The Australian Journal of
Agricultural and
Resource Economics

Journal of the Australian
Agricultural and Resource
Economics Society

Australian Journal of Agricultural and Resource Economics, 60, pp. 594–609

Agricultural markets and marketing policies

Garry Griffith and Alistair Watson[†]

Agricultural markets and marketing policies in Australia have changed markedly in recent years. In part, this has occurred because of conscious deregulation of previous price support and stabilisation schemes. Occasionally, the changes occurred because of poor administration and spectacular default. Previous price and marketing policies schemes provided differential rates of assistance with adverse consequences for resource allocation. Pricing arrangements affected marketing institutions and marketing costs beyond the farm gate, domestically and internationally. The conceptual basis of agricultural marketing analysis was contested. Private and public roles were confused, including between Commonwealth and state governments. Key principles of agricultural marketing and policy development in Australia are illustrated in the paper by reference to commodities with different histories and economic characteristics: wool, wheat, dairying and meat. Special emphasis is given to market information and price discovery. In line with continuing urbanisation and modern logistics, retail marketing of agricultural products has also been transformed. This has become controversial as a policy issue. Competition issues, the economic behaviour and performance of supermarkets, and their effects on farmers and consumers are also introduced in the paper.

Key words: agricultural markets, deregulation, economic analysis, policy, value chains.

1 Introduction

Professional interest in agricultural marketing has waned in Australia despite greater diversity and sophistication of markets, domestically and internationally. The main reason for the declining interest of economists can loosely be described as 'deregulation' of agricultural markets. Widespread government intervention that once characterised agricultural marketing in Australia has ended. Several developments occurred unexpectedly. 'Orderly' marketing turned out to be disorderly. In addition, arcane aspects of federal-state politics, financial and constitutional arrangements have affected the development of agricultural marketing in Australia. New Zealand, as a unitary state, has a different history of agricultural marketing and pricing.

While the end result of many changes in agricultural marketing in the past couple of decades would have pleased early participants in the debate like Keith Campbell, Jack Lewis, Alan Lloyd and Ross Parish, the events that

[†] Garry Griffith (email: ggriffit@une.edu.au) is with the UNE Business School, University of New England, Armidale, New South Wales, Australia. Alistair Watson is a Freelance Economist, Port Melbourne, Victoria, Australia.

doi: 10.1111/1467-8489.12161

accompanied change would have tested their appreciation of the influence of the narrowly economic, and noneconomic, arguments.

The underlying complexity of the historical record is illustrated in this paper by reference to agricultural commodities with different experience and characteristics: wool, grains, dairying and meat. The paper is a blend of chronology, economic themes and interpretations based on case studies. Important exclusions are sugar, wine, fruits and vegetables, and eggs. These four industries have interesting, and different, marketing features that space constraints do not allow us to cover.

While our focus is on the historical perspective and the four case studies, we also mention two recent issues of importance: the emergence of value chain analysis as a method of enquiry, and the effects on consumers and farmers of the two large supermarket chains that dominate the Australian market. While world prices are key to outcomes for farmers and consumers in the industries we consider, the behaviour of supermarkets is increasingly important for many other industries and for everyday purchases such as fluid milk and bread.

Previous overviews can be found in chapters in the Don Williams' edited collections, *Agriculture in the Australian Economy* (1966, 1982, 1990). In addition, Corden (1968) provided a succinct account of early work by Australian agricultural economists, including the dairy and wool industries; Lloyd and MacLaren (2015a,b) cover similar ground; and Throsby (1972) edited a book of agricultural policy readings.

Unavoidably, the paper shifts between the subject matter of the subdiscipline of agricultural marketing, now called value chain analysis, and commentary on the behaviour of prices and agriculture's role in the economy. This is because the 'home consumption price', the preferred method of intervention, had pervasive effects on marketing functions and institutions as well as price formation. That was also the case when the objective of intervention was claimed to be 'stabilisation'. Statutory Marketing Authorities (SMAs) set up under Commonwealth and state legislation once dominated the agricultural marketing landscape in Australia.

When government intervention in Australian agricultural markets was common, economic analysis was to the fore. The focus was on economic efficiency and distributional effects on farmers and consumers. Intervention was prompted by episodic low prices and incomes associated with climatic and marketing risks of Australian farming, magnified by dependence on volatile world markets. The effects of these risks were compounded by the skewed distribution of farm size with many uneconomic farms, made inevitable by feckless settlement programs.

As early as the 1920s, it was recognised that differential treatment of agricultural industries had nontrivial effects on farming and the general economy (Brigden *et al.* 1929). Giblin (1934) anticipated interest in the general equilibrium consequences of protection via agricultural price supports by establishing that the cost of home consumption price schemes

fell on unassisted export industries, including farming industries (Mauldon 1990).

