Forum

Industrial Concentration in Australian Agribusiness

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The structure of agriculture in Australia is experiencing extremely rapid change. Both firms that supply inputs to farmers and firms that process or market farm products are consolidating to create larger organisations. Mergers and acquisitions have enabled some firms to acquire relatively large market shares, thereby dominating portions of the food and fibre sector.

The purpose of this article is twofold: first, it will provide a relatively current description of the concentration within selected subsectors of agribusiness in Australia. Second, it will explore portions of the available literature to determine the impact of consolidations upon profits, operating efficiency, and risk within agribusiness and agriculture. Because concentration is a very broad topic, many aspects, by necessity, are beyond the scope of this paper.

1. Existing Situation

Casual observation suggests that many subsectors of Australian agriculture are highly concentrated and that other subsectors are rapidly becoming concentrated. This section will briefly examine the existing degree of concentration and relevant trends for selected agribusiness subsectors within Australia. In addition, the structure of Australian agribusiness is changing so rapidly that any summary is obsolete before it is published. The information in this section covers mergers and acquisitions through 1987. While the information is not completely current, the overall directions suggested by the data are certainly current and relevant.

Production Agriculture

Because rural properties comprise an essential component of the agribusiness channel and significantly influence its overall design and performance, changes in the production sector will be examined first. While the quantity of Australian agricultural output has increased from an index value of 50 in 1954–55 to 112 in 1984–85, the number of rural establishments producing crops and livestock has declined by over 15 per cent during the same period (Table 1). Interpretation of these figures is clouded because the Australian Bureau of Statistics has redefined the term "rural establishment". However, it can be safely concluded that fewer Australian properties are producing significantly more food and fibre products.

Further, the cost structure of agricultural production has also changed. In 1954–55, farm costs were 59 per cent of the gross value of rural production. In 1984–85, farm costs had increased to 74 per cent of the gross value of rural production (Table 1). While this ratio has varied significantly since the early 1950s, it has trended upward suggesting that agriculture is more intensive in employing off-farm inputs. The ratio tends to decline somewhat during periods of high prices, followed by greater increases in the ratio as farmers capitalise good years into farming practices.

Lastly, farming technology and practices have changed significantly during the past 40 years. Chemicals, farm machinery, agricultural practices, genetics and reproduction, nutrition, and many other factors have modified crop and livestock production practices.

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Table . Number and Trend of Rural Establishments In Australia

Year	Number of Rural Establishments	Percentage Decrease: Preceding Five Years	Farm Costs as Percentage of Gross Value of Rural Production
1954-55	205,700		59
1959-60	203,400	1.1	61
1964-65	200,350	1.5	61
1969-70	192,500	3.9	71
1974-75	182,250	5.3	67
1979-80	179,080	1.7	58
1984-85	171,440	4.3	74

Source: Commodity Statistical Bulletin, Bureau of Agricultural Economics, December 1986, pp. 1:4

All of these changes in farming in Australia have had a significant impact upon the organisations which provide inputs and market farm products. The reduction in farm numbers means there are fewer producer clients for agribusiness organisations to serve and therefore traditional channels may need to be rationalised. The increased use of off-farm resources has resulted in primary producers who are much more sophisticated buyers. Because they are purchasing much larger quantities of inputs, farmers are more price and service sensitive and less loyal to their traditional suppliers. They are aware, for example, of the cost of carrying inventory and use this information in making purchase decisions. The technological developments have resulted in many inputs that leave little room for error in application and therefore suppliers of some products need a relatively high level of technical expertise.

In 1987, farmers and graziers place far greater demands upon agribusiness firms for research and development, product and application expertise, availability of technical and specialised products, service, quality control, and price. Firms that successfully responded to this changing environment were able to grow. But, in addition, smaller firms saw the necessity to grow with their customers and therefore looked for, or were receptive to, mergers.

Farm Input Suppliers

The farm machinery industry that serves Australia can be classified by the products offered such as combine headers, tillage equipment, hay making equipment and tractors. The industry further subdivides tractors by either power or wheel configuraiton. This makes quantitative analysis of market share difficult because some firms compete in all classifications while others specialise in only one. In addition, sales are generally reported in units for tractors but this misrepresents dollar sales significantly between the manufacturers of large and small tractors. Therefore, rather than evaluating market share, consolidation will be reviewed.

