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Agricultural
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Report
Number 678

Food Marketing Review, 1992-93

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Abstract

U.S. grocery sales were over \$820 billion in 1993. Profits from operations for food manufacturers and retailers rose in 1992 and 1993 because of continued wage and producer price stability, a weaker dollar, and lower interest rates. Merger and leveraged buyout transactions fell in 1991, rose in 1992 but fell again in 1993. Debt levels increased. In 1993, aggressive competition for market shares resulted in record new product introductions, intensive couponing, strong private label sales, and price weakening. New plant and equipment and research and development expenditures reached new highs.

Note: Use of brand or firm names in this publication does not imply endorsement by the U.S. Department of Agriculture.

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This report was prepared by the following staff members of the Commodity Economics Division, Economic Research Service, U.S. Department of Agriculture:

Anthony E. Gallo Project coordinator 202/219-0868
and food manufacturing

Walter B. Epps Food wholesaling

Phillip R. Kaufman Food retailing

Charlene Price Food service

Charles R. Handy Deputy branch chief

Dennis Henderson Branch chief

Nedra Williams typed the manuscript. Doris Newton assisted with the food retailing chapter.

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Summary

Retail sales of the food marketing system reached a projected \$820 billion in 1993. Food share of disposable income fell to an all-time low of 11.4 percent.

Other highlights include:

- The food system added an estimated \$614 billion in value to the \$126 billion of U.S. farm products, \$22 billion in foreign processed food commodities, and \$9 billion in seafood products purchased in 1992. Food manufacturers, retailers, wholesalers, and foodservice firms comprise the Nation's largest sales marketing system, contributing about 10.5 percent to gross domestic product (GDP) in 1992.
- Both food processors' and retailers' level of profit from operations rose in 1992, but returns on stockholders' equity fell. Food processors' profits rose again in 1993.
- Merger and leveraged buyout activity rose in 1992, following 3 years of sharp declines. Recorded mergers and leveraged buyouts (LBO's) amounted to \$3 billion in 1991 and \$5.7 billion in 1992. There were 356 mergers and LBO's in 1992. Activity declined again in 1993.
- Debt levels rose in 1992 for food processors and retailers.
- Capital expenditures in food manufacturing at the corporate level rose to an estimated \$19 billion in both 1992 and 1993. Three hundred seventy-six new plant projects were initiated in fiscal 1992, up from 305 in 1991.
- Common stock prices of food marketing firms underperformed other sectors of the economy for the first time in a decade in 1992 and kept falling in 1993.
- On the cost side, wages rose modestly in 1992 and 1993. Manufacturers' purchase prices of farm foods fell slightly in both 1992 and 1993.
- Food manufacturers produced an estimated 230,000 packaged food products in 1991 (fig. 1). Competition among manufacturers and retailers for consumer preference was expressed in small price increases and sharp non-price firm competition. Average retail food prices in grocery stores rose 0.7 percent in 1992. Manufacturers spent nearly \$11 billion in consumer advertising and fiercely competed for a greater share of the limited amount of retail shelf space in 1991. Despite the continued economic slowdown, nearly 16,750 new grocery products were introduced in 1992.
- The international performance of the U.S. food marketing system is measured by its balance of trade, sales from foreign operations, and foreign investment. For the first time in 10 years, the food processing sector showed a positive trade balance. Foreign affiliates of U.S. food marketing firms had estimated sales of \$125 billion in 1992, while U.S. food marketing affiliates of foreign firms had estimated sales of \$120 billion.

Glossary

Aggregate concentration. The share of output in a sector (food manufacturing, for example) that is produced by the largest firms.

Acquisition. Purchase of a company.

Chain. A food retailer or foodservice operator owning 11 or more stores or outlets.

Disposable personal income (DPI). Income that individuals retain after they have deducted taxes.

Divestiture. The sale of a unit (a factory, a division, or a subsidiary) of a firm, either to another firm, to management of the unit, or to independent investors.

Food manufacturing. Activities that typically use power-driven machines and materials-handling equipment to mechanically or chemically transform raw materials into foods and beverages for human consumption. Certain related industrial products, such as feeds and vegetable and animal fats and oils, are also produced here.

Food service. The dispensing of prepared meals and snacks intended for onpremise or immediate consumption. The following products qualify as food service when other foods are not available: candies, popcorn, pretzels, nuts, and drinks. Vended foods qualify as food service only when tables or counters are available in the immediate area and a person with records of food receipts is present at the establishment.

Commercial establishments. Public establishments (freestanding or part of a host establishment) that prepare, serve, and sell meals and snacks for profit to the general public.

- *Drinking places.* Establishments with food service that do not operate as subordinate facilities of different and separately identifiable kinds of businesses and the primary function of which is the sale of alcoholic beverages for onpremise or immediate consumption. These include bars, beer gardens, taverns, nightclubs, and saloons.
- *Eating places.* Establishments that do not operate as subordinate facilities of different and separately identifiable kinds of businesses and the primary function of which is the sale of prepared meals and snacks for onpremise or immediate consumption. These include restaurants, lunchrooms, fast-food outlets, and cafeterias.

- *Lodging places.* Establishments that provide both lodging and food service to the general public. These establishments include hotels, motels, and tourist courts, but exclude rooming and boarding houses and private residences.

- *Recreation/entertainment.* Foodservice operations in theaters; bowling alleys or billiard or pool halls; commercial sports establishments (racetracks and stadiums); membership golf or country clubs; public golf courses; and miscellaneous commercial amusement and recreational establishments (tennis clubs, camps, athletic clubs, and amusement parks).

- *Retail hosts.* Foodservice operations that operate in conjunction with or as part of retail establishments, such as department stores, limited-price variety stores, drugstores, and miscellaneous retailers.

Noncommercial establishments. Establishments where meals and snacks are prepared and served as an adjunct, supportive service to the primary purpose of the establishment. These include schools, colleges, hospitals and extended care facilities, vending areas, plants and offices, correctional facilities, military feeding, and transportation (trains, cruise ships, and airplanes).

Foodstore. A retail outlet with at least 50 percent of sales in food products intended for offpremise consumption.

Grocery store. A foodstore that sells a variety of food products, including fresh meat, produce, packaged and canned foods, frozen foods, other processed foods, and nonfood products.

- *Supermarket.* A grocery store, primarily self-service in operation, providing a full range of departments and having at least \$2.5 million in annual sales (1985 dollars).

Combination food and drugstore--A supermarket containing a pharmacy, a nonprescription drug department, and a greater variety of health and beauty aids than that carried by conventional supermarkets.

Hypermarket--The largest supermarket format, with general merchandise items accounting for up to 40 percent of sales.

Superstore--A supermarket distinguished by its greater size and variety of products than conventional supermarkets, including specialty and service departments, and a considerable inventory of general merchandise products.

Warehouse store--A supermarket with limited product variety and fewer services provided, incorporating case lot stocking and shelving practices. Superwarehouse stores are larger, offer expanded product variety, and often have full service meat, delicatessen, or fresh seafood departments.

- **Convenience store.** A small grocery store selling a limited variety of food and nonfood products, typically open extended hours.
- **Superette.** A grocery store, primarily self-service in operation, selling a wide variety of food and non-food products with annual sales below \$2.5 million (1985 dollars).

Specialized foodstore. A foodstore primarily engaged in the retail sale of a single food category such as meat and seafood stores, dairy stores, candy and nut stores, and retail bakeries.

Foreign affiliate. A company or firm operating in a foreign country that is ultimately owned or controlled by a U.S. company or firm.

Foreign investment. Ownership of domestic assets by foreign persons or firms.

Gross margin. Retailer markup (over cost) as a percentage of total sales.

Gross domestic product (GDP). Dollar value of all goods and services produced in the U.S. regardless of nationality of producers.

Independent. A food retailer or foodservice operator owning 10 or fewer stores or outlets.

Leveraged buyout (LBO). Purchase of the common stock of a company through debt-financing, while pledging the assets of the new company as collateral.

Merger. The combination of two or more firms into one.

Horizontal merger. The combination of two firms producing or selling the same or similar products in the same market.

Megamerger. A very large merger.

Parent firm. A company or firm that has ultimate ownership or control over another company or firm.

Productivity growth. Measures of the rate of growth of output, relative to the growth of inputs (labor, capital, and materials) used to produce that output.

Subsidiary. Also referred to as an **affiliate**. A company or firm that is ultimately owned or controlled by another company or firm.

U.S. affiliate. A company or firm operating in the United States that is ultimately owned or controlled by a foreign entity.

Wholesalers. Operators of firms engaged in the purchase, assembly, transportation, storage, and distribution of groceries and food products for resale by retailers; institutions; and business, industrial, and commercial users.

Agents and brokers. Wholesale operators who buy or sell as representatives of others for a commission and who usually do not store or physically handle products.

Manufacturers' sales branches and offices. Wholesale operations maintained by grocery manufacturers (apart from their manufacturing plants) for sales and distribution purposes.

Merchant wholesalers. Operators of firms primarily engaged in buying and selling groceries and grocery products on their own account.

- **General-line wholesale merchants.** Merchants who handle a broad line of dry groceries, health and beauty aids, and household products.
- **Limited-line wholesale merchants.** Merchants who handle a narrow range of dry groceries dominated by canned foods, coffee, spices, bread, and soft drinks.
- **Specialty wholesale merchants.** Merchants who handle perishables, such as frozen foods, dairy products, poultry, meat, fish, fruit, and vegetables.
- **Wholesale club.** A hybrid wholesale-retail establishment selling food, appliances, hardware, office supplies, and similar products to its individual and small-business members at prices slightly above wholesale.

Food Marketing Review, 1992-93

Introduction

In 1992, leveraged buyout and merger activity in the food marketing system rose for the first time in 3 years. The number of food product introductions declined for the first time in a quarter of a century, but over 230,000 packaged food products were available to U.S. consumers in 1991 (fig. 1). Advertising expenditures remained flat in 1992. Retail food prices experienced the smallest increase in over a quarter of a century and were accompanied by a strong surge in consumer discounts, coupons, and private label use in 1992. The system's profitability rose in both 1991 and 1992.

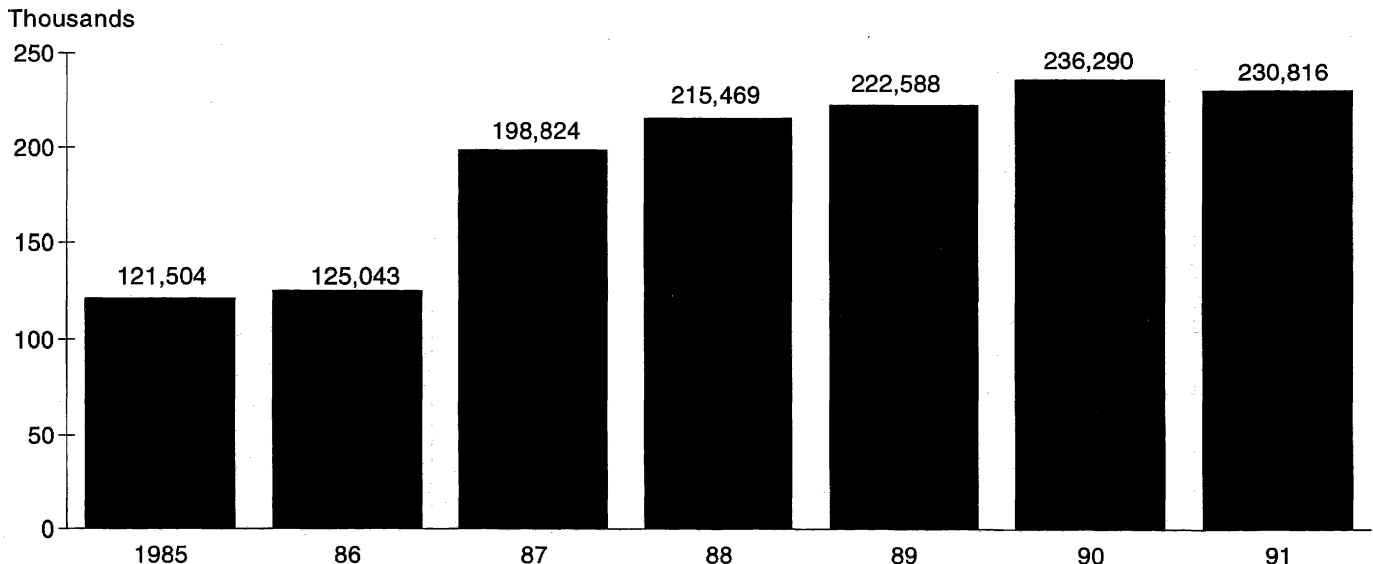
This report examines these and other developments in the U.S. food marketing system, encompassing all firms servicing the U.S. food supply such as manufacturing, wholesaling, and retailing. Much of the annual and other periodic data used in this report are pro-

vided by U.S. Government agencies. Other data are derived from publications of consulting firms, trade associations, academic research, and trade publications.

Because availability of information differed, various sections of this report treat industry scope, analysis of market levels, and emphasis on relevant variables in different ways. Some of the analysis is based on 1982-87 census data, the most recent available (44).¹ These data represent the most complete information for measuring the structural and performance characteristics of food marketing industries. Sections on individual industries contain later data from secondary sources, including trade journals and statistics by Government regulatory agencies. Where possible, we have made annual estimates from Bureau of the Census data that are available every 5 years.

¹ Italicized numbers in parentheses identify literature cited in the References at the end of this report.

Figure 1
Available U.S. packaged grocery products¹
The number of new product introductions fell for the first time in 25 years.



¹ Includes dry grocery, frozen food, and dairy; excludes meats, produce, and many other grocery products.
Source: ERS.

Sales

Stagnation in the general economy was reflected in the food system's real growth in 1992. The food marketing system's direct share of disposable personal income averaged 11.5 percent, the lowest in history (fig. 2).

In 1992, sales of the four food marketing sectors increased between 1 and 3 percent. The food processing sector's value of industry shipments rose 1 percent to \$390 billion. The \$453 billion estimate of wholesale food sales for 1992 was up only 3 percent above 1991, while foodservice sales were up 3 percent. There is some double counting of each sector's total food system sales.

Sales of food in stores and foodservice establishments, packaged alcoholic beverages and drinks purchased at eating and drinking places, and nonfood items purchased in retail foodstores reached \$782 billion in 1992 and an estimated \$820 billion in 1993. About \$319 billion of this amount was spent on food in retail foodstores and \$275 billion in foodservice establishments (fig. 3). Restaurants are taking a higher portion of the food dollar because income has been rising at a much faster rate than the population and because consumers have a tendency to eat out more often as their income rises. In 1992, food service accounted for about 46.3 percent of food sales (excluding alcohol).

Alcoholic beverage sales likely accounted for another \$88 billion of food marketing sales in 1992. Nearly \$52 billion was in the form of packaged alcoholic beverages, while alcoholic drinks served in restaurants and other institutions likely amounted to nearly \$36 billion. Distilled spirits in 1992 accounted for about 31 percent of total alcoholic beverage consumption, while wine accounted for 11.5 percent and beer accounted for 57.5 percent of the total (app. table 5).

The nonfood component of retail sales through the food marketing system amounted to about \$100 billion in 1992. Nonfood groceries include tobacco, health and beauty aids, detergents, paper products, and other grocery items sold through retail foodstores. Nonfood items, such as tobacco products, catering supplies, and nonfood supplies sold through vending services, are grouped into the foodservice category.

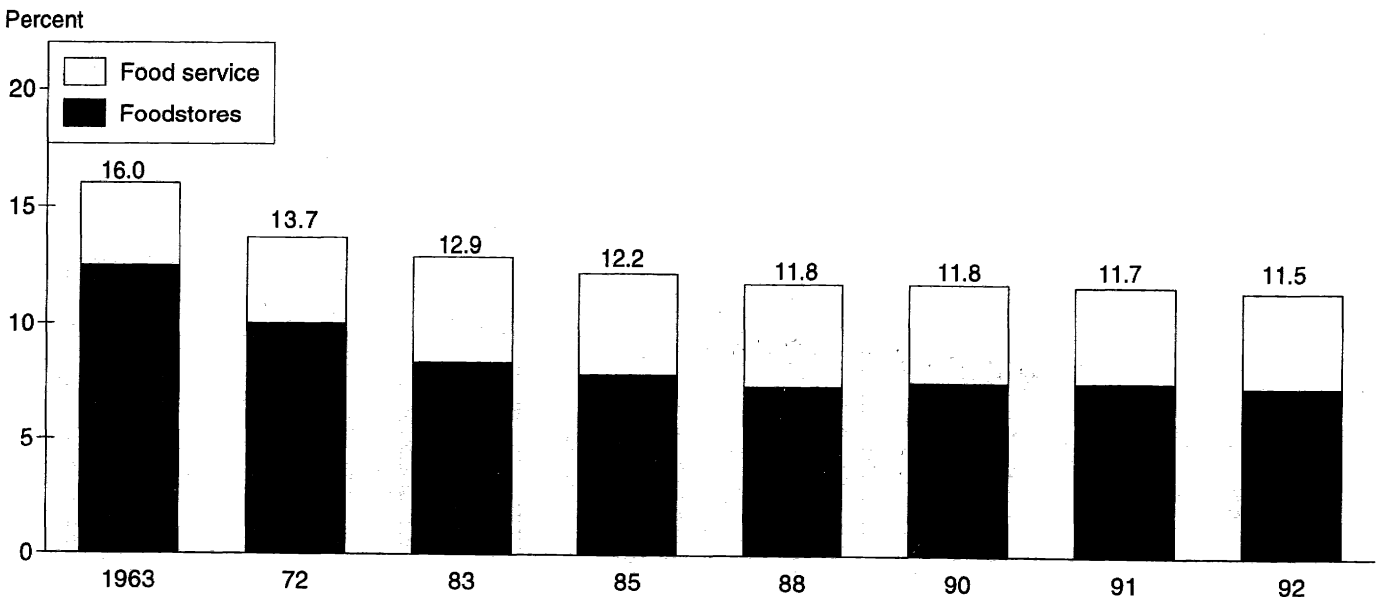
Economic Climate

Although the recession officially ended in March 1991, production and employment growth remained low well into 1992. Real gross domestic product (GDP) grew only 2.1 percent in 1992. In the fourth quarter of 1992, GDP had risen only 3.8 percent above the first quarter of 1991. At a similar point in the recovery from the 1981-82 recession, GDP had risen 10.8 percent.

Figure 2

Food marketing system's share of disposable personal income, selected years ¹

The food marketing system's share of income fell in 1992, continuing a 29-year trend.



¹ Excludes alcohol and nonfood groceries.

Source: (21).

Figure 3

Food marketing sales, 1992

Food marketing sales rose to \$782 billion in 1992, with retail foodstore and foodservice sales accounting for nearly 76 percent of total sales.



Source: (21).

The unemployment rate at the end of 1992 was little changed from the end of 1991, still almost 2 percentage points above the rate at the recession's start in July 1990. During 1992, however, the rate rose to 7.7 percent in June before subsiding to 7.3 percent in December.

Only about 600,000 jobs were added in 1992, compared with an average growth of almost 2 million jobs per year during the 1980's. The service sector contributed the most to employment gains by adding nearly 700,000 jobs during the year. Government added about 200,000 jobs, while employment in construction remained flat and the manufacturing sector lost about 250,000 jobs.

While manufacturing employment was shrinking, production was rising. Industrial production rose 2.9 percent from December 1991 to December 1992, with much of the increase occurring in the second half of the year. Capacity use in December reached 79.3 percent, about a percentage point above March 1991 and the highest rate in more than a year. However, 20 months after the official end of the recession, capacity use was still more than 4 percentage points below its pre-recession level.

Consumers contributed the most to economic growth in 1992, spending 2.2 percent more in 1992 compared

with 0.6 percent less in 1991. Retail sales rose 5.1 percent in 1992, compared with less than 1 percent in 1991 and 4.5 percent in 1990. However, consumer spending so far in the 1990's is relatively low compared with the average annual growth in the 1980's of 2.8 percent.

Disposable income did not keep pace with consumer spending in 1992, so consumers dipped into their savings. The personal savings rate inched up from 4.7 percent in 1991 to 4.8 percent in 1992, after averaging 6.5 percent during the 1980's.

Inflation remained low throughout 1992. Consumer prices rose 2.9 percent during the year, the lowest rate since 1986. Contributing to low overall consumer price inflation, food prices rose only 1.5 percent during the year, the smallest increase since 1976. Excluding food and energy, consumer prices rose 3.3 percent in 1992, the smallest increase since 1972.

Though hurting food sales, 1992's weak economic climate was favorable to the food marketing system for the tenth consecutive year in terms of costs. The food system is labor-intensive and sensitive to farm prices. The system is also highly leveraged, advertising-intensive, and global. Thus, movements in wages and prices, interest rates, and the value of the U.S. dollar affected the performance of the

food sector, and all were favorable to the food system in 1992.

Price stability for purchased food and feed inputs for each channel in the food marketing system was reflected by the Producer Price Index (PPI). The PPI for finished consumer foods, an indicator of changes in prices paid by retailers, wholesalers, and restaurateurs to food manufacturers, fell 0.7 percent in 1992 compared with 0.2 percent in 1991 (fig. 4). The PPI for intermediate foods and feeds, an indicator of changes in prices food processors pay one another, fell 1.2 percent in 1992. The PPI for crude foodstuffs, or prices paid by food manufacturers, fell 0.2 percent in 1992 compared with 6.7 percent in 1991.

For the tenth consecutive year, labor costs, which include hourly earnings and fringe benefits, were the major expense item for the food marketing system in 1992. In 1992, the food marketing system had about 12.3 million full- and part-time employees. Over 6.6 million workers were employed in food service, and about 3.6 million were employed in food retailing. About 1.6 million people were employed in food processing, and nearly 830,000 worked in grocery wholesaling. Average hourly earnings in food retailing and food processing increased by 3 percent.

However, employee benefits account for about 20 percent of labor costs, and this percentage has been

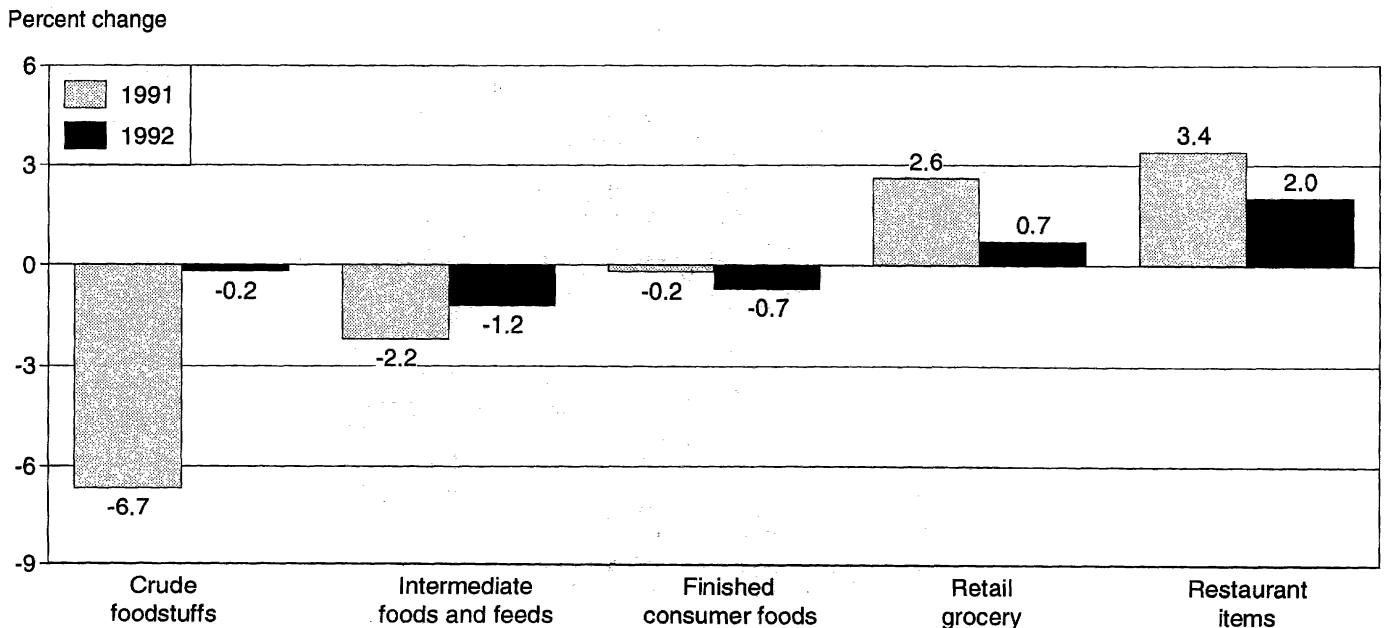
rising sharply in recent years. In food retailing, wage concessions, benefit reductions, and lump-sum payments were sometimes negotiated in lieu of wage hikes, continuing a decade-old trend. Wages in eating and drinking places averaged \$5.29 per hour, 2.1 percent higher than in 1991.

The food system, the economy's largest advertiser, experienced few increases in advertising costs for evening network television, network radio, magazines, and newspapers. Increases ranged from almost no increase for nighttime network television to a 5-percent increase for newspapers.

Lower interest rates benefited the food system in 1992. The weak economy and attempts by the Federal Reserve to revive it contributed to further interest rate declines in 1992. Three-month Treasury bill rates averaged 3.5 percent in 1992, compared with 5.4 percent in 1991. Yields on 30-year Treasury bonds averaged 7.7 percent in 1992, down from 8.1 percent in 1991. The prime interest rate averaged 6.25 percent in 1992 compared with 8.46 percent in 1991. Long-term corporate bond rates averaged about 8.14 percent in 1992.

The value of the U.S. dollar in 1992 fell from 89.8 to 86.3 (100 = 1973) between 1991 and 1992. This decline favorably affected overseas profits of American food companies. The lower valued U.S. dollar also

Figure 4
Producer Price Index (PPI) for food marketing system, 1991 and 1992
The PPI reflected lower input prices paid by most channels of the food marketing system in 1991.



Sources: (56, 61).

made U.S. exports of processed foods more attractive to foreign buyers and imports less attractive to U.S. buyers.

The U.S. Department of Agriculture's Economic Research Service (ERS) estimates that in 1992 the food system purchased about \$106 billion in animal and crop products from the U.S. farm sector, about two-thirds of domestic production. An additional \$22 billion was spent on imported processed food products, and \$9 billion was spent on seafood. To this base of \$137 billion in raw agricultural and fishery products, the food system added an estimated \$614 billion in value in 1992 compared with \$596 billion in 1991 (fig. 5). Food processors added about \$116 billion in 1992, while wholesalers, retailers, and transportation firms added another \$149 billion. The contribution of 400,000 separate eating and drinking places to value added topped \$96 billion in 1992.

Structure and Organization

New merger and leveraged buyout transactions in the food marketing system dropped in 1991 for the third consecutive year, in both total dollars and numbers. The number of acquisitions (purchase of a company or subsidiary) fell from 416 in 1990 to 365 in 1991, but rose to 468 in 1992, according to the Food Institute (table 1). These data include merger activity in such related industries as packaging supplies and

lodging companies. The number of mergers within the food marketing system itself fell from 350 in 1990 to 291 in 1991, but rose to 364 in 1992 (fig. 6).

The decline in the value of these transaction was even more striking. The value of food marketing mergers and leveraged buyouts that cost more than \$100 million fell to \$3 billion in 1991 from a high of \$61 billion in 1988, but rose to nearly \$6 billion in 1992 (fig. 7).

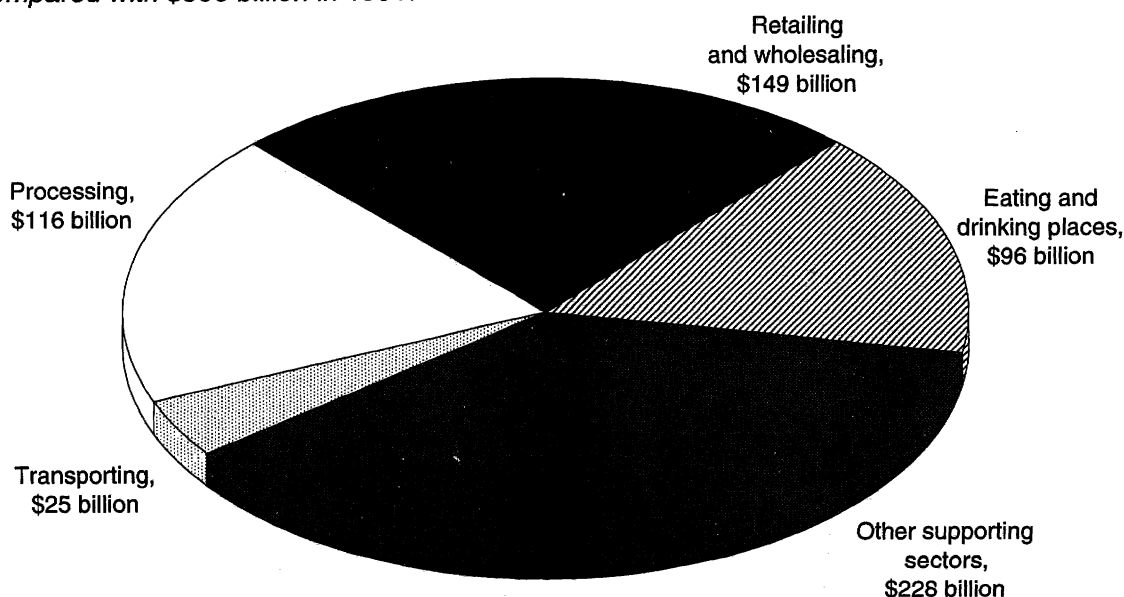
Despite lower interest rates, less merger activity in 1991 and 1992 was not surprising. The drop in both value and numbers reflected the economic slowdown, which began in 1990 and caused buyers and sellers to be cautious in any restructuring. Foreign investment in the U.S. food marketing system was also down in both 1991 and 1992.

Higher debt levels, changes in technology, and competition from domestic and foreign firms forced firms to enact major cost-reduction strategies in 1991 and 1992, including major staff reductions, greater plant efficiencies, and other savings measures. As a result, profits from operations rose in both food manufacturing and retailing. These profits have been partly used to pay higher interest expenses. It is unclear whether these cost-cutting measures could have been used to maintain lower prices to consumers in the absence of higher interest payments.

Figure 5

Estimated value added in food marketing system, 1992

The food marketing system added an estimated \$614 billion to raw products in 1992 compared with \$596 billion in 1991.



Source: (11).

Conduct

The economy's sluggish growth in 1991 and 1992 resulted in vigorous competition among manufacturers, wholesalers, retailers, and foodservice firms for the consumer dollar and among manufacturers for scarce shelf space in the Nation's grocery stores. The food industries' slow growth affected conduct or how firms compete. Less than 10.5 percent of the Nation's gross national product (GNP) was being generated by the food marketing system in 1992 compared with 15.5 percent in 1972. And, while the value added by the food system has increased in dollar terms, a much greater portion of this output is supplied by fewer and

larger firms. Although food marketing is thus more concentrated, firms in each market sector sought to acquire or maintain market shares through both price and nonprice competition.

The food system increased consumer prices 1.2 percent in 1992 compared with 2.9 percent in both 1991 and 1990. Last year's gain was the smallest in a quarter of a century. Food prices in grocery stores rose 0.7 percent in 1992, while foodservice prices were up 2.0 percent. In 1991, food prices rose 2.9 percent compared to 5.8 percent in both 1989 and 1990.

Table 1--Food business mergers and acquisitions, 1985-92

The number of mergers and acquisitions rose in 1992.

Category	1985	1986	1987	1988	1989	1990	1991	1992
	<i>Number</i>							
Agricultural cooperatives	11	7	9	5	4	2	4	9
Bakers	23	19	15	27	19	12	4	9
Brewers	8	9	6	1	3	1	1	1
Brokers	24	29	10	11	14	9	8	14
Confectioners	7	7	6	12	10	2	7	6
Dairy processors	25	17	22	19	14	16	12	14
Diversified firms with interests in the food industry	42	57	37	31	4	10	5	16
Food processing firms	100	116	110	136	107	66	73	84
Foodservice vendors	26	31	26	31	29	22	31	19
Hotel and lodging companies	10	10	5	1	6	3	2	2
Meat packers	12	11	9	14	11	11	8	12
Nonfood marketers selling through supermarkets	7	3	2	5	7	5	4	6
Packaging suppliers	29	32	24	27	25	26	15	21
Poultry processors	12	8	10	7	5	10	3	9
Primary products companies	12	21	12	18	47	24	47	36
Restaurant and foodservice establishments	58	72	63	74	57	42	33	57
Retailers:								
Convenience stores	22	21	17	18	16	15	9	4
Supermarkets	25	46	34	42	26	15	16	15
Others	10	25	13	13	9	9	9	15
Seafood processors	4	8	2	5	4	4	6	6
Snack food processors	7	5	3	12	6	5	1	11
Soft drink bottlers	17	26	24	18	12	12	3	9
Sugar refiners	4	3	3	0	1	0	1	0
Suppliers to the food industry	21	14	12	9	3	5	0	0
Unclassified and private investors	69	53	41	30	21	23	24	52
Wholesalers	42	38	30	29	21	13	10	24
Foreign acquisitions:								
U.S. firms/subsidiaries	23	23	31	29	55	39	12	12
U.S. operations of foreign firms	2	2	3	6	4	4	NA	NA
Foreign operations of U.S. firms	1	4	12	8	6	5	8	6
By Canadian firms	5	7	8	14	10	6	9	9
Total	658	724	599	652	556	416	365	468

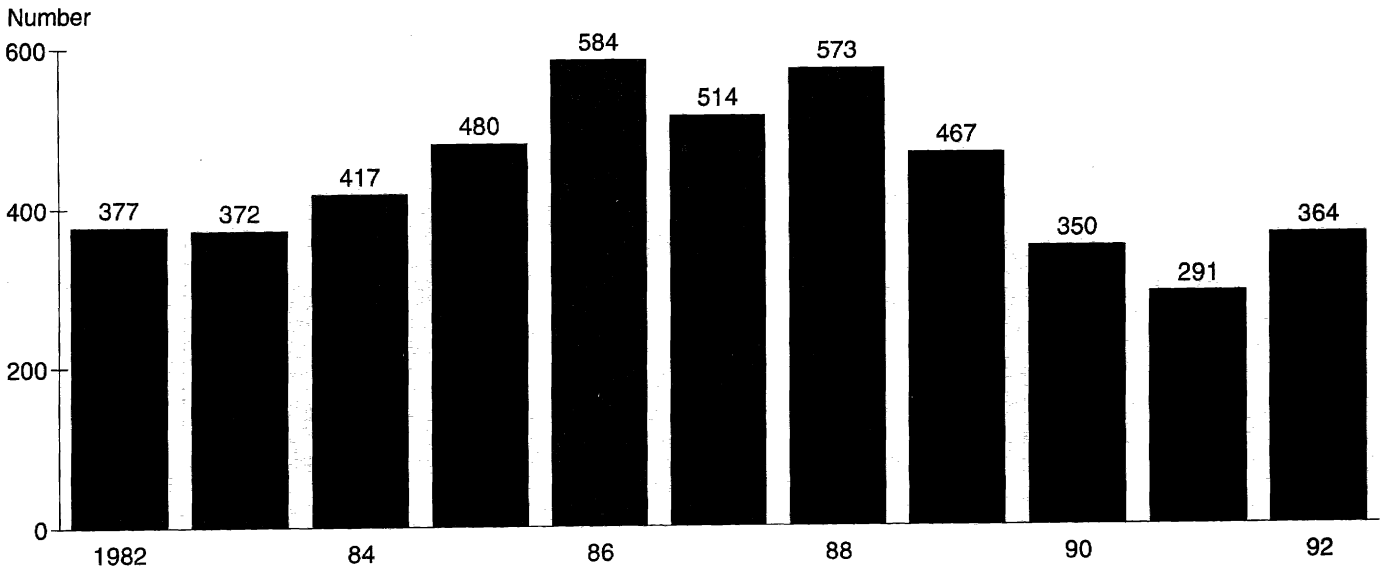
NA = Not available.
Source: (2).

Food prices in grocery stores rose 2.6 percent, while foodservice prices were up 3.4 percent.

Price competition to gain market shares was apparent in both the retail food and fast-food sectors of the foodservice industry in both 1991 and 1992. The re-

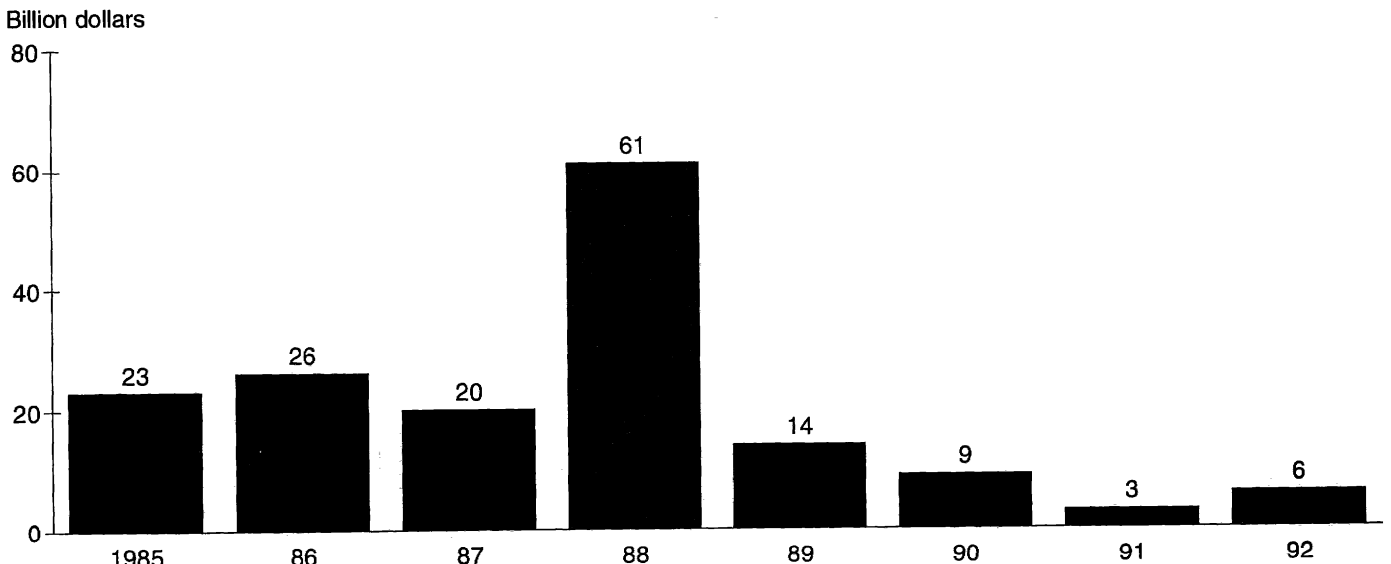
tail food and fast-food sectors gave major discounts to consumers for the third consecutive year. Private label's share of total grocery sales rose in 1990 and 1991, followed by a slight decline in 1992. Consumer coupon redemptions also rose in both 1991 and 1992.

Figure 6
Food marketing mergers¹
Merger activity slowed for the third consecutive year in 1991.



¹ Excludes some acquisitions by nonfood marketing firms that are included in table 1.
 Source: (2).

Figure 7
Value of food marketing mergers and leveraged buyouts costing more than \$100 million¹
Merger value has declined by more than 90 percent in the past 4 years.

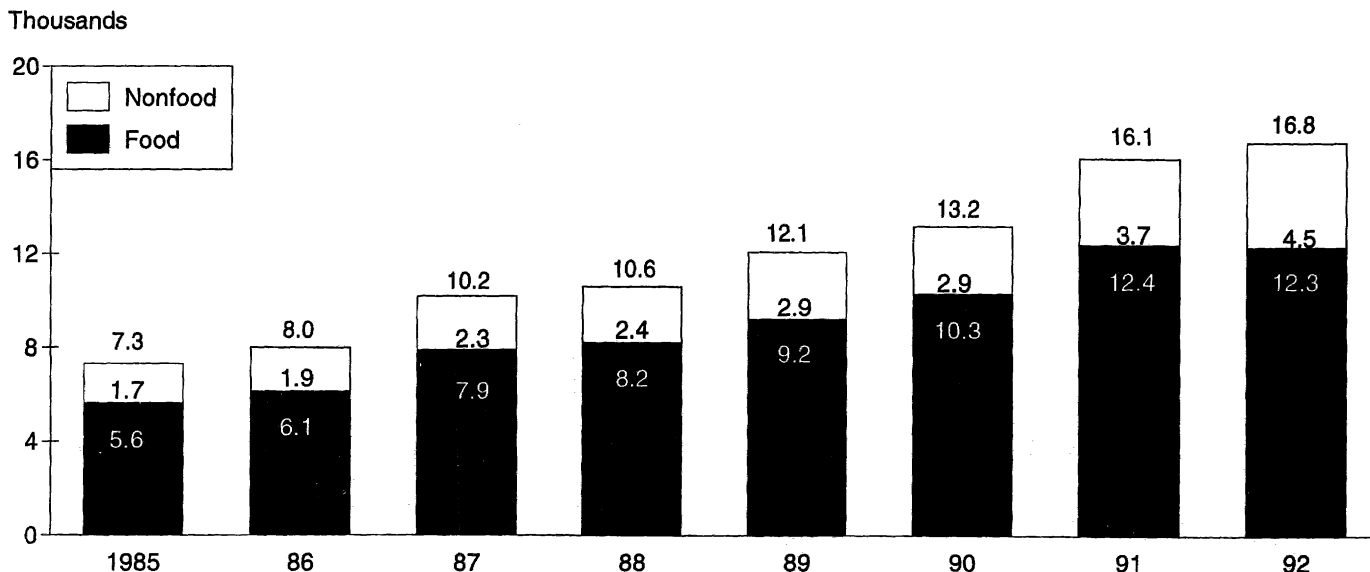


¹ Announced or completed only. Includes only recorded transactions.
 Source: (23).

Figure 8

New food and grocery product introductions, 1985-92

New food product introductions fell slightly in 1992, but nonfood introductions continued to rise.



Source: (26).

Nonprice competition, which differentiates a product in the eyes of the consumer, continued strong in 1992. The food system has always been the forerunner in new product introductions and advertising.

The Nation's food processors introduced over 16,100 new grocery products in 1991, an increase of nearly 22 percent over 1990 (fig. 8). Condiments, at nearly 2,800, comprised over 22 percent of the nearly 12,400 new food products introduced in 1991. Candy, gum, and snacks accounted for nearly 1,900 new food products, followed by bakery products at over 1,600. Nearly 1,400 beverages, mostly soft drinks, and over 1,100 dairy products, mostly cheese and ice cream, also found their way to Nation's grocery shelves in 1991. Together, these five product categories accounted for nearly 71 percent of all new food products in 1991. In 1992, total new grocery products rose to 16,790, due to a sharp increase in nonfood groceries. New food product introductions declined from 12,398 in 1991 to 12,312 in 1992, the first decline in 25 years. Bakery foods, condiments, desserts, entrees, fruits and vegetables, and soups had a decline in the number of new product introductions. American consumers had a total of 230,000 packaged food products from which to choose.

In 1992, food marketing firms spent an estimated \$11 billion in direct consumer advertising, such as electronic and printed media and coupons, which was

slightly higher than 1991 (fig. 9). A decline in food manufacturing advertising was offset by an increase in retail and restaurant advertising.

Competition was also keen in getting products on the shelves of the Nation's grocery stores in both 1991 and 1992. By most industry estimates, food processors spent about \$2 on retail promotion for every \$1 in direct consumer advertising through trade shows, promotions, discounts and allowances, and other incentives.

Performance

Food processors undertook 376 new plant projects in 1992 compared with 305 in 1991 (fig. 10). Plant and equipment expenditures continued to increase. Total new plant and equipment expenditures for food processing firms, which include nonfood operations, rose from \$16.4 billion in 1990 to \$17.4 billion in 1991, an increase of 6.1 percent. Food manufacturers spent an estimated \$18.4 billion on plant and equipment in 1992 (fig. 11). Between 1984 and 1992, the U.S. food manufacturing industries spent \$117 billion on new plant and equipment.

The retail food system continued modernizing and upgrading existing stores, while closing smaller retail outlets. The number of retail grocery stores, which has been falling steadily over the past 50 years, dropped by an estimated 1,000 stores in 1991. New

supermarkets are averaging about 50,000 square feet per store, with shelf space for about 30,000 items.

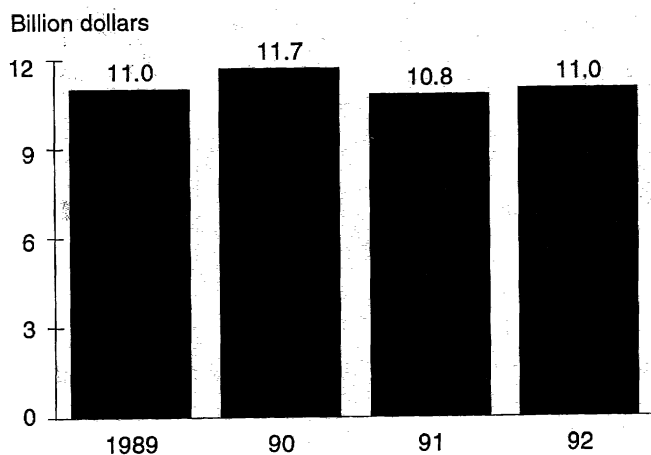
Research and development (R&D) within the food marketing sector is largely conducted in the food and tobacco processing industries. Like most other non-durable manufacturing industries, food is not R&D intensive. Food and tobacco processors will likely spend about \$1.5 billion, or about 0.4 percent of sales,

on R&D in 1992. Only about 6 percent of this amount went to basic research. More than 60 percent of all R&D funds will go to processing and new products. However, most R&D in food and tobacco processing is purchased from other sectors, such as food packaging and computer and machinery firms. In fact, much of the technological innovation for food processing comes from these sources. ERS estimates this amount to be about \$1.5 billion. The U.S. Department of Agriculture spent an estimated \$300 million on developing new products and processes, conducting health and nutrition research, expanding export markets, and improving market efficiency in 1991 (app. table 55).

Figure 9

Food-related advertising

Food marketing firms spent \$11 billion in advertising in 1992, slightly higher than the previous year.



Source: (3).