2 Approaches to marketing analysis

Mainstream teaching of agricultural marketing usually introduces the topic by focusing on marketing functions: exchange, physical and facilitating. The rationale is to establish the importance of the economic processes and institutions that coordinate the flow of products from producers to consumers, and money in the opposite direction. Biases against marketing activities and market intermediaries are persistent and a barrier to understanding agricultural markets and marketing policy. It is easier to blame the marketing system for low prices than accept that prices are low for other reasons. Farmers are not alone in being suspicious of markets and commerce.

Though blanket disdain for marketing is unhelpful, the facts and circumstances of individual cases should be considered. Market power is an issue when the product is perishable, which is why cooperative processing is common in the dairy industry in many countries. Access to information is also problematic. In a perceptive paper, Phillips (1968) argued that issues concerning information were central to the idea of marketing. Similarly, the function of grading is to provide information that enables sale by description with all that implies for costs of inspection and scheduling of transport (Freebairn 1967). Promotion and advertising are also part of information provision. The rationale for generic and country of origin promotion of agricultural products has been controversial.

A variant of antimarketing bias is the popular view that Australian farmers would do well if more local processing of agricultural products was undertaken. This view was popular in the 1980s and still is for state governments. An assumption of value adding enthusiasts is that processing and marketing are profitable. Several issues need assessing. Adding value is not costless. Comparative advantage in production is different to comparative advantage in provision of marketing services. Some factors favour processing close to the point of production, others close to the point of consumption. Perishability is an example of the former. The financing cost of holding stocks of semi-manufactures is an example of the latter. Consumers in different countries have different tastes and preferences. Further processing in Australia reduces flexibility, and opportunities for manufacturers to blend raw materials sourced from several countries. Moreover, trade barriers are lower for unprocessed agricultural products. Farmers are not necessarily better off when processing occurs in Australia for products with prices determined on world markets. Thinking about ‘role of government’ is key to policymaking with respect to further processing. Arguably, agribusiness firms in Australia and overseas are better placed than governments to decide where agricultural products are most efficiently processed.

The other major strand in agricultural marketing is the institutional approach: the 'who does what' aspect of marketing. This collapses to three questions: whether government action is required to undertake marketing functions, and if not, how should the activities of private firms be regulated, and how firms are coordinated within and between various parts of the marketing chain, which in turn depends on factors affecting the optimal size and scope of business operations.

Several frameworks are available to elaborate the role of government including the market failure paradigm, private interest theories and contemplation of the effects of institutional arrangements on business incentives, and the capacity to manage risks. A landmark in agricultural policy discussion in Australia was Ted Sieper's (1982) *Rationalising Rustic Regulation,* exploring differences between public interest and private interest theories of regulation in the context of agricultural pricing and marketing.

Professionally, Australian agricultural economists were at the forefront in treating the role of government questions seriously. This is because the performance and powers of SMAs were pivotal in the realm of agricultural marketing (Lewis 1961; Campbell 1973). Price support afforded by home consumption schemes could have been achieved by fiscal means through taxes on production and bounties on exports. In most cases, governments preferred the opacity of statutory arrangements that disguised effects on consumers and taxpayers by protecting SMAs from scrutiny. SMAs were also a vehicle for exercising patronage through board appointments, and provided opportunities for career changes by officials.

Naturally, there were attempts to reconcile conflicts between economic efficiency and majority producer representation on the boards of SMAs (Miller 1984). Including outsiders on boards to tap their commercial expertise demonstrated the differences between the subject matter knowledge and skills required of Australian business people and the marketing of agricultural commodities.

The role of government needs to be considered at Commonwealth and state levels. Section 92 of the Constitution protecting 'free trade' between states had a profound effect on marketing arrangements (Coper 1978). The postwar response of governments to decisions by the High Court in the 1930s limiting the scope for home consumption price schemes was to rely on complementary legislation passed by the Commonwealth and states. This did not solve legal problems. Complementary legislation also implies long-term agreement between the Commonwealth and all states. This did not happen.

Successful price discrimination depends on differences between elasticities of demand and the ability to keep markets separate. Where separation of markets could not be entertained, home consumption prices and SMAs were not attempted (meat) and sometimes where they were implemented statutory marketing could not be sustained because of interstate trade and rivalries (eggs, fresh milk).

A vexed question in Australian agricultural marketing is official trade promotion. While a case could be made for a Commonwealth involvement for emerging industries and/or smaller agribusiness firms, the case for state government activities in export promotion of agricultural products is problematic. Successful firms in international trade cross state borders. Trade diplomacy and dispute settlement is a matter for nation states not parts thereof. Activities of state governments in trade promotion are costly and confuse customers. In essence, export promotion of agricultural products by state governments reflects mercantilist sentiment and parochialism.

