Consolidation in the U.S. Food Marketing System

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Over 6000 mergers, acquisitions and leveraged buyouts took place in the food marketing system between 1982 and 1995. Concentration increased in all four sectors. Retail food prices rose modestly, and advertising and new product introductions rose. Profitability, capital expansion, productivity, foreign trade and investment and leveraging rose. The share of national income allocated to food dropped.

The U.S. Food Marketing System has undergone much consolidation in recent years. This system, comprised of food processors, wholesalers, retailers, and food service firms, has undergone over 6000 mergers, acquisitions, and leveraged buyouts between 1982 and 1995. During this period, food manufacturers, retailers, and wholesalers have been leaders in merger activity nearly every year in both the number of transactions, and the value of these transactions (Figure 1).

Much public interest has been focused on this consolidation as a consumer issue. Consolidation goes to the very core of free enterprise economics. Does consolidation lead to higher or lower food price, quality, and quantity? Changes in efficiency of the food system is also a pivotal issue. Does consolidation lead to higher or lower productivity? Does management efficiency improve? The U.S. food marketing system is the nation's largest employer. The food marketing system is also the largest customer of the U.S. farm system, accounting for about 80 percent of its output. Has this consolidation raised or lowered prices paid to the nation's farmers? Finally, consolidation involves entry and innovation issues. Does consolidation prevent new firms from entering and making inroads in the food marketing system? What happens to innovation, research and development?

Consequently, there is much institutional interest in this consolidation from a public policy standpoint. The Federal Trade Commission, whose objective is to promote competition requires a pre-merger notification. The Justice Department, in administering the Sherman Anti-Trust Act, also has interest in the wave of consolidations. Because the food system is the farm system's largest customer and has an impact on farm prices, the USDA has a vested interest in the performance of the food marking system. Wall Street has much interest in the performance of the food marketing system because it is a source of major investment in the U.S. Food is the leading advertiser in the United States. Consequently, Madison Avenue is another institution very interested in the system's consolidation. Labor unions have a special interest because the food sector is the largest employer in the American economy.

The purpose of this presentation is to give an initial assessment of the impact of consolidation in the system following years of intense merger activity. First, we examine the impact of consolidation on structure, and then give an initial assessment of its impact on conduct and performance.

Consolidation and Structure

Merger and acquisition activity is continuing strong in the 1990s, but is nowhere near the level of the late 1980s, both in value and number of transactions (Table 1). In 1995, there were 425 merger, divestiture, or leveraged buyout transactions, about the same as the previous two years, but considerably above levels of 1990 through 1992 (as shown in Figure 1 and Table 1). Per usual, more than half of all these activities (244) were in food processing, while the remainder were in food retailing (83), food wholesaling (56), and food service (83). During the entire period (1982-199), over 60 percent of these transactions (or more than 3600) took place in food processing.

The value of these food marketing mergers and leveraged buyouts (excluding those transactions with a dollar value of less than $100 million) have been valued at about $125 billion in current value. About a third of these transactions

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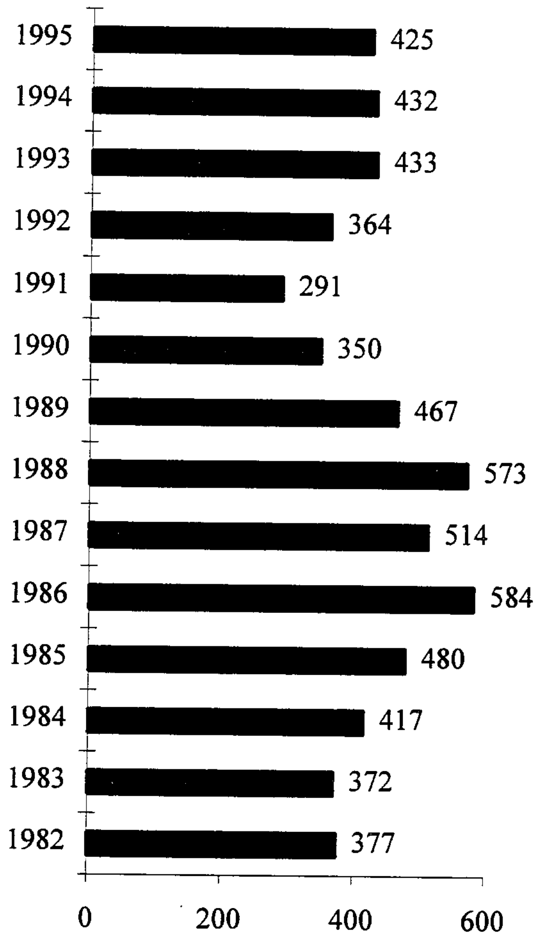
Figure 1. Food marketing mergers and acquisitions



