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How Has The Domestic Wheat Market Changed Since Deregulation?

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This article evaluates the impact of deregulation on wheat growers, marketers and buyers. An analysis of market structure focuses on the market prior to deregulation, the stimulus for change and the ways in which parts of the wheat marketing chain have developed since deregulation. The change in AWB pool deductions for storage, handling and transportation charges, and the consequent change in seasonal marketing margins since deregulation are explored. The main finding of this preliminary study is that deregulation has been associated with reductions in freight and handling charges as well as seasonal marketing margins. Factors other than deregulation appear to have contributed to the reduction in the marketing margin and would bear further investigation.

1. Introduction

Internal wheat marketing in Australia prior to 1989 was highly regulated. The structure for marketing had developed due to a preference by past governments to pursue equity, stabilisation and support goals in wheat marketing (Bureau of Agricultural Economics (BAE) 1983). In the 1980s, it was recognised that internal wheat marketing charges were excessive and this engendered a number of studies which highlighted ways in which wheat marketing could be improved (Royal Commission into Grain Storage, Handling and Transport 1988a,b,c; Industries Assistance Commission (IAC); BAE 1987). These studies had the common theme that efficiency of wheat marketing could be improved by a move toward a market orientated system. As a result, the domestic wheat market was deregulated in 1989 and market participants were offered choices in their mode of trading.

The main purpose of this preliminary analysis is to consider the impact that changes in the farm to port marketing chain for wheat including the deregulation of the domestic wheat market have had on the various market participants and on the costs associated with that chain. An analysis of market structure evaluates the market prior to deregulation, the stimulus for change and the ways in which wheat marketing has changed since deregulation. Following this, a market-

ing costs analysis looks at the change in the Australian Wheat Board (AWB) pool deductions for storage, handling and transportation charges, and at the change in marketing margins since deregulation. The policy implications of the analysis are explored prior to conclusion.

2. Background

The first instance of the regulation of the wheat market in Australia can be traced back to the implementation of temporary controls during the First and Second World Wars. From 1948 until deregulation in 1989, wheat marketing was regulated under the Wheat Industry Stabilisation Act 1948. There was a great fear that a competitive marketing environment would lead to the exploitation of growers. This was due to the belief that private sector monopolies in the handling and purchasing of wheat would emerge.

Prior to deregulation, the AWB was the sole marketer of the Australian wheat crop. All domestically produced wheat became the property of the AWB once it left the farm gate. The wheat was then taken to the AWB-appointed receiver in each State - the Bulk Handling Authorities (BHAs), which were statutory monopolies. Growers were charged for the use of the services of the BHAs at the same amount per tonne regardless of the handling facility to which they delivered their wheat and the time of delivery within the season. This phenomenon, known as cost pooling, occurred within each State. The AWB then sold all of the wheat that was to be used domestically for the same price regardless of whether it was destined for use as stockfeed, for industrial purposes, or for human consumption.

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As the wheat marketing evolved, various price discrimination schemes materialised prior to deregulation (Whitwell and Sydenham). In the period immediately prior to deregulation, a Guaranteed Minimum Price was set at ninety-five percent of the estimated net pool return for the current season and for the previous two seasons. Growers were paid from a pool of revenue from the sales made by the AWB implying that they were paid an average price for the class of wheat produced. All domestic sales of wheat for human consumption were priced on an export parity basis, with an administered price being set each quarter of the year.

The stimulus for change in the domestic wheat marketing arrangements came about from legal challenges to the AWB's monopoly, the findings and research of the Royal Commission into Grain Storage, Handling and Transport (1988), the IAC's report on the wheat industry, and various economic studies on the wheat industry by other bodies. Some of the key underlying issues included the entire deregulation movement, increasing marketing costs, lower wheat prices and an increased realisation that domestic livestock were being disadvantaged.

The Royal Commission's investigation was "directed at providing a more competitive environment for the provision of storage, handling and transport services, and removing impediments to the commercial operation of the bulk handling agencies and rail authorities" (Royal Commission into Grain Storage, Handling and Transport 1988a). The Commission concluded that the charges for the services did not reflect the cost of the service provided. This was due to the presence of cross-subsidisation between users through the pooling of costs. In respect to rail costs, the Commission found that there was cross-subsidisation between growers delivering to branch line terminals and those delivering to main line terminals. Furthermore, the Commission concluded that "savings of the order of \$10 per tonne could be achieved through the introduction of increased competition in the storage, handling and transport of grain" (Wonder and Fisher).