The previous lack of transparency of Australian agricultural marketing arrangements generated attempts to redress the situation. The most important was formation of the Industries Assistance Commission (IAC) in 1974 (Mauldon 1975). Enquiries by the IAC and its successors proved a powerful force for change. Interestingly, the wool industry used its political influence to avoid IAC enquiries. While Australia has had trade practices and competition legislation since the 1960s, the agricultural sector was exempt until the Hilmer Report, and subsequent implementation of the National Competition Policy (NCP) in 1995.

3 Case studies

Four industries are examined more closely: wool, grains, dairying and meat.

3.1 Wool

The wool industry once occupied a dominant place in Australian agriculture, and national psyche. The industry satisfied, or even defined, Bruce Davidson's desiderata for successful farming in Australia: large export markets, low transport costs, low labour requirements and cheap land (Davidson 1981, p.67). As an industrial raw material, wool was linked to the world trade cycle. Prices were volatile because demand was unstable. Clothing purchases are discretionary and demand is sensitive to income, unlike most other agricultural products. Stocks of semi-manufactures are held at many points of a long production chain. Stockholder behaviour can be stabilising or destabilising, according to price expectations.

For over a century following European settlement, the wool trade was organised on classical lines. Numerous producers of a commodity with multiple types, grades and quality standards were linked in space and time to more numerous consumers via an intricate chain of middlemen, early-stage processors, the textile and clothing industries and retailers. The end result was an example of coordination of a complex market by the price system: not just average prices, also premiums and discounts for quality and type.

When wool growing was profitable, the marketing system was acceptable to woolgrowers. Inevitably, the situation changed. Settlement policies meant many farmers were unable to manage price volatility, or even average prices

over the cycle. Subtly, a labour-intensive industry in production, handling and processing like wool loses its edge with economic progress and higher wages. The footloose textile and clothing industries reduce the effects of labour costs by international mobility (Anderson 1992). But wool production and early-stage processing use specialised and immobile assets. Some contraction of the Australian wool industry was likely irrespective of the dramatic turn of events associated with policy decisions after 1970.

Like other industrial raw materials produced within agriculture, wool became subject to competition from manufactured (standardised) substitutes. A reaction of the nascent International Wool Secretariat (IWS), formed in the 1930s to combat wool's declining fortunes, was to institute a campaign based on the slogan 'there is no substitute for wool'. Nothing was further from the truth.

Emerging difficulties of the wool industry were concealed by general prosperity following World War 2, especially a spectacular boom during the Korean War. The macroeconomic effects of the boom were not unlike the recent mining boom. Wool was spared widespread postwar intervention in pricing and marketing arrangements that happened with other products. Nevertheless, the industry was divided between advocates and opponents of government intervention. While some elements preferred an acquisition scheme similar to those operating in wartime, the favoured option was a conventional buffer stock scheme, in Australia called the reserve-price scheme (RPS) reflecting the reserve or floor price that initiates cycles of stock transactions.

The respectable case for the RPS depended on conservative management. Distinguished supporters like Sir John Crawford found comfort from Keynesian ideas about links between commodity price stabilisation and macroeconomic management.

As the debate intensified in the mid-1960s with an (eventually defeated) referendum of woolgrowers, economists became involved on either side of the debate with theoretical arguments and empirical studies. Issues at stake included reflections on the effects of speculation in stocks, price elasticities, and importantly, consideration of the technical and administrative efficacy of price forecasting necessary to operate a RPS successfully. This is because a buffer stock scheme is effectively an official attempt to stabilise prices through speculation in stocks (Duloy and Parish 1964).

A useful account of the 1960s wool marketing debate is provided by Sturgess (1968), a short-term visitor to Australia. His work includes commentary on a parallel debate surrounding lot sizes and auction procedures, objective measurement and selling systems that continues. The wool marketing debate has always had several strands: issues germane to the RPS, controversies concerning marketing costs and evaluation of the potential for objective measurement, with all that implies for evolution of the marketing chain.

The RPS was eventually introduced in 1970 with plummeting prices associated with wool-specific supply and demand factors, and macroeconomic conditions in Australia and consuming countries. For a couple of decades, the RPS operated successfully, before its collapse in February 1991 with escalating stocks, and debts.

A comprehensive account of the history and demise of the RPS is given by Massy (2011). Massy encapsulates the acrimonious decline and fall of the RPS in his evocative (short) title 'Breaking the Sheep's Back'. While overstating the financial and economic cost of the collapse by not accounting for enterprise changes by mixed farmers, Massy elaborates the ingredients of the RPS debacle: the hubris and overconfidence of the wool industry leading to unsustainable increases in the reserve price in the mid-1980s, and failure to recognise that prices could not be forecast successfully with floating exchange rates, even if the intention was to run a conservative RPS.

The outcome was anticipated by Duloy and Parish (1964, p.30):

> Even a conservative reserve-price scheme would run some risk of getting into difficulties. Furthermore, because of the limited achievements of a conservative scheme, the supporters of a floor-price scheme are likely to demand a more radical reserve price. There is thus the risk that because of errors of judgment on the part of the authority, or because of pressure from dissatisfied groups of growers, a conservative scheme would escalate into a radical one.

