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Reviews

Agribusiness: Political Economy and Market Structure - Toward a Structure for Agribusiness

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This issue of the *Review* contains three papers from the February conference on agribusiness structures and market behaviour. This introduction serves to introduce the papers and sets out a review of recent literature contributions in the marketing and agribusiness area. The review identifies the characteristic market structure of agribusiness as a transformation of farm-based commodities to many differentiated and finished products in consumer markets. This market channel or chain exhibits many of the features of competitive markets due to the many firms involved but also has features which cut across competitive theory such as monopoly buying, lack of full information, and backward integration. In the wider view, agricultural industries interact with other institutions and polities, and must take account of these forces in management and planning. The papers, which follow, analyse the government agribusiness interface from a public choice point of view, marketing structure and information from a market failure point of view, and marketing structure and alliances from a product development point of view.

1. Introduction

This issue of the *Review* contains three essays on the structure, conduct and performance of the various industries associated with the whole agricultural sector - collectively known as agribusiness. The essays are linked by their common interest in the performance of the marketing function of agribusiness as it affects farmers and the necessity to examine and understand where intervention is desirable in the normal functioning of private enterprise within the agribusiness sector. This introductory note is concerned with establishing a common structure or framework of analysis for agribusiness that *includes* the private operation of markets *and* the outside environment in which businesses operate.

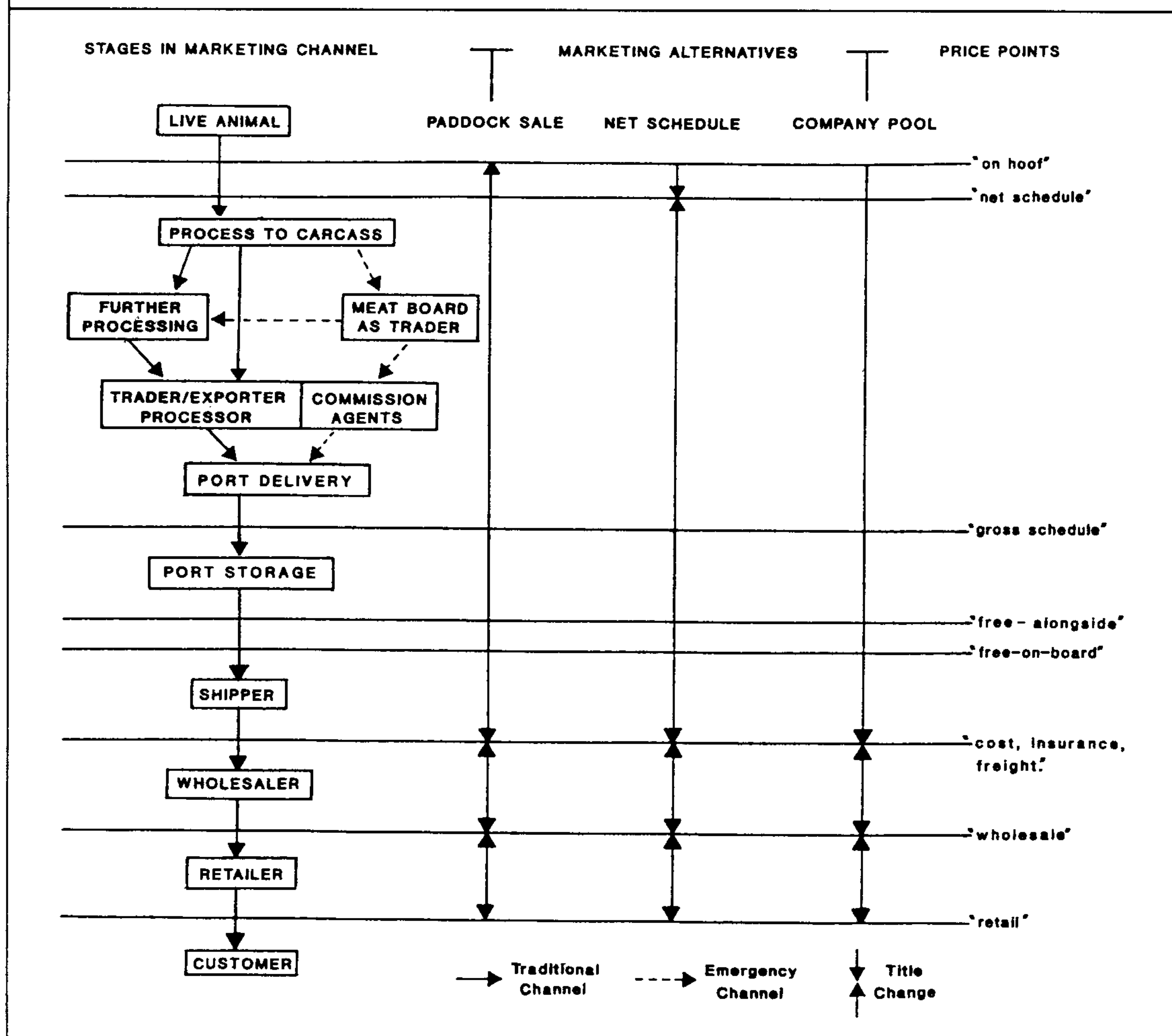
Among other industries, agribusiness is characterised by a recognisable *chain* or *sequence* of product transformation from agricultural producer to final consumer. A considerable literature exists describing the operation and performance of *market channels* or market levels (Wright). Usually, such analyses describe the series of private relationships which exist between firms in a linked product/marketing chain, how conflict between members is resolved, how ownership and pricing relationships may vary in different parts of the chain and how information is passed up and down the chain. On the other hand, agribusiness members find themselves in a wider environment of regulation and other uncontrollable market forces and must constantly react to this wider environment in their normal production and marketing decision making.

