ECONOMIC FORCES INFLUENCING VALUE-ADDED FOOD INDUSTRIES: IMPLICATIONS FOR SOUTHERN AGRICULTURE: DISCUSSION

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The Christy and Conner paper entitled "Economic Implications Influencing Value-Added Food Industries: Implications for Southern Agriculture" now joins other recent papers (Polopolus, Myers) in suggesting that (a) the food marketing sector is *relatively* more important in generating value for the U.S. economy than is the agricultural production sector and (b) support for food marketing research should be expanded.

Christy and Conner identify three categories of forces influencing the food manufacturing sector: economic, technological, and institutional. Economic forces are defined to be domestic demand, market structure and organization, and international factors. Technological change is defined as any change which alters the input mix with the potential to alter comparative regional cost advantages. Finally, institutional forces include national, sectorial, and state public policies and, presumably, the effects of macro economic conditions resulting from such policies.

The second half of the paper is devoted to the identification of regional growth patterns of U.S. food manufacturing industries and to a simple model for projecting regional growth rates in value of shipments by food manufacturers.

The first half of the paper identifies the authors' ideas about various forces shaping food manufacturing industries. My comments will attempt to elaborate on some of the general forces identified in the Christy and Conner paper.

The authors' correctly identify population growth and income growth as two major determinants of long-term growth rates for domestic processed food consumption. Two facts are important: (1) the population growth rate is less than 1 percent per year, and (2) the sales of higher valued processed foods tend to respond more to increases in income than do sales of less processed, lower value products. Food manufacturers and distributors are keenly aware that relying on population growth alone will not generate the kind of sales growth needed to attract shareholder capital. However, different firms and industry segments react with different strategies designed to increase growth rates.

One strategy attempts to capitalize on the relatively high income elasticities for processed, value-added foods. The response is an expansion of products with embodied services (e.g., pre-cooking, microwave ready packages, etc.). Another result is increased segmentation of the market through product proliferation designed to cater to specific consumer groups (i.e., a type of price discrimination). This strategy is also consistent with changes in lifestyles which result in increased demand for convenience (e.g., working wives, two-income-earner households, and single-parent households).

In an effort to evaluate whether or not the food marketing industries have been successful in achieving growth through the addition of value-added activities, I constructed a "base" growth rate of value added for the 1972 through 1987 period in five-year increments. The "base" growth is the percent increase in population plus the product of the percent increase in real, per capita income and an average income elasticity for food of 0.18. The hypothesis is that actual growth in value added (1977 dollars) by sector should be *at*

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least as good as the base. If actual growth exceeds the base, it suggests that industry strategies to achieve higher growth rates through more value-added activities have been successful. Table 1 gives the results.

This analysis suggests that the retailing / wholesaling and processing sub-sectors of the food marketing sector have only been able to achieve average, real value-added growth rates of 0.2 percent to 0.3 percent per year above expectations based on population and income growth over the 1972 to 1987 period. The eating and drinking sub-sector expanded the most relative to the base, an annual average of nearly 1.5 percent over the base. The difference between value-added growth rates for the food retailing and the eating and drinking sub-sectors suggests that if there is a positive effect of the well-publicized trends in food retailing to offer more values-added services (in-store delicatessens, salad bars, etc.), it may be in slowing down the erosion of the food retailing market share for the consumer's food dollar to the food service sub-sector rather than achieving substantial real value-added growth.

TABLE 1. GROWTH IN FOOD MARKETING VALUE ADDED: 1977 DOLLARS

Sector	72-77	77-82	82-87
		Percent	
Base[a]	6.4	5.1	7.6
Processing			
Actual	8.2	4.7	10.9
Difference[b]	1.8	-0.4	3.3
Retailing & Wholesaling			
Actual	7.5	4.4	10.5
Difference	1.1	-0.7	2.9
Eating & Drinking			
Actual	15.7	8.9	16.8
Difference	9.3	3.8	9.2
Total Food Sector			
Actual	9.3	5.4	12.0
Difference	2.9	0.3	4.4

[a] Percent change in income times 0.18 (income elasticity for food) plus the percent change in population.

[b] Actual percent change minus the base percent change.

SOURCE: Derived from Gallo, Appendix Table 38.

For the food sector as a whole, including transportation and other supporting industries, real added value grew an average of 0.5 percent per year faster than the base rate over the 1972-87 period. The growth rate, above that expected from population and income expansion, was a modest 2.9 percent from 1972-77, 0.3 percent for 1977-82, and 4.4 percent for 1982-87. If there is a potential for achieving accelerated industry growth through value-added activities, it would appear that, except for the food service industries, the food marketing sector has not been able to exploit that potential to a significant degree. The analysis suggests that the current emphasis toward more value-added activities within the food marketing sector might have limited effect on providing opportunities for new firms, increased employment, and increased farm income. At the least we need more research into the economic impacts of value-added activities.

The Christy and Conner paper does not offer much discussion of the influence of the growth in the food service industry on the economics of the food marketing sector. The share of total food expenditures spent on food consumed at food service establishments is increasing about one percentage point per year, reaching 45 percent in 1987 (Putnam, p. 107). Despite its importance, we know little about how this industry functions and interfaces with other segments within the U.S. food system. I think there are two important areas of needed inquiry.