Chapter 21 of the Massy book also details abuse of process by the IWS. This should be compulsory reading for those who put their faith in the bona fides of farmer politicians and wisdom of the state apparatus. Massy goes beyond standard critiques of other failed agricultural stabilisation and buffer stock schemes by demonstrating how the collapse of the RPS did permanent damage to the early-stage processing industry.

Another pervasive confusion in economic and marketing policy is recognised by Massy: failure to distinguish between policies and strategies appropriate for a firm and those applying to an industry. Powerful figures within the wool industry applied concepts based on what they thought were successful strategies for synthetic fibre firms in the 1960s to the circumstances of the Australian wool industry. Massy describes this adventurism as pursuit of a 'Woolly DuPont'. The analogy is flawed; and by the time the RPS was implemented, synthetic fibre companies had lost their market power because patents had expired.

Australian agricultural economists have made useful contributions to the theory and practice of price stabilisation. Prominent examples include Keith Campbell (1964) and Brian Wright in Williams and Wright (1991). Others have made good livings working for international agencies advising other countries to eschew adventures like those that so damaged the Australian

wool industry. That advice was based on their Australian education in agricultural economics.

3.2 Grains

Grains are a separate marketing miracle to wool. In essence, the wool industry emerged in Australia through private enterprise. By contrast, the grains industries have had close links with government for most of their history. In addition to the experience of closer settlement, the grains industries were reliant on government investment for marketing infrastructure. Development of an Australian export grain industry depended (internally) on public investment in railways and (externally) on bulk transport by steamships. Storage and handling facilities at ports and local receival points were necessary, involving government.

Most of the discussion below relates to wheat, the major crop in Australia and the template for other interventions by Commonwealth governments and the states. The post-1948 wheat marketing system had four main characteristics: the Australian Wheat Board (AWB) was the exclusive marketer on export and domestic markets, price and income stabilisation was sought via buffer funds, differential pricing was practised between the domestic and export markets, and there was elaborate pooling (averaging) of receipts and marketing costs. Administrative aspects should also be considered. The major changes in wheat marketing followed three IAC enquiries (in 1978, 1983 and 1988), the NCP Review (in 2000) and two Royal Commissions (in 1988 and 2006)! The domestic market was fully deregulated following an IAC enquiry in 1988, but a single desk for export markets continued until 2008.

Over time, the pattern of crop production and marketing has diversified and the relationship to government has changed. Following deregulation, there are now gross differences in marketing between places where most output is exported (Western Australia, Eyre Peninsula) and eastern Australia where domestic consumption is more important, including expansion of livestock feeding. The latter group now performs more marketing functions on their own account, on-farm storage, transport and risk bearing. Marketing decisions are made alongside production decisions, something impossible under the former regime.

The previous export monopoly of the AWB was an extension of restrictions imposed in wartime. Nevertheless, it reflected antagonism to middlemen, exacerbated by low prices in the 1930s. Much the same could be said of wheat growers on the Canadian Prairie. Like their Canadian counterparts, supporters of the export monopoly and the AWB believed that price premiums could be achieved by ‘single desk’ marketing. This was compared favourably with the outcome when numerous sellers were involved, pejoratively known as ‘weak selling’. Prima facie, Australia’s share of the world market is insufficient to have much effect on prices except in occasional circumstances. The argument about the single desk had to be conducted at

cross-purposes. It was not clear whether comparisons were to underlying prices determined by supply and demand or actual prices received, which include other aspects of the transaction – quality, transport costs and credit terms. Also it was not clear whether a single seller would be better because they would gain some 'monopoly' profits or lower administration/transaction costs than multiple sellers.

Data that would allow the pros and cons of the single desk to be tested empirically are difficult to come by. Except for nearby countries, where a single seller could extract freight premiums compared with multiple sellers, opportunities for arbitrage (the law of one price) suggest that consistent price premiums are unlikely with a single desk (export monopoly).

Another difference with wool was the approach to stabilisation. The buffer fund principle was implemented rather than buffer stocks. Buffer fund stabilisation attempts to stabilise prices by taxing high prices, with refunds at times of low prices. Similar to buffer stocks, the dilemma for buffer fund stabilisation is deciding when prices are high and low.

The price guaranteed to farmers was based on the infamous 'cost of production' formula that had been demolished by a youthful Keith Campbell in 1944. The ingredients of the formula could be (and were) fiddled to produce whatever result was required (Miller and White 1980, p.6). In the early days of wheat stabilisation, prices were kept low to reduce domestic price inflation. Large sums accumulated in the buffer fund, again with macroeconomic intent. Farm investment and output were less than if world prices had been paid to growers.