The literature in this area emphasises the political economy aspects of production and marketing as a guide to understanding how firms operate in both the private *and* the external or public environment. Some of the literature makes a distinction between the primary actors in a particular industry (producers, processors etc.) and the actors who impinge on the primary environment (government agencies) and contrast both with the external environment which affects all industry (the macro environment). In what follows, we set out a framework of analysis that encompasses these characteristics of agribusiness in a structure, conduct and performance approach.

2. The Market Channel Approach

The *market channel* approach describes the various steps through which a product must pass to reach the final consumer (Figure 1). In terms of Australian and New Zealand exports the various stages include processing, transportation, shipping, wholesaling and final retailing but need not necessarily do so. While the steps are based on transformation or shipping stages, ownership of the goods may be common over several stages of the channel, and may, in the case of vertical integration and some marketing boards, extend to final wholesale sales from quite early in the transformation channel. Alternatively, the stages of transformation

Figure 1: Characteristic Market Channel for an Export Meat Product - New Zealand



may also coincide with pricing exchanges (e.g. at f.o.b.) where contractual arrangements or other circumstances cause changes in ownership (Johnson).

In competitive theory, a market channel should provide for effective communication of economic signals between its members. The stages of the channel should be contestable. Firms should be free to move to optimum sizes, best locations and minimum cost positions. Those who take the risks in marketing and selling should appropriate the rewards (Maughan and Schroder). The requirements of consumers should be paramount and guide the various stages of production.

Food and fibre market channels are characterised by the commodity nature of farm outputs (Barry *et al.*). Each *producer's* output may be no different from their neighbours and relatively coarse grades and standards may define quality differentials. Product differentiation by manufacturers and processors occurs further down the market channel. Open market transactions, in which price changes moderate fluctuations in supply and demand, predominate at farm gate. In the United States, input suppliers and producers are increasingly entering into long-run relationships, often involving formal contracts in the areas of knowledge-based services and provision of credit. At the farm gate level, value-adding opportunities have increasingly been sought as well as contracting forward deliveries.

These pressures put a strain on open market relationships and may lead to vertical integration of firms, formal alliances and contracting between key stages in the market system. Contracting offers flexibility in control and risk sharing but is difficult to enforce (Barry *et al.*). Lenders of credit like contracting because it offers more surety in the inherently variable production processes of agriculture.

Alliances are organisational arrangements and operating policies through which separate organisations share administrative authority, form social links, and accept joint ownership (Badarocco). They may take the form of formal alliances, strategic alliances, partnerships and coalitions. These arrangements lie between full ownership ventures, such as mergers, acquisitions, and vertical integration, and spot transactions (Barry *et al.*).

Vertical integration may be used to secure or countervail market power. A firm may integrate into another level of the channel to discourage other firms from entering or controlling that level, or to ensure that its products are used in the subsequent stage. Such a firm might be able to allocate product across markets so as to maximise profits jointly from successive stages of the channel. A firm may integrate backwards to allow it to bypass higher prices charged by a monopolistic supplier (Rae). There is some criticism that firms in commodity market channels operate as a buying cartel especially in setting prices to farmers as in the case of livestock. Marketing Boards have, in the past, taken ownership of product at an early point in the transformation channel.

