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The U.S. Food Marketing System, 2002

Competition, Coordination, and Technological Innovations Into the 21st Century

J. Michael Harris, Phil R. Kaufman, Steve W. Martinez (coordinator), and Charlene Price

Abstract

This report focuses on recent trends in the food supply chain. Chapters on food manufacturing, wholesaling, grocery retailing, and food service provide a detailed overview of structure, performance, information systems, new technology, and foreign direct investments. The report also contains a comprehensive set of appendix tables containing sales, concentration, trade, productivity, and other indicators. At the time of publication, most of the data sets used in this report included data through the year 2000.

Keywords: Consolidation, concentration, trade, sales, technology, profits, foreign direct investment.

Acknowledgments

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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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Preface

This research report is an electronic version of ERS's former *Food Marketing Review* report. At this point, organization and content remain much the same as the previous version. However, users now benefit from links between a reference to an appendix table or chapter and their actual occurrence. Besides the new electronic format, the most significant changes have come in the appendix tables. We have eliminated extraneous information and combined similar data. Consequently, the number of appendix tables has been roughly cut in half. Unfortunately, because we collect a wide range of data from a variety of sources, data for various series often begin and end at different dates.

The U.S. food system has undergone much change since 1996, when the last version of this report was published. The North American Industry Classification System (NAICS) is replacing the U.S. Standard Industrial Classification (SIC) system, which presented problems in creating comparable time series for some tables. Additional information on the move to NAICS can be found at the U.S. Census Bureau (http://www.census.gov/epcd/www/naics.html).

We will continue to improve the content and tailor the organization of this report to users' needs. To this end, we welcome your comments and suggestions (contact Steve Martinez, martinez@ers.usda.gov).

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The U.S. Food Marketing System, 2002

Competition, Coordination, and Technological Innovations Into the 21st Century

Steve W. Martinez

Introduction

The food marketing system is an important part of the U.S. economy. In 2000, the food and fiber marketing system accounted for 7.7 percent of U.S. GDP (table 1) and employed over 12 percent of the U.S. labor force. An increasing share of what consumers spend on food goes to marketing services added after the product leaves the farm. In 2000, over 80 percent of the U.S. food dollar went toward value-added services and materials—transportation, processing, distribution, labor, packaging, and energy (fig. 1).

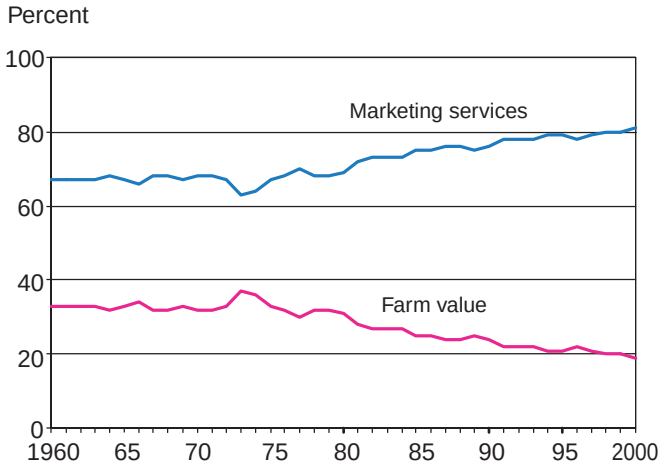
Efficiency gains in the food marketing system continue to result in abundant supplies of a variety of affordable food products. From 1996 to 2000, real value added to GDP per worker in the food and fiber system, including farmers, processors, and distributors, rose by 8.5 percent from $28,019 to $30,413. Income growth has outpaced increases in food expenditures, leading to continuous reductions in the share of income spent on food. Today, consumers spend just 10 percent of their income on food, compared with almost 18 percent in 1960 (fig. 2).

Table 1—Value added by the food and fiber system, 2000

	Value added to GDP	Share of GDP
	$ billion	*Percent*
Farming	82.0	0.8
Input industries	426.0	4.3
Manufacturing		
Food processing	165.2	1.7
Nonfoods	54.3	0.5
Distribution		
Transportation	42.9	0.4
Wholesaling and retailing	337.7	3.4
Food service	156.4	1.6
Food and fiber manufacturing and distribution	757.0	7.7
Total food and fiber system	1,264.5	12.8

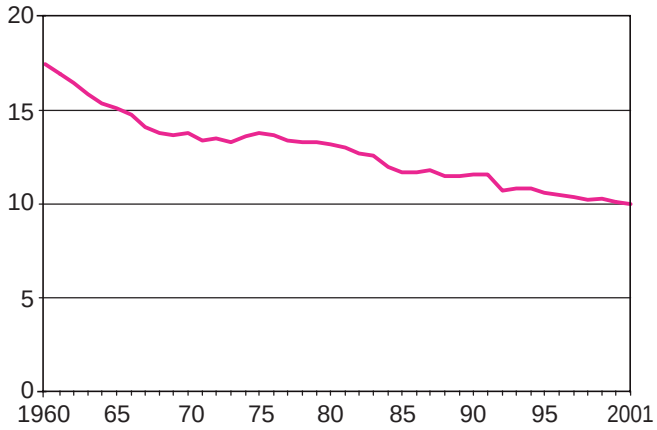
Source: ERS, Edmondson.
http://www.ers.usda.gov/briefing/foodmarketstructures/foodandfiber.htm

Figure 1
Percent of U.S. food dollar going to the farm sector verus marketing services, 1960-2000



Source: ERS, Elitzak.
http://www.ers.usda.gov/briefing/foodpricespreads/bill/index.htm

Figure 2
Total U.S. food expenditures as a share of disposable personal income, 1960-2001



Source: ERS, USDA.
http://www.ers.usda.gov/briefing/CPIFoodAndExpenditures/Data/table7.htm

There are several notable trends occurring throughout the U.S. food marketing system. First, merger and acquisition activity continues to result in increased concentration. Recent concentration in the retail sector has seen the share of U.S. grocery store sales by the top four food retailers increase from 16.6 percent in 1996 to 27.4 percent in 2000 (see "Food Retailing" chapter).[1] By contrast, this four-firm sales share had declined from 17.1 percent in 1987 to 16.6 percent in 1996. Merger and acquisition activity has also accelerated in food service distribution. In 1995, sales by Sysco, the leading U.S. food service distributor, outpaced its nearest competitor by 84 percent. With U.S. Foodservice's purchase of Alliant in 2001, this gap closed to 28 percent (see "Food Wholesaling" chapter).

Changes in concentration vary by food marketing stage, segments within a particular stage, and types of products processed and handled. Commonly cited reasons by companies for mergers and acquisitions, horizontal or vertical, include (1) to maintain bargaining power with other stages of the supply chain undergoing consolidation, (2) to ensure a market outlet in an increasingly consolidated downstream segment, (3) to ensure a consistent, high-quality source of raw materials, (4) to capture efficiency gains and lower procurement costs, and (5) to improve ability to compete with alternative formats, such as nontraditional retailers (for example, Wal-Mart and Costco) and the food-away-from-home sector. Commonly cited reasons for companies divesting include (1) to resolve bankruptcy cases by reorganizing, (2) to focus on alternative formats (for example, high-volume price impact supermarkets), (3) to focus limited resources in particular geographic areas, and (4) to adhere to antitrust requirements regarding a proposed merger.

Buyer-seller relationships are changing throughout the food supply chain as stages become increasingly interdependent. For example, farmers are increasingly engaged in contracts and vertical integration in some agricultural sectors. Also, traditional food wholesalers that buy food from manufacturers and resell to retail food stores are losing ground (Kinsey). Today, manufacturers increasingly deliver their products directly to retail stores, while self-distributing retailers own their own distribution centers and buy directly from manufacturers.

The food marketing system continues to embrace new technology that improves the flow of information and assists with scheduling and inventory. This reduces costs, reduces instances of empty grocery shelves or out-of-stocks, and enables firms to better target alternative consumer segments. Internet services are even being tailored to the food-away-from home market (see "Food Service" chapter).

Developments in the food marketing system also have important implications for the agricultural sector. Competitive pressures are mounting for farmers to deliver the right types of products at the right time. Retailers are demanding a variety of high-quality products (for example, organic produce or exceptionally lean pork) delivered in a timely fashion. This increases the importance of agricultural product differentiation and precise information. For example, leading new product introductions were convenience foods, organic and natural foods, and functional foods (see "Food Manufacturing" chapter). In addition, grocery retailers are experimenting with new formats (for example, supermarket-sized natural food stores) to meet the growing needs of natural food and ethnic consumers (see "Food Retailing" chapter).

