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United States
Department of
Agriculture

Economic
Research
Service

Agricultural
Economic
Report
Number 639

Food Marketing Review, 1989-90



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Abstract

Conditions in the U.S. food marketing system generally improved in 1989. Sales rose to an estimated \$694 billion. Competition among manufacturers for scarce shelf space in retail foodstores continued strongly. The food marketing system introduced 12,000 new grocery products in 1989, but food processors cut down on direct consumer advertising. Food processors' and retailers' debt rose by nearly \$70 billion in 1989, largely due to the financing of massive leveraged buyouts and mergers announced in 1988. However, merger activity slowed in 1989. After-tax profits for food processors fell sharply due to higher interest payments. The balance of trade deficit in the U.S. processed food sector declined from \$2.7 billion to \$2.3 billion, reflecting strong export demand in 1989.

Keywords: Food service, retailing, manufacturing, wholesaling, marketing, size, structure, behavior, performance, leveraged buyouts, mergers, divestitures

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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Summary

Aggregate liabilities of the Nation's food processors and retailers rose by nearly \$70 billion from the third quarter of 1988 to the fourth quarter of 1989, largely to finance massive leveraged buyouts and mergers.

Other highlights include:

- Merger activity slowed in 1989, following the \$61 billion paid for 573 mergers and leveraged buyouts in 1988, the most spectacular in U.S. history. Food processing had a net loss of 1,500 plants between 1982 and 1987, while the number of food retailing, wholesaling, and foodservice outlets rose sharply.
- After-tax profits for food processors fell sharply due to higher interest payments. After-tax profits as a share of stockholders' equity fell from 20.9 percent in 1988 to 17.0 percent in 1989. Profits from operations before interest rose sharply for both processors and retailers.
- Capital expenditures in U.S. food processing rose sharply for the second consecutive year, rising to \$9.4 billion and including 390 new plant projects. The constant net stock of fixed capital rose for the fifth consecutive year.
- Productivity, as measured by output per hour, increased in most food processing industries in 1988, but declined for foodstores for the third consecutive year due to added services.
- The investment performance of owners' equity, as measured by increases in common stock prices, outpaced other sectors of the economy. The Dow Jones Market Equity Index for processed foods, beverages, retailing, and wholesaling rose sharply for the sixth consecutive year. Price-earning ratios for food processing, retailing, and wholesaling were above the market average.
- Retail food sales gained ground on foodservice sales in 1989, rising slightly to about 55 percent of the food dollar. Sales in the U.S. food marketing system reached an estimated \$694 billion, including \$272 billion in retail food sales, \$235 billion in sales by restaurants and institutions, \$77 billion in alcoholic beverage sales, and \$110 billion in sales of nonfood items.
- Wage and price stability allowed costs to be held down for the seventh consecutive year. Wages rose less than inflation in each of the four sectors. Manufacturers' purchase prices of agricultural products averaged 4.7 percent above 1988, and retailers, wholesalers, and restaurateurs paid 5.4 percent more for finished consumer goods. The food marketing system purchased an estimated \$105 billion in U.S. agricultural commodities, \$20 billion in foreign agricultural commodities, and \$9 billion in seafood products. The food system added an estimated \$495 billion value to this food supply.
- Competition among manufacturers for scarce shelf space in the Nation's retail foodstores continued strongly. The food marketing system introduced 12,000 new grocery products in 1989, resulting in 62,000 new products since 1983. Advertising in the food marketing system likely reached \$12 billion in 1989, while manufacturers' promotions aimed at the retailer, wholesaler, and

restaurateur were nearly twice that amount. Food processors cut down on direct consumer advertising for the first time.

- The international performance of the U.S. food marketing system is measured by its balance of trade, sales of foreign operations, and foreign investment. The balance of trade deficit in the U.S. processed food sector declined from \$2.7 to \$2.3 billion, reflecting strong export demand in 1989. American investments in foreign food marketing systems exceeded \$17 billion in 1988, considerably below the \$24 billion foreign investors controlled in the U.S. food marketing system. Foreign affiliates of U.S. firms had sales of \$74 billion in 1987, while U.S. food marketing affiliates of foreign firms had sales of \$58 billion.

Glossary

Aggregate concentration. The share of output in a sector (say, food manufacturing) 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 (free-standing 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 whose primary function is the sale of alcoholic beverages sold for consumption on the premises. Includes 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. Includes restaurants, lunchrooms, fast-food outlets, and cafeterias.
- *Lodging places.* Establishments that provide both lodging and food service to the general public. Included are hotels, motels, and tourist courts. Excluded are rooming and boarding houses and private residences.
- *Recreation/entertainment.* Foodservice operations in theaters; bowling, 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, drug stores, 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. Includes 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 off-premise 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 drug store--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 and offer expanded product variety and often 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 nonfood 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 investment. Ownership of domestic assets by foreign persons or firms.

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

Gross national product (GNP). Dollar value of all goods and services sold plus the estimated value of imported goods and services during a given period.

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

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

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

Horizontal mergers. A combining of two firms producing the same or similar products in the same market.

Megamerger. A very large merger.

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.

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

Agents and brokers. Wholesale operators who buy or sell on the account 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 handling 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, 1989-90

Introduction

The U.S. food marketing system consists of about 400,000 manufacturers, wholesalers, retailers, and foodservice firms which process and distribute the Nation's food supply. The food system continued to undergo changes in structure, behavior, and performance in 1989. As a result of the massive leveraged buyouts and mergers announced in 1988, the food system significantly increased its debt and underwent major increases in aggregate concentration. Higher interest expense lowered overall profitability for food manufacturing and retailing. Food manufacturers cut back on consumer advertising but continued apparent levels of retail promotion to maintain shelf space in the Nation's retail outlets. Record numbers of new products were introduced to carve a large slice of the slowing food marketing dollar, which fell as a portion of total consumer income for the eighth consecutive year. Retail grocery sales increased more rapidly than foodservice sales, a rare phenomenon in food marketing. Foreign investment, trade, and sales into the U.S. system, and vice versa, rose at record levels.

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 yearly and other periodic data used in this report are provided by U.S. Government agencies. Other data are derived from publications of consulting firms, trade associations, academic research, and trade.

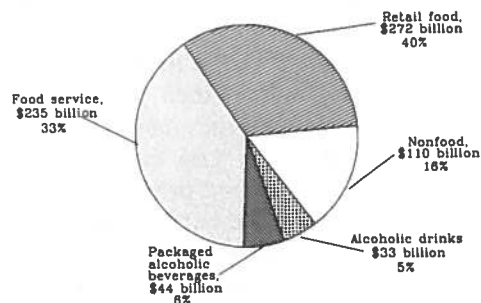
Because availability of information differed, various sections of this report treat industry scope, analysis of market levels, and emphasis on relevant variables in different ways. Some of the analysis is based on 1982-87 census data, the most recent available. More detailed data from the 1987 census will not be available until 1991. 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.

Sales

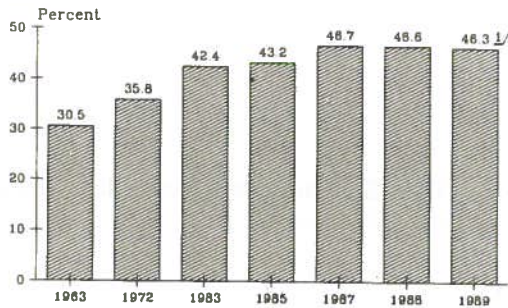
The food marketing system's trend as a below-average growth industry continued in 1989 as the portion of disposable income allocated to food fell from 12.1 percent to 11.8 percent. Items purchased at foodstores and foodservice establishments, packaged alcoholic beverages and drinks purchased at eating and drinking places, and nonfood items purchased in retail foodstores probably reached \$694 billion in 1989 (fig. 1). About \$272 billion of this amount was spent on food in retail foodstores and \$235 billion in foodservice establishments. Food sales through retail stores (after adjusting for inflation) generally rise at about the same rate as the population; restaurant and institution sales typically rise at about half the pace of income. Until recently, restaurants had been 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 incomes rise. In 1989, however, this trend came to halt as foodservice sales rose only at about half the pace of retail food sales (fig. 2). The change apparently reflected price wars among fast-food chains, resulting in slower price increases than for food at home.

Figure 1
Sales through the food marketing system reached \$694 billion in 1989 ^{1/}



^{1/} Preliminary, subject to revision. Underscored numbers in parentheses refer to items cited in the References at the end of this report
Source: (23).

Figure 2
Share of food sales accounted for by
foodservice sector



1/ Preliminary, subject to revision.
Source (23)

The alcoholic beverage market, which accounts for about 11 percent of sales in the food marketing system, continues to reflect lower consumption. Alcoholic beverage sales likely accounted for \$74.0 billion of food marketing sales in 1988 (app. table 5). Nearly \$44 billion was in the form of packaged alcoholic beverages, while alcoholic drinks served in restaurants and other institutions likely amounted to nearly \$33 billion. Distilled spirits in 1988 likely accounted for about 32 percent of total alcoholic beverage consumption, while beer accounted for nearly 56 percent (app. table 5). Wine sales appear to have fallen to about 12.7 percent of the total.

The nonfood component of retail sales likely amounted to about \$110 billion. 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

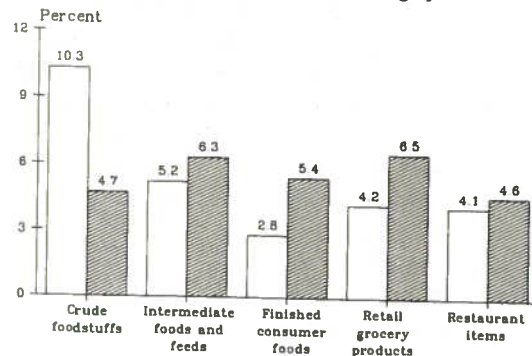
The economic climate governing the food marketing system in 1989 was excellent for the seventh consecutive year in terms of both costs and demand (app. table 36). Moderate inflation and 7 years of uninterrupted economic expansion benefited the U.S. economy in 1989. For the food sector, economic developments have their greatest effects on costs because of the system's labor intensity and dependence on farm prices. Low farm prices, along with minimal increases in food processing, wholesaling, and foodservice wages, benefited the food system. However, the system increased its debt by \$70 billion in 1989. Interest rates averaged above 1988 during much of the year, considerably raising interest costs.

Price stability for purchased food and feed inputs for each channel in the food marketing system is 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, rose 5.4 percent in 1989, compared with 2.8 percent in 1988 (fig. 3). The PPI for intermediate foods and feeds, an indicator of changes in prices food processors pay one another, increased 6.3 percent in 1989. The PPI for crude foodstuffs, or prices paid by food manufacturers at 37 major markets, rose 4.7 percent. The 1989 index reflected a 10-percent increase for milk products and a 7-percent drop for alcoholic beverages. Poultry prices rose 6 percent. Among crop products, food grain prices rose 8.6 percent, but oilseed prices dropped 8 percent (app. table 37).

For the seventh consecutive year, labor costs, which included hourly earnings and fringe benefits, constituted the major expense item for the food marketing system. In 1989, the food marketing system had more than 12 million full- and part-time employees (fig. 4). Nearly 6.4 million workers were employed in food service, and more than 3.2 million were employed in food retailing. About 1.7 million were employed in food processing, and nearly 840,000 worked in grocery wholesaling (app. table 39). Average hourly earnings in food retailing increased 1.9 percent, while food processing increased 2.5 percent (fig. 5 and app. table 41). In food retailing, wage concessions, benefit reductions, and lump-sum payments in lieu of wage hikes were sometimes negotiated, but much less frequently than in the past. Wages in eating and drinking places averaged 6 percent higher, at \$4.74 per hour.

The food system, the economy's largest advertiser, faced increased advertising costs for evening network television, network radio, magazines, and newspapers

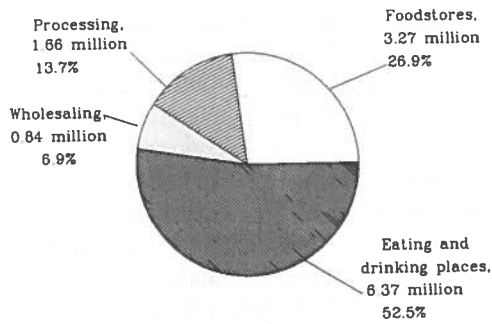
Figure 3
Price increases in the food marketing system



1/ Preliminary.
Sources (59, 61)

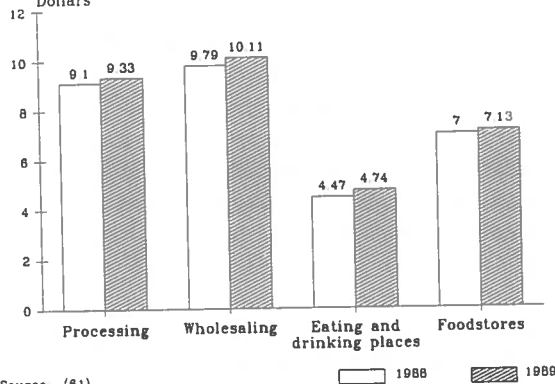
□ 1988 ▨ 1989 1/

Figure 4
Number of employees in food marketing, 1989



Source (81)

Figure 5
Average hourly earnings in food marketing
Dollars



Source (81)

(app. table 44). Increases ranged from 5 percent for nighttime network television to nearly 19 percent for cable. Daytime network television prices continued to decline (app. table 47).

By year end, the prime interest rate was 10.5 percent, compared with 9.8 percent during the third quarter of 1988. Interest rates were more important in food marketing in 1989 because of leveraged buyouts and mergers, which required large issues of debt as well as increased equity capital. The rates on Moody's AAA 20-year bonds fell from 9.5 percent in the fourth quarter of 1988 to 8.9 percent in the fourth quarter of 1989 (app. table 38). However, the rate on junk bonds now prevalent in the food system rose sharply by year end. The value of the U.S. dollar relative to major foreign currencies rose significantly from that of 1988, further raising the price of food exports and lowering prices of imports.

On the demand side, all indicators were favorable to food markets. A 2.5-million increase in population and a 2.3-million rise in total employed Americans

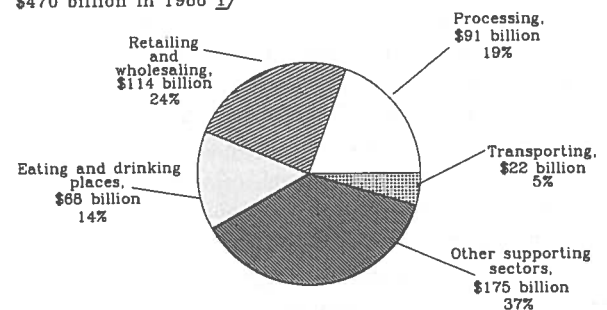
accompanied a decline in the unemployment rate from 5.4 percent in 1988 to 5.2 percent in 1989. Per capita disposable income rose about 3 percent, after adjustment for inflation (app. table 36).

Within this economic framework, U.S. Department of Agriculture's Economic Research Service (USDA, ERS) estimates that the food system purchased about \$105 billion in animal and crop products from the U.S. farm sector, about 65 percent of domestic production. An additional \$20 billion was spent on imported agricultural products, and \$9 billion was spent on seafood (app. table 69). To this base of \$134 billion in raw agricultural and fishery products, the food system added an estimated \$495 billion in value in 1989, compared with \$470 billion in 1988 (fig. 6). Food processors added about \$91 billion in 1988, while wholesalers, retailers, and transportation firms added another \$136 billion (fig. 6). The contribution of 400,000 separate eating and drinking places to value added topped \$68 billion.

Structure and Organization

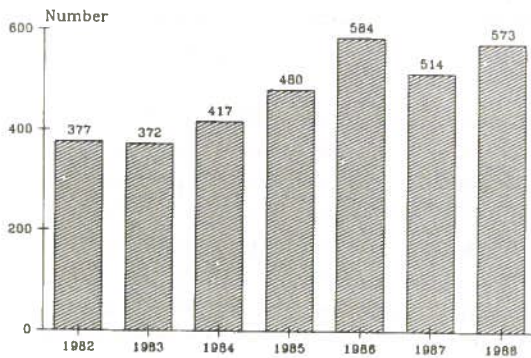
Changing structure has dominated the food system during the entire decade of the 1980's, and 1989 was no exception. Between 1982 and 1988, the years during which ERS monitored complete data, nearly 3,400 mergers, divestitures, or leveraged buyouts took place in the food marketing system (fig. 7). Food processing, which had 16,800 companies in 1982, had more than 2,000 of these transactions during that period, while food wholesaling merger transactions numbered nearly 400. Food retailing and food service each had nearly 500. In 1988, the food marketing system announced or completed the largest magnitude and number of mergers and leveraged buyouts in U.S. history, costing more than \$60 billion (fig. 8). The nearly \$25-billion leveraged buyout of RJR Nabisco, Inc., the largest in U.S.

Figure 6
Value added in food marketing reached \$470 billion in 1988 ^{1/}



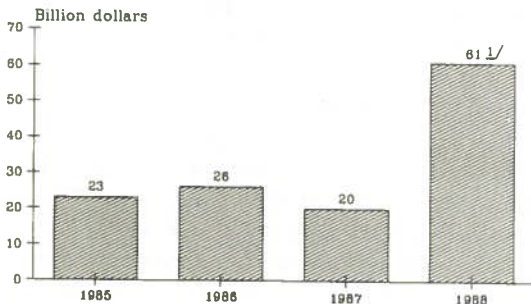
^{1/} Percentages do not add to 100 due to rounding.
Source (12)

Figure 7
Food marketing mergers



Source: (2)

Figure 8
Value of food marketing mergers and leveraged buyouts costing more than \$100 million



1/ Announced or completed. Only includes recorded transactions.
Source: (17).

economic history, exceeded the combined value of history's five largest food marketing mergers. In the food processing sector, Philip Morris Companies, Inc., merged with Kraft, Inc., at a cost of nearly \$13 billion, which about matched the Chevron and Gulf merger in 1984. Food wholesaling underwent its largest merger when Fleming Companies, Inc., acquired Malone and Hyde, Inc. The four largest leveraged buyouts in history were all in the food marketing system (table 1).

There were 573 mergers and acquisitions in food industries (excluding the related industries) in 1988, of which 41 each cost more than \$100 million (app. table 31). Many of the acquisitions were also divestitures, as only part of the firm was acquired (table 2). Among recorded transactions in food processing, 22 foreign buyers bought U.S. food companies with a value of \$8.5 billion, while U.S. food marketers purchased 14 foreign firms at \$1.6 billion (app. table 33). Acquisition leaders in the United States were Borden, Kraft, Inc., ConAgra, Inc., IC Industries, Inc., and H.J. Heinz Company

(app. table 34). Quaker Oats, RJR Nabisco, Inc., and Beatrice Companies were among the leading divestitures (app. table 35). Food processing mergers numbered 351, while retailing mergers rose to 76 (table 2 and app. table 30). There were 71 mergers in wholesaling and 75 in food service.

In 1989, a number of the mergers and leveraged buyouts announced in 1988 went to actual closing, such as that for RJR Nabisco, Inc. Preliminary data for 1989 indicate that new transactions dropped sharply from those of 1988, not only in dollar magnitude but in number as well. The number of acquisitions fell from 632 in 1988 to 553 in 1989 according to the Food Institute (table 3). These data include merger activity in such related industries as packaging and supplies.

Last year's decline in activity is not surprising. The record pace of industry restructuring through the 1980's has certainly reduced the number of likely merger and leveraged buyout candidates. More significantly, the high-yield, high-risk ("junk") bond market sharply weakened toward the end of 1989, drying up a major source of financing. Financial institutions also appeared more reluctant to provide financing.

The focus of restructuring activity in 1989 appeared to be in the adjustments made by newly leveraged or merged firms. Divestiture activity in food marketing is strong; nearly 50 percent of all acquisitions are divestitures. Given that a number of leveraged buyouts are speculative in nature, a number of spinoffs were sold in the same year of closing. RJR Nabisco's gross proceeds from these divestitures, both foreign and domestic, amounted to \$5.5 billion in 1989. The effect of these adjustments on conduct and performance, vis-a-vis higher interest payments because of higher debt loads, scaling down of staffs, capital expenditures, and profitability, is analyzed in the domestic conduct and performance section.

Aggregate concentration rose sharply in food processing, wholesaling, and food service because of merger and acquisition transactions between 1988 and 1989. The top three firms' share of market rose from 9.5 percent to 13 percent in food processing. The effect of such activity on consumers, farmers, and the food marketing system is unclear. In nearly all sectors of the American economy, fewer but larger firms have captured the largest shares of the market. This concentration has become more pronounced in food processing, wholesaling, and retailing. Merger activity has certainly caused a decline in the total number of firms.

Table 1--Ten largest going-private leveraged buyouts in history: Top four were food related

Acquisition	Target	Price	Year	Industry
		<u>Billion dollars</u>		
Kohlberg Kravis Roberts and Company	RJR Nabisco, Inc.	24.72	1989	Tobacco, food
Kohlberg Kravis Roberts and Company	Beatrice Companies, Inc.	6.25	1986	Food
Kohlberg Kravis Roberts and Company	Safeway Stores, Inc.	5.34	1986	Supermarkets
Thompson Company	Southland Corporation	4.00	1987	Convenience stores
AV Holdings Corporation	Borg-Warner Corporation	3.76	1987	Automotive, industrial products
Kohlberg Kravis Roberts and Company	Owens-Illinois, Inc.	3.69	1987	Glass
TF Investments, Inc.	Hospital Corporation of America	3.69	1989	Health care
FH Acquisition Corporation	Fort Howard Corporation	3.59	1988	Paper
Macy Acquisition Corporation	R.H. Macy and Company, Inc.	3.50	1986	Department stores
Panhandle Eastern Corporation	Texas Eastern Corporation	3.22	1989	Pipeline

Source: (25).

Table 2--Mergers and divestitures in food marketing

Sector	<u>Acquisitions</u>						<u>Divestitures</u>	
	<u>By U.S. firms in sector</u>		<u>Other firms</u>		<u>Total</u>		1988	1987
	1988	1987	1988	1987	1988	1987		
	<u>Number</u>							
Processing	229	220	122	81	351	301	161	116
Wholesaling	49	44	22	27	71	71	32	12
Retailing	41	39	35	26	76	65	51	34
Food service	46	56	29	21	75	77	29	35
Total	365	359	208	155	573	514	273	197

Source: (2).

Table 3--Food business mergers and acquisitions, 1988 and 1989

Category	Total acquisitions		Individual purchasers	Acquisitions of firms outside food industry
			Number	
Agricultural cooperatives	4	(5)	4	1
Bakers	27	(19)	18	0
Brewers	3	(1)	2	1
Brokers	14	(11)	14	0
Confectioners	10	(12)	9	0
Dairy processors	14	(19)	10	14
Diversified firms with interests in the food industry	4	(31)	1	0
Food processing firms	107	(136)	56	6
Foodservice vendors	29	(31)	23	1
Hotel and lodging companies	6	(1)	5	NA
Nonfood marketers selling through supermarkets	7	(7)	6	NA
Packaging suppliers	25	(27)	17	NA
Poultry processors	5	(7)	5	0
Primary products companies	47	(18)	40	5
Restaurant and foodservice concerns	57	(74)	54	1
Retailers:				
Convenience stores	16	(18)	15	0
Supermarkets	26	(42)	25	0
Others	9	(13)	8	6
Seafood processors	4	(5)	3	0
Snack food processors	6	(12)	6	0
Soft drink bottlers	12	(18)	7	0
Sugar refiners	1	(0)	1	0
Suppliers to the food industry	3	(9)	3	NA
Unclassified and private investors	21	(30)	21	3
Wholesalers	21	(29)	20	0
Foreign acquisitions:				
U.S. firms/subsidiaries	55	(29)	54	11
U.S. operations of foreign firms	4	(6)	4	1
Foreign operations of U.S. firms	6	(8)	6	2
By Canadian firms	10	(14)	10	0
Total	553	(632)	447 (521)	52 (59)

Note: Numbers in parentheses represent totals for 1988.

NA = Not available.

Source: (2).

With limited entry of new firms making significant inroads into market control, competition in the food system is increasingly becoming a "battle of giants." Farmers sell their products to fewer buyers, and consumers buy from fewer sellers. But, it is unclear how, in the longer run, this concentration affects company profits, consumer expenditures, prices received by farmers, capital expenditures, productivity, and research and development. However, a recent USDA study found no statistical relationship between either market concentration or firm market share and supermarket prices in local markets (43).

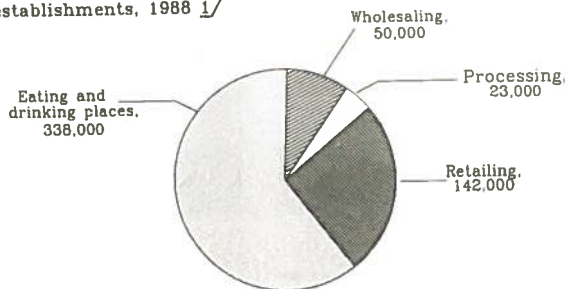
Tremendous variability exists within the food marketing system. Some local markets for food retailing and wholesaling are highly concentrated, while other local markets are not. Food manufacturing is comprised of 49 separate industries where concentration varies sharply.

Another aspect of changing structure is the total number of food marketing establishments in each sector. One such measure is the number of food marketing establishments covered by unemployment insurance. These numbered 553,000 in 1988. Food processing continued a long-term decline to about 23,000, while wholesaling rose to 50,000 and food service to 338,000 (fig. 9).

Domestic Conduct and Performance

The conduct and performance of the domestic food marketing system in 1989 was strongly affected by a sharp increase in the level of debt and competition among fewer but larger firms for a slowly growing market faced by all four marketing sectors--processing, wholesaling, retailing, and food service.

Figure 9
Number of food marketing establishments, 1988 1/

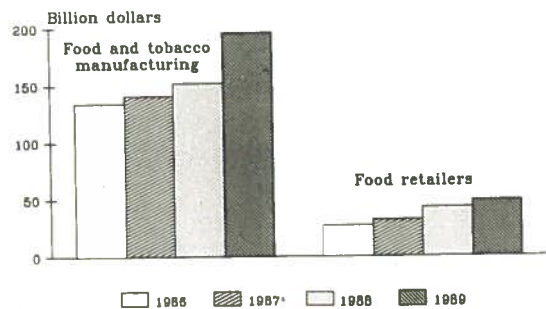


1/ Includes only those establishments covered by unemployment insurance. Source (61)

Total liabilities of food processors and retailers rose from about \$194.6 billion to nearly \$262.9 billion between the third quarter of 1988 and the fourth quarter of 1989 (fig. 10). Inflation, several successive years of major capital expansion, and normal asset growth accounted for a small portion of that growth. But the overwhelming portion of growth in liabilities was due to leveraged buyouts and mergers, and at that, several firms accounted for much of the increased debt. Furthermore, a selloff of some of these assets should further reduce debt. In the case of leveraged buyouts, increased interest expenses reduce after-tax proceeds that would normally be paid out as dividends. The equity-to-debt ratio of food manufacturers fell from 1.13 in the third quarter of 1988 to 0.77 in the fourth quarter of 1989, considerably below the 1.36 for all manufacturing corporations in 1989. The equity-to-debt ratio for food retailing fell from 0.56 to 0.36 during that same period (fig. 11).

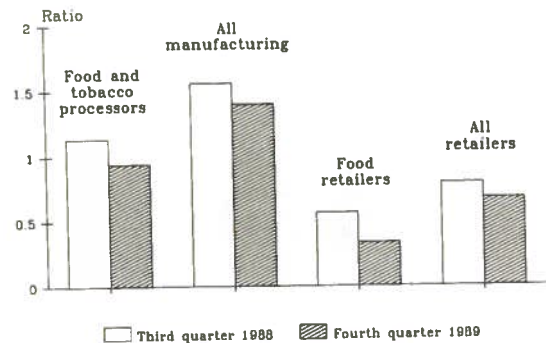
The industries' slow growth affects conduct and performance. In 1989, less than 9.5 percent of the Nation's gross national product (GNP) was

Figure 10
Total liabilities of food and tobacco processors and retailers 1/



1/ Fourth quarter 1989. Source (55)

Figure 11
Total stockholders' equity to debt

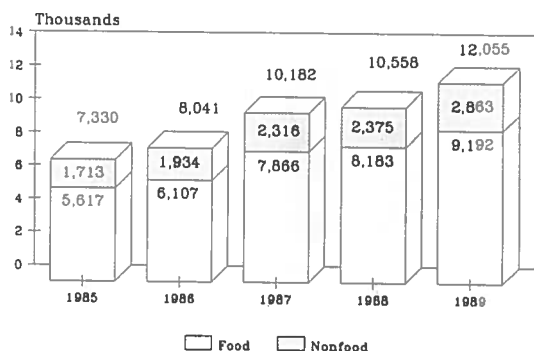


Source (55)

generated by the food marketing system, compared with 12 percent in 1972 (app. table 49). And while the value added by the food system has increased in dollar terms, a much greater portion of this output is supplied by far fewer but larger firms (app. tables 17 to 26). Although food marketing is becoming significantly more concentrated and leveraged, competition to acquire a greater market share continued at a vigorous pace in each industry sector. Price competition was apparent in the fast-food sector of the foodservice industry, where major discounts were given to consumers in what now appears to be a seller-saturated market. Price competition was also widespread among selected food products such as colas and frozen pizzas.

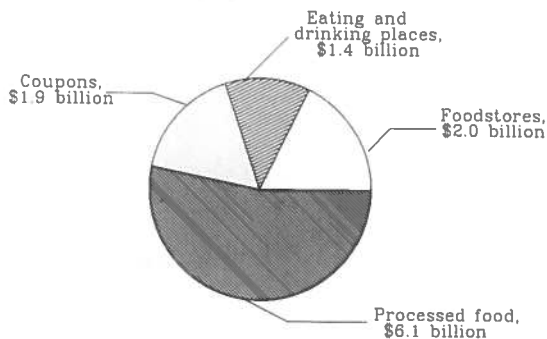
However, nonprice competition has traditionally been the mainstay of the food system. New product introduction rose sharply, totaling more than 12,000 new products in 1989 with the total between 1983 and 1989 now more than 62,000 (fig. 12). Food marketing firms spent \$11.4 billion in 1988 in direct consumer advertising, such as electronic and prime media (fig. 13). And by most industry estimates,

Figure 12
New food and grocery products



Source (16)

Figure 13
Food-related advertising, 1988



Source (3)

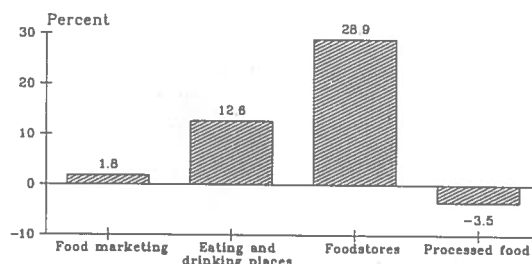
food processors spent about twice that amount on acquiring shelf space in the Nation's retail food shelves through trade shows, promotions, discounts and allowances, and other incentives.

In 1989, consumer advertising by the food system appeared to have declined, after adjustment for inflation. For the first 9 months of 1989, total advertising was up less than 1 percent, well below the 6-percent increase in advertising price increases (app. table 44). The decline would have been much sharper had eating and drinking places not increased expenditures by nearly 13 percent. Foodstores showed a 29-percent increase, largely due to more spot television commercials which offset a first-time decline in newspaper advertising (fig. 14). Food processors, however, showed a 3.5-percent drop, inferring a 10-percent decline, after adjusting for inflation. The drop was rather widespread among all food categories. The decline reflected a drop in advertising throughout the economy and some scaling down in expenditures due to mergers and leveraged buyouts.

Food safety concerns continued to escalate during 1989 and 1990. Food marketing firms are struggling to find appropriate responses. The industry generally is seeking stronger Federal, as opposed to State, food safety regulations. Some retailers and wholesalers are developing private pesticide residue testing and certification programs to supplement government-operated testing operations.

After-tax profits of food retailers and food processors as a portion of sales dropped significantly from those of 1988, due to higher interest payments. Food processors' after-tax profits were about 4.2 percent of sales in 1989, compared with 5.5 percent in 1988. Food retailers' after-tax profits in 1989

Figure 14
Change in nine-media advertising between 1988 and 1989 1/, 2/



1/ Changes are for the first 9 months of 1988 to the first 9 months of 1989.
2/ The nine media are network, spot, cable, and syndicated television, network and spot radio, billboards, magazines, and Sunday supplements.
Source: (3).

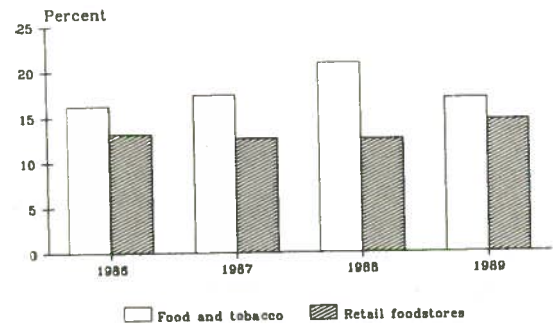
were 0.8 percent of sales versus 0.9 percent of sales in 1988. Food processors' return on equity for this period fell from 20.9 percent to 16.9 percent (fig. 15). Income from operations, which exclude interest payments, rose sharply in both industries. However, after-tax profits between the food processing, retailing, foodservice, and wholesale grocery industries vary significantly, and even more so among individual firms (app. tables 57 to 59). Discerning a true picture of industry profits is difficult because such a large portion of food sales are controlled by large diversified food marketing firms.

Despite lower profitability, retail prices for food purchased in grocery stores rose 6.5 percent, up from 4.3 percent in 1988. Restaurant meal and snack prices rose only 4.6 percent, compared with 4.1 percent in 1988.

The performance of the food marketing system can also be measured by the system's ability to expand, modernize, and fully use its production capacity. Food processors spent an estimated \$9.4 billion on new plant and equipment in 1989, up about 11 percent over that of 1988 (fig. 16). Food processors undertook almost 390 new plant projects in 1989 (fig. 17). In 1982, new capital expenditures for food wholesaling, retailing, and eating and drinking places accounted for about 30 percent of total food marketing capital expenditures. If this same pattern had been maintained in 1989, the entire food marketing sector may have invested an estimated \$13 billion in plant and equipment expenditures. We do not yet have information on the extent to which firms used their existing capacity in 1989. But in the fourth quarter of 1988, food processing firms used 81 percent of existing capacity. The number of retail foodstores fell by an estimated 1,400 in 1989, and new retail outlets were unchanged, averaging about 41,000 square feet per store. About 1,300 new fast-food restaurants opened in 1988.