Moreover, since yield fluctuations are greater in Australia than price fluctuations, even successful price stabilisation would not stabilise farm incomes. Payments to and from the fund instead depended on random experience with yields. Other effects of buffer funds were systematic. Farmers whose production plans were flexible left the industry when taxes were applied and returned when refunds were made. Long-term producers were disadvantaged, similar to the redistribution between wool specialists and mixed farmers in the wool industry with the RPS.

Whitwell and Sydenham (1991, p.286) regarded the pooling principle as the centrepiece of traditional marketing arrangements. Likewise, the retreat from pooling following various enquiries has determined the current structure of wheat marketing. Pooling had intuitive appeal to grain growers, and still does, because it conjures up notions of fairness. Unfortunately, fairness is a tricky and slippery ideal that brings forth unintended and 'unfair' consequences.

Pooling of receipts and charges in the early postwar years was incomplete. Compromises were made. A deal was struck to reflect proximity of Western Australia to important markets. In addition, pooling of some costs was originally national but this was changed to a state basis once it was recognised that national pooling favoured growers in states with increasing output (IAC 1978). Moreover, though handling and storage costs were

pooled within states, charges for rail transport were always distance-related. While the intention of pooling was to share risks (Sieper 1982), other effects were inevitable. Farmers received a uniform service at an average price that may or may not have matched their requirements. This hurt smaller growers who wanted to contract sales directly with other farmer customers to expand their farm businesses. Initially, growers were allowed to trade under a permit system.

The path to deregulation of the wheat industry with removal of the AWB export monopoly and the demise of the AWB was tortuous. Natural monopoly is common in grain assembly, storage and transport. Monopoly has various effects including extravagant investments and regulatory slackness. This statement applies to public and private monopoly (Quiggin 1988). By the 1980s, costs of grain storage, handling and transport were escalating rapidly – 50 per cent between 1979–80 and 1984–85 (Piggott 1990, p.299). The Commonwealth and state governments reacted by establishing a Royal Commission into Grain Storage, Handling and Transport. The Royal Commission was the high water mark of agricultural marketing research in Australia. The output of conceptual and empirical research papers was voluminous and high quality.

The debate about pooling payments in the wheat industry has also been high quality. It included not just the private interest theories of Sieper (1982) but also the common property view of Quiggin *et al.* (1994) who argued that growers in a pool see themselves as arranging capital investments in facilities characterised by economies of scale and scope. Cashin (1986, p.14) reflected on the time dimension of public interest/private interest theories of regulation in the Australian wheat industry as follows:

> These factors suggest a 'life-cycle' theory of administrative regulation, with the early years of an agency's life conforming with the public-interest view, the agency's performance declining thereafter as the legislature's attention, regulator enthusiasm and public concern all wane.

The Royal Commission recommended removal of 'sole receiver' status for state bulk handling authorities and restrictions on the manner in which grain is transported (Piggott 1990, p.299). In negotiations following the Royal Commission, differences between state governments and within the wheat industry per se were crucial in achieving a negotiated outcome.

The demise of the orderly marketing tradition of the Australian wheat industry came about in surprising fashion, namely the involvement of AWB Ltd in irregular payments to the previous Saddam Hussein regime in Iraq. This triggered a Royal Commission (Overington 2007). Legal repercussions are ongoing. More than bad behaviour, events surrounding deregulation of the wheat industry raise fundamental questions about sequencing and microeconomic reform, including why two classes of shares were created

when the AWB was privatised, which maintained the political influence of the organised wheat industry, or why many agricultural commodity-trading organisations are structured as private companies.

3.3 Dairying

The dairy industry was the most highly regulated and assisted major industry in Australia for 75 years until deregulation in 2000. Agricultural economists were actively involved in associated controversies, analytical and political. Corden (1968, p.49) described work by Parish (1962) as an 'elegant theoretical analysis'. The acerbic pamphlet 'Milking the Australian Economy' (Lewis 1972) offended the dairy industry, and amused generations of students and colleagues.

The fresh or fluid milk markets were previously controlled by state authorities, whereas processed or manufacturing markets were regulated by the Australian Dairy Corporation (ADC) and its predecessors. As Edwards (2003, p. 75) pointed out:

> . . .Australia had six separate dairy industries, one in each state, rather than a national industry. . .This fragmentation of the national market was precisely what the founding fathers, who saw federation removing barriers to trade between the colonies and establishing a common Australian market, sought a century ago to end.

In the fluid market, although mechanisms varied by state and over time, state SMAs licensed farmers to produce milk, regulated quality, took over ownership of milk at the farm gate, set farm prices for milk, regulated wholesale and retail margins, regulated milk transport and restricted interstate trade in milk. SMAs once regulated home deliveries of milk! The farm price for market milk was set above the farm price for manufacturing milk, so SMAs had to restrict quantities in the more lucrative market for price discrimination to be sustainable. In some states, this was done by quotas on fluid milk, in others by pooling.