International trends in trade and foreign direct investment offer U.S. food marketers an alternative to the slowly growing domestic food market. It also leaves the U.S. food marketing system increasingly exposed to foreign economic developments, policies, and changing consumer preferences. The United States is the world's largest importer and exporter of processed food, and U.S. food companies continue to expand operations overseas. Investment by foreign-owned food retailers in U.S. food retailing is on the rise through acquisitions.

The remainder of this report describes important developments in the food marketing system (manufacturing, wholesaling, retailing, and food service) with regard to structure, organization, productivity, technology, and trade.

References

Edmondson, William. U.S. Department of Agriculture, Economic Research Service. Food Market Structures: The U.S. Food and Fiber System Briefing Room: Accessed 12 July 2002, *http://www.ers.usda.gov/briefing/foodmarketstructures/foodandfiber.htm*.

Kinsey, Jean D. "The Big Shift From a Food Supply to a Food Demand Chain," *Minnesota Agricultural Economist*, No. 698. University of Minnesota, St. Paul, MN, Fall 1999.

[1]Includes sales of Wal-Mart's food and nonfood grocery items.

Food Manufacturing

J. Michael Harris

U.S. food shipments continue to trend upward in a maturing domestic market. Manufacturers are seeking to increase sales, profits, and market share through reorganization, industrialization, expanding exports and foreign growth, cost controls, and new value-added product development. While food shipments reached over $495 billion in 1999, profit growth fell. In 2000, U.S. processed food exports increased to $30 billion, but food trade still experienced a trade deficit. U.S. foreign investment also increased and reached over $33 billion in 1998, while foreign investment in the United States declined. Advertising expenditures for food products increased to almost $7.3 billion in 1999.

Introduction

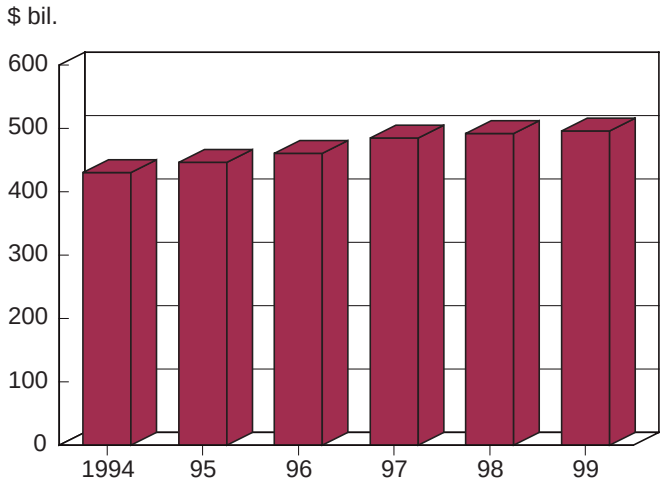
The food processing and beverage industry accounts for about one-sixth of the U.S. manufacturing sector's activity (*U.S. Industry and Trade Outlook 2000*), but has undergone significant reorganization as profits slide. Food manufacturers continue to attempt to increase income and market share through consolidation, foreign growth, and new product development (*Food Engineering*). Food manufacturing plants are growing more automated and integrated to realize economies of industrialization.

Value of Shipments and Value Added Increase

Due to a maturing domestic food market, the (nominal) value of U.S food processing shipments grew less than 3 percent annually from 1995 to 1999 (fig. 1-1). Total shipments of over $495 billion in 1999 represented less than 1 percent growth over 1998 and just over a 2-percent increase from 1997 (app. table 2). Food manufacturers continue their attempts to increase sales, profits, and market share through restructuring, expanding foreign market opportunities, reducing costs, and introducing new products (including value-added products).

Manufacturers continue to increase the value added to food products. Value added by manufacturers (the difference between most costs of production—such as labor, capital, and materials—and value of shipments) increased 23 percent from $157.2 billion in 1992 to $193.1 billion in 1997 (app. table 12) when measured as the ratio of value added relative to shipment value. Ratios across industries varied widely in 1997. Most of the meat, dairy, and fats/oils industries have ratios less than 30 percent, due to the higher cost of raw inputs (relative to the price of finished products) and to relatively modest transformation of these inputs.

Figure 1-1
Processed food shipments



Source: Annual Survey of Manufactures.

On the other hand, higher ratios are realized in highly processed, highly differentiated, packaged convenience products such as bakery goods. Bakery products showed value-added/shipment value ratios higher than 60 percent in 1997. Beverages also exhibit 50-percent-plus ratios mainly due to low material costs, intense advertising, and high marketing expenses.

The Food Processing and Beverage Industry

This industry includes firms and their establishments that manufacture or process foods and beverages for human consumption and other related products such as manufactured ice, chewing gum, vegetable and animal fats and oils, and prepared feeds for animals and fowls.

Traditionally, statistics on this industry have been reported according to the Standard Industrial Classification System (SIC) under the major industry called food and kindred products (SIC 20). Food and kindred products consists of nine industry groups (3-digit SIC groups): meat products; dairy products; canned, frozen, and preserved fruits, vegetables, and food specialties; grain mill products; bakery products; sugar and confectionery products; fats and oils; beverages; and, miscellaneous food preparations and kindred products. These 3-digit groups are made up of 4-digit industries (48 industries).

The U.S. Census Bureau has initiated a new classification system called the North American Industry Classification System (NAICS). The structure of NAICS is similar to SIC at high levels of aggregation. However, under NAICS, food manufacturing (now classified as NAICS code 311) excludes beverages, which are reported under beverage and tobacco manufacturing (NAICS code 312). The two systems are not directly comparable due to differences within major groups (i.e., at the SIC 3 and 4 digit level).

Employment Increases Slightly

The food processing industry employed almost 1.7 million production workers in 2000 (table 1-1), a slight increase compared with 1999 (app. table 11). Meat processing was the largest employer, accounting for 30 percent of workers. Fruit and vegetable processing was second (13 percent), followed by bakery products (12 percent).

Cost of Inputs Down

Food manufacturers paid about 12 percent less for crude foodstuffs and 4 percent less for intermediate materials (such as packaging, ingredients, etc.) in 2000 compared with 1997 (app. table 36). Total purchases of inputs and intermediate materials for the 49 food manufacturing industries totaled over $123 billion in 2000 (app. table 25).

In 1996 (the most recent year with detailed data), about 10 percent of all farm output was purchased through production contracts (entered before production begins), and another 8 percent came from farms owned by food processing firms (vertical integration) (table 1-2). Another 27 percent of farm output was purchased through marketing contracts (agreements to market output after production has already begun) (table 1-3).

Establishments Increase in Select Industries

The number of food processing plants rose 5 percent from 20,805 in 1992 to 21,835 in 1997, according to the last available census (table 1-4). However, this recent gain reflects increases in a few selected industries where the number of small food processors has been increasing (e.g., over 500 small salsa makers started operation in 1992-97). Over the last two or three decades, nearly every food processing industry has seen declines in the number of establishments (Connor and Schick, 1997). Still, the prepared foods industry added 800 establishments from 1992 to 1997, followed by bakery products (232) and beverages (179). Dairy lost the most establishments—190.

New plants are concentrated in industries with growing markets and large numbers of new product introductions (Connor and Schick, 1997). Examples include dairy substitutes, frozen convenience foods, corn-based snacks, refrigerated pasta entrees, and other refrigerated food products. Small-scale entry into growing niche markets has also grown significantly.

Mergers and Acquisitions

Mergers and acquisitions in food manufacturing reached 269 in 1999, but fell to 198 in 2000 (table 1-5). Despite the decline, the industry remains in a period of consolidation, and more transactions are pending (see box, p. 7).

In 1998, H.J. Heinz led transaction activity with acquisitions or controlling interest of food processors in four countries, plus acquisitions of co-packer Thermo-Pac, soup maker Quality Chef, and a minority interest in Hain Food Group. Smithfield has also risen to fourth largest beef packer through a series of smaller packer acquisitions.