The IAC's report into the wheat industry found that in 1986/87, for every one dollar worth of wheat returns received into the AWB's pool, an estimated twenty cents were absorbed by storage, handling and transport charges, and that an estimated ten cents were absorbed by the AWB in marketing and finance payments. The pooling of revenue was found to lower the disparities

in the net returns received by growers. This effect was increased by the fact that in some seasons up to seventy percent of the wheat delivered was to the Australian Standard White (ASW) wheat class. The IAC came to the conclusion that pooling results in the suppression of price and cost differences arising from the timing of sales, the markets into which wheat is sold, and where the wheat is produced.

Following these studies, a decision was made to deregulate the domestic wheat market. On 1 July 1989, the Commonwealth Wheat Marketing Act was passed which introduced the new market structure. Deregulation has given wheatgrowers choice as to how they wish to sell their wheat in the domestic market. They are no longer constrained by only being able to sell to the AWB and having to deliver to the nearest BHA site. The Wheat Industry Fund was also established to provide a capital base for the AWB's trading activities with a contribution set at 2 per cent of the farm gate value of all wheat sales (Ryan). The AWB still pools costs and returns between growers but the pooling is undertaken on a less aggregated basis than before. The opening up of the domestic wheat market has caused the AWB to be more commercially orientated due to the existence of increased competition in domestic wheat marketing. This has caused the Board to be more mindful of the charges that it incurs. In the five year period to 1991-92, total AWB costs have fallen by 9 per cent and the real weighted average handling and storage charges for the AWB pools have fallen by 2.7 per cent (AWB 1992).

Following deregulation, the BHA for New South Wales was corporatised and renamed Graincorp. In 1992 the government sold Graincorp to the Prime Wheat Association of New South Wales. Graincorp still owns most of the silos that it did prior to deregulation. The commercialisation of the BHAs in the other States has been similar to that in New South Wales. In each State the BHAs are still the major grainhandlers, although they now face some competition from private firms operating their own storage facilities and growers using on-farm storage. What has really changed is that buyers can now source their wheat directly from growers bypassing the BHAs.

The domestic wheat market can be divided into the growers, the marketers and the buyers of wheat. It is important to analyse how each of these groups has been affected by deregulation in terms of their position in the market and how they operate within the market.

2.1 Growers

Deregulation has provided growers with choices on marketing their wheat. They can either sell their wheat directly to an end-user or through a marketer. Direct grower to buyer sales have become a prevalent method for major wheat buyers in purchasing their wheat requirements. Growers are also able to sell their wheat to marketers other than the AWB including grain merchants in their local town, grain brokers and the major grain traders. The options provided to growers by the deregulated market in selling their wheat have given growers the chance to get a better understanding of the requirements of wheat buyers, especially in the case of direct grower to buyer sales. Deregulation has enabled growers to get a better understanding of the market which provides them with an opportunity to extract a premium for producing the quality of wheat in demand and selling their wheat at the time when it is in greatest demand.

Deregulation has had a significant incentive effect upon growers due to the movement away from the pooling of returns and costs. Growers are now in a position to be paid on the quality of their own product, which removes the problem where high quality wheat may have been put into a pool with lower quality wheat. Growers in the deregulated market may also be able to take advantage of the possible cost savings from the closure of some of the smaller rail lines and bulk handling facilities thereby further reducing the incidence of cross-subsidisation and enhancing competition in marketing services which will presumably have resulted in more, better and probably lower cost services.

The deregulation of the domestic wheat market has also brought about an increased use of on-farm storage so that some farmers store wheat on their own property until the time when they feel they will be provided with the best price, or when the direct buyer to grower sale is completed. Direct grower to buyer sales have enabled growers to enter into forward contracts with buyers in order to hedge their wheat production and thus manage their price risk. Price risk management can also be undertaken through the futures markets in the United States. However, this is costly for growers due to the contract size and the fact that they may have to hedge their exposure to the exchange rate. In addition, the use of US futures is made difficult by the fact that growers have a large basis which they must manage because they produce a different type of wheat from that produced in the United States, they are not

able to deliver, and the price they face is different from that faced in the United States.

The demand for marketing services from growers has been changed by the deregulated market. In the case of direct grower to buyer sales, it could be said that the use of marketing agents has been reduced; however there is increased use of road transport because of these sales, so it is difficult to assess the net effect on the demand for marketing services of such sales. Growers who choose to sell their wheat through marketing agents have increased their demand for marketing services as they demand more information and a wider range of selling options as to the price they will receive for their crop by selling through either the AWB, other grain traders, or their local grain merchant. Both the demand for and the supply of marketing services have increased even to the extent of a wheat contract being traded on the Sydney Futures Exchange.