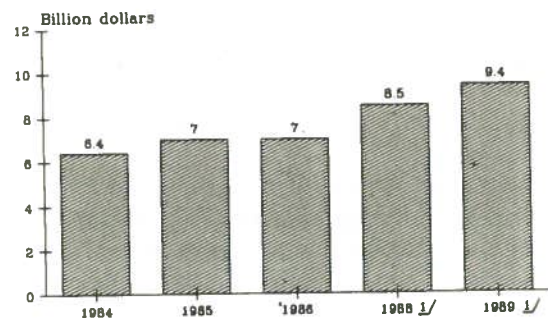
Research and development (R&D) within the food marketing sector is largely conducted in the food and tobacco processing industries (app. table 50). Like most other nondurable manufacturing industries, food is not R&D intensive. In 1989, food and tobacco processors likely spent about \$1.3

Figure 15
After-tax profits as a percentage of stockholders' equity



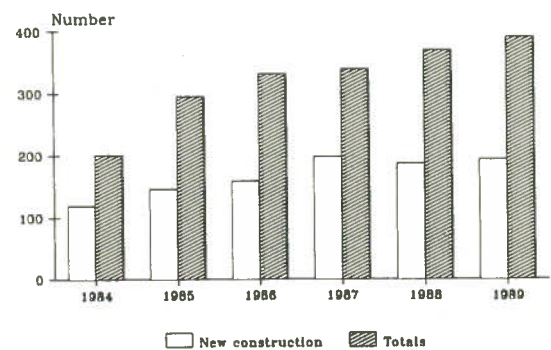
Source: (55)

Figure 16
Plant and equipment expenditures in food processing industries



1/ ERS estimate.
Source: (48)

Figure 17
U.S. food plant construction



Source: (14)

billion, or about 0.4 percent of sales, on R&D. Only about 6 percent of this amount went to basic research. More than 60 percent of all R&D funds went to processing and new products. However, much of R&D in food and tobacco processing is purchased from other sectors, such as food packaging, computer, and machinery firms (much of the technological innovation for food processing comes from these sources). ERS estimates this amount to be about \$1 billion. USDA spent more than \$311 million on developing new products and processes, conducting health and nutrition research, expanding export markets, and improving market efficiency in 1988.

Output per employee in 1988, the most recent data available on productivity, increased in foodservice industries but decreased in food retailing. This index of labor productivity also increased in some food processing industries, such as those for milk, sugar, and soft drinks. Output per employee declined for beer and bakery products and preserved fruits and vegetables after years of rapid growth (fig. 18).

Another measure of performance is how well the food system has performed for its owners. One important measure of that performance is how well the common stock has performed. Over the past 7 years, the food system, even though a low-growth industry, has done extremely well (fig. 19). The Dow Jones Equity Market Index for all companies showed a threefold increase between 1982 and 1989. Food processors showed a sixfold increase. Food retailers and wholesalers averaged more than five times greater (fig. 19). Beverages and soft drinks also outperformed the market. This trend continued in 1989, especially for food processing, which rose nearly 25 percent. Also, price earning ratios, a measurement of how investors value the quality of an industry's earnings, were above average in both 1988 and 1989 for the food system (fig. 20). There are several reasons for this increase. First, part of the system's appreciation reflects speculation due to leveraged buyouts and mergers, many of which were very favorable for investors. Second, food processing and retailing profits have grown rapidly in recent years. Third, although food marketing is a slow-growth industry, cyclical movements tend to be small with stable growth in earnings and income.

Figure 18
Changes in output per employee hour,
1987-88 ^{1/}

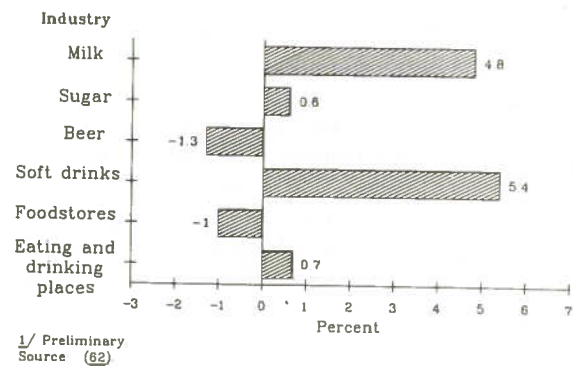
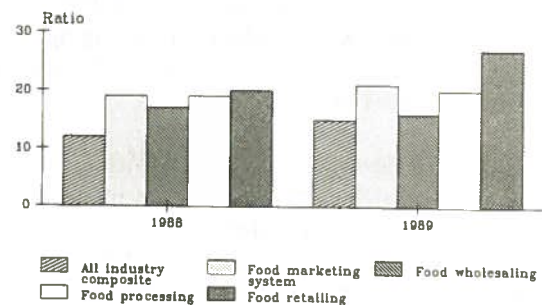


Figure 19
Dow Jones Equity Market Indexes for the
food marketing system as of November 1989 ^{1/}



Figure 20
Price-earning ratios for the food
marketing system ^{1/}



International Performance

The U.S. food marketing system continued to expand as the world's most global food system. This expansion is measured by the system's foreign trade balance, foreign investments, and the sales of its foreign subsidiaries.

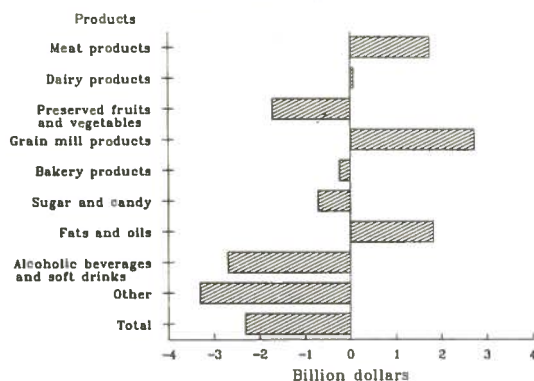
In 1989, the United States likely accounted for about 40 percent of all processed food production, 25 percent of all food industry employment, and 36 percent of all R&D in the OECD (Organization for Economic Cooperation and Development) countries.

The United States is the world's leading importer and exporter of processed food but continued its trade deficit in 1989 for the eighth consecutive year, with more than \$20 billion in imports and nearly \$18 billion in exports (app. table 70). The deficit in processed food trade dropped from \$2.7 billion in 1988 to \$2.3 billion 1989 (fig. 21 and app. table 71). An increase in foreign demand also stimulated U.S. exports.

The U.S. global presence, however, is shadowed by foreign investment in the U.S. food marketing system. Direct foreign investment in the American food system amounted to \$24 billion in 1988, compared with \$17 billion invested by U.S. food firms abroad (fig. 22). The Netherlands, United Kingdom, and other Western European countries accounted for 90 percent of investment in the United States (fig. 23), while about 75 percent of U.S. investment abroad was in Europe and Canada (fig. 24). Foreign income from U.S. investment was about \$2 billion, while U.S. investors in the foreign food system had income remittances of more than \$3 billion.

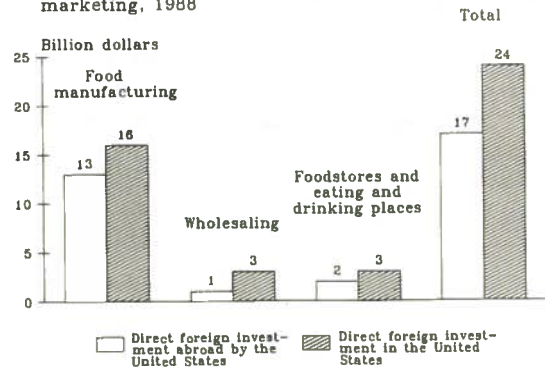
The extensiveness of foreign investment in food marketing is more clearly profiled by the actual

Figure 21
Trade balance in food processing, 1989



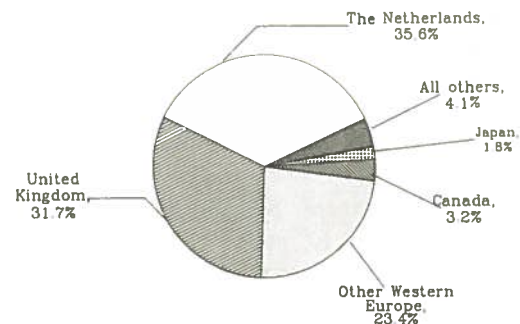
economic performance of the foreign food marketing affiliates of U.S. firms. These affiliates, which were at least partially owned by Americans, had sales of \$74 billion in 1987. Also, the nearly 1,000 affiliates employed over 1 million people. Food marketing affiliates of foreign firms located in the United States employed 400,000 people and had sales of \$58 billion and a net income of \$500 million.

Figure 22
Foreign investment in food marketing, 1988



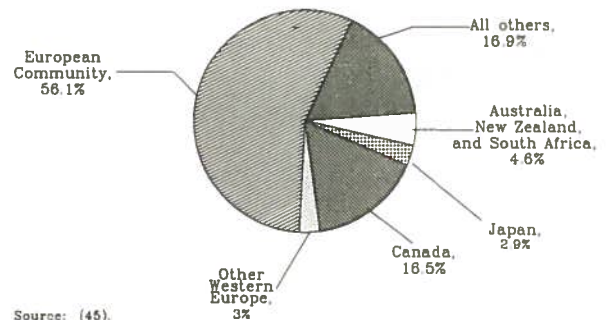
Source: (45).

Figure 23
Foreign direct investment position in U.S. food manufacturing by country, 1988



Source: (45).

Figure 24
U.S. direct investment position abroad in food manufacturing by country, 1988



Source: (45).

Food Manufacturing

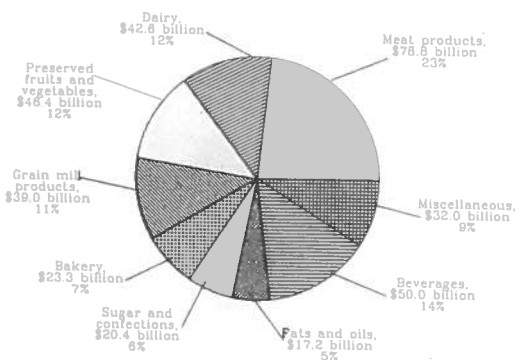
The food processing industry continued its role as the largest manufacturing sector of the economy, but continued its long-term, below-average growth trend. The industry sharply increased its liabilities because of several large leveraged buyouts which lowered after-tax earnings because of higher interest payments. Merger activity caused major increases in concentration.

With almost 12,000 new grocery products introduced and \$8.5 billion spent for advertising in 1989, competition for the consumer's dollar and shelf space in retail outlets continued to be intense. Capital expenditures likely rose 10 percent, to \$9.4 billion, and R&D expenditures increased to \$1.4 billion. Product shipments in 1989 amounted to \$345 billion, exceeding those of 1988 by \$21 billion. Food processors added an estimated \$95 billion in value to the \$132 billion purchased from American agriculture, fisheries, and imports. In the international markets, U.S. food processing firms invested \$13.1 billion in foreign operations in 1988. Income to U.S. firms from foreign food manufacturing operations amounted to \$2.2 billion. The balance of trade deficit declined in food and related products, from \$2.7 billion in 1988 to \$2.3 billion in 1989. However, the food processing industries are diverse and merger activity and other changes in structure, size, competitive conduct, and performance varied widely among them.

Size

Processed food shipments reached an estimated \$350 billion in 1989, about 6.8 percent above 1988 (fig. 25). The below-average growth is consistent with

Figure 25
Processed food shipments, 1989



Source: (57).

the food processing industries' long-term trend. Nevertheless, food manufacturing is the largest manufacturing sector of the economy, accounting for about 10 percent of production in 1989, but considerably below the 12.5 percent in 1972. As an economy grows, a smaller portion of its resources are allocated to such basics as food.

The 6.8-percent increase in processed food shipments over 1988 reflected a 5.4-percent increase in prices, which resulted in a 1.5-percent increase in real growth. About one-half of the real growth was due to increased exports. Value of shipments growth varied widely among product groups, ranging from 16 percent for breakfast cereals to 3 percent for wines and distilled spirits.

Economic Climate

The food processing industries enjoyed strong economic growth on the demand side and wage and price stability on the supply side for the fifth consecutive year. Food manufacturers paid 4.7 percent more for farm products. Dairy prices were about 11 percent higher than in 1988, but oilseed prices dropped 8 percent (app. table 37). Average hourly labor costs rose modestly for the fifth consecutive year, averaging 2.5 percent above those for 1988; thus, real earnings declined (fig. 5). Employment increased about 1.7 percent, to about 1.7 million employees (app. table 39).

Interest rates on long-term debt (such as funds for the massive leveraged buyouts), on increased expenditures on new plant and equipment investments, and on short-term operating debt were affected by the economic environment. The prime interest rate averaged 10.8 percent higher than in 1988, peaking at 11.4 percent during the second quarter (app. table 38). Interest on higher quality long-term debt, such as Moody's AAA corporate bonds, averaged 9.25 percent for the year, compared with 9.71 percent in 1988. A much larger portion of debt for food processors is now comprised of lower quality, higher yielding bonds, and these yields began moving up sharply by year end.

Since the food processing industries are the Nation's largest advertisers, advertising prices are important. Nighttime network television prices increased 5 percent, while cable television prices shot up 18.7 percent. Network and spot radio prices rose by about 4.5 percent, while consumer magazines increased an average of 5.7 percent (app. table 47). Food processing is also the Nation's largest

consumer of packaging materials. Prices for packaging materials averaged 6.5 percent more than in 1988. Energy costs rose nearly 10 percent. The value of the U.S. dollar, which affects the dollar cost of imports and exports, averaged 6 percent above 1988.

Food processors purchased more than \$134 billion in raw materials in 1989, spending \$105 billion for U.S. agricultural products, \$20 billion for imported foods, and \$9 billion for seafood. Food processors also spent an estimated \$95 billion for value added, about 5 percent above the estimated 1988 value. Value added includes production and managerial labor, energy, profits, packaging, advertising, interest, and other processing costs involved in changing raw agricultural products to food products. However, the value added by processing varies among the food processing industries.

The 3-percent increase in disposable personal income, a decline in unemployment to 5.2 percent, and a 3-percent increase in real GNP helped keep real growth about 1.5 percent above increases in the population.

Market Competition

Processed foods compete in a nearly one-third of a trillion dollar market. This market was characterized by intense competition by fewer, more leveraged, and more powerful firms in 1989. Food manufacturing faces slow growth but stable demand as a smaller share of the Nation's income is allocated to food. The battle among giant firms to gain or maintain market share was evidenced by continued new product profits and heavy advertising and promotion of new and existing consumer products, which comprise about 40 percent of food processing sales. The other 60 percent of food processing sales are either unbranded, undifferentiated products, or 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 (although in some instances, food processors have purchased major fast-food outlets, see food service section). 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.

Over 12,000 new grocery products were introduced in 1989, compared with nearly 10,558 in 1988 (fig. 12). New product leaders included beverages, condiments, dairy, and bakery products. Over 900 new dairy products and nearly 500 new meat products appeared on retail shelves. Pet food manufacturers introduced 126 new products. These estimates exclude new size introductions which, if included, would make the estimates even higher. We have no data measuring the success of these new products or the number of recent products removed from the market. Over 61,000 new grocery products have been introduced since 1982. However, even a superstore can stock only about 60,000 items. Industry estimates put the failure rate of new food products at 90-99 percent. Introducing a new product is extremely expensive, but a success can be extremely profitable. New food product leaders included Philip Morris, Campbell Soup, and Nestle (table 4).

For the first time since ERS began monitoring advertising expenditures, aggregate advertising in food processing appears to have declined in 1989. This nominal decline follows an apparent real decline in 1988, when the increase in expenditures was exceeded by the increase in advertising prices. For the first 9 months of 1989, expenditures for processed foods in nine media (network, cable, syndicated, and spot television, network and spot radio, magazines, billboards, and newspaper supplements) dropped 3.5 percent below those for 1988. Wine expenditures dropped the most, about 50 percent, but processed fruits and vegetables, bakery, processed meats, confectionery, soft drinks, and beer also dropped. Couponing also appears to have declined, as has newspaper advertising. For all of 1988, total advertising (excluding newspapers) totaled about \$8 billion, including \$6.1 billion for nine media and \$1.9 billion for couponing. In 1989, these expenditures likely fell to about \$7.8 billion. Breakfast cereals were the largest advertisers accounting for \$834 million in expenditures in 1988 (table 5).

There are several reasons for the overall decline in advertising. First, advertising has declined among all American industries. Second, it is unclear if leveraged buyouts and merger activity contributed to this decline, but many food processing firms have been cutting down on expenses and other belt-tightening activities. Third, food processing firms are concentrating more on acquiring shelf space in the retail outlets. According to industry analysis, the trend in recent years has been away from advertising and toward promotion. Consumers cannot buy the

Table 4--Ranking of companies introducing new food products

Ranking	Company	1989	1988	Percentage change
		--- Number ---		Percent
1	Philip Morris Companies	332	253	31
2	Campbell Soup Company	156	78	100
3	Nestle Holdings, Inc.	115	99	16
4	Borden, Inc.	104	77	35
5	H.J. Heinz Company	92	106	-13
6	ConAgra, Inc.	89	69	29
7	Ralston Purina Company	77	49	55
8	RJR Nabisco, Inc.	75	56	34
9	Lever-Lipton	66	29	127
10	The Pillsbury Company	56	50	12
11	Beatrice Hunt-Wesson	53	62	-15
12	M&M/Mars	50	41	22
13	General Mills, Inc.	44	69	-36
14	Pet, Inc.	42	40	5
15	CPC International Inc.	39	21	86
16	Sara Lee Corporation	38	56	-32
17	The Quaker Oats Company	32	50	-36
18	Wessanen, U.S.A. Inc.	31	22	41
19	Dean Foods Company	29	37	-22
20	Geo. A. Hormel and Company	29	34	-18

Source: (16).



Table 5--BAR/LNA multimedia service, 1988 1/

Subclass	Nine-media total	LNA magazines	LNA newspaper supplements	LNA records newspaper	LNA outdoor	BAR network television	BAR spot television	BAR syndicated television	BAR cable TV network	BAR network radio
	<u>Million dollars</u>									
Sugar, syrups, and artificial sweeteners	63,190.3	12,932.3	1,297.3	2,614.6	NA	28,807.8	13,197.4	3,517.0	817.3	6.6
Shortening, oil, margarine, and nonstick products	111,369.9	18,522.6	231.2	7,230.8	225.1	49,406.0	27,400.3	5,587.0	2,766.9	NA
Baking mixes, pie crusts, and baking ingredients	99,682.7	24,526.4	NA	10,112.3	19.9	32,292.5	11,717.4	14,360.9	3,643.6	3,009.7
Seasoning, spices, and extracts	20,661.8	4,774.6	395.6	2,909.7	2.1	6,758.9	4,855.8	747.3	217.8	NA
Gelatins and puddings (mixes and prepared)	40,086.5	5,883.2	NA	1,055.6	20.6	12,287.3	15,416.7	5,002.8	420.3	NA
Condiments, pickles, and relishes	105,137.8	19,312.8	1,498.3	6,771.5	317.4	46,055.8	23,203.6	5,168.1	2,810.3	NA
Sauces, gravies, and dips	90,421.8	8,347.2	80.7	6,570.3	73.1	32,929.8	27,291.0	7,507.3	733.4	6,889.0
Salad dressing and mayonnaise	78,330.9	21,670.3	705.5	4,649.7	175.6	29,409.1	12,996.8	7,341.0	1,382.9	NA
Combination copy, miscellaneous ingredients, and mixes	33,454.9	8,730.9	188.2	3,810.8	70.1	9,966.0	6,480.1	2,693.6	1,217.2	298.0
Soups	85,718.0	9,652.1	208.2	5,019.1	1,151.1	34,888.5	17,911.7	4,000.7	2,040.1	10,846.5
Breakfast cereals	834,579.3	30,200.2	2,656.9	43,878.4	11.6	504,322.4	184,273.5	42,879.9	25,200.8	1,155.6
Health and dietary foods	6,050.9	2,343.4	NA	1,330.2	5.7	NA	1,990.8	NA	380.8	NA
Infant foods	19,451.7	4,987.3	NA	1,325.7	NA	9,696.0	1,996.8	1,155.2	290.7	NA
Pasta products and pasta-product dinners	52,365.3	9,862.0	422.7	6,636.7	40.4	15,654.8	16,276.0	2,562.6	515.9	394.2
All other prepared dinners and entrees	192,058.9	22,834.6	1,404.9	16,322.9	277.2	55,547.5	79,811.3	10,440.6	3,164.5	2,255.4
Jellies, jams, preserves, and peanut butter	35,534.0	1,032.6	261.9	2,635.0	NA	17,082.5	9,286.1	1,669.9	1,589.4	1,976.6
Combination copy and miscellaneous prepared foods	14,313.1	1,816.3	NA	3,399.6	27.0	4,502.0	1,953.7	2,407.7	206.8	NA
Milk, butter, and eggs	77,357.3	5,333.8	NA	3,259.2	650.8	32,945.4	27,987.4	3,264.5	1,826.0	2,090.2
Cheese	134,239.0	21,140.5	1,369.1	6,741.1	297.2	50,331.1	23,869.4	22,119.1	6,508.4	1,863.1
Ice cream, frozen novelties, and sherbet	87,286.2	6,325.7	332.0	7,179.1	1,213.4	24,294.1	38,797.5	2,183.4	1,158.1	5,802.9
Dairy product substitutes	14,019.9	1,571.8	37.4	1,483.1	NA	4,165.9	4,963.7	1,256.9	89.1	452.0
Combination copy and miscellaneous dairy products	71,005.6	20,997.3	NA	3,212.3	1,586.8	17,926.5	25,518.8	1,272.5	491.4	NA
Citrus fruit	7,103.4	3,369.6	NA	1,014.1	158.2	558.0	1,926.0	NA	77.5	NA
Other fruit	66,538.7	13,784.4	356.8	3,413.4	1,358.0	29,335.0	12,698.3	1,286.5	1,179.7	3,126.6

15 See notes at end of table.

Continued--

Table 5--BAR/LNA multimedia service, 1988 1/-Continued

Subclass	Nine-media total	LNA magazines	LNA newspaper supplements	LNA newspaper records	LNA outdoor	Million dollars					
						BAR network television	BAR spot television	BAR syndicated television	BAR cable TV network	BAR network radio	
Vegetables	69,000.3	13,562.9	670.3	7,436.9	73.5	28,315.9	10,630.1	6,985.8	1,324.9	NA	
Beans and grains	62,164.5	8,511.2	32.0	5,597.0	NA	25,653.4	17,914.5	2,590.0	1,866.4	NA	
Meat, poultry, and fish	248,053.5	25,305.9	2,060.4	30,660.6	1,255.2	78,625.8	87,373.5	9,650.3	5,111.2	8,010.6	
Bread and rolls	93,878.8	2,643.7	152.3	8,391.3	1,497.5	25,905.8	44,475.4	8,872.5	1,185.2	755.1	
Cakes, pies, and pastries	63,634.8	2,681.2	358.2	5,916.9	8.1	25,870.4	16,828.0	8,324.6	1,033.3	2,614.1	
Cookies and crackers	126,263.0	5,231.3	14.8	11,999.2	45.7	77,284.4	18,867.3	7,022.1	5,798.2	NA	
Coffee, tea, cocoa, and derivatives	282,688.9	21,844.0	3,366.9	14,241.6	635.0	134,109.3	59,187.0	22,140.0	6,992.4	20,172.7	
Fruit juices and drinks	229,298.2	11,397.4	482.2	16,876.9	897.7	114,765.4	63,554.4	14,733.0	5,324.9	1,266.3	
Vegetable juices	10,574.5	147.0	NA	121.8	7.3	4,344.0	3,362.1	38.2	247.4	20,306.7	
Combination copy for food products	45,242.5	5,220.9	1,248.6	20,055.8	1,247.4	9,705.8	4,528.8	851.7	1,890.1	493.4	
Candy and gum	448,080.3	33,318.0	1,448.4	9,730.8	1,093.8	206,491.4	84,560.3	58,746.5	20,947.2	31,743.9	
Appetizers, snacks, and nuts	213,439.0	9,321.5	686.5	12,945.8	351.7	102,973.2	55,772.3	17,273.0	9,866.9	4,248.1	
Regular carbonated drinks	308,897.5	1,753.9	109.5	14,673.5	4,953.7	113,953.1	149,496.2	17,075.5	6,312.7	569.4	
Dietary carbonated drinks	148,650.4	4,050.7	NA	2,120.4	138.0	68,622.5	64,482.9	6,685.4	2,172.7	377.8	
Noncarbonated beverages	4,479.0	NA	NA	140.3	NA	541.4	3,573.8	NA	223.5	NA	
Bottled waters	18,214.3	2,657.6	212.3	1,378.8	867.3	214.0	12,727.8	NA	156.5	NA	
Beer	756,416.5	17,951.2	758.0	20,096.6	22,466.5	394,891.4	235,063.3	15,968.7	33,829.5	15,391.3	
Wine	161,469.2	13,908.8	1,657.6	4,005.9	1,154.3	95,794.8	29,024.1	11,242.0	3,812.4	869.3	
Distilled spirits	233,554.2	180,776.1	7,594.2	10,619.6	34,350.2	NA	214.1	NA	NA	NA	
Nonalcoholic preparations, mixes, and mixing ingredients	4,685.3	171.4	NA	993.7	NA	2,626.7	98.7	500.6	294.2	NA	
Pet foods	235,469.2	23,438.5	222.9	24,509.0	39.9	120,944.1	33,481.1	23,693.1	8,043.6	1,097.0	

NA = Not available.

1/ BAR/LNA copyrighted by Arbitron Ratings Company, Leading National Advertisers, Inc., Publishers Information Bureau, Inc., and Media Records, Inc.

Source: (3).

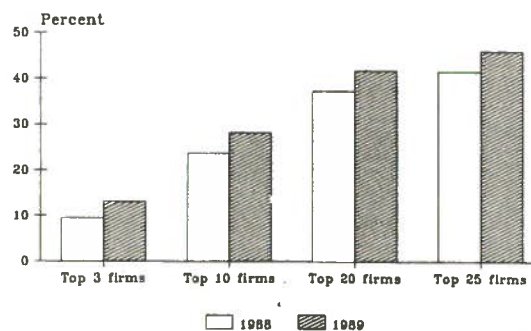
food products unless the food is stocked in the stores. Food processors in 1988 spent nearly \$16 billion on promotions, such as dealer allowances, discounts, trade shows, and coupon processing. In attempts to gain access to scarce shelf space, promotions aimed at retailers, wholesalers, and foodservice firms also increased.

Structure and Organization

The food manufacturing industries have been characterized by major structural changes in recent years. Nearly all of the 49 food processing industries have experienced a decline in the number of firms and establishments. There has been a limited entry of new firms into food manufacturing. And, the largest firms are receiving an increasing share of total sales (fig. 26).

In 1988, the latest year for which ERS has complete data, there were 351 mergers and 161 divestitures (table 6). Between 1982 and 1988, over 2,000 mergers and 835 divestitures took place among the food processing industries. In 1988, completed transactions had a value of \$28 billion while two leveraged buyouts of RJR Nabisco and the Grand Met Pillsbury merger were announced in 1988 and completed in early 1989. The total of announced or completed mergers came to \$61 billion, and included the two largest transactions in U.S. history. Foreign purchases of U.S. food processing firms numbered 22 with a value of \$8.5 billion; U.S. investors were involved in 14 foreign food processing transactions with a value of \$1.6 billion (app. table 33). Diversified food processors accounted for 131 of these transactions in 1988, while bakery firms had 27, and meatpackers had 14 (table 7). Borden was

Figure 26
Estimated share of processed food shipments



the most aggressive buyer, involved in 20 transactions. Over a 9-year period, from 1979 to 1988, ConAgra, Borden, Kraft, IC Industries, and Coca-Cola have been the most aggressive buyers, accounting for nearly 200 transactions. The most aggressive divestitures during the 9-year period have been Beatrice, RJR Nabisco, IC Industries, and Sara Lee Corporation.

In 1989, merger and divestiture activity was lower than in 1988, in both numbers and value, according to preliminary data. The total number of transactions was lower in virtually all product categories, with about a 20-percent decline in numbers (1).

Aggregate concentration in food processing increased sharply as a result of these transactions. In 1989, the top three firms accounted for 13.5 percent of industry shipments as compared with 9 percent in 1988 (fig. 26).

Table 6--Mergers and divestitures in food processing

Year	Acquisitions			Divestitures
	By U.S. food manufacturing companies	By other companies	Total	
		<u>Number</u>		
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
Total	NA	NA	2,007	835

NA = Not available.

Source: (17).

Table 7--Mergers and divestitures by food processing industry, 1987 and 1988

Industry	Acquisitions							
	By U.S. food manufacturing company		By other company		Total		Divestitures	
	1987	1988	1987	1988	1987	1988	1987	1988
	<u>Number</u>							
Agricultural cooperative processing firms	7	2	0	0	7	2	3	0
Bakers	10	17	3	10	13	27	5	12
Brewers	6	1	0	0	6	1	3	1
Confectioners	3	6	0	6	3	12	1	3
Dairy	18	17	1	2	19	19	6	5
Diversified food processors	109	118	0	13	109	131	39	49
Diversified processors with interest in food processing	23	13	6	6	29	19	10	8
Foodservice vendors	0	0	1	1	1	1	0	1
Meatpackers	4	13	2	1	6	14	3	7
Packaging supplies	0	1	1	0	1	1	1	0
Poultry	6	6	0	1	6	7	0	4
Primary products	4	10	2	1	6	11	3	2
Seafood	2	5	0	0	2	5	0	1
Snack foods	3	7	0	5	3	12	1	4
Other retail	0	1	1	9	1	10	1	8
Soft drinks	22	9	0	9	22	18	3	8
Sugar refiners	3	1	0	0	3		1	8
Restaurants	0	0	2	8	2	9	0	8
Unclassified	0	0	22	15	22	16	17	14
Wholesalers	0	0	1	1	1	1	1	0
Foreign	0	0	39	42	39	42	19	27
Total	220	227	81	130	301	358	117	170

Source: (17).

Decline in Establishments

Preliminary data from the 1987 Census of Manufactures indicated that the number of food processing establishments (mostly plants) declined by 6.8 percent between 1982 and 1987. This decline compared with a 3-percent increase for all manufacturing industries (table 8). The total number of food processing establishments fell from 22,130 to 20,624, a net loss of over 1,500.

Sharp declines occurred in meatpacking, poultry, all types of dairy products, most fats and oils, distilled spirits, seafood, and coffee. Industries with more establishments included prepared meats, breakfast cereals, bakery, wineries, and malt beverages.

Domestic Performance

The food processing industries became more concentrated and leveraged in 1989. The performance of the food processing sector is extremely significant because of these changes. However, the performance of the 49 food processing industries is difficult to assess when it is based on commonly accepted indicators such as 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 this information on individual food processing industries is not available. These

Table 8--Preliminary census status for food manufacturing industries

Industry group and industry	1987				1982			
	All establishments		With 20		All establishments		With 20	
	Total	Number	Value added by manuf-acture	Cost of materials	Total	Number	Value added by manuf-acture	Cost of materials
	----	----	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 notes at end of table.

Continued--

Table 8--Preliminary census status for food manufacturing industries--Continued

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

NA = Not available.

Source: (47).

performance measures, however, indicate a composite performance among all the 49 food processing industries.

The food and tobacco processing industries increased their debt by \$70 billion between the third quarter of 1988 and the fourth quarter of 1989, largely due to financing leveraged buyouts and mergers. Thus, the owners' equity-to-debt ratio fell sharply from 1.13 to 0.77, well below the 1.36 for all manufacturing corporations and 1.22 for all nondurable manufacturing corporations.

The difference is more pronounced when food and tobacco industries are deleted from all corporations. Although food and tobacco industries experience

less cyclical behavior in sales and profits than do other industries, a serious economic recession can jeopardize the viability of a highly leveraged buyout. Higher interest expenses, especially when financed by higher yielding, lower grade securities, typically lead to lower earnings.

Increased debt expense showed up in after-tax profits of food and tobacco processors (table 9). In 1989, after-tax income on an enterprise basis (which includes nonfood activities of food processing firms) fell 20 percent, falling from about \$20.6 billion in 1988 to an estimated \$16.5 billion in 1989. This was due to an increase in interest on debt, which we estimate to be nearly \$8 billion. Before-tax income from operations, at about \$31 billion in 1989, rose

Table 9--Profits of food and tobacco processing firms

Year and quarter	Before-tax income from operations	After-tax income	After-tax 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
I	4,288	2,571	12.8	10.5
II	5,277	3,059	15.0	10.9
III	5,163	3,542	16.5	9.9
IV	5,287	3,626	16.9	9.9
1986	21,595	13,292	16.2	9.5
I	4,009	2,686	13.3	9.0
II	5,719	3,275	15.9	12.2
III	5,695	3,178	15.5	8.4
IV	6,172	4,153	20.0	8.5
1987	24,658	15,579	17.4	12.9
I	5,159	2,879	13.6	11.2
II	6,292	3,849	17.4	14.1
III	6,522	3,869	17.0	14.6
IV	6,685	4,982	21.6	11.5
1988	25,686	20,625	21.9	16.4
I	5,890	4,469	19.1	15.8
II	7,106	6,005	25.0	17.5
III	7,563	5,400	21.9	16.0
IV	5,127	4,751	17.9	15.4
1989	30,893	16,506	16.9	13.6
I	6,306	3,854	15.5	15.7
II	8,083	3,993	16.5	14.8
III	7,872	3,233	13.4	13.5
IV ^{1/}	8,632	5,426	22.1	11.5

^{1/} Preliminary.
Source: (55).

8.0 percent, greatly outperforming nonfood manufacturing corporations. Consequently, after-tax profits as a share of stockholders' equity fell from 21.9 percent in 1988 to 16.9 percent in 1989.