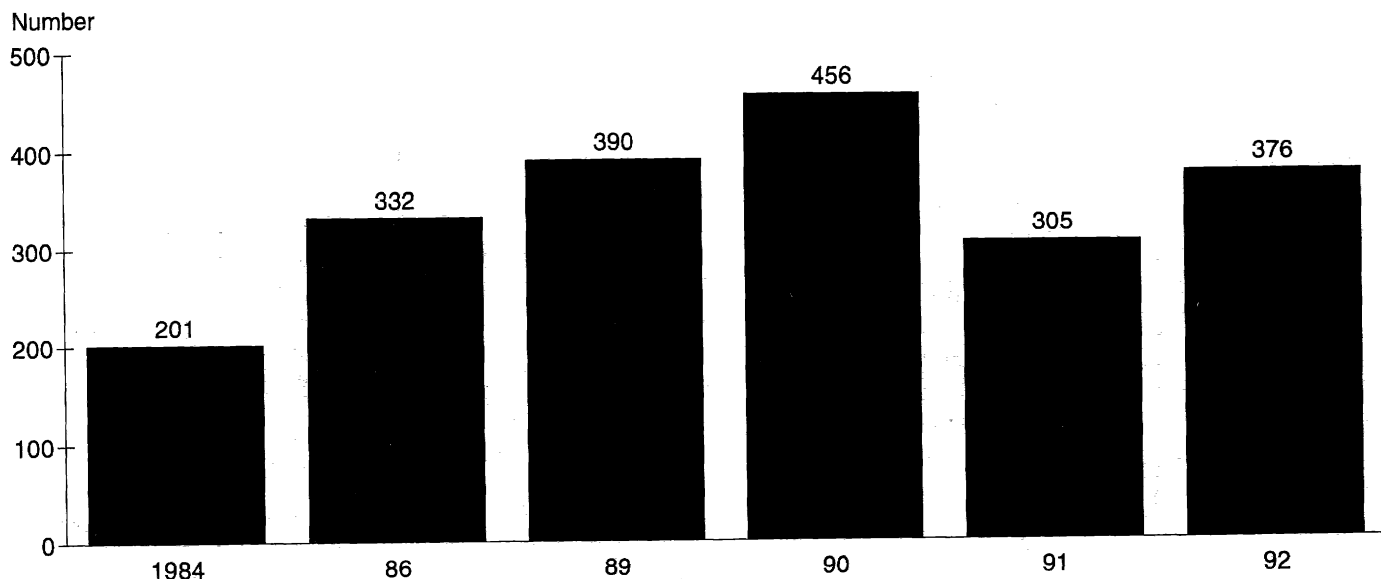
Output per employee in 1991, the most recent data available on productivity, rose only slightly in food retailing, but rose significantly in food service. This index of labor productivity increased in some food processing industries, such as milk, processed fruits and vegetables, sugar, bakery products, and soft drinks (app. table 56).

For the ninth consecutive year, owners and common stockholders in the food marketing system saw their shares outperform other sectors of the economy in 1991. However, by yearend 1992, nearly all food stocks had fallen (fig. 12). The indexes for food and beverages rose by more than 40 percent in 1991, while the index for retailers and wholesalers rose almost 24 percent in 1991. The index for restaurants,

Figure 10

New plant projects, selected years

New plant projects fell by one-third from 1990 to 1991, but rose in 1992.



Source: (14).

mostly fast-food chains, rose about 35 percent. By December 1992, both food processing and retailing equities had experienced a drop.

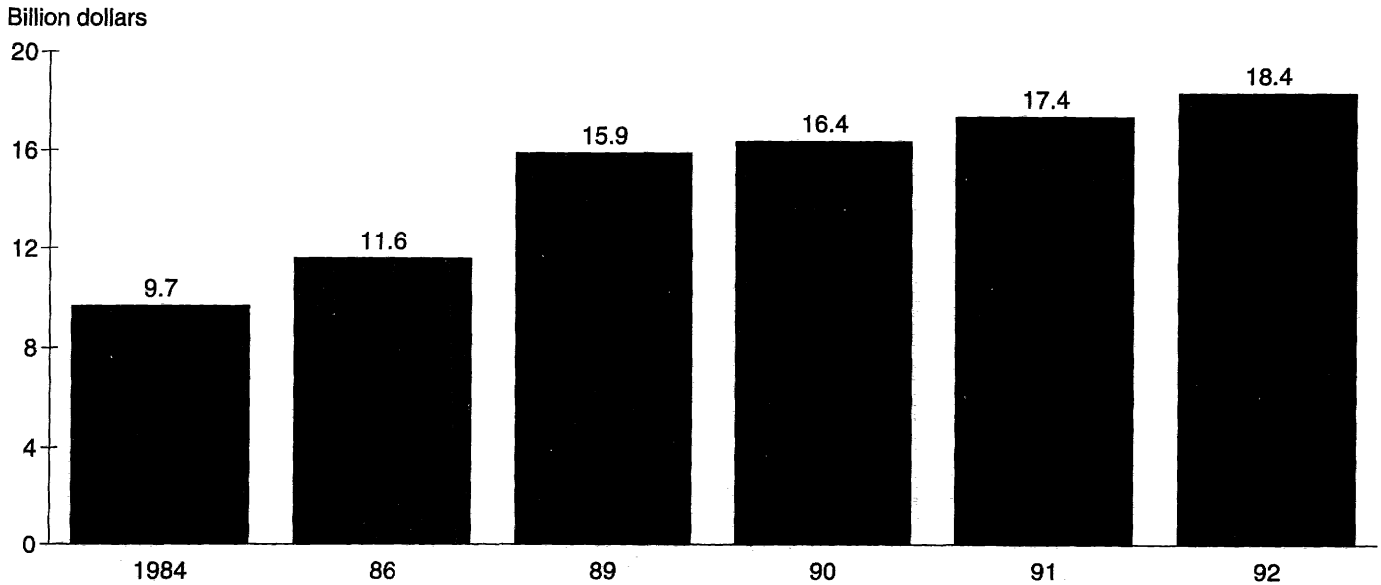
U.S. food firms have had a consistent dividend payout ratio. U.S. food processors paid out an estimated \$7.8

billion in dividends in both 1991 and 1992. Nearly 60 percent of aftertax income went to retained earnings, which are used for new product development, capital expansion, and acquisitions. Food retailers paid nearly \$500 million in dividends in 1991 and \$560 million in 1992.

Figure 11

Plant and equipment expenditures, selected years

Plant and equipment expenditures rose again in 1992, nearly doubling their 1984 rate.



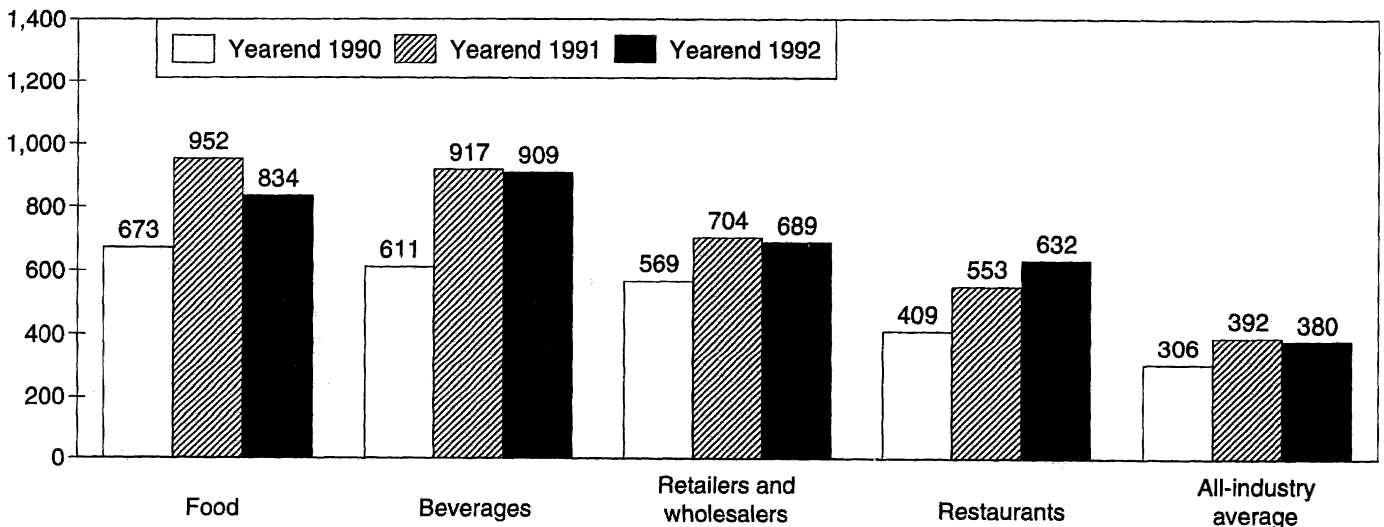
Source: (42).

Figure 12

Dow Jones Equity Market Indexes for the food marketing system

Food, beverage, and retail and wholesale companies increased in 1991 but dropped in 1992.

Index (June 30, 1980=100)



Source: (10).

Food and tobacco processors' profits from operations rose from nearly \$34 billion in 1990 to \$36 billion in 1992 (fig. 13). Food retailers' operational profits rose from \$5.9 billion in 1991 to \$6.4 billion in 1992. Modest labor and ingredient cost increases contributed to the gain. The lower value of the U.S. dollar further boosted income from foreign operations; also, many food marketing corporations reduced staffs and other operating costs to pay for increased interest expenses in the late 1980's.

Aftertax profits as a portion of stockholders' equity for food and tobacco processors rose from 16.2 percent to 17.6 percent between 1990 and 1991, but fell to 15.7 percent in 1992 (fig. 14). Retailers' aftertax profits amounted to 0.7 percent of sales and 14.5 percent of stockholders' equity in 1991, both up significantly from 1990, but fell to 0.5 percent and 9.0 percent in 1992.

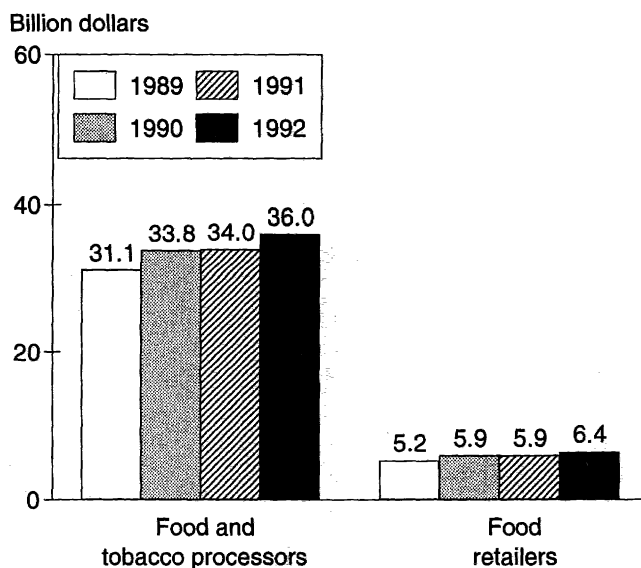
Debt for food manufacturers and retailers rose from \$259 billion in the fourth quarter of 1991 to \$281 billion in 1992 (fig. 15). Food remained one of the most leveraged industries in the American economy. The equity-to-debt ratio of food manufacturers averaged 0.94 in the fourth quarter of 1992 compared to 1.23 for all manufacturing corporations. The equity-to-debt ratio for food retailing at 0.40 was considerably below the equity-to-debt ratio for all retailers at 0.62 during the fourth quarter of 1992.

The U.S. food marketing system continued to expand globally in 1992, retaining its position as the leading international food system. This expansion is measured by the system's foreign trade, foreign investments, and the sales of its foreign subsidiaries. The

Figure 13

Profits from food manufacturing and retailing operations

Profits from operations rose for both processors and retailers in 1992.

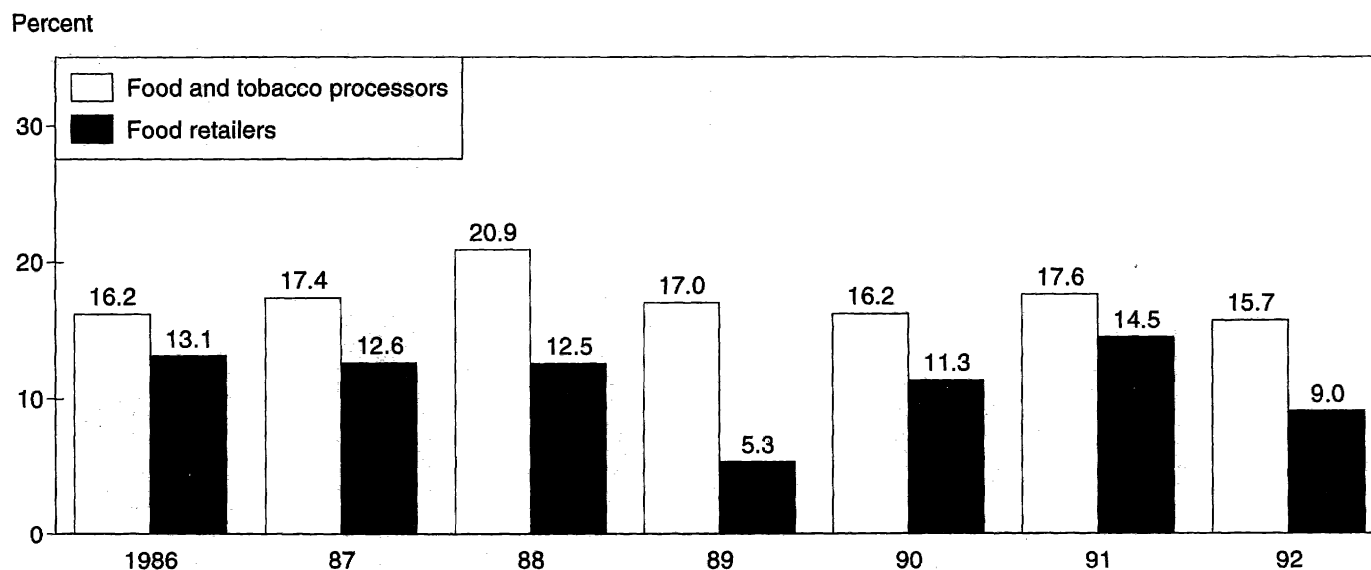


Source: (52).

Figure 14

Aftertax profits as a percentage of stockholders' equity

The aftertax ratio fell for both processors and retailers in 1992.

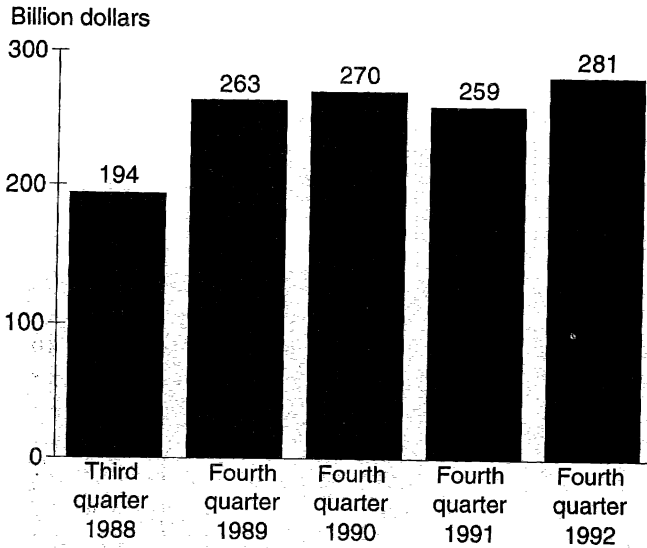


Source: (52).

Figure 15

Total liabilities of food and tobacco processors and food retailers

Debt levels increased in 1992 after experiencing a drop in 1991.



Source: (52).

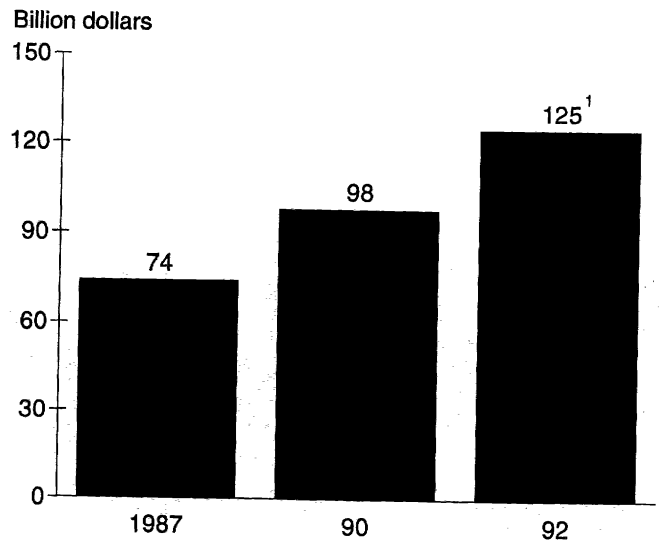
United States is one of the world's leading importers and exporters of processed foods. The U.S. deficit in processed food trade fell to \$700 million in 1991, the lowest in 9 years, with about \$21 billion in imports nearly offset by more than \$20 billion in exports. In 1992, the U.S. showed the first trade surplus, \$1 billion, in a decade.

However, trade data do not adequately reflect the global presence of U.S. food marketing firms. Many of the world's largest food processing firms aggressively expanded in foreign markets by increasing their investments in foreign plants or expanding licensing arrangements with foreign firms to produce and distribute their branded products. While large U.S. food processors exported on average only 4 percent of their sales, they made 27 percent of their total sales from their plants located in foreign countries. Food marketing sales from foreign subsidiaries of U.S. firms were nearly \$125 billion in 1992 (fig. 16). Food marketing sales from U.S. subsidiaries of foreign firms reached \$120 billion in 1992 (fig. 17). The decline in the value of the U.S. dollar in 1991 and 1992 was favorable to U.S. exports, foreign investment in the United States, and the value of foreign earnings of U.S. firms.

Figure 16

Food marketing sales from foreign subsidiaries of U.S. firms

Sales have steadily increased over the past 5 years, reaching \$125 billion in 1992.

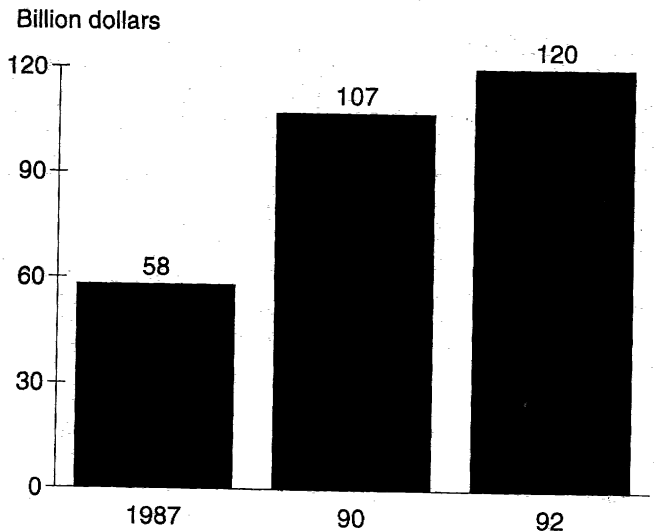


¹ Projected.
Source: (42).

Figure 17

Food marketing sales from U.S. subsidiaries of foreign firms

Sales have dramatically increased, more than doubling from 1987 to 1992.



Source: (62).

Food Manufacturing



The Nations' food processing industries remained highly profitable in both 1991 and 1992 despite sales stagnation, which reflected economic stagnation. Wage and price stability held down costs for the tenth consecutive year in 1992. Despite heavy pockets of concentration in a number of industries, competition among food processors for shelf space was intense. The rate of new product introduction growth slowed, but over 12,000 new food products appeared on grocery shelves in 1992. Food advertising was flat for the third consecutive year. Capital expenditures rose 6 percent to \$18.4 billion. Merger and leveraged buy-out activity declined for the third consecutive year in 1991, but rose again in 1992. Common stock prices for processed food companies outperformed all other industries in 1991, but fell sharply in 1992. The U.S. balance of trade in processed food showed a surplus for the first time in a decade.

Size

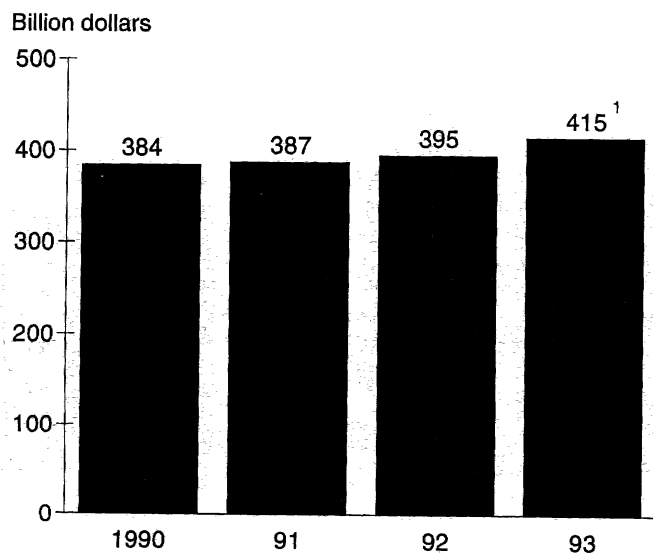
Shipments in 1993 are estimated at \$415 billion. Processed food industry shipments rose 2 percent and reached the \$395-billion mark in 1992, accounting for about 13 percent of all U.S. manufacturing activity and representing the largest sector in the economy. Because producer prices fell 1 percent in 1992, real growth was about 3 percent (fig. 18).

Estimated meat-product shipments accounted for about \$89 billion, dairy about \$52 billion, and beverages about \$56 billion.

Figure 18

Processed food shipments

Value of shipments steadily increased over the past 4 years.



¹ Estimated.
Source: ERS.

Economic Climate

In 1992, economic stagnation was very favorable to the cost side of the food processing sector. Interest rates, wages and farm prices, and the value of the U.S. dollar were low. The 49 food processing industries purchased about \$106 billion of animal and crop products from the U.S. farm sector, an additional \$21 billion in imported agricultural products, and \$9 billion in seafood in 1992. Food manufacturers paid only 0.2 percent more for these products in 1992 than in 1991, compared with 6.7 percent less in 1991.

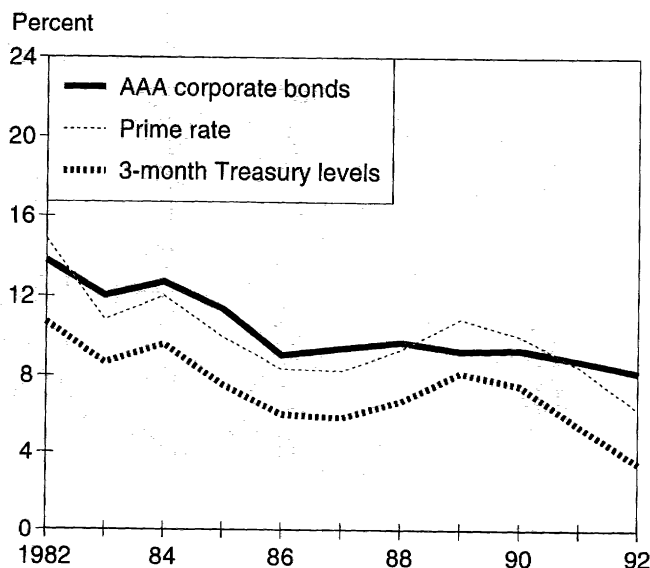
Labor is the second most important cost for food manufacturers, totaling about \$42 billion in 1992. The 49 food processing industries employed nearly 1,650,000 workers in 1992, virtually unchanged from 1991. Average hourly earnings rose 3 percent to \$10.10 per hour in 1992. Continuing a 13-year trend, this increase kept pace with inflation as the cost of living measured by the Consumer Price Index (CPI) rose 2.9 percent. However, employee benefits, especially health benefit costs, have been rising sharply in recent years.

The food processing industries are now among the Nation's most highly leveraged, with \$22 billion in liabilities. Food processors are very sensitive to interest rates, as interest costs amounted to nearly \$14 billion in 1992. The prime interest rate in 1992 averaged 6.25 percent, down from nearly 8.46 percent in 1991. Rates on short-term liabilities also dropped

Figure 19

Selected interest rates, 1982-92

The prime rate fell again in 1992, continuing a 3-year trend.



Source: (13).

(fig. 19). Three-month Treasury bills fell from 5.42 percent in 1991 to 3.45 percent in 1992. Short-term debt of less than 1 year averaged about \$77 billion for 1992. Long-term debt averaged about \$144 billion for the year. Throughout most of 1992, interest rates on long term bonds averaged 8.14 percent compared to 8.77 percent in 1991.

As the Nation's largest advertisers, the food processing industries are sensitive to change in advertising prices, which rose only slightly in 1992. Nighttime network television prices showed no increase in 1992, while spot television prices were up 4.0 percent. Network and spot radio prices remained the same, and consumer magazine rates increased 6.2 percent (app. table 53). Food processing is also the Nation's largest consumer of packaging materials, which averaged 0.3 percent lower than in 1991. Energy costs fell nearly 3 percent.

U.S. food processor performance was boosted by a decline in the value of the U.S. dollar in 1992 (fig. 20). Although exchange rates wavered sharply, the multilateral trade-weighted index averaged 86.6 in 1992 compared with 89.8 in 1991. Income from foreign operations amounted to nearly \$5 billion while U.S. exports were \$21 billion. Both were enhanced by the lower value of the U.S. dollar and thus higher value of foreign currency, making import prices higher.

Table 2--Mergers and divestitures in food processing

Nearly 2,900 mergers took place between 1982 and 1992.

Year	Acquisitions		Total	Divestitures
	By U.S. food processing firms	By all other firms		
	<i>Number</i>			
1982	165	85	250	120
1983	174	51	225	85
1984	178	64	242	100
1985	212	79	291	103
1986	NA	NA	347	150
1987	220	81	301	116
1988	229	122	351	161
1989	188	89	277	119
1990	148	60	208	108
1991	135	46	181	78
1992	163	54	217	119
Total	NA	NA	2,890	1,259

NA = Not available.

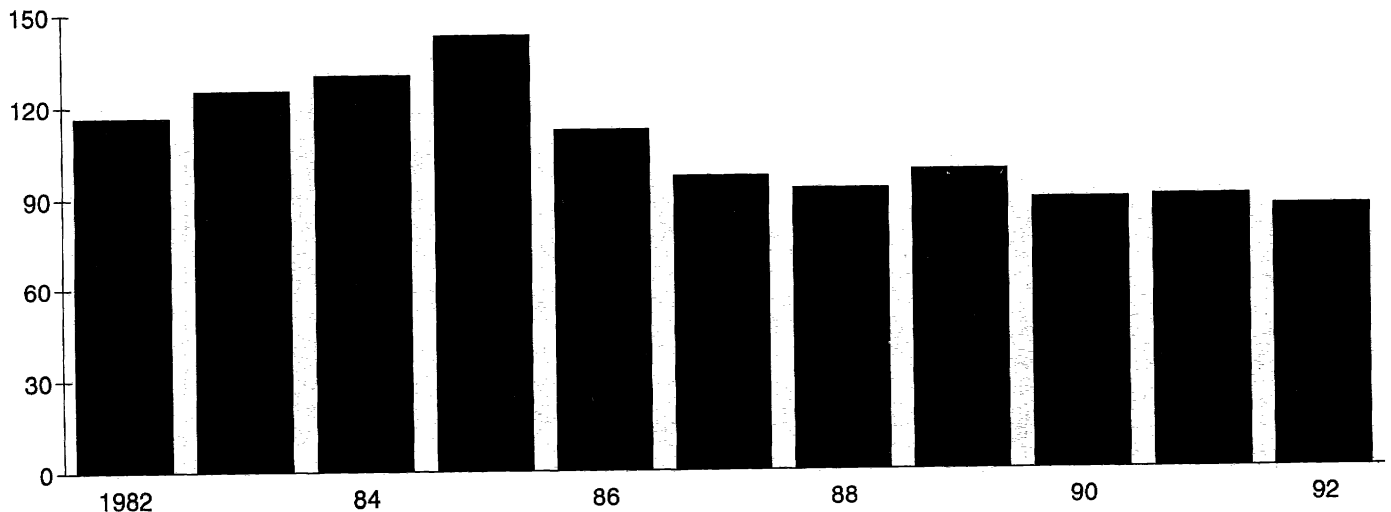
Source: (2).

Figure 20

Index value of the U.S. dollar

The value of the U.S. dollar averaged lower in 1992 than in 1991.

Index (1973=100)



Source: (13).

Structure and Organization

In 1992, merger and divestiture activity increased, but were still significantly below both 1989 and 1990 totals. Merger, divestiture, and leveraged buyout activity in the 49 food processing industries dropped in both number and dollar value of transactions in 1991. A record 351 transactions were recorded in 1988, but fell to 181 in 1991, the lowest since 1983. The total number of acquisitions rebounded in 1992. Of the 217 transactions that occurred in 1992, 163 were made by U.S. food companies and 54 were made by nonfood companies. There were 119 divestitures (table 2).

The recorded value of mergers over \$100 million rose from \$3 billion in 1991 to \$5 billion in 1992. Food processing, which ranked 12th in the value of transactions in 1990, rose to fourth in 1991 and fell to tenth in 1992. Foreign purchases of U.S. food processors,

at \$446 billion, fell to a 7-year low in value of transactions. U.S. purchases of foreign firms, at \$3 billion, rose sharply from 1991. Borden and ConAgra were the most active buyers in 1992. Leveraged buyout activity rose slightly in 1991 and 1992, following massive transactions in 1987 and 1988.

The 1992 increase reflected both lower interest rates and the continued strong cash positions of some food manufacturers. Nevertheless, the increase in liabilities for food processing over the past few years has considerably raised leverage levels, further exhausting borrowing potential. Despite a sharp decline in interest rates, some leveraged firms have been reducing debt by reissuing common stock. In 1992, food companies began to divest some of the acquisitions made in the 1980's and pared internal operations to pay higher interest expenses and improve efficiency.

Table 3—Share of value of shipments accounted for by the 4, 8, 20, and 50 largest companies, by manufacturing group, 1987

Industry	Companies	Product value of shipments accounted for by:					Herfindahl-Hirschman index for 50 largest companies
		Total value dollar	4 largest companies	8 largest companies	20 largest companies	50 largest companies	
	Number	Thousand dollars	Percent				
All industries	310,341	2,475,901.0	9	12	18	27	36
Food and kindred products	15,692	329,725.4	11	18	32	47	68
Tobacco products	98	20,757.1	82	94	99	99	2,345
Textile mill products	4,982	62,786.4	15	25	38	52	113
Apparel and other textile products	21,301	64,242.8	10	14	20	29	36
Lumber and wood products	32,014	69,746.7	11	16	23	31	45
Furniture and fixtures	10,775	37,461.0	10	15	25	36	47
Paper and allied products	4,215	108,988.7	18	30	52	68	172
Printing and publishing	57,376	136,195.6	7	13	23	34	34
Chemicals and allied products	8,313	229,546.1	14	21	34	53	97
Petroleum and coal products	1,320	130,414.0	30	49	72	89	375
Rubber and miscellaneous plastics products	12,149	86,634.3	9	13	21	31	46
Leather and leather products	1,965	9,082.4	13	21	36	55	95
Stone, clay, and glass products	12,682	61,476.6	11	18	30	41	62
Primary metal industries	5,400	120,248.2	17	25	41	55	121
Fabricated metal products	32,470	147,366.1	9	13	18	26	33
Industrial machinery and equipment	48,900	217,669.9	13	17	26	37	70
Electronic and other electric equipment	13,523	171,286.4	19	27	39	52	129
Transportation equipment	9,158	332,935.7	52	64	76	85	1,044
Instruments and related products	8,962	107,324.8	19	28	44	60	150
Miscellaneous manuf. industries	16,082	32,012.0	6	10	16	25	19

Source: (44).

Despite low merger activity, market share is concentrated among the 20 largest food and tobacco firms (fig. 21, table 3). The share of value added by the 20 largest firms rose from 23 percent in 1967 to 40.4 percent in 1987. The next 30 largest firms had a slight increase from 15.5 to 16.4 percent. Market share of the next 450 firms declined. The remaining 15,100 food processing firms experienced a decline in market share from 30.3 percent to 17.9 percent. As a result the 50 largest food processors control 47 percent of sales, compared with an average of 27 percent for all other industries.

Food ranked tenth in share of sales controlled by the top 50 firms among the 20 listed industries, which ranged from a high of 99 percent for tobacco products, essentially part of the food industry, to a low of 26 percent for fabricated metal parts.

Market Competition

Intense competition among the 16,000 firms in the 49 food processing industries continued in 1992. Despite economic stagnation, food processors used price and nonprice competition to gain both consumer acceptance and retail shelf space in the \$160-billion name-brand retail food market and in the \$240-billion food processing market which is made up of unbranded, undifferentiated products or products sold to food service or other food manufacturers. For many of the 49 food processing

industries, competition is typically focused among a few larger firms which control more than half the market (table 4).

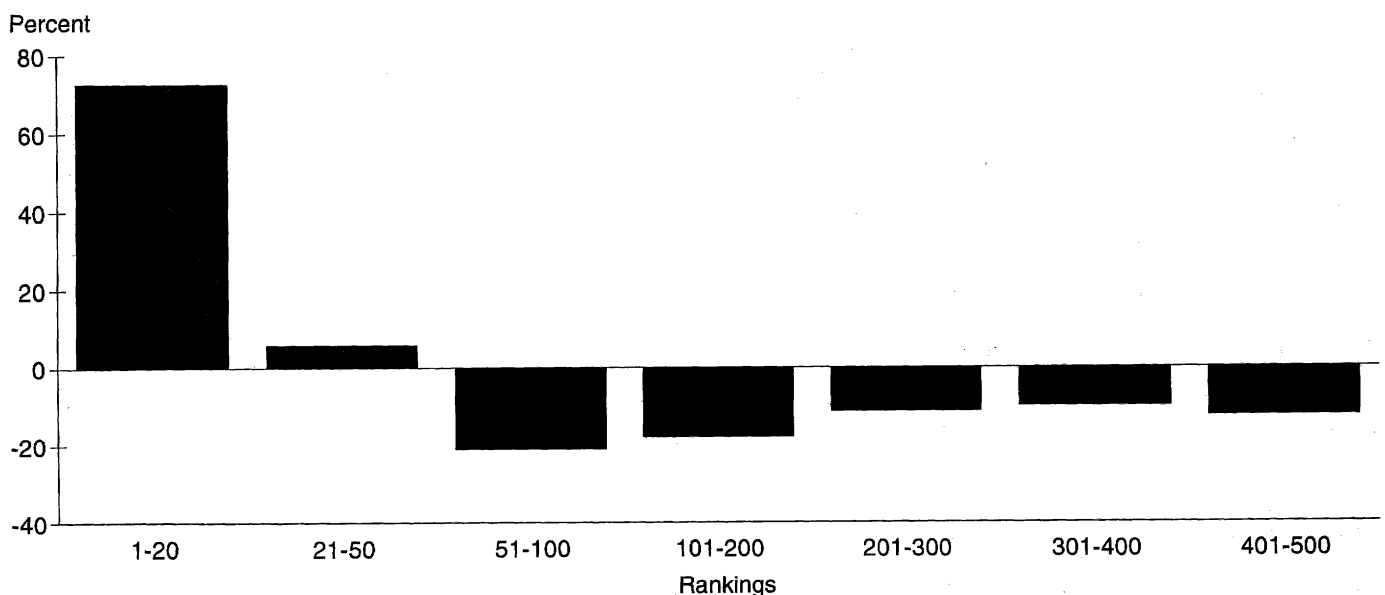
The 49 food processing industries in 1992 charged 0.7 percent less for finished consumer goods to retailers and wholesalers, compared with a 0.2-percent decrease in 1991. Price increases varied sharply among food products, largely reflecting changes in farm prices. Meat prices averaged 5.5 percent more due to higher livestock prices, especially hogs. Food manufacturers charge 1.2 percent less for intermediate products sold to other food manufacturers.

Most consumer-directed nonprice competition in 1992 consisted of product differentiation in the form of advertising and new product introductions in the name-brand market. About 40 percent of U.S. food sales are branded products; the other 60 percent are either unbranded, undifferentiated products, or products sold to food service or other food manufacturers. Sales to these two sectors would be only minimally affected by mass media advertising and other forms of product differentiation. Therefore, increasing or maintaining market share for food processors in these undifferentiated sectors is determined by price or contractual arrangements. However, the trend has been for more differentiation through new product introductions and advertising, even for traditionally undifferentiated products such as red meats, poultry, fish, and some dairy products.

Figure 21

Changes in share of value added by the largest food and tobacco firms, 1967-87

Market share is concentrated among the 20 largest firms.



Source: (33).

Table 4--Selected U.S. food brands, 1992

Brand	Category	Company	Total sales <i>Billion dollars</i>
Oscar Mayer	Processed meats	Kraft General Foods	2.50
Weight Watchers	Reduced calorie foods	H.J. Heinz Co.	1.80
Campbell Soup	Soup	Campbell Soup Co.	1.50
Kraft	Cheese	Kraft General Foods	1.45
Dole	Produce	Dole Food Co.	1.40
Chiquita	Produce	Chiquita Brands Int'l	1.00
M&Ms	Candy	M&M/Mars Inc.	.90
Del Monte	Shelf-stable produce	Del Monte Foods	.75
Kraft Salad Dressing	Salad dressing, mayonnaise	Kraft General Foods	.68
Pillsbury	Biscuits, dough, baking mix	Pillsbury Co.	.58
Cheerios	Breakfast cereal	General Mills, Inc.	.57
Snickers	Candy	M&M/Mars Inc.	.55
Green Giant	Frozen/shelf stable veg.	Pillsbury Co.	.55
Entenmann's	Baked goods	Kraft General Foods	.51
Keebler	Crackers, snacks	Keebler Co.	.47
Stouffer's	Frozen entrees	Stouffer Foods/ Nestle	.45
Star Kist	Canned seafood	H.J. Heinz Co.	.43
Doritos	Snacks	Frito Lay Inc./PepsiCo.	.43
Wonder	Bread, rolls	Ralston Purina Co.	.43
Healthy Choice	Reduced-calorie foods	ConAgra Inc.	.43
Quaker Oats	Hot cereal	Quaker Oats Co.	.42
Louis Rich	Processed meats	Kraft General Foods	.41
Betty Crocker	Baking mixes	General Mills, Inc.	.39
Jell-O	Puddings, gelatin	Kraft General Foods	.37
Pepperidge Farm	Bread, rolls	Campbell Soup Co.	.37

Source: (1).

American consumers had over 230,000 packaged food products to choose from in 1992. The rate of new product introductions slowed in 1992. Over 16,790 new grocery products were introduced in 1992, compared to 16,143 in 1991. Over 2,500 condiments and nearly 2,100 candy, gum, and snack products came on the market in 1992, while nearly 4,400 new bakery, beverages, and dairy products were put on the Nation's grocery shelves (table 5). These estimates include new size introductions. ERS has no data measuring the success of these new products or the number of recent products removed from the market. Nearly 100,000 new grocery products have been introduced since 1982. Industry estimates put the failure rate of new food products at 90 to 99 percent. Introducing a new product is extremely expensive, but a success can be extremely profitable. New food product leaders included Kraft and H.J. Heinz. However, the top 20 firms accounted for only about 17 percent of new product introductions. Smaller or midsized firms accounted for the remainder as they tried to make inroads in these concentrated industries.

Table 5--Selected new product introductions

Item	1991		1992		Percent change
	----- Number -----		Percent		
Baby foods	95	53		-44.0	
Bakery foods	1,631	1,508		-7.5	
Baking ingredients	335	346		3.3	
Beverages	1,367	1,538		12.5	
Breakfast cereal	108	122		12.9	
Candy, gum, snacks	1,885	2,068		9.7	
Condiments	2,787	2,555		-8.3	
Dairy	1,111	1,320		18.8	
Desserts	124	93		-25.0	
Entrees	808	698		-13.6	
Fruits and vegetables	356	276		-22.5	
Pet food	202	179		-11.4	
Processed meat	798	785		-1.6	
Side dishes	530	560		5.7	
Soups	265	211		-20.4	
Total	12,398	12,312		-0.7	

Source: (26).

In 1992, branded food processors spent \$5.9 billion in direct consumer advertising, continuing food's role as the leading advertiser in the U.S. economy. Prepared and convenience foods accounted for \$1.3 billion, while soft drinks accounted for over \$700 million. Food processors also spent \$2.6 billion in redeeming coupons. Food manufacturers must also compete vigorously for scarce space on the Nation's grocery shelves. Regardless of the extent of direct consumer advertising, consumers cannot buy the product unless it is on the shelves. Manufacturers' trade promotion spending has exceeded direct consumer advertising spending. Trade shows, discounts and allowances, coupon processing fees, special promotion incentives and prizes, advertising allowances, and instore displays are all parts of processor promotions.

Domestic Performance

Despite economic stagnation and disappointing sales growth, the aggregate performance of the 49 U.S. food processing industries was spectacular. The performance of the 49 food processing industries is difficult to assess based on profitability, productivity, capacity utilization, capital expansion, foreign trade, investment, producer, consumer, and farm prices, and equity performance. These measures range widely in different food processing industries, such as breakfast cereals and frozen specialties. Much of the information on individual food processing industries is not available. These performance measures, however, indicate a composite performance among all the 49 food processing industries.

Profitability from operations increased in 1992. Sales of the Nation's food and tobacco processors rose 3 percent in 1992. Profits from operations rose to \$36.2 billion excluding interest expense, profits from foreign operations, and gains from the sale of assets, which rose 6 percent (table 6). This increase largely reflected cost savings. Wages in 1990 rose 2.9 percent, and the labor force was virtually unchanged at 1.6 million workers. Farm prices charged fell 0.2 percent. Net income from foreign operations was about \$3.5 billion, aided by a lower value of the U.S. dollar. Thus, profits from foreign and domestic operations averaged nearly \$39.2 billion, the same as in 1992. Nonoperating income from interest, dividends, and rents amounted to nearly \$6 billion.

The industry paid \$14 billion in 1992 interest expense, however. Total liabilities of food processors amounted to about \$222 billion by fourth quarter 1992, up about \$15 billion dollars from 1991.

Table 6—Profits of food and tobacco processing firms

Year and quarter	Before-tax income from operations	Aftertax income	Aftertax profits as a share of stockholders' equity	
			Food and tobacco processors	All manufacturers
	--- Million dollars ---		----- Percent -----	
1985	20,015	12,798	15.3	10.3
1	4,288	2,571	12.8	10.5
2	5,277	3,059	15.0	10.9
3	5,163	3,542	16.5	9.9
4	5,287	3,626	16.9	9.9
1986	21,595	13,292	16.2	9.5
1	4,009	2,686	13.3	9.0
2	5,719	3,275	15.9	12.2
3	5,695	3,178	15.5	8.4
4	6,172	4,153	20.0	8.5
1987	24,658	15,579	17.4	12.9
1	5,159	2,879	13.6	11.2
2	6,292	3,849	17.4	14.1
3	6,522	3,869	17.0	14.6
4	6,685	4,982	21.6	11.5
1988	28,686	20,625	21.9	16.4
1	5,890	4,469	19.1	15.8
2	7,106	6,005	25.0	17.5
3	7,563	5,400	21.9	16.0
4	8,127	4,751	17.9	15.4
1989	30,757	16,545	17.0	13.6
1	6,501	3,865	15.6	15.7
2	8,089	3,939	16.5	14.8
3	7,569	3,335	13.9	13.5
4	8,598	5,406	22.2	11.3
1990	33,797	16,074	16.1	10.7
1	7,105	3,493	14.7	10.9
2	8,601	5,169	21.1	13.5
3	8,501	5,117	19.6	11.2
4	9,590	2,295	9.0	7.1
1991	34,287	19,639	17.6	6.4
1 ¹	7,788	4,969	18.5	7.0
2	9,176	5,160	18.7	8.7
3	8,917	5,539	19.3	6.6
4	8,406	3,971	13.9	3.2
1992	36,213	18,384	15.7	2.3
1	7,779	3,125	10.9	-17.4
2	9,449	5,953	20.4	11.6
3	9,545	4,998	16.9	10.9
4	9,440	4,308	14.5	4.1

¹ Preliminary.
Source: (52).

Owner's equity-to-debt ratio was 0.94 percent, well below the 1.23 percent for all manufacturing firms.

After paying nearly \$9.8 billion in Federal and State taxes, food manufacturers earned \$184 billion. The 49 food processing industries paid out about \$8 billion in dividends.

Aftertax profits as a share of stockholders' equity fell from 17.6 percent in 1991 to 15.7 percent in 1992. Return on equity was well above that of all manufacturers. Aftertax profits as a percentage of food processing sales averaged about 4.5 percent.

Labor productivity in most food manufacturing industries probably leveled off in 1991 and 1992 because production rose only slightly and the number of employees remained about the same. However, labor productivity has increased in some food manufacturing industries in recent years. Output per employee hour increased sharply for all industries in 1991 and for red meat industries in 1990, the latest years for which data are available. Overall productivity rose slightly because of some dramatic technological breakthroughs. However, employment levels in food manufacturing industries have remained unchanged. Therefore, output per employee hour has been rising.

Much of this productivity increase is the result of plant and equipment modernization. In 1992, the

food processing industries increased plant and equipment expenditures on an enterprise basis by 6 percent to \$18.4 billion (app. table 70). Overall, neither economic stagnation nor higher debt appeared to be affecting capital expenditures for new plants and major renovations.

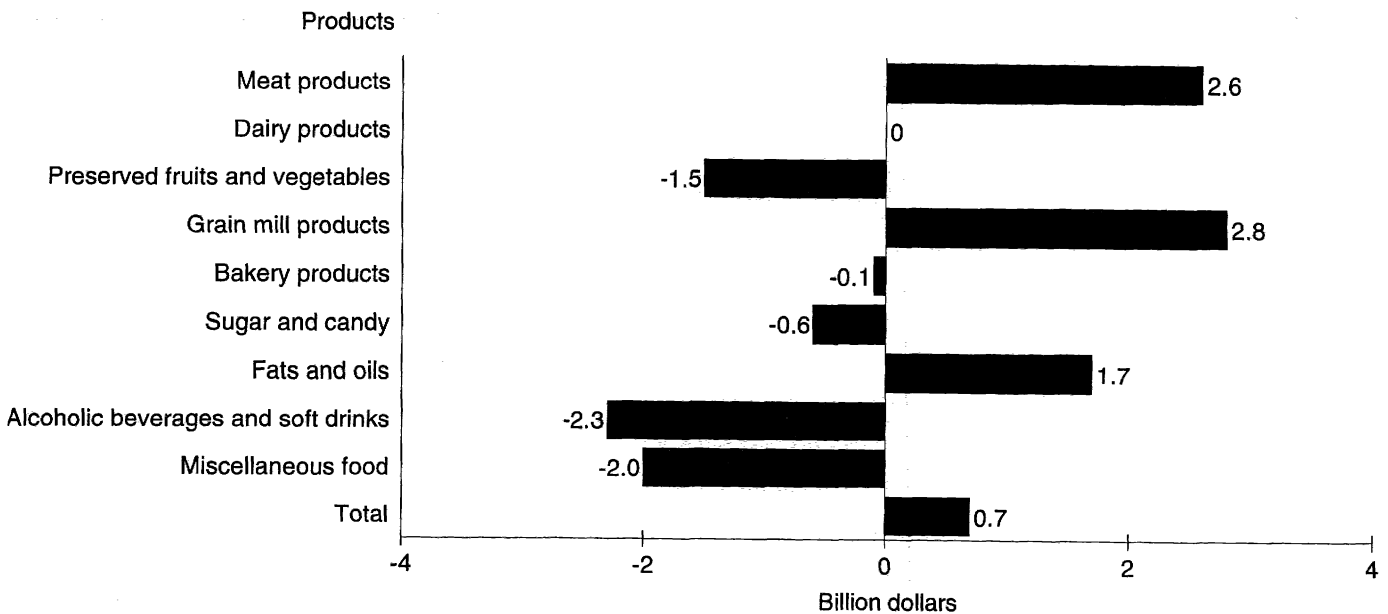
Food processing plants operated at 78 percent of capacity in 1990 (data for plant capacity utilization are not available for 1991-92), but varied widely among the 49 industries (app. table 76).

