PRICING PROBLEMS IN THE FOOD INDUSTRY
(With Emphasis on Thin Markets)

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PRICING PROBLEMS IN THE FOOD INDUSTRY: RESEARCH PERSPECTIVES

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Despite semantic differences on the definition of a "thin" market there appears to be a common thread of concern in all papers about performance of food and agricultural markets, and the pricing and exchange process in particular. The causes, consequences and remedies or even existence of perceived deficiencies of thin markets are not entirely clear, but that is precisely why this symposium has served a useful purpose—to develop dialogue, provide insights and hypotheses and raise our consciousness concerning pricing problems on the cutting edge of received economic theory and conventional research.

Let me first propose some rather broad research needs with general reference to pricing problems in the food industry, then more specific research needs with respect to pricing in "thin" markets.

1. *How can we achieve a better understanding of the role of markets and pricing in the organization and functioning of the food and fiber system?*

   The great need here is for economists to develop a unifying approach or method of analysis. For example, it might be instructive to look at a market in juxtaposition to alternative ways of organizing economic activity—namely by centrally-administered direction. Thus the short-comings of central direction stimulate more use of markets, whereas the short-comings of markets stimulate the use of more central direction. Opportunities for more central direction occur at both the micro level (by vertical and horizontal integration of the firm's productive activities) and at the macro level (by more government-directed allocations of resources and other forms of intervention). Similarly, opportunities for more use of markets may exist, e.g. subcontracting and specialization (custom harvesting, meat retailing specialists, etc.). There has been some useful theoretical work along these lines — as to what is the most efficient scheme in different settings; whether stable equilibrium is possible; and so on. The challenge is to cast these ideas into operational terms and test them against actual market data.
2. *How can one measure the benefits and costs of better institutional arrangements for the conduct of exchange, and better reporting of prices, quantities and qualities in different commodity settings?*

   Unless some useful evaluation measures can be developed, economists will remain relatively helpless in giving reliable advice on where the social pay-off would be greatest for additional dollars spent on particular programs for regulation, market information, and other facilitating services, in the conduct of exchange.

   Measurement of benefits should take into account those arising from (a) improved decisions by individual firms, (b) reduction in uncertainty leading to improved supply response, and (c) increased economic opportunity for smaller firms in overly concentrated industries. The great challenge is to find ways to operationalize the cost-benefit concepts in this seemingly intractable area.
3. *What do Government programs require in terms of market price information? How can these best be supplied?*

Reference here is to a wide variety of programs. These fall under one or more of the following titles:

a. Commodity price supports; buffer stock schemes.
b. Setting of subsidies; tariffs (e.g. sugar).
c. market regulation (e.g. CFTC needs).
d. Indexation (e.g. uses of BLS price indexes, parity indexes).
e. Income distribution (e.g. computing farm income).

A fundamental need is to think through the entire bundle of programs to determine where there are common requirements for price information and where there are different requirements that might be met more economically by working a common set of price gathering machinery. This is a big task which probably cannot proceed any faster than insights can be developed into the nature and requirements of different programs.

4. *What effects do Governmental programs have on market pricing processes?*

At some point, Government programs alter the prices established in the market, either by conscious design or as a secondary effect of another intention. In both cases one needs to be able to predict the consequences of a programmatic action to enable better Government choices to be made.

For example, where the intent of a program is to raise (or hold down) prices for a commodity, there invariably is unintended alteration of the relationship of prices for different variants of the commodity (in time, place and form). How would changes in such relationships affect organization and performance of the system — e.g. efficiency of different operations, supply responses, size and number of firms, impacts on different geographical areas, etc. Such analysis would provide the basis for more realistic assessments of costs and benefits of alternative programs.

In studying "thin" markets we need to emphasize *measuring performance.* Hayenga, *et al.* in the lead-off paper, identified several possible losses that arise in thin markets: (1) monopoly profits (2) erroneous price signals and consequent decision errors, and (3) increased risk. On the other side, Cave's symposium paper lists motives for vertical integration, and suggests that there are important gains from reducing the numbers of transactions. The losses and gains associated with "thin" markets must be quantified and weighted against each other not only from the overall standpoint of society, but also giving consideration to who benefits and who loses.

Meaningful measurement of the performance of "thin" markets calls for innovative methods of analysis. For example, in the search for pricing aberrations, more attention to the statistical distribution of price movements seems needed. Have the shape and the scale of the distribution of day-to-day or week-to-week price movements changed as markets have become thinner? Is there evidence of changing patterns of serial correlation in such price movements? How do pricing aberrations translate into decision errors? And how do such decision errors affect the well-being of producers and consumers?

The "thin-market" concept in performance terms refers to the inability of markets to absorb trades from one moment to the next without affecting price. It may reflect the existence of monopoly power as well as the existence of various other impediments to the conduct of exchange that tend to isolate traders from one another and create a fragmented rather than unified pricing system. The nature of trade impediments and the feasible means of dealing with them need to be addressed. These would include the possibilities and prospect for improved informational services (prices, quantities, grades, credit ratings, etc.) ; altered rules of trading; and altered regulation of trading. Improvements might come through group action at the industry level, at the local, state or federal government level, or in some fruitful combination of group action. There is a need to assess unequivocally the past performance and the future possibilities for contributions by the different groups. This area of investigation probably lends itself well to inter-disciplinary efforts by research workers.

Should careful weighing of the evidence show that the losses from thin markets substantially exceed the benefits, we must then identify and evaluate corrective policy options. What policy instruments are available to reduce the losses? Schrader and Williams in their papers have given us some suggestions — subsidized exchange and the prohibition of formula pricing, respectively. Other possibilities which they view less favorably are increased public price reporting, even mandatory reporting, and electronic trading. Objective assessment of these alternatives and others is a challenging task.

This indeed is a complex and subtle area for investigation. It may be that no improvements in the machinery of trade would induce more trading — a case for experiment over a length of time. Or it may be that existing industry organization may thwart efforts to improve the trade machinery. In either case, the question of restructuring becomes a legitimate concern.

The possibilities of restructuring include firm dissolution; firm withdrawal from designated activities; government promotion of new private entrants in a business (e.g. co-ops) ; and government entry into business itself (e.g. TVA) . Thus, for example, proposed legislation to limit packer feeding of livestock may be viewed as an industry restructuring device.

A major question is whether our theory and criteria are adequate to judge under what regime of industry organization we would be better off.