Table 1-1—Employment and earnings in food processing, 2000

Industry	Number of employees	Number of workers	Avg. hourly earnings	Avg. weekly earnings	Avg. weekly hours
	---------- *1,000* ----------		---------- *Dollars* ----------		
Meat	504.5	428.5	10.24	424.96	41.5
Dairy	144.6	101.6	14.43	606.06	42.0
Preserved fruits/vegetables	222.5	185.9	12.11	489.24	40.4
Grain mill products	123.4	87.2	15.26	685.17	44.9
Bakery products	201.6	141.3	13.10	534.48	40.8
Sugar and confections	89.4	70.7	14.42	594.10	41.2
Fats and oils	28.6	19.7	13.68	574.56	42.0
Beverages	184.9	91.7	16.39	708.05	43.2
Miscellaneous food	172.4	123.2	11.25	438.75	39.0
All food processing	1,671.9	1,249.2	12.41	513.77	41.4

Source: Employment and Earnings.

Table 1-2—Production contracts and ownership integration

	Production Contracts[1]			Ownership Integration[2]		
Product	1980	1990	1996	1980	1990	1996
			Percent			
Crops:						
Feed grains	1	1	<1	1	1	1
Hay	<1	1	<1	0	0	0
Food grains	1	<1	<1	1	1	1
Vegetables for fresh market	18	21	22	35	40	40
Vegetables for processing	94	95	97	4	4	2
Dry beans and peas	2	1	<1	1	1	1
Potatoes	50	48	44	35	40	44
Citrus fruits	0	0	0	11	8	7
Other fruits and nuts	0	0	0	25	25	25
Sugar beets	99	99	99	1	1	1
Sugar cane	38	42	48	62	58	52
Cotton	1	<1	<1	1	1	1
Tobacco	1	9	9	2	2	2
Soybeans	1	<1	0	<1	<1	<1
Livestock:						
Fed cattle[3]	0	0	0	4	5	3
Calves, slaughter[3]	0	0	0	2	7	12
Other cattle and calves	3	2	2	0	0	0
Sheep and lambs[3]	0	0	0	9	29	14
Market hogs	2	9	30	2	6	11
Fluid-grade milk	<1	0	<1	0	0	0
Manufacturing-grade milk	0	0	0	1	1	<1
Market eggs	45	40	37	43	54	58
Hatching eggs	70	70	74	30	30	26
Broilers	87	86	85	12	13	14
Market turkeys	52	55	56	28	28	32
Total farm output[4]	10	10	10	6	7	8

[1] Contracts entered into before production begins, excludes marketing contracts.
[2] The same firm owns farms and other vertically related operations such as a hatchery, feed mill, processing plant, or packer-shipper. Excludes direct marketing to consumers such as producer-dealers of milk, roadside stands, or pick-your-own operations.
[3] Feeding of livestock by the meatpacker, some of which is under contract in feedlots owned by others.
[4] The percent of total farm output under production contracts and ownership integration includes only the products listed in the tables and calculated using the same weights in each year so that changes in the share of, say, broilers do not affect the figure. The weights are the average share of cash receipts of each product in 1980, 1990, and 1996.

Source: Alden Manchester, Economic Research Service.

Table 1-3—Marketing contracts, including forward contractors[1]

Product	1980	1990	1996
		Percent	
Crops			
Feed grains	6	6	18
Hay	0	0	0
Food grains	7	7	14
Vegetables for fresh market	0	0	0
Vegetables for processing	0	0	0
Dry beans and peas	23	26	26
Potatoes	0	0	0
Citrus fruits	84	70	88
Other fruits and nuts	35	40	43
Sugar beets	0	0	0
Sugarcane	0	0	0
Cotton	16	12	35
Tobacco	1	1	<1
Soybeans	9	6	17
Livestock			
Fed cattle	10	12	18
Sheep and lambs	7	7	7
Market hogs	2	<1	<1
Fluid-grade milk	92	93	94
Manufacturing-grade milk	60	82	89
Market eggs	5	2	2
Hatching eggs	0	0	0
Broilers	0	0	0
Market turkeys	10	5	5
Total output[2]	21	21	27

[1] A contract to market output that is already committed, such as an annual crop already planted, output from perennials (as trees), or continuously produced products such as milk and eggs. Includes most contracts with marketing cooperatives (for milk and eggs), but not those for broilers and hogs, which are resource providing production contracts. Forward contracts are contracts entered into after production has begun (for example, the corn has been planted), specifying where the product is to be marketed and the price or the method of determining price.

[2] The percent of total farm output under production contracts and ownership integration includes only the products listed in the table and is calculated using the same weights in each year so that changes in the share of, say, broilers do not affect the figure. The weights are the share of cash receipts of each product in 1980, 1990, and 1996.

Source: Alden Manchester, Economic Research Service, USDA.

Table 1-4—Number of food processing establishments

Industry	1992	1997	Change
Food	20,805	21,835	1,030
Meat	3,242	3,164	-78
Dairy	2,024	1,834	-190
Fruits and vegetables	2,052	2,117	65
Grain mill products	2,618	2,531	-87
Bakery products	3,152	3,384	232
Sugar	1,129	1,259	130
Fats and oils	540	519	-21
Beverages	2,064	2,243	179
Other prepared foods	3,984	4,784	800

Source: Census of Manufactures.

There are several possible reasons for the most recent wave of mergers and consolidation in food manufacturing. First, consolidation is continuing in the processed food and beverage markets as less efficient plants close or merge with more efficient plants (*U.S. Industry and Trade Outlook 2000*). Second, consolidation can be a fast route to broadening a firm's product lines and acquiring additional market share in a mature domestic market. Third, food manufacturers may engage in defensive mergers to counter the purchasing clout provided by merger and acquisition activity in food retailing. Supermarket chains have been consolidating to improve operating efficiencies and economies of scale in the face of increasing competition from mass merchandisers and club stores (see "Food Retailing").

Concentration Continues To Increase

Continued consolidation and industrialization in the food processing industry is increasing concentration. These structural changes are driven by economies of firm size, economies of scope, specialized production methods, more capital-intensive technology, higher productivity, and efficiencies from vertical coordination. The ultimate result is greater concentration (greater proportion of sales held by fewer firms). Aggregate concentration in food processing can be expressed as the share of the market controlled by the top food processing firms. The top 20 firms' share rose from 36 percent of industry sales in 1987 to 43.7 percent in 1992, and to 51 percent in 1997.

In red meatpacking, market share of the four largest firms rose from 47 percent in 1987 to 61-63 percent since 1993. In steer and heifer slaughter, this same measure rose from 70 percent in 1989 to 81 percent in 1999, with most concentration occurring prior to 1989. Four-firm concentration in hog slaughter also increased from 30 percent in 1989 to 57 percent in 1999.

Other processing industries have also concentrated. In pasta, the four largest processors increased share from 42 percent in 1982 to 78 percent in 1992. In malt beverages, this measure increased from 77 percent in 1982 to 90 percent in 1992. Larger dairy processing firms also account for an increasing share of dairy sales. In 1998, companies with $800 million or more in sales accounted for 69 percent of U.S. dairy sales. Large U.S. dairy cooperatives gained market share (from 17 percent in 1975 to 27 percent in 1998) relative to proprietary dairy companies (39 percent to 42 percent).

Leading Mergers and Acquisitions, 1999-2001

Transaction	Value
Unilever's acquisition of Best Foods	$20.3 billion
Philip Morris' acquisition of Nabisco holdings	$14.9 billion
General Mills acquisition of Pillsbury	$10.4 billion
Kellogg's acquisition of Keebler Food Company	$4.0 billion
Tyson's acquisition of IBP	$3.2 billion
Unilever's acquisition of Slim Fast foods	$2.3 billion
Proctor and Gamble's acquisition of Iams Company	$2.05 billion
Coca-Cola's acquisition of Orangina	$780 million
Smithfield's acquisition of hog-producer Carroll Foods	$500 million
Nabisco's acquisition of Favorite Brands	$475 million
Unilever's acquisition of Ben and Jerry's	$326 million

Table 1-5—Mergers and divestitures in food processing

Year	Acquisitions by U.S. food processing firms	Acquisitions by all other firms	Total acquisitions	Divestitures
1982	165	85	250	120
1983	174	51	225	85
1984	178	64	242	100
1985	212	79	291	103
1986	NA	NA	347	150
1987	220	81	301	116
1988	229	122	351	161
1989	188	89	277	119
1990	148	60	208	108
1991	135	46	181	78
1992	163	54	217	119
1993	207	59	266	121
1994	185	47	232	103
1995	183	61	244	101
1996	158	52	210	105
1997	112	46	158	53
1998	222	29	251	35
1999	240	29	269	45
2000	171	27	198	25

NA = Not available.