Milk not used in the fluid market produces a range of products such as butter, cheese, skim and full-cream powder, and casein. Until 2000, the ADC regulated dairy product exports through licensing, administered the statutory marketing arrangements and promoted dairy products domestically and internationally.

From 1977, a statutory levy–disbursement scheme replaced the voluntary price equalisation scheme. Processors paid a levy at the point of manufacture, export returns were pooled for each product, and the levy was added to the pooled returns so that each processor received an equalised return from all sales. In addition, the federal government operated an underwriting scheme for gross equalised pool returns. This was designed to protect dairy producers

from large, unexpected falls in market returns. Imports were restricted as in earlier years, as was once the production of margarine.

Changes were made in 1986 (the Kerin Plan) whereby a levy was paid by dairy farmers on milk production, which was redistributed as an export subsidy on manufactured products. The plan provided for progressive reduction in support towards import parity, and eventual phasing out.

The extent of the transfers to dairy producers and the social costs of the inefficient use of national resources resulting from these schemes were documented by Sieper (1982), Freebairn (1992) and reports by the Productivity Commission and its predecessors.

National policy settings for manufactured dairy products were removed in 2000, as were monopoly arrangements for fluid milk operated by the state SMAs. However, a contentious 'structural adjustment' package was brought into effect, with a price tag of over $1.5 billion. This package, funded by a levy of 11 cents/litre on all retail milk sales for 8 years, was said to facilitate adjustment and improve industry performance. Edwards (2003) provides a detailed analysis of the package and its impacts.

3.4 Meat

In contrast with the other case studies, livestock and meat marketing in Australia has been largely unregulated. There has been some regulation particularly of the meat inspection, processing, retailing and export allocation functions, but apart from a couple of examples, no direct intervention in price support for livestock or meat as has characterised (and harmed) wool, grains and dairying.

One of the most vexing issues facing the Australian beef industry has been the long-term absence of a uniform, commercially accepted grading scheme. In spite of convincing arguments for grading put forward by Freebairn (1967, 1973) and others, and well-articulated analyses of the costs incurred without such a scheme (BAE 1981), the complexity of production systems and fragmentation of the industry prevented a consensus view until this century. And in a perfect example of the benefits of multidisciplinary thinking and planning flowing from the Cooperative Research Centre funding model, it was the meat scientists who decided that the best practice Meat Standards Australia (MSA) scheme had to be based on consumer preferences. Recent evaluations (Griffith and Thompson 2012) have concluded that the MSA scheme meets most if not all of the criteria for an efficient grading scheme proposed by Freebairn almost 50 years ago.

Another meat marketing issue was the size and behaviour of marketing margins for meat products, and the concern by livestock producers that their share of the consumer dollar was declining. Fisher (1981) contributed to the international literature on this issue.

The practices of price levelling, and its twin, price averaging, were scrutinised. These practices by butchers and supermarkets smooth short-term fluctuations in prices across market levels and across substitute goods, and inhibit consumer response to price movements. Parish developed a theoretical framework for the study of price levelling and averaging (Parish 1967). Empirical estimates were made by Griffith and Piggott (1994) and Naughtin and Quilkey (1979). The empirical evidence showed that price levelling was widespread but short-lived. In the longer term, prices at different market levels moved together.

With no institutional support for prices, and little prospect of influencing prices in the world market, Australian livestock producers turned to generic promotion to generate increased prices. The levies that livestock producers paid for R&D investments and management of market access also included a component for generic promotion. The government matched industry R&D funds, but promotion was funded solely by industry. It is noteworthy that the promotion levy increased at a faster rate than the levy for R&D, in spite of the lack of evidence that promotion resulted in higher profits.

Parish (1963) was again a major contributor, defining criteria for effective promotion of farm products, followed by Quilkey (1986) and Piggott (1992). Piggott specified the promotion investment decision in the context of an equilibrium displacement model, allowing joint consideration of both R&D and promotion investments and estimating both expected aggregate returns from these investments as well as their distribution across the various value chain sectors.

Australia is a major exporter of beef and sheep meat. World markets for these products have been influenced by a range of interventions by importing countries over the last 50 years. These interventions have included voluntary export restraints, import tariffs and quotas, and statutory import agencies. One role of Meat and Livestock Australia (MLA) and its predecessor agencies has been to manage the export trade so that the industry complies with the requirements of import restrictions. This required a system of licences and entitlements for exporters, which allowed the agency to operate as a price discriminating monopolist without supply control. Various types of export diversification schemes were analysed by Freebairn and Gruen (1977). The operations of MLA are financed by levies on slaughtering and exports.

A significant development in the last 40 years has been growth of the live animal trade – sheep to the Middle East, and cattle to South-East Asia. The opening up of this trade has provided an alternative market, particularly for northern cattle producers. However, the trade has been fraught with controversy, with public concern growing (or becoming more overt) about the welfare of sheep and cattle in transit and in processing plants in recipient countries.