Despite higher interest expenses, return on equity was above that of all manufacturers. In addition, higher leverage resulted in tremendous tax savings for food and tobacco processors. Also, interest payments become a substitute for dividends in the case of leveraged buyouts. It should also be pointed out that only a relatively small percentage of firms accounted for the bulk of this debt. Consequently, the financial performance of many firms in this sector is quite different from the industry average. Smaller food processors, for instance, with assets of less than \$25 million, had an equity-to-debt ratio of 1.56, compared with 0.77 for larger firms.

The large increase in debt decreased the tax liability of food and tobacco processors. Changes in the

1986 tax law resulted in a 12-percent tax increase for food processors (table 10), above the increase for all American industries. However, the change varied sharply among different food processing firms (table 11).

Labor productivity has increased in some food manufacturing industries in recent years. Output per employee hour for milk, sugar, and soft drink manufacturers increased sharply in 1988 (app. table 51). Output per hour for red meat industries apparently declined in 1988 for the third consecutive year. Output per hour declined for preserved fruit and vegetables and bakery product industries in 1988 after rising for many years. Overall productivity may seem high because there have been a few dramatic technological breakthroughs. However, employment levels in food manufacturing industries have remained unchanged, while output has increased. Therefore, output per employee hour has been rising. But the value added per full-time equivalent employee in constant dollars, which takes into

Table 10--Profits and Federal income taxes by industry for 250 major corporations

Industry/company	1987-88			Change from 1981-85
	Profit	Tax	Rate	
	----- Million dollars -----		----- Percent -----	
Food and beverages	14,293	4,479	31.3	12.0
Financial	21,977	2,703	12.3	5.4
Computers, office equipment	9,385	1,183	12.6	-9.8
Railroads	6,177	802	13.0	10.3
Rubber	1,249	185	14.8	-1.0
Utilities (electric and gas)	40,768	6,297	15.4	8.4
Paper and forest products	10,577	2,250	21.3	15.4
Oil and gas, coal, mining	20,175	4,292	21.3	3.1
Airlines	645	142	22.1	26.8
Automotive	19,630	4,368	22.3	3.1
Telecommunications	10,205	2,429	23.8	21.2
Conglomerates	5,049	1,262	25.0	12.8
Drugs, hospital supplies	13,776	3,569	25.9	2.0
Instruments	3,505	957	27.3	3.0
Leisure, personal care	4,650	1,271	27.3	0
Tobacco	7,035	1,967	28.0	-6.6
Electrical, electronics	14,644	4,155	28.4	14.7
Building materials, glass	2,080	593	28.5	3.8
Chemicals	11,123	3,529	31.7	25.7
Publishing and broadcasting	6,758	2,206	32.6	4.5
Services, trade	17,361	6,153	35.4	12.8
Miscellaneous manufacturing	3,712	1,330	35.8	9.2
Textiles	949	351	37.0	-.3
Aerospace	7,689	4,115	53.5	46.2
Total, all industries	253,412	60,588	23.9	9.6

Source: (6).

Table 11--Profits and Federal income taxes by selected food processors

Industry/company	1987-88			Change from 1981-85
	Profit	Tax	Rate	
	----- Million dollars -----		----- Percent -----	
Tyson Foods, Inc.	212.4	25.7	12.1	12.4
Coca-Cola	763.0	102.4	13.4	-5.3
Greyhound	155.1	29.3	18.9	30.4
Campbell Soup Company	669.4	155.8	23.3	-10.9
H.J. Heinz Company	717.3	182.5	25.4	-3.8
Adolph Coors Company	156.0	43.8	28.1	15.2
General Mills, Inc.	764.2	221.8	29.0	26.0
CPC International, Inc.	525.5	153.0	29.1	9.0
Brown-Forman Corporation	286.4	84.6	29.5	-9.5
Anheuser-Busch Companies, Inc.	2,117.0	658.2	31.1	18.3
Pepsico, Inc.	1,596.9	502.9	31.5	38.1
ConAgra, Inc.	475.3	153.5	32.3	12.4
Wm. Wrigley Jr. Company	154.6	52.2	33.8	-1.9
Archer Daniels Midland Company	998.8	348.5	34.9	24.1
Kellogg	1,048.7	371.1	35.4	-9
The Quaker Oats Company	514.6	182.2	35.4	4.6
The Pillsbury Company	560.5	203.8	36.4	8.9
Sara Lee Corporation	609.2	221.9	36.4	21.2
Hershey Foods	469.5	181.8	38.7	6.2
Ralston Purina Company	1,288.6	509.6	39.5	-3.2
Geo. A. Hormel and Company	166.2	73.2	44.1	22.4
International Multifoods Corporation	44.1	21.5	48.7	52.5
Total, food and beverages	14,293	4,479	31.3	12.0

Source: (5).

account increased use of other production factors, has also significantly increased in recent years (app. table 52).

Much of this productivity increase is the result of plant and equipment modernization. In 1989, the food processing industries increased plant and equipment expenditures on an enterprise basis by 10 percent to \$14.2 billion (app. table 61). ERS estimates that plant and equipment expenditures rose to \$9.4 billion in 1989 on an establishment basis. These expenditures for 1989 included 390 major plant projects, including 40 distribution centers (app. table 62). Anheuser-Busch spent the most, \$800 million, in capital expenditures, followed by Kellogg and Pepsico (table 12).

Food processing plants operated at 81-percent capacity in 1988 (data for plant capacity utilization is not available for 1989), but varied widely among the 49 industries (app. table 65).

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 1989, food and tobacco processors likely spent \$1.3 billion on research, with tremendous variability among companies and industries (app. table 50). 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 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.

The U.S. food industry was one of the higher performers in the equity markets, ensuring an appreciated return to stockholders--legally the corporate owners. Between 1982 and 1989, the Dow Jones Market Equity Index for food stocks rose 600

Table 12--Capital expenditures

Company	1990	1989	Company	1990	1989
Anheuser-Busch Companies, Inc.	900	800	Lance, Inc.	25	25
Kellogg Company	550	600	American Maize-Products Corporation	25	21
Pepsico, Inc.	450	400	Savannah Foods and Industries, Inc.	25	15
Campbell Soup Company	400	300	SeaBoard Farms	25	2/
RJR Nabisco, Inc.	400	1/	Brown-Forman Corporation	22	28
H.J. Heinz Company	350	350	Hudson Foods, Inc.	20	12
Archer Daniels Midland Company	350	260	Farmland Foods, Inc. (subsidiary of Farmland Industries, Inc.)	19.3	5.1
Nestle Holdings, Inc.	321	393.3	Interstate Bakeries Corporation	18.5	1/
General Mills, Inc.	260	225	Ag Processing Inc.	17.2	13.3
ConAgra, Inc.	225	100	American Crystal Sugar	17.1	13
Quaker Oats Company	200	200	Imperial Holly Corporation	17	2
Sara Lee Corporation	200	190	Sun-Diamond Growers of California	15	7.1
Pillsbury Company	180	100	Rocco Enterprises, Inc.	15	2/
Castle and Cooke, Inc.	150	200	Stroehman Bakeries, Inc.	14.8	2/
Whitman Corporation	140	65	Meiz Baking Company	14	15
Adolph Coors Company	125	90	Dairymen, Inc.	14	11.9
Keebler Company	114	69	J.M. Smucker Company	13.5	12
IBP, Inc.	110	77	Blue Diamond Growers	13	6
The Proctor and Gamble Company	100-200	1/	Riceland Foods, Inc.	12.4	10.4
Tyson Foods, Inc.	100	70	Cadbury Schweppes Inc.	12	11
A.E. Staley Manufacturing Company	62.5	1/	Smithfield Foods, Inc.	12	9
Dean Foods Company	60	55	Citrus World	12	4
International Multifoods Corporation	56	33.6	McKee Baking Company	10	2/
John Labatt, Inc.	55	50	Wisconsin Dairies Cooperative	9.5	9.5
Ocean Spray Cranberries, Inc.	54	35	California and Hawaiian Sugar Company	9	15
Curtice-Burns, Inc.	53	28	Riviana Foods	9	8
Universal Foods Corporation	43.5	37	Welch Foods, Inc.	8.9	8.5
McCormick and Company, Inc.	40	33	Thorn Apple Valley, Inc.	8	6
Flowers Industries, Inc.	37.8	46.9	Darigold, Inc.	6	10
Associated Milk Producers, Inc.	37.2	35	BeefAmerica Operating Company, Inc.	6	2/
Land O'Lakes, Inc.	35	32.1	Moyer Packing Company	5	2.5
Wm. Wrigley Jr. Company	35	30-35	Prairie Farms Dairy, Inc.	4	10
American Home Products Corporation	35	30	FDL Foods	3	5
Mid-American Dairymen, Inc.	35	15	Fresh Mark, Inc.	3	3
Gerber Products Company	33	48	Dinner Bell Foods, Inc.	1.8	2/
Tri Valley Growers	30	25	Sunkist Growers, Inc.	1	5
Warner Lambert Company, Inc.	28.3	28.5	Hyplains Dressed Beef, Inc.	.5	4
Central Soya Company, Inc.	25	27			

1/ Company did not report capital expenditures in 1988 Top 100[®] Report.2/ Company did not rank in 1988 Top 100[®] Report.

Source: (15).

percent, compared with a 300-percent return for all common stocks (app. table 66). The equity index for soft drinks was 563 percent (1982=100) by November 1989. In 1989, food processing prices averaged 26 percent above 1988, while beverages rose about 50 percent. Much of this increase was due to speculation over pending leveraged buyouts and mergers. But, the quality of earnings, along with a steady stable growth trend, also contributed to the appreciation. Third quarter 1989 price-earning ratios for food processing averaged 20, compared with 15 for the all-industry composite (app. table 67).

International Performance

U.S. food processing is the most global in the world. Although primarily oriented toward the domestic market, the United States is the world's largest importer and exporter of processed food. However, the value of food imports generally outpaces the value of food exports. U.S. food processors also have extensive operations abroad, and foreign countries have sizable investments in U.S. processing firms. The United States is also the leading food processor among developed countries, accounting for 40 percent of the value of production and 25 percent of employment among these countries (app. table 81).

U.S. food processing industries continued their trade deficit in 1989 for the seventh consecutive year (app. tables 70 and 71). However, the size of the deficit fell sharply from \$2.7 billion in 1988 to \$2.3 billion in 1989. However, the surplus in food processing in 1989 was \$1.6 billion when the value of seafood is excluded. Exports rose from \$15.7 billion to nearly \$17.8 billion, while imports rose from \$18.4 billion to a little over \$20.2 billion (app. table 70). Sharp increases in exports of meat were largely responsible for the decline in the deficit (fig. 21 and app. table 70). Heavy worldwide demand was a more important factor.

U.S. direct investment abroad remained unchanged at about \$13 billion in both 1987 and 1988 (app. table 76). Income from foreign operations accounted for about \$2.2 billion, or about 10 percent of pre-tax earnings of U.S. processors. An ERS study showed that about 20 percent of all sales for a composite of 57 firms came from overseas operations (18). U.S. beverage firms, largely soft drinks, have the largest foreign investments and earnings. Europe and Canada account for 76

percent of U.S. investment abroad (app. table 73). Grain mill products and alcoholic beverages accounted for 40 percent of U.S. investments (app. table 76). But foreign investment in the United States exceeds U.S. investment abroad (app. table 77). In 1988, direct foreign investment in U.S. food processing firms amounted to \$16.4 billion, compared with \$15.6 billion in 1987.

The Netherlands and the United Kingdom accounted for over 67 percent of foreign investment in the United States, while the rest of Western Europe accounted for 23 percent (app. table 73). Over 45 percent of foreign investment in the United States is in alcoholic beverages and soft drinks (app. table 77).

The 655 foreign food processing affiliates of U.S. firms had sales of \$50 billion in 1987, with a net income of \$3.6 billion. These affiliates, owned in part or total by 65 U.S. firms, employed 400,000 people and had assets of \$35 billion (app. table 74). U.S. affiliates of foreign firms had sales of \$22 billion and 146,000 employees (app. table 75).

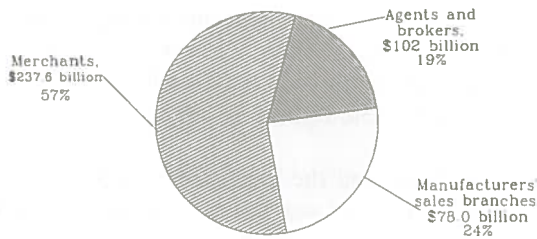
Food Wholesaling

The wholesale food industry grew less in 1989 than at any time during the decade. Mergers abated as the pool of potential candidates shrank and as parent firms focused on adapting newly acquired companies to their administrative, financial, and distribution regimens. Running counter to industry trends, existing wholesale clubs continued their record growth and new firms entered the market. Sales concentration increased in the 1980's, but more wholesale firms operated toward the decade's end than at its beginning. This indicates increased demand for specialized services and a corresponding responsiveness, both of new entrants and established distributors, to changed market conditions.

Sales

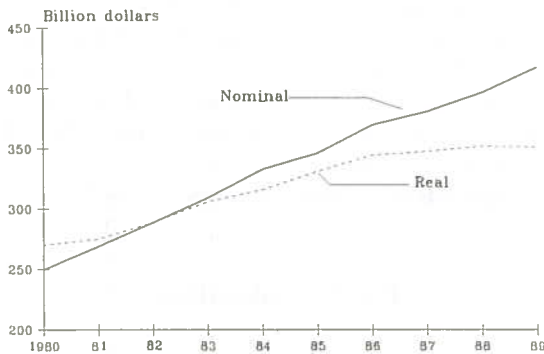
Wholesale sales reached \$418 billion in 1989, a 5-percent increase from 1988 (figs. 27 and 28). This rise is deceptive. For 3 consecutive years, industry real sales have been static, rising only 1 percent in 1987 and 1988 and declining slightly in 1989 (fig. 29). This no-growth pattern of real sales in the last third of the decade stands in stark contrast to pre-1987 growth which ranged from 3 to 6 percent each year. Among groups of wholesalers, merchants have

Figure 27
Wholesale food sales reach \$418 billion in 1989



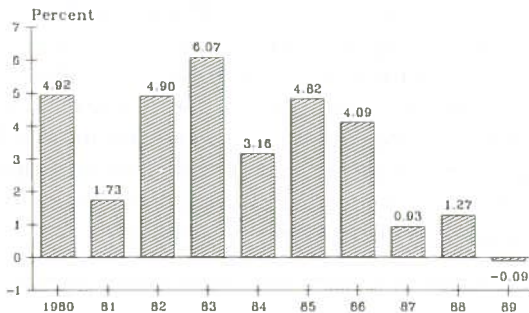
Source: (54)

Figure 28
Wholesale food sales



Sources: (50, 54)

Figure 29
Average yearly change in real wholesale sales ^{1/}



^{1/} Sales adjusted for price changes.
Sources: (50, 54)

been affected the most, but real sales of brokers and manufacturers' sales offices grew less between 1988 and 1989 than at any time in the decade.

Buffeted by rising costs and facing slow growth of their independent and chain customer bases, wholesale merchants' real sales have fallen for the past 3 years. A slackened pace of divestitures of

units by restructured chains has restricted the number of newly independent supermarkets and, thus, of new customers of independent wholesale suppliers.

Real sales for both brokerages and manufacturers' sales branches grew 1 percent during 1989. The relative sales strength of brokerages and sales offices (together accounting for 43 percent of all sales in 1989) buttressed a sagging industry level that might otherwise have fallen more.

Over the decade ending in 1989, the industry grew 3 percent each year, led by a 5-percent annual rise in brokerages' real sales, followed by a 4-percent rate for manufacturers' sales branches. Both groups outpaced the modest 2-percent growth of merchants' real sales. Even so, the two groups' 43-percent share of sales was only 3 percentage points higher than 10 years earlier.

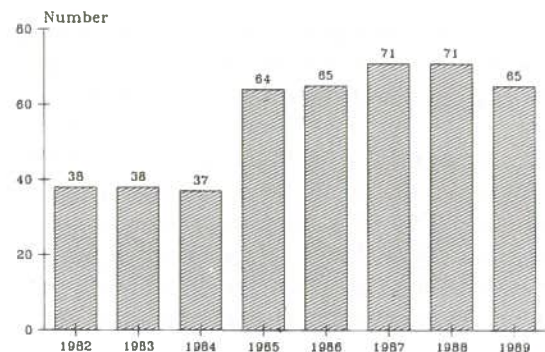
Structure and Organization

The principal structural changes in food wholesaling were merger-induced shifts in ranks among leading merchants and reduced numbers of large firms. Overall, firm numbers rose in most sectors in the 1980's as smaller, specialized operators entered the industry.

Mergers

Mergers declined in total value and number of transactions (fig. 30 and table 13). Scrivner, Inc., an Oklahoma City general line distributor, bought Gateway Foods, Inc., a La Crosse, WI, firm with \$2.2 billion in sales. K mart bought PACE Membership Warehouse, a \$1.5-billion volume, front-rank wholesale club. PYA/Monarch, a leading foodservice distributor, divested its northern division with

Figure 30
Mergers in the wholesale food industry



Sources: (1, 2)

Table 13--Mergers and divestitures in the wholesale food industry

Year	Acquisitions			Divestitures
	By U.S. wholesale food firms	By all other firms	Total	
	Number			
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 ^{1/}	NA	NA	65	NA

NA = Not available.

^{1/} Preliminary.

Source: (2).

estimated annual sales of \$1 billion, selling its units to former executives.

Extensive mergers and consolidations in the decade among large, general line wholesale merchants mask the contribution of new firms to industry growth in the period. The 1987 census counted 1,400 more industry establishments than reported 5 years earlier. There were more merchant distributors of frozen foods, confectionery products, fresh fruits and vegetables, and seafood, but fewer sellers of dairy, poultry, and meat products; brokerages and manufacturers' sales offices also dipped slightly.

Concentration increased in the 1980's. Among general line merchants, the 50 largest firms' share of the market in 1987 rose to 72 percent, from 64 percent 5 years earlier (app. table 20).

The top four firms increased their market share about 9 percentage points to 26 percent; shares of firms in lower size tiers were essentially static in the period. About 15 percent of the industry's 25,000 firms that filed tax returns in 1987 owned 88 percent of its assets (table 14).

Sector Trends

From the perspective of a decade of change, wholesale clubs have been the stellar performers in identifying and servicing a unique clientele and thereby setting successively higher yearly sales records. In influencing acquisition of assets, market expansion, and concentration growth, however, the

sheer magnitude of mergers among large merchant firms clearly ranks as the dominant industry force. And the resulting benefits of acquisitions have contributed vitally to leading firms' continuing growth in 1989, even as industry growth ceased. Acquisitions eased entry into new markets and enlarged customer bases of merging wholesale firms. Larger customer bases permitted economies in firms' warehousing, trucking, and customer services. Merging firms also effected savings through warehouse consolidations and closing of obsolete facilities.

General Line Distributors

With rare exceptions, leading merchant distributors' sales surpassed last year's even after allowing for price increases although, as noted, real sales of all merchants fell (app. table 28). Mergers realigned positions of the top-ranked firms: Scrivner's acquisition of Gateway doubled its customer base and will move it into third place. Nash-Finch completed its purchase of Timberlake. With this purchase, Nash-Finch expanded further into the Southeast and moved into a tie with fifth-ranked Wakefern.

Superstores, combination stores, hypermarkets, and warehouse markets continue to be potent sources of sales expansion. For example, industry leaders Fleming and Super Valu each derived about 40 cents of every sales dollar from large stores. Over the decade, however, industry leaders have expanded primarily through mergers and acquisitions. Since 1981, Fleming has spent \$1 billion in 12 acquisitions,

Table 14--Distribution of wholesale food firms, by owned assets, 1987

Asset group	Firms	Share of all firms	Share of all assets	Cumulative share of firms	Cumulative share of assets
1,000 dollars	Number	----- Percent -----			
250,000 or more	18	0.1	29.1	0.1	29.1
100,000-249,999	28	.1	10.6	.2	39.7
50,000-99,999	28	.1	5.8	.3	45.5
25,000-49,999	85	.3	8.3	.6	53.8
10,000-24,999	225	.9	9.4	1.5	63.2
5,000-9,999	393	1.5	7.4	3.0	70.6
1,000-4,999	3,081	12.1	17.5	15.1	88.1
500-999	2,569	10.1	5.1	25.2	93.2
250-499	3,097	12.2	3.2	37.4	96.4
100-249	5,462	21.4	2.6	58.8	99.0
Less than 100	10,498	41.2	1.0	100.0	100.0

Source: (63).

adding over \$7 billion to its sales base in the process and assuming first place in the industry. Scrivner also expanded dramatically through mergers in the 1980's, acquiring then-current leaders and dominant regionals such as S.M. Flickinger, Chris Hoerr and Son, Quinn Grocery Company, Groce-Wearden and, most recently, Gateway. Missouri-based Wetterau became a national distributor through mergers in the 1980's in acquiring such regional firms as Creasey Company (Kentucky), Potter-McCune Company (Pennsylvania), Higdon Grocery Company (Florida), Milliken-Tomlinson Company (Maine), Roger Williams Foods (Rhode Island), and USCP-Westco, Inc. (California). Other leaders also expanded through mergers, though not to the extent of the pace setters. For example, Wakefern, a cooperative wholesaler, bought 19 Shop Rite supermarkets in 1988, becoming a first-time operator of its own retail foodstores.

Foodservice Distributors

Foodservice growth slowed in 1989. Leading distributors' sales grew 5.5 percent to \$16.9 billion, only one-third of last year's rate (table 15). Adjusted for price increases, leading distributors' sales were essentially unchanged from last year. Distributors have responded to sluggish demand by broadening perishable lines, promoting convenience store and delicatessen service, expanding hospital and hotel food service, and mounting aggressive equipment and supply sales campaigns. For example, equipment and supply sales composed 14

Table 15--Sales of the top 10 foodservice distributors, 1989

Firms	Sales
	Million dollars
Sysco Corporation	7,000
Kraft Foodservice	3,200
Rykoff-Sexton, Inc.	1,380
PYA Monarch, Inc.	1,300
J.P. Foodservice, Inc.	1,000
White Swan, Inc.	692
Food Services of America	685
Gordon Food Service, Inc.	640
Unifax, Inc.	624
Shamrock Foods Company	385
Total	16,906

Source: (20).

percent of all sales last year, a new high. Hospitals are attractive customers to distributors because of the (relative) stability of their foodservice requirements and their growth potential. Several large distributors have added dieticians to their staffs as they initiate or expand product distribution to nursing homes and hospitals.

Novel alliances of independent distributors and distributor groups may portend industry trends. For example, Kraft Foodservice and Baxter Healthcare Corporation have entered a joint venture

to serve hospitals. A leader in foodservice sales to hospitals, Baxter specializes in diet foods, table and dinnerware, and equipment. The alliance with Kraft joins Kraft's extensive food lines and Baxter's existing hospital sales and marketing organization.

In a similar vein, F.A.B., Incorporated, Nugget Distributors, and Pocahontas Foods USA--all large distributor groups--formed a joint purchasing venture to effect savings through large volume buying for their affiliated independent members. The joint operation also is expected to produce savings through freight consolidation and elimination of redundant administrative tasks. The new venture's first planned purchases are frozen foods and refrigerated products for its 300 affiliated companies.

Wholesale Clubs

Though conceived in the mid-1970's, wholesale clubs may truly be called products of the 1980's in development and growth. Their development and growth accelerated in 1989 with record sales of \$17.3 billion (table 16). This was a 19-percent jump in real sales from 1988.

The industry's decade-long expansion has been produced by five leaders--Sam's, Price, Costco, PACE, and BJ's. The past year's growth was no exception. Continuing its record growth, Costco led with a 48-percent increase in sales. The other four leaders' sales grew at least 20 percent: Sam's, 26 percent; BJ's, 25 percent; Price, 21 percent; and PACE, 20 percent.

Club growth reflects a combination of low prices, quick responses to changing customer needs, and timely geographic expansion by operators. Clubs now offer family packs in meats, frozen hors d'oeuvres, packaged salads, and fresh pasta. They also sell avocados, celery, and other produce. In emphasizing family packs, clubs are signaling a stepped-up drive for family business. Perishables now rank with canned juices, coffee, dishwashing detergent, and other dry groceries in generating food sales in clubs. Food sales are a growing share of clubs' total sales.

The Northeastern section of the country has attracted the attention of all of the leaders; Sam's entered the region in 1989 with two clubs and plans for substantially more. BJ's plans to add a half-dozen stores to its 16 existing stores in the region. PACE is opening two stores in Philadelphia and Price opened a unit on Long Island.

Table 16--Sales of membership wholesale clubs

Firms	Sales	
	1989	1988
<i>Million dollars</i>		
Sam's Wholesale Club	5,030	4,000
Price Company	4,901	4,053
Costco Wholesale Club	2,943	1,989
PACE Membership Warehouse	1,500	1,250
BJ's Wholesale Club	1,000	800
Price Saver's Wholesale Club	800	610
Warehouse Club	285	249
Wholesale Club	267	380
Club Wholesale	110	105
Buyer's Club	100	80
Others	350	310
Total	17,286	13,826

Source: (1).

Growth prospects and low-entry barriers have prompted entry of two new firms. Certified Grocers of California, a large general line wholesaler, opened two wholesale clubs designed to furnish small independent grocers. The other new entrant, Wholesale Depot Limited Partnerships, opened its first unit in Pennsylvania late in the year and plans to open five more by the end of 1990, most in the Northeast.

K mart acquired PACE during the year, thus, moving into the front ranks of wholesale clubs. The \$322 million cash purchase by K mart (the largest merger ever in this wholesale sector) places PACE and Makro under K mart's direction. This immediately expanded parent K mart's wholesale club market share, making its financial resources available for rapid expansion.

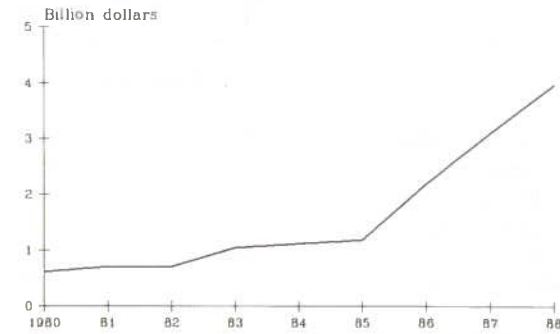
Foreign Investment

Foreign investment in the domestic wholesale food industry reached \$4 billion in 1988, a 28-percent rise from 1987 (fig. 31). Asset growth lagged growth in foreign ownership. Consequently, the share of assets held by foreign investors rose to 11 percent.

Performance

Industry profit levels appear to be steady but capital requirements for mergers and ensuing debt service costs have entailed reduced capital outlays for new

Figure 31
Foreign investment in U.S. food
wholesale firms



Source (45)

stores, distribution space, retail customer inventory financing, and related programs. This, in turn, constricts firms' latitude in responding to a general slow-down in demand. Unless productivity increases appreciably (an unlikely development), net earnings will probably drop below the previous decade's levels.

Wages

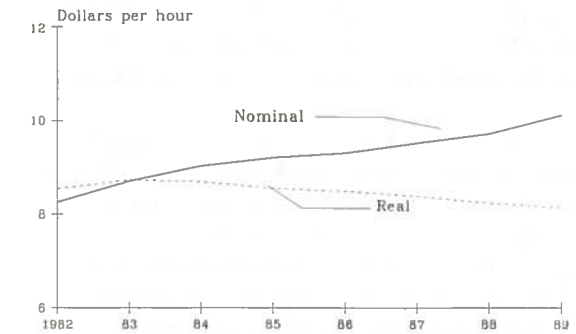
The wholesale food industry employed 705,000 workers in 1989 (app. table 40). Average hourly earnings of wholesale food workers rose to \$10.11 in 1989, a rate that remained twice that of workers in eating and drinking places and a third higher than the grocery store employees' rate (app. table 41). Buying power of wholesale workers' earnings continued to erode as real wages fell for the sixth consecutive year. Adjusted for price changes, average hourly earnings in 1989 were \$8.15, almost 5 percent lower than their 1982 peak (fig. 32).

Countering the dilution of earnings are employers' contributions to employee health and pension plans. Industrywide, the net effect of lower real earnings but higher incomes (as fringe benefits) is unclear because of incomplete coverage of the industry's workers and different coverage levels of existing health and retirement programs among firms.

Profits

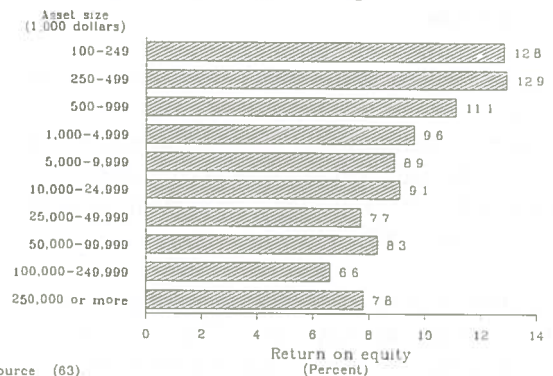
Continuing a decade-long pattern, small wholesale firms realized higher average returns on equity than their large counterparts (app. table 54 and fig. 33). Small firms' profits probably will continue to exceed large firms' for a number of reasons. Small firms predominate in specialty lines since their size offers certain advantages. For instance, small firms often

Figure 32
Average hourly earnings of wholesale
food employees



Source (61)

Figure 33
After-tax profits of wholesale food
firms, by asset size, 1980-87 average



Source (63)

handle one product, thus, they enjoy advantages such as simpler inventory management, greater ease in staying abreast of price changes for a limited number of products, and reduced chances of having out-of-stock merchandise. They often cater to one kind of customer--so-called niche marketing--and they know their customers' needs intimately. Most are also nonunion shops.

By contrast, large firms emphasize distribution efficiency and market growth. In recent times, that growth has depended heavily on mergers and debt assumption.

Debt-financed liabilities of wholesale food corporations filing tax returns ranged from 24 percent of assets to 30 percent in 1980-86. Borrowing to finance acquisitions has doubled debt-equity ratios of some acquirers. In addition, high costs of starting and operating new stores have dampened the rise in net income for a number of firms and, at the extreme, reduced net income in periods following major expansions. With high debt and slow growth, affected firms may find it necessary

to severely restrict spending on capital improvements. Some highly leveraged wholesalers may cut back on loan guarantees for their retail customers, diverting a higher proportion of earnings to debt service and accelerating the growth decline.

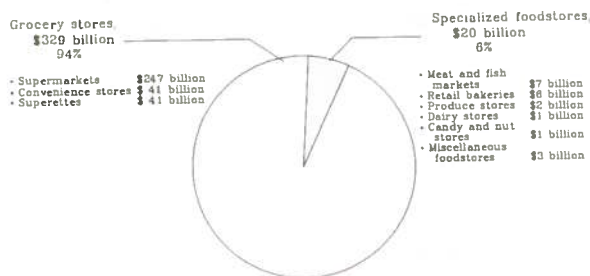
Food Retailing

Foodstore sales reached \$349.3 billion in 1989, an increase of 7 percent over 1988 sales. Grocery stores and specialized foodstores, the two major foodstore segments, accounted for 94.3 percent and 5.7 percent of total sales, respectively (fig. 34). Grocery stores captured most of the foodstore sales growth in 1989 as sales of specialized foodstores faltered. Average profit rates of medium- to large-sized food retailers (accounting for about 60 percent of grocery store sales) were lower in 1989, partly due to the effect of debt loads associated with acquisitions, financial restructuring, and leveraged buyout activity. A number of food retailers initiated produce testing and certification programs in response to heightened consumer concerns about food safety and quality assurance. Similar programs may spread to fresh meat, fish and seafood, and other perishable products.

Merger activity continued at relatively high levels in 1989, although antitrust enforcement became more visible. The Federal Trade Commission (FTC) challenged a merger of two supermarket retailers in Chattanooga, TN. The Great Atlantic and Pacific Tea Company, operator of A&P stores, was fined a record \$3 million for failure to register under pre-merger notification rules in the purchase of Waldbaums, a New York supermarket operator.

The average hourly earnings of foodstore employees reached \$7.13 in 1989, a 1.9-percent increase from

Figure 34
Foodstore sales reach \$349.3 billion in 1989



Source: (49)

1988 levels (app. table 41). In real, inflation-adjusted terms, employee earnings declined, contributing to stable or lower labor costs for many food retailers.

Sales and Sales Growth

Foodstores--those retail establishments with sales of food products intended for off-premise consumption accounting for 50 percent or more of total sales--experienced a second year of positive real growth. Foodstore sales reached \$349.3 billion in 1989, with inflation-adjusted sales growing by 0.4 percent, following a 1.1-percent real sales increase in 1988 (app. table 10). Despite only modest expansion, real foodstore sales nevertheless outpaced foodservice sector growth--for the second nonrecession year since the 1950's. As a result, the share of consumer food expenditures in foodstores remained stable at 48 percent, temporarily reversing the long-term declining trend (app. table 1). Although food expenditures generally increase with population growth, foodstores are losing sales to other outlets such as drugstores, department stores, and gasoline stations offering retail food items.

Grocery store sales grew to \$329.4 billion, a 7.2-percent increase over 1988 sales, equaling 0.6 percent in inflation-adjusted dollars (app. table 10). The largest grocery store segment, supermarkets, accounted for sales of \$247 billion, or 75.1 percent of the total in 1989. Their growth rate amounted to 0.6 percent in inflation-adjusted dollars. Supermarkets became larger in the 1980's to accommodate growth opportunities found in prepared and convenience foods, fresh meat and seafood service, prescription and over-the-counter drugs, cosmetics, and nongrocery general merchandise items. With improved quality control and production streamlining, fresh prepared foods could become one of the fastest growing categories for grocery stores in the 1990's.