2.2 Marketers

Wheat marketers can be divided into traders, brokers and merchants. The wheat traders are those firms that deal with the large buyers of wheat. The removal of the AWB's monopoly has provided opportunities for the large multinational grain trading companies to enter the domestic wheat market and to compete with the AWB. The companies that have done this are Cargill, Conagra, and Louis Dreyfus. The traders' role is to supply buyers with large quantities of wheat. The AWB still dominates the marketing chain because other traders are not large enough within Australia to supply the total requirements of a large wheat buying firm such as Goodman Fielder. While the international traders are actively involved in the domestic wheat market, they set up operations in Australia in order to be ready for the expected deregulation of the export wheat market. This is yet to eventuate and has resulted in the exit of Louis Dreyfus as a domestic wheat trader. The operations of the grain traders are risky as they often buy wheat before having a buyer who has signed a contract for the wheat. They must, therefore, bear the risk that prices may move adversely and that they may make a loss on their inventory of grain.

The AWB estimates indicate that, in the domestic market for 1991-92, it had a market share of 70 per cent of all human consumption of wheat and 50 per cent of the stockfeed wheat market (AWB, p.15). The AWB has become more customer-orientated in its marketing offering buyers and growers a broader range

of services including a cash price for wheat and a wider range of wheat grades to suit their buyers. This is particularly important for flour mills to produce a wide range of flours which require differing grades of wheat. The millers have always been discerning as to the types of wheat they required and received. Under deregulation, this has become more transparent to growers. The AWB has attempted to maintain its market share in the deregulated domestic market, in part, by offering price discounts on larger volumes demanded by buyers who purchase all of their wheat through the AWB. This suggests that the AWB still has substantial market power. It appears, then, that deregulation has resulted in the movement from a regulated monopoly to a deregulated oligopoly in wheat marketing.

The deregulation of the domestic market has increased the need for price information as growers need to effectively market their crop rather than purely deliver their crop to the AWB. This has resulted in the emergence of a new type of marketing agent in the domestic market, the grain broker. The broker's role is the facilitation of sales and purchases of wheat and other grains by allowing the anonymous connection of buyers and sellers. The trades undertaken in this market facilitate price discovery and can allow marketers, growers and buyers in need of fast transactions to remain anonymous so that they will not have to pay higher or lower prices than would otherwise be the case. In addition, the increased demand for price discovery has led to the creation of a number of information services that provide price information on the domestic market. One example of this is Australian Wheat Forecasters which provides a price information service to growers, marketers and buyers of wheat.

Grain merchants are the marketers located in country towns who tend to have a close relationship with growers. Their role tends to be one of aggregation whereby large buyers of wheat such as millers or traders will use the merchants to aggregate wheat and arrange the transport of the wheat to the buyer. In some ways, merchants compete with the BHAs as a few have taken leases on BHA silos, some have built their own storage facilities, some co-ordinate on-farm storage and some organise sales to bypass the grain handling system.

The issue surrounding the market players and who has survived and who has not revolves around how the players can take sizeable positions when the only access they have to the export market is through the AWB for which they receive a pool price. It makes

risk management very difficult for them. Thus, they are unlikely to take a sizeable position hampering their ability to compete with the AWB.

2.3 Buyers

The benefits that have been provided to the buyers of wheat such as millers and stockfeed purchasers are similar to the benefits provided to growers, as the buyers have been given a choice on how they choose to purchase their wheat. This has resulted in different firms purchasing their wheat in different ways. Some large milling firms have chosen to set up their own grain purchasing divisions which specialise in direct grower to buyer sales and use local grain merchants. Other firms have chosen to use the large traders to fulfil their needs, and some have chosen to purchase the majority of their wheat through the AWB. What is true for all the major wheat buyers is that they are now provided with a choice on how to purchase their wheat which enables them to minimise the costs of their wheat purchases.

In summary, the deregulation of the domestic wheat market has introduced a number of changes for growers, marketers and buyers of wheat. These include changes in how the wheat is sold, who buys the wheat, and where the wheat is stored. While these changes are quite significant and may have improved the efficiency of market operations through more accurate pricing, it is yet to be determined whether this has been translated into lower costs.

3. Empirical Observations

This section analyses the deductions from the AWB pool for the years 1985 to 1992 and the changes in the margin between the AWB's free on board (fob) export price and farm gate prices. Ideally, sales of wheat in the domestic market, prior to and after deregulation, could be used to estimate elasticities to determine the effect of deregulation on domestic wheat marketing efficiency and the impact of the change in marketing margins on wheat growers and wheat buyers in the domestic market. However, due to commercial sensitivity this information was not available from the marketing agents.