were due to American investment in foreign food marketing systems or foreign investment in the U.S. food marketing system.

In food processing, concentration among the top 100 firms appears to have risen very sharply during this period. The 100 largest food and tobacco manufacturing companies accounted for about 35 percent of value added in 1982: by 1995, this share had risen to an estimated 53 percent. Much of this gain came at the expense of mid-sized companies: the share of value added by the 21 to 50 largest companies stayed about the same, but the share held by the next 80 largest companies dropped from about 20 percent to about 15 percent. The drop among the other 15,000 food processing firms is apparently even greater. Figure 2 shows the value of food marketing mergers and leveraged buyouts costing more than $100 million. Table 2 shows the 100 largest transactions as of 1996 which involve food industry mergers.

The food processing sector, however, is not a single industry but is instead 72 separate industries ranging from meat processors to brewers, and bakers. Some of these industries experienced a sharp increase in concentration. Meatpacking increased sharply, as did flour, pasta, and wineries. Most dairy, processed fruits and vegetables, breakfast cereals, beet sugar, confectionery, and other industries stayed about the same or dropped slightly.

Table 1. Food Marketing Mergers

Year	Processing	Wholesaling	Retailing	Foodservice	Total[1]
			Number		
1982	250	38	38	51	377
1983	225	38	45	64	372
1984	242	37	60	78	417
1985	291	64	52	73	480
1986	347	65	91	81	584
1987	301	71	65	77	514
1988	351	71	76	75	573
1989	277	65	53	72	467
1990	208	58	37	47	350
1991	181	35	39	36	291
1992	217	59	29	59	364
1993	266	57	39	71	433
1994	232	62	60	78	432
1995	244	56	42	83	425

[1]Total includes some double counting because of interindustry mergers. For example, a food processing firm merging with a foodservice firm is included as an acquisition in each sector. Source: ERS tabulations of Food Institute data.

Figure 2. Value of food marketing mergers and leveraged buyouts costing more than $100 million