Convenience store sales reached \$41.0 billion in 1989, equaling a net increase of 0.3 percent from 1988 sales in inflation-adjusted dollars (app. table 10). Nongasoline (merchandise) sales were responsible for most of the sales increase and accounted for 62 percent of sales in 1989. Convenience store gasoline sales faltered as competition from gasoline retailers offering expanded retail food items heightened. The superette and mom and pop store segment accounted for the remaining \$41.0 billion of grocery store sales in 1989. The superette and mom and

Market Size and Sales

Appendix table 1--Food expenditures in the food marketing system ^{1/}

Year	Off-premise use				Food service				
	Food-stores	Other stores	Home-delivered, mail order	Farmers, manufacturers, wholesalers	Total sales	Commer-cial	Noncom-mercial	Total	Total
<u>Billion dollars</u>									
1963	44.1	3.0	2.7	1.6	51.5	NA	NA	22.6	74.1
1967	52.1	3.3	2.5	1.6	59.5	NA	NA	30.4	89.9
1972	75.5	3.9	2.4	1.8	83.6	NA	NA	46.6	130.2
1977	118.3	7.1	2.3	2.9	130.5	58.6	26.4	84.9	215.4
1982	179.1	10.8	2.6	4.2	196.7	100.1	40.8	140.7	337.5
1983	187.8	12.6	2.8	4.3	206.8	109.4	43.3	152.7	359.5
1984	196.7	14.1	3.0	4.5	218.3	117.3	46.7	164.1	382.4
1985	204.4	15.3	3.2	4.6	227.5	124.1	48.7	172.8	400.3
1986	209.6	16.9	3.5	4.7	234.7	134.7	52.7	187.4	422.1
1987	216.3	16.4	4.6	4.7	242.1	149.7	56.9	206.6	442.8
1988	226.9	18.2	5.1	4.8	255.1	162.3	59.9	222.2	477.3
1989 ^{2/}	241.5	19.5	5.7	5.0	271.6	171.0	63.8	234.8	506.4

NA = Not available.

^{1/} Includes taxes and tips. Excludes home food production.

^{2/} Preliminary.

Source: (23).

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	
<u>Million dollars</u>									
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	32,740	18,371	2,849	1,488	22,708	55,449
1983	16,870	14,797	4,023	35,690	19,155	3,126	1,613	23,894	59,580
1984	16,297	16,638	4,537	37,272	20,090	3,380	1,698	25,168	62,440
1985	17,217	17,011	5,007	39,225	21,009	3,633	1,821	26,463	65,698
1986	17,567	17,663	5,616	40,846	22,752	3,770	1,934	28,456	69,802
1987	17,477	18,161	5,852	41,490	23,755	4,207	2,108	30,670	71,560
1988	17,283	18,686	6,135	42,100	25,052	4,559	2,265	31,876	73,980
1989 ^{2/}	17,639	19,721	6,568	43,924	25,861	4,987	2,382	33,240	77,169

^{1/} Includes tips.

^{2/} Preliminary.

Source: (23).

Appendix table 3--Supermarket sales by product category

Product	1988 sales volume	Share of supermarket sales	Change, 1987-88	Average annual rate (5-year compounded)
	Million dollars		Percent	
Baby food	1,409.66	0.59	10.17	7.34
Baking needs	4,102.19	1.71	2.46	.39
Beer and wine	7,054.84	2.94	3.35	3.11
Breakfast foods	5,754.12	2.39	9.94	8.88
Candy and gum	2,727.11	1.13	1.05	4.14
Canned fish	1,922.26	.80	7.52	2.85
Canned fruit	1,247.02	.52	4.83	2.99
Canned meat and specialty foods	1,381.90	.57	3.54	4.12
Canned vegetables	2,574.41	1.07	2.77	1.57
Coffee and tea	3,815.49	1.59	-5.41	.40
Cookies and crackers	5,061.84	2.11	5.82	5.99
Desserts and toppings	676.88	.28	4.83	6.27
Diet and low-calorie foods	989.13	.41	8.34	6.42
Dried fruit	534.11	.22	1.11	12.03
Dried vegetables	894.33	.37	19.39	6.69
Juice (grocery)	3,333.87	1.39	3.59	5.95
Nuts	858.60	.36	-3.84	3.13
Pasta products	1,465.44	.61	10.03	8.59
Pickles and olives	923.21	.38	3.78	1.37
Sauces and dressings	3,895.58	1.62	5.59	5.90
Snacks	3,620.63	1.51	4.74	7.07
Soft drinks and mixes	9,584.21	3.99	6.84	6.12
Soups	1,784.23	.74	5.45	5.49
Spices and extracts	846.88	.35	3.63	3.77
Spreads and syrups	1,620.00	.67	1.65	3.02
Total grocery edibles	68,077.94	28.32	4.63	4.62
Household supplies	8,099.71	3.37	1.65	3.43
Paper, plastic, film, and foil products	9,129.46	3.80	5.83	5.47
Pet foods	5,015.80	2.09	3.29	4.49
Tobacco products	8,061.66	3.35	2.67	2.18
Total grocery nonedibles	30,306.63	12.61	3.43	3.84
Bakery foods, packaged	8,170.63	3.40	5.70	4.42
Dairy products	19,162.22	7.97	2.35	2.74
Delicatessen products	6,114.49	2.54	11.30	8.00
Frozen foods	14,925.65	6.21	4.96	4.94
Ice cream	2,294.39	.95	-1.00	4.14
Meat	40,981.89	17.05	6.37	3.64
Produce	22,625.32	9.41	7.33	7.84
Total perishables	114,274.59	49.34	5.90	5.48
General merchandise	10,354.86	4.31	3.50	4.42
Health and beauty aids	9,835.46	4.09	6.50	6.96
Unclassified 1/	3,198.58	1.33	NA	NA
Total supermarket	240,400.00	100.00	5.21	4.91

NA = Not applicable.

1/ Includes prescription and nonprescription drug products, fresh fish, catering services, sit-down food service, off- and onsite baked goods, seasonal merchandise, distilled spirits, money orders, and other such goods and services.

Sources: (2, 23).

Appendix table 4--Foodservice sales by industry segment, 1981-88 1/

Industry segment	1981	1982	1983	1984	1985	1986	1987	1988 2/
<u>Million dollars</u>								
Commercial:								
Separate eating places--								
Restaurants and lunchrooms	38,805	40,931	44,731	48,419	52,296	54,767	57,942	60,476
Fast-food outlets	31,523	36,492	41,898	47,319	51,455	54,077	56,822	60,597
Cafeterias	2,575	2,699	2,871	3,022	2,992	2,817	2,919	3,033
Total	72,903	80,122	89,500	98,760	106,743	111,661	117,683	124,106
Lodging places	5,939	6,164	6,756	7,264	7,355	7,862	7,913	8,020
Retail hosts	3,835	3,943	4,318	4,779	4,910	5,242	5,391	5,499
Recreation and entertainment	2,471	2,813	3,093	3,394	3,510	3,935	4,215	4,468
Separate drinking places	1,121	1,098	1,111	1,076	982	903	844	817
Commercial feeding total	86,269	94,140	104,778	115,273	123,500	129,603	136,046	142,910
Noncommercial:								
Education--								
Elementary and secondary	8,099	7,368	7,537	7,930	8,472	8,673	8,803	8,973
Colleges and universities	3,126	3,487	3,886	4,092	4,230	4,403	4,544	4,735
Other education	152	175	201	217	240	267	277	283
Total	11,377	11,030	11,624	12,239	12,942	13,343	13,624	13,991
Military services--								
Troop feeding	1,619	1,644	1,709	1,765	1,853	1,933	2,002	2,076
Clubs and exchanges	490	522	546	601	617	627	642	666
Total	2,109	2,166	2,255	2,366	2,470	2,560	2,644	2,742
Plants and office buildings	5,669	5,919	6,258	6,793	7,186	7,365	7,525	7,826
Hospitals	5,366	5,609	5,715	5,817	5,905	6,392	6,750	7,028
Extended care facilities	4,072	4,797	4,983	5,281	5,452	5,522	5,752	5,982
Vending	3,183	3,214	3,348	3,553	3,730	3,685	3,705	3,838
Transportation	1,656	1,685	1,793	1,922	1,996	2,296	2,469	2,822
Associations	1,276	1,431	1,501	1,562	1,610	1,692	1,714	1,795
Correctional facilities	786	1,018	1,092	1,155	1,205	1,388	1,505	1,545
Child day-care centers	641	607	663	760	835	920	1,012	1,047
Elderly feeding programs	544	579	629	689	744	804	884	897
Other	208	223	238	252	268	287	303	336
Noncommercial feeding total	36,887	38,278	40,099	42,389	44,343	46,254	47,887	49,849
Total	123,156	132,418	144,877	157,662	167,843	175,857	183,933	192,759

1/ Excludes sales taxes and tips.

2/ Preliminary.

Source: (44).

Appendix table 5--Alcoholic beverage sales by product category

Year	Total retail sales	Market shares		
		Distilled spirits	Wine	Beer
	Million dollars	Percent		
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	59,555	33.8	12.3	53.9
1984	62,296	32.1	12.4	54.5
1985	65,794	32.7	12.9	54.4
1986	69,409	32.6	13.4	54.0
1987	71,794	32.4	13.2	54.5
1988	73,785	31.9	12.7	55.3

Sources: (10, 23).

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

Type	1975	1977	1982	1983	1984	1985	1986	1987	1988
	Percent								
Domestic	71.5	72.1	69.4	68.3	67.4	68.3	68.3	68.2	68.1
Imported	28.5	28.0	30.7	31.7	32.6	31.7	31.7	31.8	31.9
Whiskey	53.2	49.5	43.9	42.5	41.3	39.9	38.7	38.2	37.6
Gin	9.8	10.0	9.3	9.3	9.1	8.7	8.7	8.6	8.3
Vodka	19.4	20.6	22.4	22.7	22.5	22.9	23.5	22.9	24.1
Rum	4.0	5.2	7.3	7.8	7.9	7.9	7.9	7.9	8.3
Brandy	3.5	3.8	4.6	4.9	5.1	5.1	5.1	5.1	5.1
Cordials	7.0	7.1	9.0	8.8	10.1	11.2	11.9	12.5	11.5
Others	3.1	3.5	3.5	4.0	4.0	4.0	3.8	4.5	4.5
	Million gallons 1/								
Total	448	441	447	448	439	431	404	406	381

1/ Equivalent to wine.

Source: (10).

Appendix table 7--Food and nonfood sales or shipments in food marketing ^{1/}

Year	Processing ^{2/}	Wholesaling	Food service	Retailing
<u>Million dollars</u>				
1972	115,051	106,457	NA	99,035
1977	192,912	182,905	81,776	157,941
1982	280,530	288,658	104,593	246,122
1983	287,084	309,200	113,281	256,018
1984	300,012	333,000	121,321	271,909
1985	301,562	346,300	127,949	285,062
1986	308,528	369,900	139,415	297,019
1987	320,914	380,900	153,461	309,461
1988	341,728	396,700	165,511	326,504
1989 ^{3/}	364,931	417,600	173,527	349,269

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.

^{3/} Preliminary.

Sources: (44, 47, 48, 49, 54, 57).

Appendix table 8--Food processing product shipments, 1987-89

Industry	1987	1988	1989 ^{1/}
	<u>Million dollars</u>		
Meat products	69,401	74,616	78,813
Meatpacking plants	40,658	43,508	44,710
Sausage and other prepared meats	14,385	14,789	15,214
Poultry slaughtering and processing	14,358	16,319	18,889
Dairy products	39,364	39,685	42,613
Creamery butter	1,610	1,547	1,522
Cheese, natural and processed	10,733	11,105	12,608
Condensed and evaporated milk	5,814	5,727	6,061
Ice cream and frozen desserts	4,189	4,091	4,229
Fluid milk	17,018	17,215	18,193
Preserved fruit and vegetables	34,626	36,896	40,444
Canned specialties	4,459	4,750	5,121
Canned fruit and vegetables	12,219	12,760	14,332
Dried fruit, vegetables, and soups	2,050	2,064	2,561
Pickles, sauces, and salad dressings	4,488	4,974	5,413
Frozen fruit and vegetables	6,234	6,905	7,151
Frozen specialties	5,176	5,443	5,866
Grain mill products	33,624	35,714	39,043
Flour and grain mill products	4,778	5,399	6,100
Cereal breakfast foods	5,081	5,554	6,416
Rice milling	1,257	1,290	1,316
Prepared flour mixes and doughs	2,712	2,750	2,860
Wet corn milling	4,434	4,570	5,030
Dog, cat, and other pet food	4,701	5,171	5,791
Prepared animal feed	10,661	10,980	11,530
Bakery products	20,733	22,813	25,284
Bread and other bakery goods	13,486	15,042	16,854
Cookies and crackers	5,874	6,356	6,950
Frozen bakery products, except bread	1,373	1,415	1,480
Sugar and confections	19,060	19,426	20,420
Raw cane sugar	1,232	NA	NA
Cane sugar, refined	2,483	5,458	5,844
Beet sugar	1,832	NA	NA
Candy and other confectionery products	7,312	7,692	8,138
Chocolate and cocoa products	3,274	3,366	3,480
Chewing gum	869	890	918
Salted and roasted nuts and seeds	2,058	2,020	2,040

See footnote at end of table.

Continued--

Appendix table 8--Food processing product shipments, 1987-89--Continued

Industry	1987	1988	1989 ^{1/}
	<u>Million dollars</u>		
Fats and oils	15,700	16,707	17,183
Cottonseed oil mills	435	448	470
Soybean oil mills	7,799	8,267	8,598
Vegetable oil mills	492	530	540
Animal and marine fats and oils	2,111	2,132	2,175
Shortening and cooking oils	4,863	5,330	5,400
Beverages	45,010	47,482	50,040
Malt beverages	13,505	14,059	14,719
Malt	530	541	555
Wines, brandy, and brandy spirits	3,123	3,204	3,300
Distilled and blended liquors	3,145	3,220	3,317
Soft drinks and carbonated water	19,807	21,352	22,783
Flavoring extracts and syrups	4,900	5,106	5,366
Miscellaneous foods	28,227	30,215	32,064
Processed fishery products	5,945	6,123	6,290
Roasted coffee	5,467	5,740	5,999
Potato chips and similar products	4,968	5,415	5,820
Manufactured ice	281	300	315
Macaroni and spaghetti	968	1,037	1,110
Other food preparations	10,598	11,600	12,530
Total food products	305,740	323,554	345,903

NA = Not available.

^{1/} Estimated by the U.S. Department of Commerce, International Trade Administration.

Source: (57).

Appendix table 9--Wholesale food sales, by type of wholesaler, 1980-89

Year	Merchants	Manufacturers' sales branches and offices	Agents and brokers
<u>Billion dollars</u>			
1980	155.4	53.8	40.6
1981	165.4	58.7	45.0
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	237.6	101.9	78.0

Source: (54).

Appendix table 10--Foodstore sales ^{1/}

Year	Total food-store sales	Grocery store sales				Specialized foodstore sales
		Total	Supermarkets	Convenience stores	Superettes	
<u>Million dollars</u>						
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	326,504	307,176	230,640	38,338	38,198	19,328
1989 ^{1/}	349,269	329,383	247,367	41,000	41,016	19,886

NA = Not available.

^{1/} ERS projection.

Sources: (33, 49).

Industry Size and Structure

Appendix table 11--Number of food marketing establishments

Year	Processing	Wholesaling	Eating and drinking places <u>1/</u>	Retailing	Total
			<u>Number</u>		
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: (47, 48, 50).

Appendix table 12--Number of food marketing establishments covered by unemployment insurance 1/

Year	Processing	Wholesaling	Eating and drinking places <u>2/</u>	Retailing	Total
			<u>Number</u>		
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

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: (61).

Appendix table 13--Number of food marketing establishments (county business patterns) 1/

Year	Processing	Wholesaling	Eating and drinking places <u>2/</u>	Retailing	Total
<u>Number</u>					
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 <u>3/</u>	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

1/ Includes administrative and auxiliary establishments, both of which are excluded from appendix table 8.

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: (51).

Appendix table 14--Number of retail and wholesale alcoholic beverage establishments

Year	Liquor stores	Wholesale distributors
<u>Number</u>		
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: (49, 50).

Appendix table 15--Foodservice establishments by industry segment, 1981-88

Industry segment	1981	1982	1983	1984	1985	1986	1987	1988 <u>1/</u>
	<u>Number</u>							
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 day-care 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	15,841	16,159	16,479	16,799	17,101	17,389	17,681	17,767
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

1/ Preliminary.

Source: (44).

Appendix table 18--Share of shipment value for the four and eight largest food processing firms

Industry	1982			1977			1967		
	Share of shipment value			Share of shipment value			Share of shipment value		
	Total firms	Four largest firms	Eight largest firms	Total firms	Four largest firms	Eight largest firms	Total firms	Four largest firms	Eight largest firms
Number	Number	Percent	Number	Number	Percent	Number	Number	Percent	
Meatpacking	1,658	29	43	2,404	19	37	2,529	26	38
Sausages	1,193	19	28	1,213	23	30	1,294	15	22
Poultry dressing	231	22	36	313	16	27	NA	NA	NA
Poultry and egg processing	136	22	35	124	21	35	NA	NA	NA
Butter	61	41	61	123	49	66	510	15	22
Cheese	575	34	47	660	35	48	891	44	51
Condensed and evaporated milk	132	35	50	167	30	46	179	41	56
Ice cream	482	22	34	567	28	40	713	33	43
Fluid milk	853	16	27	1,516	18	28	2,988	22	30
Canned specialties	171	61	77	172	61	77	150	69	83
Canned fruit and vegetables	541	21	35	648	22	35	930	34	52
Dehydrated fruit and vegetables	119	42	59	143	37	53	134	32	50
Pickles, sauces, and salad dressings	325	56	65	380	55	62	479	33	44
Frozen fruit and vegetables	195	27	42	187	22	40	495	36	55
Frozen specialties	318	38	54	330	40	55	NA	NA	NA
Flour and grain milling	251	40	60	301	33	54	438	30	46
Breakfast cereals	32	86	NA	32	89	98	30	88	97
Rice milling	49	47	75	47	51	76	54	46	68
Blended and prepared flour	91	58	74	111	51	69	126	68	82
Wet corn milling	25	74	94	24	63	89	32	68	89
Pet food	222	52	71	218	58	74	NA	NA	NA
Prepared feeds	1,245	20	30	1,435	22	30	NA	NA	NA
Breads and cakes	1,869	34	47	2,549	33	40	3,445	26	38
Cookies and crackers	269	59	71	26	359	68	286	59	70
Raw cane sugar	43	41	61	49	42	62	61	43	65

See note at end of table.

Continued--

Appendix table 18--Share of shipment value for the four and eight largest food processing firms--Continued

Industry	1982			1977			1967		
	Share of shipment value			Share of shipment value			Share of shipment value		
	Total firms	Four largest firms	Eight largest firms	Total firms	Four largest firms	Eight largest firms	Total firms	Four largest firms	Eight largest firms
Number	-----	Percent-----	Number	-----	Percent-----	Number	-----	Percent-----	
Cane sugar refining	19	65	91	27	63	90	22	59	82
Beet sugar	14	67	95	14	67	95	15	66	96
Confectionery	718	40	53	867	38	49	1,091	25	35
Chocolate and cocoa	77	75	89	47	73	88	27	77	89
Chewing gum	9	95	NA	14	93	NA	19	86	96
Cottonseed oil mills	47	51	70	62	45	62	91	42	60
Soybean oil mills	52	61	83	65	54	73	60	55	76
Vegetable oil mills	26	52	83	37	54	80	34	56	78
Animal and marine fats and oils	270	34	48	384	28	40	477	28	36
Shortening and cooking oils	79	43	60	66	43	63	63	43	67
Malt beverages	67	77	94	81	64	83	125	40	59
Malt	24	60	80	27	59	81	32	39	62
Wines and brandy	324	51	64	223	49	62	175	48	63
Distilled spirits	371	46	89	64	52	71	70	54	71
Bottled and canned soft drinks	1,236	14	23	1,758	15	22	3,057	13	20
Flavoring extracts and syrups	297	65	71	319	64	71	401	67	75
Canned or cured seafood	170	62	70	215	52	65	268	44	59
Fresh or frozen seafood	697	14	24	906	14	23	463	26	38
Roasted coffee	118	65	76	113	65	79	206	53	71
Manufactured ice	530	18	26	543	24	38	688	33	42
Macaroni and spaghetti	208	42	66	289	36	54	190	31	48
Other food preparations	1,746	32	40	1,872	28	36	1,824	24	35

NA = Not available.
Source: (47).

Appendix table 19--Aggregate concentration in food and tobacco manufacturing, measured by proportion of value added, 1967-82

Company ^{1/}	Proportion of value added in food and tobacco manufacturing ^{2/}			
	1967	1972	1977	1982
	<u>Percent</u>			
20 largest firms	23.4	24.3	27.4	34.0
21-50 largest firms	15.5	16.8	15.9	16.0
51-100 largest firms	11.9	12.2	11.7	11.1
101-200 largest firms	8.9	9.8	10.3	8.9
201-300 largest firms	4.4	4.7	4.8	4.4
301-400 largest firms	3.0	3.1	3.2	3.0
401-500 largest firms	2.4	2.4	2.4	2.2
All others ^{3/}	30.5	27.0	24.4	20.3
50 largest firms	38.9	41.1	43.3	50.0
100 largest firms	50.9	53.3	55.0	61.2
500 largest firms	69.5	73.2	75.6	79.7

^{1/} Companies are ranked by value added in Standard Industrial Classifications (SIC's) 20 and 21 each year.

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

^{3/} Approximately 27,000 firms in 1967 and 14,000 firms in 1982.

Source: (36).

Appendix table 20--Sales concentration in food wholesaling

Wholesaler category	1977				1982	
	4 largest firms	8 largest firms	20 largest firms	50 largest firms	4 largest firms	8 largest firms
	<u>Percent</u>					
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 seafoods	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 largest firms	50 largest firms	4 largest firms	8 largest firms	20 largest firms	50 largest firms
	<u>Percent</u>					
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 seafoods	24.5	37.1	1/	9.2	1/	1/
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	1/

1/ Not reported.

Source: (50).

Appendix table 21--Distribution of limited-asset corporate wholesale food firms, 1980-87 ^{1/}

Year	All firms		Small firms ^{2/}
	----- <u>Number</u> -----		<u>Percent</u>
1980	24,299	9,146	37.6
1981	27,149	11,774	43.3
1982	22,698	7,486	32.9
1983	24,066	8,890	36.9
1984	23,089	8,271	35.8
1985	24,808	10,901	43.9
1986	24,933	9,606	38.5
1987	25,483	10,498	42.2

^{1/} Firms that filed tax returns.

^{2/} Firms with less than \$100,000 in assets.

Source: (63).

Appendix table 22--Average concentration of top four grocery store firms by SMSA size, 1954-82 ^{1/}

SMSA population in 1980	1954	1958	1963	1967	1972	1977	1982
	<u>Percent</u>						
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/} An SMSA (Standard Metropolitan Statistical Area) defines an integrated economic and social unit such as a city and its outlying suburbs.

Source: (48).

Appendix table 23--Chain stores' share of grocery store sales

Store	1958	1963	1967	1972	1977
	<u>Percent</u>				
Supermarket	41.2	43.7	46.3	48.9	52.4
Other	2.8	3.3	5.1	7.0	6.3
Total	44.0	47.0	51.4	55.9	58.7
	<u>Percent</u>				
	1982	1986	1987	1988	1989
Supermarket	55.0	NA	NA	NA	NA
Other	6.5	NA	NA	NA	NA
Total	61.5	62.5	63.0	62.7	62.0

NA = Not available.
Source: (48).

Appendix table 24--Sales share of leading grocery chains

Year	4 largest chains	8 largest chains	20 largest chains
	<u>Percent</u>		
1958	21.7	27.5	34.1
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	15.8	24.5	35.8

Sources: (48) and ERS estimates.

Appendix table 25--Concentration among separate eating places

Year	Top 4 firms	Top 8 firms	Top 20 firms	Top 50 firms
	<u>Percent</u>			
1972 <u>1/</u>	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: (49).

Appendix table 26--Sales of top 25 food processing companies

Sales rank	Company	Sales <u>1/</u>		Change
		1989	1988	
		<u>Million dollars</u>		<u>Percent</u>
1	Philip Morris Companies, Inc., NY	25,802.0	13,051.0	98
2	RJR Nabisco, Inc., Atlanta, GA	9,888.0	9,420.0	5
3	Anheuser-Busch Companies, Inc. St. Louis, MO	9,363.0	8,003.0	17
4	ConAgra, Inc., Omaha, NE	8,590.6	6,850.0	25
5	IBP, Inc., Dakota City, NE	8,502.0	7,221.1	18
6	Pepsico, Inc., Purchase, NY	8,152.5	7,301.4	12
7	Coca-Cola Company, Atlanta, GA	8,000.0	7,643.6	5
8	Archer Daniels Midland Company, Decatur, IL	7,200.0	6,200.0	16
9	Nestle Holdings, Inc., Purchase, NY	5,961.0	5,770.0	3
10	Campbell Soup Company, Camden, NJ	5,700.0	4,870.0	17
11	H.J. Heinz Company, Pittsburgh, PA	5,492.0	4,970.1	11
12	Borden, Inc., New York, NY	5,385.8	4,657.3	16
13	Sara Lee Corporation, Chicago, IL	5,255.0	5,062.3	4
14	Quaker Oats Company, Chicago, IL	4,879.4	4,694.7	4
15	CPC International, Inc., Englewood Cliffs, NJ	4,700.8	4,903.0	-4
16	Ralston Purina Company, St. Louis, MO	4,554.8	4,294.2	6
17	Kellogg Company, Battle Creek, MI	4,348.8	3,793.0	15
18	Beatrice Companies, Inc., Chicago, IL	4,066.0	4,012.0	1
19	General Mills, Inc., Minneapolis, MN	3,999.0	3,752.6	7
20	Pillsbury Company, Minneapolis, MN	3,648.1	3,560.2	2
21	United Brands Company, Cincinnati, OH	3,317.0	3,195.0	4
22	Kroger Company, Cincinnati, OH	3,200.0	2,943.3	9
23	Procter and Gamble Company, Cincinnati, OH	3,029.0	2,963.0	2
24	Associated Milk Producers, Inc., San Antonio, TX	2,744.0	2,709.8	1
25	Castle and Cooke, Inc., Los Angeles, CA	2,665.0	2,268.0	18

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

Source: (15).

pop store segment is being gradually displaced by supermarkets and convenience stores.

Specialized foodstores, such as retail bakeries, meat and seafood stores, and produce markets, registered sales growth of only 2.9 percent in 1989. As a group, specialized foodstores experienced significant sales decline, amounting to 3.8 percent in inflation-adjusted dollars. As supermarkets become larger, they are able to offer food items of comparable variety and quality as specialized foodstores. This trend, combined with the convenience of one-stop shopping of larger supermarkets, has lured customers away from the smaller, more fragmented specialized foodstores.

Structure and Organization

The structure and organization of food retailing changes relatively little from year to year. Over longer time periods, however, dramatic restructuring and upheaval has occurred. These developments have implications for the efficiency and competitiveness of the food distribution and retailing industry.

Historical Developments

There were 387,000 grocery stores in 1939. Grocery stores accounted for only 70 percent of all foodstores, but 76 percent of foodstore sales.

Supermarkets, with their self-service and low-price features, numbered less than 1,700 stores and accounted for only 10 percent of total grocery store sales. The number of grocery stores has significantly declined since its peak in 1939, falling by 58 percent to 161,584 in 1989 (table 17). Grocery stores in 1989 accounted for all but 5.7 percent of foodstore sales due primarily to rapid supermarket growth over the last 50 years. Supermarkets have become the dominant grocery store segment measured by sales, capturing more than 75 percent of total sales in 1989 (table 18). Although their physical size has grown in recent years, supermarket numbers have declined since 1977 to 23,000 in 1989.

The rapid growth of grocery store chains during the early 1900's served to integrate what had previously been a highly fragmented supply and distribution activity. Because of the efficiencies gained in procurement, chainstores quickly became the low-price leaders among food retailers, fueling their rapid expansion. By 1930, there were more than 15,000 A&P grocery stores. The number of chainstores reached 80,000 in the early 1930's, but then steadily declined. At that time, independent retailers began to acquire comparable efficiencies as the chains, by forming affiliations with other independents, linked through contract to a single food wholesaler. Although most cost and price advantages have been eliminated, chainstores have increased their combined share of total grocery

Table 17--Number of grocery stores

Year	Total	Supermarkets	Convenience	Superettes
<u>Number</u>				
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	179,346	30,831	30,000	118,515
1982	168,041	26,640	38,700	102,701
1983 ^{1/}	167,113	26,480	40,400	100,233
1984 ^{1/}	166,183	26,265	42,950	97,008
1985 ^{1/}	165,254	26,229	45,400	93,625
1986 ^{1/}	164,326	25,629	47,000	91,697
1987	163,403	24,843	50,000	88,550
1988 ^{1/}	162,491	23,236	52,500	86,755
1989 ^{1/}	161,584	23,000	55,000	83,584

NA = Not available.

^{1/} ERS projection.

Sources: (32, 49).

Table 18--Number and sales of supermarkets ^{1/}

Year	Minimum annual sales needed to classify as a supermarket	Number	Sales	Share of grocery store sales
	1,000 dollars	<u>Number</u>	<u>Million dollars</u>	<u>Percent</u>
1958	747.0	15,282	23,562	53.9
1963	762.9	21,167	31,484	59.9
1967	825.7	23,808	43,433	67.6
1972	1,000.0	27,231	63,791	69.1
1977	1,515.0	30,831	110,849	75.0
1982	2,265.6	26,640	171,966	74.5
1983	2,321.8	26,480	184,568	76.8
1984	2,403.1	26,265	193,059	75.3
1985	2,453.3	26,229	201,843	74.9
1986	2,554.5	25,629	211,042	75.1
1987	2,659.3	24,843	219,890	75.6
1988	2,772.6	23,236	230,640	75.1
1989 ^{2/}	2,958.4	23,000	247,367	75.1

^{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/} ERS projection.

store sales--from 44 percent in 1954, to 62.0 percent in 1989 (app. table 23).

Another organizational form that developed in other retail trade sectors, but is relatively new to food retailing, is the business franchise. Franchising can provide small businesses with the resources and expertise to successfully compete with larger food retailing firms. Franchising became significant during the 1960's, as convenience store operators, including 7-Eleven (Southland Corp.) and Circle K, rapidly expanded with the concept. Some food wholesalers and retailers have also relied on franchising, such as many of the Cub supermarkets operated by Super Valu Stores, Inc. Franchising has contributed to growth among specialized foodstores such as ice cream, cookie, and donut shops as well.

There were 24,000 franchised foodstores in 1988 with total sales of \$12.5 billion (table 19). Convenience stores accounted for 27 percent of the number and 37 percent of sales of franchised foodstores.

Table 19--Number and sales of franchised foodstores, 1988

Type	Number	Sales
	<u>Number</u>	<u>1,000 dollars</u>
Convenience stores	6,417	4,648
All other foodstores ^{1/}	17,292	7,880
Total	23,709	12,528

^{1/} Includes supermarkets, other grocery stores, and specialized foodstores.

Source: (21).

Number and Size Distribution

Recently published 1987 Census of Retail Trade data (conducted every 5 years) permit a more detailed examination of the number and sales shares of grocery store establishments and firms. The largest percentage of grocery stores had annual sales

of less than \$500,000 (43.4 percent) but these smaller stores represented only 11.1 percent of total sales (fig. 35). Grocery stores with \$25 million or more in sales made up less than 1 percent of the total yet were responsible for 8 percent of all sales. Grocery stores with annual sales of \$10 million to less than \$25 million accounted for the largest share of total sales, amounting to 36.7 percent.

A similar pattern is evident in the number and sales distribution of grocery store firms (fig. 36). The largest number of firms had annual sales of less than \$1 million, equaling 75 percent of all firms. This class includes a high proportion of single store retailers. These small firms were responsible for only 7 percent of total firm sales, however. Less than 1 percent of all firms had sales of \$50 million or more, yet their combined sales amounted to 67 percent of all grocery store sales.

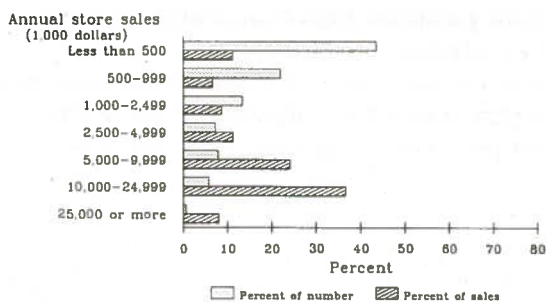
Store Formats

The average size of supermarkets opened in 1988 declined for the first time since 1979, according to the Food Marketing Institute. New stores averaged 40,800 square feet total area in 1988, compared with 46,892 square feet in 1987. Of the new supermarkets opened in 1988, conventional-sized stores were the most common, accounting for almost one-half of all stores. One of the fastest growing supermarket operators, Food Lion of Atlanta, GA, is building conventional supermarkets exclusively, contributing to the downward trend in store size.

The decline in new store size may be an indication that the fewer-but-larger trend of the 1980's has begun to slow.

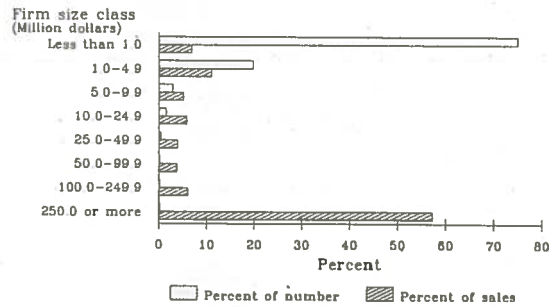
Because of their larger size, supermarket formats, such as the superstore, combination store,

Figure 35
Number and sales share of grocery stores, 1987 ^{1/}



^{1/} Grocery stores with paid employees.
Source: (49)

Figure 36
Number and sales share of grocery store firms, 1987 ^{1/}



^{1/} Grocery stores with paid employees.
Source: (49)

superwarehouse store, and the hypermarket, may be providing opportunities for smaller, more-convenient-to-shop formats, including conventional-sized and limited assortment stores. Several food retailers are experimenting with store formats by offering time-saving convenience through smaller supermarket formats. Vons Companies in southern California opened an Express Store that includes many items found in their larger supermarkets, in addition to deli, bakery, and other prepared foods. A 24-hour drive-through window operation is also featured. Super Valu Stores, Minneapolis, MN, recycled one of its former conventional stores as a prototype for an express format. The Super Valu Express is oriented toward fast foods and other perishables, although dry and packaged grocery items are available. In addition to offering shopping convenience, the format provides new options for older, smaller stores that cannot be easily expanded.