R&D in the food marketing sector is largely conducted in the food processing industry. But expenditures on R&D in food processing, both in the United States and abroad, have traditionally been among the lowest of all manufacturing industries. Both food processing and textiles spend about 0.4 percent of sales on inhouse R&D. In 1992, food and tobacco processors spent nearly \$1.5 billion on research. About 70 percent of food and tobacco processing R&D expenditures went to new product and process development and another 25 percent went to applied research. Only about 6 percent went to basic research. However, ERS estimates that more than \$1.5 billion in R&D is purchased from other sectors, such as food packaging, computer, and machinery firms. Food processors also benefit from the basic R&D conducted by Government agencies, universities, and venture capitalists.

Figure 22

Trade balance in food processing

Processed food shared the first balance of trade surplus in a decade.



Source: ERS.

For the first time in a decade, the U.S. food processing industry in 1992 was one of the lower performers in the equity markets, following 10 years appreciated returns to stockholders (corporate owners). Between 1991 and 1992, the Dow Jones Market Equity Index for food stocks fell 12.4 percent, compared with a 3.1-percent decline for all common stocks (app. table 77 and fig. 12).

International Performance

In 1992, the U.S. food processing industry showed a positive trade balance for the first time in 10 years. Projected sales of foreign subsidiaries of U.S. firms rose sharply.

The value of U.S. food processing industry exports, at \$22.7 billion in 1992, exceeded imports by \$0.7 billion (app. tables 81, 82, and fig. 22). The surplus in food processing was \$5.1 billion excluding seafood and beverages. Exports rose from \$20.1 billion to nearly \$22.6 billion, while imports rose from \$20.8 billion to almost \$21.9 billion (app. table 81).

Meat products showed a trade surplus of \$2.6 billion, and fats and oils showed a surplus of \$1.7 billion. Grain mill products had a surplus of \$2.8 billion. Preserved fruits and vegetables, bakery products, sugar and candy products, beverages, and miscellaneous food products each showed a perennial deficit.

The foreign food processing affiliates of U.S. firms had estimated sales of \$88 billion in 1992. These affiliates, owned partly or totally by U.S. firms, had assets of almost \$57 billion in 1990. The U.S. affiliates of foreign firms had estimated sales of \$48 billion in 1992.

Foreign direct investment in the U.S. food processing sector was \$23.4 billion in 1991, the latest year for which "book value" is available. Direct foreign investment by the United States in foreign food processing rose from \$16 billion in 1990 to \$17 billion in 1991. In 1992, the U.S. spent nearly \$2.9 billion in foreign food plants, compared to \$2.6 billion in 1991. More than 50 percent of this investment was in EC countries (table 7).

Table 7--Capital expenditures by majority-owned foreign food affiliates of U.S. companies

Country	1990	1991	1992
<i>Million dollars</i>			
Total	2,179	2,602	2,845
Canada	267	248	NA
EEC	1,146	1,420	1,652
Belgium	35	39	89
Denmark	35	49	50
France	128	139	188
Germany	126	278	347
Greece	17	27	25
Ireland	19	28	85
Italy	85	70	72
Luxembourg	0	0	0
Netherlands	184	271	234
Portugal	14	21	20
Spain	100	108	137
United Kingdom	402	392	403
Other European countries	55	40	57
Japan	47	90	NA
Australia, New Zealand, S. Africa	106	154	132
Latin America	468	539	523
Other	90	111	NA

Source: (42).

Food Wholesaling



In 1992, the wholesale food industry continued a modest recovery begun a year earlier. Sales of general line wholesale merchants paced the industry's recovery, but sales of other wholesalers also rose. Wholesale clubs expanded rapidly, adding nearly 100 units during the year. Clubs' sales surged as record market entry and inducements such as supermarket-style fresh food departments and business delivery services boosted household and business traffic. Foodservice distributors also posted sales gains. Mergers increased slightly, and some leading wholesale firms substantially increased their market shares through acquisitions. Consequently, industry concentration continued to rise.

Sales

Current wholesale sales totaled \$453 billion in 1992, about 3 percent above 1991 (figs. 23 and 24). After adjusting for price changes, industry sales rose almost 4 percent in 1992 (fig. 25). Merchant wholesalers' sales rebounded in 1992, rising 5 percent above 1991 levels in real terms. This sales recovery contrasts with 2 years earlier when merchant wholesalers real sales fell a record 6 percent in one calendar period. Real sales of manufacturers' sales offices and branches also rose about 4 percent above 1991 levels. At the other extreme, brokerages' real sales increased only 1 percent, and their nominal sales were unchanged from a year earlier.

Sales will top \$500 billion in 1993 if sales growth observed through the third quarter of 1993 continues to the end of the year.

Structure and Organization

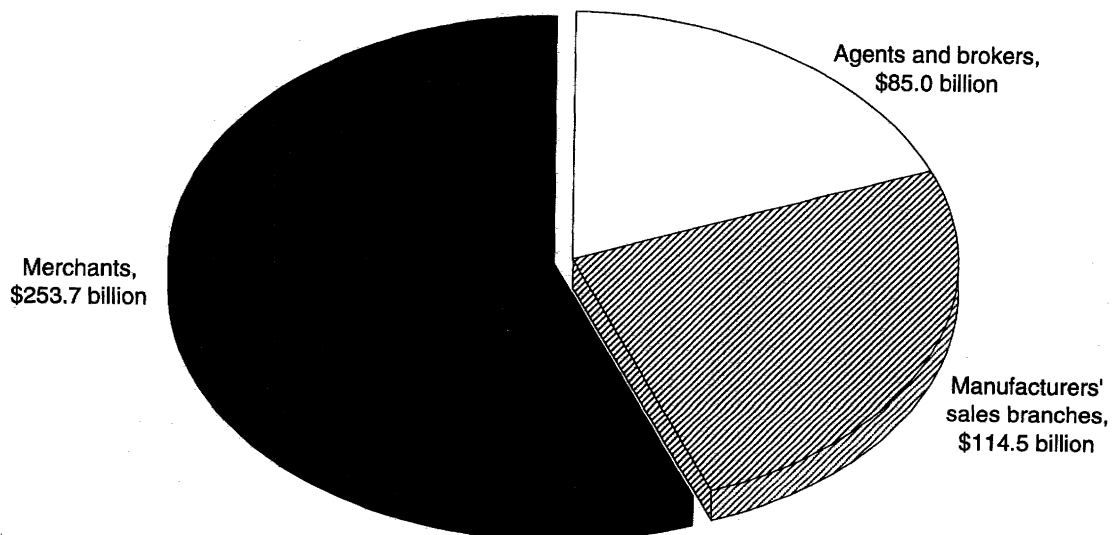
The wholesale food industry has seen two notable structural changes within the past decade: an early surge of mergers that diminished by the end of the 1980's, and a late surge in wholesale club numbers that has yet to peak. Mergers produced national grocery and food distributors, supplanting local and regional operations that had previously existed. Fewer but larger firms meant higher aggregate sales concentration. Thus, mergers changed the structure of the wholesale food industry.

The growth in wholesale club numbers has intensified competition within the club sector and between wholesale clubs and traditional supermarkets. Wholesale clubs have already saturated large population areas. Consequently, same-store sales of some leading clubs are static or declining because a fixed number of customers per area declines as companies and their competitors increase the number of stores in a territory. Existing supermarkets routinely respond to clubs' incursions by offering the supermarkets' own version of club packs, unadvertised specials, attractive bakery and restaurant items, and by emphasizing the myriad of services that supermarkets characteristically provide that clubs do not. And some nonclub competitors have responded in-kind to wholesale club

Figure 23

Wholesale food sales, 1992

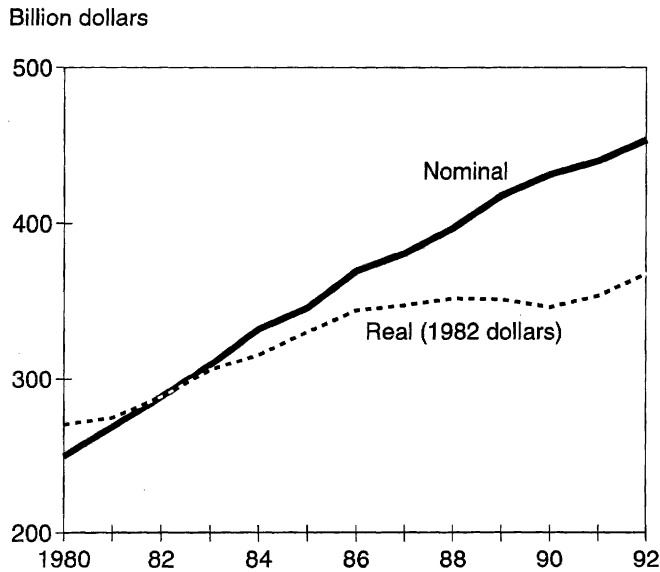
Merchant wholesalers dominated the sectors' \$453 billion in sales.



Source: (51).

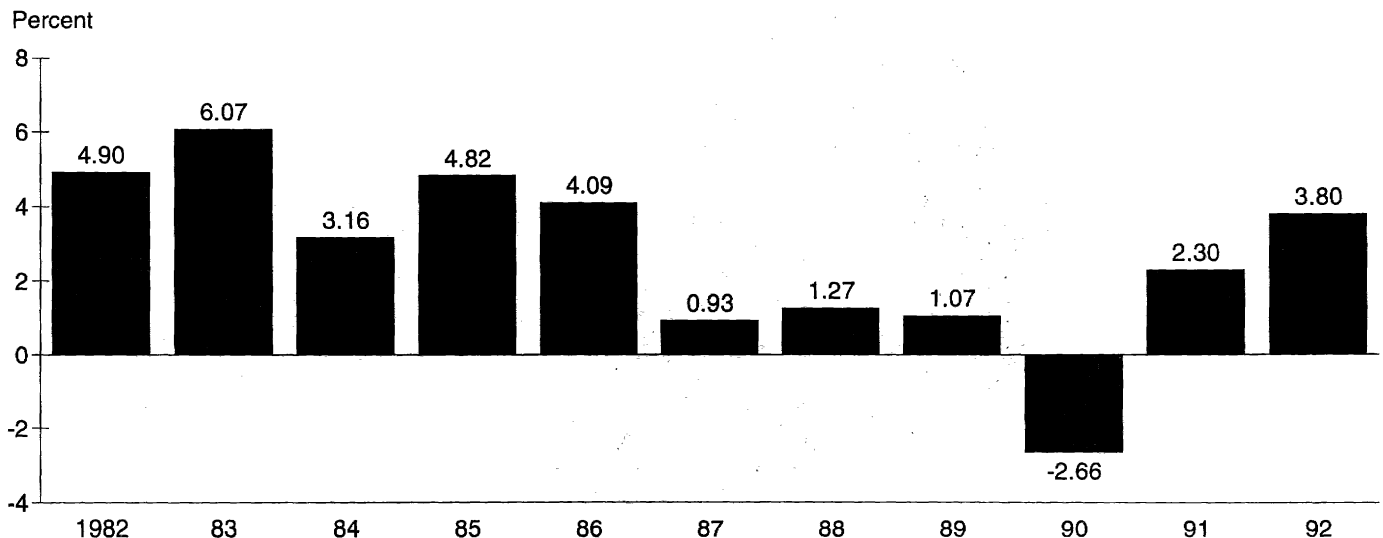
competitors by building their own clubs. These near-competitors include Meijer, a regional supermarket chain in Michigan and Wakefern, the fourth-ranked general line wholesaler firm nationally. Leading wholesaler, Super Valu, added clubs in mid-1993, adding another competitive dimension to the market.

Figure 24
Wholesale food sales, 1980-92
After experiencing a dip in 1990, real sales recovered in 1991-92.



Source: (47, 51).

Figure 25
Average annual change in real wholesale sales¹
Sales continued upward in 1992.



¹ Sales adjusted for price changes (1982=100).
 Source: (47, 51).

Wholesale club firms have begun moving into areas with lower population densities. It is yet to be determined whether sufficient traffic exists in smaller areas to supply the volume necessary to operate profitably on clubs' characteristically narrow margins. This second major structural change, the proliferation of wholesale clubs is still underway, but the presence of clubs has already changed competitive terms.

Early in the 1990's, another trend developed: the movement abroad of U.S. wholesale food firms. Prompted initially by free trade agreements between the United States and other countries, U.S. wholesale food firms have moved quickly to enter foreign markets through joint ventures with indigenous retail food and grocery firms. This topic is discussed in greater detail later in this report.

Mergers

Mergers declined in 1991 but rose in 1992 (fig. 26 and table 8). Measured by assets, aggregate concentration in the wholesale food industry has remained essentially unchanged for several years. In 1990, the last recorded year for assets ownership, 16 percent of wholesale food firms accounted for nearly 90 percent of the industry's assets (table 9). The 1992 year saw several large acquisitions by industry leaders.

In a record transaction, second-ranked Super Valu bought third-ranked Wetterau for cash and other considerations totaling \$1.1 billion. This deal created a

\$17 billion company with effective nationwide distribution. The Unifax group acquired White Swan Distributors. These formerly independent foodservice distributors had combined sales of \$1.5 billion in 1992. The merger will shift the merged operation to fourth place among foodservice distributors. The Nation's largest distributor to convenience stores, the

Table 8--Mergers and divestitures in the wholesale food industry

Mergers rose in 1992.

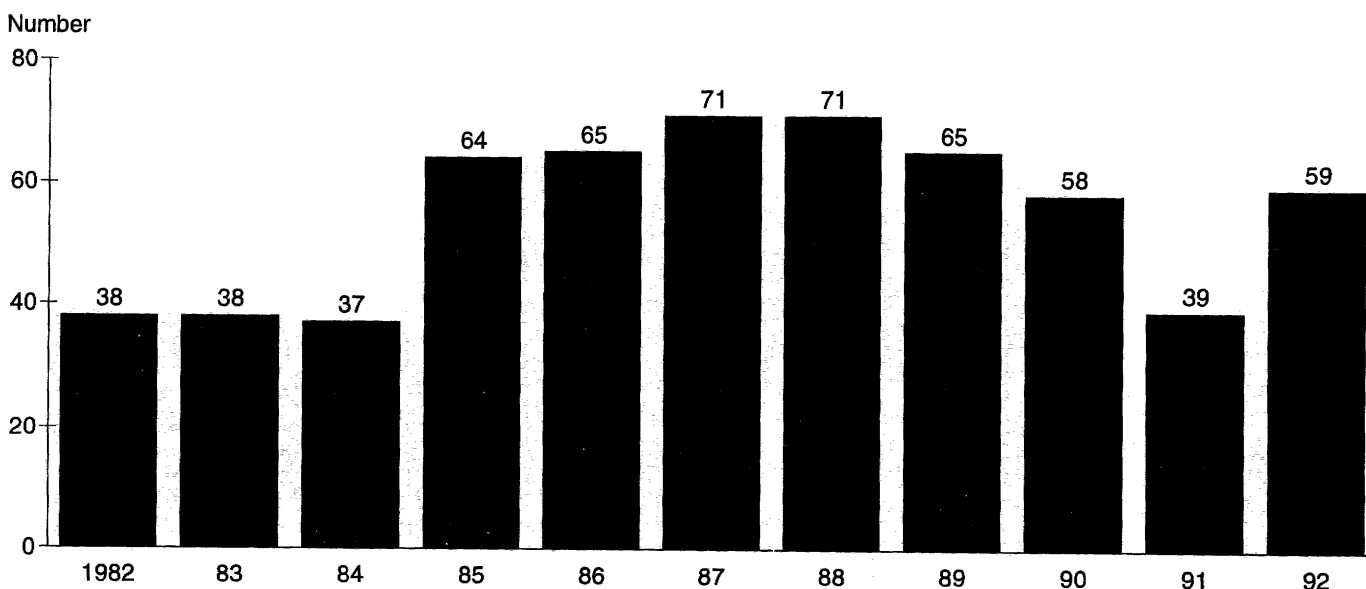
Year	Acquisitions			Divestitures
	By U.S. wholesale food firms	By all other firms	Total	
		<i>Number</i>		
1982	36	2	38	15
1983	34	4	38	13
1984	33	4	37	8
1985	61	3	64	18
1986	52	13	65	16
1987	44	27	71	12
1988	49	22	71	32
1989	39	26	65	18
1990	41	17	58	11
1991	32	7	39	16
1992	50	9	59	23

Source: (2).

Figure 26

Mergers in the wholesale food industry

The number of mergers fell in 1991, but rebounded in 1992.



Source: (1, 2).

McLane Company, acquired the distribution facilities of the Southland Company's 7-Eleven Stores along with distribution rights to over 6,000 7-Eleven units. The transaction adds over \$1 billion to McLane's volume. McLane also entered the British market by purchasing the distribution arm of a 7-Eleven licensee in the United Kingdom.

In mid-1993, the Price Company and Costco Wholesale Club merged. That transaction created a company with combined 1992 domestic sales of \$14 billion.

Other wholesale food companies have also expanded through joint ventures with foreign partners. Wholesale clubs have been in the vanguard. The Price Club jointly operates a club in Mexico and plans openings in Spain and Portugal. Costco will open a club in England; Sam's parent firm, Wal-Mart, opened a Sam's-style wholesale club in Mexico City in partnership with a Mexican retailer early in 1992. Wal-Mart plans additional clubs in Mexico, possibly as many as ten within the next 2 years.

Mexico was also the focus of expansion plans of broad-line distributor Fleming, who entered a joint venture to build up to 6 supermarkets with Fleming holding a substantial interest in the proposed operation to be capitalized initially at \$20 million.

Sector Trends

General-line wholesale firms, manufacturer's sales branches, wholesale clubs, and foodservice firms all

Table 9--Distribution of wholesale food firms, by owned assets, 1990*Large distributors control most of the industry's assets.*

Asset value	Firms	Share of all firms	Share of all assets	Cumulative share of firms	Cumulative share of assets
<i>1,000 dollars</i>	<i>Number</i>	<i>Percent</i>			
250,000 or more	26	0.1	40.4	0.1	40.4
100,000-249,999	24	.1	8.0	.2	48.4
50,000-99,999	43	.2	6.2	.4	54.6
25,000-49,999	78	.3	5.4	.7	60.0
10,000-24,999	281	1.1	8.8	1.8	68.8
5,000-9,999	464	1.8	6.7	3.6	75.5
1,000-4,999	3,201	12.4	14.4	16.0	89.9
500-999	3,299	12.7	4.7	28.7	94.6
250-499	4,172	16.1	3.0	44.8	97.6
100-249	3,581	13.8	1.3	58.6	98.9
Less than 100	10,722	41.4	1.1	100.0	100.0

Source: (62).

expanded sales during 1992. Among leading general-line distributors, new corporate retail foodstores provided the greatest sales boost, balancing the offsetting influence of declining sales in existing stores. That growth was a bright spot in an otherwise lackluster year marked by deflation in the cost of goods sold and intensified retail competition. Brokerages were buffeted by changed trade practices that curtailed their services and reduced their fees. Foodservice operators sought new customers, producing higher sales from their efforts. Wholesale clubs held to the growth pace of recent years, but declining sales in existing stores denoted large-market saturation.

General-Line Distributors

General-line food wholesale merchants' growth has been propelled by a combination of expanding existing independent store accounts, adding chain business, and operating corporate retail supermarkets. Of these sources of growth, corporate retail unit operations have received the most attention from leading general-line distributors. For example, Fleming outlined a strategic plan that called for more corporate retail foodstores to expand its share of growing markets. Thus, the distributor formally stated the company's course implied in its acquisition in 1991 of Baker's Supermarkets, a quarter billion dollar volume Omaha chain. Super Valu opened seven new retail food stores in the last quarter of 1992, bringing its total to 264 stores. Its 1991 retail unit sales placed Super Valu among the top 25 food retailers in the Nation. In 1993, Super Valu opened about 20 retail stores; the company also opened 2 wholesale clubs in 1993, its first-time use of the club format.

Brokerages are being pressured by several developments. Some food retailers such as Wal-Mart have chosen to deal directly with the manufacturers who are their significant suppliers. A related development is a growing use of internal brokers by some food retailers and wholesalers for private label procurement. In either case, traditional independent brokers' services are replaced or severely curtailed. At the same time, manufacturers are reducing their commissions, while brokers are servicing diverted products at retail but not being paid. Consequently, brokerages' fees are off and their revenues continue to fall. Brokerages are exploring alternatives that include requests for regulatory intervention by the Federal Trade Commission.

Foodservice Distributors

Leading foodservice distributors' sales grew 8 percent to \$20.5 billion in 1992, the largest increase in several years (table 10). Foodservice distributors expanded customer bases to include such disparate, nontraditional customers as Boy Scouts, fraternity houses, convenience stores, church auxiliaries, and individuals. Distributors also offered greater product variety to induce larger purchases by existing accounts. Food cost deflation also increased orders from restaurants and eating places, which are among the principal customers of foodservice distributors.

In 1992, White Swan and Unifax merged, creating a \$1.5 billion company. However, the sector remains relatively unconcentrated, as the top 50 distributors accounted for nearly one-fourth of foodservice sales. Large numbers of small, local suppliers remain the bedrock of foodservice distribution.

Table 10--Sales of the top 10 foodservice distributors

The 5 largest firms accounted for 82 percent of the sector's \$20.5 billion in sales.

Firms	Sales	
	1992	1991
	<i>Billion dollars</i>	
Sysco Corporation	9.30	8.37
Kraft Foodservice	3.60	3.30
Rykoff-Sexton, Inc.	1.55	1.50
PYA Monarch, Inc.	1.34	1.30
J.P. Foodservice, Inc.	1.15	1.07
White Swan, Inc.	0.80	0.76
Food Services of America	.75	.71
Gordon Food Service, Inc.	.83	.76
Unifax, Inc.	.75	.72
Consolidated Foodservice companies	.49	.46
Total	20.55	18.95

Source: (19).

Wholesale Clubs

Wholesale club sales in 1992 rose 26 percent above 1991 sales (table 11). At \$13 billion, Sam's sales nearly doubled Price Club's and Sam's garnered 38 percent of all clubs sales. But, Price and Costco merged in 1993, as noted earlier. The newly-merged Price/Costco and Sam's accounted for about 9 of every 10 dollars spent in wholesale clubs in 1992, but all of the clubs expanded.

As in past years new openings and new departments fueled expansion. With this expansion, competition has increased dramatically. Price and Pace entered Houston and Dallas, joining incumbent Sam's for a first-time, three-firm rivalry in the same market areas. Two-firm rivalries already existed in a number of areas of the country and the rapid expansion in 1992 added more. For example, Pace entered the New York area, opening a warehouse at Paramus, New Jersey, within a mile of an existing Sam's Club and less than 10 miles from a B.J.'s club. Similarly, Pace opened a club in Albuquerque, New Mexico, to directly compete with Price.

By 1992, most large chains had begun selling so-called club packs in response to the entry of clubs. Typically, retail foodstores now have club pack sections offering such items as 12-pack paper towels at competitive prices.

In a singular reaction to potential competition from wholesale clubs, Meijer, a Michigan retail food chain, created a wholesale club division. This marked the

first-time entry of a grocery chain in the wholesale club industry. Meijer opened a club in Lansing, Michigan, late in 1992, announced the imminent opening of two more stores, and planned for others later in 1993, all with free memberships.

Broadline wholesale companies have also entered the increasingly competitive club market. Fourth-ranked Wakefern opened two wholesale clubs in a joint venture with its member-retailers in 1992. Wakefern's move was prompted by inroads of major traditional wholesale clubs in its retail members' New Jersey and metropolitan New York markets. The venture has several novel aspects. First, the warehouses are former retail supermarkets, with roughly one-third of the 150,000 square foot area of traditional clubs. This reduces initial capital outlays. Second, each store is member-owned but Wakefern is the sole wholesaler, providing all procurement and related services. The clubs have direct access to Wakefern's merchandising, advertising, and marketing expertise in addition to receiving the benefits of the cooperative's considerable purchasing power. Like their large counterparts, these clubs sell a broad range of food and nonfood products. And third, unlike most of the traditional clubs, these clubs have no membership restrictions. As noted, Super Valu opened two clubs in 1993.

Wholesale clubs also continued expansion of fresh food departments. For example, leading clubs now offer fresh meat, a shift from earlier practice where they sold only frozen meat. Moreover, fresh meat is sold at mark-ups comparable to those of other club departments. Clubs are also testing expansion of fresh food departments. Sam's has begun selling freshly baked bread and head lettuce in a number of units. High-margin, private-label products also figured in

Table 11--Sales of membership wholesale clubs

Leading wholesale clubs set new sales records in 1992.

Firms	Sales	
	1992	1991
	<i>Billion dollars</i>	
Sam's Wholesale Club	13.00	9.43
Price Company	7.30	6.60
Costco Wholesale Club	6.50	5.22
Pace Membership Warehouse	5.00	3.65
BJ's Wholesale Club	1.60	1.44
Warehouse Club	.23	.24
Others	.17	.35
Total	33.80	26.92

Source: (1).

clubs' marketing plans. The Price Club promoted private-label apparel lines; Sam's introduced private-label soft drinks; and Pace, the pioneer private-label vendor among wholesale clubs, continued selling private-label, nonfood products.

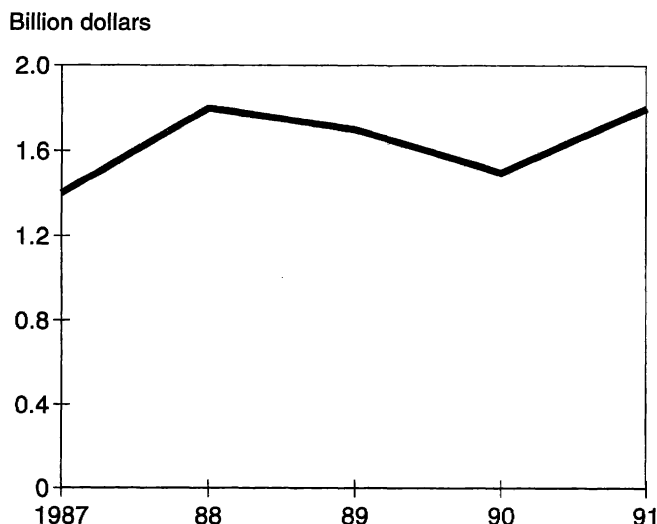
Foreign Investment

In 1990, there were 14 U.S. food wholesale firms with foreign affiliates (app. table 88). These firms' 180 foreign affiliates sold \$13 billion worth of products and produced a net income of \$638 million. The affiliates also employed 25,000 workers and held assets exceeding \$5 billion. The firms ranged from industry-leader Fleming, with interests in the Caribbean, Japan, Mexico, Korea, and the former Soviet Union, to shipment offices and distribution centers of American foodservice distributors such as Labatt and McLane. Foreign-owned wholesale firms had 123 U.S. affiliates. These affiliates reported sales of \$20 billion in 1991 (app. table 92), with a work force of 44,000 (app. table 89) and assets of \$6 billion (app. table 90). One of the ten leading distributors in the United States, Scrivner, Inc., is owned by Haniel of Germany. Provigo, a Canadian firm, also owns distribution facilities in the United States.

Foreign investment in the domestic wholesale food industry was \$1.8 billion in 1991, a 3-percent rise from 1990 (fig. 27). Asset growth matched growth in foreign ownership. Consequently, the share of assets

Figure 27
Foreign investment in U.S. wholesale food firms

Foreign investment rose slightly in 1991 after a 2-year decline.



Source: (42).

held by foreign investors remained under 4 percent. Direct investment by Americans in foreign wholesale firms was \$1.8 billion in 1991 (app. table 87). This was more than double 1990 figures.

Performance

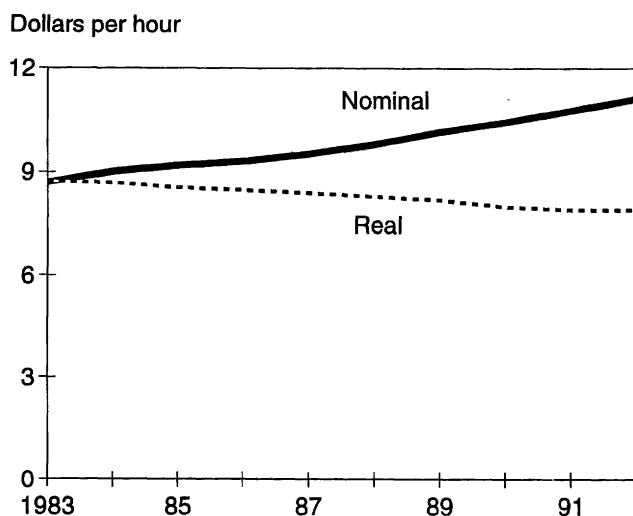
Cost control and retail division expansion were centerpieces of wholesale firms' efforts to improve earnings during 1992. Among industry leaders, retail divisions' earnings growth compensated for a continuing decline in earnings of wholesale divisions. In the past, sales growth in smaller firms outpaced cost increases and their average profits rose. With the cessation of growth, smaller firms' profits have fallen but they have neither the resources to buttress earnings by creating retail divisions nor the scale of operations to realize cost economics.

Wages

The wholesale food industry employed 717,300 workers in 1992 (app. table 46). Average hourly earnings of wholesale food workers rose to \$11.09 in 1992, nearly double the average earnings of workers in eating and drinking places and one-third higher than grocery store employees' rates (app. table 47). The buying power of wholesale workers' earnings has declined for 9 of the last 10 years, however. Real average hourly earnings in 1992 were unchanged from the previous year (fig. 28).

Figure 28
Average hourly earnings of wholesale food employees

Real wages were unchanged in 1992, ending a 9-year decline.



Source: (56, 61).

Profits

Average industry profits displayed remarkable stability between 1982 and 1990, the last year industry profits were recorded (app. table 60 and fig. 29). Small firms have posted higher profit rates than their large counterparts in the period, but small firms' profit rates have fluctuated more. Further, gaps between large-firm and small-firm rates narrowed considerably by 1990 as small-firms' profits declined. Leading companies' profit rates consistently outpace the industry average. Leading publicly-held wholesale food firms such as Nash-Finch, Fleming, and

Richfood Holdings reported double-digit returns on equity in 1992 (app. table 66).

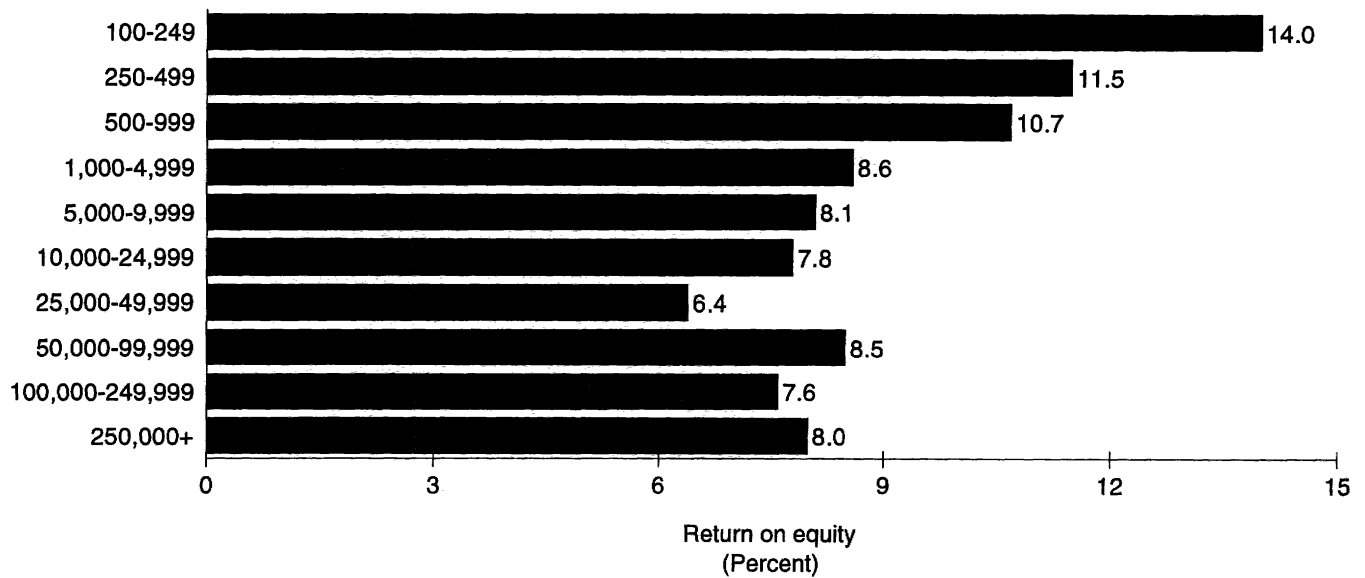
Debt-financed liabilities of wholesale food corporations filing tax returns averaged 33 percent of assets in 1990, the last year assets were recorded for all industry firms. This ratio has remained stable over the past decade, although the wholesale food industry's capital outlays and assets have grown apace. That stability reflects the impact of equity-based financing, use of retained earnings, and use of proceeds from divested properties to underwrite capital spending.

Figure 29

After-tax profits of wholesale food firms, by asset value, 1982-90 average

Greater assets do not ensure greater returns on equity.

Asset value (1,000 dollars)



Source: (62).

Food Retailing



Continued slow economic recovery and low inflation rates in 1992-93 limited food retailers' opportunities to improve their profit performance above previous recessionary levels. Those food retailers maintaining sizable long-term debt were especially hard-pressed to improve their "bottom line" (net after-tax income) performance. Among them were the 4 largest U.S. food retailers--Kroger Co., Safeway, Inc., American Stores, and Great Atlantic and Pacific Tea Co. (A&P). Meanwhile, less indebted retailers such as Albertsons and Winn-Dixie were able to maintain earnings despite stagnant sales growth. Increased food product offerings by nontraditional food retailers, such as K-Mart and Wal-Mart, and by membership wholesale club outlets selling food products provided additional sources of competition in many areas.

Merger activity remained well below levels reached in the 1980's during 1992-93, continuing a recent trend. Two large food wholesalers, Super Valu and Wetterau, announced their intention to merge operations. Both companies own a significant number of supermarkets as well, resulting in a post-merger ranking among the top 25 U.S. food retailers. Foreign investment in U.S. foodstores stepped up in 1992 with the acquisition of Appletree Markets by the Long-term Credit Bank of Japan. Food retailers sought to control labor costs, as evidenced by the decline in total employment levels in 1992. Wage increases remained in line with inflation rates. Rising health and medical costs and pending family leave legislation were sources of con-

cern in the industry. Food safety issues were also in the forefront, with the airing of a nationwide television program highlighting alleged unsafe food handling practices in stores of a major supermarket chain.

Sales and Sales Growth

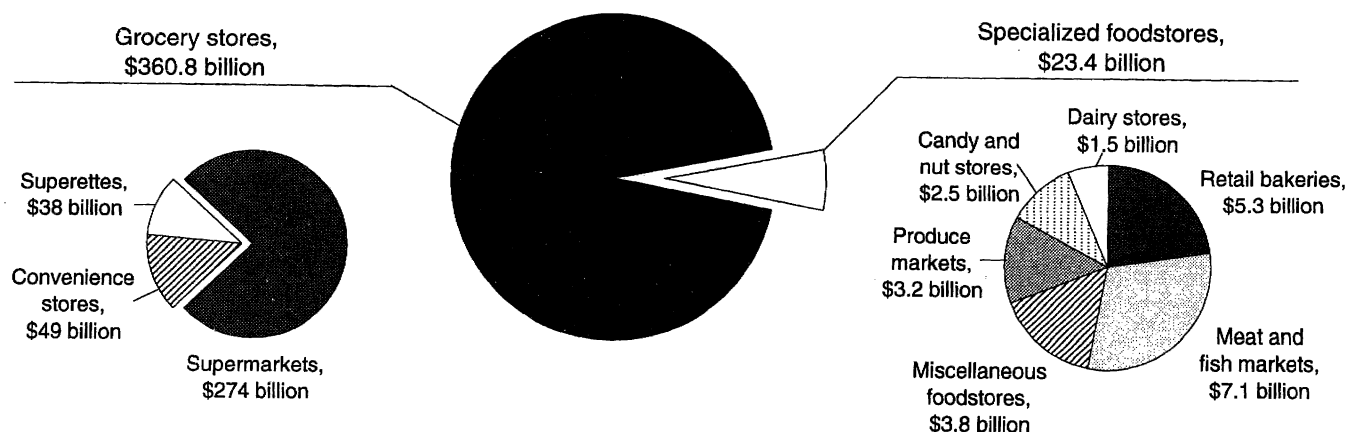
Nominal foodstore sales increased by 2.25 percent in 1993, reaching an estimated \$392.6 billion. Foodstore sales reached \$384 billion in 1992, of which grocery stores accounted for 94 percent of foodstore sales, with the remainder made by specialized foodstores such as retail bakeries, produce markets, and meat and seafood markets (fig. 30). The inflation rate remained low as well, with the Consumer Price Index for food-at-home rising by only 0.7 percent in 1992, leaving room for real growth as the recovery gains momentum. The ERS grocery price deflator, a measure of price changes for a more representative mix of food and nonfood items sold by food retailers, equalled 1.1 percent in 1992, compared with 3.7 percent in 1991.

Sales growth differed considerably by region, reflecting lingering recessionary conditions in many areas. The South recorded the largest sales growth in 1992, with foodstore sales up 2.7 percent in 1992, followed by the West, with sales gains of 1.7 percent. Little progress was made in the Northeast, where foodstore sales edged up only 0.5 percent in 1992. Similarly, the Midwest region grew by only 0.6 percent. Ad-

Figure 30

Foodstore sales in 1992

Sales reached \$384 billion, with supermarkets accounting for more than 71 percent of total sales.



Source: (46) and ERS.

justed for inflation, only the South and West regions of the U.S. had positive real growth in 1992.

A review of 1991 foodstore sales results reveals the impact of the economic recession, which officially ended in March 1991. Although nominal sales were up by 2.5 percent, the ERS grocery price deflator amounted to 3.7 percent, indicating a net decline in sales of 1.2 percent from 1990 levels. Although basic needs such as food were considered by some to be resistant to spending declines during economic downturns, this hypothesis was tested and proven untrue in 1991.

Mindful of actual or potential income reductions, consumers found means to reduce their discretionary spending, a large portion of which was devoted to food. Food-at-home expenditures increased only 2.5 percent in nominal terms, implying spending declines after adjusting for inflation. Nontraditional food outlets, such as membership warehouse stores, mass-merchandisers, and discount stores, benefited at the expense of many traditional foodstore retailers.

Sales by supermarkets reached an estimated \$274.3 billion in 1992, accounting for more than three-fourths of all U.S. grocery store sales (table 12). Supermarket volume increased in nominal terms by 2.0 percent over 1991 sales, allowing for real growth of 0.9 percent after adjusting for inflation. The positive growth was welcome news to supermarket operators, following a 1.6-percent decline in real sales in the previous year. During 1992-93, supermarket operators strove to lower operating costs, while gradual improvement in the general economy boosted their sales. Combined with continued stable inflation rates, these factors led to improvements in both growth of sales and earnings (see "Performance"). To reduce costs, retailers cut labor hours, inventory and purchasing methods, and restructured longterm debt as interest rates fell. On the retail side, many supermarket retailers emphasized more profitable store brands and expanded "club pack" product offerings, which are similar to items sold in membership wholesale club store outlets (see "Food Wholesaling"). These strategies may have slowed the loss of sales to nontraditional outlets.

Convenience stores captured an estimated 13.4 percent of total grocery store sales, equalling \$48.5 billion in 1992 (app. table 12). Sales reached \$47.3 billion in 1991, a 1.6 percent increase over 1990. Merchandise sales (sales excluding gasoline) totaled

\$25.5 billion in 1991. According to Convenience Store News, gasoline sales by 33,600 traditional convenience stores rose to \$21.8 billion. Store closings by some of the largest convenience store chains such as Circle-K, Southland (7-Eleven), and National Convenience Stores (Stop and Go) led to a net reduction in total store numbers, from 51,700 in 1990 to 50,700 in 1991. Traditional convenience stores have experienced heightened competition from petroleum-based retailers that have added convenience stores to their gasoline stations. These retail outlets are not counted as foodstores owing to their less-than-majority share of food product sales.

Superettes and "mom and pop" stores accounted for the remaining 11.4 percent of sales within the grocery store segment, amounting to an estimated \$38.0 billion in 1992 (app. table 12). These smaller grocery stores offer a variety of food and nonfood grocery products and are usually located in areas underserved by supermarkets, such as in densely populated urban

Table 12--Number and sales of supermarkets¹

Supermarkets account for 76 percent of grocery store sales.

Year	Minimum annual sales needed to classify as a supermarket ¹	Stores	Sales	Share of grocery store sales
	1,000 dollars	Number	Million dollars	Percent
1958	0.747	15,282	23,562	53.9
1963	.762	21,167	31,484	59.9
1967	.825	23,808	43,433	67.6
1972	1.000	27,231	63,791	69.1
1977	1.515	30,831	110,849	75.0
1982	2.266	26,640	171,966	74.5
1983	2.322	26,480	184,568	76.8
1984	2.403	26,265	193,059	75.3
1985	2.453	26,229	201,843	74.9
1986	2.554	25,629	211,042	75.1
1987	2.659	24,980	219,890	75.6
1988	2.773	24,614	230,640	75.1
1989	2.966	24,083	247,312	75.1
1990	3.110	23,813	260,127	76.8
1991	3.259	23,722	268,925	75.3
1992 ²	3.307	NA	274,277	76.0

NA = Not available.

¹ To be classified as a supermarket, a grocery store had to generate annual sales of at least \$1 million in 1972; other years calculated using a price index of prices of all products sold in grocery stores. Sales exclude sales taxes.

² Estimated.

Source: (28) and ERS.

areas and in low-density, rural areas. As supermarket operators explore new growth opportunities, these smaller grocery stores may become vulnerable to heightened competition that could limit their longterm prospects.

Specialized foodstores accounted for 6.0 percent of all retail foodstore sales, equalling \$23.2 billion in 1992, up from \$21.6 billion in 1991 (app. table 12). Specialized foodstores include retail bakeries, meat and fish markets, fruit and vegetable markets, candy and nut stores, and miscellaneous retail food outlets such as natural and health food stores, coffee, tea, and spice stores, and ice cream stores. Nominal sales were up 4.9 percent in 1992 overall. Assuming price increases comparable to those of grocery stores, specialized foodstores posted sales growth amounting to 3.5 percent in real terms. The largest single specialized foodstore category in 1992, meat and fish markets, accounted for 30.4 percent of sales, followed by retail bakeries with 23.0 percent, and miscellaneous foodstores capturing 16.3 percent of store sales (table 13).

Among specialized foodstores, the share of sales by retail bakeries fell from 28.1 percent to 23.0 percent between 1987 and 1992. Similarly, the share of sales by meat and fish markets declined from 33.9 percent to 30.4 percent over the same 5-year period. The remaining specialized foodstores all experienced sales share increases between 1987 and 1992. Sales trends reflect changing consumer tastes and preferences, as well as the impact of supermarkets that have expanded their specialized offerings, such as produce and seafood.

Structure and Organization

The structure and organization of food retailing has undergone a major transformation in a relatively short time span. Public ownership of leading grocery store chains experienced significant declines during the

1980's as a wave of leveraged buyouts (LBO's) and financial restructurings swept through the industry. Concurrent record levels of mergers, acquisitions, and divestitures acted to transform the economic landscape both at the local market and national levels. More recently, many food wholesalers have expanded the number of corporate-owned and operated supermarkets, contributing to an organizational change in distribution channels. In the 1990's, strategies by non-traditional food retailers to capture grocery product sales have contributed to heightened competition as new stores were opened.

Chainstores' Share of Grocery Store Sales

The chainstore share of grocery store sales reached 65.2 percent in 1992, unchanged from 1991 (app. table 28). Chainstores grew in importance between 1958 and 1982, reaching 62 percent of total U.S. grocery store sales. Until recently, the chainstore sales' share remained stable, largely due to the improvements in purchasing and operating efficiencies available to nonchainstore retailers (independents) through affiliation with a full-service food wholesaler. Since 1987, the chainstore share of sales has once again begun to grow, increasing 2.2 percentage points by 1992. Large food wholesalers may be partly responsible for this upward trend as they expand their number of corporate-owned supermarkets, many of which had previously been independently operated. Indeed, the merger of Super Valu and Wettarau, two food wholesalers, will likely place their combined corporate food retailing operations among the 25 largest in the United States in 1993 (see "Mergers, Acquisitions, and Divestitures").

Aggregate Concentration

The largest 4, 8, and 20 grocery retailers accounted for 16.3, 25.1, and 39.1 percent of total U.S. grocery

Table 13--Specialized foodstore sales, 1992 and 1987

Item	Specialized foodstore sales		Share of specialized foodstore sales	
	1992	1987	1992	1987
	-----Million dollars-----		-----Percent-----	
Specialized foodstores	23,198	18,482	100.0	100.0
Retail bakeries	5,333	5,194	23.0	28.1
Meat and fish markets	7,051	6,261	30.4	33.9
Produce markets	3,217	2,090	13.9	11.3
Candy, nut, and confectionery stores	2,255	1,465	9.7	7.9
Dairy products stores	1,549	1,007	6.7	5.4
Misc. food stores ¹	3,790	2,464	16.3	13.3

¹ Includes natural foods and health food stores, egg and poultry retailers, coffee, tea, and spice stores, vitamin stores, and all other specialized foodstores not elsewhere classified.

Source: (46) and ERS.

store sales in 1991. Sales shares of the largest firms were down slightly in 1991 compared to sales share for the same period in 1990, but continued to remain stable across the past decade. (fig. 31, app. table 29). Leading firms' aggregate shares are based on total U.S. grocery store sales, excluding sales from other U.S. sources and all foreign sales. Sales by the 20 largest food retailers reached \$139.4 billion in 1991, compared with \$136.2 billion in 1990.

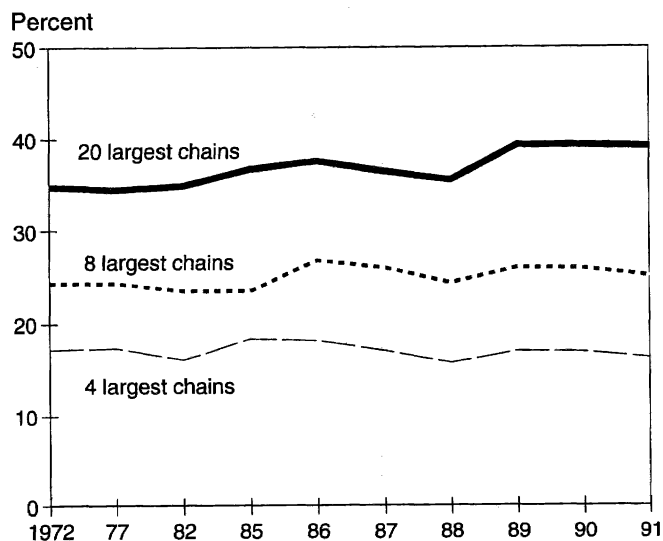
The 4 largest firms sales totaled \$58.1 billion in 1991, a slight decrease from 1990 sales of \$58.6 billion. A number of factors contributed to reduced sales, including heightened competition between grocery retailers and with nontraditional retail outlets that are beginning to offer an increasing numbers of grocery products. Labor unrest and debt servicing were also factors. Grocery firms used varying strategies in order to keep earnings up. American Stores Company sold its Alpha Beta stores and concentrated on strengthening its more profitable markets through competitive pricing and increased advertising. Though American Stores' overall identical store sales were up slightly in 1991, grocery and combination stores reported a decrease of 1.6 percent for this category. The Kroger Company lead the way with a 3 percent increase in identical store sales for the period and also focused on debt reduction.