4 Current issues

While our focus has been on the historical perspective and the four case studies, there are two recent issues of emerging importance.

4.1 Value chain analyses

In recent years Australian agricultural and food marketing economists have begun recasting their research and teaching in a value chain framework. New undergraduate and/or postgraduate courses have been designed and introduced at several universities, and the proponents have made the case for a similar refocusing of research (Baker *et al*. 2016). This has been prompted by the evolving restructuring of domestic and international food markets and the growing share of large multinational food companies, and by the increasing involvement of Australian agricultural and food marketing economists in projects in developing countries, where a value chain perspective is taken as given.

4.2 Supermarkets and competition on the Australian domestic market

One of the issues that confronts agricultural and food marketing economists in Australia is the nature of competition in the domestic market, and in particular the role of the two dominant supermarket companies as chain leaders. This concern has led to a number of enquiries by the Australian Competition and Consumer Commission, the Productivity Commission and its predecessors and Parliamentary Committees. Consumers have been shown to benefit from current arrangements, the concern being more with impacts on suppliers and on smaller fringe competitors (Umberger and Griffith 2011). At present the balance seems to lie more with the benefits from improved operational efficiency brought about by increasing concentration of ownership and less with the possible costs of compromised pricing efficiency.

5 Concluding comment

Australian experience is like that of other developed countries with mixed economies. Designing and implementing price and marketing policies that simultaneously satisfy political objectives and commercial realities is no mean feat. Nevertheless, despite all the difficulties Australian agricultural industries have managed to connect successfully with international markets. This includes both export-oriented industries and import-competing industries with two-way trade. This outcome reflects an ongoing dilemma for governments dealing with agricultural marketing issues. To the extent that farm-gate prices are determined on world markets, the age-old suspicion of the behaviour of middlemen by farmers is more misplaced. However, many would argue that without the wealth of economic analysis and inputs to

policymaking reviewed here, the gains from trade and growth of Australian agriculture would be much less.

References

Anderson, K. (ed) (1992). *New Silk Roads: East Asia and World Textile Markets*. Cambridge University Press, Cambridge.

Baker, D., Hamza, K., Parker, W., Scrimgeour, F. and Griffith, G. (2016). Public and private interests in primary industry chains and networks: case studies and a new agenda, *Systems Research and Behavioural Science* DOI: 10.1002/sres.2400.

Brigden, J.B., Copland, D.B., Dyason, E.C., Giblin, L.F. and Wickens, C.H. (1929). *The Australian Tariff: An Economic Inquiry*. Melbourne University Press, Parkville.

Bureau of Agricultural Economics (1981). *Livestock and Meat Marketing in Australia: an economic evaluation*, Industry Monograph No. 1, AGPS, Canberra.

Campbell, K.O. (1944). Production cost studies as a field of research in agricultural economics, *Journal of the Australian Institute of Agricultural Science* 10(1), 31–37.

Campbell, K.O. (1964). National commodity stablilization schemes: some implications based on the Australian experience, in Dixey, R.N. (ed), *International Explorations of Agricultural Economics*. Iowa State University Press, Ames, pp. 55–63.

Campbell, K.O. (1973). The state marketing board: relic or prototype, *Australian Journal of Agricultural Economics* 17(3), 179–188.

Cashin, P. (1986). Deregulation of the Australian Wheat Industry, unpublished M.Agr.Sc. thesis, University of Melbourne, Parkville.

Coper, M. (1978). Constitutional obstacles to organised marketing in Australia, *Review of Marketing and Agricultural Economics* 46(2), 71–102.

Corden, W.M. (1968). *Australian Economic Policy Discussion: A Survey*. Melbourne University Press, Parkville.

Davidson, B.R. (1981). *European Farming in Australia: An Economic History of Australian Farming*. Elsevier, Amsterdam.

Duloy, J.H. and Parish, R.M. (1964). *An Appraisal of a Floor-Price Scheme for Wool*, New England Marketing Studies No. 1, University of New England, Armidale.

Edwards, G.W. (2003). The story of deregulation in the dairy industry, *Australian Journal of Agricultural Economics* 47(1), 75–98.

Fisher, B.S. (1981). The impact of changing marketing margins on farm prices, *American Journal of Agricultural Economics* 63(2), 261–263.

Freebairn, J.W. (1967). Grading as a market innovation, *Review of Marketing and Agricultural Economics* 35(3), 147–162.

Freebairn, J.W. (1973). The value of information provided by a uniform grading system, *Australian Journal of Agricultural Economics* 17(2), 127–139.

Freebairn, J.W. (1992). Dairy industry policy, *Review of Marketing and Agricultural Economics* 60(1), 23–41.

Freebairn, J.W. and Gruen, F.H. (1977). Marketing Australian beef and export diversification schemes, *Australian Journal of Agricultural Economics* 21(1), 26–39.

