketing activities that are closely connected to agriculture.

There is a good deal of scope for farmers to benefit from changes to agricultural cooperatives which involve the adoption of structures closer to those of conventional investor-owned firms. However, individual farmers are unlikely to benefit from the elaborate organisational structures being proposed to ensure that these firms remain under farmer control. This is because:

- farmer control is increasingly less likely to be beneficial to farmers as firms increase in size and become involved in further value-adding activities that require increasing amounts of risk capital;
- requirements that certain classes of shares can only be held by farmers severely restrict the opportunities for farmers to diversify their asset portfolios and are thus likely to result in prices for restricted shares that are substantially below the prices of shares that are freely tradeable;
- when firms are performing poorly, transfer of control can benefit shareholders by enabling them to sell their shares for a higher price and by enabling major changes to be implemented in the firm so as to increase earnings per share; and
- organisational arrangements designed to maintain farmer control tend to distort share prices and profit measures, and make it more difficult for boards and senior managers to implement performance evaluation and reward systems that are directed toward improving shareholder wealth.

When poorly performing firms are widely believed to be immune from takeover, the prices obtained by farmers who sell shares are depressed. Ultimately, if farmers' representatives are not prepared to consider takeover offers when a firm is experiencing liquidity problems, this can lead to the loss of farmers' investments. The only other option may be for farmers to subsidise the firm by accepting lower prices for their produce. This option is not likely to be attractive to many farmers, particularly given the potential for farmer-controlled firms to experience greatest difficulties during a market slump, when returns to farmers are already likely to be depressed.

While it is convenient to discuss the benefits and costs of farmer control relative to the standard model of an investor-owned firm, farmers are not usually confronted with a choice between these alternatives. Unrestricted share transfer increases the options available to individual farmers. It can only result in transfer of control if farmers want to sell their shares.

The important choices confronting farmers are about contestability. In terms of corporate structure, the choice confronting shareholders in farmer cooperatives is whether to adopt organisational arrangements that make future control of the firm depend on its performance and the investment strategies of individual shareholders, or to maintain various restrictions on share transfer despite the costs these restrictions impose on farmers.

A prior issue of contestability, which confronts shareholders in farmer cooperatives in the dairy industry, is whether to retain the practice of bundling investment returns into the payout for milk and the associated requirement for farmers to own shares proportional to the milk they supply. The choice for shareholders is whether to adopt a strategy that seeks to promote greater efficiency in processing and marketing by subjecting firms engaged in these activities to the market test of ability to withstand competition, or to adopt a strategy which attempts to protect the dominance of farmer-controlled firms. A decision to subject firms to the market test would recognise that farmers' best interests as suppliers are served by unfettered competition for raw materials.

Allowing unrestricted share transfer and encouraging increased involvement of investor-owned firms in processing and marketing would be likely to result in greater investment dedicated to the use of New Zealand raw materials. Additional investment in the context of a contestable market might also encourage investment in the development of clusters of related food industries, with associated technological spin-offs, and the intense rivalry between firms that leads to superior products and superior economic performance.

There are alternatives. Farmers could place increasing amounts of their own capital at risk to finance investment in further value-adding activities by farmer-controlled firms. They could continue to focus their efforts on producing lightly processed goods and undifferentiated industrial raw materials. At the end of the day, farmers have to decide whether the benefits they obtain from uncontestable farmer control of processing and marketing are worth the costs of that choice.

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