The Limited Assortment supermarket may be entering a growth stage once again, following a period of relative decline in the 1980's. Both variety and services are minimal, allowing gross margins of about 10 to 12 percent, compared with about 10 to 20 percent for conventional supermarkets (37). A number of food wholesalers and retailers have announced plans to expand their limited assortment store operations, including Aldi, Batavia, IL; Wetterau, a food wholesaler that franchises Save-A-Lot stores; Roundy's, Pewaukee, WI; and Associated Wholesale Grocer, Kansas City, KN.

Aggregate Concentration

The combined shares of the 4, 8, and 20 largest firms accounted for 15.8, 24.5, and 35.8 percent of all U.S. grocery store sales in 1988. Despite unprecedented levels of mergers, acquisitions (including investor takeovers), and financial

restructuring, there were only modest changes in the sales shares of the largest 4, 8, and 20 grocery store retailers during the 1980's (fig. 37 and app. table 24). Between 1982 and 1988, the top four retailers' share decreased by 0.3 percentage points, while the top eight firms' share increased by 0.9 percentage points. The largest 20 food retailers added 1.1 percentage points to their combined market share during the 6-year period.

Among the four largest firms, Kroger Co. maintained its leading position for the third consecutive year, with sales growing by 4.8 percent (app. table 27). American Stores moved from third to second place in 1988 with its acquisition of Lucky Stores, thus displacing Safeway Stores. Safeway Stores' sales fell \$5.3 billion as a result of southern California and Houston division divestitures associated with its earlier leveraged buyout. Sales of the top four retailers reached \$51.1 billion in 1988, a slight decrease from 1987.

Sales of the fifth- through eighth-ranked retailers rose 8.3 percent to \$28.7 billion in 1988. Tengelmann, A.G., foreign parent of The Great Atlantic and Pacific Tea Company (A&P), boosted its revenues with the acquisition of Borman's, a supermarket retailer in Detroit. Internal growth was responsible for a 15.4-percent sales increase by seventh-ranked Albertsons, Inc.

Sales of the 9th- through 20th-ranked companies reached \$37.1 billion, up 9 percent over similarly ranked retailers in 1987. Grand Union was purchased by an investment group from its foreign parent, General Occidentale (France). Bruno's became the 20th-ranked retailer after its purchase of Piggly Wiggly supermarkets operating in Georgia.

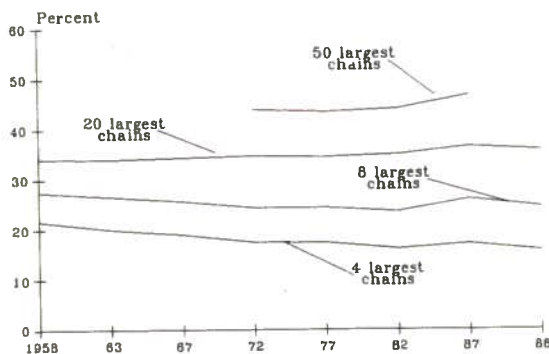
Ninth-ranked Publix Supermarkets, Inc. managed a 15.8-percent sales increase despite growing competitive pressures in its Florida market areas. Tenth-ranked Vons Companies' acquisition of Safeway Stores' southern California division contributed to a sales increase of 26.4 percent in 1988. Ahold International, the Dutch parent of BI-LO and Giant Food Stores acquired First National, operators of Finast, Pick-n-Pay, and Edwards Food Warehouse stores in the Northeast. With the addition of the First National division, Ahold jumped from the 18th-ranked to 12th-ranked retailer in 1988. Ahold also became the third largest foreign-owned U.S. grocery store operator after Tengelmann A.G. (West Germany) and Delhaize, Le Lion (Belgium). Delhaize, Le Lion, the foreign parent of Food Lion, achieved a 29.2-percent growth rate in 1988 through new store openings in the Southeastern United States. Food Lion has expanded largely internally, building 100 conventional-sized supermarkets in 1988.

Mergers and Divestitures

The number of food retailing acquisitions increased in 1988 to 76 after a sharp decline in 1987. The number of 1988 acquisitions is still below the record 91 acquisitions recorded in 1986 (table 20). U.S. food retailing firms made more than half of all acquisitions. Divestiture activity remained strong. Fifty-one of the 76 acquisitions involved divestitures by other firms. Buyers not classified as food retailers made 35 food retailing acquisitions. Grand Union, which had been purchased by an investor group in 1988, was acquired by Penn Traffic Co. for \$1.2 billion in 1989. Because of overlapping markets in smaller cities and towns, the Federal Trade Commission (FTC) required the sale of 16 stores in Vermont and New York. Penn Traffic and its investors also signed a consent order requiring FTC approval over the next 10 years before acquiring additional grocery stores in areas where stores were divested.

Southland Corporation (7-Eleven stores) divested assets worth \$744 million in 1989, following its leveraged buyout. Southland raised \$750 million through the divestiture of its ownership share in Citgo Oil and 58 7-Eleven stores in Hawaii early in 1990. In April 1990, Southland announced a proposed sale of 70 percent of the company to a Japanese food retailer, the Ito-Yokado Group, for \$400 million. The Ito-Yokado Group would also assume about \$600 million in debt, bringing the value of the purchase to about \$1 billion.

Figure 37
Sales share of leading grocery chains



Source (49)

Table 21--Five largest investors in U.S. grocery retailing

Foreign investor/ country of headquarters	U.S. affiliate	U.S. grocery store sales	
		1988	1987
		Million dollars	
Tengelmann A.G. (West Germany)	A&P	8,205	7,859
	Shopwell	1/	1/
	Waldbaum	1/	1/
Delhaize, Le Lion (Belgium)	Food Lion	3,815	2,954
Ahold International (The Netherlands)	BI-LO	1,270	1,601
	Giant Food Stores 2/	697	559
	First National	1,547	NA
George Weston, Ltd. (Canada)	National Tea Co.	1,857	NA
Sainsbury, Ltd. (United Kingdom)	Shaw's Supermarkets	1,463	1,222
	Iandoli's Supermarket	3/	3/
	Total	18,854	14,195

NA = Not available.

1/ Included in A&P subsidiary total sales.

2/ Giant Food Stores, Carlisle, PA.

3/ Included in Shaw's sales.

investors that included former Grand Union management in 1988.

Expenditures by foreign companies in U.S. food retailing rose to \$238 million in 1988, compared with \$78 million in 1987. These outlays were used entirely for acquisition of U.S. foodstore assets. Expenditures in 1989 include the purchase of 21 former Kroger supermarkets in North and South Carolina by Ahold International and the conversion of 11 former Lucky supermarkets in northern California to the Petrini's banner by Provigo (Canada).

U.S. direct investment abroad in foodstores and eating and drinking places totaled \$2.5 billion in 1988 (app. table 72). Direct investment is measured as the book value of total assets owned by U.S. firms abroad. U.S. food retailers having significant investments in foreign foodstore operations include Safeway stores and convenience store operators Circle K and Southland Corporation. Safeway operates 240 conventional supermarkets in Western Canada. Circle K has licensing agreements for stores in the United Kingdom and Japan. Southland Corporation, operator of 7-Eleven stores,

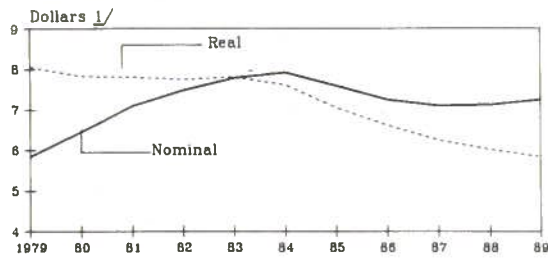
has licensing agreements covering 4,000 7-Eleven stores in Japan.

Employment and Wages

Foodstore employment grew by 5.5 percent to 3.3 million workers in 1989 (app. table 39). Grocery stores accounted for 88 percent of the foodstore total, with 2.9 million employees, a 4.5-percent gain over 1988. Employment figures include both full-time and part-time workers. Growth rates in foodstore employment have maintained high levels in the 1980's. Between 1982 and 1989, foodstores experienced a compounded employment growth rate of 3.5 percent, while grocery stores averaged a 3.7-percent growth. Both the greater use of part-time schedules and the growth of more labor-intensive store services have contributed to employment growth during the past decade.

Average hourly earnings of grocery store employees returned to 1986 levels after declines in 1987 and 1988, reaching \$7.23 in 1989 (app. table 41 and fig. 38). The average hourly earnings measure does not include lump-sum pay or profit-sharing income, two compensation forms that became common among

Figure 38
Average hourly earnings, grocery store employees



1/ Real wages are adjusted for inflation by the Consumer Price Index and expressed in constant 1982-84 dollars. Nominal wages are expressed in current dollars. Source: (61)

food retailers during the 1980's. The Bureau of Labor Statistics (BLS) estimates that 43 percent of all negotiated contracts in 1989 contained lump-sum payment provisions. These agreements averaged only 1.8 percent in wage increases, compared with an average 3.3-percent increase in wages among contracts not including such payments.

Grocery store wage rates continued to fall in real, inflation-adjusted terms (fig. 38). Real hourly earnings declined to \$5.83 in 1989, down from \$6.02 in 1988, and substantially below the 1982-84 reference period average of \$7.73. Real hourly earnings have not kept pace with inflation rates during the 1980's, in part due to employer demands for significant wage and benefit concessions after 1982. The impact of those contract renegotiations can be seen in the agreements reached in 1989 and 1990. A majority of the wage adjustments during that period represent deferred increases from contracts specified in 1987 and 1988. A considerable number of accords recently announced involve retroactive pay increases or partial to full restoration of earlier concessions. New agreements give evidence that foodstore employees are resisting both the use of lump-sum payments in lieu of wage hikes and the use of lower wage progressions for new hires. These provisions had been used by food retailers along with across-the-board concessions to reduce labor costs.

Examples of grocery stores that negotiated contract settlements in 1989 and 1990 include Acme Supermarkets (American Stores, Inc.) in eastern Pennsylvania, Delaware, and southern New Jersey. The contract settlements provide for wage increases in addition to job guarantees during the contract period for employees meeting time-in-service requirements. Acme Supermarkets in the

Philadelphia area also signed a new contract which eliminated a lower tier wage schedule, provided an annual 60-cent hourly increase for wage rates of \$12 or more, and raised the wage progression of all other employees. Safeway Stores, Inc., operating in the Richmond, VA area, signed a new contract that restores many of the pay concessions obtained following the leveraged buyout of the company in 1986. The increases ranged from \$1 to \$2.75 per hour. Grocery store workers in northern California received retroactive wage rate increases in addition to lump-sum payments due in March 1990 and 1991, and September 1991. There are 38,000 employees affected by the agreement. Food Employers Councils in Cleveland and Akron, OH, approved a lump-sum payment equal to 4 percent of employee salary. Kroger Co. in Arkansas negotiated a no-wage adjustment but provided department head and full-time employee bonuses of up to \$1,000. Sunday work premiums were limited to \$1 per hour. Paid personal days off were eliminated. The 27,000 employees of Giant Food Stores, Inc., and Safeway Stores, Inc. in the Washington, DC, and Baltimore, MD, areas received an across-the-board raise of \$1 per hour. In addition, workers hired before 1983 will receive a 45-cent per hour increase in March 1990 and 1991, plus lump-sum payments of \$200 to \$500. Employees hired after 1983 will benefit from new rates that boost lower tier wages. Benefits negotiated include full payment of health insurance premiums by employers.

The effective wage rate adjustments (excluding lump-sum payments) resulting from major bargaining agreements in wholesale and retail trade increased 3.2 percent on average in 1989. Earnings of all foodstore employees (including workers not covered under contracts) rose on average only 1.8 percent. Sustained modest wage adjustments during the 1980's have allowed food retailers to introduce more labor-intensive services while controlling labor costs.

Performance

The economic performance measures of the food retailing industry include financial measures, productivity, and the introduction of new technology and innovations.

Financial Measures

Food retailers with \$50 million or more in assets, accounting for almost 60 percent of grocery store sales, experienced higher profit rates in 1989 than in 1988. Return on stockholders' equity averaged 14.6

percent in 1989, up from 12.5 percent in 1988 (app. table 53). Similarly, productivity of assets rose in 1989, with return on assets measuring 2.4 percent, compared with 0.9 percent in assets in 1988 (55).

Significant changes in the financial structure of food retailing firms have taken place during the 1980's, partly the result of mergers, divestitures, and leveraged buyout activities. Although operating income increased 37 percent, from 1.9 percent of sales in the recession year of 1981 to 2.6 percent of sales in 1989, nonoperating expenses reached 1.2 percent of sales in 1989, a sixfold increase over the 1981 average of 0.2 percent (table 22). Most of the increase in nonoperating expenses can be attributed to debt servicing (interest charges). Income before taxes in 1989 equaling 1.4 percent of sales compared favorably with the 1981 measure of 1.7 percent of sales, a result of the higher level of operating income as a percentage of sales in 1989. Evidently, a number of food retailers have been able to increase operating income through improvements in gross margins, allowing for positive net income despite higher interest expenses.

The importance of long-term debt in the industry has grown dramatically. Accounting for only 21 percent of assets in 1981, long-term debt amounted to 84 percent of assets in 1989. At the same time, the use of the leveraged buyout, in which securities (stock) of publicly held companies are purchased by private investors, has greatly reduced shareholder equity. Between 1981 and 1989, stockholders' equity as a percentage of total assets fell from 36.3 percent to 16.2 percent. The use of financial leveraging by food retailers is also apparent in the decline in the stockholders' equity-to-total-debt ratio.

Stockholders' equity equaled 1.5 times the amount of total debt in 1981. By 1989, stockholders' equity represented only one-third of total debt.

The full impact and implications of the resulting higher debt levels on industry performance is not yet clear. Food retailers compete largely in local market areas. Given market competitive conditions, a highly leveraged (high debt-to-equity ratio) food retailer may not be able to increase gross margins through higher prices. Rather, the debt-laden firm may seek to lower operating and purchase costs, sell (divest) poorly performing or costly assets, scale back capital expenditures, and use other means to improve profit performance while amortizing debt. Divestiture of assets such as a supermarket division or even individual stores can have a deconcentrating effect on the industry and markets, and acts to offset concentration increases due to mergers and acquisitions.

Productivity and Technology

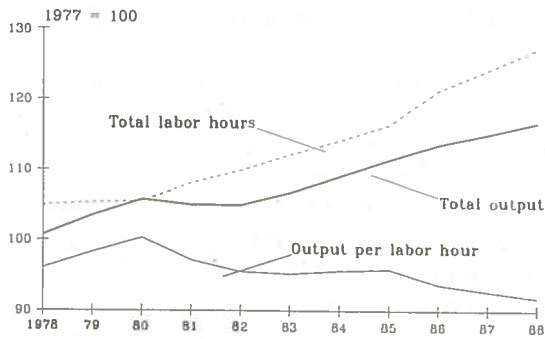
Stable or declining labor costs may be contributing to greater labor hours, and in turn, a decline in the productivity of foodstore workers. The total hours' index increased by 2.4 percent in 1988 following a similar rise in 1987 (fig. 39). Between 1980 and 1988, foodstore labor hours grew by more than 20 percent, as food retailers have greatly expanded labor-intensive store services. During the same 8-year period, total output grew by only 10 percent. Output per hour has fallen as a result of these trends. Output per labor hour dropped by 1 percent in 1988, following a 1.1-percent decrease in 1987. Labor productivity (output per labor hour) fell by 8.5 percent between 1980 and 1988.

Table 22--Food retailing companies with \$50 million or more in assets

Year	Share of sales			Share of assets		Profit rate		Total stockholders' equity to total debt
	Operating income	Nonoperating expenses	Income before taxes	Long-term debt	Stockholders' equity	Return on stockholders' equity	Return on assets	
	Percent							Ratio
1981	1.9	0.2	1.7	21.0	36.3	12.5	0.9	1.5
1989	2.6	1.2	1.4	83.8	16.2	14.6	2.4	.3

Source: (55).

Figure 39
Foodstore productivity



Source (82)

Food retailers are introducing new computer technology in order to reduce labor and other operating costs wherever possible. Although electronic scanning technology is well established, new applications of the information byproduct from scanning are being adopted. New applications include electronic shelf labeling, computer-assisted inventory reordering and direct store delivery management, checkout operations monitoring, self-service checkouts, shelf-space allocation, and merchandising evaluation. A number of supermarket retailers are developing databases consisting of scanner-generated sales data combined with demographic characteristics of individual customers. UKrop's Super Markets (Richmond, VA), Dahl's Food Markets (Des Moines, IA), Ralph's Grocery Co. (Compton, CA), and BI-LO stores in Charleston, SC, have introduced frequent shopper clubs that provide incentives in exchange for customer characteristics data. The databases have promise for improving marketing and merchandising programs that focus on individual consumers or households.

Food Service

The foodservice industry can be divided into two general categories, commercial and noncommercial establishments:

- **Commercial establishments:** Establishments which are free-standing or included in part of a host establishment, whose only reason for being is to make a profit on the sale of meal and snack items to the general public. Meals and snacks can be consumed on-premise or off-premise.

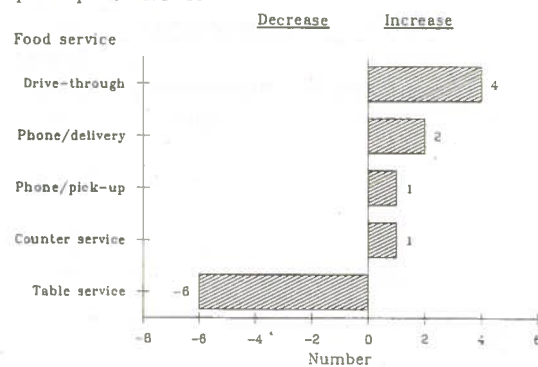
- **Noncommercial establishments:** Establishments where meals and snacks are prepared and served as an adjunct, supportive service to the primary purpose of the establishment. These establishments have a primarily captive customer base which is dependent on the foodservice source for meals and snacks.

Foodservice sales in 1989 were flat. Fast-food sales were up slightly while full-service sales were down, compared with a year earlier. The annual number of table service meals consumed per capita dropped by six between 1985 and 1989. Drive-through and delivery service were the major gainers over the same period (fig. 40). In 1988, almost \$193 billion worth of meals and snacks, excluding alcoholic beverages, were sold through nearly 732,000 foodservice establishments. The commercial (food-sales-for-profit) sector grew in sales from \$136 billion in 1987 to \$143 billion in 1988. The noncommercial (food-as-a-service) sector enjoyed a \$2 billion increase from \$48 billion in 1987 to nearly \$50 billion in 1988 (49).

The foodservice industry continued to suffer from a shrinking labor pool, especially among young adults who provide much of the work force in the fast-food sector. The demand for labor is not expected to abate in the near future. Employment for food preparation and service positions is expected to grow 37 percent between 1986 and 2000. Over that period, eating and drinking places will add the largest number of jobs to the economy, 2.5 million.

Each person in the United States now disposes of about 4 pounds of solid waste each day. Some of the most visible trash is made up of packages and

Figure 40
Change in the number of meals consumed per capita, 1985-89



Source (27)

wrappers from fast-food restaurants. Although the foodservice industry produces less than 10 percent of the Nation's solid waste, the industry's styrofoam packaging and colorful logos are easily recognized amidst roadside trash.

Calls for better disposal efforts and recycling come from many quarters. Because most jurisdictions are still involved in the logistics of residential recycling, food service has yet to feel the full impact of waste legislation. However, the laws are coming, as may be seen by the large number of bills currently in State legislatures (35).

Food safety issues in the foodservice sector tend to center on in-house practices rather than agricultural production problems. Diners do not seem to be as worried about growth hormones and pesticides in the foods they order in restaurants. Rather, they are concerned with service, cleanliness, and nonsmoking sections. Thus, foodservice operators spend more time monitoring sanitation and safe storage and holding times and temperatures for the foods they handle than they spend on addressing the day's more popular food safety concerns. Increasingly, operators are also making an effort to provide their patrons with health and nutrition information on various menu items.

Sales

In 1989, sales among eating and drinking places were flat, according to preliminary census figures. Fast-food operators saw their sales rise only a fraction of a percent while full-service sales were down by a similar amount. For the first time since ERS began tracking foodservice sales, fast-food outlets had greater sales than the full-service sector. Overall, commercial sales accounted for 74 percent of foodservice sales, while the noncommercial sector accounted for 26 percent. These proportions have remained steady over the past several years.

Sales among the Nation's eating and drinking places were up 6.6 percent in 1988 (the most recent year for which detailed data is available). In real terms, that translates into a 2.5-percent increase (fig. 41). Fast-food outlets again led the sector with a sales increase of 8.4 percent. Full-service restaurants had a 6.1-percent sales increase (about 2 percent real) in 1988. Takeout service continued to pace the industry. Per capita takeout dinners grew to 17 per year in 1988 (fig. 42). Growth areas in the noncommercial sector included the educational and transportation industries, while sales were down

Figure 41
Inflation-adjusted sales growth by type of restaurant

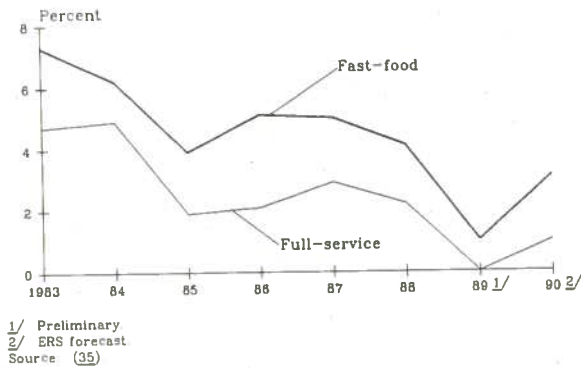
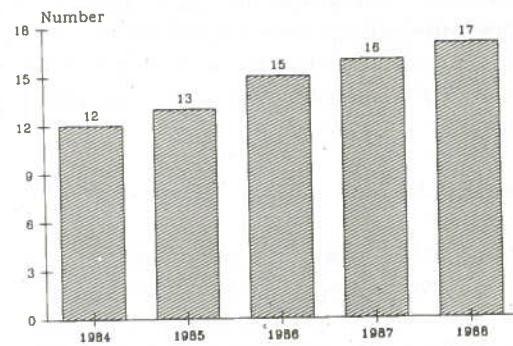


Figure 42
Take-out dinners per person, per year



Source (35)

somewhat in military and employee foodservice operations.

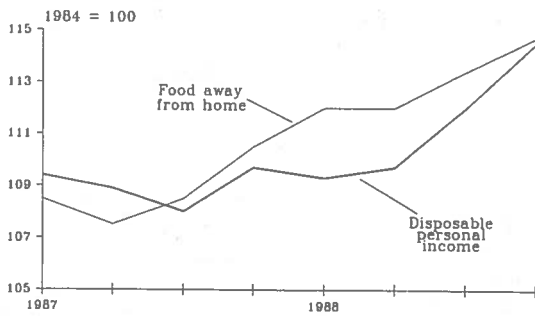
Foodservice gains in colleges and universities continue to work mainly to the advantage of contractors who have become major players in the educational sector. Contractors are expected to post a 1990 sales gain of about 6 percent. Colleges and universities operating their own food service should see 1990 sales decline by about 1 percent.

The trend in consumer expenditures for food away-from-home continued to closely parallel the trend line of disposable personal income during 1988 (fig. 43). Such correlation is expected to continue into the 1990's, pointing to slow but steady increases in foodservice sales during the next few years.

Structure and Organization

The foodservice industry is made up of nearly 732,000 establishments, including both commercial and noncommercial sectors. Separate eating places

Figure 43
Food-away-from-home expenditures versus
disposable personal income, by quarter



Source (1)

that derive revenue mainly from sales of meals and snacks accounted for 63 percent of commercial foodservice establishments and 87 percent of sales. These proportions have held steady for the past several years. Sales in the noncommercial sector were up about 4 percent in 1988 over 1987 (app. table 15).

Franchising

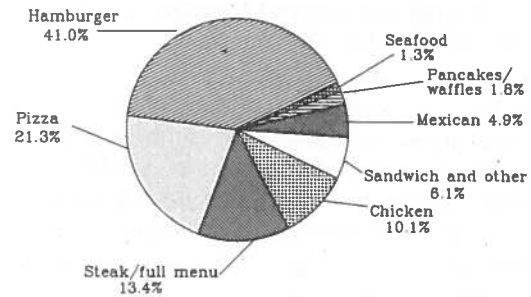
Franchising continues to grow (table 23). According to the franchising survey conducted by the International Franchising Association, there were 90,345 franchise restaurant units in the United States in 1988--more than 25 percent of all types of franchise units (21).

Moreover, sales from franchise restaurants in 1988 reached \$64.3 billion--36 percent of total business-franchise sales and half of total sales for eating places. On a per-unit basis, franchise restaurants had revenue of roughly \$711,500 in 1988, substantially higher than the \$526,038 average sale per unit for all franchise units.

Franchise restaurants are expected to continue to grow. Survey participants projected that by 1990 there will be 102,135 franchise restaurant units, with sales exceeding \$76.5 billion. This represents an average annual unit growth of 6.5 percent between 1988 and 1990 and an annual average 9.5 percent advance in sales. Unit sales for franchise restaurants should reach \$749,167 in 1990--up by an annual average rate of 2.6 percent between 1988 and 1990.

Among restaurant franchises, hamburger units accounted for the greatest number of units and they also lead in franchise sales (fig. 44). In 1988, there were more than 37,000 hamburger franchises in the United States with total sales of \$32 billion.

Figure 44
Franchise restaurant breakdown
by theme, 1988



Source: (21)

Hamburger units account for 4 out of every 10 franchise units. Pizza outlets follow with 21 percent of total units, while steak and chicken outlets rank third and fourth, respectively (21).

Mergers

The foodservice industry counted a total of 75 acquisitions and 29 divestitures in 1988, compared with 77 acquisitions in 1987 and 81 in 1986 (app. table 30). In 1989, merger and acquisition activity continued to be brisk. Restaurant and foodservice concerns were involved in 39 mergers and acquisitions during the first 6 months of 1989, compared with 30 in the first half of 1988 (1). By far the largest acquisition during 1989 was the Grand Metropolitan, PLC purchase of Pillsbury, which gave Grand Met the Burger King chain--second only to McDonald's among U.S. restaurant chains (table 24).

In the wake of the strong 1988 merger and acquisition activity in the food industry:

- Grand Metropolitan, PLC, sold the Bennigan's and Steak & Ale chains for \$430 million. The chains were acquired when Grand Met took over Pillsbury. Quik Wok restaurants were also sold. Grand Met also laid off 550 people at Pillsbury's Minneapolis headquarters, reducing that work force by 23 percent (1). Grand Met also put up for sale Van de Kamp frozen fish division and Bumble Bee canned tuna division. Van de Kamp had fiscal year 1988 sales of \$315 million and Bumble Bee had \$283 million.
- The Marriott Corporation announced late in 1989 that it would sell nearly 800 restaurants: 358 company-owned Roy Rogers restaurants

Table 23--Franchise restaurants in the United States

Item	1988	1989 1/	1990 1/	Percentage increase	
				1988-89	1989-90
			<u>Number</u>		<u>Percent</u>
Total number of establishments:					
Company-owned	27,305	27,761	29,313	1.7	5.6
Franchisee-owned	63,040	66,524	72,822	5.5	9.5
Total	90,345	94,285	102,135	4.4	8.3
			<u>1,000 dollars</u>		
Total sales:					
Company-owned	22,276,989	23,438,938	25,688,238	5.2	9.6
Franchisee-owned	42,003,446	45,655,170	50,827,883	8.7	11.3
Total	64,280,435	69,094,108	76,516,121	7.5	10.7
Average sales per unit:					
Company-owned	816	844	876	3.4	3.8
Franchisee-owned	666	686	698	3.0	1.7
Total	711	733	749	3.0	2.3

1/ Value for 1989 and 1990 are estimates from survey participants.

Source: (21).

Table 24--Major acquisitions, 1989

Acquirer	Acquisition (Parent)	1988 U.S. sales of acquisitions
		<u>1,000 dollars</u>
Grand Metropolitan	Burger King (Pillsbury)	\$4,944
Coniston Partners	TW Services (including Denny's, El Pollo Loco, and Quincy's)	1,700
Castle Harlan	Jerrico	620
Metromedia Company	Bonanza Restaurants	571
A. Copeland Enterprises	Church's Fried Chicken	559
Benale Corporation	Bennigan's	500
Marie Callender's (LBO)	Marie Callender's (Ramada)	245
Benale Corporation	Steak and Ale	200
Inno-Pacific Holdings	Shakey's	145
Kettle Restaurants (LBO)	Kettle Restaurants	123
Steakhouse Acquisitions	York Steak House (34 units)	NA

NA = Not available.

Source: (35).

and 434 family restaurants such as Bob's Big Boy, Wag's, and Howard Johnson's. Most of the Roy Rogers chain was sold to Hardee's for \$365 million. The sale virtually moved Marriott out of the restaurant business. The company had already divested its In-Flite division to a management-led investment group for \$570 million. In moving out of the restaurant business, Marriott noted the very aggressive pricing among the fast-food giants and increased competition for the foodservice dollar from convenience stores and supermarket take-out operations. Marriott will concentrate on expanding its lodging segment (538 properties) and contract feeding operations (2,100 accounts), which together accounted for 86 percent of the company's 1989 revenues (27).

Convenience Stores

Convenience stores continue their move into fast foods. The number of convenience stores offering food service was up 6 percent from 1987 to 1988, a very modest increase compared with the 77-percent increase from 1984 to 1985 when convenience stores were making a major push into fast foods. About 83 percent of all convenience stores offered some type of food service in 1988, compared with 33 percent in 1981. Most stores are offering only basic sandwich, soft drink, and microwavable items. Only 4 percent of the convenience stores with food service offer pizza and 3 percent serve fried chicken (27).

Performance

Eating and drinking places employed 6.6 million people in 1988. The index of output per hour in eating and drinking places rebounded slightly from 90.7 in 1987 to 91.3 in 1988 (1977=100) (62). Still, output per hour in the 1983-88 period showed an annual average rate of change of -0.6, due at least in part to added services such as delivery and drive-throughs which increase labor costs while not necessarily increasing sales.

Menu Prices and Costs

Menu prices were up 4.1 percent in 1988 and 4.6 percent in 1989. ERS forecasts about a 4.8-percent increase during 1990 on the Consumer Price Index (1982-84=100), to 133.5 compared with 127.4 in 1989.

Wholesale food prices increased 2.7 percent in 1988 and 5.1 percent in 1989. Higher food costs, coupled

with a large number of "deals"--cents-off, two-for-one offers, couponing--put a squeeze on overall receipts and profits, especially in the fast-food sector. In 1990, wholesale food price increases are again expected to be up more than 5 percent for the year.

Industry labor costs were up only 2.7 percent in 1988, but rose by 4.2 percent in 1989. A much greater increase--6.5 percent--is forecast for 1990, since the new Federal minimum wage (\$3.80 per hour) went into effect in April. Federal or State legislation on employee benefits might further drive up labor costs during 1990. A tight labor market and higher training costs could put additional upward pressure on labor costs.

Other costs are projected to rise 4.4 percent in 1990, keeping pace with the anticipated overall inflation rate. An influential factor in other costs will be solid waste removal, the cost of which is spiraling at double-digit rates in some parts of the country. Energy prices are expected to increase at a significant rate. Insurance rates could increase at higher-than-inflation levels, due to damage from Hurricane Hugo and the 1989 California earthquake, and from higher premiums to cover the growing number of delivery vehicles being used in food service.

In the fast-food sector, market saturation, coupled with changing demographics and cost increases, have slowed both growth and profits. Major players in the fast-food sector are turning more to overseas expansion now that "all the corners are rented" in the United States.

Foreign Activities

A new 108,000 square-foot McDonald's food processing and distribution center near Moscow will supply projected joint venture restaurants in the Moscow area where 20 additional units are planned by McDonald's of Canada and the Moscow City Council (1). Already 25 percent of McDonald's 11,000 outlets are overseas; mainly in Japan (700), Canada (600), and West Germany (300). In the fall of 1989, Kentucky Fried Chicken opened its 3,000th unit outside the United States (in Seoul, Korea). Kentucky Fried Chicken operates more restaurants overseas than any other chain, nearly 40 percent of its outlets are outside the United States (27). The recent opening of several Eastern European countries and markets, and the ever-tightening domestic market, point to continued growth in international openings in the years ahead.

Profits

Profits, as a percentage of sales, ranged from 2-12 percent in 1988. However, profit performance varied widely over foodservice sector firms. Returns on equity continued in the 20-percent range for some of the industry leaders. The percentage of meals purchased at discount in fast-food restaurants grew from 12 percent in 1984 to 20 percent in 1988. Discounting continued to grow in 1989 and, in 1990, meals purchased at discount in fast-food outlets are expected to reach 21.6 percent. Wendy's, Rax, and Taco Villa were among the fast-food chains whose profits dropped after a year of intense discounting. Full-service restaurants have also increased their efforts in price promotions. In 1984, only 8.3 percent of meals were bought at discount in full-service restaurants. An industry trade forecast for 1990 sees 15.4 percent of full-service meals being sold at discount (27).

Concentration

The largest U.S. eating place firms continued to gradually increase their shares of sales between 1982-87, according to the Censuses of Retail Trade. The Nation's 4 and 50 largest eating place firms held 5 and 20 percent of sales, respectively, in 1982. In 1987, their comparable shares were 8 and 22 percent. Among fast-food restaurants, the 4 and 50 largest firms held market shares of 9 and 26 percent, respectively, in 1982. Those shares were up to 11 and 27 percent in the 1987 census (49). These are sales of owned outlets only, not including franchising. The relevant market focus for most firms is local or regional, so national market concentration data does not provide very useful information on market power in specific geographic subsectors.

Advertising

In 1988, the foodservice industry continued to favor television as its advertising medium. The top five advertising spenders invested about \$988 million in nine-media advertising and 90 percent of that amount was spent on television promotions. McDonald's continued to lead foodservice advertisers in 1988, spending \$401 million, mainly on network and spot television advertising (app. table 45). Pepsico promoted its Kentucky Fried Chicken, Pizza Hut, and other foodservice concepts to the tune of more than \$270 million during 1988. Pillsbury invested \$230 million in nine-media advertising during 1988 (3). The relative positions

of the top foodservice advertisers remained much the same in 1989.