The farm machinery industry has been crisis driven by the farm economy and therefore has experienced massive restructuring. Some major century-old North American companies have lost their identity through acquisition. International Harvester has been acquired by J. I. Case, and Allis Chalmers is a part of Deutz. Since 1984, fifteen farm machinery companies have consolidated to comprise six at the present (Table 2). Most of these involved North American companies but several were Australian. However, even the remaining six may not exist into the 1990s, as industry observers are forecasting further acquisitions and mergers.

Table 2. Consolidation of Australian Farm Machinery Manufacturers

1984 Original Companies	1987 Resulting Companies
James Nargorka-(1)	Ford New Holland
Ford	
New Holland	
Versatile	
J I Case	Case International
International Harvester	
Steiger	
Deutz	Deutz Allis
Allis Chalmers	
Horwood Bayshaw	Horwood Bayshaw
Acremaster Tractor	
Connor Shea	Connor Shea Napier
Napier Grasslands	
Massey Ferguson	Massey Ferguson
White Industries	

1. Marketing arrangement only

Source: Tractor and Machinery Association

However, the competitive environment may not have changed as much as the numbers suggest. As the traditional North American firms are consolidating, European and other firms are entering the market and providing the farmer with alternatives. In addition, some of the mergers have resulted because companies were relatively poor competitors, often with ineffective distribution channels and dealership networks. Therefore, potentially, the mergers may create stronger organisations which will increase the competition for the industry leaders. If they fail to become effective competitors, however, the industry will certainly display less competition.

Similarly, the pastoral companies servicing the farmer and grazier are characterised by acquisition and mergers (Table 3). Elders IXL and Dalgety Farmers have built organisations which dominate all pastoral operations and, in 1983, accounted for over fifty and thirty per cent of the wool brokerage market respectively. In addition to selling nearly half the wool in Australia. Elders IXL is also a major Australian processor (scourer) of wool and a wool purchaser for overseas manufacturers. Elders IXL also has expanded into the international wool market by acquiring several New Zealand pastoral companies (Table 3).

However, competition has not decreased as much as the consolidations suggest. As Elders IXL and Dalgety Farmers built their organisations, other firms have developed to serve specific market segments. Challenge Mercantile is one example. With its motto, "like your pastoral company used to be", it has grown rapidly and expanded service offerings as it attempts to provide personal service beyond the capabilities of Elders and Dalgety Farmers, while providing a wider range of services than the smaller stock and station agencies are able to offer. After converting from a cooperative to a corporation, Wesfarmers has entered the eastern market, again providing increased competition. In addition, many small pastoral firms have sprung up around Australia and state cooperatives have provided competitive pressures. As a result, the market share of Elders and Dalgety, that was potentially 84 per cent after their consolidation, has eventuated to a combined share of around 75 per cent in 1987.

Processors and Marketers

The food processing and marketing industry consists of many subsectors, each displaying unique characteristics. However, increasing concentration characterises many subsectors and high levels of concentration already exist in some.

During the past six years, over a third of the dairy companies in Australia have ceased to exist as they have merged with, or been acquired by, other dairy processors. In 1979–80, there were 138 dairy companies in Australia. Six years later, in 1985–86, there were 94, a reduction of 34 per cent (Table 4). Further, is very likely that dairy consolidations will continue unabated in the future. While the farmer may have fewer alternatives, this is not the major impact. Rather, the mergers can potentially provide the dairies with increased market power and therefore

Table 3. Increased Concentration In Wool Brokerage Industry

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    1974 Companies                             1987 Companies

Australian Estates--------|
AML and F-----------------|----AML and F----|
Strachan and Co-----------|                 |
Dennys Lascelles----------|                 |
                                            |
Elders-GM-----------------|-------------------|----Elders IXL
Pitt Son and Badgery------|                   |      |
Portland Woolbrok---------|                   |      |
Country Producers---------|                   |      |
Younghusbands-------------|                   |      |
Westwools-----------------|                   |      |
Western Livestock---------|                   |      |
                                              |      |
G. J. Johnston--------------------------------|      |
                                                     |
Watsons-------------------|                          |
Hodder and Tolley---------|                          |
Allied Farmers------------|----New Zealand companies--|
Yates & Co----------------|
Dalgety Crown-------------|