The fifth through eighth largest retailers had combined sales of \$31.6 billion in 1991, up 1.3 percent

Figure 31

Sales share of leading grocery chains

The 20 largest grocery chains accounted for almost 40 percent of grocery store sales nationwide.



Source: (46) and ERS.

from 1990 sales of \$31.2 billion. Food Lion moved up to 8th from 10th position in 1990, posting a gain of 15.3 percent over the period.

Sales of the 9th through 20th ranked retailers totaled \$49.7 billion in 1991 compared with \$46.4 billion in 1990. The increase was due in part to the entry of The Yucaipa Company of Clairmont, California, into the top 25 in 1991. With the acquisition of the Alpha Beta chain from the American Stores company, Yucaipa's 1991 sales reached \$2.9 billion.

Mergers, Acquisitions, and Divestitures

Merger, acquisition, and divestiture activity remained at relatively low levels in 1992 compared with the past decade. There were 29 U.S. food retailers acquired in 1992, down from 35 acquisitions in 1991 (table 14). Of the 29 acquisitions in 1992, 17 were made by U.S. food retailers, while 12 were made by nonfood retailers. Each of the 24 total divestitures accounted for the sale of substantial food retailing assets, such as grocery stores in one or more local market areas. Significant activity in 1992 included the Super Valu-Wetterau merger, involving the 2nd-ranked and 3rd-ranked food wholesalers, both of which operated corporate-owned supermarket chains. Combined food retailing sales were estimated to exceed \$3.4 billion, resulting in their ranking among the 25 largest grocery store firms. Albertson's (Boise, ID) acquired 74 Jewel-Osco combination food and drug supermarkets from American Stores (Salt Lake City, UT) for \$455 million in 1992. The acquired stores, located in Texas, Oklahoma, Florida, and

Table 14—Mergers and divestitures in food retailing

Total acquisitions fell in 1990.

Year	Acquisitions		Total	Divestitures
	By U.S. food retailing firms	By all other firms		
	<i>Number</i>			
1982	25	13	38	22
1983	35	10	45	33
1984	37	23	60	28
1985	36	16	52	33
1986	56	35	91	57
1987	39	26	65	34
1988	41	35	76	51
1989	28	25	53	37
1990	14	23	37	22
1991	20	15	35	28
1992	17	12	29	24

Source: (2).

Arkansas will account for about 25 percent of Albertson's total asset value. In Texas, Randall's Food Markets (Houston, TX) purchased Cullum Companies, Inc. (Dallas, TX), a chain of 62 supermarkets. Both retailers are privately owned and operate full-service, upscale supermarkets in geographically separated parts of the State. The companies combined sales are estimated to exceed \$2.1 billion. Eighty percent of Randall's is owned by Morgan Stanley investment bankers, following a LBO in 1988. Current management will be maintained, according to *Supermarket News*, in what is considered a mutually agreeable venture. Foreign-owned Victory Markets (LNC Industries, Australia) was sold to an investor group for \$130 million. The 81-store chain operates conventional supermarkets in New York. The Vons Companies (Arcadia, CA) acquired the leaseholds of all Phar-Mor properties in California. Phar-Mor, a discount drugstore retailer was operating under bankruptcy court protection in Youngstown, Ohio. Whole Foods Market, Inc. (Austin, TX), a natural/whole foods grocery retailer purchased Bread and Circus, a natural/whole food grocery retailer with 6 stores in the Boston, Massachusetts, and Providence, Rhode Island, metro areas. AppleTree Markets (Houston, TX) was acquired in 1992 by the Long-term Credit Bank of Japan as part of a court-sponsored plan to emerge from Chapter 11 bankruptcy status. According to *Supermarket News*, AppleTree, a former division of Safeway Stores, Inc., had been burdened by a \$168 million debt to Safeway as part of its original purchase price in 1988.

Store Formats

The share of conventional supermarket formats declined as a percentage of both the sales and number of all supermarkets during 1991-92, continuing a long-term trend. Among traditional grocery store retailers, conventional supermarkets have been increasingly displaced by newer store formats, such as the superstore and warehouse/limited assortment supermarkets. Nonconventional formats accounted for more than half of all supermarkets and more than two-thirds of the sales of all supermarkets in 1991 (table 15). Superstores have increased in importance since their inception in the 1980's, growing to one-quarter of all supermarkets and one-third of all supermarket sales. Combination food and drug formats, which offer similar services and variety as superstores but include a pharmacy, have increased their share of sales from 4 percent in 1980 to 17.1 percent in 1991. The combined sales of warehouse and superwarehouse formats have enjoyed similar success, growing from 5.2 percent share of sales in 1980 to 18.2 percent in 1991.

The evolution of supermarket formats has had significant implications for both consumers and the food distribution and retailing industries. By the late 1970's, it became apparent that the needs of consumers in a changing economic and demographic environment could no longer be met by a single supermarket format encompassing a common mix of products and services. Alternative store formats allowed retailers to better address individual consumer segments. At the same time, these new formats provided retailers with a wider latitude of product and services mix with which to distinguish themselves from competitors. In addition to a variety of supermarket formats, other outlets have developed that are challenging traditional grocery store retailers. These nontraditional outlets offer grocery products (both food and nonfood) as part of a broader line of retail merchandise. As nontraditional outlets offering grocery products have expanded, they must compete with traditional grocery retailers, principally supermarkets.

Nontraditional or "alternative" stores include warehouse wholesale club stores, deep discount drugstores, and mass merchandisers. Although each format differs in the variety of merchandise offered, all three include grocery products. Although these nontraditional outlets do not generally offer a comparable array of grocery food and nonfood products found in supermarkets, they do market specific high-volume categories of dry grocery products, paper products, frozen foods, limited perishable foods such as produce and meat, health and personal care products, and general merchandise. As well, these products are typically sold in large, institutional sizes or in smaller sizes bundled into multi-packs. Low operating margins provide a low-price

Table 15--Supermarket format: Number and sales shares¹

Conventional supermarket's share of sales has declined.

Supermarket format ²	Share of supermarkets		Sales share of supermarkets	
	1991	1980	1991	1980
	<i>Percent</i>			
Conventional	49.5	85.0	30.4	73.1
Superstore	24.9	8.9	33.9	17.7
Combination	8.9	.9	17.1	4.0
Warehouse/limited assortment	14.6	4.7	13.1	4.2
Superwarehouse	0.1	.5	5.1	1.0
Hypermarket	NA	NA	0.3	NA

NA = Not applicable.

¹ Percentage may not sum to 100 due to rounding.

² See glossary for format description.

Sources: (28, 64) and ERS.

appeal to consumers while ensuring high volume shipments by suppliers. According to a recent Food Marketing Institute (FMI) report on alternative store formats, nontraditional retail outlets accounted for \$33.3 billion or 6.2 percent of all grocery related sales in 1991 (1). In addition, much of this growth has occurred over the past 5 years.

Warehouse wholesale club store sales reached \$33.6 billion in 1992, of which an estimated \$11.4 billion consisted of food and nonfood grocery products sales. These outlets stock fewer items than traditional supermarkets, but concentrate on high-value, branded items displayed on pallets and in large, multipack sizes. They also offer fewer services than supermarkets. There is no bagging, and they are open fewer hours per day. Warehouse clubs also incur lower expenses for advertising, administrative, and shipping, resulting in lower overall operating expenses compared to those of supermarkets. Wholesale club stores pass on these savings to shoppers in the form of lower prices. A FMI study concluded that prices for grocery-related items averaged 26 percent lower than in traditional grocery stores.

Deep discount drugstores offer a broad selection of merchandise, including prescription and over-the-counter drug products, personal care products, household cleaning supplies, and paper products, in addition to nonperishable/shelf-stable food items, such as snack foods, bottled and canned beverages, candy, and cookies. Although not a primary sales category, grocery-related products are one of the fastest-growing segments of the deep discount drugstores. Like the warehouse membership club stores, merchandising is focused on high-volume branded products. Like warehouse clubs, these stores have lower labor and fixtures costs when compared to supermarkets. Gross margins are higher than those for membership wholesale clubs but less than those of grocery stores. The top three deep discount drugstores by sales are Phar-Mor, Drug Emporium, and F & M.

Mass merchandise stores offer a wide array of general branded merchandise and an increasing variety of grocery-related products. Mass merchandisers rely heavily on branded products, although private/store label items have been successfully introduced. According to an FMI report, three retailers, Wal-Mart, K-Mart, and Target, account for 70 percent of total mass merchandise sales. Mass merchandise stores emphasize "everyday low prices" and have increased the number and variety of grocery related products they offer. Wal-Mart is both the largest and fastest-growing mass merchandiser. Wal-Mart's 1991 sales

reached \$31.7 billion, up 24.2 percent from 1990 (table 16). This growth has been partly due to cost savings, both in product procurement and in store operations and overhead, which allowed for lower gross margins compared to traditional grocery retailers. Some of the top mass merchandisers generate as much as 25 to 30 percent of their sales from grocery-related products.

Lower gross margins have provided opportunities for expanding sales of grocery related products. As a result, mass merchandisers are opening new stores featuring a complete food and nonfood grocery department within a larger store format. These new formats, called supercenters, often exceed 100,000 square feet in size and offer 70,000 to 80,000 stock keeping units (sku's). A 40,000- to 50,000-square-foot grocery department area within the store rivals many supermarkets in size and variety. Wal-Mart operates 60 of these new formats in Arkansas, Texas, Oklahoma, and Missouri, while K-Mart operates 4 supercenter outlets in Ohio, North Carolina, and Mississippi. Additionally, K-Mart is expanding the grocery department in all of its 2,300 stores and will offer a mix of branded and private label products. This is part of a \$2.5 billion chainwide refurbishing program planned for completion by 1995.

In addition to opening new formats, nontraditional outlets are expanding offerings of food and nonfood grocery products in many of their existing locations. For example, many wholesale club stores have already added fresh bakery, meat, poultry, and fish products as well as produce and other nonfood services like film developing, tire, car, and travel agency services. Increased competition among wholesale club stores in the same market could result in new marketing strategies by club stores to attract new customers, such as reducing or waiving membership fees, extending store hours, or stepping up off-site advertising and promotion.

Table 16--Top 5 mass merchandisers¹

Company	Location	1991 sales Million dollars
Wal-Mart	Bentonville Arkansas ²	31,667
K-Mart	Troy, Michigan ³	24,749
Target	Minneapolis	9,041
Ames	Rocky Hill, Connecticut	2,819
Caldor	Norwalk, Connecticut	1,868

¹ In some references called "discount department stores."

² Discount store sales only.

³ U.S. stores only.

Source: (1) and ERS.

The outlook for deep discount drugstores such as Phar-Mor, Drug Emporium, and F & M indicates future growth may not be as rapid as in the past, according to some industry observers. Between 1990 and 1991, Drug Emporium opened 39 stores. However, as of August 1992, the Columbus, Ohio-based firm had opened only 6 new stores. It also posted a \$4.7 million loss for the fiscal year ending February 1992. Phar-Mor filed Chapter 11 bankruptcy in August under allegations of mismanagement by company executives. Conventional drugstores have the ability to incorporate grocery products into their store offerings as customer acceptance grows. For these reasons, the potential competitive impact of drugstores on traditional grocery retailing should not be overlooked.

Foreign Investment

Foreign investment in U.S. food retailing continued to rise, despite concerns that parent firms in Western Europe might redirect capital spending and business activity to the newly independent countries of Eastern

Table 17—Five largest investors in U.S. grocery retailing

Tengelmann A.G. is the largest foreign investor in U.S. grocery stores

Foreign investor/ (country of headquarters)	U.S. affiliates	U.S. grocery store sales	
		1991	1990
<i>Billion dollars</i>			
Tengelmann A.G. (Germany)	A&P Shopwell Waldbaum Borman's Total sales	8.99	9.17
Delhaize, Le Lion (Belgium)	Food Lion	6.44	5.58
Ahold International (The Netherlands)	BI-LO Giant Food Stores ¹ First National Total sales	5.60	4.41
George Weston, Ltd. (Canada)	National Tea Co.	1.19	1.31
Sainsbury, Ltd (United Kingdom).	Shaw's Supermarkets Iandoli's Supermarket Total sales	1.81	1.75
	Total	24.03	22.23

¹ Giant Food Stores, Carlisle, PA.
Source: (28, 35, 63), and ERS.

Europe. Although some new investment there has taken place, it appears to have had little significance for corresponding U.S. foodstore affiliates.

Inward Investment

Sales by foreign-owned food retailers operating in the U.S. reached \$36.8 billion in 1990, the most currently available year, up from \$30.1 billion in 1989 (42). Net income on sales amounted to \$358 million in 1990. Foreign-owned food retailers employed 289,100 persons in 1990 and invested \$1.3 billion for new plants and equipment, including food retailing acquisitions.

The 5 largest foreign-owned food retailers had U.S. sales of \$24 billion in 1991, an increase of 8 percent over 1990 (table 17). During 1991-92, same-store sales growth was stalled by general economic conditions affecting the entire industry. Efforts to reduce operating costs prevented significant erosion of net income, however. Both internal expansion and growth through acquiring existing food retailing operations contributed to sales expansion in 1991. Ahold USA, the U.S. affiliate of Ahold International (the Netherlands) had sales of \$5.6 billion in 1991, equalling 50 percent of total sales volume. Likewise, Food Lion (Salisbury, NC), the U.S. affiliate of Delhaize Le Lion (Belgium) accounted for more than one-half of parent firms' total sales. Other leading foreign-owned food retailers include Provigo (Canada), operator of 18 Petrini Supermarkets in California, Aldi (Germany), a limited assortment store operator in the Midwest, and Kings Super Markets (New Jersey), owned by Marks and Spencer (United Kingdom). Yaohan, a Japanese food retailer, has opened several ethnic-oriented supermarkets in the United States, most recently in Illinois. Appletree Markets joined the ranks of foreign-owned firms when they were acquired in 1992 by the Long-term Credit Bank of Japan (see "Mergers, Acquisitions, and Divestitures").

Outward Investment

Acquisitions by U.S. retailers abroad constitutes outward investment. Foodstore sales by U.S. food retailing affiliates abroad amounted to \$6.6 billion in 1990, compared with \$6.8 billion in 1989. Part of the decline was due to U.S. firms with overseas operations that were acquired by a foreign entity, such as Southland Corp. (7-Eleven) when it was acquired by Ito-Yokado of Japan. Overseas investment in food retailing by U.S. firms totaled \$1.9 billion in 1990, generating net income of \$112 million. U.S. affiliate employment reached 51,700 in 1990. In addition to longstanding food retailing operations in Canada, principally Safeway, Inc., U.S. firms stepped up investment in Latin American countries, including Wal-Mart/Sam's in

Mexico, and joint ventures with host country partners by Safeway and Price Club (a wholesale club).

Employment and Wages

Foodstore employment numbered 3.2 million in 1992, following a decline of 1.5 percent from 1991 levels and a similar decrease in 1990. Between 1982 and 1990, food retailers added 749,000 workers to their payrolls. This trend may be reversing as pressures to reduce operating costs continue. Grocery stores account for almost 90 percent of all food retailing employment. Wage rate increases averaged above the inflation rate over the 1991-92 period, as measured by the Consumer Price Index for Urban Wage Earners (CPI-W). Average hourly earnings were \$7.64 among grocery store employees in 1992, and \$7.39 in 1991 (app. table 47). Adjusted for inflation, wage rates remained significantly below those of the early 1980's (fig. 32).

With sales growth flat or negative and heightened competitive pressure from nontraditional outlets selling grocery products, food retailers sought to reduce operating costs in an effort to maintain profit margins. Because labor accounts for about 50 percent of gross margins, eliminating unnecessary labor was a top priority for many retailers. These efforts appear to have been largely successful. During 1991-92, employment levels fell, reversing a rising trend observed over the past decade (app. table 42). Efforts to reduce labor hours to reduce costs contrasts with the significant wage concessions and contract renegotiations that took place during the mid-1980's.

Performance

Performance characteristics of the food retailing industry measure relative economic efficiency in terms of financial measures, productivity measures, and the adoption of new technology and innovation.

Financial Measures

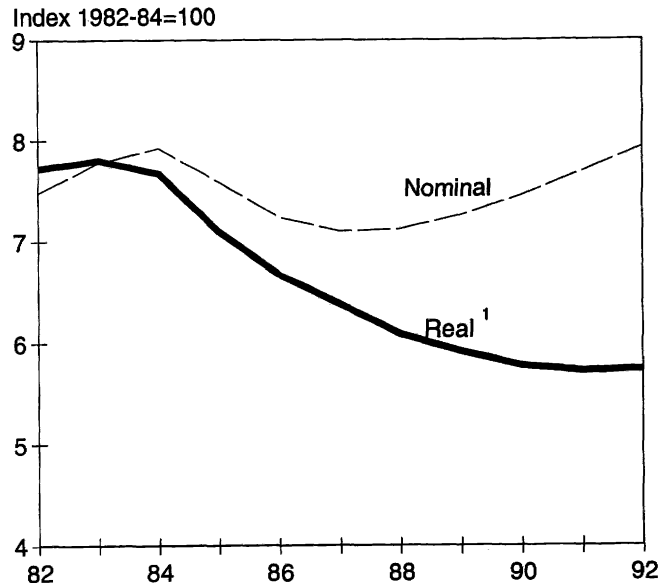
Confronted with sluggish sales growth and continued low inflation rates during 1992-93, retailers relied on cost-cutting measures to mitigate declining income and earnings. Nonetheless, return on stockholders equity (after taxes) for grocery retailers of \$50 million or more in assets fell to 9.8 percent in 1992, down from 14.5 percent in 1991 (table 18). Shareholder earnings were down significantly in the fourth quarter of 1992, contributing to the overall decline.

Operating income as a share of sales remained at 2.7 percent in 1991 and rose to 2.8 percent in 1992. Profits, however measured, varied considerably among individual retailers, even when comparing

Figure 32

Average hourly earnings of grocery store employees

Real wages have stabilized.



¹ Real wages are adjusted for inflation by the Consumer Price Index (1982-84=100).

Source: (56, 59).

among firms of similar sales volume. Nonoperating expenses, mostly interest charges on longterm debt, grew from 1.4 percent to 1.6 percent of sales between 1991 and 1992. Consequently, net income before taxes fell from 1.3 to 1.2 percent of sales over the period.

During 1992-93, a number of retailers refinanced their longterm debt, while others sold equity in the form of stock offerings to repay debt ahead of schedule. With borrowing rates falling to historical lows, some firms took on new debt or slowed their amortization rates in order to allocate additional revenues to new capital expenditures. As a share of total assets, longterm debt accounted for 43 percent in 1991, and 44.8 percent in 1992. Food retailer debt is at historically high levels due to the wave of leveraged buyouts, mergers, acquisitions, and financial restructurings prompted by investor buyouts beginning in the mid-1980's. By comparison, longterm debt amounted to only 21 percent of assets in 1981.

Similarly, the ratio of stockholders' equity to total debt remained unchanged at 0.4 during 1991-92. Both the greater use of longterm debt, and the considerable decline in the number of publically-held retailers over the past decade have contributed to the decline.

Productivity

The index of output per labor hour rose to 94.5 in 1992, a slight improvement over the 1991 level of 93.8 (app. table 56 and fig. 33). These gains materialized from efforts by retailers to cut labor costs through reduction of compensated hours (see "Employment and Wages"). While total labor output was stable in 1992, the index of total labor hours were somewhat reduced, falling from 106.2 in 1991 to 105.7 in 1992 (56). Thus, fewer labor inputs produced about the same quantity of output (measured by sales, adjusted for inflation) in 1992 as in 1991 and 1990, hence, productivity rose. It is unclear whether or not reductions in store-level labor use will be maintained as sales improve. However, it is noteworthy that similar labor cutbacks have taken place in other industries, prompted in part by the 1990-91 recession.

Technology and Innovation

Retailers are offering customers new methods of payment beyond the traditional cash or personal check. Special incentives by credit card issuers have spurred grocery retailers to accept credit cards for purchases, opening up the last (and largest) nondurable retail credit card market. Almost all other nondurable goods retail businesses accepted credit cards in 1992. With this development, more progress is being made to facilitate the use of electronic payment methods, including the use of debit cards and food stamp benefit cards. The use of electronic payment methods has the potential for speeding checkout time, since the personal check is currently the most common form of payment.

Although optical scanning technology and electronic payment methods have improved checkout (front end) productivity, many grocery operators are seeking ways to apply new technology to streamline inventory (back end) operations. These include the use

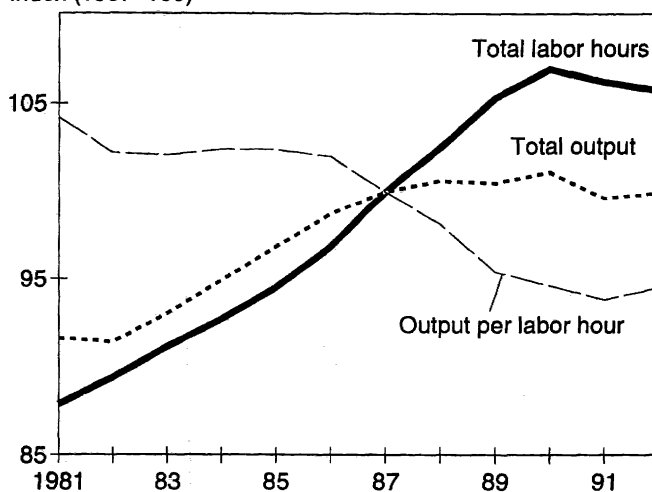
of electronic data interchange (EDI) for warehouse ordering and inventory data exchange between retailers and suppliers, currently practiced by as many as 800 companies (35). New efforts are being made to extend the use of EDI to allow transmission of promotional information and discounts to retailers, and automated billing and payment transfers for customers. Extended EDI applications will eventually permit "just-in-time" replenishment of inventory (28). Several retailers, wholesalers manufacturers, and brokerage companies are participating in a pilot study of the program.

Figure 33

Foodstore productivity, 1981-92

Reductions in labor hours have improved productivity despite slow output growth.

Index (1987=100)



Source: (58, 60).

Table 18--Financial performance of food retailing companies with assets worth \$50 million or more

Average profit rates fell in 1990.

Year	Share of sales			Share of assets		Profit rate ¹		Total stockholders equity to total debt
	Operating income	Nonoperating income	Income before taxes	Long-term debt	Stockholders' equity	Return on stockholders' equity	Return on assets	
	Percent						Ratio	
1981	11.9	0.2	1.7	21.0	36.3	12.5	0.9	1.5
1989	2.6	1.2	1.4	43.9	16.2	14.6	2.4	.3
1990	2.7	1.7	1.0	45.1	14.5	11.2	1.6	.3
1991	2.7	1.4	1.3	43.0	17.0	14.5	2.4	.4
1992	2.8	1.6	1.2	44.8	16.4	9.8	1.6	.4

¹ Profit rate net of taxes.

Source: (52).

Food Service



Recovery from the recession was sluggish during 1991-92 for the foodservice industry. Consumer incomes were not stimulated as much as expected and income growth remained slow. Also, consumers continued to be concerned about the state of the economy and the tight income and economic conditions causing spending to remain low. Food operators are continuing to respond to economic conditions by continuing to offer lower everyday prices and to increase services as they try to win and retain customers.

Restaurant owners are expanding into nontraditional locations such as zoos, outdoor concert arenas, school weekend affairs, and office buildings via carts and kiosks, which can go where a full-scale eating place cannot.

Other alternative points of distribution for restaurant chains include retail outlets such as supermarkets, convenience stores, retail shops, and department stores, which have proven to be an open market for these products. Schools, colleges, and universities are also contracting with restaurant owners and foodservice contractors for this type of service on campus. Experience has shown that branded products can generate two to four times the sales volume of generic products since consumers prefer purchasing brands they know.

Several important legislative and regulatory issues faced the foodservice industry in 1992 and 1993. The Family and Medical Leave Act took effect in August

1993. It required employers of 50 or more persons to provide up to 12 weeks of unpaid job-protected leave to employees during any 12-month period.

Sales

Foodservice sales in 1993 were estimated at \$265 billion. Total foodservice sales, including both the commercial and noncommercial sectors, reached nearly \$251 billion in 1992, compared with \$241 billion in 1991, an increase of 3.9 percent over 1991 (app. table 4). During 1992, real sales among eating and drinking places rose only 0.9 percent.

Commercial foodservice sales of meals and snacks accounted for nearly \$191 billion or 76 percent of foodservice sales, while the noncommercial sector accounted for nearly \$60 billion or 24 percent (fig. 34). Although fast food restaurants had negative real sales growth in 1991, they showed a significant increase in real sales in 1992 of 6.1 percent. Restaurants and lunchrooms, however, showed no real sales growth in either year.

In the noncommercial sector, sales grew 5.3 percent in the education segment (2.3 percent after adjusting for inflation) and 2.9 percent real sales growth in extended care facilities.

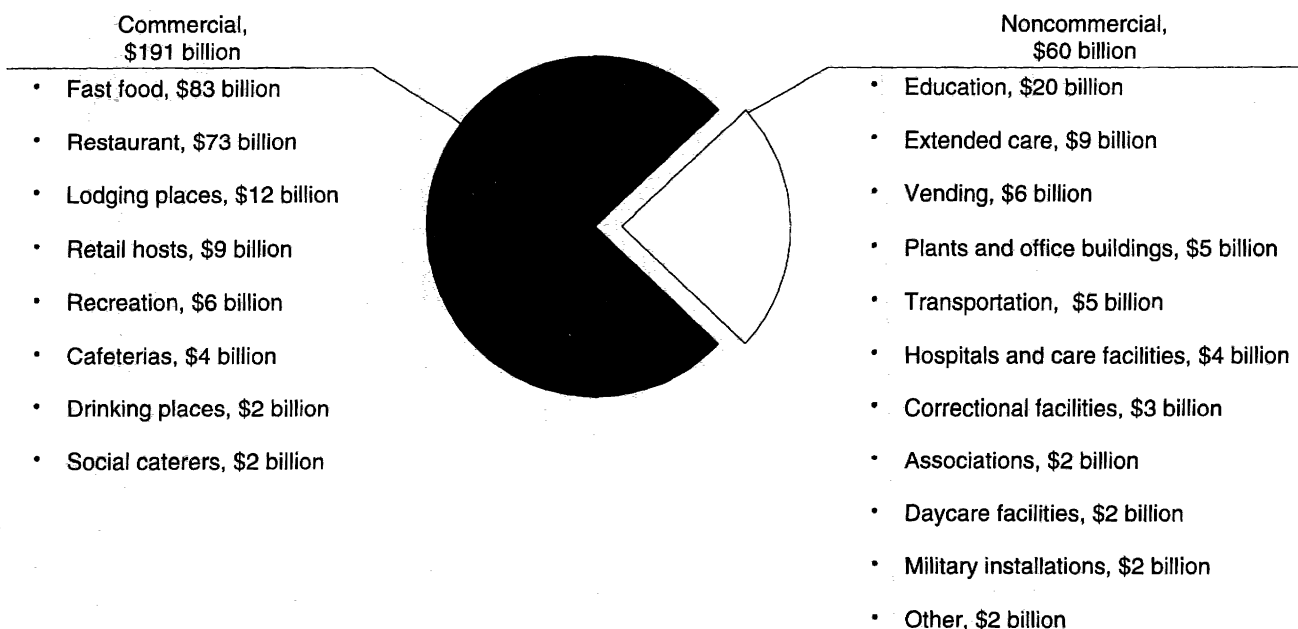
Structure and Organization

The 732,000-establishment foodservice industry consists of numerous individual market segments

Figure 34

Foodservice sales in 1992

Sales reached \$251 billion, with commercial sales accounting for 76 percent of total sales.



Source: (21).

commonly divided into two major sectors: commercial and noncommercial. Commercial foodservice establishments exist for profit. The primary purpose of noncommercial foodservice operations is to provide food in such establishments as nursing homes, child daycare centers, hospitals, and military installations as part of its overall service function rather than to make a profit by serving food.

Separate eating places are commercial foodservice outlets that derive revenue mainly from sales of meals and snacks. They include full-service restaurants, fast food outlets, commercial cafeterias, and social caterers. Separate eating places accounted for 85 percent of commercial foodservice sales in 1991 and 1992. The remaining sales in the commercial sector were in outlets such as hotel restaurants or drugstore lunch counters, that were part of a larger facility, the food-service sales of which were a small component of total revenues.

In 1991, the top 25 restaurant firms ranged from McDonald's Corporation, the leader, with \$12.5 billion in domestic sales, to Carl Karcher Enterprises, Inc., with \$629 million in domestic sales (app. table 34).

PepsiCo Food Service is the No. 2 firm, with U.S. sales totaling \$10.3 billion. PepsiCo continues to be the largest restaurant organization in the world. Pizza Hut, Kentucky Fried Chicken (KFC), Taco Bell, and Hot 'N Now make up PepsiCo's restaurant division. PepsiCo led the U.S. restaurant industry in number of units with a total of 16,020.

Grand Metropolitan, PLC, owner of Burger King and Haagen-Dazs, is the third largest restaurant firm, with estimated sales of \$5.4 billion. McDonald's, PepsiCo Food Service, and Grand Metropolitan, PLC, control domestic sales of \$28.2 billion, representing 36 percent of the top 100 sales.

Sales of the 25 largest franchised restaurant chains reached \$52.9 billion in 1991, representing 64 percent of total franchised restaurant sales (table 19). The four largest chains captured 29.8 percent of sales in 1991, compared to 31.9 percent in 1990. The eight largest chain's sales measured 43.2 percent, down from 45.9 percent in 1990.

McDonald's, the largest chain, maintained its leading position with systemwide sales of \$12.5 billion. Grand Metropolitan's Burger King continued in second place with sales of \$5.3 billion, and PepsiCo's Pizza Hut remained in third position. Hardee's/Roy Rogers moved from fifth to fourth position.

Sales of the fifth through eighth ranked chains rose 2.5 percent during 1991 to \$11.4 billion. Domino's ranked eighth with sales of \$2.4 billion--down 2.7 percent from 1990. KFC, the fifth ranked store, had sales of \$3.4 billion.

Sales of the ninth through twenty-fifth ranked chains reached \$18.2 billion in 1991, up 6.7 percent over similarly ranked chains in 1990. Sales at Dairy Queen, the ninth-ranked chain, were up 4.7 percent in 1991 to \$2.1 billion. Little Caesar's, which was not among the top 25 chains in 1989, jumped to tenth position in 1991, up 16 percent from 1990.

Mergers

In 1992, merger and acquisition activity in the food-service industry increased for the first time since 1986 (table 20). A total of 59 acquisitions were counted for 1992, up 64 percent from 1991. Of these acquisitions, 39 were made by U.S. foodservice firms,

Table 19--Sales of top 25 restaurant chains, 1990-91

Rank	Chain	U.S. system sales	
		1991	1990
<i>Billion dollars</i>			
1	McDonald's Corporation	12.52	12.25
2	Burger King	5.30	5.25
3	Pizza Hut	4.10	4.00
4	Hardee's/Roy Rogers	3.58	3.36
5	Kentucky Fried Chicken	3.40	3.20
6	Wendy's	2.94	2.74
7	Taco Bell	2.70	2.50
8	Domino's	2.40	2.47
9	Dairy Queen	2.12	2.10
10	Little Caesar's Pizza	1.73	1.49
11	Red Lobster	1.48	1.36
12	Denny's	1.43	1.30
13	Subway	1.40	1.30
14	Arby's	1.35	1.30
15	Shoney's	1.10	.99
16	Big Boy	1.07	1.07
17	Jack in the Box	.98	.95
18	Sizzler	.87	.90
19	Dunkin Donuts	.80	.78
20	Long John Silver's	.79	.78
21	The Olive Garden	.71	.55
22	Ponderosa	.71	.70
23	Carl's Jr.	.61	.57
24	Bennigan's	.56	.54
25	Chili's	.55	.43
Total		55.17	52.88

Source: (30).

while 20 were made by other firms. Divestitures numbered 34 at that time.

Significant merger activity during 1991 included Restaurant Enterprise Group, Inc., an Irvine, California-based dinner-house group, and PepsiCo, Inc., based in Purchase, New York. The Restaurant Enterprise Group purchased 104 Big Boys and 16 Allies restaurants for \$65 million from Marriott. The group, which owns El Torito among other franchises, converted the purchased restaurants into its Coco's and Carrows family restaurants in Southern California. PepsiCo, Inc., acquired 182 KFC stores from Scott's Hospitality's, Inc., in Toronto, Canada. This is part of PepsiCo's effort to upgrade its restaurants and launch new products.

Merger activity for 1992 included Rally's (a 338-unit double drive-thru) purchase of 45 Zipp's restaurants for \$12 million. Pizza Hut, a subsidiary of PepsiCo, Inc., and the Nation's largest pizza chain, acquired its second largest franchise, Pizza Management, Inc., of Texas, for an undisclosed amount. PepsiCo, Inc., also purchased a half interest in California Pizza Kitchens, Inc., a 25-outlet restaurant chain for an undisclosed amount.

Kohlberg, Kravis, Roberts, and Company, one of the Nation's leading leveraged buyout investment firms, acquired a controlling 47-percent stake in TW Holdings, Inc., the parent of TW Services, Inc., via a \$300 million equity investment and a debt restructuring valued at more than \$1 billion. TW Services, head-

quartered in Spartansburg, South Carolina, operates Denny's, Hardee's, Quincy's, and El Pollo Loco restaurants as well as contract food and vending machine operations.

In early 1993, Baskin-Robbins International purchased 13 company-owned and 186 franchised ice cream shops from a Canadian franchiser, Silicorp Limited, for an undisclosed amount. These units are located throughout Canada.

Franchising

According to the 1991 franchising survey conducted by the International Franchising Association, there were an estimated 103,313 franchise restaurant units operating in the United States. Total sales for franchised restaurants grew by 9.8 percent in 1991 (table 21). The U.S. franchise industry generated \$85.5 billion in retail sales in 1991, up from 1990 sales of \$77.9 billion. The 1991 sales figure represents 44.8 percent of total eating place sales. The industry added nearly 4,000 units in 1991, an increase of 4 percent, and now operates 103,313 restaurants. The hamburger segment, which includes roast beef and hot dogs, continues to dominate the industry.

Food Service in Supermarkets

Although supermarket delis are part of the retail market, they have been one of the fastest growing outlets for food service in recent years. Sales from supermarket delis are counted in the "Food Retailing" chapter.

The number of supermarkets with delicatessens has steadily increased over the years. Seventy-eight percent of all supermarkets had delicatessens with service employees in 1992 (fig. 35). Sales volume in the service deli reached a new high of \$16.5 billion in 1992, up 12.3 percent over 1991 sales of \$14.7 billion. The number of service deli units increased to 22,913 in 1992, up 4.2 percent over 1991.

The deli gained slightly in its share of store sales between 1991 and 1992. Deli sales now account for 4.9 percent of total store sales and contribute an average of 18.2 percent of the total store's profits. Sliced meats still dominate deli sales; however, prepared foods continue to make great inroads in deli sales (fig. 36). While sliced meats' share declined from 36.2 to 33.8 percent, hot- and cold-entree sales have been on the increase and will probably continue to gain. Entrees accounted for 9 percent of deli sales in 1982, and this share grew to 11.8 percent in 1992. Pizza increased its share from 3.8 percent in 1982 to 8.3

Table 20—Mergers and divestitures in food service
Merger activity fell in 1991, up in 1992.

Year	Acquisitions		Total	Divestitures
	By U.S. foodservice firms	By all other firms		
	<i>Number</i>			
1982	33	18	51	33
1983	43	21	64	35
1984	39	39	78	30
1985	49	24	73	39
1986	58	23	81	35
1987	56	21	77	35
1988	46	29	75	29
1989	38	34	72	30
1990	32	15	47	25
1991	21	15	36	16
1992	39	20	59	34

Source: (2).

percent in 1992. Fried and barbecued chicken's share increased from 6.2 percent in 1982 to 9.9 percent in 1992.

Soup and salad bars have become commonplace in supermarket delis. About half of the Nation's supermarkets offer them. Hot pizza sections are offered in 48 percent of supermarkets, fresh pasta

sections in 43 percent, yogurt machines in 15 percent, and sushi bars in 7 percent.

Alternative Markets for Food Service

Supermarkets are making arrangements with fast food companies and contract feeders to bring name brand fast food into the supermarket. A name brand brings high visibility to the supermarket's foodservice

Table 21--Franchised restaurants in the United States

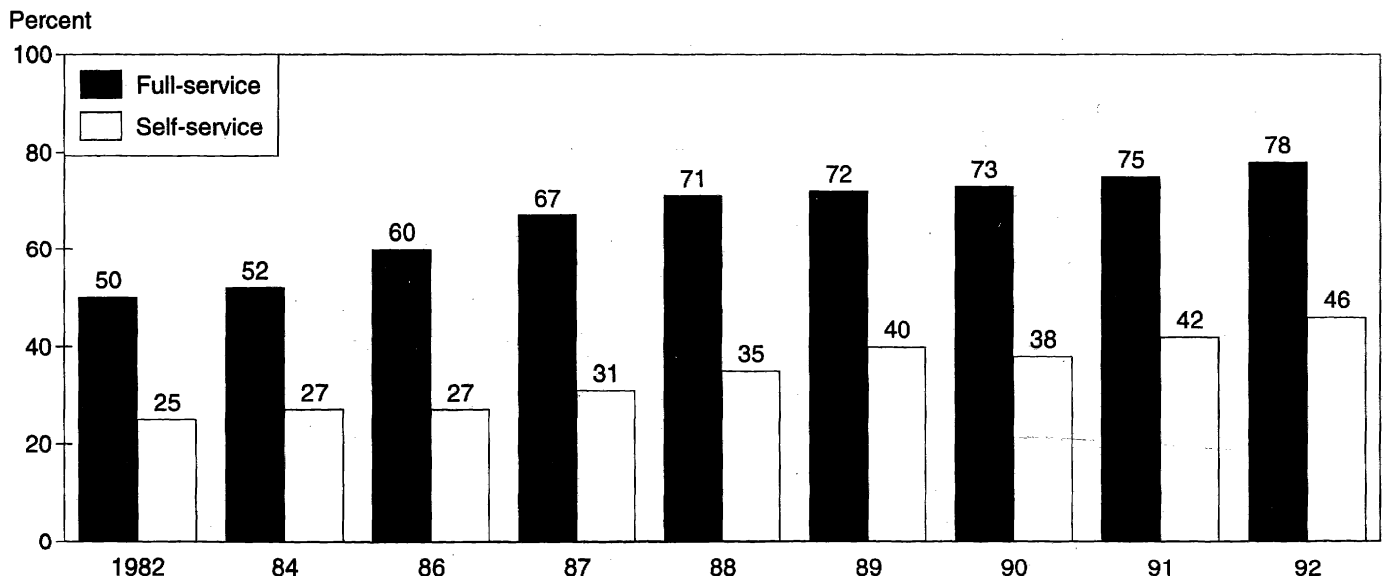
Item	1989	1990	1991	Increase	
				1989-90	1990-91
			-----Number-----		
			-----Percent-----		
Total number of establishments					
Company-owned	27,596	29,152	30,533	5.6	4.7
Franchisee-owned	64,359	70,188	72,780	9.1	3.7
Total	91,955	99,340	103,313	8.0	4.0
			-----Dollars-----		
Total sales					
Company-owned	25,490,936	27,901,355	30,498,783	9.5	9.3
Franchisee-owned	44,662,772	49,954,288	54,998,628	11.0	10.1
Total	70,113,708	77,855,643	85,497,411	11.0	9.8
Average sales per unit					
Company-owned	924	957	999	3.6	4.4
Franchisee-owned	693	712	756	2.7	6.2
Total	762	784	828	2.9	5.6

Source: (20).

Figure 35

Delicatessen growth in supermarkets, 1982-92

The percentage of supermarkets with full-service delis has steadily increased since 1982.



Source: (28).

operation. Pizza Hut, for example, has negotiated to put 75 kiosk-style outlets in supermarkets operated by ABCO in Phoenix, Arizona. The kiosks feature a limited menu and are located in the deli-bakery sections of the supermarket. Pizza Hut's deal marks the first time a major national chain has opened outlets within supermarkets. Pizza Hut units are also now in some Safeway and Kroger supermarkets.

Morrison's and ARA are examples of foodservice contractors who are teaming up with supermarket fast food chains. Smitty's Super Value, a 25-unit retailer in Phoenix, has also entered into agreement with Morrison Hospitality Group, a contract feeder based in Mobile, Alabama, to have Morrison's take over the supermarket's entire foodservice operation, which would include kiosks from Pizza Hut, Taco Bell, Cinnabon, and Subway. Morrison's will lease 5-8,000 square feet of space per store. Morrison's currently operates more than 1,200 food service facilities in 38 States, including food courts in high-density shopping malls.

Chains involved in supermarket programs sometimes share mall-style food court arrangements with complementary concepts. The "Supreme Court" is one such

concept that combines up to six restaurant chains in one operation within a supermarket. The three existing Supreme Courts are in a Kansas City Price Chopper, a Food Barn, and a Cleveland Risen. Chains participating in the Supreme Court concept include Chi-Chi's, Bennigan's, and Godfather's. Regional concepts involved include Fifth & Grand Sandwich Stand, Ricky Shaw's Oriental Express, and Heartland Wingers.

Mexican and Oriental chains are opening units in supermarket food courts also. Chi-Chi's entered a Price Chopper supermarket in Kansas City in 1992, and Panda Express, a Chinese food chain, is in 23 Vons and Fedco supermarkets. More chains are likely to open in supermarkets in the near future.

Food Service in Convenience Stores

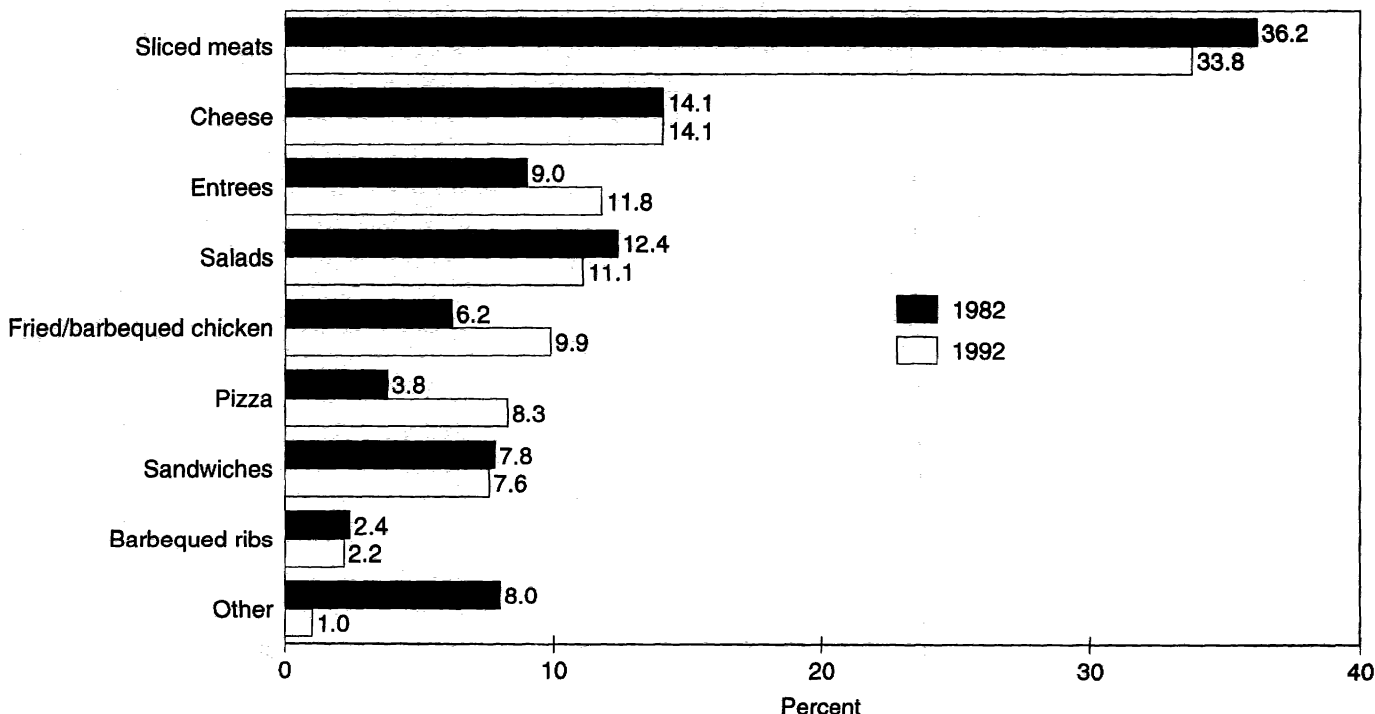
Food service continues to be a growing part of the convenience store (C-store) industry. According to the National Association of Convenience Stores, foodservice profit margins in 1992 ranged from 34 percent from deli services other than sandwiches (such as prepared salads) to 72 percent for hot beverages. The profit margin for fresh (versus frozen) sandwiches was 47 percent.

Figure 36

Share of deli sales in supermarkets, 1982 and 1992

Sliced meat and cheese accounted for almost half of all deli sales in supermarkets in 1992.

Products



Source: (34).

Fast food accounted for 10.4 percent of merchandise purchases in 1992, down from 12.1 percent in 1991. Hot dogs remain the top fast food item, with 71 percent of all stores offering them.

The C-store industry has started taking advantage of new marketing strategies to increase sales. Many chains have found that creating brand names for their foodservice programs helps portray a quality image. Taking the branding concept further, some C-store chains have even gotten together with national restaurant chains, figuring that selling nationally known products would bring in more customers than unbranded ones. Dunkin Donuts and other donut chains have had kiosks in convenience stores for years, but now Pizza Hut, Mrs. Field's, and Godfather's are also testing their products. Following the lead of Stop and Go, Wawa Food Markets is now testing Pizza Hut and Taco Bell stations in its stores.

Performance

Several measures of performance include changes in productivity and technology, profits, menu prices and costs, foreign activity, and advertising.

Productivity and Technology

Though labor productivity at eating and drinking places has been declining over the past decade, the index of output per labor hour rose to 101.0 in 1991 (app. table 56). According to Bureau of Labor Statistics (BLS) data, the productivity index for the industry hit a high of 105.0 in 1972, declined to 100.0 in 1982, and continued its decline to 97.6 in 1990. In the case of eating and drinking places, BLS has defined output by sales receipts rather than by a physical quantity because foodservice operators do not generally produce readily definable "hard" goods. The labor input part of the productivity ratio is defined as the total hours worked by all employees, both supervisory and nonsupervisory. After steadily increasing throughout the 1960's and mid-1970's then declining in the 1980's, productivity (measured as output per labor hour) appears to be on the increase in eating and drinking places.

New technology continues to be introduced in the foodservice industry that will speed service and reduce labor. Taco Bell has successfully tested an automatic, self-contained taco maker called Taco Flex-Station at one of its East Coast stores. The chain plans to install the units systemwide by 1994. The machine is reported to save up to 16 hours of human labor a day--functioning much like an assembly line.

It dispenses soft and hard taco shells; fills them with the right amount of meat, which is kept properly heated; adds lettuce and cheese, which is kept properly refrigerated; then packages the finished product. Taco Flex-Station makes tacos fast and ensures that every one of them is made right every time--offering customers consistency and quality. The machine reduces kitchen labor and helps to control food costs by eliminating waste.