Source: Compiled by ERS from *Food Business Mergers* and *Acquisitions*, Food Institute.

Mergers and acquisitions have driven concentration in the food processing industries. Company failures accounted for little of the trend. From 1993 to the first half of 1998, dairy processors accounted for 69 mergers and acquisitions, meat processors for 60, soft drink bottlers for 53, snack food processors for 44, and poultry processors for 32. In 2000, mergers and acquisitions took place in 18 of the 27 food or food-related categories tracked by the Food Institute.

Market Competition

U.S. consumers had about 40,000 food products to choose from in the typical supermarket in 2000, as more than 16,000 food processing firms competed vigorously for a greater share of the consumer food dollar. Food processors use both price and nonprice strategies to gain consumer acceptance and retail shelf space in the branded product market. Over 80 percent of U.S. grocery

products are nationally or regionally branded; the remaining products are unbranded, private label, or generic products. In produce, nearly 19 percent of U.S. sales were nationally branded in 1997, and this figure is rising. Branding of cut meats, especially poultry, has been increasing. Differentiation through new product introductions and advertising is being applied even for traditionally undifferentiated products such as red meats, poultry, fish, and some dairy products.

Advertising is typically used to differentiate food product brands and create brand loyalty. In 1999, brand food processors spent almost $7.3 billion in direct consumer media advertising (app. table 30). Prepared and convenience food processors advertised most with expenditures at $1.3 billion, followed by alcoholic beverages ($1.25 billion) and confectionery and snacks ($1.2 billion).

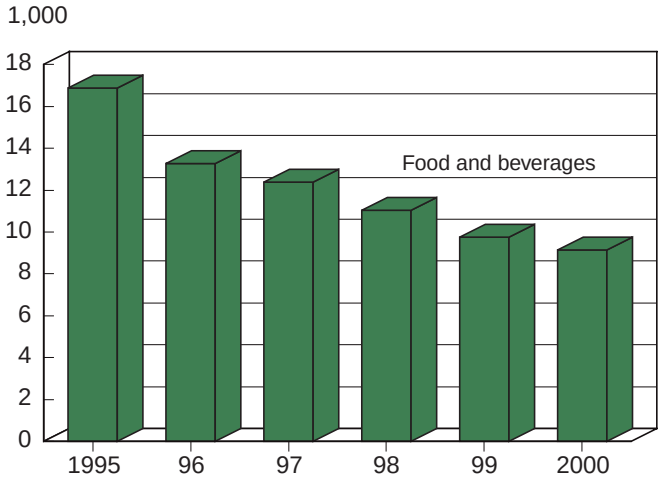
New Products Decline

The trend in new food product introductions continues to decline from its peak in 1995 (fig. 1-2). In 2000, new product introductions totaled 9,145, down nearly 46 percent from the peak level of introductions in 1995 (app. table 33).[1] The trend toward consolidations may have limited new food product introductions since redundancy may result when parallel product lines merge. Efficient consumer response (ECR) technology may have also slowed new product introductions since it allows more consumer research before introduction of new products. Finally, some food product categories may be reaching saturation. Instead of providing more value to consumers, new products may create consumer confusion over virtually identical products.

New product introductions are most prevalent in convenience food products, organic and natural foods, and functional foods (*New Product News*). New value-added convenience foods (e.g., skillet meals) reflect food processors' efforts to recapture sales lost to increased food-away-from-home expenditures. "All natural" foods have led new product introductions of foods with nutrition or health claims (table 1-6). Reduced/low-calorie, reduced/low-sugar, and reduced/low-fat products, in general, have declined since their peak in 1995-96 (despite a spike in 2000).

[1] Recently released data indicate that new product introductions increased slightly in 2001, and in the first 2 months of 2002, there have been twice as many introductions compared to the corresponding months of 2001. It remains uncertain as to whether this represents a shift in the downward trend established since 1995.

Figure 1-2
New food product introductions



Source: *New Product News*.

Coupon Promotion

Food processors vie for space on America's grocery shelves not only by paying slotting fees (fees paid to get new products on shelves), but also through trade promotion. Trade shows, discounts and allowances, coupon processing fees, special promotion incentives and prizes, advertising allowances, and instore displays are all part of processors' promotion expenditures.

Processors use couponing to promote their products (fig. 1-3). In 2000, 166 billion grocery coupons were distributed, down 4.1 percent from 1999 but up 3 percent from 1998 (Food Institute). Despite overall decline, some grocery categories garnered as much as 22 percent more coupons in 2000. U.S. shoppers redeemed 3.5 billion of the grocery coupons available (fig. 1-4). While internet coupons accounted for a minute portion (less than 0.1 percent) of coupons issued, the redemption rate is 7.5 percent compared with 1.5 to 2 percent for coupons offered through newspapers and mailing (*U.S. Industry and Trade Outlook 2000*).

Domestic Performance

The aggregate performance of the 49 food processing industries was better than that of the rest of U.S. manufacturers in 2000. Performance can be based on profitability; productivity; capacity utilization; capital expansion; investment; producer, consumer, and farm prices; and return on investment. These meas-

Table 1-6—New product introductions bearing nutritional claims, 1994-2000

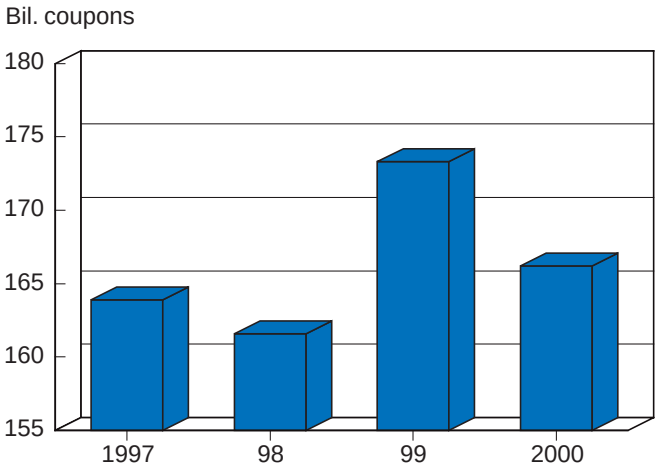
Category[1]	1994	1995	1996	1997	1998	1999	2000
				Number			
Added/high calcium	23	21	35	28	45	119	158
No additives/preservatives	251	167	143	142	149	346	269
Low/no cholesterol	372	163	223	106	124	244	189
Added/high fiber	26	40	12	33	43	67	81
Reduced/low salt	274	205	171	87	80	97	131
Organic	446	538	645	505	842	783	844
All natural	575	407	645	587	743	522	1,130
Reduced/low calorie	575	1,161	776	742	456	302	261
Reduced/low sugar	301	422	373	78	164	74	61
Reduced/low fat	1,439	1,914	2,076	1,405	1,180	481	1,057

[1] Nutritional claims categories are not additive since new products may carry more than one claim.

Source: ERS, USDA / *New Product News*.

Figure 1-3

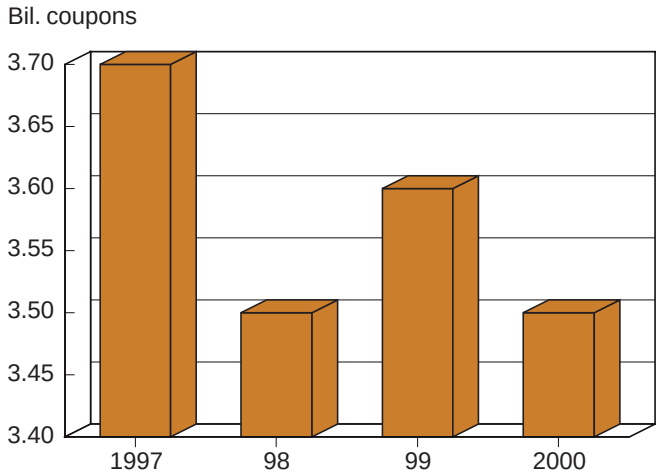
Grocery coupon distribution



Source: Food Institute/NCH NuWorld Marketing Ltd.

Figure 1-4

Grocery coupon redemption



Source: Food Institute/NCH NuWorld Marketing Ltd.

ures can vary widely among individual industries, with detailed information often unavailable. However, composite indicators provide a performance reading among the food manufacturing industries.