Dalgety-------------------|-Dalgety Winchcombe--|
Winchcombe Carson---------|                     |
                                                |
Farmers and Graziers------|-Farmers Grazcos-----|-Dalgety Farmers
Grazcos-------------------|                     |
                                                |
Bennett and Fisher--------|-Bennetts Farmers----|
Southern Farmers----------|
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Source is: Bureau of Agricultural Economics Situation and Outlook Wool, p. 17 "Fig. 5: Concentration of Ownership in Australian Wool Broking" 1984 and Industry Sources

Table 4. Total Number of Dairy Companies in Australia by State and Percentage Change

State	1979-80 Number of Companies	1985-86 Number of Companies	Percentage Decrease
New South Wales	44	33	25
Victoria	50	31	38
Queensland	20	14	30
South Australia	9	4	56
Western Australia	8	6	25
Tasmania	7	6	14
Total Australia	138	94	34

Source: Australian Dairy Corporation

improve their negotiating power with the major food chains.

Biscuit manufacturing is another highly concentrated subsector. While the market share of the three largest manufacturers grew only slightly between 1978–79 and 1983–84, the impact on the other firms was devastating. An increase of about two per cent in the share of the three largest result in nearly a fifty per cent reduction in the market share of the manufacturers (Table 5). In 1987, the smaller companies were no longer considered in industry tabulations. The concentration in the biscuit industry has not resulted from recent mergers but rather is the result of effective and aggressive marketing. Therefore, unlike the pastoral industry where new companies have taken market share, or the farm machinery industry in which new firms are offering their products in Australia, reduction in concentration are extremely unlikely. Marketing and the development of strong brand names is a significant barrier to entry.

Table 6 displays concentration and market shares for selected agribusiness processing industries. This static analysis does not reveal dynamic trends in concentration. However, ownership changes during the past few years suggest that some of these industries, as well as many others, are also experiencing increased concentration.

In addition, Table 6 does not reveal the common ownership between many of the product group which significantly increases the impact of concentration. The giants of Australian food manufacturing and their annual sales include Goodman Fielder ($1 300 million), Amatil ($900 million), Petersville (owned by Adelaide Steamship, $708 million), Unilever ($606 million), and Arnotts ($567 million).

Table 5. Market Share by Company in The Biscuit Segment

Company	Percentage of Sales Value 1978-79	Percentage of Sales Value 1983-84	Percentage Change in Market Share
Arnotts Group	73.5	72.0	- 2.0
George Weston	12.9	16.0	+24.0
Nabisco	9.9	10.0	+ 1.0
Others	3.7	2.0	-45.9
Total	100.0	100.0	

Source: Ratnatunga, 1985, p.13

To a large extent, the concentration in food processing has resulted from effective marketing. These firms have developed strong brand names with high consumer recognition. A quick review of Table 6 indicates that those product groups with the greatest concentration are also the groupings with the strongest brand names.

The market power that can be exerted by processors with large market shares is restrained, however by the opposite of the brand name, the "no name" brand. Generic brands and store brands have not become dominant forces over the past decade, but their presence provides consumers with a lower cost alternative. Market shares of the "no brand" products vary between food groupings and have stabilised over the past five years. Perhaps their biggest role has been to meet the needs of a small niche that was not served the major processors.

In addition, international sourcing of manufactured food items has provided competition for domestic firms while improving prices for consumers. Of

Table 6. Market Value, Market share of Major Firms, and Market Share of Market Leader in Various Sectors of Agribusiness