3.1 Pool Deductions

The analysis developed involves taking the pool deductions for freight and BHA charges from AWB

annual reports for the wheat growing States of New South Wales, Victoria, South Australia, Western Australia and Queensland for the years 1985 to 1992. The payments were deflated by the consumer price index to put them in real dollars as at 30 September 1985. The data were grouped into two periods; the period prior to deregulation (1985-89) and the period after deregulation (1990-92). For the purpose of this analysis, it is assumed that the market was deregulated after 30 September 1989, as the harvest usually does not begin until October, at the earliest, and the AWB figures are produced as at this date. Table 1 displays the results of the analysis of pool deductions for each of the States.⁷ There are two components to the total pool deduction - a freight and a bulk handling component.

Table 1: Pool Deductions per Tonne by State in Real Terms 1985-92

State	1985-89	1990-92	Percentage Change
NSW	\$35.45	\$30.93	-12.7
VIC	\$30.57	\$26.14	-14.5
SA	\$16.70	\$13.95	-16.5
WA	\$23.86	\$18.70	-21.6
QLD	\$29.36	\$25.67	-12.6
Source: AWB Annual Reports 1985-92			

The evidence for New South Wales shows that, in comparing the pre-deregulation period (1985-89) and the post deregulation period (1990-92), there has been a fall in total deductions for freight and bulk handling of \$4.52 per tonne in real terms or 12.7 per cent. The evidence for Victoria indicates that, in comparing the pre and post deregulation periods, there has been a fall in total deductions for freight and bulk handling of \$4.43 per tonne in real terms or 14.5 per cent. Much of this is attributable to the large fall in the freight charges in Victoria resulting from the increased use of road transport. In fact, bulk handling charges actually increased over the period. This is different from the other States which have experienced decreases in bulk handling charges. The increase could be explained by the costs incurred in restructuring the Victorian Grain Elevators Board, including paying redundancy packages to employees and the closure of underutilised bulk handling facilities.

The evidence for South Australia shows that, in comparing the pre and post deregulation periods, there has been a fall in total deductions for freight and bulk handling of \$2.75 per tonne in real terms or 16.5 per cent. Freight costs for South Australia are substantially lower than for the other States which may be explained by the proximity of the wheat growing areas to the seaboard, and that road transport was used heavily prior to deregulation, whereas the other States used a lot of rail transport. In numerical terms the savings in freight and bulk handling charges are small compared to those in the other States. However, the percentage decrease in charges is comparable to that for the other States and is significant. The evidence for Western Australia shows that, in comparing the pre and post deregulation periods, there has been a fall in total deductions for freight and bulk handling of \$5.16 per tonne in real terms or 21.6 per cent. The evidence for Queensland shows that, in comparing the pre and post deregulation periods, there has been a fall in total deductions for freight and bulk handling of \$3.69 per tonne in real terms or 12.6 per cent. Once again, substantial cost savings are evident for the period of analysis. These savings appear to stem from both deregulation of the domestic market and changes to the storage, handling and transportation system, but principally the latter. The distribution of the benefits from these savings require further investigation.

3.2 Marketing Margins

Marketing margins were calculated by subtracting suggested grower selling prices from the AWB fob export price for wheat. The locations analysed were Moree, Tamworth, Narrabri, Dubbo, Parkes, West Wyalong, Wagga Wagga, Berrigan, Narrandera and Deniliquin. The price series covered three periods in monthly amounts, 18/9/84 to 19/6/85, 22/12/88 to 14/9/89, and 19/10/89 to 18/2/93. The AWB's fob export price for ASW wheat was converted from US dollars to Australian dollars in order to calculate a margin. The analysis was undertaken for ASW wheat, as it is the largest grade of wheat that is produced in Australia, and there were not sufficient data for the other categories of wheat.

This preliminary analysis focused on the change in marketing margins by quarters. The harvest of wheat ranges from November to January which implies that the wheat marketing system has major demands placed upon it during this period. The deregulation analysis that was undertaken prior to 1989 argued that marketing services should be priced according to the time they

were used. In periods when marketing services were used in high capacity it was suggested that the price of these services should be increased. Conversely in periods when the marketing services were being used in low capacity, it was suggested prices should be lower to reflect the lower cost of providing the services at this time.

The analysis used the average margin across all areas in real 1984 Australian dollar terms in the September (July, August, September), December (October, November, December), March (January, February, March) and June (April, May June) quarters for years where data are available. The years are 1984/85, 1988/89, 1989/90, 1990/91, 1991/1992, 1992/1993. The percentage change in the margin for the quarter was calculated by comparing the initial margin recorded with the last margin recorded for the quarter. The results are indicative rather than absolute as estimates between years were difficult to interpret (Table 2).