Profits

After-tax profits (return on investment) in food manufacturing and kindred products increased in 2000 (fig. 1-5, app. table 22). Return on stockholders' equity increased 3 percentage points, from 21.1 to 24.1 percent, from 1999 to 2000. Return on equity has been increasing since 1993 when it stood at 13.5 percent. Return on assets increased from 6.6 percent to 7.3 percent from 1999 to 2000, its highest level since 1989 (8.2 percent).

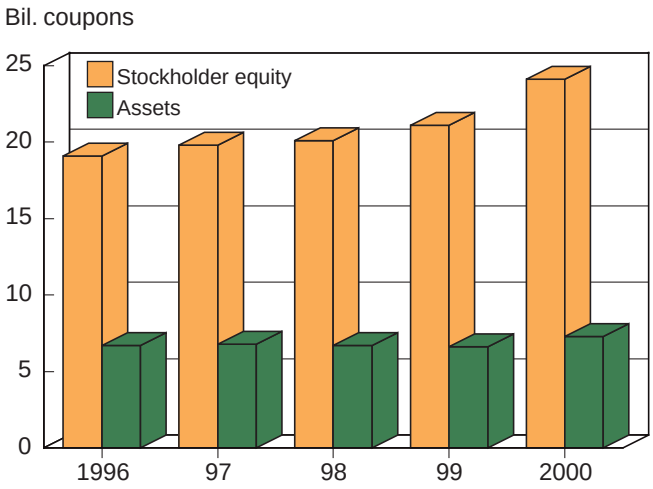
Productivity

Productivity is a measure of economic efficiency that shows how effectively economic inputs are turned into output. The multifactor (capital, labor, and raw materials) productivity index for U.S. food manufacturing increased from 101.2 in 1998 to 103.3 in 1999 (app. table 20), the largest gain since 1995. Capital services led, gaining 3.2 points, and labor productivity was up 2 points. Purchased services and materials both declined over 3 points from 1998 to 1999.

Labor productivity has increased at varying rates among reported industries (app. table 24). Candy and confectionery gained almost 17 points between 1998 and 1999, bakery gained over 10 points, and red meat posted nearly a 2-point gain in labor productivity. Malt beverages declined 8 points.

Figure 1-5

Returns on food manufacturing stockholder equity and assets



Source: Quarterly Financial Reports.

Capacity Utilization

Food processing plants operated at varying rates of capacity in 1999 (app. table 21). Overall, capacity utilization (based on full production) ran at 74 percent for food manufacturing, excluding beverages (70 percent). Both food manufacturing and all manufacturing had the same capacity utilization rates (based on full production) in 1999. Rates range from 62 percent in seafood to 85 percent in meat product manufacturing. Capacity rates are mainly affected by capital expenditures, capital retirements, workforce changes, price changes, and changes in product mix (*Survey of Plant Capacity*).

Capital Expenditures

Capital expenditures for food manufacturers increased almost 13 percent from 1998 to 1999 (app. table 28). The beverage industry, bakeries and tortilla manufacturing, meat product manufacturing, and fruit and vegetable processing each had expenditures exceeding $2 billion. Renovations and plant expansions led new construction projects in 1999, accounting for 68 percent of new projects (*Food Engineering)*. In 1997 and 1998, renovations and expansions made up 64 percent of new projects by food manufacturers, with new plant construction comprising 36 percent.

International Performance

Globalization of the processed food and beverage markets (both foreign trade and investment) is increasing rapidly since most food manufacturers face mature domestic markets. Foreign markets can provide opportunities to increase sales and market share. According to *Prepared Foods*, 40 percent of the world's top 50 food processing firms in 1998 were U.S./Canadian-based companies. Europe, in total, accounted for 34 percent.[2] The Asian-Pacific area accounted for 24 percent of the top food processing firms.

U.S. Dominates Trade

The United States is the world's largest importer and exporter of processed food and beverage products, with exports over $30 billion in 2000 and imports approaching nearly $37 billion (fig. 1-6, app. table 37). Meat products was the largest export ($8.9 billion), followed by miscellaneous foods ($4.7 billion), grain mill ($4 billion), fats and oils ($3.3 billion), and fruits and vegetables ($3.3 billion). U.S. imports were led by miscellaneous processed foods ($11.9 billion), mostly fresh fish, followed by beverages ($8.1 billion), meat products ($4.2 billion), fruits and vegetables ($3.8 billion), and sugar and confectionery ($3.5 billion). The top five destinations for U.S. processed food exports were Japan, Canada, Mexico, South Korea, and Hong Kong. The top originating countries for U.S. imports were Canada, Mexico, Thailand, France, and Italy.

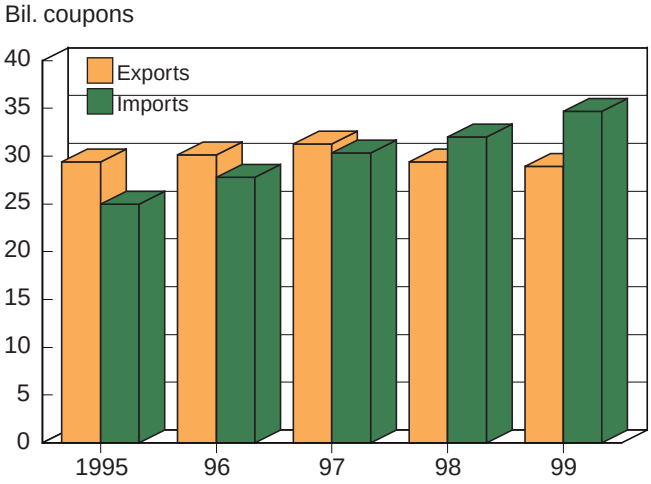
Trade Deficit Widens

In 2000, the United States had a negative trade balance for all processed foods, totaling almost $7 billion, which has existed since 1998 (fig. 1-6, app. table 38). Only three categories of processed food had a trade surplus: meat products ($4.8 billion), grain mill products ($2.7 billion), and fats and oils ($1.7 billion). Miscellaneous prepared foods was the largest contributor to the deficit ($7.3 billion), followed by beverages ($5.6 billion).

The United States has experienced a food trade deficit due to the current world economic situation and the strength of the U.S. dollar (*U.S. Industry and Trade Outlook 2000*). Exports of more price-sensitive products, such as fats and oils and wet corn milling, have declined as well. U.S. exports of higher value branded food products have increased due to their popularity abroad. While the strong U.S. dollar dampens the overall demand for U.S. processed food exports, it encourages additional imports of processed food. Increases in imports come mainly from branded, consumer-ready products, rather than lower valued products with less processing.

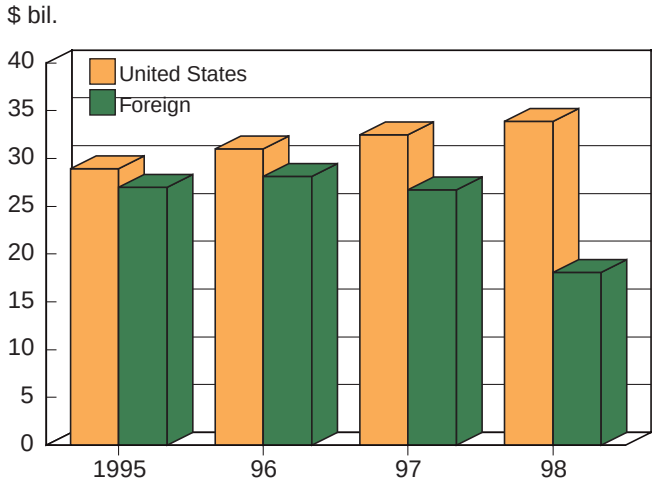
[2] These numbers were generated by combining *Prepared Food's* lists of top international food processing firms.

Figure 1-6
U.S. processed food imports and exports



Source: ERS, USDA.

Figure 1-7
U.S. direct foreign investment abroad and foreign investment in the U.S., food manufacturing



Source: *U.S. Direct Investment Abroad*, Bureau of Economic Analysis.

Expansion Abroad

U.S. foreign direct investment in food manufacturing abroad totaled $33.9 billion in 1998, while foreign investment in U.S. food manufacturing totaled $18.1 billion (fig. 1-7). Sales for U.S. affiliates of foreign firms totaled $49.8 billion in 1998 (app. table 43), while sales by foreign affiliates of U.S. firms totaled $133.1 billion (app. table 42).