Product Grouping	Year	Market Value (Millions of Dollars)	Number of Major Firms	Major Firms' Share (Per Cent)	Share of One Firm (Per Cent)
Baby Food	1986	$31	2	95	77
Baked Beans/Spaghetti	1986	62	4	79	55
Beer	1986	5000	2	90	45
Biscuits	1986	570	3	98	75
Canned Dog Food	1986	184	3	88	71
Dry Dog Food	1986	88	3	83	42
Canned Catfood	1986	100	3	81	62
Canned Fruit	1984	73	3	97	
Canned Ham	1980				54
Canned Vegetables	1986	158	2	57	44
Cereal Ready to Eat	1986	174	3	85	41
Cereal Mueslis	1986	36	4	85	36
Coffee (Instant)	1986	300	3	86	59
Confectionery	1986	950	5	90	28
Cooking Oil	1986	71	2	75	55
Flour	1986	40	4	53	55
Fresh Fruit Juice	1984	281	5	55	18
Frozen Vegetables	1986	120	2	45	32
Frozen Fish	1986	65	2	58	32
Ice Cream	1983	340	2	50	26
Malt		100	1	60	
Poultry Meat	1986	900	2	90	
Rice	1986	30	2	94	72
Savoary Pies/Pastries	1984	400	2	70	
Snackfoods	1986	360	2	91	56
Soft Drinks	1986	1100	3	83	47
Cola Soft Drinks	1984	340	1	71	
Soups	1986	54	4	92	44
Starch/Gluten/Glucose			4	100	
Sugar	1987	380	2	100	
Table Margarine	1986	380	3	96	43
Animal Chemicals					33
Crop Chemicals					28
Wool Brokerage	1987		2	75	45

Source: Compiled from Foodweek, 9 December 1986, pp. 5-8; Sargent, 1985, pp. 265-271, National Farmer, 8 March 84, pp. 20-26; and Private Sources course, the Australia farmer loses sales when food items that could have been produced domestically are imported.

The last channel member between the farmer and the consumer is the food retailer. From 1977 to 1984, the market share of the four largest chains grew from 46 to 60 per cent, a 30 per cent increase (Table 7). The concentration trend has continued since 1984, and currently two firms share over 53 per cent of the grocery market while four firms have 78 per cent (Table 7). Note that one of these firms is a wholesaler distributing through several independent chains, while the other three are wholesale-retail organisations.

Part of the supermarket growth has occurred at the expense of traditional butchers and greengrocers. Between 1974 and 1986, the number of butchers has declined 22 per cent from 8 700 to 6 800. During the same period, the number of prepackaged meat outlets, primarily supermarkets, has increased nearly 200 per cent, from 580 to 1 700 outlets. This does not, however, suggest that market shares have shifted as significantly. Industry sources suggest that three types of outlets have increased market share at the expense of traditional butchers. Those gaining share are the supermarkets which offer consistency and convenience, chains of butchers with perhaps ten butchers in a shop which offer lower prices, and gourmet/specialty butchers which provide unique customised products.

The increase in the market share for the four major supermarkets has resulted from a variety of factors. First, extremely aggressive price competition has attracted consumers. These reduced prices have resulted from very narrow margins, economies of scale, and aggressive purchasing. Second, Woolworths purchased market share. Third, the supermarkets have responded to changing customer needs and wants by offering one stop convenience to the working woman; larger product assortments in modern stores; and products, such as meats, in the form demanded by consumers. And, fourth, they have used effective and aggressive management and marketing strategies.

The results of the growth in market shares of the four largest chains have been that "The whole Australian food industry is this year suffering from poor profitability" (*Foodweek* 21 October 1986, p.1). While Woolworths purchased a large market share, it has been unable to protect it from the competition and actually incurred a combined share decline between 1984 and 1987. In addition, the large chains have proven extremely effective in using their market power to extract discounts from manufacturers (*Foodweek* 24 March 1987, p. 1).

And the future? Coles purchase of Bi-Lo and 18 per cent of the South Australian market, along with aggressive marketing, suggests its market share is likely to

Table 7. Increase in the Concentration in Food Retailing

Organization	Market Shares[1] 1977	1984	1987	Percentage Share Change 1977-1984	1984-1987
Coles	18	24	25.4	33	6
Woolworths	18	23	27.4	28	(-)6
Safeway	5	6		30	
Franklins	5	7	11.0	40	57
Total	46	60	64	30	7
Davids Holdings[2]		14	14		
Total		74	78		6

1. Woolworths acquired Safeway and totals are combined for 1987.
2. Davids Holding is a wholesaler and figures represent sales of supermarket chains supplied by Davids. All other organizations are wholesale and retail chains.