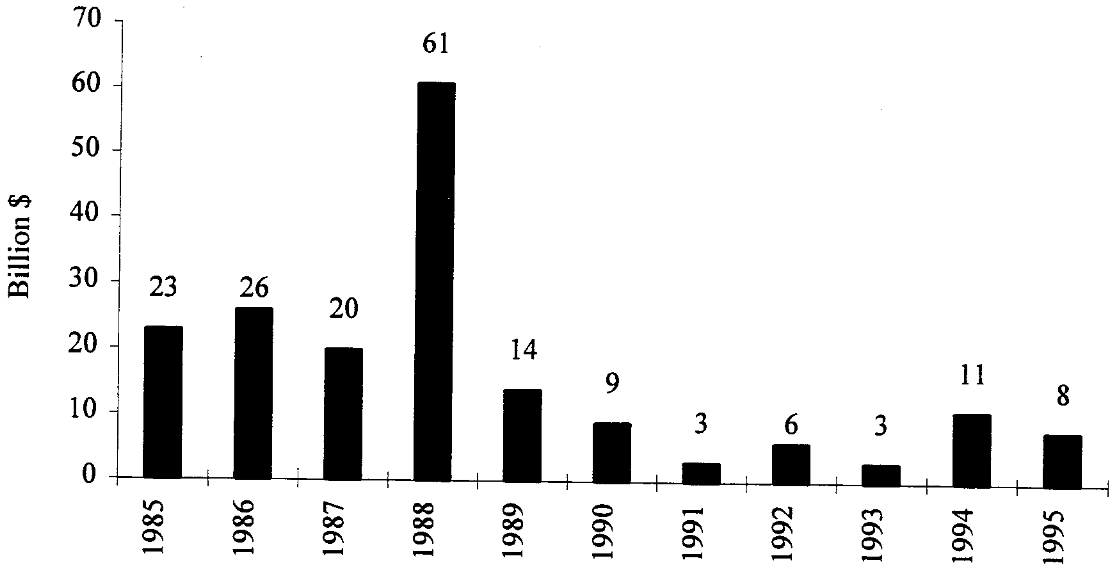


Table 2. Food marketing mergers ranking among the 100 largest transactions in history as of 1996

Buyer/seller	Rank among all transactions	Price (million dollars)	Year announced
Kohlberg, Kravis, Roberts & Company/RJR Nabisco Inc.	1	24,562	1988
Philip Morris Company/ Kraft Inc.	4	13,100	1988
Grand Metropolitan PLC/Pillsbury Company	24	5,636	1988
Philip Morris Company/ General Foods Corporation	25	5,628	1985
Kohlberg, Kravis, Roberts & Company/Beatrice Companies	27	5,362	1985
R.J. Reynolds Industries, Inc./ Nabisco Brands, Inc.	34	4,906	1985
SSI Holdings Corporation/ Safeway Stores, Inc.	44	4,198	1986
Phillip Morris Companies, Inc. Jacobs Suchard AG	53	3,825	1990
Private group, led by two top company executives/ Southland Corporation	56	3,723	1987
Unilever N.V. - Netherlands/ Chesebrough-Pond's, Inc.	75	3,093	1986
Nestle S.A. (Switzerland)/ Carnation Company	81	2,885	1984
Seagram Company Ltd (Canada)/ Conoco, Inc.	89	2,576	1981
Beatrice Foods Company/ Esmark Inc.	91	2,509	1984
BSN SA-France Kohlberg, Kravis, Roberts & Co.	92	2,500	1990

Source: (1).

Despite all of this merger activity, the number of food processing companies increased during this period, rising for the first time since 1920. According to the 1992 Census of Manufacturers, the number of food processing companies rose from 15,692 in 1987 to 16,075 in 1992 (Table 3). The number of plants also increased from 20,583 to 20,792. Interim trade intelligence since 1992 indicates that the trend is continuing.

The share of output controlled by the four largest firms in general grocery wholesaling rose from 15 percent in 1982 to 35 percent in 1992, while the output controlled by the eight largest rose from 37 percent to 44 percent. Whereas the top 50 firms controlled 64 percent of sales in 1982, this figure had risen to nearly 80 percent in 1995. The total number of wholesale grocery firms appears to be increasing however.

The largest 4, 8, and 20 food retailers accounted for roughly 17, 27, and 41 percent of U.S. grocery sales in the mid 1990s. These aggregate shares have remained static during the past decade. Food retailers compete in local markets, and changes in concentration at the local level appear to be a mixed bag with increases in some markets and decreases in others. However, local concentration is what is important to this industry.

Concentration is not a problem in the food-service industry either at the local or national level. In food service the top four firms accounted for 8.4 percent of sales in 1992, while the top 50 firms accounted for 23 percent of sales.

Table 3. Number of Food Manufacturing Companies

Industry	1992	1987	Net Change
Food	16,075	15,692	383
Meat	2,736	2,767	-31
Dairy	1,437	1,700	-263
Fruits & Vegetables	1,555	1,438	120
Grain Mill	1,716	1,722	-6
Bakery	2,688	2,349	339
Sugar	993	918	75
Fats and Oils	301	340	-39
Beverages	1,610	1,697	-87
Misc.	3,507	3,271	236