Restaurants in New York are linking up to a new phone service called Foodphone. The phone service links patrons to a directory of restaurants in a particular city that is categorized by food types and price ranges. Restaurant operators pay a monthly or annual fee to be listed with the service. Once the caller has found the restaurant of their choice, the same call can be connected directly to the restaurant so that they can make reservations. The phone service currently includes several hundred New York restaurants, their addresses, menus, holiday specials, discounts, accepted credit cards, and hours of service. Long-range goals are to list all of New York's full-service restaurants, about 22,000 eating places, through the system. The phone system also provides a "Talk of the Town" selection that spotlights special restaurants for brunches, desserts, romantic ambience, dramatic views, kid-friendly places, hotel restaurants, supper clubs, and new openings.

Domino's Pizza is testing a new-age phenomenon known as interactive television. Pending final approval by the Federal Communications Commission, nine major markets will be issued operating licenses to test the television service. Consumers will have to pay an installation fee to be hooked up to interactive television, but will be able to access the Domino's menu along with other services through remote control. Orders are transmitted through a wireless control then ultimately land in the form of a printed fax at the Domino's unit nearest the ordering home--in about 10 seconds. When the customer turns the system on, they are able to see the entire Domino's menu, pricing and special offers. This system will make it easier for customers to make a purchasing decision.

Employment and Wages

The foodservice industry employed 6.6 million workers in 1992, 2 percent above the 1991 level (app. table 45). Food service accounted for 54 percent of all food marketing employees. Average hourly earnings of foodservice workers rose to \$5.29 in 1992, 3 percent above 1991 earnings (app. table 47).

Table 22--Largest U.S. investors abroad in foodservice operations, 1992

U.S. company	U.S. chain	Units abroad		Foreign sales
		Number	Percent	Billion dollars
PepsiCo., Inc.	KFC	3,640	42	3.3
	Pizza Hut	1,841	12	1.3
	Taco Bell	75	2	0.1
McDonald's Corp.	McDonald's	4,134	32	8.6
International Dairy Queen., Inc.	Dairy Queen	608	11	.3
Al Copeland Enterprises	Church's	134	13	.1
Wendy's Intern., Inc.	Wendy's	355	9	.3
Domino's Pizza, Inc.	Domino's	548	11	.3

Source: (30).

Menu Prices and Costs

Menu prices were up 2.0 percent in 1992, 3.4 percent in 1991, and 4.7 percent in 1990. Wholesale food prices dropped 0.8 percent in 1991 compared to 1.5 percent in 1992. Wholesale food prices are projected to increase 1.0 percent in 1993.

Industry labor costs, which include payroll as well as benefit expenses, rose 7.2 percent in 1991 and 4.6 percent in 1992. Industry labor costs are expected to increase 4.8 percent in 1993. The increase will be partially driven by higher health insurance costs. Other costs rose 4.2 percent in 1991 and 3.1 percent in 1992. Other costs are expected to rise 3.2 percent in 1993. Influential factors in the 1993 increase will include waste-removal expenses, water fees, real estate taxes, and insurance.

Foreign Investment

In 1990, the latest year for which data are available, there were 11 U.S. foodservice firms with 65 foreign affiliates. These affiliates had sales of \$6.7 billion, 22 percent above 1989 sales. The net income of these affiliates was \$293 million compared to \$206 million in 1989. Assets of these affiliates were almost \$3.3 billion, 25 percent less than in 1989 (app. table 88). Foreign-owned firms had 44 U.S. affiliates in 1990. These U.S. affiliates accounted for sales of \$4.8 billion and employed 118,000 employees (app. table 89).

U.S. Investment Abroad

As U.S. markets become saturated and U.S. companies look for alternative markets, more fast food outlets are showing up in other countries. Europe in particular offers many expansion opportunities for U.S. fast food chains. Between 1987 and 1991, units operating outside the United States rose 39 percent to 14,177 units.

Table 22 shows the sales, number, and percentage of foodservice units currently operating in other countries. In 1992, PepsiCo took the lead in number of units located outside of the United States. Forty-two percent of its 8,729 KFC units, 12 percent of its Pizza Hut units, and 2 percent of its Taco Bell units are located abroad. KFC currently operates outlets in 63 countries. KFC has opened the first of an undisclosed number of outlets to be built in Hungary under a franchise agreement with Hemingway Holding, a Budapest-based restaurant and real estate firm. KFC is looking at opportunities in Spain, France, Germany, Poland, Russia, Ukraine, and Czechoslovakia. The United Kingdom is Pizza Hut's largest European market. Some 300 of its 450 European restaurants are located there. Pizza Hut plans to increase its presence outside the United States, mostly in Germany.

Though McDonald's Corporation leads in foreign sales, accounting for \$8.6 billion in 1992, it is ranked second in terms of number of units abroad, with 32 percent of its outlets in other countries. McDonald's opened its first restaurant in Warsaw, Poland, in 1992 and will soon be opening its doors in Saudi Arabia and India. The contract to set up a franchise in Saudi Arabia was signed in January 1993 with the Alireza Group of Saudi Arabia. Church's Chicken chain has 13 percent of its 1,078 units located in other countries.

International Dairy Queen, Inc., and Domino's operate 11 percent of their systemwide units overseas. Domino's plans to open 21 outlets in and around Paris in the next 5 years.

Wendy's International, Inc., operates 9 percent of its outlets in other countries. Wendy's planned to open more restaurants worldwide in 1993, with substantial expansion in Europe.

Foreign Investment in the United States

The 6 largest foreign investors in U.S. foodservice had sales amounting to \$13.9 billion in 1992, 5.3 percent above 1991 sales (table 23).

Leaders of foreign investment in the United States include Grand Metropolitan, PLC, Imasco, Ltd., Allied-Lyons, and three contract foodservice companies; Onex Corporation, Sodexho, and Forte, PLC. Grand Metropolitan, PLC, London-based owner of the Burger King chain, is the largest investor in U.S. food service, Burger King operates over 5,600 outlets in the United States with U.S. systemwide sales amounting to \$6.4 billion, up 3.6 percent from 1991. Imasco, LTD, Canada was the number 2 foreign investor. Imasco operates about 3,580 Hardees/Roy Rogers outlets in the United States with sales amounting to \$4.5 billion. Allied-Lyons, London, England, owner of the Dunkin Donuts and Baskin-Robbins chains, is the third largest investor in U.S. foodservice operations. They operate 2,368 Dunkin Donuts units and 2,588 Baskin-Robbins units in the United States with combined U.S. sales of \$1.9 billion.

Onex Corporation, the largest of the contract foodservice companies, is headquartered in Toronto, Canada. Onex operates Sky Chef airline foodservices. Sodexho, Inc., is located in Bois D'Arcy, France, and Forte, PLC, is based in London, England. The three companies operate 1,075 units in the United States with combined sales of \$1.1 billion.

Unit expansion of Asian fast food chains in the United States and Canada is growing at an annual rate of 20 percent or more. According to a 1991 survey conducted by the National Restaurant Association, 6 major fast food chains operated a total of 389 U.S. units versus only 86 units in 1985. In addition, between 1987 and 1990, customer counts at Asian fast food restaurants soared 31.5 percent, far outstripping the 5.5 percent gain posted by all other fast food restaurants.

The Asian chains, which are blazing this new fast food trail for Chinese cuisine, are: Manchu Wok, with 243 units worldwide; Panda Express, 70 units; Mark Pi Express, 22 units; China Bell, 13 units; and Ho Lee Chow, 10 units. Two of the Asian chains, Manchu Wok and Ho Lee Chow, are Canadian owned.

Table 23--Largest foreign investors in U.S. foodservice operations

Foreign investor/headquarters	U.S. chains	U.S. units ¹		U.S. systemwide sales ¹	
		1992	1991	1992	1991
		<i>Number</i>		<i>Billion dollars</i>	
Grand Metropolitan, PLC (London, England)	Burger King	5,675	5,655	6.5	6.2
Imasco, LTD (Montreal, Canada)	Hardees	3,750	4,240	3.8 ²	4.2
	Roy Rogers	784	219	.7	.2
	Total	4,534	4,459	4.5	4.4
Allied-Lyons, PLC (London-England)	Dunkin Donuts	2,368	2,009	1.1	.9
	Baskin-Robbins	2,588	2,390	.8	.7
	Total	4,956	4,399	1.9	1.6
Contract foodservice:					
Onex Corporation (Toronto, Canada)	Sky Chef	37	30	.5	.5
Sodexho (Bois D'Arcy, France)	Seiler Corp.	400	400	.4	.4
Forte, PLC (London, England)	Gardner Merchant Food Services	638	598	.2	.2
Total		16,240	15,541	13.9	13.2

¹ Includes company-owned and franchise-owned operations.

² Projected 1992 decline in Hardee's sales reflects strategic reconversions to its sister brand, Roy Rogers, after that chain's large-scale conversion to Hardees in 1991. Pre-existing Hardee's units in the Northeast were also converted to the Roy Rogers brand.

Source: (25).

Profits

Three of the Nation's leading hamburger systems, McDonald's, Hardees, and Krystal Co., posted hefty increases in revenues and profits for 1992. PepsiCo's restaurant division, which includes KFC, Pizza Hut, and Taco Bell, started off slow early in 1992 but also experienced gains. McDonald's, the largest hamburger chain, reported a 12-percent annual gain in profits on revenue increases of 7 percent. McDonald's systemwide sales growth outside of the United States jumped 17 percent to \$8.6 billion, in contrast to the 6-percent domestic increase to \$13.2 billion. In 1992, Wendy's, the Nation's third largest hamburger operator, reported their net income rose 26 percent to \$64.7 million, while revenues increased 17 percent to \$1.23 billion.

Hardee's, the fourth largest burger chain, owned by Imasco in Montreal, Canada, reported their operating income rose 57 percent to \$63.1 million in 1992. Revenues increased 7 percent to \$2 billion. Hardee's systemwide volume increased 9 percent to \$4.8 billion for the year. Hardees attributed this increase to improved guest satisfaction, successful bridging of three-day parts (breakfast, lunch, and dinner), and its 1992 development of new menu introductions.

Krystal Co., the Chattanooga, Tennessee, hamburger system, reported an annual net income increase of 143 percent to \$7 million. The company's revenues rose 10 percent to \$232.1 million for the year.

Table 24--Top 3 foodservice corporations' expenditures in advertising,¹ 1990-1991

Company	Expenditures	
	1990	1991
	<i>Million dollars</i>	
McDonald's Corp.	423.0	387.4
PepsiCo, Inc.		
KFC	118.3	119.9
Pizza Hut	106.9	118.4
Taco Bell	81.1	92.3
Hot 'N Now	NA	0.3
H. Salt	NA	NA
Eng. Res.	.1	.1
Grand Met., PLC		
Burger King	177.3	133.7
Total	906.7	852.4

¹ Includes magazines, newspapers, outdoor advertising, television (network, spot, syndicated and cable), and radio network and spot.

Source: (3).

NA = Not applicable.

PepsiCo's restaurant division posted a 35-percent annual rise in fourth-quarter operating profits in 1992 to \$229 million. Domestic restaurant operating profits grew by 37 percent to \$189 million; sales rose to \$2.2 billion, a 14-percent gain. For the year, KFC's profit grew 41 percent, to \$174 million. Sales rose 18 percent to \$2.2 billion. Pizza Hut's full year profits grew 9 percent to \$343 million, and sales rose 11 percent to \$3.6 billion.

Taco Bell remained strong with full year profits up 20 percent to \$217 million. The chain increased worldwide sales to \$2.5 billion, a 21-percent increase.

Advertising

Television continued to be the major advertising medium for the top three (McDonald's, PepsiCo, Inc., and Grand Metropolitan, PLC) foodservice advertisers during 1991.

The top three foodservice advertisers spent \$852 million in advertising in 1991, down 6.2 percent from 1990 (table 24). Of that amount, 96 percent was spent on television promotions. Although McDonald's spent less on its advertising in 1991, they continued to lead foodservice advertisers. The corporation spent \$387 million on advertising, primarily for network and spot advertising. Much of McDonald's advertising was to promote their "value pricing" strategy that lowered prices on selected core items like hamburgers, cheeseburgers, and children's Happy Meals.

McDonald's launched a massive outdoor ad campaign in May 1992 to promote its menu values. This is the first use of this medium for national brand advertising. Its purchase of 20,000 outdoor locations nationwide was said to have been the largest single outdoor campaign ever launched.

McDonald's has also started a colorful new ad campaign aimed at kids 2 to 11 years old on "good nutrition." The public service spots are animated lessons in good eating. McDonald's is also testing two new advertising concepts--McMagazine, an in-store publication and McDonald Television, an ad supported television network being developed with Turner Broadcasting Systems.

Of the remaining two foodservice corporations, PepsiCo spent \$331 million in foodservice advertising during 1991; KFC and Pizza Hut accounted for 72 percent of that total. Grand Metropolitan, PLC, spent nearly \$134 million advertising their Burger King franchises.

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Market Size and Sales

Appendix table 1--Food expenditures in the food marketing system¹

Year	Off-premise use				Total sales	Food service	Total
	Food-stores	Other stores	Home-delivered, mail order	Farmers, manufacturers, wholesalers			
<i>Billion dollars</i>							
1963	44.1	3.0	2.7	1.6	51.5	22.6	74.1
1967	52.1	3.3	2.5	1.6	59.5	30.4	89.9
1972	75.5	3.9	2.4	1.8	83.6	46.6	130.2
1977	118.3	7.1	2.3	2.9	130.5	84.8	215.3
1982	179.1	10.7	2.6	4.2	196.7	140.4	337.4
1983	187.3	12.8	2.7	4.3	207.1	152.1	359.2
1984	197.1	14.6	2.8	4.5	218.9	163.0	381.9
1985	204.9	16.4	2.8	4.6	228.7	171.5	400.2
1986	210.4	19.3	2.9	4.7	237.2	185.3	422.5
1987	217.9	20.2	3.4	5.2	246.5	204.7	451.2
1988	227.8	22.3	3.7	5.5	259.4	223.2	482.6
1989	243.1	25.0	3.9	6.0	278.0	237.9	515.9
1990	264.0	28.2	4.3	6.3	302.8	255.1	562.9
1991	274.1	30.5	4.4	6.5	315.5	263.2	578.7
1992	280.1	32.0	4.5	6.4	323.0	273.6	596.6

¹ Includes taxes and tips. Excludes home food production.

Source: (21) and updates.

Appendix table 2--Alcoholic beverage sales in the food marketing system

Year	Packaged alcoholic beverages				Alcoholic drinks				Total
	Liquor stores	Food-stores	All other	Total	Eating and drinking places ¹	Hotels and motels	All other	Total	
<i>1,000 dollars</i>									
1963	4,465	2,594	725	7,784	5,306	458	385	6,149	13,933
1967	6,005	3,211	904	10,120	6,222	623	551	7,396	17,516
1972	8,810	5,137	1,113	15,060	7,911	961	704	9,576	24,636
1977	11,686	8,041	1,946	21,673	11,981	1,713	1,266	14,960	36,633
1982	15,984	13,379	3,378	32,741	18,371	2,849	1,488	22,708	55,449
1983	16,818	14,789	3,878	35,485	19,038	3,051	1,620	23,709	59,194
1984	15,997	16,622	4,158	36,777	19,863	3,220	1,691	24,774	61,551
1985	17,058	16,989	4,152	38,199	20,659	3,371	1,816	25,846	64,045
1986	17,350	17,631	5,031	40,012	22,291	3,406	1,935	27,632	67,644
1987	17,283	18,197	5,094	40,574	23,204	3,691	2,090	28,985	69,560
1988	17,467	18,741	5,603	41,811	24,643	3,965	2,278	30,889	72,699
1989	18,221	19,868	6,440	44,529	25,467	4,069	2,446	31,983	76,512
1990	20,069	21,228	7,354	48,651	27,531	4,195	2,649	34,375	83,026
1991	21,040	21,300	7,912	50,252	28,569	4,190	2,712	35,471	84,724
1992	22,487	21,432	8,107	52,025	27,603	4,701	2,827	35,131	87,157

¹ Includes tips.

Source: (21) and updates.

Appendix table 3--Consumer grocery expenditures, 1992

Product	Sales volume	Share of supermarket sales	Percent change, 1991-92
	<i>1,000 dollars</i>	-----Percent-----	
Perishables	171,249,299	47.66	2.80
Baby goods	13,085,547	3.64	1.2
Instore bakery	8,920,000	2.48	12.6
Dairy	24,214,658	6.74	1.9
Frozen foods	16,937,588	4.71	2.5
Fresh and cured meat and poultry	55,073,699	15.32	-1.3
Service deli	16,460,000	4.58	12.3
Produce	36,602,807	10.18	4.6
Dry grocery (Food)	102,454,639	28.51	1.8
Baby foods	3,217,398	0.90	7.8
Baking needs	2,948,717	0.82	3.6
Beer, wine & liquor	19,614,507	5.46	0.9
Breakfast foods	9,156,668	2.55	5.0
Candy and gum	3,995,955	1.11	2.9
Canned seafood	1,688,875	0.47	-6.6
Canned fruits	1,762,936	0.49	-1.0
Canned and bottled juices	4,936,087	1.37	3.3
Canned meat/specialty foods	1,292,572	0.36	-0.1
Canned milk	386,067	0.11	-1.7
Canned prepared foods	2,012,196	0.56	-1.1
Canned and dry soups	3,092,184	0.86	4.7
Canned vegetables	3,190,325	0.89	-2.1
Condiments, dressings, and spreads	7,403,916	2.06	NC
Desserts	602,657	0.17	-1.4
Dried foods	3,427,475	0.95	1.2
Fats and shortenings	1,492,345	0.42	-3.2
Jams, jellies, preserves	2,245,622	0.62	0.3
Pasta	1,502,772	0.42	5.5
Prepared drinks	6,471,922	1.80	-4.1
Snacks	6,577,707	1.83	-0.5
Soft drinks	12,896,530	3.59	3.1
Sweetners and flavors	2,494,206	0.69	1.4
Total foods	273,748,938	76.17	2.5
Dry grocery (nonfoods)	44,716,790	12.44	-3.7
Health and beauty aids	15,157,484	4.22	3.1
Prescriptions	4,128,366	1.15	18.6
General merchandise	15,164,049	4.22	4.4
Total foods and nonfoods	352,915,627	98.20	1.9
Unclassified	6,466,373	1.80	NC
Grand total	359,382,000	100.00	3.7

NC = No change.

Sources: (1, 29).

Appendix table 4--Foodservice sales by industry segment¹

Industry segment	1986	1987 ²	1988 ²	1989 ²	1990 ²	1991 ²	1992 ²
<i>Million dollars</i>							
Commercial:							
Separate eating places--							
Restaurants and lunchrooms	53,027	57,881	62,675	67,240	70,583	73,547	72,724
Fast-food outlets	49,852	58,556	66,017	70,774	75,324	76,685	83,628
Cafeterias	3,505	3,111	3,342	3,534	3,793	3,952	3,908
Social caterers	963	946	1,246	1,447	1,614	1,542	1,552
Total	107,347	120,494	133,280	142,995	151,314	155,726	161,812
Lodging places	8,843	9,317	10,116	10,493	11,016	11,029	12,355
Retail hosts	6,027	5,943	6,502	7,294	8,066	8,489	8,915
Recreation and entertainment	3,830	4,260	4,714	5,141	5,475	5,698	5,991
Separate drinking places	1,475	1,546	573	1,552	1,681	1,748	1,614
Commercial feeding total	127,522	141,560	155,185	167,475	177,552	182,690	190,687
Noncommercial:							
Education--							
Elementary and secondary	9,610	9,145	9,534	9,933	10,181	10,627	10,472
Colleges and universities	6,184	6,671	7,057	7,665	8,276	8,838	9,310
Total	15,794	15,816	16,591	17,598	18,457	19,465	19,782
Military services--							
Troop feeding	1,066	1,064	1,068	1,104	1,074	1,070	1,040
Clubs and exchanges	630	336	366	400	434	454	471
Total	1,696	1,400	1,434	1,504	1,508	1,524	1,511
Plants and office buildings	3,966	4,254	4,625	4,903	5,176	5,306	5,327
Hospitals	3,494	3,528	3,590	3,740	3,876	3,826	3,758
Extended care facilities	5,908	5,072	5,392	5,872	8,212	8,778	9,292
Vending	4,770	5,276	5,753	6,049	6,624	6,648	6,747
Transportation	3,100	3,654	4,048	4,432	4,888	4,784	4,834
Associations	1,488	1,429	1,541	1,629	1,745	1,772	1,853
Correctional facilities	1,880	1,658	1,842	2,084	2,280	2,434	2,510
Child daycare centers	912	849	988	1,073	1,193	1,345	1,561
Elderly feeding programs	117	116	147	309	913	³	165
Other	469	1,148	973	1,032	1,197	2,559 ³	2,460
Noncommercial feeding total	43,594	44,200	46,924	50,225	56,069	58,441	59,800
Total	171,116	185,760	202,109	217,700	233,621	241,131	250,487

¹ Excludes sales taxes and tips.

² Revised based on new data.

³ See other which includes 1991 elderly feeding programs.

Source: (21).

Appendix table 5--Alcoholic beverage sales, by product category

Year	Total retail sales	Market shares		
		Distilled spirits	Wine	Beer
	<i>Million dollars</i>	<i>Percent</i>		
1967	17,516	50.8	6.0	43.2
1972	24,636	48.0	9.1	42.9
1977	36,633	41.8	10.0	48.2
1983	59,194	33.8	12.3	53.9
1984	61,151	32.1	12.4	54.5
1985	64,045	32.7	12.9	54.4
1986	67,644	32.6	13.4	54.0
1987	69,556	32.4	13.2	54.5
1988	72,739	31.9	12.7	55.3
1989	76,600	31.7	12.2	56.0
1990	83,164	32.2	12.5	55.3
1991	85,940	31.8	12.0	56.2
1992	87,609	30.9	11.5	57.5

Sources: (9, 21).

Appendix table 6--Market share of distilled spirits entering U.S. trade channels

Type	1975	1977	1982	1984	1986	1988	1990	1992
	<i>Percent</i>							
Domestic	71.5	72.1	69.4	67.4	68.3	68.1	64.5	67.4
Imported	28.5	28.0	30.7	32.6	31.7	31.9	35.5	32.6
Whiskey	53.2	49.5	43.9	41.3	38.7	37.6	37.4	35.2
Gin	9.8	10.0	9.3	9.1	8.7	8.3	8.0	8.0
Vodka	19.4	20.6	22.4	22.5	23.5	24.1	22.8	24.2
Rum	4.0	5.2	7.3	7.9	7.9	8.3	9.4	8.6
Brandy	3.5	3.8	4.6	5.1	5.1	5.1	4.9	5.1
Cordials	7.0	7.1	9.0	10.1	11.9	11.5	10.7	11.7
Others	3.1	3.5	3.5	4.0	3.8	4.5	6.4	6.9
	<i>Million gallons¹</i>							
Total	448	441	447	444	404	384	403	372

¹ Equivalent to wine.

Source: (9).

Appendix table 7--Food marketing system's share of disposable personal income¹

Year	Retailing	Food service	Total food
		<i>Percent</i>	
1963	12.5	3.5	16.0
1967	10.6	3.5	14.1
1972	0.0	3.7	13.7
1977	9.5	4.2	13.7
1982	8.5	4.5	13.0
1983	8.3	4.6	12.9
1984	8.0	4.4	12.4
1985	7.8	4.4	12.2
1986	7.6	4.4	12.0
1987	7.5	4.5	12.0
1988	7.3	4.5	11.8
1989	7.4	4.4	11.7
1990	7.5	4.3	11.8
1991	7.5	4.2	11.7
1992	7.3	4.2	11.5

¹ Excludes alcohol.

Source: (42).

Appendix table 8--Food service as share of food expenditures

Year	Share of total dollars	Share of total food (quantity)	Share of personal dollars
		<i>Percent</i>	
1929	17.2	14.9	13.4
1939	19.2	16.9	15.0
1948	24.1	20.7	17.9
1954	25.2	22.0	18.2
1955	25.5	21.7	18.6
1956	25.8	21.7	19.0
1957	25.6	21.3	18.8
1958	25.3	21.3	18.5
1959	26.2	21.4	19.8
1960	26.6	21.4	19.9
1961	27.2	21.7	20.4
1962	28.0	22.2	21.1
1963	28.9	22.6	21.7
1964	29.4	23.3	22.3
1965	30.2	23.7	22.8
1966	31.3	24.7	23.7
1967	32.5	25.0	24.7
1968	33.5	25.6	25.5
1969	33.7	25.3	25.6
1970	33.8	25.0	26.3
1971	34.2	24.8	26.5
1972	34.6	25.2	27.1
1973	35.1	27.2	27.3
1974	34.5	26.3	26.8
1975	36.2	27.5	28.5
1976	37.5	28.0	30.0
1977	38.3	28.1	30.8
1978	39.0	29.0	31.5
1979	39.5	29.5	32.2
1980	39.3	29.2	32.3
1981	39.8	29.4	33.5
1982	40.5	29.8	34.6
1983	41.2	29.7	35.4
1984	41.1	30.2	35.8
1985	42.1	30.2	36.1
1986	43.1	30.7	36.7
1987	44.6	31.5	37.3
1988	45.5	32.3	37.8
1989	45.4	32.8	37.3
1990	45.0	32.7	36.5
1991	44.8	32.3	35.9
1992	45.2	32.4	36.3

Source: (21).

Appendix table 9--Food and nonfood sales or shipments in food marketing¹

Year	Processing ²	Wholesaling	Food service	Retailing
<i>Million dollars</i>				
1972	115,051	106,457	NA	99,035
1977	192,912	182,905	NA	157,941
1982	280,530	288,658	NA	246,122
1983	287,084	309,200	135,982	256,018
1984	300,012	333,000	146,054	271,909
1985	301,562	346,300	152,773	285,062
1986	308,528	369,900	171,116	297,019
1987	329,725	380,900	185,760	309,461
1988	351,513	396,700	202,109	325,947
1989	364,403	422,600	217,700	347,995
1990	384,009	431,000	233,621	369,839
1991	386,102	441,800	241,131	376,892
1992	390,580	453,000	250,487	384,013

NA = Not available.

¹ Both food processing and wholesaling include double counting because of sales to other processors or wholesalers. Sales of the four sectors include nonfood grocery items. Shipments or sales of the four sectors are noncumulative.

² Industry shipments.

Sources: (41, 44, 45, 46, 47, 51).

Appendix table 10--Food processing product shipments

Industry	1987	1988	1989	1990	1991
	<i>Million dollars</i>				
Meat products	79,002	81,189	84,340	90,776	89,391
Meatpacking plants	45,536	47,333	46,542	51,069	49,362
Sausage and other prepared meats	16,553	17,258	17,515	18,779	18,361
Poultry slaughtering and processing	14,912	16,598	20,282	20,927	21,703
Dairy products	44,755	46,944	48,044	50,962	48,852
Creamery butter	1,420	1,764	1,570	1,307	1,231
Cheese, natural and processed	12,971	13,134	14,317	16,155	16,379
Condensed and evaporated milk	5,856	6,245	6,052	6,135	6,343
Ice cream and frozen desserts	3,916	4,298	4,474	4,660	4,761
Fluid milk	20,590	21,502	21,630	22,703	21,137
Preserved fruit and vegetables	36,342	38,301	41,627	44,494	46,806
Canned specialties	5,350	5,551	6,047	6,332	6,474
Canned fruit and vegetables	11,889	12,872	13,605	14,697	15,579
Dried fruit, vegetables, and soups	1,821	1,971	2,235	2,453	2,708
Pickles, sauces, and salad dressings	5,050	5,292	5,412	5,749	6,220
Frozen fruit and vegetables	6,606	6,814	7,422	7,473	7,395
Frozen specialties	5,624	5,798	6,904	7,797	8,427
Grain mill products	36,737	40,945	44,873	46,538	47,110
Flour and grain mill products	4,984	5,205	5,776	5,624	5,207
Cereal breakfast foods	6,565	7,274	7,912	8,704	8,954
Rice milling	1,234	1,603	1,743	1,771	1,739
Prepared flour mixes and dough	2,625	2,802	2,912	3,155	3,302
Wet corn milling	4,788	5,312	6,287	6,696	7,114
Dog, cat, and other pet food	5,069	5,956	6,703	7,015	7,097
Prepared animal feed	11,468	12,790	13,538	13,570	13,696
Bakery products	23,677	24,156	25,065	26,121	26,538
Bread and other bakery goods	16,221	16,362	16,580	17,019	17,278
Cookies and crackers	6,290	6,498	7,099	7,803	8,021
Frozen bakery products, except bread	1,165	1,296	1,386	1,298	1,238
Sugar and confections	18,887	19,640	20,184	21,044	21,958
Raw cane sugar	1,239	1,287	1,436	1,295	1,374
Cane sugar, refined	2,460	2,458	2,641	3,075	2,925
Beet sugar	1,831	2,093	2,096	2,133	2,330
Candy and other confectionery products	6,979	7,419	7,863	7,991	8,745
Chocolate and cocoa products	3,107	3,212	2,843	3,061	3,013
Chewing gum	1,090	1,040	NA	1,113	NA
Salted and roasted nuts and seeds	2,178	2,129	NA	2,373	NA
Fats and oils	15,880	20,516	20,194	19,499	18,735
Cottonseed oil mills	470	851	938	850	716
Soybean oil mills	9,074	12,140	10,723	10,966	9,965
Vegetable oil mills	431	448	591	490	455
Animal and marine fats and oils	1,753	2,024	2,297	1,766	1,725
Shortening and cooking oils	4,151	5,052	5,642	5,415	5,873

See footnotes at end of table.

Continued--

Appendix table 10--Food processing product shipments--Continued

Industry	1987	1988	1989	1990	1991
	<i>Million dollars</i>				
Beverages	47,327	49,722	50,133	52,198	54,610
Malt beverages	13,618	13,870	14,321	15,186	15,924
Malt	530	613	798	700	610
Wines, brandy, and brandy spirits	3,208	NA	3,539	3,657	3,585
Distilled and blended liquors	3,474	3,468	3,601	3,473	3,656
Soft drinks and carbonated water	21,830	23,310	23,002	23,847	25,191
Flavoring extracts and syrups	4,664	4,930	4,870	5,332	5,642
Miscellaneous foods	29,116	30,098	29,938	32,374	32,597
Processed fishery products	767	844	837	998	1,029
Roasted coffee	6,400	6,332	6,167	6,622	5,919
Potato chips and similar products	5,040	5,384	5,788	6,062	6,646
Manufactured ice	289	280	355	326	324
Macaroni and spaghetti	1,048	1,119	1,154	1,229	1,276
Other food preparations	9,787	10,167	10,083	11,047	11,322
Total food products	329,725	351,513	364,403	384,009	379,000

Source: (43).

Appendix table 11--Total sales of grocery and food wholesalers, by type of wholesaler

Year	Merchants	Manufacturers' sales branches and offices	Agents and brokers
<i>Billion dollars</i>			
1982	174.7	63.9	50.0
1983	187.6	68.3	53.3
1984	203.1	73.1	56.8
1985	207.7	78.1	60.5
1986	221.9	83.5	64.5
1987	223.0	89.2	68.7
1988	228.1	95.4	73.2
1989	242.7	101.9	78.0
1990	238.9	109.0	83.1
1991	243.9	111.1	84.8
1992	253.7	114.5	85.0

Sources: (47, 51).

Appendix table 12--Foodstore sales¹

Year	Total foodstore sales	Grocery store sales				Specialized foodstore sales
		Total	Supermarkets	Convenience stores	Superettes	
<i>Million dollars</i>						
1958	50,263	43,696	23,562	NA	NA	6,567
1963	57,254	52,566	31,484	NA	NA	4,688
1967	69,371	64,215	43,433	NA	NA	5,156
1972	99,035	92,273	63,791	4,200	24,282	6,762
1977	157,941	147,759	110,849	8,722	28,188	10,182
1982	246,122	230,696	171,966	24,867	33,863	15,426
1983	256,018	240,402	184,568	27,677	28,157	15,616
1984	271,909	256,465	193,059	33,320	30,086	15,444
1985	285,062	269,546	201,843	33,707	33,996	15,516
1986	297,019	280,833	211,042	34,426	35,365	16,186
1987	309,461	290,979	219,890	36,051	35,038	18,482
1988	325,947	307,331	230,640	40,234	36,457	18,616
1989	347,995	328,404	247,312	43,945	37,147	19,591
1990	369,839	348,767	260,127	46,537	42,103	21,072
1991	376,892	355,267	268,925	47,271	39,071	21,625
1992	384,013	360,815	274,277 ²	48,514 ²	38,024 ²	23,198

NA = Not available.

¹ Sales exclude sales taxes.

² Estimated.

Sources: (29, 46).

Industry Size and Structure

Appendix table 13--Number of food marketing establishments

Year	Processing	Wholesaling	Eating and drinking places ¹	Retailing	Total
<i>Number</i>					
1963	37,521	41,890	334,481	319,433	733,325
1967	32,517	40,005	271,182	294,243	637,947
1972	28,193	38,531	359,524	267,352	693,600
1977	26,656	37,960	368,066	252,853	685,535
1982	22,130	38,516	379,444	254,346	694,436
1987	20,624	42,075	490,383	257,337	810,239

¹ Excludes all noncommercial eating facilities and commercial outlets such as hotel restaurants, department store coffee shops, and ballpark food concessions. These eating facilities numbered over 397,000 in 1982 and over 343,000 in 1977.

Sources: (44, 45, 47).

Appendix table 14--Number of food marketing establishments covered by unemployment insurance¹

Year	Processing	Wholesaling	Eating and drinking places ²	Retailing	Total
<i>Number</i>					
1978	24,999	39,339	284,531	127,974	476,843
1979	24,172	40,009	288,016	128,114	480,311
1980	24,218	40,613	290,959	129,402	485,192
1981	24,061	41,629	292,570	129,921	488,181
1982	24,180	42,626	297,630	132,067	496,503
1983	24,127	43,498	305,684	135,125	508,434
1984	23,845	44,856	308,966	136,651	514,318
1985	23,669	45,584	314,257	138,641	522,151
1986	23,367	46,678	319,484	139,106	528,635
1987	23,174	48,677	331,368	141,426	544,645
1988	22,920	50,103	337,566	141,791	552,380
1989	22,239	51,096	343,168	142,356	558,859
1990	22,903	51,385	35,545	143,279	573,024
1991	23,546	53,237	382,163	157,280	616,226

¹ Includes production establishments, central business offices, and other auxiliary units.

² Excludes all noncommercial eating facilities and commercial outlets such as hotel restaurants, department store coffee shops, and ballpark food concessions. These eating facilities numbered over 397,000 in 1982 and over 343,000 in 1977.

Source: (58).

Appendix table 15--Number of food marketing establishments (county business patterns)¹

Year	Processing	Wholesaling	Eating and drinking places ²	Retailing	Total
<i>Number</i>					
1974	25,383	34,736	241,253	160,233	461,605
1975	24,550	34,577	245,774	159,710	464,611
1976	24,113	34,893	252,267	162,010	473,283
1977	24,294	35,951	275,761	167,088	503,094
1978	23,748	35,019	278,609	161,230	498,606
1979	21,362	36,127	275,447	159,162	492,098
1980	20,983	35,636	271,236	157,649	485,504
1981	20,720	35,535	273,726	162,952	492,933
1982	20,808	36,521	299,684	173,311	530,324
1983 ³	21,757	39,517	351,935	187,451	600,660
1984	21,667	37,492	350,619	185,133	594,911
1985	21,569	39,694	333,994	182,725	577,982
1986	21,145	39,758	362,895	187,430	611,228
1987	20,837	42,031	388,842	197,130	648,840
1988	20,323	40,651	370,291	183,226	614,531
1989	20,182	40,038	391,478	183,857	635,555
1990	20,492	40,766	402,564	186,062	649,884

¹ Includes administrative and auxiliary establishments, both of which are excluded from appendix table 13.

² Excludes all noncommercial eating facilities and commercial outlets such as hotel restaurants, department store coffee shops, and ballpark food concessions. These eating facilities numbered over 397,000 in 1982 and over 343,000 in 1977.

³ Beginning in 1983, establishments were included if they existed at any time during the year. For prior years, only firms existing at the end of the year were included.

Source: (48).

Appendix table 16--Number of retail and wholesale alcoholic beverage establishments

Year	Liquor stores	Wholesale distributors
<i>Number</i>		
1963	40,188	7,598
1967	39,719	7,109
1972	41,991	6,383
1977	44,354	6,714
1982	41,507	6,666
1987	45,086	5,835

Sources: (46, 47).

Appendix table 17--Census statistics for food manufacturing industries

Industry group and industry	1987				1982			
	All establishments		Value added by manufacture	Cost of materials	All establishments		Value added by manufacture	Cost of materials
	Total	With 20 or more employees			Total	With 20 or more employees		
	----- Number -----		----- Million dollars -----		----- Number -----		----- Million dollars -----	
All industries	368,817	126,162	1,166,554.9	1,321,327.8	358,061	123,163	824,117.7	1,130,142.7
Food and kindred products	20,624	9,694	122,072.6	208,628.7	22,130	10,681	88,419.1	192,216.6
Meat products	3,267	1,535	13,740.4	62,850.3	3,623	1,682	11,002.3	56,598.2
Meatpacking plants	1,465	504	5,160.0	39,840.3	1,780	668	5,824.6	39,048.6
Sausages and other prepared meats	1,340	651	4,470.3	12,184.1	1,311	613	2,009.9	9,379.1
Poultry slaughtering and processing	462	380	4,110.2	10,825.9	532	401	2,276.8	8,170.5
Dairy products	2,366	1,289	11,908.9	32,945.7	2,724	1,449	8,359.8	30,473.6
Creamery butter	49	26	155.6	1,269.3	74	35	135.6	1,556.1
Cheese, natural and processed	643	310	2,614.4	10,315.1	704	319	1,777.3	9,012.7
Condensed and evaporated milk	185	114	2,388.2	3,445.4	204	125	1,447.6	3,296.7
Ice cream and frozen desserts	540	212	1,263.4	2,669.5	552	219	910.4	1,949.0
Fluid milk	949	627	5,487.3	15,246.5	1,190	751	4,088.9	14,659.1
Preserved fruit and vegetables	1,912	1,106	17,272.1	19,042.8	NA	NA	NA	NA
Canned specialties	211	86	2,661.9	2,703.4	198	88	1,769.3	2,372.0
Canned fruit and vegetables	648	418	5,441.8	6,467.8	715	451	3,552.7	5,768.1
Dehydrated fruit, vegetables, and soups	131	68	938.6	928.4	151	85	792.3	985.0
Pickles, sauces, and salad dressings	381	161	2,457.8	2,455.5	376	155	1,736.9	2,532.7
Frozen fruit and vegetables	258	193	2,986.0	3,669.5	264	199	2,408.6	2,970.1
Frozen specialties	283	180	2,786.0	2,818.2	NA	NA	NA	NA
Grain mill products	2,610	1,015	15,271.3	21,530.4	2,745	1,063	10,333.1	20,965.7
Flour and other grain mill products	361	168	1,384.0	3,709.9	360	174	1,094.3	3,825.5
Breakfast cereals	53	34	4,904.5	1,669.8	52	37	2,622.8	1,475.0
Rice milling	63	35	440.1	852.4	NA	NA	NA	NA
Blended and prepared flour	147	95	1,237.0	1,294.0	NA	NA	NA	NA
Wet corn milling	61	36	2,030.9	2,746.7	42	27	1,157.4	2,101.0
Dog, cat, and other pet food	186	101	2,739.5	2,289.1	NA	NA	NA	NA
Other prepared feeds	1,739	546	2,535.4	8,968.6	NA	NA	NA	NA
Bakery products	2,850	1,287	15,251.7	8,477.0	NA	NA	NA	NA
Bread, cake, and related products	2,356	1,030	10,550.9	5,670.6	2,305	1,074	7,861.1	5,282.7
Cookies and crackers	380	191	4,100.7	2,241.0	358	187	2,789.3	1,880.2
Frozen bakery products, except bread	114	66	600.1	565.4	NA	NA	NA	NA

See footnotes at end of table.

Continued--

Appendix table 17—Census statistics for food manufacturing industries—Continued

Industry group and industry	1987				1982			
	All establishments			Cost of materials	All establishments			Cost of materials
	Total	With 20 or more employees	Value added by manufacture		Total	With 20 or more employees	Value added by manufacture	
	----- Number -----		--- Million dollars ---	----- Number -----		--- Million dollars ---		
Sugar and confectionery products	1,094	520	8,927.1	10,560.6	1,033	506	6,234.0	9,348.7
Raw cane sugar	50	42	509.6	796.0	51	44	297.7	755.8
Cane sugar, refined	24	16	445.9	2,003.4	30	25	622.4	2,424.9
Beet sugar	43	38	613.2	1,277.1	48	44	432.2	1,102.5
Confectionery products	672	292	4,163.0	3,118.1	NA	NA	NA	NA
Chocolate and cocoa products	188	55	1,578.3	1,727.0	NA	NA	NA	NA
Chewing gum	29	12	750.3	347.8	14	14	598.9	312.3
Salted and roasted nuts and seeds	88	65	866.8	1,291.2	NA	NA	NA	NA
Fats and oils	595	358	3,245.5	12,916.5	724	432	2,785.4	13,910.6
Cottonseed oil mills	52	40	106.9	378.8	77	59	202.9	715.0
Soybean oil mills	115	74	1,019.0	8,199.0	114	84	678.2	7,896.8
Vegetable oil mills	23	15	82.7	353.3	29	15	80.0	467.0
Animal and marine fats and oils	305	154	750.4	1,024.1	386	189	562.6	1,188.5
Edible fats and oils	100	75	1,286.5	2,961.3	118	85	1,261.7	3,643.3
Beverages	2,214	1,132	22,693.7	24,859.8	2,584	1,501	16,683.6	22,163.7
Malt beverages	134	64	7,270.8	6,311.4	109	73	4,543.8	6,669.7
Malt	27	19	153.6	368.0	36	25	166.2	480.0
Wines, brandy, and brandy spirits	508	108	1,317.1	1,815.7	366	103	996.7	1,762.9
Distilled spirits, except brandy products	71	56	2,043.7	1,508.8	104	75	1,460.1	1,700.5
Bottled and canned soft drinks	1,192	785	8,612.9	13,488.8	1,626	1,094	6,856.1	9,981.3
Flavoring extracts and syrups	282	100	3,295.6	1,367.2	343	131	2,669.8	1,569.3
Miscellaneous foods and food products	3,716	1,452	13,762.0	15,445.6	3,941	1,558	10,017.2	13,962.7
Canned and cured fish and seafood	178	84	290.1	509.1	204	107	613.4	1,235.3
Fresh or frozen prepared fish	640	354	1,540.0	4,188.2	783	433	966.7	3,040.0
Roasted coffee	142	83	2,602.8	3,803.0	152	85	2,070.3	3,749.0
Potato chips and similar snacks	340	182	3,292.5	1,745.0	NA	NA	NA	NA
Manufactured ice	548	65	202.2	86.2	596	64	152.6	79.0
Macaroni and spaghetti	227	49	620.3	442.5	NA	NA	NA	NA
Food preparations	1,641	635	5,214.1	4,671.5	NA	NA	NA	NA

NA = Not available.

Source: (44).

Appendix table 18--Number of grocery stores

Year	Total	Supermarkets	Convenience stores	Superettes
<i>Number</i>				
1939	386,900	NA	NA	NA
1958	259,796	15,282	NA	NA
1963	244,838	21,167	NA	NA
1967	218,130	23,808	NA	NA
1972	194,346	27,231	NA	NA
1977	179,042	30,831	30,000	118,211
1982	177,889	26,640	38,700	112,549
1983 ¹	177,659	26,480	40,400	110,779
1984 ¹	177,430	26,265	42,950	108,215
1985 ¹	177,200	26,229	45,400	105,571
1986 ¹	176,971	25,629	47,000	104,342
1987	176,759	24,980	50,000	101,779
1988 ¹	174,531	24,614	52,500	97,417
1989 ¹	172,332	24,083	52,000	96,249
1990 ¹	170,160	23,813	51,700	94,647
1991 ¹	168,016	23,722	50,700	93,594
1992 ¹	165,898	NA	49,905	NA

NA = Not available.

¹ ERS projection.

Sources: (29, 47).

Appendix table 19--Specialized foodstore sales, 1987

Item	All establishments	Establishments with payroll	Establishments w/o payroll	Share of specialized foodstore sales (All establishments)
	----- <i>Million dollars</i> -----			--- <i>Percent</i> ---
Specialized foodstores	18,481	16,366	2,116	100.0
Retail bakeries	5,194	4,871	323	28.1
Meat and fish markets	6,261	5,616	645	33.9
Fruit & vegetable markets	2,090	1,802	288 ¹	11.3
Candy, nut, and confectionery stores	1,465	1,182	283 ¹	7.9
Dairy products stores	1,007	880	127 ¹	5.4
Misc. food stores ²	2,464	2,014	450 ¹	13.3

¹ ERS estimate based on Census of Retail Trade, 1987 and prior years.

² Includes natural foods and health foods stores, egg and poultry retailers, coffee, tea, and spice stores, vitamin stores, and all other specialized foodstores not elsewhere classified.

Appendix table 20--Foodservice establishments, by industry segment

Industry segment	1981	1982	1983	1984	1985	1986	1987	1988
	<i>Number</i>							
Commercial:								
Separate eating places--								
Restaurants, lunchrooms	122,060	122,851	123,642	124,433	125,502	125,237	124,983	125,042
Fast-food outlets	113,794	117,119	120,444	123,769	124,809	125,032	126,619	127,930
Cafeterias	6,223	61,029	5,853	5,640	5,388	4,277	4,420	4,312
Total	242,077	300,999	249,939	253,842	255,699	254,546	256,022	257,284
Lodging places	23,559	24,448	23,855	23,262	22,613	24,533	25,413	26,252
Retail hosts	58,193	57,578	56,963	56,348	56,005	55,616	54,942	54,008
Recreation, entertainment	33,996	34,093	34,188	34,282	34,910	35,716	36,125	36,660
Separate drinking places	45,864	44,478	43,092	41,706	40,642	39,462	38,520	37,113
Commercial feeding total	403,701	410,155	408,030	409,453	409,869	409,873	411,022	411,317
Noncommercial:								
Education--								
Elementary, secondary	92,900	91,300	90,600	89,600	89,424	88,824	88,414	89,692
Colleges, universities	3,253	3,280	3,284	3,288	3,299	3,312	3,443	3,511
Other education	2,925	2,966	2,975	3,000	3,076	3,120	3,185	3,240
Total	99,078	97,546	96,859	95,888	95,799	95,256	95,042	96,443
Military services--								
Troop feeding	1,389	1,387	1,341	1,310	1,290	1,250	1,222	1,217
Clubs, exchanges	2,435	2,431	2,420	2,042	1,980	1,940	1,913	1,904
Total	3,824	3,818	3,761	3,352	3,270	3,190	3,135	3,121
Plants, office buildings	15,747	15,414	15,409	15,846	15,963	16,006	16,814	17,250
Hospitals	6,933	6,915	6,888	6,861	6,835	6,810	6,796	6,772
Care facilities	24,941	26,817	27,875	28,933	29,711	30,599	31,218	31,945
Vending	3,634	3,608	3,582	3,556	3,535	3,507	3,480	3,453
Transportation	714	664	644	642	640	626	607	594
Associations	19,211	19,272	19,333	19,394	19,450	19,333	19,200	19,070
Correctional facilities	6,977	7,031	7,085	7,164	7,204	7,232	7,255	7,282
Child daycare centers	64,657	70,679	78,880	84,175	88,410	91,645	94,819	96,918
Elderly feeding programs	12,915	13,246	13,993	14,035	14,068	19,167	19,605	20,000
Other	16,159	16,479	16,799	17,101	17,389	17,681	17,767	15,841
Noncommercial feeding total	274,472	281,169	290,788	296,645	301,986	310,760	315,652	320,461
Total	678,172	691,324	698,738	706,098	711,855	720,633	726,674	731,724

Source: (46).