Source: Calculated from Foodweek, 12 May 1987, p. 1 and Ratnatunga, 1985, p. 14

continue to increase, at least in the short term. Further, retailers will continue to use their buying power to extract price concessions from manufacturers.

Conglomerates

In addition to market shares within specific sectors, another element of industrial structure can be considered: conglomerates. Some firms operate in several industries. For example, in addition to its 27 per cent market share in the supermarket trade, Coles also is associated with a major fast food chain, Red Rooster. Another fast food chain, Pizza Hut, is part of Pepsi Cola. Pepsi, of course, is a major product in supermarkets around the world. And in August 1986, Pepsi further increased its presence in the fast food market by purchasing Kentucky Fried Chicken. It now controls $330 million of the fast food market in Australia.

During 1987, "Industrial Equity, one of the big five conglomerates. . . , is poised to buy control of Woolworths' and become the first manufacturing-based company to own a supermarket chain—a revolutionary concept" (*Foodweek* 21 April 1987, p. 1). Already owning Southern Farmers, the sixth largest grocery manufacturer, this would place Industrial Equity in an extremely delicate position: it would be both a supplier to and competitor of the other supermarket chains.

Other conglomerates include Adsteam and Elders IXL. Adelaide Steamship Company owns 49 per cent of Petersville Sleigh and brand names such as Edgell, Birdseye, Peters, Four'n Twenty, Wedgewood, Gerber, and Nanna's. Among its many other interests, it is also the largest operator in the Australian pig and small goods sector, the largest health food marketer, the largest sheep meat exporter, and a major factor in the wine industry. With its widespread business interests, Elders IXL is the major pastoral company in Australia, a major producer of malt and beer, an exporter and processor of wool, the owner of a beef feedlot, and through Henry Jones IXL and Tom Piper produces fruit, jams, canned meats, tomatoes and margarine.

2. Ramifications of Structural Changes

The literature suggests that mergers result from multiple factors rather than a single factor (Steiner 1975, pp. 205, 206, Scherer 1980, pp. 141). Therefore, it is essential to recognize that merger decisions are complex and interactive. For example, an organisation may be seeking a horizontal merger partner to achieve economies of scale. However, the quest may not come to fruition until changes in tax laws are made or the economic climate provides the opportunity. Or perhaps an increase in interest rates will encourage a cash starved corporation to acquire a cash rich target.

In this section, four incentives for industrial consolidation will be reviewed: profitability, efficiencies, risk reduction, and market power. However, the state of knowledge does not provide the tools to analyse combinations of variables simultaneously. Therefore, individual factors will be reviewed.

Profitability

In a review of the international literature, Mueller (1977, p. 344) found the empirical evidence provides a consistent result that mergers have not increased the profits of the acquiring firms. In a study examining over 800 mergers in seven countries (Belgium, Germany, France, Netherlands, Sweden, Britain, and the United States), Mueller *et al.* (1980, p. 303) found that in some countries post-merger profitability increased, but with significant qualifications, while in others, profitability decreased. Overall, no pattern emerged. Scherer (1980, p. 140) concluded that shareholders in conglomerate firms that were highly acquisitive generally did not enjoy abnormally high profits.

Within Australia, the most significant research is a recent study by McDougall *et al.* (1986, p. 89) in which the methodology closely parallels that used by Mueller *et al.* For the period 1970–81, the results of 88 companies resulting from consolidations were compared with the results of comparison companies which did not merge using two ratios: net profit after tax to shareholders' funds, and net profit before interest and taxes to a firm's total assets.

The findings indicate that the profitability of acquiring firms was not significantly different (either higher or lower) than the profitability of the comparison group. This was a general study of mergers in all Australian economic sectors and only a limited number of the firms were involved in agribusiness. However, assuming rational investment decisions, behaviour between sectors should not vary significantly.

These results suggest two conclusions: first, fears that monopolistic profits will result from mergers have not been proven empirically. But, second, the improved profitability that justifies consolidations has not been documented empirically either.

This conclusion frustrates both proponents of regulation and proponents of free markets, who therefore suggest that the profitability of individual divisions of merged firms should be examined. However, this is almost impossible because corporate accounting practices, such as overhead charges, may render accounting results for components of a corporation unusable for comparison purposes. In addition, divisions with abnormal profits should be identified by statistical tests if there is a consistent pattern over a large sample.