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Market Size and Sales

Appendix table 1--Food expenditures in the food marketing system ^{1/}

Year	Off-premise use				Food service				
	Food-stores	Other stores	Home-delivered, mail order	Farmers, manufacturers, wholesalers	Total sales	Commer-cial	Noncom-mercial	Total	Total
<u>Billion dollars</u>									
1963	44.1	3.0	2.7	1.6	51.5	NA	NA	22.6	74.1
1967	52.1	3.3	2.5	1.6	59.5	NA	NA	30.4	89.9
1972	75.5	3.9	2.4	1.8	83.6	NA	NA	46.6	130.2
1977	118.3	7.1	2.3	2.9	130.5	58.6	26.4	84.9	215.4
1982	179.1	10.8	2.6	4.2	196.7	100.1	40.8	140.7	337.5
1983	187.8	12.6	2.8	4.3	206.8	109.4	43.3	152.7	359.5
1984	196.7	14.1	3.0	4.5	218.3	117.3	46.7	164.1	382.4
1985	204.4	15.3	3.2	4.6	227.5	124.1	48.7	172.8	400.3
1986	209.6	16.9	3.5	4.7	234.7	134.7	52.7	187.4	422.1
1987	216.3	16.4	4.6	4.7	242.1	149.7	56.9	206.6	442.8
1988	226.9	18.2	5.1	4.8	255.1	162.3	59.9	222.2	477.3
1989 ^{2/}	241.5	19.5	5.7	5.0	271.6	171.0	63.8	234.8	506.4

NA = Not available.

^{1/} Includes taxes and tips. Excludes home food production.

^{2/} Preliminary.

Source: (23).

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	
<u>Million dollars</u>									
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	32,740	18,371	2,849	1,488	22,708	55,449
1983	16,870	14,797	4,023	35,690	19,155	3,126	1,613	23,894	59,580
1984	16,297	16,638	4,537	37,272	20,090	3,380	1,698	25,168	62,440
1985	17,217	17,011	5,007	39,225	21,009	3,633	1,821	26,463	65,698
1986	17,567	17,663	5,616	40,846	22,752	3,770	1,934	28,456	69,802
1987	17,477	18,161	5,852	41,490	23,755	4,207	2,108	30,670	71,560
1988	17,283	18,686	6,135	42,100	25,052	4,559	2,265	31,876	73,980
1989 ^{2/}	17,639	19,721	6,568	43,924	25,861	4,987	2,382	33,240	77,169

^{1/} Includes tips.

^{2/} Preliminary.

Source: (23).

Appendix table 3--Supermarket sales by product category

Product	1988 sales volume	Share of supermarket sales	Change, 1987-88	Average annual rate (5-year compounded)
	Million dollars		Percent	
Baby food	1,409.66	0.59	10.17	7.34
Baking needs	4,102.19	1.71	2.46	.39
Beer and wine	7,054.84	2.94	3.35	3.11
Breakfast foods	5,754.12	2.39	9.94	8.88
Candy and gum	2,727.11	1.13	1.05	4.14
Canned fish	1,922.26	.80	7.52	2.85
Canned fruit	1,247.02	.52	4.83	2.99
Canned meat and specialty foods	1,381.90	.57	3.54	4.12
Canned vegetables	2,574.41	1.07	2.77	1.57
Coffee and tea	3,815.49	1.59	-5.41	.40
Cookies and crackers	5,061.84	2.11	5.82	5.99
Desserts and toppings	676.88	.28	4.83	6.27
Diet and low-calorie foods	989.13	.41	8.34	6.42
Dried fruit	534.11	.22	1.11	12.03
Dried vegetables	894.33	.37	19.39	6.69
Juice (grocery)	3,333.87	1.39	3.59	5.95
Nuts	858.60	.36	-3.84	3.13
Pasta products	1,465.44	.61	10.03	8.59
Pickles and olives	923.21	.38	3.78	1.37
Sauces and dressings	3,895.58	1.62	5.59	5.90
Snacks	3,620.63	1.51	4.74	7.07
Soft drinks and mixes	9,584.21	3.99	6.84	6.12
Soups	1,784.23	.74	5.45	5.49
Spices and extracts	846.88	.35	3.63	3.77
Spreads and syrups	1,620.00	.67	1.65	3.02
Total grocery edibles	68,077.94	28.32	4.63	4.62
Household supplies	8,099.71	3.37	1.65	3.43
Paper, plastic, film, and foil products	9,129.46	3.80	5.83	5.47
Pet foods	5,015.80	2.09	3.29	4.49
Tobacco products	8,061.66	3.35	2.67	2.18
Total grocery nonedibles	30,306.63	12.61	3.43	3.84
Bakery foods, packaged	8,170.63	3.40	5.70	4.42
Dairy products	19,162.22	7.97	2.35	2.74
Delicatessen products	6,114.49	2.54	11.30	8.00
Frozen foods	14,925.65	6.21	4.96	4.94
Ice cream	2,294.39	.95	-1.00	4.14
Meat	40,981.89	17.05	6.37	3.64
Produce	22,625.32	9.41	7.33	7.84
Total perishables	114,274.59	49.34	5.90	5.48
General merchandise	10,354.86	4.31	3.50	4.42
Health and beauty aids	9,835.46	4.09	6.50	6.96
Unclassified 1/	3,198.58	1.33	NA	NA
Total supermarket	240,400.00	100.00	5.21	4.91

NA = Not applicable.

1/ Includes prescription and nonprescription drug products, fresh fish, catering services, sit-down food service, off- and onsite baked goods, seasonal merchandise, distilled spirits, money orders, and other such goods and services.

Sources: (2, 23).

Appendix table 4--Foodservice sales by industry segment, 1981-88 1/

Industry segment	1981	1982	1983	1984	1985	1986	1987	1988 2/
<u>Million dollars</u>								
Commercial:								
Separate eating places--								
Restaurants and lunchrooms	38,805	40,931	44,731	48,419	52,296	54,767	57,942	60,476
Fast-food outlets	31,523	36,492	41,898	47,319	51,455	54,077	56,822	60,597
Cafeterias	2,575	2,699	2,871	3,022	2,992	2,817	2,919	3,033
Total	72,903	80,122	89,500	98,760	106,743	111,661	117,683	124,106
Lodging places	5,939	6,164	6,756	7,264	7,355	7,862	7,913	8,020
Retail hosts	3,835	3,943	4,318	4,779	4,910	5,242	5,391	5,499
Recreation and entertainment	2,471	2,813	3,093	3,394	3,510	3,935	4,215	4,468
Separate drinking places	1,121	1,098	1,111	1,076	982	903	844	817
Commercial feeding total	86,269	94,140	104,778	115,273	123,500	129,603	136,046	142,910
Noncommercial:								
Education--								
Elementary and secondary	8,099	7,368	7,537	7,930	8,472	8,673	8,803	8,973
Colleges and universities	3,126	3,487	3,886	4,092	4,230	4,403	4,544	4,735
Other education	152	175	201	217	240	267	277	283
Total	11,377	11,030	11,624	12,239	12,942	13,343	13,624	13,991
Military services--								
Troop feeding	1,619	1,644	1,709	1,765	1,853	1,933	2,002	2,076
Clubs and exchanges	490	522	546	601	617	627	642	666
Total	2,109	2,166	2,255	2,366	2,470	2,560	2,644	2,742
Plants and office buildings	5,669	5,919	6,258	6,793	7,186	7,365	7,525	7,826
Hospitals	5,366	5,609	5,715	5,817	5,905	6,392	6,750	7,028
Extended care facilities	4,072	4,797	4,983	5,281	5,452	5,522	5,752	5,982
Vending	3,183	3,214	3,348	3,553	3,730	3,685	3,705	3,838
Transportation	1,656	1,685	1,793	1,922	1,996	2,296	2,469	2,822
Associations	1,276	1,431	1,501	1,562	1,610	1,692	1,714	1,795
Correctional facilities	786	1,018	1,092	1,155	1,205	1,388	1,505	1,545
Child day-care centers	641	607	663	760	835	920	1,012	1,047
Elderly feeding programs	544	579	629	689	744	804	884	897
Other	208	223	238	252	268	287	303	336
Noncommercial feeding total	36,887	38,278	40,099	42,389	44,343	46,254	47,887	49,849
Total	123,156	132,418	144,877	157,662	167,843	175,857	183,933	192,759

1/ Excludes sales taxes and tips.

2/ Preliminary.

Source: (44).

Appendix table 5--Alcoholic beverage sales by product category

Year	Total retail sales	Market shares		
		Distilled spirits	Wine	Beer
	Million dollars	Percent		
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	59,555	33.8	12.3	53.9
1984	62,296	32.1	12.4	54.5
1985	65,794	32.7	12.9	54.4
1986	69,409	32.6	13.4	54.0
1987	71,794	32.4	13.2	54.5
1988	73,785	31.9	12.7	55.3

Sources: (10, 23).

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

Type	1975	1977	1982	1983	1984	1985	1986	1987	1988
	Percent								
Domestic	71.5	72.1	69.4	68.3	67.4	68.3	68.3	68.2	68.1
Imported	28.5	28.0	30.7	31.7	32.6	31.7	31.7	31.8	31.9
Whiskey	53.2	49.5	43.9	42.5	41.3	39.9	38.7	38.2	37.6
Gin	9.8	10.0	9.3	9.3	9.1	8.7	8.7	8.6	8.3
Vodka	19.4	20.6	22.4	22.7	22.5	22.9	23.5	22.9	24.1
Rum	4.0	5.2	7.3	7.8	7.9	7.9	7.9	7.9	8.3
Brandy	3.5	3.8	4.6	4.9	5.1	5.1	5.1	5.1	5.1
Cordials	7.0	7.1	9.0	8.8	10.1	11.2	11.9	12.5	11.5
Others	3.1	3.5	3.5	4.0	4.0	4.0	3.8	4.5	4.5
	Million gallons 1/								
Total	448	441	447	448	439	431	404	406	381

1/ Equivalent to wine.

Source: (10).

Appendix table 7--Food and nonfood sales or shipments in food marketing ^{1/}

Year	Processing ^{2/}	Wholesaling	Food service	Retailing
<u>Million dollars</u>				
1972	115,051	106,457	NA	99,035
1977	192,912	182,905	81,776	157,941
1982	280,530	288,658	104,593	246,122
1983	287,084	309,200	113,281	256,018
1984	300,012	333,000	121,321	271,909
1985	301,562	346,300	127,949	285,062
1986	308,528	369,900	139,415	297,019
1987	320,914	380,900	153,461	309,461
1988	341,728	396,700	165,511	326,504
1989 ^{3/}	364,931	417,600	173,527	349,269

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.

^{3/} Preliminary.

Sources: (44, 47, 48, 49, 54, 57).

Appendix table 8--Food processing product shipments, 1987-89

Industry	1987	1988	1989 ^{1/}
	<u>Million dollars</u>		
Meat products	69,401	74,616	78,813
Meatpacking plants	40,658	43,508	44,710
Sausage and other prepared meats	14,385	14,789	15,214
Poultry slaughtering and processing	14,358	16,319	18,889
Dairy products	39,364	39,685	42,613
Creamery butter	1,610	1,547	1,522
Cheese, natural and processed	10,733	11,105	12,608
Condensed and evaporated milk	5,814	5,727	6,061
Ice cream and frozen desserts	4,189	4,091	4,229
Fluid milk	17,018	17,215	18,193
Preserved fruit and vegetables	34,626	36,896	40,444
Canned specialties	4,459	4,750	5,121
Canned fruit and vegetables	12,219	12,760	14,332
Dried fruit, vegetables, and soups	2,050	2,064	2,561
Pickles, sauces, and salad dressings	4,488	4,974	5,413
Frozen fruit and vegetables	6,234	6,905	7,151
Frozen specialties	5,176	5,443	5,866
Grain mill products	33,624	35,714	39,043
Flour and grain mill products	4,778	5,399	6,100
Cereal breakfast foods	5,081	5,554	6,416
Rice milling	1,257	1,290	1,316
Prepared flour mixes and doughs	2,712	2,750	2,860
Wet corn milling	4,434	4,570	5,030
Dog, cat, and other pet food	4,701	5,171	5,791
Prepared animal feed	10,661	10,980	11,530
Bakery products	20,733	22,813	25,284
Bread and other bakery goods	13,486	15,042	16,854
Cookies and crackers	5,874	6,356	6,950
Frozen bakery products, except bread	1,373	1,415	1,480
Sugar and confections	19,060	19,426	20,420
Raw cane sugar	1,232	NA	NA
Cane sugar, refined	2,483	5,458	5,844
Beet sugar	1,832	NA	NA
Candy and other confectionery products	7,312	7,692	8,138
Chocolate and cocoa products	3,274	3,366	3,480
Chewing gum	869	890	918
Salted and roasted nuts and seeds	2,058	2,020	2,040

See footnote at end of table.

Continued--

Appendix table 8--Food processing product shipments, 1987-89--Continued

Industry	1987	1988	1989 ^{1/}
	<u>Million dollars</u>		
Fats and oils	15,700	16,707	17,183
Cottonseed oil mills	435	448	470
Soybean oil mills	7,799	8,267	8,598
Vegetable oil mills	492	530	540
Animal and marine fats and oils	2,111	2,132	2,175
Shortening and cooking oils	4,863	5,330	5,400
Beverages	45,010	47,482	50,040
Malt beverages	13,505	14,059	14,719
Malt	530	541	555
Wines, brandy, and brandy spirits	3,123	3,204	3,300
Distilled and blended liquors	3,145	3,220	3,317
Soft drinks and carbonated water	19,807	21,352	22,783
Flavoring extracts and syrups	4,900	5,106	5,366
Miscellaneous foods	28,227	30,215	32,064
Processed fishery products	5,945	6,123	6,290
Roasted coffee	5,467	5,740	5,999
Potato chips and similar products	4,968	5,415	5,820
Manufactured ice	281	300	315
Macaroni and spaghetti	968	1,037	1,110
Other food preparations	10,598	11,600	12,530
Total food products	305,740	323,554	345,903

NA = Not available.

^{1/} Estimated by the U.S. Department of Commerce, International Trade Administration.

Source: (57).

Appendix table 9--Wholesale food sales, by type of wholesaler, 1980-89

Year	Merchants	Manufacturers'	Agents and
		sales branches and offices	brokers
<u>Billion dollars</u>			
1980	155.4	53.8	40.6
1981	165.4	58.7	45.0
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	237.6	101.9	78.0

Source: (54).

Appendix table 10--Foodstore sales ^{1/}

Year	Total food- store sales	Grocery store sales				Specialized foodstore sales
		Total	Supermarkets	Conven- ience stores	Superettes	
<u>Million dollars</u>						
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	326,504	307,176	230,640	38,338	38,198	19,328
1989 ^{1/}	349,269	329,383	247,367	41,000	41,016	19,886

NA = Not available.

^{1/} ERS projection.

Sources: (33, 49).

Industry Size and Structure

Appendix table 11--Number of food marketing establishments

Year	Processing	Wholesaling	Eating and drinking places <u>1/</u>	Retailing	Total
			<u>Number</u>		
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: (47, 48, 50).

Appendix table 12--Number of food marketing establishments covered by unemployment insurance 1/

Year	Processing	Wholesaling	Eating and drinking places <u>2/</u>	Retailing	Total
			<u>Number</u>		
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

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: (61).

Appendix table 13--Number of food marketing establishments (county business patterns) 1/

Year	Processing	Wholesaling	Eating and drinking places <u>2/</u>	Retailing	Total
<u>Number</u>					
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 <u>3/</u>	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

1/ Includes administrative and auxiliary establishments, both of which are excluded from appendix table 8.

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: (51).

Appendix table 14--Number of retail and wholesale alcoholic beverage establishments

Year	Liquor stores	Wholesale distributors
<u>Number</u>		
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: (49, 50).

Appendix table 15--Foodservice establishments by industry segment, 1981-88

Industry segment	1981	1982	1983	1984	1985	1986	1987	1988 <u>1/</u>
	<u>Number</u>							
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 day-care 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	15,841	16,159	16,479	16,799	17,101	17,389	17,681	17,767
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

1/ Preliminary.

Source: (44).

Appendix table 18--Share of shipment value for the four and eight largest food processing firms

Industry	1982			1977			1967			
	Share of shipment value			Share of shipment value			Share of shipment value			
	Total firms	Four largest firms	Eight largest firms	Total firms	Four largest firms	Eight largest firms	Total firms	Four largest firms	Eight largest firms	
	Number	-----Percent-----	Number	-----Percent-----	Number	-----Percent-----	Number	-----Percent-----	Number	-----Percent-----
Meatpacking	1,658	29	43	2,404	19	37	2,529	26	38	
Sausages	1,193	19	28	1,213	23	30	1,294	15	22	
Poultry dressing	231	22	36	313	16	27	NA	NA	NA	
Poultry and egg processing	136	22	35	124	21	35	NA	NA	NA	
Butter	61	41	61	123	49	66	510	15	22	
Cheese	575	34	47	660	35	48	891	44	51	
Condensed and evaporated milk	132	35	50	167	30	46	179	41	56	
Ice cream	482	22	34	567	28	40	713	33	43	
Fluid milk	853	16	27	1,516	18	28	2,988	22	30	
Canned specialties	171	61	77	172	61	77	150	69	83	
Canned fruit and vegetables	541	21	35	648	22	35	930	34	52	
Dehydrated fruit and vegetables	119	42	59	143	37	53	134	32	50	
Pickles, sauces, and salad dressings	325	56	65	380	55	62	479	33	44	
Frozen fruit and vegetables	195	27	42	187	22	40	495	36	55	
Frozen specialties	318	38	54	330	40	55	NA	NA	NA	
Flour and grain milling	251	40	60	301	33	54	438	30	46	
Breakfast cereals	32	86	NA	32	89	98	30	88	97	
Rice milling	49	47	75	47	51	76	54	46	68	
Blended and prepared flour	91	58	74	111	51	69	126	68	82	
Wet corn milling	25	74	94	24	63	89	32	68	89	
Pet food	222	52	71	218	58	74	NA	NA	NA	
Prepared feeds	1,245	20	30	1,435	22	30	NA	NA	NA	
Breads and cakes	1,869	34	47	2,549	33	40	3,445	26	38	
Cookies and crackers	269	59	71	26	359	68	286	59	70	
Raw cane sugar	43	41	61	49	42	62	61	43	65	

See note at end of table.

Continued--

Appendix table 18--Share of shipment value for the four and eight largest food processing firms--Continued

Industry	1982			1977			1967		
	Share of shipment value			Share of shipment value			Share of shipment value		
	Total firms	Four largest firms	Eight largest firms	Total firms	Four largest firms	Eight largest firms	Total firms	Four largest firms	Eight largest firms
Number	-----	Percent-----	Number	-----	Percent-----	Number	-----	Percent-----	
Cane sugar refining	19	65	91	27	63	90	22	59	82
Beet sugar	14	67	95	14	67	95	15	66	96
Confectionery	718	40	53	867	38	49	1,091	25	35
Chocolate and cocoa	77	75	89	47	73	88	27	77	89
Chewing gum	9	95	NA	14	93	NA	19	86	96
Cottonseed oil mills	47	51	70	62	45	62	91	42	60
Soybean oil mills	52	61	83	65	54	73	60	55	76
Vegetable oil mills	26	52	83	37	54	80	34	56	78
Animal and marine fats and oils	270	34	48	384	28	40	477	28	36
Shortening and cooking oils	79	43	60	66	43	63	63	43	67
Malt beverages	67	77	94	81	64	83	125	40	59
Malt	24	60	80	27	59	81	32	39	62
Wines and brandy	324	51	64	223	49	62	175	48	63
Distilled spirits	371	46	89	64	52	71	70	54	71
Bottled and canned soft drinks	1,236	14	23	1,758	15	22	3,057	13	20
Flavoring extracts and syrups	297	65	71	319	64	71	401	67	75
Canned or cured seafood	170	62	70	215	52	65	268	44	59
Fresh or frozen seafood	697	14	24	906	14	23	463	26	38
Roasted coffee	118	65	76	113	65	79	206	53	71
Manufactured ice	530	18	26	543	24	38	688	33	42
Macaroni and spaghetti	208	42	66	289	36	54	190	31	48
Other food preparations	1,746	32	40	1,872	28	36	1,824	24	35

NA = Not available.

Source: (47).

Appendix table 19--Aggregate concentration in food and tobacco manufacturing, measured by proportion of value added, 1967-82

Company ^{1/}	Proportion of value added in food and tobacco manufacturing ^{2/}			
	1967	1972	1977	1982
	<u>Percent</u>			
20 largest firms	23.4	24.3	27.4	34.0
21-50 largest firms	15.5	16.8	15.9	16.0
51-100 largest firms	11.9	12.2	11.7	11.1
101-200 largest firms	8.9	9.8	10.3	8.9
201-300 largest firms	4.4	4.7	4.8	4.4
301-400 largest firms	3.0	3.1	3.2	3.0
401-500 largest firms	2.4	2.4	2.4	2.2
All others ^{3/}	30.5	27.0	24.4	20.3
50 largest firms	38.9	41.1	43.3	50.0
100 largest firms	50.9	53.3	55.0	61.2
500 largest firms	69.5	73.2	75.6	79.7

^{1/} Companies are ranked by value added in Standard Industrial Classifications (SIC's) 20 and 21 each year.

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

^{3/} Approximately 27,000 firms in 1967 and 14,000 firms in 1982.

Source: (36).

Appendix table 20--Sales concentration in food wholesaling

Wholesaler category	1977				1982	
	4 largest firms	8 largest firms	20 largest firms	50 largest firms	4 largest firms	8 largest firms
	<u>Percent</u>					
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 seafoods	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 largest firms	50 largest firms	4 largest firms	8 largest firms	20 largest firms	50 largest firms
	<u>Percent</u>					
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 seafoods	24.5	37.1	1/	9.2	1/	1/
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	1/

1/ Not reported.

Source: (50).

Appendix table 21--Distribution of limited-asset corporate wholesale food firms, 1980-87 ^{1/}

Year	All firms		Small firms ^{2/}
	----- <u>Number</u> -----		<u>Percent</u>
1980	24,299	9,146	37.6
1981	27,149	11,774	43.3
1982	22,698	7,486	32.9
1983	24,066	8,890	36.9
1984	23,089	8,271	35.8
1985	24,808	10,901	43.9
1986	24,933	9,606	38.5
1987	25,483	10,498	42.2

^{1/} Firms that filed tax returns.

^{2/} Firms with less than \$100,000 in assets.

Source: (63).

Appendix table 22--Average concentration of top four grocery store firms by SMSA size, 1954-82 ^{1/}

SMSA population in 1980	1954	1958	1963	1967	1972	1977	1982
	<u>Percent</u>						
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/} An SMSA (Standard Metropolitan Statistical Area) defines an integrated economic and social unit such as a city and its outlying suburbs.

Source: (48).

Appendix table 23--Chain stores' share of grocery store sales

Store	1958	1963	1967	1972	1977
	<u>Percent</u>				
Supermarket	41.2	43.7	46.3	48.9	52.4
Other	2.8	3.3	5.1	7.0	6.3
Total	44.0	47.0	51.4	55.9	58.7
	<u>Percent</u>				
	1982	1986	1987	1988	1989
Supermarket	55.0	NA	NA	NA	NA
Other	6.5	NA	NA	NA	NA
Total	61.5	62.5	63.0	62.7	62.0

NA = Not available.
Source: (48).

Appendix table 24--Sales share of leading grocery chains

Year	4 largest chains	8 largest chains	20 largest chains
	<u>Percent</u>		
1958	21.7	27.5	34.1
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	15.8	24.5	35.8

Sources: (48) and ERS estimates.

Appendix table 25--Concentration among separate eating places

Year	Top 4 firms	Top 8 firms	Top 20 firms	Top 50 firms
	<u>Percent</u>			
1972 <u>1/</u>	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: (49).

Appendix table 26--Sales of top 25 food processing companies

Sales rank	Company	Sales <u>1/</u>		Change
		1989	1988	
		<u>Million dollars</u>		<u>Percent</u>
1	Philip Morris Companies, Inc., NY	25,802.0	13,051.0	98
2	RJR Nabisco, Inc., Atlanta, GA	9,888.0	9,420.0	5
3	Anheuser-Busch Companies, Inc. St. Louis, MO	9,363.0	8,003.0	17
4	ConAgra, Inc., Omaha, NE	8,590.6	6,850.0	25
5	IBP, Inc., Dakota City, NE	8,502.0	7,221.1	18
6	Pepsico, Inc., Purchase, NY	8,152.5	7,301.4	12
7	Coca-Cola Company, Atlanta, GA	8,000.0	7,643.6	5
8	Archer Daniels Midland Company, Decatur, IL	7,200.0	6,200.0	16
9	Nestle Holdings, Inc., Purchase, NY	5,961.0	5,770.0	3
10	Campbell Soup Company, Camden, NJ	5,700.0	4,870.0	17
11	H.J. Heinz Company, Pittsburgh, PA	5,492.0	4,970.1	11
12	Borden, Inc., New York, NY	5,385.8	4,657.3	16
13	Sara Lee Corporation, Chicago, IL	5,255.0	5,062.3	4
14	Quaker Oats Company, Chicago, IL	4,879.4	4,694.7	4
15	CPC International, Inc., Englewood Cliffs, NJ	4,700.8	4,903.0	-4
16	Ralston Purina Company, St. Louis, MO	4,554.8	4,294.2	6
17	Kellogg Company, Battle Creek, MI	4,348.8	3,793.0	15
18	Beatrice Companies, Inc., Chicago, IL	4,066.0	4,012.0	1
19	General Mills, Inc., Minneapolis, MN	3,999.0	3,752.6	7
20	Pillsbury Company, Minneapolis, MN	3,648.1	3,560.2	2
21	United Brands Company, Cincinnati, OH	3,317.0	3,195.0	4
22	Kroger Company, Cincinnati, OH	3,200.0	2,943.3	9
23	Procter and Gamble Company, Cincinnati, OH	3,029.0	2,963.0	2
24	Associated Milk Producers, Inc., San Antonio, TX	2,744.0	2,709.8	1
25	Castle and Cooke, Inc., Los Angeles, CA	2,665.0	2,268.0	18

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

Source: (15).

Appendix table 27--Sales of top 25 food retailing companies 1/

Company	1988		1987	
	Rank	Sales	Rank	Sales
		Million dollars		Million dollars
Kroger Company (Kroger, Dillion)	1	17,500	1	16,700
American Stores Company (Acme, Jewel, Star, Alpha Beta, Lucky Stores, Inc.)	2	15,280	3	11,208
Safeway Stores, Inc.	3	10,200	2	15,500
Winn-Dixie Stores Company	4	9,151	4	8,804
The Atlantic and Pacific Tea Company (Shopwell, Waldbaums, A&P, Bormans) 2/	5	8,205	5	7,859
Southland Corporation (7-Eleven Stores) 3/	6	7,990	6	7,515
Albertson's, Inc.	7	6,773	8	5,869
Supermarkets General Corporation (Pathmark, Purity-Supreme)	8	5,770	9	5,300
Publix Supermarkets, Inc.	9	4,848	10	4,187
Vons Companies (Safeway-So. Calif.)	10	3,917	11	3,100
Food Lion, Inc. 2/	11	3,815	12	2,954
Ahold International (BI-LO Inc., 2/ Giant Food Stores, First National) 4/	12	3,514	18	2,160
Circle K Corporation 3/	13	3,441	15	2,289
Giant Food, Inc.	14	2,987	14	2,721
Grand Union	15	2,717	13	2,900
Stop and Shop Companies, Inc.	16	2,517	16	2,258
Dominick's Finer Foods	17	2,500	21	1,700
Ralphs Supermarkets	18	2,381	17	2,250
H.E. Butt Grocery Company	19	2,300	19	2,105
Bruno's (Bruno's, Piggly Wiggly)	20	2,134		
George Weston, Ltd. (National Tea) 2/	21	1,857	NA	NA
Super Valu Stores, Inc. (TwinValu, Cub)	22	1,732	24	1,362
Fred Meyer, Inc.	23	1,556	20	1,848
Hy-Vee Food Stores, Inc.	24	1,475	23	1,418
Sainsbury, Ltd. (Shaw's Supermarkets, Iandoli's) 2/	25	1,463	25	1,222

NA = Not available.

1/ U.S. grocery store sales only.

2/ Foreign-owned companies as of 1988.

3/ Convenience store retailer.

4/ Giant Food Stores, Carlisle, PA.

Sources: (1, 4, 33, 37, 64).

Appendix table 28--Sales of top 20 wholesale food companies ^{1/}

Firms	Sales	
	1989	1988
	<u>Million dollars</u>	
Fleming Companies, Inc.	12,050	10,467
Super Valu Stores, Inc.	11,136	10,296
Wetterau, Inc.	4,918	4,155
Scrivner, Inc.	3,360	3,200
Wakefern Food Corporation	3,069	2,923
McLane Company, Inc.	2,500	2,100
Gateway Foods, Inc.	2,500	1,750
Roundy's, Inc.	2,331	2,036
Certified Grocers	2,329	1,961
Nash Finch Company	2,224	2,098
Associated Wholesale Grocers (K.C.)	1,948	1,839
Spartan Stores, Inc.	1,700	1,526
Super Food Services	1,691	1,573
Peter J. Schmitt Company	1,260	1,200
Richfood, Inc.	1,245	1,005
Grocers Supply Co., Inc.	1,000	900
Associated Grocers, Inc.	965	950
Twin County Grocers, Inc.	920	920
Springfield Sugar and Products Company	892	904
American Seaway Foods	820	1,100

^{1/} Firms primarily serving supermarkets and retail foodstores. Foodservice distributors and wholesale clubs are listed in text tables 15 and 16.

Sources: (9, 37).

Appendix table 29--Sales of top 25 restaurant chains

Sales rank	Chain	U.S. system sales	
		1988	1987
		<u>1,000 dollars</u>	
1	McDonald's Corporation	11,380,212	10,576,266
2	Burger King Corporation (Grand Met, PLC)	4,943,576	4,777,004
3	Kentucky Fried Chicken Corporation (Pepsico, Inc.)	2,900,000	2,700,000
4	Pizza Hut (Pepsico, Inc.)	2,800,000	2,500,000
5	Hardee's Food Systems (Imasco Ltd.)	2,725,000	2,534,000
6	Wendy's International, Inc.	2,690,000	2,627,899
7	Domino's Pizza, Inc.	2,300,000	1,980,000
8	International Dairy Queen, Inc.	1,900,000	1,630,000
9	Taco Bell (Pepsico, Inc.)	1,600,000	1,500,000
10	Denny's, Inc. (Coniston Partners)	1,268,000	1,194,600
11	Arby's, Inc. (DWG Corp.)	1,160,000	988,000
12	Red Lobster U.S.A. (General Mills Restaurant Group)	1,140,000	1,050,000
13	Big Boy (Elias Brothers Restaurants, Inc.)	1,000,000	<u>1/</u> 950,000
14	Little Caesar Enterprises, Inc.	908,000	725,000
15	Sizzler (Collins Foods International)	790,000	705,500
16	Jack In The Box Restaurants, Inc. (Foodmaker, Inc.)	775,000	655,104
17	Long John Silver's Seafood Shoppes (Jerrico, Inc.)	761,513	743,441
18	Shoney's, Inc.	<u>1/</u> 750,000	<u>1/</u> 677,000
19	Ponderosa, Inc. (Metromedia)	<u>1/</u> 710,000	699,731
20	Dunkin' Donuts of America Inc. (Allied-Lyons, PLC)	658,000	629,600
21	Roy Rogers (Imasco Ltd.)	<u>1/</u> 630,000	<u>1/</u> 557,500
22	Friendly Restaurants (Tennessee Restaurant Co.)	<u>1/</u> 600,000	<u>1/</u> 572,400
23	Subway (Doctors Associates, Inc.)	600,000	360,000
24	Bonanza Steak Houses, Inc. (Metromedia)	570,533	529,622
25	Church's Fried Chicken (A. Copeland Enterprises, Inc.)	559,300	533,900

1/ Estimated.

Source: (34).

Appendix table 30--Food marketing mergers

Year	Processing	Wholesaling	Retailing	Food service	Total ^{1/}
			<u>Number</u>		
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

^{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: (17).

Appendix table 31--Food marketing mergers and divestitures costing over \$100 million, 1988 ^{1/}

Buyer	Seller	Price	Type ^{2/}
		Million dollars	
Kohlberg Kravis Roberts & Company	RJR Nabisco Inc.	24,562	2
Philip Morris Companies Inc.	Kraft Inc.	13,100	2
Grand Metropolitan, PLC	Pillsbury Company	5,636	2
American Stores Company	Lucky Stores, Inc.	2,499	2
Kohlberg Kravis Roberts & Company	Stop & Shop Companies, Inc.	1,223	2
Seagram Ltd.	Beatrice Companies	1,200	1
Pepsico Inc.	General Cinema Corporation	1,200	1
ConAgra Inc.	Holly Farms Corporation	1,158	2
Tate & Lyle PLC	Staley Continental, Inc.	1,108	2
Tyson Foods Inc.	Holly Farms Corporation	977	2
JMB Realty Corporation	AMFAC Inc.	839	2
Pepsico Inc.	Grand Metropolitan PLC	705	1
Sysco Corporation	Tate & Lyle PLC	700	1
High Voltage Engineering Corporation	Universal Foods Corporation	565	2
Coca-Cola Enterprises Inc.	Coca-Cola Company	500	1
Tennessee Restaurant Company	Hershey Foods Corporation	375	1
Private Group	Cullum Companies Inc.	369	2
Gibbons, Green, Van Amerongen	American Stores Company	305	1
A. Copeland Enterprises	Churches Fried Chicken Inc.	296	2
Private Group	AMFAC Inc.	276	1
Foodmaker Inc.	Chi-Chi's Inc.	271	2
Hershey Food Corporation	Cadbury Schweppes PLC	270	1
Penn Traffic Company	Big Bear Inc.	269	2
Private Group	Fleming Companies, Inc. (White Swan Inc.)	227	1
Fleming Companies	Malone & Hyde Inc.	225	3
Penn Traffic Company	P & C Foods, Inc.	211	2
Private Group	Rowntree PLC (Tom's Foods)	210	1
Private Group	Neoax, Inc.	205	1
Private Group	Specialty Equipment Company, Inc.	204	2
Campbell Soup Company	Freshbake Foods Group PLC	200	4
Private Group	Farm Fresh Inc.	181	2
Private Group	Foodmaker Inc.	180	2
Private Group	Wyatt Cafeterias, Inc.	173	3
Ralston Purina Company	Cofinea	169	4
Wynham Foods Inc.	Prospect Group, Inc.	165	1
Circle K Corporation	Southland Corporation	147	1
Doskocil Companies	Wilson Foods Corporation	133	2
TPI Enterprises, Inc.	Shoneys South Inc.	131	2
Circle K Corporation	Charter Company	120	1
Whitman Corporation, Inc.	Orval Kent Food Company	112	3
Marks & Spencer PLC	King Supermarkets Inc.	108	3
Total		61,504	NA

NA = Not available.