The first is the role of food service as a vehicle for small food processors to enter the market. My impression is that it has been easier for small processors to enter the industry via selling to the food service industry and their distributors than through marketing to retail food stores because of less need for brand identification and because selling activity could be concentrated on relatively few buyers. However, recent reports that some distributors are beginning to charge fees to handle new products, similar to "slotting" fees charged by retailers, suggest that entry into the institutional sales market may be becoming more difficult.

The second is an analysis of the effect of high volume purchases of a commodity by the food service sector on farm price volatility. Demand by the food service sector is generally assumed to be more price inelastic for a given commodity than the demand through food stores. For commodities where production tends to be variable, farm prices may become more volatile as a larger portion is sold through the price inelastic market segment. Examples of commodity sub-sectors where this problem might exist include lettuce, broilers, and potatoes.

Christy and Conner correctly point out that price elasticities differ for different foods, but that demand is inelastic for most foods. This

means that the impacts of food manufacturing and marketing activities which result in altering relative prices will affect individual commodity groups in different ways. I would suggest to the authors, however, that more recent sources of empirical price elasticity estimates are available than the 1961 Brandow study cited in their paper.

Industry structure and organization is identified in the Christy and Conner paper as having implications for producers and consumers. However, the discussion does not present specific current organizational issues or the details of implications to consumers or producers. Current issues related to industry organization focus on the high level of mergers, acquisitions, and leveraged buyouts within the food marketing sector. The American Institute of Food Distribution estimates that during 1987 there were a total of 514 separate acquisitions in the processing, wholesaling, retailing, and foodservice sectors. At the same time there were 197 divestitures.

Concerns about the high level of merger activity center around two areas. The first relates to how leveraged buyouts increase debt loads and the firm's ability to meet interest and principle payment obligations during periods of economic recession. Related is the issue of how earnings might be diverted from capital investment and R & D activities to interest payments with implications for long-term productivity growth.

The value of food marketing mergers and leveraged buyouts ranged between $20 billion and $26 billion per year during 1985 through 1987 (Grimm). In 1988, the five largest transactions alone were valued at more than $50 billion. In the third quarter of 1987, total liabilities for corporations in SIC groups 20 and 21 were $140.7 billion. By third quarter 1988, the total had increased to $155 billion. Long-term debt increased from 27 percent of assets in third quarter 1987 to 28.4 percent of assets in third quarter 1988 (U.S. Dept. of Commerce). Based on transactions already agreed to, long-term debt could increase to $175 to $180 billion by third quarter 1989. The ratio of assets to total liabilities is 1.4 for food manufacturing firms versus 1.54 for all manufacturing firms (U.S. Dept. of Commerce).

The second focus of concern surrounding mergers relates to increasing concentration and the potential impact on monopoly pricing, market access for farm producers, and margin behavior. As indicated in the Christy and Conner paper, recent concentration within the meat packing and flour milling industries has generated the most concern. Currently our research base on assessing the effects of the increased concentration is very limited.

These are some of the economic issues related to food marketing which beg for more research effort.

Finally, I want to comment on the regional growth projection model for value of shipments presented by Christy and Conner. The model, as estimated, states that the 1972 to 1982 change in value of shipments for a given region is a function of the population change and 1972 wage levels for food processing industries in the state. The model explains 21 percent of the change in value of shipments between 1972 and 1982 for 50 states.

I question the value of presenting results based on such a simplified model. Regional growth in manufacturing capacity depends on a myriad of factors, including relative energy costs, taxes, access to markets, access to raw product, input prices relative to other locations, labor markets, relative income growth, and technological change. Many of these factors were identified in the Christy and Conner paper as being important, but were then ignored in the empirical analysis.

In summary, it is vitally important for agricultural and other economists to focus attention on the food marketing sector. Not only is it important to regional economic growth and the generation of value-added economic activity, but productivity and economic efficiency within this sector have important implications for producers, consumers, and the performance of the larger economy. Unfortunately, the Christy and Conner paper does not provide the analysis needed to answer some of the more important questions. Maybe we shouldn't expect it to. Hopefully, their paper and these comments will stimulate additional research effort.

REFERENCES

American Institute of Food Distribution, Inc. *The Food Institute Report.* Fair Lawn, N.J., selected issues.

Gallo, A. E. *Food Market Review, 1988.* Forthcoming AER, Economic Research Service, U.S.D.A., Washington, D.C.

Grimm, W. T. *Mergerstat Review,* Chicago, selected issues.

Myers, L. H. "Productivity Measurement in Food Marketing." Paper presented at Joint ERS/IR-6 Conference on New Measurement Procedures for U.S. Agricultural Productivity, Washington, D.C., March 31 and April 1, 1988.

Polopolus, L. "Agricultural Economics Beyond the Farm Gate." *Amer. J. of Agr. Econ.,* 64,5(1982):803–10.

Putnam, J. J. *Food Consumption, Prices, and Expenditures, 1966–87.* Statistical Bul. No. 773, Economic Research Service, U.S.D.A., Washington, D.C., January 1989.

U.S. Dept. of Commerce. "Quarterly Financial Report." Bureau of Census, Washington, D.C., selected issues.