These results would not discourage corporate managers from seeking acquisitions or mergers. They would see individual observations in which some firms achieved increases in profits through consolidation while others incurred profit decreases. Corporate decisions makers, confident of their managerial ability, are likely to seek acquisitions as a strategy to enhance profits.

While scientific conclusions cannot be drawn from single observations, specific examples may be enlightening. Food retailing observers suggest that profits are not adequate:

> The whole Australian food industry is this year suffering from poor profitability caused by price-cutting and rapid expansion of the national chains and Franklins. (*Foodweek* 21 October 1986, p. 10)
>
> The national chains had brought about a serious threat to the food industry's profitability, as a result of price wars. Woolworths started it by significantly dropping prices across the board. As you would expect that quickly brought Coles on the counterattack. Franklins and Jewel were consequently forced to sharpen prices, too. (*Foodweek* 28 October 1986, p. 2)

These comments seem to be supported by evidence. The New South Wales supermarket chain, Shoeys, sells 209 of its top 600 items at a loss (*Foodweek* 1 July 1986, p. 5). A composite chain report reveals that supermarkets operate on a gross margin of 21.91 per cent which generates net operating profits of 0.32 per cent. This is less than the credit for imputed interest which is 0.42 per cent (*Foodweek* 18 November 1986, p. 16). And Woolworths has earned $2.3 million on sales of $2,800 million during its last year. At least within the food retailing industry, high market shares have not generated large profits.

Operating Efficiency

Often when acquisitions and mergers are announced, corporate managers suggest that improved operating efficiencies will create improved profits. The first problem with evaluating this claim is defining the term efficiency. Corporate managers may use a different definition than economists, and accountants use still another definition.

In evaluating efficiency, the international evidence is again inconclusive. Mueller (1977, p. 344) stated that "the mergers . . . have not resulted in increased economic efficiency." Later research verified this conclusion, suggesting that there appeared to be only small gains created from economic efficiency (Mueller *et al.* 1980). And Cowling *et al.* (1980, p. 370) found:

> In many cases efficiency has not improved, in some cases it has declined, in other cases it has improved but no faster than one would have expected in the absence of merger.

In Australia, Sheridan (1974) and Lawriwsky (1980) found that an inverse relationship existed between the profitability and size of a firm. On the other hand, Round (1975) determined that the profitability increased for the larger firms within an industry, relative to the industry average, as concentration increased, but this did not appear to be the result of collusion. While none of these studies examined merged firms specifically, Round's results provide some foundation for efficiency claims, but other reasons, such as superior management, could also have created the results. McDougall *et al.* (1986, p. 143) found from their study of 88 mergers and acquisitions in Australia that scale economics could not have been a major objective of firms because of the size discrepancies between the firms involved in takeovers. However, they reported that scale economies may have been a minor motive.

Thus, the limited research indicates that mergers are generally ineffective in achieving efficiencies. Yet, specific examples reveal examples of both gains (or inefficiency reductions) and losses in efficiency. These examples also reveal some of the measurement problems.

In the mid 1980s, the capacity of tractor manufacturers worldwide was 1.2 million units per year, while demand was 540 000 units. Losses and bankruptcies prevailed within the industry. An industry designed by management to be relatively efficient during the late 1970s period of high machinery purchases suddenly found that its demand curve had shifted significantly. To eliminate this inefficient use of resources and again achieve a realistic long-run average cost curve, the industry had to rationalize.

The mergers of Ford, New Holland, and Versatile have created a company with a much broader and complete line of tractors, headers, and equipment. This should spread risk over a much broader range of farming industries such as dairying and broadacre and may allow more effective use of production facilities. Further, marketing resources and channel members may also be used more efficiently. The Case acquisition of International Harvester and Steiger could also result in a more efficient dealer network which would improve the competitiveness of the new orgainisation. In both of these examples, however, efficiencies may not materialise and be measurable for several years. When they do materialise, they may be identified as resulting from a revival in the farm economy rather than realised efficiencies.