^{1/} Completed or pending.^{2/} 1 = divestitures, 2 = public seller, 3 = private seller, and 4 = foreign seller.

Source: (17).

Appendix table 32--Food marketing mergers among the 100 largest transactions in history

Buyer/seller	Rank among transactions	Price	Year announced
		<u>Million dollars</u>	
Kohlberg, Kravis, Roberts & Company/RJR Nabisco Inc.	1	24,562	1988
Philip Morris Company/ Kraft Inc.	3	13,100	1988
Grand Metropolitan PLC/ Pillsbury Company	11	5,636	1988
Philip Morris Company/ General Foods Corporation	12	5,628	1985
Kohlberg, Kravis, Roberts & Company/Beatrice Companies	14	5,362	1985
R.J. Reynolds Industries, Inc./ Nabisco Brands, Inc.	19	4,906	1985
SSI Holdings Corporation/ Safeway Stores, Inc.	24	4,198	1986
Private Group, led by two top company executives/ Southland Corporation	29	3,723	1987
Unilever N.V. - Netherlands/ Chesebrough-Pond's Inc.	38	3,093	1986
Nestle S.A. (Switzerland)/ Carnation Company	41	2,885	1984
Seagram Company Ltd (Canada)/ Conoco, Inc.	47	2,576	1981
Beatrice Foods Company/ Esmark Inc.	49	2,509	1984
Kraft, Inc./ Dart Industries, Inc.	57	2,400	1980
Nabisco, Inc./ Standard Brands, Inc.	78	1,827	1981
Private Group, led by Merrill Lynch & Company/ Supermarkets General Corporation	80	1,801	1987
Pantry Pride, Inc./ Revlon, Inc.	91	1,639	1985

Source: (17).

Appendix table 33--Food processing mergers 1/

Year announced or completed	Rank among all industries in value	Foreign purchases of U.S. firms			U.S. purchases of foreign firms	
		Value	Number	Value	Number	Value
		Million dollars	Number	Million dollars	Number	Million dollars
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	2	28,640	22	8,541	14	1,569

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

Source: (17).

Appendix table 34--Aggressive buyers in food marketing

Company	1979	1980	1981	1982	1983	1984
ConAgra Inc.	2	3	4	3	3	8
Borden Inc.	1	1	2	2	1	1
Kraft Inc.	0	0	2	2	2	6
IC Industries Inc.	1	0	1	3	2	3
Coca-Cola Company	1	1	0	3	0	3

	1985	1986	1987	1988	10-year total
ConAgra Inc.	8	8	7	4	50
Borden Inc.	3	5	11	20	47
Kraft Inc.	8	17	7	1	45
IC Industries Inc.	3	8	6	4	31
Coca-Cola Company	8	7	3	0	26

Source: (17).

Appendix table 35--Aggressive divestitures in food marketing

Selling parent company	1980	1981	1982	1983	1984
Beatrice Companies	1	7	3	9	12
RJR Nabisco Inc.	2	1	0	2	1
IC Industries Inc.	1	2	3	2	0
Sara Lee Corporation	3	2	0	3	1

	1985	1986	1987	1988	9-year total
Beatrice Companies	10	10	2	1	55
RJR Nabisco Inc.	2	9	5	3	25
IC Industries Inc.	7	4	3	1	23
Sara Lee Corporation	8	2	2	1	22

Source: (17).

Industry Economic Characteristics

Appendix table 36--Major economic indicators

Year	Population	Gross national product		Disposable personal income (DPI)	
		Current million dollars	1982 million dollars	Current million dollars	1982 million dollars
	<u>Million</u>				
1963	189.2	607	1,873	451	1,291
1967	198.7	816	2,271	562	1,493
1972	209.9	1,212	2,608	840	1,797
1977	220.2	1,991	2,959	1,379	2,067
1982	232.5	3,166	3,166	2,261	2,262
1983	234.8	3,406	3,279	2,428	2,332
1984	237.0	3,772	3,501	2,668	2,470
1985	239.3	4,014	3,619	2,839	2,543
1986	241.6	4,231	3,718	3,013	2,636
1987	243.9	4,524	3,854	3,206	2,676
1988	246.3	4,881	4,024	3,477	2,793
1989*	248.8	5,234	4,142	3,780	2,907

	Per capita DPI		Employment	Unemployment rate
	Current dollars	1982 dollars	<u>Million</u>	<u>Percent</u>
1963	2,197	6,378	69.7	5.5
1967	2,828	7,513	76.6	3.7
1972	4,000	8,562	87.0	5.5
1977	6,262	9,381	99.0	6.9
1982	9,724	9,725	102.0	9.5
1983	10,339	9,930	102.5	9.5
1984	11,257	10,419	106.7	7.4
1985	11,861	10,625	108.8	7.1
1986	12,496	10,905	111.3	6.9
1987	13,140	10,970	114.2	6.1
1988	14,116	11,337	116.7	5.4
1989 <u>1/</u>	15,191	11,681	119.0	5.2

1/ Preliminary.

Sources: (45, 53, 61).

Appendix table 37--Producer price indexes for the food marketing system

Commodity	1985	1986	1987	1988	1989 ^{1/}
			<u>1982=100</u>		
Crude foodstuffs and feedstuffs ^{2/}	94.8	93.2	96.2	106.1	111.1
Fruit and vegetables	102.6	103.9	106.8	108.5	114.1
Grains	96.1	79.2	71.1	97.9	106.4
Livestock	89.1	91.8	102.0	103.3	106.9
Live poultry	117.8	129.6	101.2	121.5	128.8
Fluid milk	93.6	90.9	91.9	89.4	98.1
Oilseeds	94.4	91.4	99.3	134.0	123.8
Sugar and raw cane	104.6	104.9	110.3	111.9	115.5
Intermediate materials for food manufacturing ^{3/}	101.4	98.4	100.8	106.0	112.7
Flour	99.8	94.5	92.9	105.7	114.6
Refined sugar	102.8	103.2	106.4	108.9	118.3
Crude vegetable oils	137.5	84.8	84.2	116.6	103.4
Finished consumer foods ^{4/}	104.6	107.3	109.5	112.6	118.7
Fresh fruit	108.1	112.9	112.0	113.5	111.9
Fresh and dried vegetables	99.4	97.8	103.8	105.5	116.9
Canned fruit and juice	113.8	111.0	115.4	120.2	122.6
Frozen fruit and juice	118.5	103.0	113.3	129.8	124.6
Fresh vegetables, excluding potatoes	100.3	99.3	99.0	100.4	104.2
Canned vegetables and juices	101.9	101.2	103.6	108.3	118.6
Frozen vegetables	106.5	106.6	107.3	108.6	115.5
Potatoes	101.2	104.0	120.1	113.9	153.6
Eggs	95.6	99.5	87.6	88.6	119.6
Bakery products	113.9	116.6	118.5	126.4	135.4
Meats	90.9	93.9	100.4	99.9	104.8
Beef and veal	90.3	88.1	95.5	101.4	109.0
Pork	89.1	99.9	104.9	95.0	97.5
Processed poultry	110.4	116.7	103.5	111.6	120.8
Fish	114.6	124.9	140.0	148.7	144.6
Dairy products	100.2	99.9	101.6	102.2	110.6
Processed fruit and vegetables	107.9	104.9	108.6	113.8	120.0
Shortening and cooking oil	123.9	103.3	103.9	118.8	116.6

^{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: (60).

Appendix table 38--Value of U.S. dollar and interest rates

Year/ quarter	Value of U.S. dollar 1/		Short-term 3-month Treasury bill	Interest rates	
	Nominal	Real 2/		Long-term AAA corporate bonds (Moody's) 3/	Prime rate charged by banks
	----- Dollars 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	103.3	93.1	5.26	8.02	6.83
1982	16.6	111.7	10.67	13.79	14.86
1983	125.3	177.3	8.63	12.04	10.79
1984	138.2	128.7	9.58	12.71	12.04
1985	143.2	132.0	7.48	11.37	9.93
1986	112.0	103.4	5.98	9.02	8.33
1987	96.9	90.6	5.82	9.38	8.22
I	99.9	92.6	5.53	8.37	7.50
II	97.0	90.3	5.73	9.16	8.25
III	98.7	92.5	6.03	9.76	8.25
IV	92.3	86.8	6.03	10.21	8.75
1988	92.8	88.0	6.69	9.71	9.32
I	90.0	84.9	5.76	9.56	8.58
II	90.4	85.5	6.23	9.81	8.83
III	97.6	92.9	6.99	9.96	9.83
IV	93.0	88.6	7.71	9.51	10.33
1989	98.6	9.42	8.12	9.25	10.83
I	96.0	91.5	8.53	9.68	11.00
II	100.4	95.8	8.44	9.49	11.41
III	100.5	96.1	7.85	8.97	10.41
IV 5/	97.8	93.5	7.64	8.87	10.50

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 39--Number of employees in food marketing ^{1/}

Year	Processing	Wholesaling	Eating and drinking places ^{2/}	Retailing		Total
				Food- stores ^{3/}	Grocery stores ^{3/}	
<u>Thousands</u>						
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	666.9	4,831.2	2,477.6	2,152.8	9,611.6
1983	1,614.8	682.4	5,041.8	2,556.2	2,234.6	9,895.2
1984	1,612.2	707.3	5,388.0	2,637.1	2,298.1	10,344.6
1985	1,607.9	734.3	5,715.1	2,778.6	2,427.0	10,835.9
1986	1,616.9	757.7	5,878.8	2,872.9	2,522.9	11,126.3
1987	1,620.4	792.2	6,105.8	2,961.8	2,610.1	11,480.2
1988	1,635.8	822.2	6,281.8	3,098.4	2,754.2	11,838.2
1989 ^{4/}	1,664.2	837.1	6,369.9	3,270.0	2,879.8	12,141.2

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. These eating facilities numbered over 397,000 in 1982 and over 343,000 in 1977.

^{3/} Grocery stores are also included in foodstore column.

^{4/} Estimate based on 10-month average.

Source: (61).

Appendix table 40--Number of production workers in food marketing 1/

Year	Processing	Wholesaling	Eating and drinking places <u>2/</u>	Retailing		Total
				Food- stores <u>3/</u>	Grocery stores <u>3/</u>	
<u>Thousands</u>						
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	1,125.6	575.3	4,444.1	2,294.0	2,016.5	8,439.0
1983	1,113.7	588.4	4,632.9	2,374.0	2,085.0	8,709.0
1984	1,119.5	598.3	4,925.9	2,441.7	2,139.7	9,085.4
1985	1,121.9	621.9	5,199.2	2,569.6	2,258.0	9,512.6
1986	1,135.7	641.4	5,345.2	2,654.7	2,343.5	9,777.0
1987	1,147.7	669.7	5,558.0	2,728.5	2,414.8	10,103.9
1988	1,162.6	693.9	5,718.3	2,850.5	2,535.8	10,425.3
1989 <u>4/</u>	1,101.5	704.7	5,785.5	2,907.3	2,693.2	10,499.0

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. These eating facilities numbered over 397,000 in 1982 and over 343,000 in 1977.

3/ Grocery stores are also included in foodstore column.

4/ Estimate based on 10-month average.

Source: (61).

Appendix table 41--Average hourly earnings in food marketing ^{1/}

Year	Processing	Wholesaling	Eating and drinking places ^{2/}	Retailing	
				Food- stores ^{3/}	Grocery stores ^{3/}
<u>Dollars</u>					
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	7.22	7.48
1983	8.19	8.70	4.27	7.51	7.78
1984	8.39	9.03	4.26	7.64	7.92
1985	8.57	9.20	4.33	7.35	7.59
1986	8.74	9.30	4.35	7.03	7.24
1987	8.93	9.53	4.42	6.95	7.10
1988	9.10	9.79	4.47	7.00	7.12
1989 ^{4/}	9.33	10.11	4.74	7.13	7.23

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. These eating facilities numbered over 397,000 in 1982 and over 343,000 in 1977.

^{3/} Grocery stores are also included in foodstore column.

^{4/} Estimate based on 10-month average.

Source: (61).

Appendix table 42--Average weekly earnings in food marketing ^{1/}

Year	Processing	Wholesaling	Eating and drinking places ^{2/}	Retailing	
				Food- stores ^{3/}	Grocery stores ^{3/}
<u>Dollars</u>					
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	342.60	351.44	111.71	221.97	230.43
1986	349.60	355.26	111.36	211.80	218.65
1987	358.99	361.19	114.48	209.20	215.13
1988	366.73	371.04	117.45	211.40	215.74
1989 ^{4/}	379.73	383.07	120.71	213.33	217.47

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. These eating facilities numbered over 397,000 in 1982 and over 343,000 in 1977.

^{3/} Grocery stores are also included in foodstore column.

^{4/} Estimate based on 10-month average.

Source: (61).

Appendix table 43--Average weekly hours in food marketing 1/

Year	Processing	Wholesaling	Eating and drinking places 2/	Retailing	
				Food- stores 3/	Grocery stores 3/
<u>Dollars</u>					
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 4/	40.7	37.8	25.4	30.0	30.1

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. These eating facilities numbered over 397,000 in 1982 and over 343,000 in 1977.

3/ Grocery stores are also included in foodstore column.

4/ Estimate based on 10-month average.

Source: (61).

Appendix table 44--Food-related advertising

Item	1988	1987 ^{1/}	First 6 months		Change, 1988-89
			1988	1989	
	-----Million dollars-----				Percent
Nine media ^{2/}	8,264	7,072	3,974	4,044	1.8
Eating and drinking places ^{3/}	1,419	1,345	670	755	12.6
Foodstores	760	345	297	383	28.9
Processed foods	6,085	5,382	3,007	2,906	-3.4
Cooking products and seasoning	642	528	322	327	1.6
Prepared and convenience foods	1,240	1,063	594	625	5.2
Dairy products	384	337	197	193	-2.0
Fruit and vegetables	204	158	108	92	-14.8
Meat, poultry, and fish	248	204	131	114	-13.0
Bakery	284	276	146	110	-24.7
Food beverages	522	433	254	291	14.5
Combination copy	45	44	21	23	9.5
Confectionery	661	597	362	308	-14.9
Soft drinks	480	404	251	249	-.7
Beer	756	684	339	299	-11.8
Wine	161	211	74	37	-50.0
Liquor	223	224	94	108	14.9
Pet food	235	219	114	130	14.0
Newspaper					
Retail foodstores	1,265	1,272	660	633	-4.0
Coupons	1,900	1,800	NA	NA	-5.2
Total advertising	11,429	10,144	4,634	4,677	.9

NA = Not available.

^{1/} 1988 and 1987 are not comparable because syndicated and cable television were not included in 1987.

^{2/} Network television, spot television, cable syndicated, and cable television; magazines; newspaper supplements; network radio; and billboards.

^{3/} Includes hotel restaurants not otherwise counted among eating and drinking places.

Sources: (3, 29).

Appendix table 45--Leading food advertisers

Company	1987 ^{1/}	1988
	<u>Million dollars</u>	
Philip Morris Companies, Inc.	755	1,092
Procter & Gamble Company	746	813
RJR Nabisco, Inc.	440	458
Pepsico, Inc.	426	431
Kellogg Company	309	402
McDonald's Corporation	362	401
Anheuser-Busch Companies, Inc.	339	370
Unilever NV	342	363
General Mills, Inc.	314	359
Nestle SA	170	300
Pillsbury Company	231	230
American Home Products Corporation	221	224
Quaker Oats Company	168	216
Coca-Cola Company	200	216
Mars, Inc.	204	185
Sara Lee Corporation	125	155
Ralston Purina Company	156	154
H.J. Heinz Company	93	150
Campbell Soup Company	130	133
Wm Wrigley, Jr. Company	102	123
American Stores Company	27	115
Grand Metropolitan PLC	102	112
Adolph Coors Company	85	111
Seagrams Group PLC	62	105
Hershey Foods Corporation	68	94
Wendy's International Inc.	81	86
American Dairy Association	94	83
American Brands Inc.	74	75
Kroger Company	49	62

^{1/} 1987 only includes seven media while 1988 includes nine media.

Source: (3).

Appendix table 46--Share of food advertising expenditures by the largest food marketing firms, 1988

Industry	Total advertising	Share of expenditures spent by--	
		3 largest advertisers	10 largest advertisers
	Million dollars	Percent	
Restaurants	1,364.3	46.3	74.8
Foodstores	355.2	20.4	44.5
Food processing:			
Sugar, syrups, and artificial sweeteners	57.1	54.7	95.8
Shortening, oil, margarine, and nonstick products	98.5	37.3	88.9
Baking mixes, pie crusts, and baking ingredients	75.2	53.1	93.1
Seasoning, spices, and extracts	17.0	57.7	89.5
Gelatin and puddings (mixes and prepared)	34.0	97.2	100.0
Condiments, pickles, and relishes	93.2	44.6	83.6
Sauces, gravies, and dips	76.3	55.9	92.0
Salad dressing and mayonnaise	66.3	66.5	97.3
Soups	76.7	87.9	99.4
Breakfast cereals	747.8	63.6	83.7
Health and dietary foods	4.7	76.7	99.6
Infant foods	17.0	98.6	100.0
Pasta products and pasta-product dinners	43.2	51.3	88.2
All other prepared dinners and entrees	165.3	34.1	66.8
Jellies, jams, preserves, and peanut butter	31.3	68.7	99.2
Milk, butter, and eggs	70.8	79.9	92.6
Cheese	105.4	80.2	95.0
Ice cream, frozen novelties, and sherbet	77.9	27.9	58.6
Dairy product substitutes	11.3	84.5	100.0

See note at end of table.

Continued--

Appendix table 46--Share of food advertising expenditures by the largest food marketing firms, 1988--Continued

Industry	Total advertising	Share of expenditures spent by--	
		3 largest advertisers	10 largest advertisers
	Million dollars	----- Percent -----	
Citrus fruit	6.1	96.1	100.0
Other fruit	61.8	46.2	88.3
Vegetables	54.6	61.7	90.1
Beans and grains	54.0	61.3	92.8
Meat, poultry, and fish	207.7	33.0	58.9
Bread and rolls	76.6	28.2	63.1
Cakes, pies, and pastries	20.4	57.5	97.4
Cookies and crackers	107.2	74.1	95.1
Coffee, tea, cocoa, and derivatives	246.3	50.3	85.3
Fruit juices and drinks	197.7	37.9	77.4
Vegetable juices	10.4	100.0	100.0
Candy and gum	379.6	41.1	65.3
Appetizers, snacks, and nuts	183.2	24.6	65.9
Regular carbonated drinks	277.2	59.6	88.2
Dietary carbonated drinks	139.8	78.0	98.3
Noncarbonated beverages	4.4	69.4	100.0
Bottled waters	16.8	62.5	92.2
Beer	72.0	61.0	87.9
Wine	14.2	43.0	76.5
Distilled spirits	222.9	20.0	42.9
Nonalcoholic preparations, mixes, and mixing ingredients	3.2	97.1	100.0
Pet foods	187.3	43.6	77.1

Source: (3).

Appendix table 47--Advertising media price changes

Media	1986	1987	1988	1989 <u>1/</u>	1990 <u>2/</u>
	<u>Percent</u>				
Nighttime network television	5.9	3.2	5.9	5.0	6.0
Daytime network television	3.9	-7.7	-3.4	-8.0	.6
Spot television	5.8	5.6	5.9	4.6	5.1
Network radio	9.1	5.7	3.2	4.3	5.3
Spot radio	5.6	4.4	4.0	4.5	4.2
Consumer magazines	7.0	4.3	4.7	5.7	6.3
Cable	NA	NA	NA	18.7	10.3
Daily newspapers	7.4	6.5	6.0	6.1	5.2
Outdoor posters	5.7	4.9	4.8	6.2	4.8
Business publications	7.6	5.3	4.9	5.5	5.6
Yellow pages	NA	NA	5.2	5.7	5.3
National syndication	NA	NA	5.4	4.8	3.8

NA = Not available.

1/ Estimated.

2/ Projected.

Source: (8).

Appendix table 48--Advertising price changes in cost per 1,000 targeted viewers

Media	1982	1983	1984	1985	1986	1987	1988	1989
	<u>Percent</u>							
Broadcast:								
Primetime network television <u>1/</u>	18	2	20	5	4	11	3	8
Daytime network television <u>1/</u>	10	1	18	12	-6	1	-12	3
Spot television <u>1/</u>	9	8	9	9	6	6	8	5
Network radio <u>2/</u>	8	11	9	8	9	6	4	6
Spot radio <u>2/</u>	6	8	7	8	6	6	6	7
Print:								
Magazines <u>3/</u>	12	6	7	8	6	6	6	7
Newspapers <u>3/</u>	16	14	13	10	7	7	6	7
Outdoor	11	8	9	8	6	5	5	5

1/ Per 1,000 targeted households.

2/ Per 1,000 listeners over the age of 18.

3/ Per 1,000 paid buyers.

Source: (8).

Performance Measures

Appendix table 49--Value added and employment generated by the food marketing system

Item	1972	1977	1982	1985	1987	1988
	<u>Billion dollars</u>					
Value added:						
Food sector	143.4	217.6	337.3	407.4	445.4	469.4
Processing	30.6	45.0	65.0	79.7	86.0	90.5
Retailing and wholesaling	37.9	57.8	87.0	102.5	108.7	114.3
Transportation	6.5	9.8	16.9	20.0	20.9	22.0
Eating and drinking places	18.5	27.3	46.8	55.9	63.7	67.6
Other supporting sectors ^{1/}	49.9	77.7	121.6	149.3	166.1	175.0
Farm sector (food products)	22.0	30.1	48.1	51.7	51.9	51.7
Nonfood sector	1,047.4	1,742.5	2,780.6	3,555.8	4,027.0	4,359.5
Gross national product	1,212.8	1,990.5	3,166.0	4,014.9	4,524.3	4,880.6
	<u>Million</u>					
Full-time-equivalent employment:						
Food sector	11.4	11.5	12.1	11.9	12.3	12.3
Processing	1.6	1.5	1.5	1.4	1.3	1.3
Retailing and wholesaling	3.0	3.0	3.2	3.2	3.2	3.2
Transportation	.4	.4	.4	.4	.4	.4
Eating and drinking places	2.9	3.1	3.4	3.4	3.7	3.7
Other supporting sectors ^{1/}	3.5	3.5	3.6	3.5	3.7	3.7
Farm sector (food products)	2.4	2.2	1.7	1.8	1.8	1.9
Nonfood sector	72.7	85.3	96.4	101.8	105.8	107.5
Civilian labor force	86.5	99.0	110.2	115.5	119.9	121.7
	<u>Percent</u>					
Value added:						
Food sector	11.8	10.9	10.7	10.1	9.8	9.6
Processing	2.5	2.2	2.0	2.0	1.9	1.9
Retailing and wholesaling	3.1	2.9	2.6	2.6	2.4	2.3
Transportation	.5	.5	.5	.5	.5	.5
Eating and drinking places	1.5	1.4	1.4	1.4	1.4	1.3
Other supporting sectors ^{1/}	4.1	3.9	3.7	3.8	3.7	3.6
Farm sector (food products)	1.8	1.5	1.5	1.3	1.1	1.1
Nonfood sector	86.6	87.5	87.8	88.6	89.1	89.3
Gross national product	100.0	100.0	100.0	100.0	100.0	100.0
Full-time-equivalent employment:						
Food sector	13.2	11.6	11.0	10.3	10.2	10.1
Processing	1.8	1.5	1.4	1.2	1.1	1.1
Retailing and wholesaling	3.5	3.0	2.9	2.8	2.7	2.6
Transportation	.4	.4	.4	.3	.3	.3
Eating and drinking places	3.3	3.1	3.0	2.9	3.1	3.0
Other supporting sectors ^{1/}	4.0	3.5	3.3	3.0	3.1	3.0
Farm sector (food products)	2.7	2.2	1.5	1.6	1.5	1.6
Nonfood sector	84.0	86.2	87.5	88.1	88.1	88.3
Civilian labor force	100.0	100.0	100.0	100.0	100.0	100.0

^{1/} 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: (12).

Appendix table 50--Research and development expenditures in food and tobacco marketing

Type	1984	1985	1986	1987	1988	1989 <u>1/</u>
	<u>Million dollars</u>					
Industry	1,081	<u>1/</u> 1,136	<u>1/</u> 1,280	<u>1/</u> 1,221	1,274	1,345
Basic research	63	<u>1/</u> 66	<u>1/</u> 74	<u>1/</u> 71	74	78
Applied research and product and process development	1,018	<u>1/</u> 1,070	<u>1/</u> 1,206	1,150	1,200	1,267
U.S. Department of Agriculture total <u>2/</u>	279	307	310	290	311	NA
Product and process development	114	128	131	169	178	NA
Marketing efficiency	42	44	44	41	47	NA
Export market expansion	15	18	19	29	32	NA
Health and nutrition	109	117	116	50	52	NA

NA = Not available.

1/ ERS estimate.

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

Sources: (4, 26).

Appendix table 52--Index of real value added in food marketing per full-time equivalent employee ^{1/}

Sector	1972	1977	1982	1985	1987	1988
	<u>1982 dollars</u>					
Processing	96.8	100.0	105.9	117.3	125.8	129.2
Retailing and wholesaling	94.7	100.0	99.2	106.8	109.9	110.5
Transportation	94.8	100.0	99.1	102.3	109.8	110.1
Eating and drinking places	94.7	100.0	99.2	106.2	109.9	111.5
Other supporting sectors	94.3	100.0	100.0	106.9	112.9	115.1

^{1/} In 1977 dollars.

Source: Derived from (12).

Appendix table 53--Profit margins in food marketing

Year/ quarter	After-tax profits for food and tobacco processing, as a share of--		After-tax profits for general line whole- sales, as a share of stockholders' equity	After-tax profits for retail food stores, as a share of--	
	Sales	Stock- holders' equity		Sales	Stock- holders' equity
	<u>Percent</u>				
1977	3.1	13.2	NA	0.8	10.7
1982	3.1	13.0	9.0	1.0	12.6
1983	3.3	12.0	8.6	1.2	13.3
1984	3.3	13.3	7.7	1.4	16.2
1985 ^{1/}	4.1	15.3	8.4	1.2	14.2
1986	4.2	16.2	NA	1.2	13.1
I	3.6	13.3	NA	.9	9.2
II	4.0	15.9	NA	1.2	15.2
III	3.9	15.5	NA	1.5	12.7
IV	5.2	20.0	NA	1.5	15.7
1987	4.6	17.4	NA	1.0	12.6
I	3.7	13.6	NA	.9	10.5
II	4.4	17.4	NA	1.2	14.2
III	4.4	17.0	NA	.9	11.6
IV	5.7	21.6	NA	1.0	13.9
1988	5.5	20.9	NA	.9	12.5
I	5.2	19.1	NA	.6	8.4
II	6.5	25.0	NA	1.3	17.8
III	5.6	21.9	NA	.8	10.4
IV	4.7	17.9	NA	.7	13.5
1989	4.2	16.9	NA	.8	14.6
I	4.1	15.5	NA	.5	9.4
II	3.9	16.5	NA	.9	17.6
III	3.2	13.4	NA	.7	14.4
IV	5.3	22.1	NA	.9	17.1

NA = Not available.

^{1/} Food processing was combined with tobacco processing in 1985.

Source: (35).

Appendix table 54--Profits (return on equity) after taxes of wholesale corporate food firms, by asset group, 1980-88

Asset group	1980	1981	1982	1983	1984
	<u>Percent</u>				
1,000 dollars					
100-249	15.2	12.2	11.7	13.9	10.2
250-499	13.6	14.0	12.3	10.9	9.4
500-999	14.2	13.9	11.5	9.0	9.0
1,000-4,999	11.7	11.6	11.1	10.1	8.2
5,000-9,999	8.7	10.6	9.8	9.8	8.4
10,000-24,999	8.4	7.9	10.1	8.4	8.9
25,000-49,999	9.9	11.0	7.0	6.2	8.5
50,000-99,999	7.0	6.3	10.1	8.2	7.6
100,000-249,999	6.3	6.4	9.2	5.3	7.1
250,000 or more	10.6	7.8	6.7	8.0	6.4
	<u>Percent</u>				
	1985	1986	1987	1988 ^{1/}	Average, 1980-88
1,000 dollars					
100-249	14.7	10.9	13.7	12.8	13.1
250-499	15.2	16.1	12.8	12.9	12.2
500-999	10.6	9.2	10.6	11.1	11.5
1,000-4,999	8.5	8.0	8.1	9.6	9.4
5,000-9,999	7.4	7.7	9.1	8.9	9.0
10,000-24,999	9.1	10.2	9.5	9.1	9.0
25,000-49,999	6.0	6.0	6.4	7.7	8.5
50,000-99,999	11.1	8.3	8.0	8.3	8.2
100,000-249,999	7.7	4.6	5.0	6.6	7.9
250,000 or more	6.7	6.5	8.8	7.8	8.3

^{1/} Estimated.
Source: (63).

Appendix table 55--Income statement for food processing and retailing, 1989

Item	Food and tobacco products				Retail foodstores 1/			
	Quarter				Quarter			
	1	2	3	4	1	2	3	4
	Million dollars							
Net sales, receipts, and operating revenues	86,520	93,408	96,665	100,391	41,933	42,964	44,833	46,785
Less depreciation, depletion, and amortization of property, plant, and equipment	2,182	2,281	2,326	2,381	622	686	708	738
Less all other operating costs and expenses, including costs of goods sold and selling, general, and administrative expenses	78,447	84,021	86,777	89,883	40,314	40,965	43,254	45,165
Income (or loss) from operations	5,890	7,106	7,563	8,127	957	1,314	871	882
Net nonoperating income (expense)	219	1,719	377	(749)	(434)	(429)	(276)	(442)
Income (or loss) before income taxes	6,108	8,825	7,939	7,378	523	884	595	440
Less provision for current and deferred domestic income taxes	1,640	2,774	2,539	2,626	251	324	256	120
Income (or loss) after income taxes	4,469	6,051	5,400	4,751	272	560	339	320
Cash dividends charged to retained earnings in current quarter	1,718	1,782	1,706	2,354	132	178	138	4,088
Net income retained in business	2,751	4,269	3,694	2,398	139	383	201	(3,768)
Retained earnings at beginning of quarter	76,230	78,824	80,882	83,249	9,002	8,454	8,393	8,706
Other direct credits (or charges) to retained earnings (net), including stock and other noncash dividends	(386)	(1,405)	(548)	(3,532)	(425)	(465)	(12)	(111)
Retained earnings at end of quarter	78,595	81,689	84,028	82,114	8,717	8,372	8,582	4,826
	Percent of net sales							
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	2.5	2.4	2.4	2.4	1.6	1.6	1.6	1.6
Less all other operating costs and expenses	90.7	90.0	89.8	89.5	96.1	95.3	96.5	96.5
Income (or loss) from operations	6.8	7.6	7.8	8.1	2.3	3.1	1.9	1.9
Nonoperating income (expense)	.3	1.8	.4	(.7)	(1.0)	(1.0)	(.6)	(.9)
Income (or loss) before income taxes	7.1	9.4	8.2	7.3	1.2	1.2	1.3	.9
Less provision for current and deferred domestic income taxes	1.9	3.0	2.6	2.6	.6	.8	.6	.3
Income (or loss) after income taxes	5.2	6.5	5.6	4.7	.6	1.3	.8	.7

See footnotes at end of table.

Continued--

Appendix table 55--Income statement for food processing and retailing, 1989--Continued

Item	Food and tobacco products				Retail foodstores 1/				
	Quarter				Quarter				
	1	2	3	4	1	2	3	4	
Operating ratios:									
Annual rate of profit on stockholders' equity at end of period--									
Before-income taxes	26.13	36.49	32.22	27.78	16.19	28.06	18.27	18.61	
After-income taxes	19.11	25.02	21.91	17.89	8.41	17.78	10.42	13.52	
Annual rate of profit on total assets--									
Before-income taxes	10.31	14.42	12.69	10.38	4.06	6.53	4.25	3.07	
After-income taxes	7.54	9.89	8.63	6.69	2.11	4.14	2.42	2.23	
Balance sheet ratios: 2/									
Total current assets to total current liabilities	1.49	1.46	1.39	1.38	1.22	1.23	1.17	1.15	
Total cash and U.S. Government and other securities to total current liabilities	.23	.27	.24	.20	.18	.16	.15	.14	
Total stockholders' equity to total debt	1.11	1.12	1.13	.97	.64	.55	.56	.34	

1/ Excludes firms with assets below \$25 million.

2/ Based on data presented in appendix table 44.

Source: (55).