Appendix table 21--Number of food marketing companies

Year	Processing	Wholesaling		Food service ¹	Retailing		Total
		Grocery	Liquor		Food-stores ¹	Liquor stores	
<i>Number</i>							
1963	32,617	35,666	7,598	175,117	162,273	28,624	441,895
1967	26,549	33,848	6,246	170,851	131,926	20,200	389,620
1972	22,171	32,053	5,792	179,578	122,592	28,378	390,564
1977	20,616	31,670	5,518	186,625	120,107	29,741	394,277
1982	16,800	31,290	5,158	198,088	109,567	28,977	389,880
1987	15,692	34,155	5,835	191,798	108,439	25,163	381,082

¹ Firms with paid employees.

Sources: (42, 46, 47).

Appendix table 22--Aggregate concentration in food marketing

Year	Share of market controlled by top firms			
	Top 50 processing firms	Top 50 wholesaling firms	Top 20 retailing firms	Top 50 foodservice firms
<i>Percent</i>				
1963	NA	NA	34.0	NA
1967	35.0	NA	34.4	NA
1972	38.0	48.0	34.8	13.3
1977	40.0	57.0	34.5	17.8
1982	43.0	64.0	34.9	20.2
1987	47.0	71.4	36.5	22.3

NA = Not available.

Sources: (42, 46, 47).

Appendix table 23—Share of shipment value for the four and eight largest food processing firms

Industry	1987			1982			1967		
	Share of shipment value			Share of shipment value			Share of shipment value		
	Total firms	4 largest firms	8 largest firms	Total firms	4 largest firms	8 largest firms	Total firms	4 largest firms	8 largest firms
	<i>Number</i>	<i>----Percent----</i>	<i>Number</i>	<i>----Percent----</i>	<i>Number</i>	<i>----Percent----</i>	<i>Number</i>	<i>----Percent----</i>	<i>Number</i>
Meatpacking	5,266	32	50	1,658	29	43	2,529	26	38
Sausages	4,457	26	34	1,193	19	28	1,294	15	22
Poultry dressing	NA	NA	NA	231	22	36	NA	NA	NA
Poultry and egg processing	NA	NA	NA	136	22	35	NA	NA	NA
Butter	1,420	40	63	61	41	61	510	15	22
Cheese	12,971	43	55	575	34	47	891	44	51
Condensed and evaporated milk	5,856	45	59	132	35	50	179	41	56
Ice cream	3,916	25	39	482	22	34	713	33	43
Fluid milk	20,590	21	32	853	16	27	2,988	22	30
Canned specialties	5,350	59	75	171	61	77	150	69	83
Canned fruit and vegetables	11,889	29	40	541	21	35	930	34	52
Dehydrated fruit and vegetables	1,821	39	58	119	42	59	134	32	50
Pickles, sauces, and salad dressings	5,050	43	55	325	56	65	479	33	44
Frozen fruit and vegetables	6,606	31	45	195	27	42	495	36	55
Frozen specialties	5,624	43	59	318	38	54	NA	NA	NA
Flour and grain milling	4,984	44	63	251	40	60	438	30	46
Breakfast cereals	6,565	87	99	32	86	NA	30	88	97
Rice milling	1,234	56	81	49	47	75	54	46	68
Blended and prepared flour	2,625	43	60	91	58	74	126	68	82
Wet corn milling	4,788	74	94	25	74	94	32	68	89
Pet food	5,069	61	78	222	52	71	NA	NA	NA
Prepared feeds	11,468	20	29	1,245	20	30	NA	NA	NA
Breads and cakes	16,221	34	47	1,869	34	47	3,445	26	38
Cookies and crackers	6,290	58	73	269	59	71	286	59	70
Raw cane sugar	1,239	48	70	43	41	61	61	43	65
Cane sugar refining	2,460	87	99	19	65	91	22	59	82
Beet sugar	1,831	72	96	14	67	95	15	66	96
Confectionery	6,979	45	55	718	40	53	1,091	25	35

See footnotes at end of table.

Continued--

Appendix table 23—Share of shipment value for the four and eight largest food processing firms—Continued

Industry	1987			1982			1967		
	Share of shipment value			Share of shipment value			Share of shipment value		
	Total firms	4 largest firms	8 largest firms	Total firms	4 largest firms	8 largest firms	Total firms	4 largest firms	8 largest firms
	<i>Number</i>	<i>-----Percent-----</i>		<i>Number</i>	<i>-----Percent-----</i>		<i>Number</i>	<i>-----Percent-----</i>	
Chocolate and cocoa	3,107	69	82	77	75	89	27	77	89
Chewing gum	1,090	96	100	9	95	NA	19	86	96
Cottonseed oil mills	470	43	68	47	51	70	91	42	60
Soybean oil mills	9,074	71	91	52	61	83	60	55	76
Vegetable oil mills	431	74	92	26	52	83	34	56	78
Animal and marine fats and oils	1,753	35	50	270	34	48	477	28	36
Shortening and cooking oils	4,151	45	65	79	43	60	63	43	67
Malt beverages	3,618	87	98	67	77	94	125	40	59
Malt	530	64	95	24	60	80	32	39	62
Wines and brandy	1,380	37	53	324	51	64	175	48	63
Distilled spirits	3,474	53	75	371	46	89	70	54	71
Bottled and canned soft drinks	21,830	30	40	1,236	14	23	3,057	13	20
Flavoring extracts and syrups	4,664	65	73	297	65	71	401	67	75
Canned or cured seafood	767	26	42	170	62	70	268	44	59
Fresh or frozen seafood	5,783	18	30	697	14	24	463	26	38
Roasted coffee	6,400	66	78	118	65	76	206	53	71
Manufactured ice	289	19	25	530	18	26	688	33	42
Macaroni and spaghetti	1,048	73	82	208	42	66	190	31	48
Other food preparations	9,787	26	34	1,746	32	40	1,824	24	35

NA = Not available.

Source: (44).

Appendix table 24--Aggregate concentration in food and tobacco manufacturing, measured by proportion of value added¹, selected years

	Proportion of value-added in food and tobacco manufacturing ²					Percent change 1967-87
	1967	1972	1977	1982	1987	
	<i>Percent</i>					
20 largest	23.4	24.3	27.4	34.0	40.4	72.6
21-50 largest	15.5	16.8	15.9	16.0	16.4	5.8
51-100 largest	11.9	12.2	11.7	11.1	9.4	-21.1
101-200 largest	8.9	9.8	10.3	8.9	7.3	-18.0
201-300 largest	4.4	4.7	4.8	4.4	3.9	-11.4
301-400 largest	3.0	3.1	3.2	3.0	2.7	-10.0
410-500 largest	2.4	2.4	2.4	2.2	2.1	-12.5
50 largest	38.9	41.1	43.3	50.0	56.8	46.0
100 largest	50.9	53.3	55.0	61.2	66.2	30.1
500 largest	69.5	73.2	75.6	79.7	82.1	18.1
All others	30.3	26.8	24.4	20.3	17.9	-41.3

¹ Companies are ranked by value-added in SICs 20 and 21 each year.

² Ratio of value-added in SICs 20 and 21 of the largest companies to total value-added in SICs 20 and 21. Value-added figures in SIC 21 were estimated for some company size classes in the years 1967, 1972, and 1977 using published market share estimated and specially tabulated census data.

Source: (33).

Appendix table 25--Sales concentration in food wholesaling

Wholesaler category	1977				1982	
	4	8	20	50	4	8
	largest firms	largest firms	largest firms	largest firms	largest firms	largest firms
	<i>Percent</i>					
General line	15.0	22.4	36.8	56.6	17.4	26.5
Limited line	13.3	19.5	31.4	46.6	9.0	13.8
Specialty products	10.3	15.1	21.1	33.5	14.9	20.9
Frozen foods	11.3	17.5	28.7	43.3	16.5	23.5
Dairy	14.0	21.6	34.2	46.8	15.8	22.6
Poultry	8.6	12.9	21.0	34.2	11.8	16.9
Confectionery	11.9	17.3	25.5	37.1	12.5	18.2
Fish and seafood	15.5	20.4	28.9	39.6	12.5	16.3
Meat	6.9	10.8	17.9	29.1	5.5	8.1
Fresh fruit and vegetables	7.0	10.4	15.0	22.1	7.4	10.2
	1982		1987			
	20	50	4	8	20	50
	largest firms	largest firms	largest firms	largest firms	largest firms	largest firms
	<i>Percent</i>					
General line	42.8	63.6	26.0	36.9	53.8	71.4
Limited line	23.8	37.2	9.6	15.3	27.2	41.8
Specialty products	25.4	34.0	12.2	18.7	29.4	44.8
Frozen foods	34.3	49.1	15.0	23.6	37.6	53.0
Dairy	35.0	49.4	15.7	25.1	39.0	52.6
Poultry	25.3	38.3	7.4	12.0	22.6	39.0
Confectionery	27.7	40.1	17.5	22.9	31.6	43.6
Fish and seafood	24.5	37.1	NA	9.2	NA	NA
Meat	14.7	25.5	6.6	10.4	18.1	30.5
Fresh fruit and vegetables	14.5	21.6	8.9	11.0	15.4	NA

NA = Not available.

Source: (47).

Appendix table 26--Incorporated wholesale food firms, by size of assets

Year	All firms ¹	Large firms ²	Small firms ³
	<i>Number</i>	<i>Percent</i>	
1982	22,698	67.1	32.9
1983	24,066	63.1	36.9
1984	23,089	64.2	35.8
1985	24,808	56.1	43.9
1986	24,933	61.5	38.5
1987	25,483	57.8	42.2
1988	25,555	57.1	42.9
1989	25,754	56.2	43.8
1990	25,891	58.6	41.4

¹ Firms that filed tax returns.

² Firms with \$100,000 or more in assets.

³ Firms with less than \$100,000 in assets.

Source: (62).

Appendix table 27--Average concentration of top four grocery store firms, by SMSA size ¹

SMSA population in 1980	1954	1958	1963	1967	1972	1977	1982
	<i>Percent</i>						
All SMSA's	45.4	49.3	50.0	50.9	52.4	56.3	58.3
1 million and over	45.7	48.0	48.4	48.0	51.2	54.3	54.9
300,000-999,999	45.3	48.7	48.5	48.6	48.7	52.3	54.1
150,000-299,999	43.9	50.3	50.8	53.2	53.5	56.5	57.5
Under 150,000	47.0	50.3	52.9	54.1	57.3	62.6	63.6
173 SMSA's	NA	48.7	49.1	50.2	52.2	56.4	58.7

NA = Not available.

¹ Standard Metropolitan Statistical Area (SMSA) defines an integrated economic and social unit such as a city and its outlying suburbs.

Source: (45).

Appendix table 28--Chain stores' share of grocery store sales

Year	Supermarket chains	Other chains	Total
		<i>Percent</i>	
1958	41.2	2.8	44.0
1963	43.7	3.3	47.0
1967	46.3	5.1	51.4
1972	48.9	7.0	55.9
1977	52.4	6.3	58.7
1982	55.0	6.5	62.0
1983	NA	NA	61.9
1984	NA	NA	61.6
1985	NA	NA	61.8
1986	NA	NA	61.6
1987	NA	NA	63.0
1988	NA	NA	63.4
1989	NA	NA	63.4
1990	NA	NA	64.4
1991	NA	NA	65.2
1992	NA	NA	65.2

NA = Not available.

Source: (45).

Appendix table 29--Sales share of leading grocery chains

Year	4 largest chains	8 largest chains	20 largest chains
		<i>Percent</i>	
1963	20.0	26.6	34.0
1967	19.0	25.7	34.4
1972	17.5	24.4	34.8
1977	17.4	24.4	34.5
1982	16.1	23.6	34.9
1985	18.4	26.6	36.7
1986	18.2	26.8	37.6
1987	17.1	26.0	36.5
1988	15.7	24.4	35.5
1989	17.0	26.0	39.3
1990	16.9	25.9	39.3
1991	16.3	25.1	39.1

Sources: (46) and ERS estimates.

Appendix table 30--Concentration among separate eating places

Year	Top 4 firms	Top 8 firms	Top 20 firms	Top 50 firms
	<i>Percent</i>			
1972 ¹	3.6	5.5	8.9	13.3
1977	4.5	7.3	12.4	17.8
1982	5.4	8.9	15.1	20.2
1987	8.1	12.0	17.0	22.3

¹ No concentration data are available for census years prior to 1972.

Source: (46).

Appendix table 31--Sales of top 50 food processing companies

Sales rank	Company	Sales ¹		Change
		1991	1990	
		-----Million dollars-----		Percent
1	Philip Morris Companies, Inc., New York, NY	29,619.0	26,368.0	12.3
2	ConAgra, Inc., Omaha, NE	18,111.1	17,253.0	5.0
3	Cargill Inc., Minneapolis, MN	12,500.0	NA	NA
4	PepsiCo Inc., Purchase, NY	11,557.0	9,992.0	15.9
5	Anheuser-Busch Companies, Inc., St. Louis, MO	11,001.7	10,011.0	9.9
6	The Coca-Cola Company, Atlanta, GA	10,190.0	8,900.0	14.5
7	IBP, Inc., Dakota City, NE	9,595.9	8,586.2	11.8
8	Archer-Daniels-Midland Company, Decatur, IL	7,759.0	7,130.0	8.8
9	Nestlé Holdings, Inc., Purchase, NY	6,501.0	6,354.0	2.3
10	H.J. Heinz Company, Pittsburgh, PA	6,314.7	5,761.3	9.6
11	Campbell Soup Company, Camden, NJ	6,204.1	6,200.0	0
12	Grand Metropolitan PLC	5,995.0	2,376.0	152.3
13	RJR Nabisco, Inc., New York, NY	5,826.0	5,783.0	0.7
14	CPC International, Inc., Englewood Cliffs, NJ	5,781.0	5,103.1	13.3
15	Sara Lee Corporation, Chicago, IL	5,700.0	5,460.0	4.4
16	Borden, Inc., New York, NY	5,629.5	5,660.7	-0.6
17	The Quaker Oats Company, Chicago, IL	5,490.0	3,270.0	67.8
18	Ralston Purina Company, St. Louis, MO	5,289.2	5,085.6	4.0
19	Kellogg Company, Battle Creek, MI	5,181.4	4,651.7	11.4
20	General Mills, Inc., Minneapolis, MN	4,940.0	4,520.3	9.3
21	Chiquita Brands Int'l, Inc., Cincinnati, OH	4,188.0	3,823.0	9.5
22	Tyson's Foods, Inc., Springdale, AR	4,000.0	3,850.0	3.9
23	Joseph E. Seagram & Sons, Inc., New York, NY	3,607.8	3,403.5	6.1
24	The Procter and Gamble Company, Cincinnati, OH	3,546.0	3,318.0	6.9
25	The Kroger Company, Cincinnati, OH	3,376.8	3,183.3	6.1
26	Associated Milk Producers, Inc., San Antonio, TX	3,006.0	2,986.5	0.6
27	Dole Food Company Inc., Westlake, CA	2,771.0	2,814.0	-1.5
28	Hershey Foods Corporation, Hershey, PA	2,700.0	2,420.9	11.5
29	George A. Hormel & Company, Austin, MN	2,681.0	2,304.5	14.6
30	Dean Foods Company, Franklin Park, IL	2,112.0	1,906.0	10.8
31	International Multifoods Corp., Minneapolis, MN	1,940.2	1,838.0	5.6
32	Mid-America Dairymen, Inc., Springfield, MO	1,862.6	1,798.0	3.5
33	Pet Incorporated, St. Louis, MO	1,793.4	²	
34	Central Soya Company, Inc., Fort Wayne, IN	1,625.0	1,500.0	8.3
35	Beef America Operating Co., Inc., Omaha, NE	1,625.0	1,500.0	8.3
36	Keebler Company, Elmhurst, IL	1,596.0	1,463.4	9.1
37	Land O'Lakes, Inc., Minneapolis, MN	1,580.0	1,418.0	11.4
38	Adolph Coors Company, Golden, CO	1,428.9	1,366.1	4.6
39	Continental Grain Company, New York, NY	1,300.0	NA	NA
40	The Stroh Brewery Co., Detroit, MI	1,300.0	NA	NA
41	McCormick & Company, Inc., Hunt Valley, MD	1,216.0	1,145.0	6.2
42	Savannah Foods & Industries, Inc., Savannah, GA	1,210.0	1,090.0	11.1
43	Idle Wild Foods, Inc., Liberal, KS	1,138.0	NA	NA
44	Wm. Wrigley Jr. Company, Chicago, IL	1,110.6	992.9	11.7
45	Interstate Brands Corporation, Kansas City, MO	1,106.7	1,104.6	0.2
46	Smithfield Foods Inc., Smithfield, VA	1,071.0	853.4	25.6
47	Sunkist Growers, Inc., Sherman Oaks, CA	1,066.0	931.0	14.5
48	Warner-Lambert Company, Morris Plains, NJ	1,054.0	1,003.0	5.1
49	Whitman Corp., Rolling Meadows, IL	1,041.2	2,305.0	NA
50	A.E. Staley Manufacturing Corp., Decatur, IL	1,000.0	862.0	16.0

NA=Not available.

¹ Sales figures for the companies represent only food and beverage segments.

² Spun off from Whitman Corp., April 1991.

Source: (15).

Appendix table 32--Sales of top 25 food retailing companies¹

Company	1991		1990	
	Rank	Sales	Rank	Sales
		<i>Million dollars</i>		<i>Million dollars</i>
The Kroger Company (Kroger, Dillon)	1	20,397	1	19,348
American Stores Company (Acme, Jewel, Star, Lucky Stores, Inc.)	2	16,344	2	18,449
Safeway Stores, Inc. ²	3	11,333	3	11,173
Winn-Dixie Stores, Inc.	4	10,074	4	9,744
The Great Atlantic and Pacific Tea Company, Inc. (Shopwell, Waldbaum's, A&P, Borman's) ²	5	8,994	5	9,196
Albertson's, Inc.	6	8,680	6	8,219
Southland Corporation (7-Eleven Stores) ³	7	7,500	7	7,700
Food Lion, Inc. ²	8	6,438	10	5,584
Publix Supermarkets, Inc.	9	6,100	9	5,800
Supermarkets General Corp. (Pathmark)	10	5,705	8	6,100
Ahold International (BI-LO Inc., Giant Food Stores-Carlisle, Pa., First National, Top's Market) ²	11	5,603	13	4,413
Penn Traffic Co. (Grand Union, P&C, Big Bear)	12	5,399	12	4,970
The Vons' Companies, Inc. (Safeway-So. Calif.)	13	5,350	11	5,334
Circle K Corp. ³	14	3,686	14	3,686
Giant Food, Inc.	15	3,490	15	3,350
Stop & Shop Companies, Inc.	16	3,218	16	3,218
The Yucaipa Companies (Food 4 Less, Alpha Beta, The Boys, Viva, Bell Markets, Falley, Cala Foods)	17	2,900		
Ralph's Supermarkets	18	2,889	17	2,799
H.E. Butt Grocery Company	19	2,778	18	2,778
Bruno's Inc. (Bruno's, Piggly Wiggly)	20	2,618	19	2,395
Fred Meyer, Inc.	21	2,476	23	1,857
Smith's Food & Drug Stores	22	2,217	20	2,031
Dominick's Finer Foods	23	2,200	21	2,000
Hy-Vee Food Stores, Inc.	24	1,949	22	1,866
Sainsbury, Ltd. (Shaw's, Iandoli's) ²	25	1,810	25	1,750

¹ U.S. grocery store sales only.

² Foreign-owned companies as of 1991.

³ Convenience store retailer.

Sources: (1, 4).

Appendix table 33--Sales of top 20 wholesale food companies¹

Firms	Sales	
	1992	1991
	<i>Million dollars</i>	
Fleming Companies, Inc.	12,937	12,900
Super Valu Stores, Inc.	12,568	10,632
Wetterau, Inc.	5,712	5,670
Scrivner, Inc.	6,300	6,100
Wakefern Food Corporation	3,600	3,533
McLane Company, Inc.	3,700	
Roundy's, Inc.	2,490	2,534
Nash Finch Company	2,521	1,517
Certified Grocers of Calif.	2,650	2,780
Associated Wholesale Grocers (K.C.)	2,314	2,226
Spartan Stores, Inc.	2,222	1,517
Super Food Services	1,100	1,826
United Grocers, Inc.	919	882
Richfood Holdings	1,070	1,068
Associated Grocers, Inc.	1,070	1,118
Grocers Supply Co., Inc.	925	1,100
Twin County Grocers, Inc.	1,290	1,201
Sweet Life Foods, Inc.	900	1,100
C and S Wholesale Grocers	1,010	1,000
Super Rite Foods, Inc.	1,180	976

¹ Firms primarily serving supermarkets and retail foodstores. Foodservice distributors and wholesale clubs are listed in text tables 13 and 14.

Sources: (1, 8).

Appendix table 34--Sales of top 25 restaurant chains

Company	1991	1990
	<i>Million dollars</i>	
1. McDonald's Corporation	12,519	12,252
McDonald's	12,519	12,252
2. PepsiCo Food Service	10,252	9,434
Pizza Hut	4,100	3,800
Kentucky Fried Chicken	3,400	3,200
Taco Bell	2,700	2,400
Hot 'N Now Hamburgers	52	34
3. Grand Metropolitan, PLC	5,406	5,329
Burger King	5,330	5,250
Haagen-Dazs	76	79
4. Imasco, LTD	3,580	3,360
Hardees/Roy Rogers	3,580	3,360
5. Wendy's International, Inc.	2,940	2,835
Wendy's	2,940	2,835
6. Domino's Pizza Inc.	2,400	2,500
Domino's Pizza	2,400	2,500
7. TW Services, Inc.	2,340	2,671
Denny's Restaurants	1,430	1,687
Hardees (TW Services)	525	510
Quincy's Family Steakhouse	238	281
El Pollo Loco	101	192
8. International Dairy Queen, Inc.	2,229	2,142
Dairy Queen	2,120	2,025
Orange Julius of America	80	85
Karmel Corn	16	18
Golden Skillet	13	15
9. General Mills, Inc.	2,188	1,914
Red Lobster Inns	1,481	1,362
The Olive Garden	707	552
10. Metromedia Co.	1,815	1,097
Ponderosa	700	651
Bennigan's	555	NA
Bonanza	340	446
Steak and Ale	220	NA
11. Little Caesar's Enterprise, Inc.	1,725	1,400
Little Caesar's	1,725	1,400
12. Shoney's Inc.	1,704	1,585
Shoney's	1,099	991
Captain D's	421	413
Lee's Famous Recipe	144	141
Fifth Quarter	21	NA
Pargo's	19	NA
13. Foodmaker, Inc.	1,434	1,372
Jack in the Box	978	944
Chi-Chi's	456	428
14. Doctor's Associates, Inc.	1,432	1,123
Subway	1,400	1,100
Cajun Joes	32	23
15. DWG Corp.	1,391	1,366
Arby's Restaurants	1,387	1,363
Daddy-o's Express	4	3

Continued--

Appendix table 34--Sales of top 25 restaurant chains--Continued

Company	1991	1990
	<i>Million dollars</i>	
16. Allied-Lyons, PLC	1,324	1,438
Dunkin Donuts	804	790
Baskin-Robbins	510	490
Caffe Classico	10	NA
17. Elias Brothers Restaurants, Inc.	1,077	1,047
Big Boy	1,070	1,040
Top Hat	7	7
18. Tennesse Restaurant Co.	1,016	992
Friendly	519	520
Perkins	496	472
19. Restaurant Enterprise Group	1,002	908
El Torito	369	393
Family Restaurant Div.	340	NA
Far West Concepts	168	NA
Big Boy (Reg)	100	NA
Allies	25	NA
20. Copeland, Enterprises, Inc.	950	NA
Popeye's	535	520
Church's	415	461
21. Sizzler International, Inc.	865	NA
Sizzler	865	903
22. Long John Silver's Holdings, Inc.	784	777
Long John Silver's	784	777
23. Morrison, Inc.	712	669
Morrison's	366	365
Ruby Tuesday's	246	226
L and N Seafood	77	64
Silver Spoon	23	14
24. Carlson Companies	710	672
T.G.I. Fridays	505	471
Country Kitchen	180	173
Dalts	25	28
25. Carl Karcher Enterprises, Inc.	629	575
Carl's Jr.	629	NA

NA = Not available.

Source: (30).

Appendix table 35--Food marketing mergers

Year	Processing	Wholesaling	Retailing	Food service	Total ¹
			<i>Number</i>		
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

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.

Appendix table 36--Food marketing mergers and divestitures costing over \$100 million, 1991¹

Buyer	Seller	Price	Type ²
		<i>Million dollars</i>	
H.J. Heinz Co. Manufactured of processed foods	John Labbatt Ltd. Food services, hospitals hotels (JL Foods)	500.0	1
ConAgra, Inc. Prepared foods; agriproducts	Golden Valley Microwave Food, Inc. Markets microwave food products	460.7	2
Merrill Lynch & Co., Inc., Investment services	Onex Corp. Dairy products & baked goods (Beatrice Foods Inc.)	418.6	1
Coca-Cola Enterprise, Inc., Soft drink bottler	Johnston Coca-Cola Bottling Grp. Inc., Carbonated soft drinks	374.8	3
Freeman Spogli & Co. Supermarkets	Supermarkets General Holdings Corp. U.S. Supermarkets & convenience stores (Purity Supreme)	265.0	1
Food 4 Less Supermarkets, Inc., Supermarkets	American Stores Co. Southern California grocery chain (Alpha Beta Co.)	241.0	1
Thomas H. Lee Co. Investment firm	Metropolitan Life Insurance Co. Supermarket/food concern (Big V Supermarkets Inc.)	200.0	1
Roquette Freres Starch company	H.J. Heinz Co. Corn milling concern (Hubinger Co.)	200.0	1
Campbell Soup Co. Canned soup & other foods	Campbell Soup Co. Ltd. Food manufacturer	153.6	4
Archer-Daniels-Midland Co. Process soybeans; flour mill	International Multifoods Corp. Animal feed & grains food stuffs (U.S. & Canada Feed and Grain Merchandise Business)	146.0	1
Ahold, N.V. Supermarket operator	Tops Markets Inc. Food retailers, supermarkets	125.0	3
Guinness PLC Products, distributes, markets liquor	Glenmore Distillers Co. Domestic & imported liquors	103.0	2

¹ Completed or pending.

² 1 = divestitures, 2 = public seller, 3 = private seller, and 4 = foreign seller.

Source: (23).

Appendix table 37--Food marketing mergers and divestitures costing over \$100 million, 1992¹

Buyer	Seller	Price	Type ²
		<i>Million dollars</i>	
Philip Morris Companies Cigarettes, food, brewing	Orkla AS Confectionery company	1,480	1
Super Valu Stores, Inc. Independent food wholesaler	Wetterau Inc. Food wholesaler	1,100	2
Campbell Soup Co. Canned foods	Arnotts Ltd. Produces cookies and crackers	590	4
Philip Morris Companies, Inc. Cigarettes, food brewing	Kohlberg Kravis Roberts and Co. Produces cold ready-to-eat cereals	450	1
Bradlees Inc. Specialty food stores	Stop & Shop Cos. Inc. Operates discount stores/ 8 States	341	1
PepsiCo, Inc. Soft drink concern; restaurants	Banco Bilbao Vizcaya S.A. Beverage products and bottling	320	1
Kohlberg Kravis Roberts & Co. LBO concern	TW Holdings Inc. Restaurant and food service concern	300	1
Albertson's Inc. Grocery store chain	American Stores Company Supermarket chain	300	1
H.J. Heinz Co. Packaged foods	Goodman Fielder Wattle Ltd. Food producer	300	1
United Biscuits PLC Snack foods	Coca-Cola Co. Snack foods	299	1
Tyson Foods Inc. Poultry producer	Arctic Alaska Fisheries Corp. Fishing concern	202	2
ConAgra, Inc. Meat packing plants	Arrow Industries Inc. Manufacturers and distributes private-label products/food	186	3
Hershey Foods Corp. Confectionery company	Orkla AS Confectionery company	180	1

¹ Completed or pending.

² 1 = divestitures, 2 = public seller, 3 = private seller, and 4 = foreign seller.

Source: (23).

Appendix table 38--Food marketing mergers ranking among the 100 largest transactions in history

Buyer/seller	Rank among all transactions	Price	Year announced
		<i>Million dollars</i>	
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	17	5,636	1988
Philip Morris Company/ General Foods Corporation	18	5,628	1985
Kohlberg, Kravis, Roberts & Company/Beatrice Companies	20	5,362	1985
R.J. Reynolds Industries, Inc./ Nabisco Brands, Inc.	25	4,906	1985
SSI Holdings Corporation/ Safeway Stores, Inc.	32	4,198	1986
Phillip Morris Companies, Inc. Jacobs Suchard AG	38	3,825	1990
Private group, led by two top company executives/ Southland Corporation	40	3,723	1987
Unilever N.V. - Netherlands/ Chesebrough-Pond's Inc.	54	3,093	1986
Nestle S.A. (Switzerland)/ Carnation Company	59	2,885	1984
Seagram Company Ltd (Canada)/ Conoco, Inc.	65	2,576	1981
Beatrice Foods Company/ Esmark Inc.	67	2,509	1984
BSN SA-France Kohlberg, Kravis, Roberts & Co.	68	2,500	1990
Kraft, Inc./ Dart Industries, Inc.	79	2,400	1980

Source: (23).

Appendix table 39--Food processing mergers¹

Year announced or completed	Rank among all industries in value	Value	Foreign purchases of U.S. firms		U.S. purchases of foreign firms	
			Number	Value	Number	Value
				<i>Million dollars</i>	<i>Number</i>	<i>Million dollars</i>
1982	4	4,952	4	131	5	154
1983	8	2,712	9	253	6	105
1984	2	7,948	8	2,994	5	96
1985	5	12,854	8	257	10	70
1986	4	8,432	13	1,246	9	98
1987	6	7,951	13	2,888	14	800
1988	1	53,209	22	8,541	14	1,569
1989	7	8,261	17	4,222	14	2,260
1990	12	7,666	15	1,074	10	4,769
1991	14	3,100	8	453	14	721
1992	10	4,328	8	446	26	2,976

¹ Includes only large mergers in which the value of the transaction was recorded.

Source: (23).

Appendix table 40--Aggressive buyers in food marketing

Company	1983	1984	1985
	<i>Number</i>		
ConAgra, Inc.	3	8	8
Borden, Inc.	1	1	3
Kraft, Inc.	2	6	8
Whitman Corp.	2	3	3
Coca-Cola Company	0	3	8
PepsiCo	0	1	3

1986	1987	1988	1989	1990	1991	1992
------	------	------	------	------	------	------

	<i>Number</i>						
ConAgra, Inc.	8	7	4	2	3	2	3
Borden, Inc.	5	11	20	5	5	1	2
Kraft, Inc.	17	7	1	0	0	2	0
Whitman Corp.	8	6	4	5	2	0	0
Coca-Cola Company	7	3	0	2	1	0	0
PepsiCo	4	1	3	2	2	3	8

Source: (19).

Appendix table 41--Aggressive divestitures in food marketing

Selling parent company	1980	1981	1982	1983	1984	1985
	<i>Number</i>					
Beatrice Companies	1	7	3	9	12	10
RJR Nabisco, Inc.	2	1	0	2	1	2
Whitman Corp.	1	2	3	2	0	7
Sara Lee Corp.	3	2	0	3	1	8

1986	1987	1988	1989	1990	1991	1992
------	------	------	------	------	------	------

	<i>Number</i>					
Beatrice Companies	10	2	1	0	0	0
RJR Nabisco, Inc.	9	5	3	0	0	0
Whitman Corp.	4	3	1	1	0	0
Sara Lee Corp.	2	2	1	2	1	2

Source: (23).

Industry Economic Characteristics

Appendix table 42--Major economic indicators

Year	Population ¹ <i>Billion</i>	Gross domestic product		Disposable personal income (DPI)	
		<i>Current million dollars</i>	<i>1987 million dollars</i>	<i>Current million dollars</i>	<i>1987 million dollars</i>
1963	188.4	603	2,218	418	1,461
1967	197.5	814	2,690	569	1,811
1972	209.3	1,207	3,107	849	2,816
1977	219.7	1,974	3,533	1,391	2,513
1982	231.7	3,150	3,760	2,319	2,820
1983	234.3	3,405	3,907	2,497	2,894
1984	236.4	3,777	4,148	2,759	3,080
1985	238.5	4,038	4,279	2,943	3,162
1986	242.8	4,269	4,805	3,132	3,262
1987	244.5	4,539	4,540	3,290	3,290
1988	247.3	4,900	4,710	3,548	3,404
1989	249.9	5,244	4,838	3,787	3,465
1990	252.4	5,250	4,817	4,043	3,525
1991	255.1	5,653	4,821	4,209	3,529
1992 ¹	257.9	5,951	4,923	4,431	3,632

	Per capita DPI		Employment <i>Million</i>	Unemployment rate <i>Percent</i>
	<i>Current dollars</i>	<i>1987 dollars</i>		
1963	2,210	7,718	69.7	5.5
1967	2,861	9,114	76.6	3.7
1972	4,042	10,414	87.0	5.5
1977	6,316	11,406	99.0	6.9
1982	9,989	12,146	102.0	9.5
1983	10,642	12,349	102.5	9.5
1984	11,673	13,029	106.7	7.4
1985	12,339	13,258	108.8	7.1
1986	13,010	13,552	111.3	6.9
1987	13,545	13,595	114.2	6.1
1988	14,447	13,890	116.7	5.4
1989	15,307	14,005	119.0	5.2
1990	16,205	14,101	119.6	5.4
1991	16,741	13,965	118.4	6.6
1992	17,615	14,219	119.6	7.3

¹ The resident population, excludes armed forces overseas, as of July 1.
Sources: (42, 50, 58).

Appendix table 43--Producer price indexes for the food marketing system

Commodity	1985	1986	1987	1988	1989	1990	1991	1992 ¹
	<i>1982=100</i>							
Crude foodstuffs and feedstuffs ²	94.8	93.2	96.2	106.1	111.1	113.1	105.5	105.1
Fruit and vegetables	102.6	103.9	106.8	108.5	114.1	117.5	114.7	96.8
Grains	96.1	79.2	71.1	97.9	106.4	97.4	92.0	97.3
Livestock	89.1	91.8	102.0	103.3	106.9	115.6	107.9	104.7
Live poultry	117.8	129.6	101.2	121.5	128.8	118.8	111.2	122.6
Fluid milk	93.6	90.9	91.9	89.4	98.1	100.8	89.5	96.3
Oilseeds	94.4	91.4	99.3	134.0	123.8	112.1	106.4	107.5
Sugar and raw cane	104.6	104.9	110.3	111.9	115.5	119.2	119.2	113.7
Intermediate materials for food manufacturing ³	101.4	98.4	100.8	106.0	112.7	117.9	115.3	113.9
Flour	99.8	94.5	92.9	105.7	114.6	103.6	96.8	109.3
Refined sugar	102.8	103.2	106.4	108.9	118.3	122.7	121.6	120.0
Crude vegetable oils	137.5	84.8	84.2	116.6	103.4	115.8	103.0	97.0
Finished consumer foods ⁴	104.6	107.3	109.5	112.6	118.7	124.4	124.1	123.2
Fresh fruit	108.1	112.9	112.0	113.5	111.9	118.1	129.9	183.8
Fresh and dried vegetables	99.4	97.8	103.8	105.5	116.9	118.1	103.8	115.0
Canned fruit and juice	113.8	111.0	115.4	120.2	122.6	127.0	128.6	134.5
Frozen fruit and juice	118.5	103.0	113.3	129.8	124.6	139.0	116.3	125.8
Fresh vegetables, excluding potatoes	100.3	99.3	99.0	100.4	104.2	107.8	110.2	116.4
Canned vegetables and juices	101.9	101.2	103.6	108.3	118.6	116.7	112.9	109.6
Frozen vegetables	106.5	106.6	107.3	108.6	115.5	118.4	117.6	116.4
Potatoes	101.2	104.0	120.1	113.9	153.6	157.3	125.7	118.3
Eggs	95.6	99.5	87.6	88.6	119.6	117.6	110.7	78.6
Bakery products	113.9	116.6	118.5	126.4	135.4	141.0	146.6	152.5
Meats	90.9	93.9	100.4	99.9	104.8	117.0	113.5	106.7
Beef and veal	90.3	88.1	95.5	101.4	109.0	116.0	112.2	109.7
Pork	89.1	99.9	104.9	95.0	97.5	119.8	113.4	98.5
Processed poultry	110.4	116.7	103.5	111.6	120.8	113.6	109.9	109.1
Fish	114.6	124.9	140.0	148.7	144.6	147.2	149.5	153.0
Dairy products	100.2	99.9	101.6	102.2	110.6	117.2	114.6	118.0
Processed fruit and vegetables	107.9	104.9	108.6	113.8	120.0	124.7	119.6	120.8
Shortening and cooking oil	123.9	103.3	103.9	118.8	116.6	123.2	116.5	114.9
Soft drinks	NA	NA	NA	NA	NA	122.3	125.5	125.7
Beverages, alcoholic	NA	NA	NA	NA	NA	111.2	123.7	126.1
Tobacco products	NA	NA	NA	NA	NA	221.4	249.7	275.2

¹ Preliminary.² What food manufacturers paid at major markets.³ What food manufacturers charged other food manufacturers.⁴ What retailers, wholesalers, restaurateurs, or other institutions paid.

Source: (61).

Appendix table 44--Value of U.S. dollar and interest rates

Year/ quarter	Value of U.S. dollar ¹		Interest rates		
	Nominal	Real ²	Short-term 3-month Treasury bill	Long-term	Prime rate charged by banks
				AAA corporate bonds (Moody's) ³	
----- Index ⁴ -----		----- Percent -----			
1963	NA	NA	3.16	4.26	4.50
1967	120.0	NA	4.32	5.51	5.61
1972	109.1	NA	4.07	7.21	5.25
1977	103.4	93.1	5.26	8.02	6.83
1982	116.6	111.8	10.67	13.79	14.86
1983	125.3	117.3	8.63	12.04	10.79
1984	138.2	128.8	9.58	12.71	12.04
1985	143.0	132.4	7.48	11.37	9.93
1986	112.2	103.6	5.98	9.02	8.33
1987	96.9	90.9	5.82	9.38	8.22
1988	92.7	88.2	6.69	9.71	9.32
1989	98.6	94.4	8.12	9.26	10.87
1990	89.1	86.0	7.51	9.32	10.00
1991	89.8	86.5	5.42	8.77	8.46
1992 ⁵	86.6	86.3	3.66	8.28	6.50

NA = Not available.

¹ Multilateral trade-weighted index.

² Adjusted by CPI.

³ Creditworthiness of issuing organization rated very high by Moody's Investors Service, Inc.

⁴ 1973=100.

⁵ Preliminary.

Source: (13).

Appendix table 45--Number of employees in food marketing¹

Year	Processing	Wholesaling	Eating and drinking places ²	Retailing		Total
				Food-stores ³	Grocery stores ³	
<i>Thousands</i>						
1963	1,752.0	472.9	1,747.9	1,383.8	NA	5,356.6
1967	1,786.3	513.0	2,191.4	1,571.6	NA	6,062.3
1972	1,745.2	536.3	2,860.2	1,805.1	1,577.8	6,946.8
1977	1,711.0	611.7	3,948.6	2,106.3	1,837.2	8,377.3
1982	1,635.9	666.8	4,829.4	2,477.3	2,169.6	9,609.4
1983	1,614.4	682.1	5,038.0	2,555.5	2,234.2	9,890.0
1984	1,611.4	706.6	5,380.9	2,635.9	2,297.3	10,334.9
1985	1,600.9	733.8	5,698.6	2,773.5	2,428.9	10,806.8
1986	1,606.9	761.1	5,901.5	2,896.3	2,544.5	11,166.1
1987	1,616.8	790.5	6,085.9	2,958.3	2,607.7	11,451.3
1988	1,626.1	820.9	6,250.2	3,073.9	2,723.5	11,779.1
1989	1,644.4	836.7	6,401.9	3,163.5	2,874.5	12,046.5
1990	1,660.5	849.2	6,509.1	3,215.0	2,880.1	12,233.9
1991	1,666.9	846.4	6,467.3	3,203.7	2,824.1	12,193.3
1992	1,654.8	855.3	6,601.7	3,179.5	2,842.0	12,290.7

NA = Not available.

¹ Includes full- and part-time workers. ² Excludes all noncommercial eating facilities and commercial outlets such as hotel restaurants, department store coffee shops, and ballpark food concessions. ³ Grocery stores are also included in foodstore column.

Source: (58).

Appendix table 46--Number of production workers in food marketing¹

Year	Processing	Wholesaling	Eating and drinking places ²	Retailing		Total
				Food-stores ³	Grocery stores ³	
<i>Thousands</i>						
1963	1,157.3	411.3	NA	1,289.9	NA	2,858.5
1967	1,187.3	442.3	2,047.8	1,456.6	NA	5,134.0
1972	1,191.8	462.2	2,673.7	1,676.1	1,467.3	6,003.8
1977	1,161.0	526.3	3,665.4	1,942.1	1,697.4	7,294.8
1982	1,125.5	575.3	4,442.5	2,293.7	2,016.3	8,437.0
1983	1,113.5	588.2	4,629.3	2,373.4	2,084.6	8,704.4
1984	1,118.9	597.9	4,919.4	2,440.6	2,138.9	9,076.8
1985	1,117.0	621.8	5,184.3	2,565.2	2,259.9	9,488.3
1986	1,129.4	645.0	5,366.0	2,676.7	2,364.1	9,817.1
1987	1,145.1	668.3	5,539.7	2,725.3	2,412.6	10,078.4
1988	1,154.8	692.5	5,696.8	2,828.5	2,518.9	10,372.6
1989	1,176.2	704.1	5,817.9	2,913.6	2,605.3	10,611.8
1990	1,193.8	712.6	5,905.2	2,952.7	2,658.7	10,764.2
1991	1,205.2	703.7	5,858.8	2,925.2	2,638.4	10,696.9
1992	1,205.7	717.3	5,967.9	2,895.7	2,603.2	10,786.6

NA = Not available.

¹ Includes full- and part-time workers. ² Excludes all noncommercial eating facilities and commercial outlets such as hotel restaurants, department store coffee shops, and ballpark food concessions. ³ Grocery stores are also included in foodstore column.

Source: (58).

Appendix table 47--Average hourly earnings in food marketing¹

Year	Processing	Wholesaling	Eating and drinking places ²	Retailing	
				Food-stores ³	Grocery stores ³
<i>Dollars</i>					
1963	2.30	2.23	NA	1.90	NA
1967	2.64	2.65	1.50	2.23	NA
1972	3.60	3.69	2.07	3.18	NA
1977	5.37	5.43	2.93	4.77	4.92
1982	7.92	8.25	4.09	7.31	7.48
1983	8.19	8.70	4.27	7.54	7.78
1984	8.39	9.03	4.26	7.58	7.92
1985	8.57	9.20	4.33	7.18	7.59
1986	8.74	9.30	4.35	6.93	7.24
1987	8.93	9.53	4.42	6.89	7.10
1988	9.12	9.79	4.57	7.08	7.12
1989	9.38	10.16	4.75	7.22	7.25
1990	9.62	10.45	4.97	7.30	7.39
1991	9.90	10.77	5.18	7.34	7.39
1992 ⁴	10.19	11.09	5.29	7.57	7.64

NA = Not available.

¹ Includes full- and part-time workers. ² Excludes all noncommercial eating facilities and commercial outlets such as hotel restaurants, department store coffee shops, and ballpark food concessions. ³ Grocery stores are also included in foodstore column. ⁴ Preliminary.

Source: (58).

Appendix table 48--Average weekly earnings in food marketing¹

Year	Processing	Wholesaling	Eating and drinking places ²	Retailing	
				Food-stores ³	Grocery stores ³
<i>Dollars</i>					
1963	94.30	92.32	NA	66.69	NA
1967	107.98	107.86	50.10	74.48	NA
1972	145.80	143.91	62.97	104.30	106.92
1977	214.80	209.60	81.75	155.07	161.38
1982	312.05	315.15	107.16	221.65	230.38
1983	323.51	324.96	112.30	229.81	238.85
1984	333.92	347.66	112.04	233.78	244.24
1985	342.80	351.44	111.71	221.97	230.43
1986	350.00	355.26	111.36	211.80	218.65
1987	358.99	361.19	114.48	209.20	215.13
1988	367.54	371.04	117.45	211.70	215.74
1989	381.77	385.06	121.13	213.79	217.50
1990	392.50	396.06	125.24	217.11	220.22
1991	401.74	410.34	128.98	214.77	217.27
1992 ⁴	413.71	424.75	132.25	224.07	227.67

NA = Not available.

¹ Includes full- and part-time workers. ² Excludes all noncommercial eating facilities and commercial outlets such as hotel restaurants, department store coffee shops, and ballpark food concessions. ³ Grocery stores are also included in foodstore column. ⁴ Preliminary.

Source: (58).

Appendix table 49--Average weekly hours in food marketing¹

Year	Processing	Wholesaling	Eating and drinking places ²	Retailing	
				Food-stores ³	Grocery stores ³
<i>Hours</i>					
1963	41.0	41.4	NA	35.1	NA
1967	40.8	40.7	33.4	32.8	NA
1972	40.4	39.0	30.4	32.8	33.0
1977	39.7	38.6	26.1	32.8	32.8
1982	39.5	38.2	26.2	32.5	30.8
1983	39.8	38.5	26.3	31.0	30.7
1984	39.5	38.5	26.3	31.7	30.8
1985	40.0	38.2	25.8	30.6	30.4
1986	40.0	38.2	25.6	30.6	30.2
1987	40.2	37.9	25.9	30.6	30.3
1988	40.3	37.9	25.7	30.2	30.3
1989	40.7	37.9	25.5	29.9	30.0
1990	40.8	37.9	25.2	29.7	29.8
1991	40.6	38.1	24.9	29.3	29.4
1992 ⁴	40.6	38.3	25.0	29.6	29.3

NA = Not available.

¹ Includes full- and part-time workers.

² Excludes all noncommercial eating facilities and commercial outlets such as hotel restaurants, department store coffee shops, and ballpark food concessions.

³ Grocery stores are also included in foodstore column.

⁴ Preliminary.

Source: (58).

Appendix table 50--Food-related advertising

Item	1992	1991
	<i>Million dollars</i>	
Ten media ¹	8,744	8,434
Eating and drinking places ²	1,861	1,719
Foodstores ³	942	748
Processed foods	5,941	5,967
Cooking products and seasoning	649	677
Prepared and convenience foods	1,274	1,283
Dairy products	345	313
Fruit and vegetables	143	199
Meat, poultry, and fish	247	233
Bakery	255	290
Food beverages	501	515
Combination copy	81	49
Confectionery	712	624
Soft drinks	531	515
Beer	759	743
Wine	85	93
Liquor	230	284
Pet food	129	149
Coupons	2,600	2,400
Total advertising	11,034	10,834

¹ Magazines, Sunday magazines, newspapers, outdoor, network and spot television, network and spot radio, syndicated television, and cable television networks.