Clearly, Woolworths has not generated efficiencies with the expanded volume of Safeways: with sales of $367 per square foot, they are competing with sales of Franklins of $908 per square foot (*Foodweek* 2 June 1987, p. 7).

Through their many acquisitions, Elders IXL acquired companies with a total market share of 52 per cent of the wool clip. Yet, a few years later, their reported market share is between 43 and 48 per cent. Therefore, it appears that while physical economies may have been targeted through greater volume, some marketing efficiencies appear to have been lost, causing a decay in customer patronage.

But, while the statistical evidence does not reveal that efficiences have been achieved, corporate managers are still likely to pursue efficiences through mergers and acquisitions.

Reducing Risk

Farming is characterised by risk and variability which agribusiness firms share to various degrees. Those firms which sell capital goods, such as farm machinery, face far greater revenue variability than the farmer. For example, farmers and graziers faced a reduction in sales of 2.7 per cent between 1984–85 and 1985–86 (BAE 1986, p. 1) while tractor manufacturers faced a reduction in sales of 53 per cent between 1984 and 1986 (Bolt 1987). Incomes also decreased for both but, while farm income fell 29 per cent, income for machinery manufacturers almost completely disappeared.

Reduction of this risk and income variability is advanced frequently as a goal or result of corporate consolidations. If this is an objective, firms with high risk exposure should merge with low risk organisations. However, McDougall *et al.* (1986, pp. 147–148) found that the leverage ratio of acquiring firms was not statistically different than the ratio of target firms. Nor were the leverage ratios statistically different for the acquiring firm during the five years before the acquisition compared to the same post acquisition period. However, the leverage ratio was higher for acquired firms than it was for matched firms that were not acquired. Therefore, it seems that firms seeking acquisitions do not look for targets with different leverage ratios.

Further analysis by McDougall *et al.* (1986, pp. 157–158) indicated that profit variability after takeovers increased significantly when compared to pre-takeover experience.

Market Power

Perhaps the greatest fear of the average citizen is that concentration creates market power which can be used to dominate and control an industry. The expected outcome is higher food prices to consumers and reduced prices paid to farmers for products supplied. It is not the intent of this paper to provide an detailed analysis of this issue. However, a few observations will be made.

If firms in Australia have been able to create excessive market power, corporate profits should be increased. Yet the evidence provided earlier suggests that this has not been the case. The studies cited of nearly 900 mergers and acquisitions in Australia and other developed countries indicated that profits of merged firms were neither higher, nor lower, than comparison firms which had not merged.

Lower prices for consumers and extremely low industry profits have resulted from the increase in market share achieved by the four largest food retailers. Their increase in share has been purchased with very competitive pricing strategies.

Rather than creating market power through the market shares they purchased, Elders IXL and Dalgety Farmers seem to have created opportunities for other firms as identified earlier. Similarly, Woolworths has not been able to use its market power to protect its market share or profits, both of which decreased.

On the other hand, the two major supermarket chains have used market power in negotiating with suppliers. They have utilised "dictatorial approaches", and "highhanded methods" to make "unbelievable demands" until recently (*Foodweek* 24 March 1987, p. 1):

> Australia's two largest food chains are re-examining ways to extract bigger discounts and other concessions from suppliers, and of gaining longer use of their creditors' funds, triggering outrage among many manufacturers along the way.

However, this flexing of market power has been directed at the highly concentrated food processing sector. Consumers have actually benefited from reduced food prices but farmers could potentially receive lower prices.

3. Summary and Conclusion

The evidence is conclusive that many subsectors of Australian agribusiness are highly concentrated and concentration is increasing. Unfortunately, the impacts of increasing concentration are far less clear. This study explored three quantifiable dimensions: profit, profit viability and risk, and economies of scale. Each proved inconclusive as the quantitative analysis from the literature indicating that mergers and acquisitions did not improve or diminish profits, risk, or economies.

These findings can lead to two conclusions. First, there is no evidence of economic advantage to large organisations that have grown through mergers and acquisition and, therefore, no reason to regulate or control industrial structure. Second, since there is no economic advantage, and some potential disadvantage, there is no reason to allow mergers and acquisitions. One's economic and political presupposition will probably have the greatest impact on one's choice.

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