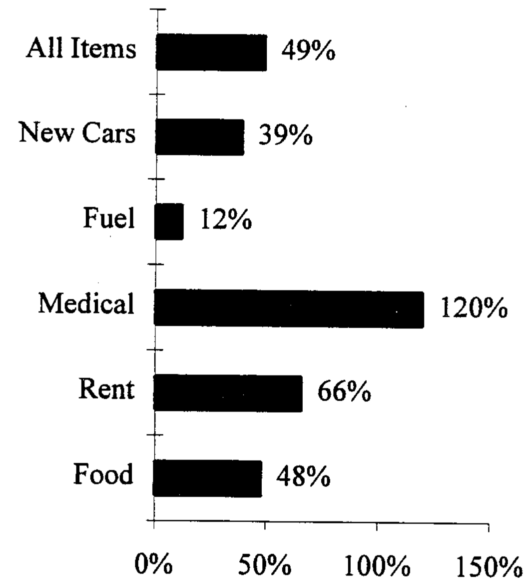
Source: (1)

Consolidation and Competition

Despite all of the consolidation and increase in concentration in all four sectors of the food marketing system, competition appears to be continuing strongly. Competition is an extremely difficult measure to assess, but we look at three basic measures of the degree of competition: retail pricing, advertising, and new product introduction The first is a measure of price competition. The other two of nonprice competition. These measures are important because they measure consumer welfare.

Between 1982 and 1995, retail food prices rose 48 percent, about the same as the increase in the overall (All Items) Consumer Price Index (Figure 3). Overall price increases appear to be about in-line with general inflation. By contrast, medical costs rose 120 percent and housing costs rose 66 percent. Fuel and new car prices rose 12 and 39 percent respectively. An examination of changes in retail food prices by product category did not seem to show any increase which could be associated with consolidations in particular food processing industries. However, a much closer examination and analysis will have to be done before conclusions are more definite.

Figure 3. Change in Retail Prices, 1982-1995



Advertising is a major form of nonprice competition. Consolidation does not seem to have had an impact on advertising. Food is still the largest advertiser in the American economy. Advertising has increased about 25 percent since 1991. For most industries, the three largest advertisers account for the great bulk of all advertising. As expected, the more concentrated industries account for most of the advertising, including breakfast cereals, beer, wine, liquor, and prepared and convenience foods.

New product introductions appear to have been unaffected by consolidations. New product introductions continue to escalate at an extremely high rate, totaling nearly 17,000 in 1995. Since the inception of the consolidation mania in the early 1980's, over 150,000 new grocery products have been introduced, and much of that escalation took place within the last five years.

Consolidation and Performance

Nearly all measures indicate that the system continues to perform very well following consolidation. These measures include leveraging, profitability, capital expansion, appreciation, research and development, productivity, and performance in international markets.

Consolidation in the food system has changed the system's basic financial structure. Between 1988 and 1995, total liabilities of food processors rose from $194 billion to $320 billion. The food system, which had traditionally been one of low debt, has now become one of the most leveraged sectors of the American economy. The food processors debt-to-equity ratio fell from 1.77 to .96 between 1989 and 1995, while the food retailers ratio rose from 0.36 to 0.64.

Simultaneously, profits have continued to rise sharply. The food system has traditionally been one of the more profitable segments of the American economy, and profitability has continued to rise sharply over the past decade. Profits from domestic and foreign operations are up sharply and leveraging has given new impetus to higher profit rates. After tax profits as a percentage of stockholders' equity for both food processors and retailers are above the combined manufacturing and retailing industry average.

Both continue to rise sharply. During the past decade between 300 and 400 new food processing plants have been completed. A high of 456 projects were completed in 1990, a banner year for mergers. Food processing is one of the Nations most automated industries, and consolidation has been accompanied by much capital expansion, reaching a high of nearly $18 billion in 1995.

Output per man-hour in the food processing system overall continues to increase. According to a recent study by the census bureau, output per man-hour increased in plants of merged firms at an even more rapid pace.

Research and development appears to have been unaffected by consolidations. Food processing firms have traditionally allocated about 0.4 percent of sales to research and development. This figure has remained unchanged in recent years.

