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

A compendium of papers presented at the Symposium on Pricing Problems in the Food Industry (with Emphasis on Thin Markets), Washington, D.C., March 2-3, 1978

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"THIN MARKETS" IN THE LIVESTOCK AND MEAT INDUSTRY

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Much has been written in the past couple years about pricing practices in the fresh meat business [1, 2, 3]. Various concerns expressed are: (1) the so-called formula pricing has grown to the point where the overwhelming proportion of carlot trading is now on this basis; (2) largely as a result, negotiated pricing has declined sharply, and is the prevailing practice in only a fraction of all such trading; (3) published price reports (of the greatly reduced number of negotiated trades) have unavoidably suffered material quality erosion; (4) in turn, since formula prices are based directly on these published price reports of uncertain quality, it follows that most of the industry's carlot volume may be inaccurately priced, and thus detrimental to the public welfare; (5) and lastly, remedial action seems called for, such as the prohibition of formula pricing, along with perhaps the establishment of mandatory price reporting.

The term "thin market" appeared hardly at all in the literature reviewed above, but its use would not have been inappropriate. In the case of carcass beef, for instance, at least one price reporting service has indicated much difficulty in regularly finding any significant number of negotiated trades to report — trades that evolved out of the conventional bargaining of the price finding process. This then, for all practical purposes, might be deemed a thin market; a large volume is produced each week, but only a small fraction of that tonnage is directly involved in equilibrium price determination.

Since the literature occasionally implies that all formula prices should also be reported, one may wonder whether the term (formula type of trade) is always adequately understood. Perhaps the following description may help: In a fairly typical formula agreement, a specified quantity of product is to be delivered for a given number of weeks or months into the future, and the price each week will be an agreed-upon differential from a price reporting service's quotation, as published one day prior to the date on which the product is shipped. This so-called formula price is thus based squarely upon reports of prices that have been negotiated by others in the marketplace. Such formula trades are simply "riding passively on someone else's price"; they make no contribution to the price-finding process in any economic sense, and reporting them would be more misleading than helpful.

Since formula trading in the fresh meat sector has gone on for many years, the practice would doubtless cause little concern today if its growth had not progressed to the point where "thin" markets have developed. In passing, a key contributing factor (to these thin markets) during the past decade has probably been the significant growth of the voluntary and co-op food chains. Given their preference for formula trading, combined with their centralized volume purchasing for previously unaffiliated stores, a further decline in negotiated pricing has been a logical result.

With all but a few corporate food chains also on a formula basis, it may be that no more than 10-15 percent of total fresh meat carlot sales are on a negotiated pricing

basis — and perhaps much less for such products as choice-grade carcass beef.[1] Another approach to estimating this percentage: one private price-reporting service also publishes the volume of meat traded daily on a negotiated basis, and its reports in recent weeks show that some 50 loads of 20 lbs./down pork loins were traded weekly. This would be about four percent of an estimated industry output of some 1,200 loads weekly. Assuming there was another 4-5 percent of loins being traded that were not reported to this price-reporting service, then a total of some ten percent was being traded on a negotiated basis, with 90 percent moving via a formula route.[2]

As already suggested, the point has been reached where only a relatively few major chains need to switch to formula pricing to put the industry completely on this basis. This possibility has fascinating implications. Theoretically, no one is left to go out and find today's supply-demand equilibrium price. Therefore, the price reporting services would have no price changes to report — and would remain locked, in effect, to the last negotiated price they obtained, possibly some days or weeks earlier.

The extreme situation, as pointed out above, differs from prevailing thin market conditions only in degree. A few days ago, for instance, imported cow meat was quoted by one of the price reporting services at 88¢ — at the same time that it could be bought in good volume in the open market for 86¢. For at least a short time-period, those buyers on a formula basis were at a competitive disadvantage, *and motivated to buy on the open market.* Further, their handicap was probably greatest if they were on a 100 percent formula basis, as they would then be dependent on others to bring the published price in line. However, one must not forget that retail and institutional buyers are in extremely competitive markets, and interested in procuring needed product at the lowest possible total cost. They will not continue to buy on a formula basis if *they believe* that it is increasing their total cost to procure product. Formula buyers can maintain the flexibility to "test the water" by buying product on the open market from time to time. In short, the present mixed system does have built-in elements of self-adjustment, which probably prevent any major, extended departures of reported prices from equilibrium levels.