Direct foreign investment abroad continues to increase. Investment in foreign affiliates by U.S. firms increased 17 percent from 1995 ($28.9 billion) to 1998 ($33.9 billion), while sales of these firms increased from $113.2 billion to $133.1 billion. Over the same period, the number of U.S. parent companies declined from 77 to 72, while the number of affiliates increased from 764 to 823. U.S. companies continue to invest in joint ventures with existing foreign firms rather than start from scratch in foreign markets.

Direct foreign investment in U.S. food manufacturing declined nearly 36 percent from its peak in 1996 ($28.1 billion) to 1998 ($18.1 billion). Sales by these firms were also down nearly 8 percent, from $54 billion to $49.8 billion. However, sales by U.S. affiliates in the dairy sector were up over 27 percent, and bakery sales were up nearly 252 percent. The number employed by these affiliates was down to 159,000 in 1998, compared with 229,000 in 1995 (app. table 43). The strengthening U.S. dollar may explain the declines in direct foreign investment in U.S. food manufacturing.

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Food Wholesaling

Steve W. Martinez

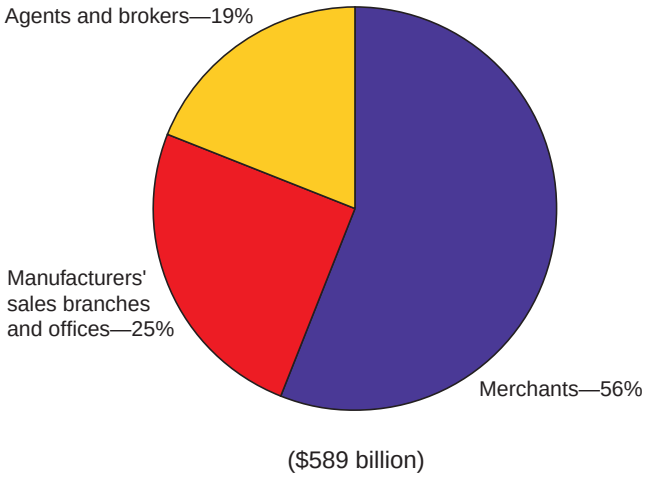
The food wholesaling sector continues to enjoy steady growth in sales and undergo concentration through acquisitions. Merchant food wholesalers work with processors to distribute products to retailers and food service establishments. As their customer base continues to shrink due to rapid consolidation by supermarket chains, many broadline merchant distributors to retail food stores continue to acquire retail operations. Concentration has also become international in scope as companies from outside the United States purchase U.S. food wholesalers.

Introduction

Broadly speaking, there are three types of wholesalers in the food industry. *Merchant wholesalers* typically buy and resell food (primarily from a variety of manufacturers), assemble it for distribution, load it onto trucks, and deliver it to retailers, food service establishments, government, or the export market, making profits on the services they provide. They also may purchase grocery items from, or deliver to, other wholesalers. Merchant wholesalers account for over half of all grocery and related product sales, which reached $589 billion in 1997 (fig. 2-1).[1] The remainder of wholesale sales is accounted for by *manufacturers' sales branches and offices* (MSBO) (25 percent), and *agents and brokers* (19 percent). MSBOs are maintained by manufacturers, apart from their plants, to market their products at wholesale. Branches carry inventory, while offices do not. Agents and brokers buy or sell goods owned by others on commission.

Grocery wholesalers are also classified by the type of products they handle. *Specialty* wholesalers might specialize in dairy, poultry, meats, or fresh fruits/vegetables, and they account for most wholesale sales (fig. 2-2). Of these, distributors of packaged frozen foods, meats, and fresh produce lead in sales value (fig. 2-3). *Miscellaneous* wholesalers primarily distribute products such as coffee, baked goods, soft drinks, and canned goods; *general line* distributors sell a broad range of dry groceries, perishable food products, and nonfood products found in grocery stores.

Figure 2-1
Total wholesale sales by type of wholesaler, 1997



Source: Bureau of the Census, Census of Wholesale Trade, 1997, U.S. Department of Commerce.

Distribution Channels to Retail Food Stores

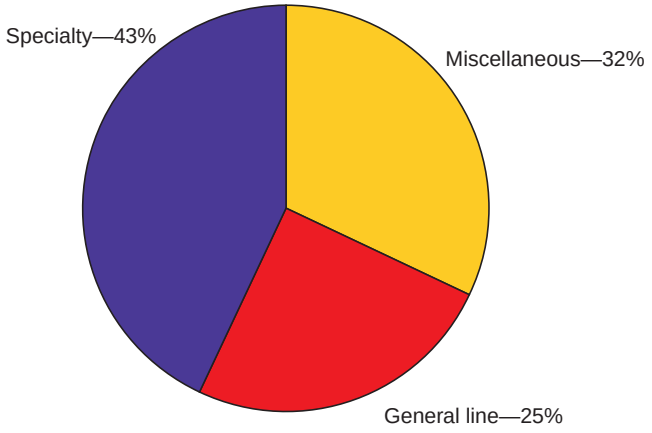
Retail food stores buy approximately 40 percent of wholesalers' grocery and related products (fig. 2-4). Another 25 percent is sold to other wholesalers.[2] From

[1] The U.S. Census Bureau double-counts wholesale sales to other wholesalers. Product sales are counted once when sold to another wholesaler and counted again when the wholesaler resells the products to a retailer. In 1997, sales of grocery and related products to retail food outlets and food service establishments accounted for 62 percent of total wholesale sales of grocery and related products, or $365 billion.

[2] Other wholesalers include small specialty wholesalers who tend to purchase product from larger wholesalers rather than directly from manufacturers (Kaufman et al., 2000).

Figure 2-2

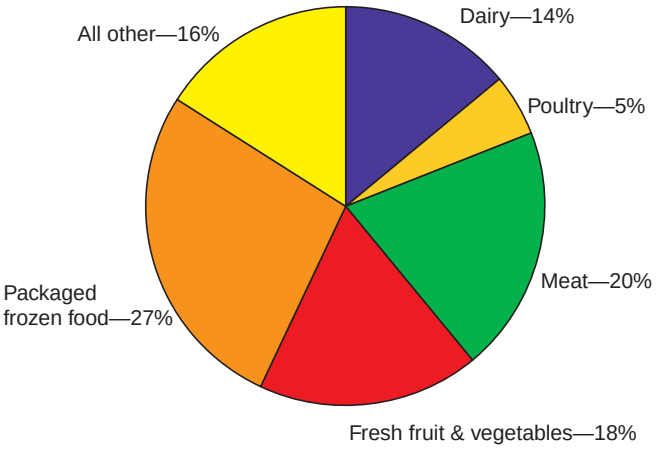
Wholesale sales by type of products handled, 1997



Source: Bureau of the Census, Census of Wholesale Trade, 1997, U.S. Department of Commerce.

Figure 2-3

Specialty wholesale sales by type of product, 1997



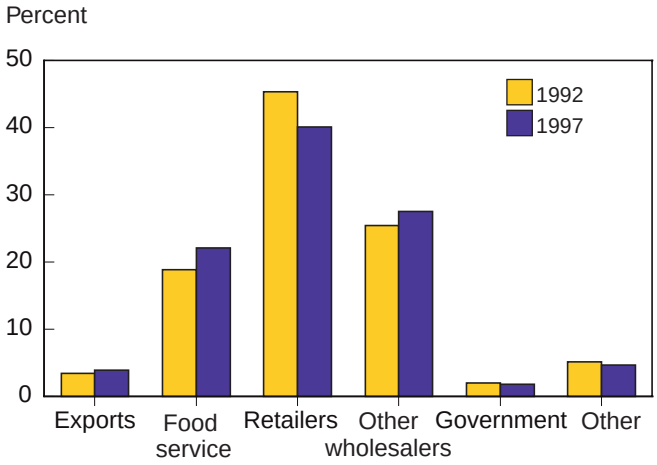
Source: Bureau of the Census, Census of Wholesale Trade, 1997, U.S. Department of Commerce.

1992 to 1997, sales to retail stores declined as a percentage of total wholesale sales, perhaps due to integration by retailers into wholesaling and the growing importance of the food service sector.[3]

Distribution to retail food stores (excluding brokers) can be classified into merchant, or third-party wholesalers (for example Supervalu, Fleming, Nash Finch), direct-store delivery (DSD), and self-distributing retailers. Nontraditional relationships between wholesalers and retailers are becoming increasingly important (Kinsey, 1999). Self-distributing retailers—including Kroger, Albertsons, Wal-Mart, Safeway, Ahold, and a number of smaller grocery chains—own their own distribution facilities.[4] Manufacturers deliver product directly to these retailers' distribution centers. Self-distributing retailers account for about 34 percent of all food distribution centers in the United States (Kinsey, 2001).