The owners of the food marketing system have done very well during these merger years, in part due to consolidation. Between 1982 and 1995, the Dow-Jones equity market indexes showed a nearly fivefold increase. But food rose nearly 11 times, while beverages were 15 times higher (Figure 4).

Retailers, wholesalers and the fast food chains also did extremely well in foreign markets, both in terms of exports and foreign investment. U.S. food processors' foreign sales have risen sharply since consolidation, and now amount to about a fourth of domestic shipment. Exports abroad now amount to about $25 billion.

The final performance measure is one of resource allocation. The nations share of income spent on food continues to decline sharply. Since 1982 the portion of income allocated to food has dropped from 13 to 11 percent (Figure 5). In 1995 only one sixteenth of all income was allocated towards food at home.

An Initial Assessment

Despite consolidation and continued increases in concentration, the share of resources allocated towards food continues to decline. The number of food manufacturing companies and establishments appears to be increasing. Both price and nonprice competition appear strong. Profitability, stock appreciation, capital expenditures, and other performance measures moved up sharply during this period.

References

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Food Institute

Richard Rogers, University of Massachusetts

Figure 4. Dow-Jones equity market indexes for the food marketing system

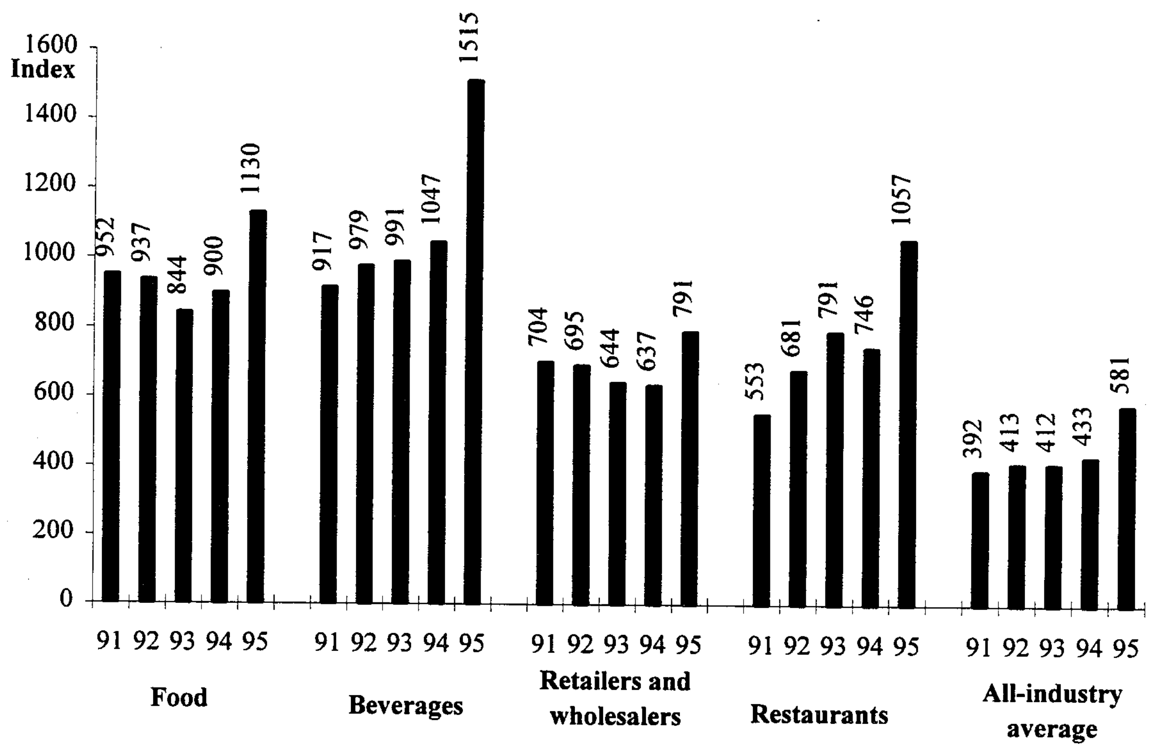

Figure 5. Food marketing system's share of disposable personal income