However, the above does not come to grips with lesser existing degrees of pricing inefficiency, to the extent they prevail. Granted, the latter could fade away if formula trading were to recede back to the 40-50 percent level that apparently prevailed a decade ago. This is unlikely to happen, absent any in-depth research on the subject. The industry, and especially the chain-buying side of the market, have recognized that transaction costs can be sharply reduced through formula trading, relative to a full-scale (non-formula) system of day-to-day price-haggling in the best Adam Smith tradition. It is likely that no one today knows the magnitude of savings for the industry as a whole that accompany the current major reliance on formula trading. Through good research, these savings are measurable. Before taking such a far-reaching step as prohibition of formula trading, it seems vital that at least its tangible benefits be first appraised.

Turning briefly to the cost side of formula trading, (as opposed to its benefits), again no concentrated research effort has yet been made to measure the scope and degree of pricing inefficiencies, and the adverse effects they may or may not have on allocative efficiency and consumer welfare. For instance, perhaps the pricing outcome is different — or it may not be at all — when only three or four food chains are engaged actively in negotiated pricing, as compared with 30 or 40 chains. Certain elements of studies from

the field of imperfect competition may be applicable here, as long as the analogies are not stretched too far.[3] Here, the *relative* degree of allocative inefficiency is surely relevant. Concern about allocative inefficiency (where producers may be guided by pricing distortions into uneconomic levels of capital investment and output) may frequently be a tempest in a teapot. This brings to mind the two land-grant universities (in adjoining states in the Corn Belt) that published data on 1976 earnings from commercial hog production for their respective states; one concluded that its producers showed a profit of $10.30 per cwt., whereas the second university arrived at a loss of 50¢ per cwt. for its commercial-sized record keepers. In this case, it would appear that differences in cost accounting concepts and procedures were far more important in misleading producers concerning levels of hog profitability, than any possible differences due to market-price inefficiencies.

Still another possible outcome of thin market studies is that any pricing inefficiencies uncovered may simply be resulting in a redistribution of income among marketing firms, with little or no adverse effects on consumer or producer. Such a finding could well have a bearing upon any new public policy prescriptions.

By way of concluding comment, the literature suggests that very little is really known about the magnitude of the economic trade-offs (cost vs. benefits) that are involved in the practice of formula trading, especially from a public welfare standpoint. On the one hand, there may be certain costs (inefficiencies) associated with this mode of pricing, but no one has evaluated their degree of importance. The other side of the coin suggests sizable benefits from a formula pricing system, in the form of lowered transactions (trading) expenses. One should not arbitrarily throw away these benefits without knowing more about the net trade-off with the possible, but undocumented, costs involved.

While most of the discussion of formula trading to date has been healthy and helpful, it will soon reach the point of diminishing returns unless accompanied by some needed research. On the whole, the industry is still functioning well in carrying out its highly complex assignment of moving a billion pounds of meat each week from producer to consumer, with hundreds of different products distributed to every city and hamlet throughout the country, and in reasonably adequate combinations of quantity and quality. The point here, for this research-oriented group, is that there are no acute, pending crises that serve to justify either a hurried and superficial research job, or — worse yet — the formulation of a new set of policy prescriptions that are based upon guess-work instead of a solid research effort. The industry has great respect for well-conducted research into any and all areas where it can make a contribution, given the provision that its cost is not prohibitively high. That there is a research need seems clear, given the relative vacuum of facts surrounding the all-crucial pricing function. On the surface there is no indication that research costs should be excessive. Perhaps all that really remains is the development of desire to get the research effort launched.

NOTES

[1]Concerning the carcass beef percentage, results of a special USDA Packers and Stockyards survey may be released in the summer of 1978.

[2]Also deserving mention is the fact that food chains, when making forward fresh meat purchases for "features," will often request the option of buying at the prevailing formula or on a "firm price"

basis. This has the effect of reducing the overall percentage of volume that moves on a formula basis.

[3]For instance, Bork [4] has concluded recently, based upon his review of economic theory and analysis, that "The law should be reformed so that it strikes at horizontal mergers . . . which leave *fewer than three* significant rivals in any market" (underscore added).

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