The relationships between firms in the channel will change with contract relationships between buyers and sellers. In terms of agency theory, contractual obligations between principals (lenders, input suppliers, processors), and agents (farmers), are difficult to fulfil and difficult to write (Barry *et al.*). Self-interest seeking by the agent, limited cognitive powers, information asymmetries and uncertainties widely prevail. As Barry says, the objectives and activities of the principal and agent will not completely coincide, leading to greatly increased agency costs (enforcement, information requirements etc). Expanding firms will need to consider whether the sum of management and transaction costs incurred through in-house production is more or less than the sum of management and transaction costs incurred through purchase across markets.

In the United States, changes have taken place in the delivery of credit. Agribusiness firms willing to provide credit to agricultural producers have increased substantially. Lenders offer greater incentives to producers to borrow but also seek *extensive financial contracts* to more closely align incentives, monitor and control borrower performance and deal with unforseen contingencies. In terms of agency theory, the borrower (the agent) may be riskier than believed when a loan contract is established (an adverse selection problem), and may take on greater risks during the term of the loan contract than anticipated by the lender when the contract was established (a moral hazard problem). In such cases, the risk tends to fall on the principal (the lender), especially with high leverage on the part of the agent and the principal's lack of knowledge of the agent (Barry *et al.*).

The literature from the US emphasises that the undifferentiated products and open markets characterising many agricultural commodities are evolving towards differentiated and contractual or integrated controlled-supply markets as in manufacturing (Sporleder). Development of products for specialised and relatively low-volume end-use food markets displaces spot market transactions for mass marketing of undifferentiated commodities. In addition, the emphasis on particular product characteristics (leanness, healthiness, consistency in taste and performance etc.) by end consumers and the increasing imperative that food firms deliver such characteristics in a dependable and value-added fashion argues for increased vertical *coordination* if not integration (Beldon). The slowness of open-market mechanisms in communicating appropriate signals to producers and the lack of consistency in producer response has only accelerated the movement toward greater integration. United States authors still tend to see the other actors in the channel as somehow 'serving' the needs of producers (Barry *et al.*, Sporleder, and Beldon).

Finally, there is a new challenge to the orthodoxy of the neo-classical model (Hunt). Instead of viewing the behaviour of firms in the market channel as profit maximisers in a frictionless world, the resource-advantage theory of competition builds on heterogeneity among firms within industries, information as a cost, a resource base including financial, physical, legal, human and organisational resources, characterised by immobility, and a wider definition of management to include recognising, understanding, creating, selecting, implementing and modifying strategies within the total environment of the business. Instead of profit

maximisation in a static framework, the model suggests a firm's objective should be to gain superior financial performance in an ever-changing situation.

In the case of heterogeneous demand within industries, the model accommodates consumer tastes and preferences being different for different products and *within* products. 'Heterogeneous intra-industry demand implies that there are very few industry markets - there are only fragments or segments of demand within industries' (Hunt). Equally, resources are both significantly heterogeneous across firms and imperfectly mobile. Resource heterogeneity means that each and every firm has an assortment of resources that is at least in some ways unique. This would include such tangible and intangible entities available to the firm that enable it to produce efficiently and/or effectively a market offering that has value for some market segment. In this view, a strategic alliance between businesses to gain access to a new market would be a resource opportunity and *not* a conspiracy to fix prices.

This model has a number of features that are important in the analysis of market channels. It stresses that competition is a process and not a state; it stresses that products, firms and markets are not all that homogeneous; it stresses management is an intellectual activity encompassing understanding and creativity as well as implementing and modifying strategies; it brings market segmentation closer to the producer; it explains why firms prosper and why firms fail; and it brings Chamberlain product differentiation back into economic orthodoxy among other things. Further elaboration of its properties would be welcome in agribusiness circles.

3. The Political Economy Approach to Agribusiness

The political economy approach to agribusiness involves the study of all the agents, actors and institutions that impact on a particular industry. The *political economy* of the channel describes the relationships between firms in the channel (the primary network) and regulatory agents and interest groups in the particular distribution system (the secondary network). Transactions between networks involve information, power and authority rather than goods and services, and market outcomes depend upon structural linkages among actors, relative power and bargaining performance, and prevailing conflict or cooperative attitudes (Petrey).

Outside the channel, these networks interact with the external economy which can in turn be divided into commercial and a political component (Hutt *et al.*). The external political economy consists of socio-political, economic and technological forces that influence the primary and secondary networks. If the secondary network is confined to all the members of the distribution channel, then it is useful to view the external political economy as the general macro environment in which *all* commerce takes place (Stern and Reve, and Achrol *et al.*).