Giblin, L.F. (1934). *Royal Commission on the Wheat Flour and Bread Industries*, First Report, Appendix, Commonwealth Government Printer, Canberra.

Griffith, G.R. and Piggott, N.E. (1994). Asymmetry in beef, lamb and pork farm-retail price transmission in Australia, *Agricultural Economics* 10, 307–316.

Griffith, G.R. and Thompson, J.M. (2012). The aggregate economic benefits to the Australian beef industry from the adoption of Meat Standards Australia: updated to 2010/11, *Australasian Agribusiness Review,* 20 Paper 2, 11–38.

Industries Assistance Commission (1978). *Wheat Stabilization*, IAC Report no.175, AGPS, Canberra.

Lewis, J.N. (1961). The organised marketing of agricultural economics in Australia, *Australian Journal of Agricultural Economics* 5(1), 1–8.
Lewis, J.N. (1972). Milking the Australian Economy, in Throsby, C.D. (eds), *Agricultural Policy: Selected Readings*, Penguin Books Australia, Docklands, pp. Chapter 6.
Lloyd, P. and MacLaren, D. (2015a). Relative assistance to Australian agriculture and manufacturing since federation, *Australian Journal of Agricultural and Resource Economics* 59(2), 159–170.
Lloyd, P. and MacLaren, D. (2015b). Assistance to Australian Agriculture from Federation to World War II, *Australian Journal of Agricultural and Resource Economics* 59(3), 317–333.
Massy, C. (2011). *Breaking the Sheep's Back: The Shocking True Story of the Decline and Fall of the Australian Wool Industry*. University of Queensland Press, St Lucia.
Mauldon, R.G. (1975). Agricultural policy advice and the public inquiry process, *Australian Journal of Agricultural Economics* 19(2), 16–34.
Mauldon, R.G. (1990). Price policy, Chapter 19 in Williams, D.B. (ed.), *Agriculture in the Australian Economy*, 3rd edn. Sydney University Press, Camperdown, pp. 310–328.
Miller, G.L. (1984). 'Economic Organization of Australian Agriculture', paper presented to the National Agricultural Outlook Conference, Canberra.
Miller, G.L. and White, G. (1980). 'The Seventh Wheat Industry Stabilisation Scheme – Evolution and Effects', Paper Contributed to the 24th Annual Conference of the Australian Agricultural Economics Society, Adelaide.
Naughtin, J.C. and Quilkey, J.J. (1979). Pricing Efficiency in the Retail Meat Market, *Australian Journal of Agricultural Economics* 23(1), 48–61.
Parish, R.M. (1962). The costs of protecting the dairy industry, *Economic Record* 38(92), 167–192.
Parish, R.M. (1963). Possibilities for promoting farm products, *Australian Journal of Agricultural Economics* 7(1), 27–34.
Parish, R.M. (1967). Price levelling and averaging, *The Farm Economist* 9(5), 187–198.
Phillips, J. (1968). A revised approach to marketing, *Review of Marketing and Agricultural Economics* 34(2), 28–36.
Piggott, R.R. (1990). Agricultural marketing, Chapter 18 in Williams, D.B. (ed.), *Agriculture in the Australian Economy*, 3rd edn. Sydney University Press, Camperdown, pp. 287–309.
Piggott, R.R. (1992). Some old truths revisited, *Australian Journal of Agricultural Economics* 36(2), 117–140.
Quiggin, J. (1988). Public or private monopoly, *Review of Marketing and Agricultural Economics* 56(3), 253–254.
Quiggin, J., Fisher, B. and Peterson, D. (1994). Cost pooling in Australian grain handling: a common property analysis, *American Journal of Agricultural Economics* 76(2), 262–269.
Quilkey, J.J. (1986). Promotion of primary products – a view from the Cloister, *Australian Journal of Agricultural Economics* 30(1), 38–52.
Sieper, E. (1982). *Rationalising Rustic Regulation, CIS Research Studies in Government Regulation 2*. Centre for Independent Studies, Sydney.
Sturgess, I.M. (1968). The wool board's second report on marketing: a review article, *Australian Journal of Agricultural Economics* 12(3), 69–80.
Throsby, C.D. (1972). *Agricultural Policy: Selected Readings*. Penguin Books Australia, Docklands.
Umberger, W. and Griffith, G.R. (2011). Beef cattle producer strategies to accommodate more concentrated and more organised value chains and more discriminating consumers, *Farm Policy Journal* 8(3), 27–37.
Whitwell, G. and Sydenham, D. (1991). *A Shared Harvest*. Macmillan, Sydney.
Williams, D.B. (ed) (1966, 1982, 1990). *Agriculture in the Australian Economy*. Sydney University Press, Camperdown.
Williams, J.C. and Wright, B.D. (1991). *Storage and Commodity Markets*. Cambridge University Press, Cambridge.