² Includes hotel restaurants not otherwise counted among eating and drinking places.

³ Excludes newspaper advertising.

Sources: (3).

Appendix table 51--Leading food advertisers

Company	1991	1990	Change, 1990-91
	<i>Million dollars</i>		<i>Percent</i>
Procter & Gamble Company	1,166.5	1,224.3	-4.7
Philip Morris Companies, Inc.	1,110.4	1,199.7	-7.4
PepsiCo	542.0	547.0	.9
General Mills, Inc.	419.1	406.5	3.1
McDonald's Corporation	387.4	426.0	-9.1
Kellogg Company	381.3	404.4	-5.7
Unilever NV	371.4	355.9	4.4
Anheuser-Busch Companies, Inc.	327.9	301.1	8.9
Grand Metropolitan PLC	326.7	402.1	-18.8
Nestlé SA	307.6	325.8	-5.6
American Home Products Corp.	290.6	234.3	24.0
RJR Nabisco, Inc.	285.5	349.3	-18.3
Warner-Lambert Co.	224.5	215.5	4.2
Coca-Cola Co.	218.8	224.6	-2.6
Bristol-Myers Squibb Co.	184.0	223.8	-17.8
Ralston-Purina Co.	141.6	127.6	11.0
Adolph Coors Co.	130.3	122.4	6.5
Sara Lee Corp.	129.5	135.8	-4.6
Mars, Inc.	128.2	148.8	-13.8
Clorox Co.	127.8	129.1	-1.0
ConAgra Inc.	111.9	110.0	1.7
Quaker Oats	111.7	165.0	-32.3
Wm. Wrigley Jr. Co.	111.6	118.3	-5.7
Campbell Soup Co.	109.5	116.9	-6.3
American Brands, Inc.	96.6	98.6	-2.0
Wendy's International, Inc.	94.4	91.1	3.6
Seagram's Co. Ltd.	94.0	100.7	-6.7
H.J. Heinz Co.	77.1	134.2	-42.5
Domino's Pizza Inc.	75.1	70.2	7.0
Hershey Food Corp.	74.0	108.7	-31.9
Colgate Palmolive	70.4	82.0	-14.1

Source: (3).

Appendix table 52--Share of food advertising expenditures by the largest food marketing firms, 1991

Industry	Total advertising	Share of expenditures spent by:	
		3 largest advertisers	10 largest advertisers
	<i>Million dollars</i>	<i>Percent</i>	
Restaurants	1,719.8	37.3	69.4
Foodstores	747.9	20.0	44.0
Food processing:			
Sugar, syrups, and artificial sweeteners	82.5	53.4	90.4
Shortening, oil, margarine, and nonstick products	120.0	35.3	90.1
Baking mixes, pie crusts, and baking ingredients	92.2	67.0	95.0
Seasonings, spices, and extracts	22.1	57.8	96.9
Gelatins and puddings (mixes and prepared)	32.6	94.0	100.0
Condiments, pickles, and relishes	92.0	35.3	74.7
Sauces, gravies, and dips	75.6	63.0	95.2
Salad dressing and mayonnaise	113.5	70.5	98.6
Soups	84.8	89.4	99.9
Breakfast cereals	765.8	62.2	81.8
Health and dietary foods	98.8	94.3	99.0
Infant foods	25.1	100.0	100.0
Pasta products and pasta-product dinners	59.3	65.7	94.1
All other prepared dinners and entrees	199.5	34.4	62.3
Jellies, jams, preserves, and peanut butter	44.0	74.5	99.2
Milk, butter, and eggs	50.3	62.9	88.6
Cheese	124.3	68.4	90.9
Ice cream, frozen novelties, and sherbet	60.9	25.3	53.0
Dairy product substitutes	15.3	80.8	100.0
Citrus fruit	7.5	93.4	100.0
Other fruit	63.2	47.2	91.6
Vegetables	68.8	65.2	89.5
Beans and grains	50.9	74.9	96.9
Meat, poultry, and fish	233.4	27.6	57.4
Bread and rolls	114.1	48.2	79.4
Cakes, pies, and pastries	71.8	56.4	97.0
Cookies and crackers	101.7	85.5	98.3

Continued--

Appendix table 52--Share of food advertising expenditures by the largest food marketing firms, 1991--Continued

Industry	Total advertising	Share of expenditures spent by:	
		3 largest advertisers	10 largest advertisers
	<i>Million dollars</i>	<i>Percent</i>	
Coffee, tea, cocoa, and derivatives	265.0	54.2	82.6
Fruit juices and drinks	240.8	39.0	75.8
Vegetable juices	10.5	100.0	100.0
Candy and gum	402.7	37.9	63.1
Appetizers, snacks, and nuts	140.0	21.7	63.2
Regular carbonated drinks	269.8	61.4	92.1
Dietary carbonated drinks	184.8	87.0	99.5
Noncarbonated beverages	8.7	75.9	96.1
Bottled waters	22.8	50.9	78.4
Beer	743.6	74.2	90.3
Wine	92.3	47.6	84.1
Distilled spirits:			
Nonalcoholic preparations, mixes, and mixing ingredients	3.7	97.4	100.0
Blended or rye	3.5	100.0	100.0
Bourbon	24.5	79.6	98.3
Canadian	24.3	77.4	100.0
Irish	.6	100.0	100.0
Scotch	50.3	52.0	96.4
Brandy, cognac, or armagnac	28.0	56.2	99.7
Cordials and liqueurs	35.4	38.7	81.1
Gin	31.0	64.4	100.0
Rum	21.7	72.7	97.9
Tequila	4.6	86.3	100.0
Vodka	37.8	80.6	98.9
Mixed drinks with liquor	12.0	98.4	100.0
Pet foods			
Dog food	87.3	56.4	91.6
Cat food	41.6	68.2	99.3
Pet food	21.0	78.8	97.7

Source: (3).

Appendix table 53--Advertising price indexes in cost per 1,000 targeted viewers or readers

Medium	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	<i>Index (1975=100)</i>										
Network TV	212	245	279	301	318	318	343	363	399	399	399
Spot TV	168	178	190	203	215	228	242	254	269	269	280
Network radio	236	244	237	268	284	301	313	332	345	338	331
Spot radio	148	152	155	161	170	177	182	193	205	205	203
Magazines	181	196	223	236	249	261	271	287	301	322	338
Supplements	170	177	192	204	220	229	240	254	267	301	316
Newspaper	215	234	252	267	286	306	327	347	368	390	410
Outdoor	168	182	198	208	218	229	238	250	263	274	274

Source: ERS.

Performance Measures

Appendix table 54--Value added and employment generated by the food marketing system¹

Item	1972	1977	1982	1985	1988	1989	1990	1991
<i>Billion dollars</i>								
Value added:								
Food sector	170.0	255.5	385.8	450.6	524.0	548.2	578.4	595.8
Processing	35.5	51.6	74.2	87.8	100.0	104.6	110.3	113.2
Retailing and wholesaling	44.4	67.2	100.7	114.3	127.7	133.6	141.1	144.5
Transportation	6.6	9.8	16.7	19.2	21.1	22.1	23.3	24.0
Eating and drinking places	25.1	37.1	55.9	65.1	81.1	84.9	89.5	93.3
Other supporting sectors ²	58.4	89.8	138.3	164.2	194.1	203.0	214.2	220.8
Farm sector (food products)	18.5	27.2	36.2	38.3	45.9	46.1	49.7	47.0
Nonfood sector	927.2	1,691.4	2,727.6	3,549.8	4,330.5	4,656.5	4,894.1	5,034.7
Gross national product	1,097.2	1,974.1	3,149.6	4,038.7	4,900.4	5,250.8	5,522.2	5,677.5
<i>Million employees</i>								
Full-time-equivalent employment:								
Food sector	12.8	12.8	13.4	13.3	13.8	14.0	14.2	14.0
Processing	1.8	1.7	1.6	1.6	1.5	1.5	1.5	1.5
Retailing and wholesaling	3.2	3.1	3.4	3.3	3.3	3.4	3.5	3.4
Transportation	.5	.5	.5	.5	.6	.6	.6	.6
Eating and drinking places	3.9	4.2	4.5	4.5	5.0	5.1	5.1	5.4
Other supporting sectors ²	3.4	3.3	3.4	3.4	3.4	3.4	3.5	3.4
Farm sector (food products)	2.5	2.2	1.7	1.7	1.8	1.7	1.8	1.8
Nonfood sector	71.2	84.0	95.1	102.2	104.3	108.2	108.8	109.5
Civilian labor force	86.3	99.0	110.2	115.5	119.9	123.9	124.8	125.3
<i>Percent</i>								
Value added:								
Food sector	15.5	12.9	12.3	11.2	10.7	10.4	10.5	10.5
Processing	3.2	2.6	2.4	2.1	2.0	2.6	2.0	2.0
Retailing and wholesaling	4.1	3.4	3.2	2.8	2.6	2.5	2.6	2.6
Transportation	.6	.5	.5	.5	.5	.4	.4	.4
Eating and drinking places	2.3	1.9	1.8	1.6	1.7	1.6	1.6	1.6
Other supporting sectors ²	5.3	4.6	4.4	4.0	4.0	3.9	3.9	3.9
Farm sector (food products)	1.7	1.4	1.1	1.0	.9	.9	.9	.8
Nonfood sector	84.5	85.7	86.6	87.8	88.4	88.6	88.6	88.7
Gross national product	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<i>Million employees</i>								
Full-time-equivalent employment:								
Food sector	14.7	12.9	12.2	11.5	11.5	11.3	11.4	11.1
Processing	2.0	1.7	1.5	1.4	1.3	1.2	1.2	1.2
Retailing and wholesaling	3.7	3.1	3.0	2.9	2.8	2.7	2.8	2.7
Transportation	.6	.5	.5	.4	.5	.5	.5	.5
Eating and drinking places	4.5	4.2	4.0	3.9	4.1	4.1	4.1	4.0
Other supporting sectors ²	3.9	3.3	3.0	2.9	2.8	2.7	2.8	2.7
Farm sector (food products)	2.9	2.2	1.5	1.5	1.5	1.4	1.4	1.4
Nonfood sector	82.3	84.1	86.8	88.5	87.0	87.3	87.2	87.4
Civilian labor force	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹ Revised following rebenchmarking to 1982 Census.

² Includes auxiliary activities needed to provide food to the final user. These include, for example, the value added and employment needed by the packaging industry to produce containers used in the food sector. These exclude the cost of materials used to produce related products.

Source: (11).

Appendix table 55--Research and development expenditures in food and tobacco marketing

Type	1984	1985	1986	1987	1988	1989	1990	1991	1992 ¹
	<i>Million dollars</i>								
Industry	1,081	1,136	1,280	1,204	1,192	1,283	1,200	1,442	1,494
Basic research	63	66 ¹	74 ¹	71 ¹	63	68	65	65	65
Applied research and product and process development	1,018	1,070	1,206	1,133	1,129	1,215	1,135	NA	NA
U.S. Department of Agriculture ²	280	307	310	289	309	305	NA	NA	NA
Product and process development	114	128	131	169	178	161	NA	NA	NA
Marketing efficiency	42	44	44	41	47	54	NA	NA	NA
Export market expansion	15	18	19	29	32	38	NA	NA	NA
Health and nutrition	109	117	116	50	52	52	NA	NA	NA

NA = Not available.

¹ ERS estimate.

² Many other types of Federal, State, and private R&D are not included.

Sources: (4, 24).

Appendix table 56--Labor productivity in food processing and retailing

Year	Index of output per person per hour							
	Food processing							Eating and drinking places
	Red meats	Milk	Bakery products	Sugar	Beer	Soft drinks	Food-stores	
	<i>1982=100</i>							
1967	66.7	46.4	80.3	85.4	38.7	54.5	100.0	100.6
1972	75.7	62.9	91.2	100.0	53.9	63.2	111.9	105.0
1977	89.1	73.8	96.8	110.6	81.6	80.4	104.7	103.1
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	103.7	105.3	104.0	107.5	108.5	103.6	99.7	99.0
1984	105.3	109.4	104.4	107.8	115.3	109.8	99.8	95.3
1985	108.4	112.8	106.4	112.2	110.4	114.0	100.0	92.6
1986	106.8	117.8	112.6	115.7	130.7	120.2	99.4	95.6
1987	108.6	122.4	111.4	130.7	143.8	125.9	92.4	96.1
1988	111.2	127.3	103.3	127.2	143.2	131.5	96.2	98.3
1989	162.6	130.6	103.0	121.0	142.8	134.3	94.0	97.0
1990	99.8	131.9	104.6	122.6	153.0	137.8	93.7	97.6
1991	NA	135.8	104.8	127.7	152.1	140.1	93.8	101.0
1992	NA	NA	NA	NA	NA	NA	94.5	NA

NA = Not available.

Source: (60).

Appendix table 57--Multifactor productivity changes in U.S. food manufacturing

Year	Gross output	Capital services	Labor hours	Energy	Materials	Purchased services	Combined inputs	Multifactor productivity
<i>Percent change</i>								
1950	2.1	2.0	0.4	-2.0	-1.2	10.0	-0.4	2.5
1951	2.2	.6	1.9	2.3	2.0	13.1	2.3	-1
1952	3.5	-1	-2	.0	2.7	2.3	2.0	1.5
1953	2.5	-7	-2	-3.8	.9	-1.9	0.5	2.1
1954	-6	-1.3	-1.5	19.7	-2	3.4	-2	-4
1955	5.6	-1.0	.6	6.4	8.3	5.7	5.9	-3
1956	5.0	-4	.5	6.6	3.9	11.5	3.3	1.7
1957	.7	-4	-2.9	-3.9	-1.1	3.2	-1.3	2.1
1958	1.4	-2	-1.9	13.7	2.7	7.0	1.9	-5
1959	4.7	-0.3	1.2	-2	7.1	-1.2	4.8	-1
1960	1.8	.2	-3	.4	1.5	5.4	1.2	.6
1961	1.5	.3	-7	-2	1.5	2.1	.9	.5
1962	1.9	.4	-6	1.1	1.1	2.0	.7	1.1
1963	2.8	.5	-7	3.9	2.2	4.4	1.5	1.2
1964	5.4	1.3	.0	16.9	6.7	7.8	5.0	.3
1965	2.3	1.5	1.0	.1	-8	.6	-2	2.5
1966	2.0	1.9	.9	7.4	.1	4.5	.7	1.2
1967	5.3	2.6	-1	-2.5	8.2	9.7	6.0	-7
1968	2.8	2.6	-7	26.4	5.2	-2.1	3.5	-7
1969	1.5	1.9	.0	-2.8	.9	2.1	.8	.6
1970	2.3	1.8	-1.7	6.8	2.8	-.3	1.7	.6
1971	2.1	1.9	-1.4	-4.8	1.6	-6.8	.5	1.6
1972	3.0	1.9	-0.1	4.9	2.2	1.6	1.7	1.3
1973	-3.4	2.4	-1.9	-.2	-5.4	0.1	-4.0	.6
1974	3.6	2.8	-1.5	-7.2	10.2	10.5	7.5	-3.6
1975	.5	2.7	-3.2	2.6	.0	3.8	-1	.7
1976	9.9	3.2	2.6	3.0	11.0	6.9	8.6	1.2
1977	1.0	5.4	.3	-.2	4.1	2.2	3.4	-2.3
1978	2.8	4.0	.2	3.0	1.7	4.3	1.8	1.0
1979	-5	1.1	.9	-4.3	-2.4	2.8	-1.4	.9
1980	1.4	2.6	-1.7	-.1	.5	4.7	.5	1.0
1981	2.4	2.1	-2.3	-3.8	.6	17.9	1.1	1.3
1982	1.9	1.8	-3.1	7.3	.1	-1.4	-.3	2.2

Continued--

Appendix table 57--Multifactor productivity changes in U.S. food manufacturing--Continued

Year	Gross output	Capital services	Labor hours	Energy	Materials	Purchased services	Combined inputs	Multifactor productivity
<i>Percent change</i>								
1983	-3	1.5	-1.3	-5.4	-1.3	.1	-1.1	.8
1984	1.1	.3	-.6	3.0	1.4	2.9	1.1	.1
1985	3.0	.5	.1	-4.7	1.8	8.2	1.7	1.2
1986	.2	.9	2.0	4.2	-2.1	9.1	.1	.2
1987	4.4	.9	.9	3.1	7.8	-1.0	4.8	-.5
1988	2.1	.5	.8	3.0	3.2	-4.4	1.7	.3
Period:								
1949-88	2.3	1.2	-.4	2.3	2.2	3.7	1.7	.6
1949-73	2.4	.8	-.4	3.7	2.2	3.4	1.6	.8
1973-88	2.2	2.0	-.4	0.1	2.4	4.3	1.9	.3
1949-79	2.5	1.3	-.3	2.9	2.5	3.7	1.9	.6
1979-88	1.8	1.2	-.6	.6	1.3	3.8	1.1	.7

Source: (60).

Appendix table 58--Changes in labor productivity in selected food processing industries

Industry	Change, 1987-88			Change, 1988-89		
	Output per hour	Output	Employee hours	Output per hour	Output	Employee hours
	<i>Percent</i>					
Red meat products	2.2	4.8	2.6	NA	NA	NA
Meat packing	.3	2.9	2.6	-.2	-1.0	-.8
Sausages and other prepared meats	5.3	8.1	2.7	NA	NA	NA
Poultry dressing and processing	-2.4	4.3	6.8	NA	NA	NA
Fluid milk	3.8	-.6	-4.2	.7	-1.1	-1.8
Preserved fruits and vegetables	1.0	-.8	-1.7	NA	NA	NA
Canned fruits and vegetables	2.3	2.1	-.2	NA	NA	NA
Frozen fruits and vegetables	-.2	-2.0	-1.8	NA	NA	NA
Grain mill products	.4	1.3	1.0	NA	NA	NA
Flour (including flour mixes) and other grains	1.9	2.1	.2	NA	NA	NA
Flour and other grain mill products	2.2	0	-2.2	-2.4	-4.6	-2.2
Cereal breakfast foods	-2.7	1.9	4.7	NA	NA	NA
Rice milling	1.4	-9.0	-10.2	21.7	21.8	0
Wet corn milling	-4.3	2.7	7.3	NA	NA	NA
Prepared animal feeds	3.0	1.3	-1.7	NA	NA	NA
Bakery products	-6.4	-5.1	1.5	NA	NA	NA
Sugar	-.8	-3.5	-2.7	-4.8	.2	5.2
Raw and refined cane sugar	2.2	-1.7	-3.8	-.9	3.6	4.5
Beet sugar	-5.5	-6.0	-.6	-9.9	-4.6	5.9
Malt beverages	4.8	1.7	-3.0	-.2	-.5	-.3
Bottled and canned soft drinks	7.1	1.9	-4.8	8.3	2.1	-5.7

NA = Not available.

Source: (60).

Appendix table 59--Profit margins in food marketing

Year/ quarter	Aftertax profits for food processing, as a share of:		Aftertax profits for retail foodstores, as a share of:	
	Sales	Stock- holders' equity	Sales	Stock- holders' equity
<i>Percent</i>				
1977	3.1	13.2	0.8	10.7
1982	3.1	13.0	1.0	12.6
1983	3.3	12.0	1.2	13.3
1984	3.3	13.3	1.4	16.2
1985 ¹	4.1	15.3	1.2	14.2
1988	5.5	20.9	.9	12.5
1	5.2	19.1	.6	8.4
2	6.5	25.0	1.3	17.8
3	5.6	21.9	.8	10.4
4	4.7	17.9	.7	13.5
1989	4.2	17.0	.8	14.9
1	4.1	15.6	.5	9.2
2	4.0	16.5	.9	17.3
3	3.4	13.9	.7	13.8
4	5.3	22.2	.9	19.1
1990	4.1	16.1	.5	11.2
1	3.7	14.7	-.8	-17.1
2	5.2	21.1	1.0	23.3
3	5.1	19.6	.5	11.6
4	2.2	9.0	1.1	26.8
1991	4.8	17.5	0.8	15.3
1	5.1	18.5	0.6	13.3
2	5.0	18.7	1.2	23.7
3	5.2	19.3	0.8	15.5
4	3.9	13.9	0.3	5.4
1992	4.4	15.7	0.4	9.0
1	3.2	10.9	0.5	10.3
2	5.7	20.3	0.7	14.1
3	4.8	16.9	0.5	10.8
4	4.0	14.5	0.0	0.7

¹ Includes tobacco, 1985 to data.

Source: (52).

Appendix table 60--Profits (return on equity) after taxes of wholesale corporate food firms, by asset group

Asset group value	1982		1983		1984		
<i>1,000 dollars</i>	<i>Percent</i>						
100-249	11.7	13.9	10.2				
250-499	12.3	10.9	9.4				
500-999	11.5	9.0	9.0				
1,000-4,999	11.1	10.1	8.2				
5,000-9,999	9.8	9.8	8.4				
10,000-24,999	10.1	8.4	8.9				
25,000-49,999	7.0	6.2	8.5				
50,000-99,999	10.1	8.2	7.6				
100,000-249,999	9.2	5.3	7.1				
250,000 or more	6.7	8.0	6.4				
	1985	1986	1987	1988	1989	1990 ¹	Average, 1982-90
<i>1,000 dollars</i>	<i>Percent</i>						
100-249	14.7	10.9	13.7	12.8	11.9	25.6	14.0
250-499	15.2	16.1	12.8	12.9	7.4	6.9	11.5
500-999	10.6	9.2	10.6	11.1	6.9	9.4	10.7
1,000-4,999	8.5	8.0	8.1	9.6	7.1	6.9	8.6
5,000-9,999	7.4	7.7	9.1	8.9	5.4	6.5	8.1
10,000-24,999	9.1	10.2	9.5	9.1	6.6	7.2	7.8
25,000-49,999	6.0	6.0	6.4	7.7	4.1	5.7	6.4
50,000-99,999	11.1	8.3	8.0	8.3	6.4	8.6	8.5
100,000-249,999	7.7	4.6	5.0	6.6	12.8	10.4	7.6
250,000 or more	6.7	6.5	8.8	7.8	11.4	9.3	8.0

¹ Estimated.
Source: (62).

Appendix table 61—Comparative financial statistics for selected food companies¹

Statistical year	Borden Inc.	CPC Int'l.	Campbell Soup	ConAgra Inc. ²	Flowers Industries	General Mills	Gerber Products	H.J. Heinz	Hershey Foods	Kellogg Company	McCor-mick ³	Nestlé S.A.	Quaker Oats	Ralston Purina	Sara Lee
Pretax margin:															
<i>Percent</i>															
1986	7.5	10.5	8.8	2.5	8.4	8.6	8.8	11.9	10.9	17.8	5.2	8.7	8.1	10.3	4.9
1989	7.5	10.9	7.9	2.8	6.1	9.2	13.2	12.5	12.0	14.9	6.3	8.8	8.4	9.1	5.2
1990	7.5	11.0	8.4	2.3	6.7	9.5	15.0	13.3	12.0	15.7	6.9	8.0	7.3	9.5	6.1
1991	7.4	11.2	10.8	2.6	4.8	10.0	16.7	13.6	12.5	17.0	8.0	8.0	7.7	9.4	6.7
1992	4.9	11.3	12.8	2.8	5.6	10.7	15.6	15.0	12.5	16.7	9.4	8.2	7.6	7.5	7.2
Net margin:															
1986	4.5	4.8	5.1	1.8	4.2	4.0	4.7	6.9	6.1	9.5	2.5	5.0	4.7	5.2	2.8
1987	4.1	4.7	5.5	1.7	3.4	4.3	4.2	7.3	6.1	10.4	2.3	5.5	4.2	4.7	2.9
1988	4.3	6.2	5.6	1.6	5.6	5.1	5.4	7.4	6.7	11.0	2.9	5.2	5.1	6.6	3.0
1989	4.5	6.4	4.8	1.7	3.8	5.6	8.3	7.6	7.1	9.4	4.2	5.0	5.2	5.4	3.3
1990	4.8	6.5	4.9	1.5	4.1	5.8	8.3	8.3	7.2	9.7	4.5	4.9	4.2	5.5	3.8
1991	4.7	6.5	6.5	1.5	2.9	6.2	10.5	8.5	7.6	10.5	5.7	4.9	4.3	5.4	4.0
1992	3.4	6.4	7.8	1.6	3.6	6.5	10.1	9.7	7.5	10.6	6.5	5.0	4.4	4.3	4.5
Return on average equity:															
1986	15.7	18.8	15.3	21.7	19.2	21.5	12.6	23.3	18.2	40.3	9.2	11.8	21.3	30.0	20.4
1987	17.2	22.4	15.1	22.6	16.3	31.4	10.6	24.6	19.0	37.6	8.9	11.8	19.4	52.1	20.4
1988	17.8	25.3	15.1	20.1	22.1	38.5	15.8	25.8	17.5	35.8	12.4	15.1	23.1	35.4	21.1
1989	19.7	27.2	14.9	22.5	14.5	45.6	26.1	26.1	16.1	28.2	16.4	19.1	12.5	37.2	22.1
1990	20.9	27.2	17.6	22.3	16.2	48.5	31.5	27.5	16.6	29.0	17.9	16.6	20.8	54.9	20.9
1991	17.8	25.6	23.0	20.0	11.4	45.5	34.3	27.3	17.0	29.8	21.5	16.8	24.8	58.3	20.6
1992	15.8	25.6	25.7	16.7	14.9	40.7	33.8	27.5	17.3	32.0	23.0	NA	27.9	46.2	19.9
Return on average assets:															
1986	6.9	6.6	8.6	5.8	8.3	7.7	7.9	11.4	10.4	16.7	4.0	7.1	8.9	8.4	6.6
1987	6.9	6.6	8.5	6.7	7.1	10.2	5.6	10.9	9.9	16.6	3.6	7.2	7.0	6.8	6.9
1988	7.3	8.8	8.2	5.6	10.1	11.4	7.7	11.1	9.7	16.1	4.8	7.8	8.7	9.2	7.1
1989	7.4	9.3	7.3	5.9	6.7	11.3	11.7	11.6	9.6	13.1	6.1	7.0	4.8	8.5	6.7
1990	7.2	8.9	7.6	5.9	7.7	12.1	15.3	11.9	10.0	14.3	7.0	6.4	7.0	8.6	6.2
1991	6.3	8.8	9.7	4.1	5.5	12.2	16.2	12.1	9.9	15.8	8.2	6.6	7.5	8.8	6.3
1992	6.4	8.7	11.5	3.6	7.1	12.3	14.8	11.7	9.7	16.5	8.8	NA	8.0	6.8	6.5

Continued--

Appendix table 61—Comparative financial statistics for selected food companies¹—Continued

Statistical year	Borden Inc.	CPC Int'l.	Campbell Soup	ConAgra Inc. ²	Flowers Industries	General Mills	Gerber Products	H.J. Heinz	Hershey Foods	Kellogg Company	McCormick ³	Nestlé S.A.	Quaker Oats	Ralston Purina	Sara Lee
Dividend payout ratio:	<i>Percent</i>														
1986	36.3	49.1	37.8	32.2	37.1	55.1	59.2	39.0	36.3	39.5	45.5	27.6	31.2	29.1	38.6
1987	34.3	46.1	40.1	29.3	46.6	50.0	71.0	40.7	35.4	40.3	48.1	27.9	32.0	31.9	40.4
1988	35.3	41.3	38.2	33.5	36.4	49.2	46.8	41.6	37.1	39.0	35.5	30.1	29.6	27.3	40.6
1989	38.8	41.5	42.5	30.7	60.0	48.8	33.5	41.3	38.9	47.8	28.3	30.5	31.9	27.5	40.6
1990	42.1	41.4	41.5	31.0	60.8	48.4	32.4	42.6	38.7	45.3	30.5	32.4	50.9	25.8	42.4
1991	48.9	42.1	35.4	31.3	92.3	48.1	33.5	43.7	38.7	43.0	31.6	32.0	49.8	32.1	42.8
1992	71.0	43.2	36.4	34.7	75.5	48.5	36.3	43.8	38.3	43.6	35.1	32.2	52.9	43.1	39.9
Total debt/capital: ⁴															
1986	41.8	61.7	22.7	38.6	42.3	41.0	22.8	28.4	23.1	30.9	36.2	24.5	35.8	67.9	37.7
1987	43.9	46.4	21.4	37.9	38.5	34.3	39.9	38.6	28.9	26.7	43.5	22.1	50.2	63.8	38.4
1988	43.5	44.7	25.9	38.6	34.9	53.0	39.2	32.6	22.3	32.4	44.6	46.8	33.9	60.9	40.9
1989	51.5	49.6	33.6	39.3	34.1	47.8	31.7	35.1	17.4	36.4	43.0	39.7	44.2	72.2	50.0
1990	51.2	54.5	33.6	43.9	30.9	51.9	30.5	40.0	17.9	23.3	39.3	22.9	52.3	80.1	48.6
1991	47.2	45.9	37.0	61.4	31.9	48.1	29.6	28.6	21.6	17.7	45.1	36.9	47.5	74.2	41.0
1992	66.0	46.6	32.7	52.2	30.9	45.0	23.2	44.6	26.8	21.3	44.3	NA	49.0	80.4	34.5
5-year compound growth:															
Net income	(2.2)	12.9	14.7	18.8	2.8	18.6	29.9	13.5	10.4	10.7	25.5	8.1	5.6	(8.2)	17.6
Earnings per share	(1.6)	14.7	17.2	12.1	3.2	20.3	34.9	14.2	10.4	11.4	34.4	6.7	5.4	18.9	16.0
Dividends/share	13.8	13.2	14.0	15.9	13.6	18.8	15.9	15.9	12.2	13.2	26.2	9.4	16.5	14.1	15.8

¹ Based on continuing operations and excluding nonrecurring items.

² Capitalization defined as short-term debt + long-term debt + equity.

³ Based on results of McCormick's food and packaging operations.

⁴ Distorted.

Source: Company reports.

Appendix table 62--Income statement for food processing and retailing, 1992

Item	Food and kindred products				Retail foodstores ¹			
	Quarter				Quarter			
	1	2	3	4	1	2	3	4
	<i>Million dollars</i>							
Net sales, receipts, and operating revenues	96,535	103,328	104,761	106,400	55,656	57,230	57,277	57,041
Less depreciation, depletion, and amortization of property, plant, and equipment	2,481	2,561	2,817	2,730	938	969	965	956
Less all other operating costs and expenses, including costs of goods sold and selling, general, and administrative expenses	86,306	91,345	92,398	94,232	53,163	54,616	54,828	54,350
Income (or loss) from operations	7,748	9,423	9,546	9,438	1,564	1,645	1,484	1,735
Net nonoperating income (expense)	(2,724)	(673)	(1,837)	(2,504)	(897)	(737)	(819)	(1,271)
Income (or loss) before income taxes	5,024	8,750	7,709	6,933	667	908	665	464
Less provision for current and deferred domestic income taxes	1,915	2,810	2,712	2,628	365	502	359	445
Income (or loss) after income taxes	3,109	5,940	4,997	4,305	161	303	406	306
Cash dividends charged to retained earnings in current quarter	1,890	2,004	1,747	2,159	106	150	150	143
Net income retained in business	1,219	3,935	3,250	2,146	153	256	163	(98)
Retained earnings at beginning of quarter	88,151	88,478	91,206	94,089	4,776	4,248	4,032	4,014
Other direct credits (or charges) to retained earnings (net), including stock and other noncash dividends	(853)	55	(1,366)	(2,879)	(484)	(431)	(460)	(207)
Retained earnings at end of quarter	88,518	92,468	93,090	93,356	4,446	4,072	3,736	3,709
	<i>Percentage of net sales</i>							
Income statement in ratio format:								
Net sales, receipts, and operating revenues	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less depreciation, depletion, and amortization of property, plant, and equipment	2.6	2.5	2.7	2.6	1.7	1.7	1.7	1.7
Less all other operating costs and expenses	89.4	88.4	88.2	88.6	95.5	95.4	95.7	95.3
Income (or loss) from operations	8.0	9.1	9.1	9.1	2.8	2.9	2.6	3.0

See footnotes at end of table.

Continued--

Appendix table 62--Income statement for food processing and retailing, 1992--Continued

Item	Food and kindred products				Retail foodstores ¹			
	Quarter				Quarter			
	1	2	3	4	1	2	3	4
	<i>Percentage of net sales</i>							
Nonoperating income (expense)	(2.8)	(0.7)	(1.8)	(2.4)	(1.6)	(1.3)	(1.4)	(2.2)
Income (or loss) before income taxes	5.2	8.5	7.4	6.5	1.2	1.6	1.2	0.8
Less provision for current and deferred domestic income taxes	2.0	2.7	2.6	2.5	0.7	0.9	0.6	0.8
Income (or loss) after income taxes	3.2	5.7	4.8	4.0	0.5	0.7	0.5	0.0
	<i>Percent</i>							
Operating ratios:								
Annual rate of profit on stockholders' equity at end of period--								
Before income taxes	17.54	29.97	25.99	23.39	22.78	31.58	23.34	15.64
After income taxes	10.86	20.34	16.85	14.52	10.33	14.11	10.75	.65
Annual rate of profit on total assets--								
Before income taxes	6.23	10.76	9.14	8.15	3.86	5.25	3.81	2.61
After income taxes	3.85	7.31	5.92	5.06	1.75	2.34	1.75	0.11
Balance sheet ratios: ²								
Total current assets to total current liabilities	1.28	1.28	1.26	1.25	1.20	1.21	1.21	1.21
Total cash and U.S. Government and other securities to total current liabilities	.16	.17	.16	.15	.19	.19	.18	.19
Total stockholders' equity to total debt	.92	.95	.92	.90	.37	.36	.36	.37

¹ Excludes firms with assets below \$25 million.

² Based on data presented in appendix table 44.

Source: (52).

Appendix table 63—Balance sheet for food processing and retailing, 1991

Item	Food and tobacco products				Retail foodstores ¹			
	Quarter				Quarter			
	1	2	3	4	1	2	3	4
	<i>Million dollars</i>							
Assets:								
Cash and demand deposits in the United States	3,763	3,724	4,178	3,974	2,063	1,842	1,967	2,334
Time deposits in the United States, including negotiable certificates of deposit	1,655	1,338	1,516	1,496	458	423	385	347
Total cash on hand and in U.S. banks	5,418	5,061	5,694	5,470	2,521	2,265	2,352	2,681
Other short-term financial investments, including marketable and Government securities, and commercial paper	5,777	6,692	6,627	6,688	1,311	1,494	1,439	1,300
Total cash, U.S. Government, and other securities	11,195	11,754	12,321	12,158	3,832	3,759	3,790	3,981
Trade accounts and trade notes receivable (less allowances for doubtful receivables)	28,816	29,631	31,698	30,585	2,679	2,642	2,733	2,999
Inventories	42,402	40,476	44,303	46,109	16,014	15,905	16,346	16,739
All other current assets	8,010	8,324	8,377	9,393	1,987	2,067	2,124	2,237
Total current assets	90,424	90,185	96,699	98,245	24,512	24,372	24,994	25,956
Depreciable and amortizable fixed assets, including construction in progress	145,790	148,277	155,873	158,394	47,340	48,205	49,204	50,614
Land and mineral rights	6,406	6,331	6,568	6,762	4,273	4,326	4,469	4,506
Less accumulated depreciation, depletion, and amortization	61,467	62,999	65,820	67,463	18,803	19,408	20,054	20,536
Net property, plant, and equipment	90,729	91,608	96,622	97,693	32,810	33,123	33,619	34,585
All other noncurrent assets, including investment in nonconsolidated entities, long-term investments, and intangibles	141,489	143,347	144,254	144,539	11,768	11,706	11,257	10,624
Total assets	322,642	325,140	337,574	340,477	69,091	69,202	69,871	71,165
Liabilities and stockholders' equity:								
Short-term debt, original maturity of 1 year or less--								
Loans from banks	6,543	5,357	6,909	7,589	479	420	301	241
Other short-term debt, including commercial paper	8,957	7,789	8,528	10,068	88	59	103	595
Trade accounts and trade notes payable	19,485	20,585	23,299	24,204	10,701	10,964	11,306	11,682
Income taxes accrued, prior and current years, net of payments	5,170	4,464	4,788	4,443	407	317	342	362

See footnote at end of table.

Continued--

Appendix table 63--Balance sheet for food processing and retailing, 1991--Continued

Item	Food and tobacco products				Retail foodstores ¹			
	Quarter				Quarter			
	1	2	3	4	1	2	3	4
<i>Million dollars</i>								
Installments, due in 1 year or less, on long-term debt--								
Loans from banks	1,616	1,666	1,684	2,065	1,108	722	711	647
Other long-term debt	5,813	6,253	6,643	6,040	549	499	622	624
All other noncurrent liabilities, including excise and sales taxes and accrued expenses	23,153	24,152	25,046	24,147	7,095	7,187	7,287	7,299
Total current liabilities	70,737	70,539	76,897	78,556	20,427	20,167	20,672	21,451
Long-term debt (due in more than 1 year)--								
Loans from banks	23,298	23,220	24,665	24,952	11,026	11,096	10,711	11,138
Other long-term debt	78,103	78,702	80,809	80,604	18,389	18,834	19,492	19,037
All other noncurrent liabilities, including deferred income taxes, capitalized leases, and minority stockholders' interest, in consolidated domestic corporations	35,953	35,879	36,567	37,790	7,534	7,603	7,596	7,672
Total liabilities	208,091	208,341	218,938	221,901	57,376	57,701	58,471	59,298
Capital stock and other capital (less Treasury stock)	26,034	24,331	25,545	25,220	7,270	7,429	7,664	8,158
Retained earnings	88,518	92,468	93,090	93,356	4,446	4,072	3,736	3,709
Stockholders' equity	114,551	116,799	118,635	118,575	11,715	11,501	11,399	11,867
Total liabilities and stockholders' equity	322,642	325,140	337,574	340,477	69,091	69,202	69,871	71,165
Net working capital:								
Excess of total current assets over total current liabilities	19,687	19,645	19,802	19,689	4,086	4,205	4,332	4,505
<i>Percent of total assets</i>								
Selected balance-sheet ratios:								
Total cash and U.S. Government and other securities	3.5	3.6	3.6	3.6	5.5	5.4	5.4	5.6
Trade accounts and trade notes receivable	8.9	9.1	9.4	9.0	3.9	3.8	3.9	4.2
Inventories	13.1	12.4	13.1	13.5	23.2	23.0	23.4	23.5
Total current assets	28.0	27.7	28.6	28.9	35.5	35.2	35.8	36.5
Net property, plant, and equipment	28.1	28.2	28.6	28.7	47.5	47.9	48.1	48.6
Short-term debt, including installments on long-term debt	7.1	6.4	7.0	7.6	3.2	2.4	2.4	2.9
Total current liabilities	21.9	21.7	22.8	23.1	29.6	29.1	29.6	30.1
Long-term debt	31.4	31.3	31.2	31.0	42.6	43.2	43.2	42.5
Total liabilities	64.5	64.1	64.9	65.2	83.0	83.4	83.7	83.3
Stockholders' equity	35.5	35.9	35.1	34.8	17.0	16.6	16.3	16.7

¹ Excludes firms with assets below \$25 million.

Source: (52).

Appendix table 64--Aftertax profits of selected processors, 1992

Firm	Profits	Change from 1991	Return on common equity over 12-month period ending December 1992
	<i>Million dollars</i>		----- <i>Percent</i> -----
Borden, Inc.	-210.6	NA	-18.8
Campbell Soup Company	517.9	22	24.7
ConAgra, Inc.	393.8	11	16.3
CPC International, Inc.	430.6	7	26.0
Curtice-Burns Food	6.1	176	5.7
Dean Foods	61.8	-15	13.6
Dale Food	65.2	-51	6.0
Dockocil	-26.8	NA	-29.9
Flower Industries	36.4	52	13.7
General Mills, Inc.	532.9	8	38.3
Gerber Products	139.3	31	29.0
H.J. Heinz Company	559.0	-16	23.6
Hershey Foods	242.6	11	17.1
Geo. A. Hormel	95.2	10	14.8
Hudson Foods	6.4	-18	4.6
IBP, Inc.	63.6	NA	12.3
Imperial Holly	-4.9	NA	-3.8
Interstate Bakeries	32.6	539	15.6
International Multifoods	39.9	5	12.5
Kellogg Co.	682.8	13	29.2
Lancaster Colony	39.6	57	23.7
McCormick and Company, Inc.	95.2	18	22.5
Pet Incorporated	106.6	12	18.4
Pilgrim's Pride	-18.6	NA	-15.7
Quaker Oats Company	281.5	10	39.6
Ralston-Purina	326.0	-16	101.6
Sara Lee Corporation	669.8	-6	20.3
Smithfield Foods, Inc.	15.3	-48	11.5
Thorn Apple Valley	18.7	-14	22.6
Tyson Foods, Inc.	168.1	13	13.7
Wm. Wrigley, Jr.	148.6	15	29.8
Group composite	5,514.3	-5	20.5

Source: (4).

Appendix table 65--Aftertax profits of selected eating places, in 1992

Firm	Profits	Change from 1991	Return on common equity over 12-month period ending December 1992
	<i>Million dollars</i>	----- <i>Percent</i> -----	
Bob Evans Farms	42.8	18	14.7
Brinker International	41.2	34	13.5
Checker Drive-In Restaurant	10.7	191	14.2
Cracker Barrel Old County Store	39.2	43	16.8
Lone Star Steakhouse and Saloon	4.7	426	25.4
Luby's Cafeteria	33.8	8	15.3
McDonald's	958.6	12	17.7
Morrison's Restaurants	35.4	23	16.4
Outback Steakhouse	12.5	129	20.6
Shoney's	-16.6	NA	NA
Wendy's International	64.7	25	12.5
Group composite	1,217.3	9	17.3

Source: (4).

Appendix table 66--Aftertax profits of selected food wholesalers, 1992

Firm	Profit	Change from 1991	Return on common equity over 12-month period ending December 1992
	<i>Million dollars</i>	----- <i>Percent</i> -----	
Fleming	114.5	58	10.9
Nash-Finch	20.1	5	10.8
Richfood Holdings	15.5	42	21.4
Rykoff-Sexton	6.7	-52	3.5
Smart and Final	14.4	427	13.3
Super Food Services	-5.9	NA	-4.8
Super Rite	6.7	105	-10.9
SuperValu	162.1	-22	14.9
Sysco	179.7	11	15.4
Group composite	513.8	2	12.6

NA = Not available.
Source: (4).

Appendix table 67--Aftertax profits of selected food retailers, 1992

Firm	Profits	Change from 1991	Return on common equity over 12-month period ending December 1992
	<i>Million dollars</i>	----- <i>Percent</i> -----	
Albertson's	251.3	0	19.3
American Stores Company	171.5	-36	10.7
Bruno's	53.1	-23	13.5
Casey's General Stores	12.6	14	12.1
Delchamps	11.7	13	9.9
Eagle Food Centers	8.4	NA	12.0
Food Lion, Inc.	178.0	-13	18.6
Foodarama Supermarkets	0.7	NA	2.2
Giant Food (Landover, MD)	69.5	-32	10.9
Great Atlantic & Pacific Tea Company	-42.3	NA	-3.9
Hannaford Brothers	48.9	14	14.7
Ingles Markets	6.5	-34	4.6
Kroger	101.2	0	NA
Marsh Supermarkets	10.7	12	11.3
Penn Traffic	1.2	NA	8.1
Riser Foods	4.5	-51	8.7
Ruddick	31.1	8	12.2
Smith's Food & Drug Centers	13	53.7	2.0
Stop & Shop	61	70.8	0.9
Village Super Market	20	0.5	0.1
Vons	53	82.1	1.5
Weis Markets	-24	71.7	6.8
Winn-Dixie Stores Company	17	232.4	1.7
Group composite	1,121.1	-33	15.7

NA = Not available.

Source: (4).

Appendix table 68--New products introduced in 20 selected categories

Category	1984	1985	1986	1987	1988	1989	1990	1991	1992
	<i>Number</i>								
Food categories:									
Baby food	34	14	38	10	55	53	31	95	53
Bakery foods	485	553	681	931	968	1,115	1,239	1,631	1,508
Baking ingredients	130	142	137	157	212	233	307	335	346
Beverages	717	625	697	832	936	913	1,143	1,367	1,538
Breakfast cereals	61	56	62	92	97	118	123	104	122
Condiments	993	904	811	1,145	1,310	1,355	1,486	1,885	2,068
Candy, gum, and snacks	858	1,146	1,179	1,367	1,608	1,701	2,028	2,787	2,555
Dairy	806	671	852	1,132	854	1,348	1,327	1,111	1,320
Desserts	61	62	101	56	39	69	49	124	93
Entrees	430	409	441	691	613	694	753	808	698
Fruit and vegetables	114	195	194	185	262	214	325	356	276
Pet food	187	103	80	82	100	126	130	202	179
Processed meat	336	383	401	581	548	509	663	798	785
Side dishes	119	187	292	435	402	489	538	530	560
Soups	113	167	141	170	179	215	159	265	211
Total, food	5,376	5,617	6,107	7,886	8,183	9,192	10,301	12,398	12,312
Nonfood categories:									
Health and beauty aids	1,652	1,446	1,678	2,039	2,000	2,308	2,379	3,064	3,690
Household supplies	133	184	178	161	233	372	317	423	474
Paper products	41	42	42	47	100	121	174	165	153
Tobacco products	23	27	27	51	12	29	31	19	45
Pet products	22	14	9	18	30	33	42	74	116
Total, nonfood	1,871	1,713	1,934	2,316	2,375	2,863	2,943	3,745	4,478
Total	7,247	7,330	8,041	10,182	10,558	12,055	13,244	16,143	16,790

Source: (27).

Appendix table 69--New food product introductions: Leading companies, 1992

Rank	Company	1992	1991
		<i>Number</i>	
1	Philip Morris	256	247
2	Con Agra	151	183
3	Campbell Soup	121	114
4	Nestlé	114	91
5	H.J. Heinz	99	53
6	Wessanen USA	81	139
7	Grand Metropolitan	74	104
8	E.J. Brach	71	3
9	RJR Nabisco	67	69
10	General Mills	61	55
11	Sara Lee	60	63
12	Unilever	53	60
13	CPC International	53	41
14	Ralston Purina	51	66
15	Geo. F. Hormel	50	96
16	Borden	44	76
17	Spice Hunter	41	15
18	American Roland	40	2
19	M&M/Mars	40	42
20	Anheuser-Busch	39	28
Total		1,566	1,547

Source: (27).

Appendix table 70—Capital expenditures in food marketing

Item	1972	1982	1984	1985	1986	1987	1988	1989	1990 ¹	1991 ²	1992
<i>Billion dollars</i>											
Food processing (by enterprise) ³	3.3	9.4	9.7	11.3	11.6	12.1	14.2	15.9	16.4	17.4	18.5
<i>1,000 dollars</i>											
Food processing (by establishment): ³											
Food and kindred products	NA	6,727	6,432	7,049	6,966	7,198	7,493	8,329	8,858	9,632	NA
Meat products	NA	697	614	717	856	886	881	1,170	1,255	1,336	NA
Dairy	NA	711	566	671	672	744	792	903	887	855	NA
Fruit and vegetables	NA	NA	890	1,006	1,015	1,025	1,096	1,220	1,508	1,620	NA
Grain mill	NA	88	790	1,078	1,028	1,072	1,297	1,360	1,316	1,278	NA
Bakery products	NA	NA	584	587	572	736	685	750	827	948	NA
Sugar and confectionery	NA	430	498	629	540	481	491	634	667	636	NA
Fats and oils	NA	-393	317	337	236	251	531	285	327	376	NA
Beverages	NA	1,628	1,527	1,338	1,366	1,253	1,355	1,337	1,215	1,445	NA
Prepared foods	NA	520	644	685	681	950	564	202	855	868	NA

NA = Not available.