Such a framework has been used to analyse the regulation of meat hygiene arrangements in New Zealand, where there is a history of *imposed* process conditions necessitated by changes in overseas hygiene demands and imposed by an agency of the state. Petrey identified a 'lead agency' (the Ministry of Agriculture) in the secondary network, a'recalcitrant industry' (the processing companies) in the primary network, a 'rule making agency' (the Government) in the external environment, and an 'external polity' (the EEC representing the importing countries of the Union) also in the external environment. Cooperative relationships were explored at first to bring about desired change but when these appeared to be unable to meet externally imposed deadlines an authoritative solution was sought. The officials in the Ministry sought Government sanctions to impose the new sanitary regulations as well as seeking to ameliorate the impacts of the EEC regulations by bargaining strategies (Petrey).

Cooperative exchanges can also occur within the parallel political network (Webster). Cooperation reflects the ability of interorganisation network members to work together in a joint fashion towards their respective goals (Stern and Reve). Cooperation and coordination tend to be high when interorganisation communications are perceived to be effective in reducing uncertainty and there is mutual benefit by combining together (Guiltman *et al.*). In the following paper, Schroder and Mavondo discuss this phenomenon in a bargaining and public choice framework. The internal political economy of a sector consists of a loosely aligned set of decision making units often unable or unwilling to plan networking activity (e.g. the NZ meat processing industry), and which may or may not seek the benefits of mutual collaboration (Hutt *et al.*).

4. Contributions in this Issue of the *Review*

In the following papers, Schroder and Mavondo are concerned with the interface between the industry group as a whole and the government as representing the one controlling force over private actions which has to be respected. Their analysis can be generalised to any industry group or a group of firms which has a common interest such as a distributional channel represents. While this relationship is commonly thought of as antagonistic in the public choice literature, these authors report on circumstances where cooperative attitudes might be appropriate.

Wright is concerned with the performance of the marketing channel and assumes some common interests among members. He asks where public intervention in the system might be warranted on grounds of the public interest and isolates particularly impediments to the passage of information up and down the channel as an example of market failure. Consumers do not get the cuts of meat they most value because price signals are confused by the number of actors the signals have to pass through and by price averaging and other institutional arrangements. Wright says there is a case for legislation which enables the majority (in an interest group) to collect levies for funding research, product innovation, and product promotion. This would increase the market performance of the channel though at the cost of the loss of some competitive structures.

Farrell and Tozer analyse the lamb marketing system in New South Wales. They describe existing marketing arrangements for NSW lamb with special reference to the specific *market segments* in which lamb can be sold. They also suggest that full information is not reaching producers because of lack of product descriptions and price averaging. They suggest the use of strategic alliances and cooperative marketing so as to encourage common standards and improve the returns to producers.

Both these papers are concerned with the operation of the marketing channel and its efficiency. Both suggest some intervention in the internal economy of the channel albeit suggesting that members of the channel themselves could cooperate better to produce higher returns for all members. Both papers suggest self-regulation though the external environment would need to be involved in the necessary legislation if needed. Otherwise, these authors take the external environment for granted.

Schroder and Mavondo examine the external/internal environment interface. In public choice terms, this interface is the setting of the debate between the public interest and the private interest view of rent seeking and policy influence. The authors do not distinguish between the policy makers (the politicians) and the bureaucrats who propose, implement (and sometimes intervene in) economic policy. They examine the relationships between individual firms (or groups of firms) and government as a whole. They do not see this relationship as one of necessary conflict; rather a partnership relationship may be established when both sides see the situation as a positive-sum game, and the government is willing to correct for natural market failure or generate market imperfections. Trade practices law discourages collective activity in the business arena, but governments seem to welcome working with well-organised interest groups.

The political economy approach to agribusiness illuminates a wider view of agricultural industry than has been put forward previously. Examples of group behaviour in the distribution channel are obvious to the observer as is the overwhelming influence of government in the conduct of commerce. The relationships between interest groups and government (and its agents) are an important aspect of economic behaviour. Future overviews of these relationships in agribusiness could well incorporate the features of the resource-advantage theory of competition with its emphasis on continuity, heterogeneity and complex management functions.

The present authors have previously emphasised the holistic view of agribusiness (Maughan and Schroder, Johnson). Interdependency is characteristic of market channels. Yet U.S. writers and many institutions (e.g. Departments of Agriculture) still regard the farm production level as paramount and seem unable to visualise or provide for the entity as a whole.

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