Appendix table 56--Balance sheet for food processing and retailing, 1989

Item	Food and tobacco products				Retail foodstores 1/			
	Quarter				Quarter			
	1	2	3	4	1	2	3	4
	Million dollars							
Assets:								
Cash and demand deposits in the United States	3,306	3,642	4,066	3,122	1,414	1,297	1,261	1,218
Time deposits in the United States, including negotiable certificates of deposit	2,683	3,633	3,051	1,731	243	272	477	496
Total cash on hand and in U.S. banks	5,989	7,276	7,117	4,853	1,657	1,569	1,738	1,714
Other short-term financial investments, including marketable and Government securities and commercial paper	6,892	8,461	7,925	8,093	1,277	968	805	779
Total cash, U.S. Government and other securities	12,881	15,736	15,042	12,946	2,934	2,537	2,543	2,493
Trade accounts and trade notes receivable (less allowances for doubtful receivables)	27,077	29,142	29,819	28,409	1,862	1,804	1,933	2,168
Inventories	36,540	34,669	36,526	39,534	12,672	12,484	13,444	13,635
All other current assets	7,461	6,602	6,006	10,527	2,435	2,722	1,879	1,817
Total current assets	83,960	86,149	87,392	91,415	19,904	19,547	19,798	20,113
Depreciable and amortizable fixed assets, including construction in progress	126,462	131,542	133,185	137,124	32,001	31,184	32,087	33,201
Land and mineral rights	4,495	4,722	4,662	4,781	2,739	2,942	2,972	3,153
Less accumulated depreciation, depletion, and amortization	48,805	50,580	51,304	51,838	11,360	10,567	11,042	11,340
Net property, plant, and equipment	82,152	85,684	86,543	90,067	23,381	23,558	24,016	25,014
All other noncurrent assets, including investment in nonconsolidated entities, long-term investments, and intangibles	70,957	72,994	76,231	102,771	8,199	11,051	12,263	12,280
Total assets	237,068	244,827	250,167	284,253	51,483	54,156	56,078	57,407
Liabilities and stockholders' equity:								
Short-term debt, original maturity of 1 year or less--								
Loans from banks	5,127	5,048	5,341	5,892	375	340	366	332
Other short-term debt, including commercial paper	6,151	5,880	6,870	6,961	425	469	621	339
Trade accounts and trade notes payable	17,708	18,490	19,672	22,097	8,430	8,542	9,230	9,278
Income taxes accrued, prior and current years, net of payments	3,503	3,990	5,030	4,843	316	260	294	393
Installments, due in 1 year or less, on long-term debt--								
Loans from banks	1,100	1,075	985	1,288	1,104	971	531	680
Other long-term debt	2,944	2,810	3,164	3,694	784	504	827	1,206
All other noncurrent liabilities, including excise and sales taxes and accrued expenses	19,764	21,703	21,591	21,571	4,844	4,749	5,013	5,311
Total current liabilities	56,297	58,996	62,654	66,345	16,279	15,835	16,883	17,539

See footnote at end of table.

Continued--

Appendix table 56--Balance sheet for food processing and retailing, 1989--Continued

Item	Food and tobacco products				Retail foodstores 1/			
	Quarter				Quarter			
	1	2	3	4	1	2	3	4
	Million dollars							
Long-term debt (due in more than 1 year)--	20,735	21,143	19,850	32,181	6,282	8,344	8,759	11,064
Loans from banks	48,152	50,479	50,655	59,007	11,187	12,412	12,324	14,103
Other long-term debt								
All other noncurrent liabilities, including deferred income taxes, capitalized leases, and minority stockholders' interest, in consolidated domestic corporations	18,361	17,467	18,444	20,473	4,807	4,956	5,081	5,235
Total liabilities	143,545	148,085	151,603	178,007	38,555	41,547	43,047	47,941
Capital stock and other capital (less Treasury stock)	14,928	15,054	14,536	24,132	4,211	4,237	4,448	4,641
Retained earnings	78,595	81,689	84,028	82,114	8,717	8,372	8,582	4,826
Stockholders' equity	93,523	96,743	98,564	106,246	12,928	12,608	13,031	9,467
Total liabilities and stockholders' equity	237,068	244,827	250,167	284,253	51,483	54,156	56,078	57,407
Net working capital:								
Excess of total current assets over total current liabilities	27,662	27,153	24,738	25,070	3,624	3,712	2,916	2,574
	Percent of total assets							
Selected balance-sheet ratios:								
Total cash and U.S. Government and other securities	5.4	6.4	6.0	4.6	5.7	4.7	4.5	4.3
Trade accounts and trade notes receivable	11.4	11.9	11.9	10.0	3.6	3.3	3.4	3.8
Inventories	15.4	14.2	14.6	13.9	24.6	23.1	24.0	23.8
Total current assets	35.4	35.2	34.9	32.2	38.7	36.1	35.3	35.0
Net property, plant, and equipment	34.7	35.0	34.6	31.7	45.4	43.5	42.8	43.6
Short-term debt, including installments on long-term debt	6.5	6.0	6.5	6.3	5.1	4.2	4.2	4.5
Total current liabilities	23.7	24.1	25.0	23.3	31.6	29.2	30.1	30.6
Long-term debt	29.0	29.2	28.1	32.1	33.9	38.3	37.6	43.9
Total liabilities	60.6	60.5	60.6	62.6	74.9	76.7	76.8	83.5
Stockholders' equity	39.4	39.5	39.4	37.4	25.1	23.3	23.2	16.5

1/ Excludes firms with assets below \$25 million.
Source: (55).

Appendix table 57--After-tax profits of selected processors in the first 9 months of 1989

Firm	Profits	Change from 1988	Return on common equity over 12 months ending September 1989
	<u>Million dollars</u>	----- <u>Percent</u> -----	
American Maize-Products	9.0	51	2.8
Campbell Soup Company	-56.3	NA	.7
ConAgra, Inc.	152.9	33	21.9
CPC International, Inc.	238.0	15	25.7
Dean Foods	47.3	46	20.8
Flowers Industries	18.6	-43	12.8
General Mills, Inc.	247.2	17	43.5
Gerber Products	77.6	34	29.0
H.J. Heinz Company	346.8	15	25.3
Hershey Foods	117.0	19	15.7
Geo. A. Hormel	37.8	20	15.0
IBP, Inc.	21.6	-45	9.1
Kellogg	362.2	-5	30.4
Lance	30.6	4	19.5
McCormick	32.2	76	14.8
Quaker Oats Company	168.6	-21	18.4
Sara Lee Corporation	291.5	22	26.4
Seaboard	17.4	-8	12.6
Smithfield Foods	4.4	-69	18.7
Smucker (J.M.)	20.8	13	18.7
WLR Foods	16.0	279	21.1
Wm. Wrigley, Jr.	90.8	23	31.5

NA = Not applicable.

Source: (4).

Appendix table 58--After-tax profits of selected retailers in the first 9 months of 1989

Firm	Profits	Change from 1988	Return on common equity over 12 months ending September 1989
	<u>Million dollars</u>	----- <u>Percent</u> -----	
Albertson's	141.9	26	20.9
American Stores Company	66.4	-36	7.3
Bruno's	37.3	18	17.3
Casey's General Stores	2.9	-61	8.3
The Circle K Corporation	-2.7	NA	1.3
Dairy Mart Convenience	-.1	NA	3.8
Delchamps	12.4	47	16.1
Food Lion, Inc.	93.0	19	25.5
Foodarama Supermarkets	.5	-84	4.5
General Nutrition	16.7	940	18.7
Giant Food	84.4	24	23.9
The Atlantic & Pacific Tea Company	111.6	20	14.0
Hannaford Brothers	29.6	33	18.4
The Kroger Company	-21.6	NA	NA
National Convenience Stores	-.7	NA	-4.4
Penn Traffic	-19.6	NA	NA
Quality Food Centers	9.6	113	34.3
Smith's Food & Drug Centers	18.9	45	NA
Village Super Market	3.7	-24	9.9
Weis Markets	62.3	5	16.0
Winn-Dixie Stores Company	104.8	12	17.8
Group composite	751.3	-17	24.1

NA = Not applicable.

Source: (4).

Appendix table 59--After-tax profits of selected food wholesalers in the first 9 months of 1989

Firm	Profits	Change from 1988	Return on common equity over 12 months ending September 1989
	<u>Million dollars</u>	----- <u>Percent</u> -----	
Di Giorgio	6.6	-4	10.8
Fleming	59.2	34	11.5
International Multifoods	19.1	-22	10.4
Richfood Holdings	-4.5	NA	-9.6
Rykoff-Sexton	13.9	4	10.9
Super Rite Foods	12.4	9	15.8
Super Valu Stores	104.1	10	16.8
Sysco	85.9	24	17.6
Group composite	296.7	11	14.1

NA = Not applicable.

Source: (4).

Appendix table 60--New products introduced in 20 selected categories

Category	1985	1986	1987	1988	1989
			<u>Number</u>		
Food categories:					
Baby food	14	38	10	55	53
Bakery foods	553	681	931	968	1,115
Baking ingredients	142	137	157	212	233
Beverages	625	697	832	936	913
Breakfast cereals	56	62	92	97	118
Condiments	904	811	1,145	1,310	1,355
Candy, gum, and snacks	1,146	1,179	1,367	1,608	1,701
Dairy	671	852	1,132	854	1,348
Desserts	62	101	56	39	69
Entrees	409	441	691	613	694
Fruit and vegetables	195	194	185	262	214
Pet food	103	80	82	100	126
Processed meat	383	401	581	548	509
Side dishes	187	292	435	402	489
Soups	167	141	170	179	215
Total, food	5,617	6,107	7,866	8,183	9,192
Nonfood categories:					
Health and beauty aids	1,446	1,678	2,039	2,000	2,308
Household supplies	184	178	161	233	372
Paper products	42	42	47	100	121
Tobacco products	27	27	51	12	29
Pet products	14	9	18	30	33
Total, nonfood	1,713	1,934	2,316	2,375	2,863
Total	7,330	8,042	10,182	10,558	12,055

Source: (16).

Appendix table 61--Capital expenditures in food marketing

Item	1972	1982	1984	1985	1986	1987	1988	1989 ^{1/}
<u>Billion dollars</u>								
Food processing (by enterprise):								
Current dollars	3.3	8.7	8.8	10.3	10.6	11.0	12.9	14.2
1982 dollars	7.4	8.7	8.6	9.6	9.9	10.0	11.5	NA
<u>1,000 dollars</u>								
Food processing (by establishment):								
Food and kindred products	NA	6,727	6,432	7,049	6,966	7,225	NA	NA
Meat products	NA	697	614	717	856	883	NA	NA
Dairy	NA	711	566	671	672	745	NA	NA
Fruit and vegetables	NA	NA	890	1,006	1,015	1,038	NA	NA
Grain mill	NA	88	790	1,078	1,028	1,072	NA	NA
Bakery products	NA	NA	584	587	572	736	NA	NA
Sugar and confectionery	NA	430	498	629	540	492	NA	NA
Fats and oils	NA	-393	317	337	236	257	NA	NA
Beverages	NA	1,628	1,527	1,338	1,366	1,249	NA	NA
Prepared foods	NA	520	644	685	681	750	NA	NA

NA = Not available.

^{1/} Preliminary.

Sources: (45, 46, 47).

Appendix table 62--U.S. food plant construction 1/

Year	New construction	Major renovations or expansions	Free-standing distribution centers	Total
	<u>Number</u>			
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

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

Source: (14).

Appendix table 63--New capital expenditures in the food processing sectors

Food processing industries	1985	1986	1987
		<u>Million dollars</u>	
All food processing	7,048.7	6,966.2	7,224.9
Meat products	716.5	855.5	883.0
Meatpacking plants	249.9	258.9	242.2
Sausages and other prepared meats	210.6	232.4	254.8
Poultry dressing plants	208.4	278.3	NA
Poultry and egg processing	47.6	85.9	NA
Dairy products	671.3	672.0	745.2
Creamery butter	10.5	8.0	9.7
Cheese, natural and processed	133.3	140.1	146.1
Condensed and evaporated milk	NA	120.7	109.4
Ice cream and frozen desserts	NA	105.4	137.3
Fluid milk	322.3	297.8	342.7
Preserved fruit and vegetables	1,006.5	1,015.1	1,038.9
Canned specialties	113.6	178.8	148.7
Canned fruit and vegetables	264.1	240.0	250.0
Dehydrated fruit, vegetables, and soups	61.4	47.1	48.2
Pickles, sauces, and salad dressings	129.5	147.0	219.7
Frozen fruit and vegetables	213.5	196.4	179.2
Frozen specialties	224.4	205.8	183.1
Grain mill products	1,078.9	1,027.9	1,072.4
Flour and other grain mill products	82.7	62.8	81.0
Breakfast cereals	228.3	270.1	333.4
Rice milling	NA	52.9	48.9
Blended and prepared flour	NA	61.6	64.7
Wet corn milling	450.9	340.5	282.5
Dog, cat, and other pet food	97.8	112.9	107.3
Other prepared feeds	141.8	127.1	154.7
Bakery products	586.4	572.0	735.9
Bread, cake, and related products	378.0	408.7	519.0
Cookies and crackers	208.4	163.3	185.1
Sugar and confectionery products	629.1	540.4	492.0
Raw cane sugar	49.3	34.0	43.3
Cane sugar, refined	41.0	34.9	32.7
Beet sugar	85.3	88.3	42.5
Confectionery products	313.3	273.0	231.9
Chocolate and cocoa products	NA	85.1	90.4
Chewing gum	NA	25.1	23.2
Fats and oils	265.2	235.8	257.6
Cottonseed oil mills	22.0	17.9	12.2
Soybean oil mills	109.5	93.3	91.5
Other vegetable oil mills	NA	1.3	4.9

See notes at end of table.

Continued--

Appendix table 63--New capital expenditures in the food processing sectors--Continued

Food processing industries	1985	1986	1987
	<u>Million dollars</u>		
Animal and marine fats and oils	NA	41.3	60.4
Shortening and cooking oils	100.3	82.0	88.4
Beverages	1,337.8	1,366.2	1,249.6
Malt beverages	372.2	578.3	474.9
Malt	29.1	13.5	13.5
Wines, brandy, and brandy spirits	112.1	112.1	99.6
Distilled spirits, except brandy products	37.3	41.4	43.9
Bottled and canned soft drinks	720.8	560.7	568.4
Other flavoring extracts and syrups	66.3	60.2	49.2
Miscellaneous foods and food products	685.0	681.3	750.4
Canned and cured seafoods	11.6	14.8	14.7
Fresh or frozen packaged fish	58.9	58.4	104.6
Roasted coffee	138.9	147.3	155.3
Manufactured ice	32.1	19.8	13.9
Pasta products	31.8	32.8	32.5
Other food preparations	411.7	408.2	248.5

NA = Not available.

Source: (46).

Appendix table 64--Fixed capital in food manufacturing

Fixed capital	1984	1985	1986	1987	1988
	<u>Billion dollars</u>				
Current gross stock	129.5	134.2	142.3	149.6	156.8
Current net stock	69.5	71.5	75.1	78.3	81.9
Constant gross stock	120.1	122.1	123.5	124.8	126.7
Constant net stock	64.4	65.1	65.3	65.4	66.2

Source: (45).

Appendix table 65--Capacity measures in food marketing

Item	1972	1977	1982	1983	1984	1985	1986	1987	1988	
Capacity utilization rates: 1/										
All industries	NA	79	65	72	75	75	76	78	80	
Food processing	NA	77	76	76	76	79	78	79	81	
Meat	NA	86	80	80	80	82	87	81	84	
Dairy	NA	76	77	80	76	81	80	81	82	
Fruit and vegetables	NA	72	81	77	77	76	70	73	80	
Grain mill	NA	NA	80	80	80	80	80	83	84	
Bakery	NA	81	72	70	83	80	83	83	80	
Sugar	NA	76	82	81	80	82	80	84	87	
Fats and oils	NA	84	76	82	87	84	81	84	89	
Beverages	NA	83	68	71	69	75	74	74	78	
Miscellaneous	NA	55	75	77	69	76	80	80	81	
					<u>Square feet</u>					
Food retailing:										
Total area	765,233	823,510	963,788	NA	NA	NA	NA	NA	NA	
Selling area	545,690	606,117	713,065	NA	NA	NA	NA	NA	NA	
Typical size of new store	NA	NA	36,400	NA	40,000	42,800	48,900	46,900	40,800	
Food wholesaling:										
Warehouse area	370,079	350,532	NA	NA	NA	NA	NA	NA	NA	
					<u>Thousands</u>					
Food service:										
Seating capacity	9,342	10,099	12,035	NA	NA	NA	NA	NA	NA	

NA = Not available.

1/ Data are for the fourth quarter of indicated years.

Sources: (1, 49, 50, 52).

Appendix table 66--Dow Jones Market Indexes for the food marketing system

Date	Food	Beverages	Distillers	Soft drinks	Food retailers and wholesalers
	<u>Percent</u>				
30-Jun-82	100.00	100.00	100.00	100.00	100.00
31-Dec-82	122.93	125.40	121.26	127.74	141.39
30-Dec-83	148.63	133.58	130.79	135.12	162.26
31-Dec-84	171.87	147.03	129.41	156.91	179.77
31-Dec-85	273.11	220.97	204.79	230.41	243.51
31-Dec-86	355.81	270.83	250.40	282.52	288.23
31-Dec-87	362.82	304.95	309.28	304.40	322.08
30-Dec-88	477.72	341.43	311.65	360.56	438.83
08-Nov-89	602.64	505.56	374.23	563.51	522.97

	Restaurants	Consumer noncyclical	Consumer cyclical	Dow Jones equity market
	<u>Percent</u>			
30-Jun-82	100.00	100.00	100.00	100.00
31-Dec-82	134.85	126.35	143.24	129.74
30-Dec-83	155.44	136.86	169.71	152.29
31-Dec-84	170.42	147.20	167.45	155.36
31-Dec-85	249.65	205.58	218.45	199.23
31-Dec-86	273.86	264.83	260.79	228.86
31-Dec-87	272.55	282.69	261.35	230.50
30-Dec-88	324.37	333.84	322.74	260.74
08-Nov-89	426.09	458.00	389.98	317.10

Source: (11).

Appendix table 67--Price earnings ratio for the food marketing system

Industry	1985 fourth quarter	1986 fourth quarter	1987 third quarter	1988 third quarter	1989 third quarter
All industry composite	NA	NA	15	12	15
Food marketing system	NA	NA	NA	19	21
Food wholesaling	NA	NA	NA	17	16
Food processing	15	19	15	19	20
Food retailing	13	20	20	20	27

NA = Not available.

Source: (4).

Food Marketing Purchases

Appendix table 68--Food marketing system purchases from U.S. agriculture

Year	Meat	Fruit and vegetables ^{1/}	Dairy products	Bakery products	
<u>Billion dollars</u>					
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	17.6	19.6	4.4	

	Poultry	Grain mill products ^{2/}	Eggs	Other foods ^{3/}	Total ^{4/}
<u>Billion dollars</u>					
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	11.3	1.5	2.8	11.8	103.0

^{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.

Source: (40).

Appendix table 69--Food marketing system purchases from fisheries

Edible fishery products	Domestic commercial landings		Imports		Total	
	1987	1988	1987	1988	1987	1988
<u>Million dollars</u>						
Finfish	1,502	1,873	2,884	2,676	4,386	4,549
Shellfish	1,477	1,490	2,772	2,730	4,249	4,220
Total	2,979	3,363	5,656	5,406	8,635	8,769

Source: (58).

Food Marketing and the International Economy

Appendix table 70--U.S. trade in processed foods

Item	Exports		Imports	
	1988	1989 ^{1/}	1988	1989 ^{1/}
	<u>Million dollars</u>			
Total processed food	15,747	17,843	18,417	20,166
Meat products	4,015	4,514	2,978	2,776
Dairy products	508	812	675	740
Preserved fruit and vegetables	1,297	1,445	2,074	3,164
Grain mill products	2,907	3,240	358	519
Bakery products	68	110	310	343
Sugar and confectioneries	581	1,083	1,405	1,792
Fats and oils	3,113	2,634	858	816
Beverages	701	685	3,438	3,384
Miscellaneous foods	2,558	3,317	6,319	6,628
Processed fishery products ^{3/}	2,325	2,299	5,500	5,397

^{1/} Preliminary.

^{2/} Under \$400,000.

^{3/} International Trade Administration data.

Source: (57).

Appendix table 71--U.S. trade balance in processed foods

Item	Trade balance	
	1988	1989
	<u>Million dollars</u>	
All processed food	-2,664	-2,323
Meat products	1,039	1,738
Dairy products	-167	72
Preserved fruit and vegetables	-777	1,719
Grain mill products	2,550	2,721
Bakery products	-242	-233
Sugar and confectioneries	-824	-709
Fats and oils	2,255	1,818
Beverages	-2,737	-2,699
Miscellaneous foods (including seafood)	-3,761	-3,311
Seafood	-3,175	-3,098
All processed food less seafood	+511	+775

Appendix table 72--Foreign investment in food marketing ^{1/}

Item	1984	1985	1986	1987	1988
<u>Million dollars</u>					
Direct foreign investment in the United States:					
Investment position--					
Food manufacturing	8,270	10,710	12,147	15,638	16,437
Wholesaling	1,124	1,182	2,190	3,100	3,963
Foodstores and eating and drinking places	2,774	2,886	3,619	4,018	3,739
Total	12,168	14,778	17,956	22,756	24,139
Capital inflows--					
Food manufacturing	818	2,538	1,337	3,491	1,895
Wholesaling	54	104	1,002	439	548
Foodstores and eating and drinking places	629	72	663	244	628
Total	1,501	2,714	3,002	4,174	3,071
Income--					
Food manufacturing	726	441	797	772	1,706
Wholesaling	60	78	102	142	115
Foodstores and eating and drinking places	399	66	284	252	193
Total	1,185	585	1,183	1,166	2,014
Direct foreign investment by the United States:					
Investment position--					
Food manufacturing	8,156	9,252	11,336	12,995	13,121
Wholesaling	871	954	1,146	1,333	1,527
Foodstores and eating and drinking places	1,408	1,427	1,855	1,907	2,480
Total	10,435	11,633	14,337	16,235	17,128
Capital outflows--					
Food manufacturing	478	1,196	1,667	1,614	85
Wholesaling	19	247	199	262	146
Foodstores and eating and drinking places	11	^{2/} -56	236	^{2/} -529	574
Total	508	1,387	2,102	1,347	805
Income--					
Food manufacturing	683	1,619	2,202	2,865	2,219
Wholesaling	182	202	289	317	371
Foodstores and eating and drinking places	98	184	262	347	473
Total	963	2,005	2,753	3,529	3,063

^{1/} Investment on an enterprise basis.

^{2/} (-) = Inflows.

Source: (45).

Appendix table 73--Foreign direct investment position in food manufacturing by country

Item	1986		1987		1988	
	Million dollars	Percent of total	Million dollars	Percent of total	Million dollars	Percent of total
Foreign direct investment position in the						
United States	12,147	100.0	15,638	100.0	16,437	100.0
The Netherlands	4,890	40.3	5,243	33.5	5,852	35.6
United Kingdom	2,899	23.8	4,167	26.6	5,204	31.7
Other Europe	3,500	28.8	4,121	26.4	3,860	23.4
Canada	355	2.9	403	2.6	531	3.2
Japan	158	2.8	164	1.0	302	1.8
All other	345	2.8	1,540	9.8	688	4.1
U.S. direct investment position abroad						
European Community	11,366	100.0	12,295	100.0	13,121	100.0
Other Europe	6,084	53.5	7,190	58.5	7,364	56.1
Canada	193	1.7	344	2.7	448	3.0
Japan	2,068	18.2	2,187	17.8	2,178	16.5
Australia, New Zealand, and South Africa	157	1.4	371	3.0	382	2.9
All others	591	5.2	606	4.9	535	4.6
	2,430	21.4	1,597	12.9	2,214	16.9

Source: (45).

Appendix table 74--Profile of foreign affiliates of U.S. firms, 1987

Sector	Sales	Net income	Assets	Parents	Affiliates	Employees
	----- Million dollars -----					
					Number	
All food manufacturing	50,049	3,616	35,274	65	655	407
Grain mill	13,443	569	7,452	13	136	69
Bakery	4,311	421	3,491	1	42	49
Beverages	8,759	1,131	8,081	11	140	64
Meat	2,691	71	1,442	7	22	21
Dairy	3,075	192	2,270	4	38	25
Fruits and vegetables	2,824	177	2,089	7	52	48
Other food	14,947	855	10,419	22	225	131
Food wholesaling	9,522	569	4,386	17	156	402
Foodstores, eating and drinking places	9,674	261	5,397	14	59	208
Food marketing	74,310	4,446	45,057	96	966	1,017

Source: (45).

Appendix table 75--Profile of American affiliates of foreign firms, 1987

Sector	Sales	Net income	Number of employees	Employee of compensation	Total assets
		Million dollars			
Food manufacturing					
Beverages	22,424	394	146	3,788	23,031
Meat	5,955	284	39	1,000	12,363
Dairy	1,040	-10	4	139	176
Fruits and vegetables	2,864	8	17	386	1,520
Grain mill	365	25	4	60	325
Bakery	171	11	1	19	200
Other foods	2,039	50	21	617	1,040
Wholesaling	9,989	26	61	1,568	7,407
Retailing	12,927	54	23	575	3,582
Eating and drinking places	22,066	80	218	2,770	7,854
	1,284	2	20	292	633
Food marketing	58,701	530	407	7,425	35,100

Source: (45).

Appendix table 76--U.S. direct investment abroad for food processing industries, 1988

Item	Direct investment		Income	
	Million dollars	Percent	Million dollars	Percent
All food processing	13,121	100.0	2,219	100.0
Grain mill products	3,188	24.2	505	22.7
Bakery products	950	7.2	116	5.2
Alcoholic beverages and soft drinks	2,467	18.8	509	22.9
Meat products	240	1.8	54	2.4
Dairy products	1,008	7.6	157	7.0
Preserved fruit and vegetables	693	5.3	95	4.3
Other	4,575	34.8	782	35.2

Source: (45).

Appendix table 77--Direct foreign investment in U.S. food processing industries, 1988

Item	Direct investment		Income	
	Million dollars	Percent	Million dollars	Percent
All food processing	16,437	100.0	772	100.0
Grain mill products	605	3.6	95	12.3
Bakery products	815	5.0	1/	1/
Alcoholic beverages and soft drinks	7,425	45.2	458	59.3
Meat products	195	1.2	4	.5
Dairy products	702	4.3	33	3.0
Preserved fruits and vegetables	56	.3	2	.3
Other	6,643	40.4	189	24.5

1/ Combined into grain mill products total.

Source: (45).

Appendix table 78--International restaurant franchising: Location and number of establishments of U.S. restaurant firms ^{1/}

Location	1971	1974	1976	1978	1981	1982	1984	1986	1988
	<u>Number</u>								
Canada	519	860	1,047	1,196	1,220	1,172	1,591	1,869	1,338
Mexico	44	71	87	84	99	100	119	121	146
Caribbean	40	70	96	150	198	234	290	280	213
United Kingdom	63	429	433	454	442	481	567	608	726
Continental Europe	40	101	103	164	316	360	514	642	772
Australia	163	223	224	384	468	522	581	691	750
Asia	37	306	468	710	1,336	1,535	1,921	2,100	2,397
Japan	NA	265	415	590	1,106	1,259	1,490	1,548	1,827
Other	NA	41	53	120	230	276	431	552	570
Other	24	109	162	198	246	271	398	458	678
Africa	NA	NA	NA	NA	NA	124	172	NA	NA
New Zealand	NA	NA	NA	NA	NA	71	88	NA	NA
Central America	NA	NA	NA	NA	NA	45	75	NA	NA
South America	NA	NA	NA	NA	NA	31	63	NA	NA
Total	930	2,475	3,088	4,050	5,661	6,481	8,300	8,869	9,417

NA = Not available.

^{1/} Includes company-owned, franchisee-owned, and joint-venture establishments.

Source: (21).

Appendix table 79--Composition of food processing industries in selected countries, 1985

Industry	France	West Germany	Japan	United Kingdom	United States
			<u>Percent</u>		
Milk products	34	27	10	18	16
Grain mill products	18	12	20	17	13
Meat products	9	14	8	15	25
Sugar and confectioneries	19	17	10	13	7
Frozen and miscellaneous foods	8	6	13	14	7
Bakery products	5	8	14	12	8
Processed fruit and vegetables	4	5	3	4	14
Fats and oils	1	9	5	4	8
Fish products	2	2	17	3	2

Source: (19).

Appendix table 80--Food processing share of total manufacturing production and employment within each country of the OECD

Country	Production			Employment		
	1965	1975	1985	1965	1975	1985
	<u>Percent</u>					
Australia	16.1	18.3	18.3	10.2	13.3	13.9
Austria	14.0	14.1	14.7	14.2	10.0	10.6
Belgium	17.7	15.5	16.1	7.1	7.6	9.2
Canada	16.7	16.0	15.3	12.2	10.7	10.5
Denmark	19.8	26.9	33.0	12.6	13.7	17.0
Finland	26.1	17.4	17.0	11.8	10.4	10.2
France	18.1	16.6	16.8	8.3	7.8	10.2
West Germany	9.6	9.1	9.5	4.3	4.3	4.9
Greece	23.5	20.0	18.5	16.2	16.2	15.4
Iceland	NA	21.9	22.0	NA	15.4	12.5
Ireland	35.0	40.5	37.0	22.5	23.4	21.6
Italy	NA	11.0	10.5	5.7	5.2	5.3
Japan	10.3	9.6	8.9	8.9	8.9	9.6
Luxembourg	NA	5.7	6.0	2.9	3.0	4.1
The Netherlands	25.5	24.8	24.8	12.2	13.2	14.7
New Zealand	32.3	27.0	27.1	18.9	23.6	24.1
Norway	25.2	17.3	20.2	13.5	12.5	14.8
Portugal	17.1	23.1	16.8	10.1	11.9	11.2
Spain	15.3	13.0	16.6	11.6	10.1	11.3
Sweden	16.9	12.2	12.9	7.0	7.0	8.4
Switzerland	NA	NA	NA	5.0	5.5	7.6
Turkey	26.3	18.1	14.5	16.1	13.9	13.5
United Kingdom	NA	11.9	13.3	NA	8.2	9.4
United States	13.6	14.9	12.3	68.4	7.8	7.1
OECD total	10.8	10.4	10.3	8.4	8.2	9.1

NA = Not available.

Source: (19).

Appendix table 81--Share of food marketing production and employment by OECD countries, 1985

Country	Production	Employment
	<u>Percent</u>	
Australia	1.9	2.6
Austria	1.0	1.5
Belgium	1.0	1.3
Canada	4.7	3.7
Denmark	1.3	1.2
Finland	1.0	1.0
France	7.7	8.7
West Germany	5.9	6.7
Greece	.5	1.5
Iceland	<u>1/</u>	<u>1/</u>
Ireland	.6	.8
Italy	4.0	3.1
Japan	14.4	19.6
Luxembourg	<u>1/</u>	<u>1/</u>
The Netherlands	3.0	2.3
New Zealand	.6	1.3
Norway	.8	.9
Portugal	.4	1.5
Spain	2.7	4.4
Sweden	1.2	1.2
Switzerland	1.2	1.1
Turkey	.6	2.2
United Kingdom	6.4	8.1
United States	38.6	25.1
OECD total	100.0	100.0

1/ Less than 0.1.

Source: (19).

Appendix table 82--OECD trade in processed foods

Country	Import cover rate 1/		Import penetration 2/		Export shares 3/	
	1970	1975	1970	1975	1970	1975
Australia	11.2	10.0	54.3	5.3	38.0	37.3
Austria	.7	.5	.6	21.0	7.0	11.5
Belgium/Luxembourg	.8	1.0	1.2	34.2	30.4	39.3
Canada	.8	.5	1.0	8.7	7.3	5.5
Denmark	3.6	7.0	3.1	25.0	48.0	53.0
Finland	.4	.4	.6	10.6	4.7	4.4
France	.8	1.0	.9	10.2	7.9	11.1
West Germany	.3	.6	.7	21.2	7.2	13.4
Greece	.4	.8	.6	28.0	18.0	15.0
Iceland	3.3	3.2	4.1	NA	NA	NA
Ireland	3.7	4.6	2.9	NA	NA	NA
Italy	.3	.3	.4	19.7	6.2	9.0
Japan	.5	.2	.2	6.8	3.4	1.4
The Netherlands	2.1	2.2	1.9	14.0	40.6	44.5
New Zealand	22.5	10.5	14.0	11.0	62.0	57.0
Norway	1.5	1.5	1.4	12.0	17.2	15.6
Portugal	.9	.4	.6	NA	NA	NA
Spain	1.2	.5	1.1	16.0	16.0	12.0
Sweden	.3	.3	.5	14.1	4.2	5.0
Switzerland	.6	.9	.7	NA	NA	NA
Turkey	3.2	2.0	1.5	NA	NA	NA
United Kingdom	.2	.3	.4	20.5	3.9	7.3
United States	.6	.7	.6	4.8	2.9	3.5

Percent

NA = Not available.

1/ Import cover rate: exports as a percentage of imports.

2/ Import penetration: imports as a share of apparent consumption (production less exports plus imports).

3/ Export shares: exports as a share of production.

Source: (19).

Appendix table 83--Productivity in food processing industries in selected OECD countries, 1985

Country	Production	Employment	Labor productivity
		<u>1980=100</u>	
Australia	100	90	111
Austria	106	90	118
Belgium	121	92	132
Canada	105	89	117
Denmark	120	110	110
Finland	111	101	110
France	107	105	102
West Germany	109	92	118
Ireland	119	81	146
Italy	103	95	108
Japan	104	102	102
The Netherlands	110	88	125
Norway	64	100	65
Sweden	104	97	106
United Kingdom	104	80	130
United States	117	96	122

Source: (19).

Appendix table 84--Private research and development (R&D) expenditures by OECD food-related industries, 1981 ^{1/}

Country	Total	Share of		Percent	
		OECD total	Share of R&D total in manufacturing	Share of government-financed R&D in total manufacturing R&D	
	Million dollars				
Australia	13.9	0.8	6.3	NA	
Austria	10.9	.6	2.6	5.3	
Belgium	25.0	1.4	2.8	2.4	
Canada	52.0	2.9	3.5	2.9	
Denmark	18.8	1.0	7.9	15.5	
Finland	13.7	.8	4.8	1.7	
France	80.8	4.5	1.3	.1	
West Germany	132.7	7.4	1.2	.4	
Greece	.5	<u>2/</u>	3.1	NA	
Iceland	.1	<u>2/</u>	5.1	6.7	
Ireland	13.0	.7	20.0	8.8	
Italy	19.2	1.1	.8	.3	
Japan	438.8	24.3	3.0	.7	
The Netherlands	89.3	4.9	6.8	NA	
Norway	3.7	.2	2.0	.7	
Spain	17.9	1.0	4.3	6.5	
Sweden	34.7	1.9	2.6	2.2	
Switzerland	16.1	.9	1.3	NA	
United Kingdom	183.2	10.2	2.6	.3	
United States	640.0	35.5	1.3	.1	
OECD total	1,804.3	100.1	1.9	.9	

NA = Not available.

^{1/} Food-related: food, beverages, and tobacco.

^{2/} Less than 0.1.

Source: (19).

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