¹ Preliminary.² Projected.³ Capital expenditures at the enterprise (corporate) level include all capital expenditures by establishments owned by the corporation and additional corporate-level capital expenditures including nonfood, retailing, wholesaling, and foodservice operations.

Sources: (42, 43, 44).

Appendix table 71--U.S. food plant construction¹

Year ²	New construction	Major renovations or expansions	Freestanding distribution centers	Total
	<i>Number</i>			
1984	19	82	27	201
1985	146	149	23	295
1986	159	173	20	332
1987	198	141	35	339
1988	187	182	72	369
1989	193	157	40	390
1990	219	201	36	456
1991	146	159	NA	305
1992	170	206	32	376

¹ Projects planned, under construction, or completed during that year. Some redundancies exist from year to year, because a project under construction in one year may have been completed in the following year.

² Covers period from July 1 to June 30 through 1990. Beginning in 1991, data for period from January 1 to December 31.

Source: (14).

Appendix table 72--New capital expenditures in the food processing sectors

Food processing industries	1986	1987	1988	1989	1990	1991
<i>Million dollars</i>						
All food processing	6,966.2	7,224.9	7,492.7	8,392.3	8,858.4	9,361.9
Meat products	855.5	885.9	881.0	1,170.1	1,255.3	1,335.9
Meatpacking	258.9	246.1	272.0	365.8	393.7	423.0
Sausages and other prepared meats	232.4	252.5	261.2	304.5	363.9	326.3
Poultry dressing	278.3	387.4	347.8	NA	NA	NA
Poultry and egg processing	85.9	NA	NA	499.8	497.6	586.6
Dairy products	672.0	744.4	791.2	903.2	887.2	854.6
Creamery butter	8.0	9.7	9.7	13.6	16.5	17.4
Cheese, natural and processed	140.1	146.3	135.0	169.1	272.1	187.6
Condensed and evaporated milk	120.7	109.6	107.7	153.8	117.2	162.5
Ice cream and frozen desserts	105.4	137.1	157.5	148.0	140.9	161.3
Fluid milk	297.8	341.7	380.3	418.8	340.4	325.8
Preserved fruit and vegetables	1,015.1	1,025.4	1,095.8	1,220.8	1,508.6	1,620.2
Canned specialties	178.8	144.8	125.0	175.5	251.0	278.6
Canned fruit and vegetables	240.0	257.9	320.7	351.5	433.6	490.2
Dehydrated fruit, vegetables, and soups	47.1	48.3	60.7	125.0	98.6	117.9
Pickles, sauces, and salad dressings	147.0	221.0	165.6	139.2	145.3	210.5
Frozen fruit and vegetables	196.4	175.2	235.7	283.9	349.9	298.2
Frozen specialties	205.8	178.2	188.1	145.6	230.3	224.9
Grain mill products	1,027.9	1,071.6	1,297.3	1,360.2	1,316.5	1,277.7
Flour and other grain mill products	62.8	79.5	130.3	92.4	114.2	152.1
Breakfast cereals	270.1	333.4	394.5	483.1	396.8	297.9
Rice milling	52.9	48.8	38.4	27.0	23.2	25.2
Blended and prepared flour	61.6	66.1	67.3	101.0	108.3	103.6
Wet corn milling	340.5	281.9	383.2	283.9	290.4	369.5
Dog, cat, and other pet food	112.9	108.2	143.9	144.2	167.9	167.7
Other prepared feeds	127.1	153.7	139.7	228.5	215.7	161.7
Bakery products	572.0	735.9	685.4	750.8	827.4	948.4
Bread, cake, and related products	408.7	519.3	446.3	483.8	541.5	515.9
Cookies and crackers	163.3	184.8	202.2	240.6	255.5	406.6
Frozen bakery products	NA	NA	36.9	26.4	30.5	25.9
Sugar and confectionery products	540.4	480.6	491.3	634.5	666.9	636.2
Raw cane sugar	34.0	46.2	36.0	62.6	82.3	32.4
Cane sugar, refined	34.9	32.6	33.1	42.3	45.0	50.3
Beet sugar	88.3	42.5	46.4	60.5	55.0	108.1
Confectionery products	273.0	233.2	225.6	262.4	296.5	217.2
Chocolate and cocoa products	85.1	74.8	94.4	130.1	129.1	132.8
Chewing gum	25.1	23.1	19.8	NA	24.9	NA
Fats and oils	235.8	251.1	331.3	285.0	327.0	376.3
Cottonseed oil mills	17.9	12.2	19.2	28.8	24.8	27.4
Soybean oil mills	93.3	90.7	126.4	99.1	166.0	207.9
Other vegetable oil mills	1.3	4.9	4.9	34.8	5.9	6.5
Animal and marine fats and oils	41.3	57.0	102.2	57.1	45.2	40.1
Shortening and cooking oils	82.0	86.2	78.6	65.4	85.0	94.4

See footnotes at end of table.

Continued--

Appendix table 72--New capital expenditures in the food processing sectors--Continued

Food processing industries	1986	1987	1988	1989	1990	1991
	<i>Million dollars</i>					
Beverages	1,366.2	1,253.1	1,355.3	1,337.1	1,214.7	1,444.9
Malt beverages	578.3	473.6	570.3	601.8	542.8	649.0
Malt	13.5	13.8	28.7	15.4	17.4	18.5
Wines, brandy, and brandy spirits	112.1	99.9	104.3	123.4	108.2	96.9
Distilled spirits, except brandy products	41.4	44.6	33.4	37.6	36.4	59.1
Bottled and canned soft drinks	560.7	568.2	567.7	607.8	460.0	548.5
Other flavoring extracts and syrups	60.2	53.0	50.9	51.3	49.9	72.9
Miscellaneous foods and food products	681.3	749.5	564.1	667.6	854.8	867.6
Canned and cured seafood	14.8	14.4	13.1	16.8	33.1	26.5
Fresh or frozen packaged fish	58.4	105.0	75.3	138.5	217.1	112.0
Roasted coffee	147.3	155.2	123.2	120.9	114.6	126.6
Manufactured ice	19.8	14.0	9.9	18.0	29.8	21.0
Pasta products	32.8	32.2	35.5	44.5	46.8	96.5
Other food preparations	408.2	247.5	204.5	883.3	251.7	296.0

NA = Not available.

Source: (43).

Appendix table 73--Fixed capital in food manufacturing

Year	Current cost gross stock	Current cost net stock	Constant cost gross stock	Constant cost net stock
<i>Billion dollars</i>				
1947	12.8	6.9	78.7	42.0
1958	20.1	10.2	86.2	43.7
1963	22.1	11.5	89.8	46.6
1967	27.1	14.7	97.1	52.3
1972	39.8	22.4	109.3	61.1
1977	70.7	40.3	125.5	71.3
1982	124.4	70.1	144.7	81.5
1983	129.7	72.3	146.8	81.8
1984	135.5	74.8	149.0	82.2
1985	141.8	77.9	151.8	83.3
1986	150.8	82.0	153.7	83.6
1987	159.7	86.7	157.0	85.2
1988	168.8	91.5	160.1	86.8
1989	180.8	98.2	164.5	89.5
1990	190.4	103.8	169.1	92.4
1991	200.2	109.4	173.5	95.2

¹ Constant = 1982 dollars.

Source: (42).

Appendix table 74--Capital expenditures in food processing

Company	1993	1992
	<i>Million dollars</i>	
Cargill, Inc.	1,000	NA
Philip Morris Companies, Inc.	972	1,200
Anheuser-Busch Companies, Inc.	800	800
Kellogg Company	600	400
Campbell Soup Company	400	NA
General Mills, Inc.	375	375
ConAgra, Inc.	325	300
H.J. Heinz Company	300	355
CPC International, Inc.	300	300
Chiquita Brands International, Inc.	245	225
Hershey Foods Corporation	225	225
Borden Inc.	200	200
Dole Foods Co., Inc.	185	193
Sara Lee Corporation	155	180
Tyson Food, Inc.	150	75
Quaker Oats Company	135	220
Adolph Coors Co.	125	115
American Maize-Products Corp.	80	20
Joseph E. Seagram & Sons, Inc.	80	160
Dean Foods Company	78	77
McCormick & Company, Inc.	67	50
IBP, Inc.	65	65
Gerber Products Company	63	54
Whitman Corporation	60	50
A.E. Stanley Manufacturing Company	60	100
Pet Incorporated	55	54
Multifoods	51	60
Flowers Industries, Inc.	50	50
Wm. Wrigley Jr. Company	50	45
Universal Foods Corporation	45	50
George A. Hormel & Company	45	40
W.R. Grace & Co.	40	66
American Crystal Sugar Company	39	50
Central Soya Company, Inc.	38	30
American Home Products Corp.	37	30
Land O'Lakes, Inc.	35	32
Savannah Foods & Industries, Inc.	35	25
Leaf Incorporated	33	60
Tri-Valley Growers	33	36
Ocean Spray Cranberries, Inc.	33	26
WRL Foods Inc.	32	48
Rich Products Corp.	30	23
Associated Milk Producers, Inc.	30	27
Interstate Brands Corp.	27	23
Lance, Inc.	25	25
Ag Processing	24	20
Welch Foods, Inc.	22	15
Farmland Foods, Inc.	22	14
Smithfield Foods, Inc.	20	15
The J.M. Smucker Company	20	19

Continued--

Appendix table 74--Capital expenditures in food processing--Continued

Company	1993	1992
	<i>Million dollars</i>	
Hudson Foods, Inc.	20	30
Curtice-Burns Foods	19	14
Mid-American Dairymen, Inc.	18	22
Thorn Apple Valley, Inc.	18	10
Darigold, Inc.	18	10
Metz Baking Company	16	17
Warner-Lambert Company	16	22
Brown-Forman Corp.	14	20
Imperial Holly Corporation	14	30
Cadbury Beverages USA	13	11
Sun-Diamond Growers of California	12	15
California & Hawaiian Sugar Co.	10	NA
Prairie Farms Dairy, Inc.	10	5
Riviana Food, Inc.	8	8
Townsend, Inc.	7	NA
Moyer Packing Company	6	5
Rocco Enterprises, Inc.	6	NA
FDL Foods, Inc.	6	6
Dairymen, Inc.	5	6
Wisconsin Dairies Cooperative	5	2
The Amalgamated Sugar Co.	5	5
ERLY Industries	3	4
Clougherty Packing Co.	3	3
Milk Marketing, Inc.	2	NA
Idle Wild Foods, Inc.	2	3
Sunkist Growers, Inc.	2	4

NA = Not available.

Source: (15).

Appendix table 75--U.S. grocery retailer characteristics, 1992

	Total area	Weekly sales	GM/BHA items	Share of sales
	<i>Square feet</i>	<i>Dollars</i>	<i>Number</i>	<i>Percent</i>
Conventional supermarket	22,500	\$141,500	15,000	8
Superstore	41,500	297,500	23,000	13
Food/drug combo	53,500	385,00	29,000	18
Super combo	95,000	975,000	60,000	35
Warehouse store	42,500	224,000	14,000	6
Super warehouse	58,500	569,500	22,500	8
Hypermarket	174,000	958,300	100,000	40
Limited assortment	10,000	62,500	800	6
Wholesale club	111,000	632,400	4,000	60
Mini-club	50,000	119,700	2,400	15
Deep discount drug	30,000	112,100	25,000	80
Food mass merchandiser	150,000	346,200	100,000	70
Convenience store (traditional)	2,500	11,000	3,400	7
Convenience store (petroleum-based)	NA	8,500	NA	NA

NA = Not available.

Source: (1).

Appendix table 76--Capacity utilization rates in food processing, fourth quarters 1989 and 1990

Industry	Full production		National Emergency Production	
	1990	1989	1990	1989
	<i>Percent</i>			
Meat products	85	81	78	76
Meatpacking plants	85	82	81	78
Sausages and other prepared meats	79	73	73	67
Poultry slaughtering and processing	90	89	81	82
Dairy products	81	80	75	72
Creamery butter	90	90	84	83
Cheese, natural and processed	83	85	78	78
Dry, condensed, and evaporated dairy products	83	82	72	72
Ice cream and frozen desserts	70	68	66	64
Fluid milk	83	80	77	72
Preserved fruits and vegetables	73	72	66	65
Canned specialties	86	87	83	83
Canned fruit and vegetables	67	67	59	60
Dehydrated fruits, vegetables, soups	85	82	80	76
Pickles, sauces, and salad dressing	51	49	49	47
Frozen fruits and vegetables	89	86	81	78
Frozen specialties	86	81	74	70
Grain mill products	78	77	75	73
Flour and other grain mill products	89	87	89	87
Cereal breakfast foods	79	77	75	73
Rice milling	92	93	88	89
Prepared flour mixes and doughs	45	44	44	43
Wet corn milling	94	91	93	91
Dog and cat food	75	78	71	73
Prepared feeds	88	84	80	77
Bakery products	82	80	78	76
Bread, cake, and related products	86	84	81	79
Cookies and crackers	73	71	70	68
Frozen bakery products, except bread	86	85	80	79
Sugar and confectionery products	77	79	71	72
Raw cane sugar	80	83	80	83
Cane sugar refining	86	83	81	78
Beet sugar	93	95	85	87
Candy and other confectionery products	75	77	66	68
Chocolate and cocoa products	74	76	71	74

Continued--

Appendix table 76--Capacity utilization rates in food processing, fourth quarters 1989 and 1990

Industry	Full production		National Emergency Production	
	1990	1989	1990	1989
	<i>Percent</i>			
Chewing gum	73	74	68	68
Salted and roasted nuts and seeds	77	81	75	78
Fats and oils	84	83	80	80
Cottonseed oil mills	82	78	79	75
Soybean oil mills	91	88	87	84
Vegetable oil mills	54	53	53	52
Animal and marine fats and oils	85	92	80	85
Edible fats and oils	82	80	78	77
Beverages	74	74	70	69
Malt beverages	90	89	86	85
Malt	94	93	94	93
Wines, brandy, and brandy spirits	58	61	57	60
Distilled and blended liquors	80	77	65	63
Bottled and canned soft drinks	68	69	64	64
Flavoring extracts and syrups	68	67	64	60
Miscellaneous food and kindred products	72	74	66	68
Canned and cured fish and seafoods	80	95	60	93
Fresh or frozen prepared fish	78	78	77	76
Roasted coffee	68	70	65	68
Potato chips and similar snacks	76	75	69	68
Manufactured ice				
Macaroni and spaghetti	81	80	78	77
Food preparations	73	75	64	66

Source: (49).

Appendix table 77--Dow Jones market indexes of stock prices for the food marketing system

Date	Food	Beverages	Food retailers and wholesalers
		<i>Percent</i>	
June 30, 1982	100.00	100.00	100.00
December 31, 1982	122.93	125.40	141.39
December 30, 1983	148.63	133.58	162.26
December 31, 1984	171.87	147.03	179.77
December 31, 1985	273.11	220.97	243.51
December 31, 1986	355.81	270.83	288.23
December 31, 1987	362.82	304.95	322.08
December 30, 1988	477.72	341.43	438.83
December 29, 1989	642.77	525.61	544.21
December 31, 1990	673.52	611.53	569.17
December 31, 1991	952.04	917.35	704.05
December 31, 1992	833.90	909.17	689.36

	Restaurants	Consumer noncyclical	Consumer cyclical	Dow Jones equity market
			<i>Percent</i>	
June 30, 1982	100.00	100.00	100.00	100.00
December 31, 1982	134.85	126.35	143.24	129.74
December 30, 1983	155.44	136.86	169.71	152.29
December 31, 1984	170.42	147.20	167.45	155.36
December 31, 1985	249.65	205.58	218.45	199.23
December 31, 1986	273.86	264.83	260.79	228.86
December 31, 1987	272.55	282.69	261.35	230.50
December 30, 1988	324.37	333.84	322.74	260.74
December 29, 1989	463.15	479.37	386.31	329.85
December 31, 1990	408.80	543.87	325.98	305.59
December 31, 1991	552.57	784.90	446.65	391.90
December 31, 1992	631.65	721.20	470.56	380.80

Source: (10).

Appendix table 78--Price/earnings ratio for the food marketing system

Industry	1985 fourth quarter	1986 fourth quarter	1987 third quarter	1988 third quarter	1989 third quarter	1990 fourth quarter	1992 first quarter	1993 second quarter
					<i>Percent</i>			
All industry composite	NA	NA	15	12	15	15	26	23
Food marketing system	NA	NA	NA	19	21	22	16	20
Food wholesaling	NA	NA	NA	17	16	16	16	18
Food processing	15	19	15	19	20	20	19	21
Food retailing	13	20	20	20	27	47	27	20
Eating places	NA	NA	NA	NA	NA	NA	NA	22

NA = Not available.

Source: (4).

Food Marketing Purchases

Appendix table 79--Food marketing system purchases from U.S. agriculture

Year	Meat	Fruit and vegetables ¹	Dairy products	Bakery products	
<i>Billion dollars</i>					
1982	31.5	11.5	16.7	3.4	
1983	31.4	12.9	18.0	3.5	
1984	32.4	13.5	18.1	3.7	
1985	30.5	13.3	17.7	3.4	
1986	30.9	14.6	17.8	2.9	
1987	32.7	14.3	18.2	2.8	
1988	33.5	16.2	17.9	3.6	
1989	34.0	17.8	19.6	4.3	
1990	37.0	16.5	20.5	3.7	
1991	34.7	17.0	18.4	3.3	
1992	34.7	17.7	20.3	3.8	
<i>Billion dollars</i>					
	Poultry	Grain mill products ²	Eggs	Other foods ³	Total ⁴
1982	6.0	1.4	2.5	8.4	81.4
1983	6.6	1.4	2.7	8.8	85.3
1984	8.0	1.4	3.0	9.7	89.8
1985	7.9	1.3	2.3	10.0	86.4
1986	9.0	1.1	2.5	10.0	88.8
1987	8.1	1.0	2.2	11.0	90.4
1988	9.9	1.3	2.2	12.2	96.8
1989	11.4	1.6	2.8	12.3	103.8
1990	11.1	1.4	2.8	13.3	106.2
1991	11.2	1.3	2.6	13.0	101.5
1992	12.0	1.4	2.3	13.7	101.6

¹ Includes soups, baby foods, condiments, dressings, spreads, and relishes.

² Includes flour, flour mixes, cereals, rice, and pasta.

³ Includes fats and oils, sugar, and miscellaneous foods.

⁴ Excludes alcoholic beverages and aquaculture, which are estimated at \$2.5 billion in 1990.

Source: (37).

Appendix table 80--Food marketing system purchases from fisheries

Edible fishery products	Domestic commercial						Total		
	landings			Imports					
	1990	1991	1992	1990	1991	1992	1990	1991	1992
<i>Million dollars</i>									
Finfish	1,755	1,553	1,878	2,697	2,990	2,620	4,452	4,443	4,498
Shellfish	1,611	1,616	1,654	2,536	2,782	3,086	4,147	4,398	4,740
Total	3,366	3,169	3,532	5,233	5,672	5,706	8,599	8,841	9,238

Source: (55).

Food Marketing and the International Economy

Appendix table 81--U.S. trade in processed foods, 1991 and 1992

	Exports		Imports	
	1991	1992	1991	1992
<i>Thousand dollars</i>				
Total processed food	20,084,403	22,646,802	20,806,696	21,938,802
Meat products	4,959,826	5,545,822	3,122,398	2,903,173
Meat packing	4,040,343	4,511,247	2,982,930	2,767,947
Sausage and prepared meats	53,081	55,882	113,116	114,837
Poultry dressing plants	866,405	978,691	26,351	20,393
Dairy products	552,871	832,184	701,725	781,673
Creamery butter	45,418	158,217	1,726	1,564
Cheese, natural and processed	37,936	52,618	419,662	433,730
Condensed and evaporated milk	376,457	494,498	273,837	340,522
Ice cream and frozen desserts	50,270	73,800	195	730
Fluid milk	42,784	53,047	6,307	5,130
Preserved fruit and vegetables	1,963,871	2,187,400	3,374,962	3,677,815
Canned specialties	54,600	58,576	15,801	25,044
Canned fruit and vegetables	488,884	568,757	885,533	971,515
Dried fruit and vegetables	570,938	590,038	1,209,785	1,310,111
Sauces and salad dressings	164,613	182,968	197,254	232,413
Frozen fruit and vegetables	684,827	787,070	1,066,590	1,138,728
Grain mill products	3,258,207	3,432,869	575,582	658,655
Flour and grain mill products	312,221	336,057	33,332	45,119
Breakfast cereals	151,368	150,435	61,618	73,152
Rice milling	703,965	702,429	81,890	93,339
Blended and prepared flours	54,534	71,961	10,528	16,871
Wet corn milling	1,297,365	1,374,641	194,340	232,967
Dog, cat, and other pet food	213,008	256,879	74,154	73,879
Prepared animal feed	525,752	540,465	116,721	123,327
Bakery products	233,159	306,023	381,156	422,412
Bread and other	233,159	306,023	381,156	422,412
Sugar and confections	1,419,543	1,500,734	2,036,673	2,140,794
Beet and cane sugar	305,878	250,811	730,606	726,242
Candy and confectionery products	110,913	149,998	235,870	296,774
Chocolate and cocoa products	236,639	294,934	661,721	674,902
Chewing gum	25,233	29,948	44,205	55,294
Salted and roasted nuts and seeds	737,880	775,047	364,267	387,588
Fats and oils	2,446,494	2,859,408	862,943	1,118,006
Cottonseed oil mills	71,665	83,190	26,913	13,704
Soybean oil mills	1,597,161	1,823,339	26,913	29,551
Vegetable oil mills	191,757	269,302	719,650	954,920
Animal/marine fats and oils	528,683	616,622	67,729	86,216
Shortening and cooking oils	57,221	66,953	35,609	33,615

Continued--

Appendix table 81--U.S. trade in processed foods, 1991 and 1992--Continued

	Exports		Imports	
	1991	1992	1991	1992
<i>Thousand dollars</i>				
Beverages	1,326,333	1,510,599	3,327,570	3,801,015
Malt beverages	205,410	220,993	840,425	881,114
Malt	33,689	33,781	4,677	3,011
Wines, brandy, and brandy spirits	164,748	193,578	1,093,882	1,346,129
Distilled and blended spirits	289,985	335,995	1,130,750	1,299,299
Soft drinks and carbonated water	133,623	173,181	219,551	227,719
Flavorings, extracts, and syrups	498,288	553,084	38,285	43,747
Miscellaneous foods	3,924,105	4,471,787	6,426,697	6,435,310
Processed fishery products	470,875	495,813	1,063,290	993,191
Fresh fish	2,592,081	2,886,354	4,508,985	4,495,355
Roasted coffee	88,795	116,743	127,008	142,330
Potato chips	91,192	136,791	18,172	22,856
Manufactured ice	3,020	3,372	9,741	12,138
Pasta products	7,153	8,306	127,503	139,208
Other food preparations	671,087	824,409	571,996	630,176

Source: ERS.

Appendix table 82--U.S. trade balance in processed foods

Item	Trade balance	
	1991	1992
<i>Thousand dollars</i>		
All processed food	-722,293	708,000
Meat products	1,837,428	2,642,649
Dairy products	-148,854	50,511
Preserved fruit and vegetables	-1,411,091	-1,490,415
Grain mill products	2,685,625	2,774,214
Bakery products	-147,997	-116,389
Sugar and confectioneries	-617,130	-640,060
Fats and oils	1,583,551	1,741,402
Beverages	-2,001,237	-2,290,416
Miscellaneous foods (including seafood)	-2,502,592	-1,963,523
Seafood	2,509,319	2,106,379
All processed food less seafood	1,787,026	2,814,403
All processed food less beverages and seafood	3,788,263	5,104,819

Source: ERS.

Appendix table 83--Top 10 recipients of U.S. food exports, 1992

Country	Value
	<i>Thousand dollars</i>
Japan	6,186,874
Canada	3,298,873
Mexico	1,933,956
South Korea	1,222,890
Netherlands	796,617
United Kingdom	667,496
West Germany	516,327
France	479,115
Taiwan	471,897
Hong Kong	460,630
Top 10 total	16,034,675
All others	6,612,151
Total exports	22,646,826

Source: ERS.

Appendix table 84--Leading exporters of food products to the United States, 1992

Country	Value
	<i>Thousand dollars</i>
Canada	3,745,602
Thailand	1,330,157
Mexico	1,123,897
France	1,087,121
Australia	1,081,066
Italy	882,931
New Zealand	839,680
Brazil	813,781
Ecuador	735,998
United Kingdom	674,991
Top 10	12,315,224
All others	9,623,578
Total imports	21,938,802

Source: ERS.

Appendix table 85--Leading exporters of food products to the United States, by category, 1992

Country	Value
	<i>Thousand dollars</i>
Meats	
Australia	786,686
Canada	749,453
New Zealand	553,407
Denmark	202,803
Argentina	147,538
Dairy	
Ireland	153,237
New Zealand	119,028
Italy	105,947
France	84,146
Denmark	42,503
Processed fruits and vegetables	
Mexico	406,983
Costa Rica	334,204
Ecuador	280,178
Spain	261,641
Brazil	259,964
Grain mill products	
Canada	312,720
Thailand	116,424
West Germany	51,872
Netherlands	33,553
Australia	26,052
Bakery	
Canada	165,403
Denmark	50,834
Mexico	28,984
United Kingdom	21,828
West Germany	21,104
Sugar	
Brazil	320,590
Canada	276,817
Philippines	128,386
India	114,948
West Germany	104,688
Fats and oils	
Canada	273,301
Philippines	241,072
Italy	198,409
Malaysia	112,940
Indonesia	40,011
Beverages	
France	892,509
Canada	589,043
United Kingdom	523,957

Continued--

Appendix table 85--Leading exporters of food products to the United States, by category, 1992--Continued

Country	Value
	<i>Thousand dollars</i>
Italy	393,051
Netherlands	330,323
Miscellaneous food	
Canada	
Thailand	1,111,066
China	915,948
Ecuador	461,598
Mexico	426,936
	309,388

Source: ERS.

Appendix table 86--Leading importers of food products from the United States, by category, 1992

Country	Value
	<i>Thousand dollars</i>
Meats	
Japan	2,307,724
South Korea	806,906
Mexico	797,334
Canada	635,956
Hong Kong	186,963
Dairy	
Mexico	160,895
Russia	92,645
Japan	70,869
Canada	55,013
India	49,843
Processed fruits and vegetables	
Canada	551,608
Japan	502,729
United Kingdom	117,252
Mexico	96,891
West Germany	84,799
Grain mill products	
Canada	423,237
Netherlands	410,107
Japan	334,472
Mexico	235,914
Saudi Arabia	146,230
Bakery	
Canada	176,472
Mexico	33,529
Bermuda	19,134
United Kingdom	9,691
Japan	9,158
Sugar	
Canada	303,637
Japan	189,358
West Germany	153,007
Mexico	124,523
Netherlands	83,599
Fats and oils	
Mexico	280,894
Canada	239,985
Russia	223,660
Soviet Union	158,181
Algeria	141,219

Continued--

**Appendix table 86--Leading importers of food products from the United States by category,
1992--Continued**

Country	Value
	<i>Thousand dollars</i>
Beverages	
Japan	333,984
Canada	203,377
Mexico	100,666
Australia	97,856
United Kingdom	80,995
Miscellaneous food	
Japan	2,219,551
Canada	648,940
South Korea	174,729
United Kingdom	167,804
France	150,236

Source: ERS.

Appendix table 87--Foreign investment in food marketing¹

Item	1987	1988	1989	1990	1991
<i>Million dollars</i>					
Direct foreign investment in the United States:					
Investment position-- ²					
Food manufacturing	15,506	16,458	23,585	22,934	23,370
Wholesaling	1,425	1,835	2,026	1,729	1,775
Foodstores	2,537	2,408	2,448	2,752	3,338
Eating and drinking places	116	168	313	1,710	1,527
Total	19,584	20,689	22,637	29,125	30,410
Capital inflows--					
Food manufacturing	3,168	418	7,755	-740	281
Wholesaling	462	322	805	115	252
Foodstores	424	-431	-2	579	589
Eating and drinking places	13	66	109	-25	-125
Total	4,067	375	8,662	-21	997
Income--					
Food manufacturing	943	448	1,359	1,186	1,100
Wholesaling	83	109	-1	65	119
Foodstores	169	213	137	232	130
Eating and drinking places	-7	9	-14	-22	-2
Total	1,188	779	1,483	1,461	1,347
Direct foreign investment by the United States:					
Investment position-- ²					
Food manufacturing	12,682	13,281	13,069	15,900	17,093
Wholesaling	1,374	1,633	1,150	880	1,849
Foodstores and eating and drinking places	2,135	3,055	3,502	3,785	4,355
Total	16,191	17,128	17,721	18,565	23,297
Capital outflows--					
Food manufacturing	761	405	-357	1,463	1,619
Wholesaling	237	345	130	-19	845
Foodstores and eating and drinking places	-591	852	395	4	531
Total	407	1,602	168	1,268	26,292
Income--					
Food manufacturing	2,106	2,372	2,358	2,841	2,904
Wholesaling	309	372	218	212	128
Foodstores and eating and drinking places	289	352	357	401	448
Total	2,704	3,096	2,933	3,454	3,480

¹ Investment on an enterprise basis.

² On a historical cost basis.

Source: (42).

Appendix table 88--Profile of foreign affiliates of U.S. firms

Sector	Sales			Net income			Assets			Parents			Affiliates		
	1988	1989	1990	1988	1989	1990	1988	1989	1990	1988	1989	1990	1988	1989	1990
-----Million dollars-----									-----Number-----						
All food manufacturing	60,285	47,903	74,903	3,520	3,264	4,374	39,508	33,897	43,470	64	64	62	663	720	677
Grain mill and bakery	19,898	19,696	20,902	947	1,132	999	11,721	11,723	NA	13	9	9	174	177	165
Beverages	11,275	19,780	19,090	1,260	1,705	1,785	8,995	16,075	16,174	13	14	14	146	154	152
Meat	2,924	NA	1,403	59	NA	87	1,437	NA	1,360	7	9	8	20	30	27
Dairy	3,941	3,231	4,046	216	114	187	2,150	1,866	2,144	3	4	3	35	40	36
Fruits and vegetables	3,675	5,196	5,541	120	313	133	2,815	4,233	4,916	8	7	8	59	81	72
Other food	18,572	NA	23,921	918	NA	1,183	12,390	NA	18,876	20	21	20	229	238	225
Food wholesaling	10,634	10,747	13,104	576	1,092	638	4,698	5,103	5,424	17	13	14	159	179	180
Foodstores, eating and drinking places	11,151	12,310	23,299	353	320	405	5,397	NA	6,233	15	13	15	56	75	75
Food marketing	82,070	70,960	111,306	4,449	4,676	5,417	50,439	44,611	55,127	96	90	91	878	974	1,390

Source: (42).

NA = Not available.

Appendix table 89--Employees of U.S. affiliates of foreign firms

Sector	Employees			
	1987	1988	1990	1991
	<i>Thousands</i>			
All food manufacturing	146	169	247	242
Beverages	39	40	56	57
Meat	4	7	NA	NA
Dairy	17	20	NA	NA
Fruits and vegetables	4	NA	NA	NA
Grain mill	1	NA	NA	NA
Bakery	21	30	NA	NA
Other foods	61	62	192	185
Wholesaling	23	23	43	44
Foodstore	218	234	293	333
Eating and drinking places	20	24	118	NA
Food marketing	407	450	701	NA

NA = Not available.

Source: (42).

Appendix table 90--Assets of U.S. affiliates of foreign firms

Sector	Assets			
	1987	1988	1990	1991
----- Million dollars -----				
All food manufacturing	23,304	30,317	45,987	48,178
Beverages	12,636	13,982	18,159	19,356
Meat	176	310	NA	NA
Dairy	1,520	2,005	NA	NA
Fruits and vegetables	325	NA	NA	NA
Grain mill	200	NA	NA	NA
Bakery	1,040	1,751	NA	NA
Other foods	7,407	9,308	27,828	28,822
Wholesaling	3,582	3,502	5,769	6,308
Foodstore	7,854	8,436	11,774	17,267
Eating and drinking places	633	193	3,327	NA
Food marketing	35,373	42,488	68,857	NA

NA = Not available.

Source: (42).

Appendix table 91--Net income of U.S. affiliates of foreign firms

Sector	Net income			
	1987	1988	1990	1991
	-----Million dollars-----			
All food manufacturing	394	755	89	228
Beverages	284	661	372	41
Meat	-10	-11	NA	NA
Dairy	8	2	NA	NA
Fruits and vegetables	25	NA	NA	NA
Grain mill	NA	11	NA	NA
Bakery	50	63	NA	NA
Other foods	26	NA	-283	186
Wholesaling	54	24	-360	-11
Foodstore	80	323	-331	619
Eating and drinking places	2	8	-82	NA
Food marketing	530	1,110	-684	NA

NA = Not available.

Source: (42).

Appendix table 92--Sales of U.S. affiliates of foreign firms

Sector	Sales			
	1987	1988	1990	1991
-----Million dollars-----				
All food manufacturing	22,424	30,053	44,986	44,262
Beverages	5,955	7,445	6,163	13,367
Meat	1,040	1,699	882	NA
Dairy	2,864	3,983	6,722	NA
Fruits and vegetables	365	NA	NA	NA
Grain mill	171	NA	NA	NA
Bakery	2,039	2,515	4,178	NA
Other foods	9,989	11,844	16,321	NA
Wholesaling	12,927	14,244	20,476	19,724
Foodstore	22,066	21,421	37,440	47,103
Eating and drinking places	1,284	874	4,821	NA
Food marketing	58,701	72,592	107,723	NA

NA = Not available.

Source: (42).

Appendix table 93--Food and beverage exports of U.S. firms with foreign affiliates, 1988 and 1991

	1988		1991		Change, 1988-91
	Exports	Share of U.S. food sales	Exports	Share of U.S. food sales	
	<i>Million dollars</i>	<i>Percent</i>	<i>Million dollars</i>	<i>----- Percent -----</i>	
Philip Morris/Kraft-Gen. Foods	264	1.5	1,325	5.8	401.9
Archer-Daniels Midland	979	16.5	925	14.0	-5.5
ConAgra, Inc.	215	3.0	726	4.5	237.7
Anheuser-Busch	282	3.5	561	5.9	98.9
Chiquita Brands	86	3.6	223	10.6	159.3
Tyson	153	4.4	187	4.9	22.2
Coca-Cola	94	2.6	163	4.0	73.4
General Mills	74	2.2	148	2.3	100.0
Procter & Gamble	124	4.3	142	4.0	14.5
Hershey's	39	2.0	128	5.0	228.2
Universal Foods	36	5.5	127	17.1	252.8
Heinz	61	2.0	121	3.3	98.4
M & M/Mars	45	1.0	120	2.0	66.7
PepsiCo	221	0.4	111	1.2	428.6
Sara Lee	38	0.7	104	2.2	173.7
Ralston Purina	40	1.1	76	2.2	90.0
Kellogg	43	1.7	68	2.0	58.1
McCormick	62	6.4	64	6.2	3.2
Brown Forman	51	6.5	56	7.8	9.8
C P C International	31	1.5	52	2.2	67.7
American Brands	14	3.5	49	5.0	250.0
Castle & Cooke/Dole	1	0.1	49	3.2	4,800.0
Borden	22	0.6	48	1.2	118.2
Campbell Soup	30	0.7	35	0.8	16.7
Pet, Inc.	24	1.3	35	2.3	45.8
American Home Products	12	2.0	34	4.2	183.3
International Multifoods	12	1.0	28	1.7	133.3
Quaker Oats	15	0.5	25	0.7	66.7
RJR/Nabisco	14	0.2	24	0.4	71.4
Curtice-Burns	11	1.8	18	2.0	63.6
Smucker's	7	2.1	14	3.4	100.0
Gerber Foods	5	1.1	11	1.8	120.0
Wm. Wrigley	5	0.9	11	1.8	120.0
Clorox	1	0.6	3	0.9	200.0
Total	2,912	2.6	5,810	4.1	99.5

Source: ERS.

Appendix table 94--Foreign exchange rates¹

Country	Monetary unit	1989	1990	1991	1992
<i>--Currency units per dollar--</i>					
Australia ²	Dollar	0.7919	0.7807	0.7787	0.7919
Austria	Schilling	13.236	11.331	11.686	10.992
Belgium	Franc	39.409	33.424	34.195	42.148
Canada	Dollar	1.1842	1.1668	1.1460	1.2085
People's Republic of China	Yuan	3.7673	4.7921	5.3337	5.5206
Denmark	Krone	7.3210	6.1899	6.4038	6.0372
Euro Community ²	ECU	NA	1.2976	1.2401	1.2951
Finland	Markka	4.2963	3.8300	4.05521	4.4865
France	Franc	6.3802	5.4467	5.64668	5.2935
Germany	D. mark	1.8808	1.6166	1.6610	1.5618
Greece	Drachma	162.60	158.59	182.63	190.81
Hong Kong	Dollar	7.7402	7.7712	7.7899	7.8008
India	Rupee	16.213	17.492	22.712	28.156
Ireland ²	Pound	1.4180	1.6576	1.6139	1.7042
Italy	Lira	1372.28	1198.27	1241.28	1232.17
Japan	Yen	138.07	145.00	134.59	126.78
Malaysia	Ringgit	2.7079	2.7057	2.7503	2.5463
Netherlands	Guilder	2.1219	1.8215	1.8720	1.7587
New Zealand ²	Dollar	0.5979	0.5962	0.5783	0.5379
Norway	Krone	6.9131	6.2541	6.4912	6.2142
Portugal	Escudo	157.53	142.70	144.77	135.07
Singapore	Dollar	1.9511	1.8134	1.7283	1.6294
South Africa	Rand	2.6214	2.5885	2.7633	2.8524
South Korea	Won	674.29	710.64	736.73	784.58
Spain	Peseta	118.44	101.96	104.01	102.38
Sri Lanka	Rupee	35.947	40.078	41.200	44.013
Sweden	Krona	6.4559	5.9231	6.0521	5.8258
Switzerland	Franc	1.6369	1.3901	1.4356	1.4064
Taiwan	Dollar	26.407	26.918	26.759	25.160
Thailand	Baht	25.725	25.609	25.528	25.411
United Kingdom ²	Pound	163.8202	178.4103	176.7354	176.6306
United States ³	Dollar	98.60	89.09	89.84	86.61

¹ The table shows the average rates of exchange in 1992 together with comparable figures for other years. Averages are based on daily noon buying rates for cable transfers in New York City certified for customs purposes by the Federal Reserve Bank of New York.

² Value is U.S. dollar.

³ Index of weighted average exchange value of U.S. dollar against currencies of other G-10 countries. March 1973 = 100. Weights are 1972-76 global trade of each of the 10 countries. Series revised as of August 1978. For description and back data, see "Index of the weighted-average exchange value of the U.S. dollar: Revision" on page 700 of the August 1978 Federal Reserve Bulletin.

Source: (13).

Appendix table 95--Percent of total personal consumption expenditures spent on food and alcoholic beverages consumed at home, selected countries, 1990¹

Country	Percent of total personal consumption expenditures		Total personal consumption expenditures ³
	Food ²	Alcoholic beverages	
	----- Percent -----		Dollar per person
United States ¹			
ERS estimate	8.0	1.3	15,000
PCE estimate	9.4	1.9	15,000
Canada	11.0	2.6	12,645
United Kingdom	11.8	6.5	9,740
Luxembourg	12.7	1.2	11,948
Netherlands	14.5	1.8	10,345
Australia	14.8	4.1	10,458
Sweden	15.4	3.2	12,250
Denmark	15.5	3.2	12,958
New Zealand	16.0	NA	7,615
Finland	16.1	4.2	13,868
Belgium	16.1	1.4	11,952
France	16.2	2.0	12,610
Austria	17.2	2.2	11,303
Hong Kong	17.5	1.1	6,534
Iceland	18.1	2.3	5,961
Italy	18.3	1.1	10,569
Singapore	18.4	2.0	5,229
Spain	18.5	1.2	7,129
Bahamas ⁴	19.2	0.5	469
Puerto Rico	19.4	3.4	5,306
West Germany	19.5 ⁵	⁵	9,890
Norway	19.6	3.0	11,719
Zimbabwe	21.4	9.9	191
Ireland	23.9	11.8	6,490
Israel	24.7	0.7	5,800
Switzerland	24.9	NA	17,788
Malaysia ⁶	25.8	2.1	1,063
Fiji ⁴	25.9	3.5	1,027
Thailand	27.3	4.8	736
South Africa	28.6	6.2	1,263
Venezuela	28.6	2.6	1,039
Columbia ⁷	29.5	3.9	706
CIS ¹	30.0	NA	699
Cyprus ⁴	31.6	3.2	3,724
Malta ³	32.3	4.2	3,488
Portugal ⁹	34.4	2.0	1,874
Greece	32.4	3.0	4,756
Ecuador	32.6	1.7	722
Jordan	37.6	NA	784
Jamaica ⁴	39.8	4.5	859
Honduras	44.5	NA	634
Sri Lanka ⁸	50.6	1.9	301
India	51.3	1.1	193
Philippines ⁸	55.2	NA	503
Sudan ⁷	63.5	NA	56

¹ Two sets of figures are shown for the United States. The first, and we believe most accurate, set is based on ERS estimates of U.S. food and beverage expenditures by families and individuals. The second set is based on the U.S. Department of Commerce estimated of personal consumption expenditures (PCE) for food and beverages, and is used by the UN. The ERS estimate is lower than the PCE estimate partly because it excludes pet food, ice, and prepared feed which are included in the PCE estimates. ERS estimates also deduct more from grocery store sales for nonfoods, such as drugs and household supplies, in arriving at the estimate for food purchases for at-home consumption. ² Includes nonalcoholic beverages. ³ Consumer expenditures for goods and services. ⁴ 1988. ⁵ Food includes nonalcoholic beverages. ⁶ 1983. ⁷ 1989. ⁸ 1986.

Source: ERS.

Food Marketing Review Seminar Series

Anthony E. Gallo, Co-ordinator

Beginning in 1993, the Economic Research Service began the Food Marketing Review Seminar Series to focus on food marketing policy issues in the 1990's. The following are summaries extracted from each seminar.

First Food Marketing Seminar

March 10, 1993

Invited Speaker: Ronald Cotterill
Director, Food Marketing Policy Center
University of Connecticut

Discussants: Alden Manchester
Margaret Malanoski

Moderator: Dennis R. Henderson

Title: *Oligopoly Price Reaction Models: An Application to the U.S. Soft Drink Industry*

Summary: This research developed an oligopoly price-reaction function model for brands of soft drinks and used the model to analyze determinants of retail price. Regular soft drink and diet soft drink brands were analyzed separately. In addition to cost and demand shift variables, market structure variables, including the extent of vertical integration and the local market share of soft drink manufacturers and the local market four firm concentration ratio for grocery retailers, are incorporated in the model. Forward integration by Coca-Cola and Pepsi does seem to lower retail prices. In the regular soft drink category, Coca-Cola is a price leader and other brands follow Coke's price in markets where Coke has a large market share. Royal Crown Cola is a fringe competitive firm of regular soft drinks. In the diet category, Coca-Cola and Pepsi seem to have a different strategic objectives. Coke and Pepsi appear to be pricing in a fashion to grow the category and to ensure that they establish dominant shares in this new category. Their prices are not higher in markets where they have a large market share.

Second Food Marketing Seminar

May 19, 1993

Invited Speaker: Gerald Grinnell
Warren Preston
Packers and Stockyards Administration

Discussants: Kenneth Nelson
Russell Parker

Moderator: Dennis R. Henderson

Title: *Empirical Research on Concentration in Meatpacking*

Summary: The authors reviewed plans for a study of concentration in the red meat packing industry that was requested by Congress. The Packers and Stockyards Administration has awarded six contracts to: define regional cattle procurement markets; examine effects of concentration on prices paid for cattle; examine price discovery in cattle procurement; analyze trends and implications of vertical coordination arrangements in cattle procurement and hog production; and conduct a literature review. The Packers and Stockyards Administration is preparing to collect data for the study and expects to complete a final report by December 1994.

Third Food Marketing Seminar

September 28, 1993

Invited Speaker: Ian Sheldon
Ohio State University

Discussants: Daniel Pick
Robert Bohall

Moderator: Dennis R. Henderson

Title: *Effects of Imperfect Competition in Food Manufacturing on Agricultural Policy Reform*

Summary: Most policy analysis in agricultural economics typically ignores the existence of the food processing, distribution, and retail sectors. If these sectors were perfectly competitive, their exclusion would not significantly affect the welfare changes following policy reform. However, since these sectors are typically imperfectly competitive, excluding them does matter. In a theoretical model of a vertically-related food market, this paper shows that welfare changes of policy reform are lower than the 'perfectly competitive' case since there is imperfect pass-through of price changes occurring at the farmgate. The model shows that the pass-through effects depend on the nature of strategic interaction in the food market and the degree of product differentiation of the final food products. The theoretical model is applied regime, a sector characterized by the existence of a few large firms.

Fourth Food Marketing Seminar

November 4, 1993

Invited Speaker: Steven A. Newborn
Federal Trade Commission

Discussants: Richard Rogers
Charles Handy

Moderator: Patrick O'Brien

Title: *The Federal Trade Commission's Antitrust Priorities and the Food Marketing System*

Summary: The Federal Trade Commission (FTC) and the Department of Justice's Antitrust Division (DOJ) share concurrent responsibility for enforcing the antimerger statutes. Which agency will investigate any particular merger is based on which has the most expertise in that industry. Because of its expertise, FTC handles most of the mergers in the food industry.

There are between 1,500 and 1,600 premerger notification filings annually under the Hart-Scott-Rodino Act, of which roughly 60, or 4 percent, require in-depth investigation. Of these, roughly 20 or slightly more than 1 percent, result in enforcement actions that either stop the merger through litigation, through the parties abandoning the merger, or allow the merger to be consummated but through consent orders whereby the parties usually divest the offending horizontal overlaps. In addition, and not counted in the above statistics, in any 1 year, several mergers are called off when FTC staff makes evident any interest in the competitive consequences of that transaction. These statistics suggest that businesses and their antitrust advisors are usually able to anticipate when a proposed transaction is likely to raise competitive concerns with the antitrust agencies and either refrain from attempting such a transaction or structure it to avoid competitive problems.

In the 15 merger enforcement actions taken by the FTC since the issuance of the 1992 Joint Federal Merger Guidelines in April of that year, three involved hospital mergers, four the chemical industry, one coal terminals, one the electrical industry, one the defense industry, one the dental industry, one the railroad boxcar industry, one the furniture polish industry, and two the food industry (one was Vons' Stores acquisition of Williams Brothers Supermarket in San Luis Obispo, California, and the other was the acquisition of Haas, a dehydrated onion manufacturer by McCormick Spice Company). Two additional mergers in the food industry are presently being investigated by the FTC.