Figure 2-4

Food wholesale sales by type of customer



Source: Bureau of the Census, Census of Wholesale Trade, 1992 and 1997, *Miscellaneous Subjects*, U.S. Department of Commerce.

As consolidation continues in food retailing (see "Food Retailing" chapter), retail chains with their own distribution centers will become more prevalent. This arrangement reduces labor and nonlabor expenses. Self-distributing retailers move more cases of produce per hour in their warehouses than do traditional wholesalers, so their operating costs as a proportion of sales are lower compared with traditional merchant wholesalers (Kinsey, 1999). In 1999, 47 of the 50 largest food retailers were self-distributors.

While self-distributing food retailers manage inventories more efficiently, there remains a role for traditional third-party wholesalers, who account for 38 percent of wholesale distribution to retail food stores. For example, they service niche retailers with specialty

[3] While the food service outlets compete with retail food stores for the consumer's food dollar, food service wholesalers, such as Sysco and U.S. Foodservice, do not compete directly with retail food wholesalers, such as Supervalu and Nash Finch.

[4] Apparently, the U.S. Census Bureau classifies distribution facilities of self-distributing retailers as auxiliaries, not wholesale establishments (U.S. Department of Commerce, 2002).

Wholesale Sector Definitions

Grocery and related product wholesaling: Part of the food system in which goods are assembled, stored, and transported to retailers, food service organizations (hotels, restaurants, and institutions (HRI)), other wholesalers, export, and other types of businesses. Institutions include schools, prisons, and other government operations.

Merchant wholesalers: Operators of firms primarily engaged in buying groceries and grocery products, and reselling to retailers, institutions, and other businesses.

Manufacturers' sales branches and offices: Wholesale operations maintained by grocery manufacturers or processors to market their own products. Manufacturers' sales branches carry stocks of merchandise for delivery to customers. Manufacturers'sales offices do not stock merchandise for sale.

Brokers and agents: Wholesale operators who buy or sell as representatives of others for a commission and typically do not physically handle the products. They may serve as representatives of manufacturers or processors, but normally do not take title to the goods.

General line or broadline distributors: Merchant wholesale operators that handle a broad line of groceries, health and beauty aids, household products. Also referred to as general-line and full-line distributors. Examples include Supervalu, Fleming, and Sysco.

Specialty wholesalers: Establishments primarily engaged in the wholesale distribution of items such as frozen foods, bakery, dairy products, poultry products, fish, meat and meat products, or fresh fruits and vegetables.

Miscellaneous food wholesalers: Establishments specializing in the wholesale distribution of a narrow range of dry groceries such as canned foods, coffee, tea, or spices. Also referred to as systems distributors.

Warehouse clubs: A hybrid wholesaler and retailer that sells food, appliances, hardware, office supplies, and similar products to members (both individuals and small businesses) at prices slightly above wholesale. Examples include Sam's, BJ's, and Costco.

foods, unique displays, and a wide variety of convenience foods (Kinsey, 2000). Unified Western Grocers, the tenth largest U.S. broadline food wholesaler, acquired a specialty wholesaler to meet the needs of retailers catering to growing Asian and Hispanic communities in California (Veiders).

Manufacturers that deliver their own products to individual stores, and usually arrange it on the shelves for retailers (DSD), account for the remaining distribution to retail food stores (28 percent). These companies usually strongly advocate scan-based trading (Kinsey, 1998, 2000). Here, retailers are not billed by manufacturers until after the good is scanned and sold to the consumer. This gives the manufacturers—such as Coca Cola, Dreyers/Edy's Grand Ice Cream, and Frito-Lay—direct and immediate access to sales information so that stocks can be replenished quickly (Kinsey, 1999). These manufacturers deliver food products that typically have a relatively short shelf life, such as beverages, sweet/salty snacks, bread, and ice cream. This makes efficient delivery of fresh product doubly crucial. In this arrangement, retailers do not own the products until they are sold, so their money is not tied up in slow-moving inventory.

Distribution Channels for Food Service[5]

Food service outlets buy over 20 percent of wholesalers' grocery and related products (fig. 2-4). Distribution channels to restaurants and other food service establishments can be classified as broadliners, systems distributors, and specialty distributors. *Broadliners* (for example, Sysco and U.S. Foodservice), who account for half of U.S. food service distribution sales, serve a diverse customer base consisting of single establishments and small chains (Kinsey, 2001). Broadliners offer one-stop shopping by carrying a wide range of food, equipment, and supplies.

Specialty distributors (for example, Costco, McLane, Smart & Final) focus on a product (dairy, meat) or a customer segment (airlines, convenience stores), or may

[5] The source for this section is Friddle, Mangaraj, and Kinsey; 2001.

be warehouse clubs or cash-and-carry establishments. These distributors, accounting for a third of food service sales, often serve niches that require specialized knowledge in product sourcing, handling, or service.

Systems distributors (for example, AmeriServe/McLane, Martin Brower) account for 17 percent of food service distribution sales and serve multi-unit customers and large chains by offering low-cost, reliable delivery services. They may also serve convenience stores, hospitals, and hotels and typically carry low inventory and have low overheads. While systems distributors operate on lower margins relative to broadliners, typically their lower overhead and larger asset turnover offset this.

Small and medium-sized food service distributors of all three types may join buying groups (for example, UniPro, Pocahontas, Premier), which offer buying clout and benefits such as private labels, merchandising and marketing programs, and other support services.

Concentration

Unlike food retailing and manufacturing, where large companies have existed for over 50 years, large general-line grocery wholesalers emerged in the 1980s (Manchester). In 1954, five large general-line wholesale companies ($93 million or more in sales) accounted for only 9 percent of general-line wholesale sales. By 1987, 32 large companies accounted for 65 percent of sales.

Among merchant wholesalers, general-line distributors (Supervalu, Fleming, Nash Finch) are the most concentrated, while fresh fruit and vegetable distributors are the least concentrated (app. table 17). Meat, general-line, and especially poultry merchant wholesalers have experienced greater concentration since 1987 than other merchant wholesalers.

Mainstream economic theory predicts that increased concentration confers increased market power, and that increased market power should increase profits (Kinsey, 1998). One profit measure commonly used is gross margins. Among all types of grocery wholesalers, gross margin rose from 14.3 percent in 1990 to 15.3 percent in 1997 (U.S. Department of the Treasury). However, this increase was associated with a two-percentage-point reduction in concentration from 1992 to 1997, as measured by the sales share of the top four grocery wholesalers (CR4) (app. table 16).

For merchant wholesalers of grocery products, gross margin was two percentage points higher (17.2 percent) than that for all grocery wholesalers combined in 1997. From 1993 to 1999, merchant wholesalers' gross margin remained stable (16-18 percent) (fig. 2.5).[6] Small increases in merchant wholesalers' gross margins were associated with slight reductions in the CR4 from 1992 to 1997 (app. table 16).

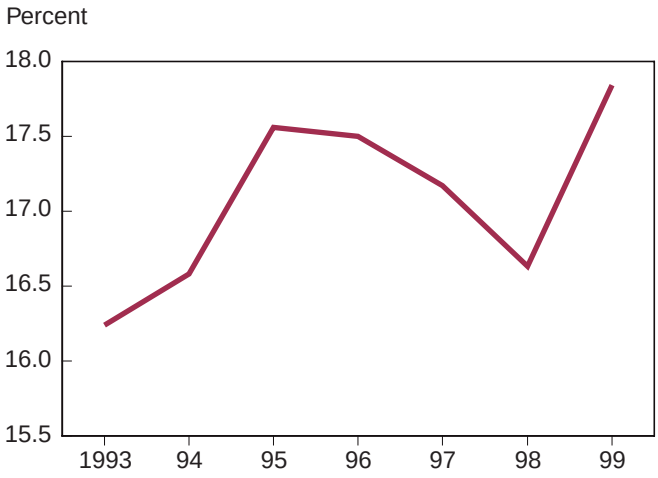
Supply Chain Initiatives

Firms throughout the retail food industry have adopted various practices from a 1992 industrywide initiative, referred to as Efficient Consumer Response (ECR), designed to emulate the logistic expertise of Wal-Mart (Kinsey, 2001). Under this initiative, firms are to group individual products into categories based on consumer sales and use of the product to ensure desired products are available when demanded (Kinsey, 2001). Efficient replenishment, whereby product flows cheaper and quicker through the food system, reduces inventories and ensures freshness. Under continuous replenishment practices, the retail customer shares data on item movement and inventory with the supplier/wholesaler, reducing the costs of stocking retail shelves. For example, a manufacturer

[6] Gross margin is defined as sales less cost of goods sold, divided by sales (Kinsey, 1998). U.S. Bureau of the Census tabulates profits only for merchant wholesalers.