Table 2: Average Marketing Margin per Tonne by Quarter in Real Terms 1984/85 - 1992/93

	QUARTER			
	September	December	March	June
1984/85	—	\$74.66	\$82.24	\$86.38
1988/89	—	—	\$72.37	\$81.64
1989/90	\$73.62	—	—	—
1989/90	—	\$70.10	\$69.07	—
1990/91	\$22.50	\$46.38	\$59.94	\$69.07
1991/92	\$66.03	\$60.30	\$60.11	\$44.14
1992/93	\$35.19	\$59.17	—	—
% Change/qtr	52.2	20.7	26.9	48.9

Source: The Land and Grain Farmer

The change in the September quarter between 1989 and 1992 was a reduction of 52.2 per cent. A similar result was found in the June quarter where the margin fell by 48.9 per cent between 1985 and 1992. In contrast, the December and March quarters are the periods in which marketing services are in highest demand by the wheat industry. In the December quarter the average margin fell by 20.7 per cent between 1984 and 1992 and in the March quarter the average margin fell by 26.9 per cent between 1985 and 1992. These results suggest that pricing has been adjusted so that the marketing margin is higher in periods where

the marketing system is operating at full capacity (the December and March quarters) compared to when the system is operating at a lower capacity (the June and September quarters). This implies that there has been a reduction in the marketing margin in the latter quarters so that the cross-subsidisation between periods that was previously in place is being reduced and the margin is increasingly determined by the market. Further investigation would clarify this conclusion.

4. Policy Implications

The key finding of the analysis is that the period since deregulation has been associated with a reduction in real freight and handling charges, and a redistribution of the marketing margin between the farm gate and wheat buyers in the domestic market between seasons. Given the limitations of the data, it was not possible to allocate the decrease in the marketing margin in some quarters to the decrease caused by the deregulation of domestic wheat marketing and the portion of the decrease caused by lower wheat prices. However, it appears that deregulation has been of benefit to the Australian wheat industry, as otherwise growers would be receiving much lower returns due to higher marketing costs. Gardner suggests that this is a naive view and shows that the lower wheat prices will pressure the providers of marketing services to lower the cost of their services. Therefore, lower marketing margins have probably been caused by a combination of low wheat prices and the deregulation of domestic wheat marketing. Further investigation would be useful.

In summary, storage, handling and transportation charges have decreased, there appears to be a difference in the quarterly marketing margin, there has been an increase in the marketing options available to growers, there is an initial increase in the number of marketers involved, but that appears to have dropped off and there is an increase in the numbers and types of price signals going back to producers. That is, price transparency has increased and a number of other forces have probably been released which are still working their way through the system.

It is, however, important to ask how these efficiency gains have been *distributed*. The existence of monopoly power in the domestic wheat market may imply that the efficiency gains from deregulation may have been unevenly distributed between growers and buyers to the advantage of wheat buyers and to the detriment

of growers. Deregulation is a dynamic process and domestic wheat marketing is continuing to adapt to the consequent changes with effects on all participants. These distributional changes should be further investigated from a welfare point of view.

5. Conclusion

While the market for marketing services for domestic wheat still falls short of being adequately competitive, deregulation has brought the market closer to being contestable. This is due to the increase in the number of direct grower to buyer sales, the entrance of new wheat marketing firms that compete with the AWB, the increased use of road transport which competes with rail in transporting wheat, and the increased use of on-farm and private storage which competes with the bulk handling system.

Since deregulation, price information has become closely guarded by the marketing agents which has resulted in an increased need for price discovery. Despite the increased sensitivity of price information between marketing agents, the deregulated market has brought about a better transmission of price signals due to the removal of regulatory distortions in the domestic market. Some examples of the changes that have been brought about by a more efficient transmission of market signals are the reduction in cost and revenue pooling, and the increase in choices in the marketing environment which enables growers to access the prices that different marketing channels will provide.

There has been a significant amount of innovation in the marketing of wheat since deregulation with the introduction of new payment methods by the AWB including cash payments and forward contracts to supplement the pooling system that was already in place. There has also been innovation in bulk handling through the introduction of extended grading of wheat to suit customer requirements. The marketing agents have introduced a new marketing agent, the grain broker. These developments have provided a wider choice of marketing channels for growers and buyers. While it was found that the marketing margin in the off season has fallen since deregulation, it is quite possible that there were factors in addition to deregulation, such as lower export wheat prices, that have also

placed downward pressure on the marketing margin. Further research is clearly needed to address these issues.

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