Figure 2-5

Gross margin as a percentage of sales for merchant wholesalers of grocery and related products



Source: Bureau of the Census, Annual Benchmark Report for Wholesale Trade: January 1992 to March 2001, U.S. Department of Commerce.

may adjust production or shipments to more effectively meet the needs of the distribution center.

Enabling technologies—which include Electronic Data Interchange (EDI), barcodes, and Internet platforms such as UCCNet—facilitate category management and efficient replenishment. EDI allows instantaneous, paperless transmission of data between firms. Potential gains from EDI are substantial, as are costs of implementing it. Net benefits can be fully realized only through widespread adoption.

Attempts at implementing these initiatives have met with mixed success. In 1994, the top two general-line merchant distributors to retail food stores, Supervalu and Fleming, announced ECR initiatives. Supervalu noted that it has been pleased with its progress in implementing its program and improved performance of retail operations. Fleming, on the other hand, found sales to be disappointing. By the end of 1995, the company scaled back its application of ECR principles and chose to implement specific aspects of ECR that best fit their needs. Successful implementation of efficiency-enhancing activities launched by Supervalu helped to increase its sales relative to Fleming (Margulis) (table 2.1).

Efficient Foodservice Response (EFR) is a similar initiative by the food service industry. A study conducted by Computer Sciences Corporation, Consulting and Systems Integration, and the Stanford Global Supply Chain Forum of Stanford University concluded that the food service system could save $14.3 billion by adopting EFR practices, potentially resulting in lower menu prices (Perkins). Savings to food service wholesalers, in particular, would amount to $4.7 billion.

Table 2.1—Sales of top 15 general-line grocery wholesalers[1]

Company[2]	1995	1996	1997	1998	1999	2000	2001 Sales derived from: Wholesale	Retail	Total
				$ billion					
Supervalu Stores, Inc.[3]	16.5	16.6	17.2	17.4	20.3	23.2	11.40	9.50	20.9
Fleming Companies, Inc.	17.5	16.5	15.4	15.1	14.7	14.5	13.30	2.30	15.60
C & S Wholesale Grocers[4]	2.5	3.4	5.05	6.1	6.1	7.1	8.50	0.00	8.5
Wakefern Food Corporation[5]	4.1	4.3	4.6	5	5.5	5.8	5.84	0.06	5.9
Giant Eagle	ne	2.2	2.2	4	4.2	4.2	1.64	2.86	4.5
Nash Finch Company[6]	4.1	4.2	4.5	4.3	4.1	3.96	3.08	1.03	4.11
Spartan Stores, Inc.	2.5	2.5	2.49	2.7	3.2	3.5	2.10	1.40	3.5
Roundy's, Inc.	2.49	2.6	2.6	2.6	2.7	3	2.04	1.36	3.4
Associated Wholesale Grocers (K.C.)	2.97	3.2	3.1	3.2	3.4	3.2	2.95	0.16	3.1
Unified Western Grocers[7]	2.89	3.3	3.2	3	3.1	3.1	2.85	0.15	3
Di Giorgio Corp.	ne	1	1.1	1.2	1.4	1.4	1.60	0.00	1.6
Purity Wholesale Grocers	ne	ne	ne	1.2	1.5	1.3	1.60	0.00	1.6
Grocers Supply Co., Inc.	1.5	1.25	1.2	1.4	1.4	1.4	1.40	0.00	1.4
Associated Food Stores	ne	0.14	ne	0.86	1.1	1.3	0.98	0.33	1.3
Associated Wholesalers, Inc.	1.2	1.15	1.1	1.09	1.2	1.1	0.94	0.06	1
Total	58.25	62.34	63.74	69.15	73.9	78.06	60.22	19.19	79.41

ne = New entrant. A consistent time series was not maintained for these companies in earlier years as they were new entrants into the top 15.
[1] Firms primarily serving supermarkets and retail foodstores.
[2] Companies are listed in order, according to sales rank.
[3] Sales reflect Richfood's acquisition of Super Rite Foods, and subsequent purchase of Richfood by Supervalu.
[4] C&S plans to operate corporate stores purchased from Grand Union.
[5] Wakefern is the merchandising and distribution arm of ShopRite supermarkets, the largest retailer-owned cooperative in the United States.
[6] Sales reflect Nash Finch's acquisition of Super Food Services.
[7] Unified Western Grocers is the company resulting from the merger between Certified Grocers of California and United Grocers.

Sources: *Supermarket News*, various issues; *Food Institute Report*, various issues; *Progressive Grocer Annual Report*, April 2001; *Wall Street Journal*, selected issues; American Institute of Food Distribution, Inc.; Company 10K's filed with the Security and Exchange Commission.

Recent Developments in Food Wholesaling

Supervalu and Fleming remain, by far, the largest broadline wholesalers of retail food (table 2.1). The companies plan to follow divergent strategies. Fleming announced plans to sell company-owned conventional supermarket chains to focus on food distribution facilities and its Food 4 Less warehouse stores, emphasizing value pricing. For the first time in Fleming's 86-year history, supermarkets account for less than half its sales to retailers, with the remainder going to alternative store formats. For example, by supplying Prima Marketing and Quarles Food Stores, which operate convenience stores, like the Pantry Store and Q-Stop, Fleming is building its presence there in response to changes in consumer purchasing patterns (see "Food Retailing"). Sales to online food retailers are also expected to be an important driver for future growth.

On the other hand, Supervalu, also the 10th largest supermarket retailer, announced that it would focus on building its retail business and continue its long-term strategy of retail acquisitions. In 2001, as part of its restructuring, the company announced plans to focus its retail operations and capital spending on retail markets with higher-return growth. The company is also accelerating the growth of its Save-A-Lot stores, which is a limited-assortment, "extreme value" chain of supermarkets that targets households with annual income of $35,000 or less. The goal in 2002 is to grow retail earnings to overcome the loss of its Kmart account in 2001. Thus far, Supervalu has chosen to focus on its supply chain logistics in the United States, rather than expanding internationally through export markets or investments in retail operations.

Consolidation Among General-Line Retail Food Wholesalers

The retail food wholesaling sector continues to experience consolidation through acquisitions. Mergers by leading wholesalers, both horizontal and vertical, are reshuffling the ranks of the top companies (app. table 35). Acquisitions can lead to efficiency gains that reduce costs and enable wholesalers to offer more variety to customers throughout a market region. With rapid consolidation by supermarket chains, many grocery wholesalers continue to acquire retail operations to maintain their customer base. Such vertical expansion enables companies to create synergies, cut operating costs, and cater to the geographic idiosyncrasies of consumers and retailer customers. Leading wholesalers Supervalu, Fleming, and Giant Eagle (along with BJ's Wholesale Club) are now among the top U.S. food retailers, with a combined market share of 5 percent.

Richfood Holdings has been especially active in merger activity, acquiring other grocery wholesalers to become more cost-effective while servicing a smaller number of small chains. The addition of Super Rite's distribution facilities significantly increased Richfood's warehouse space. And by acquiring the supermarket chain Farm Fresh in 1997, Richfood multiplied its supermarket establishments six-fold. In 1999, Supervalu purchased Richfood, at that time the sixth leading food wholesaler.

Nash Finch, Spartan Stores, and Roundy's are also pursuing a strategy of supermarket acquisitions. In 2002, Nash Finch had 111 supermarkets, warehouse stores, and mass merchandise stores to better compete with large self-distributing supermarket chains. In 2001, C&S Wholesale Grocers made its first significant entry into retailing by purchasing Grand Union, a retailer that it formerly supplied.

In an industry in which wholesalers' main customers are independent retailers and small chains, some wholesalers are courting large and medium-sized chains. For example, C&S Wholesale Grocers is a supplier to Giant Food Stores, whose parent company, Ahold, is the Nation's fifth largest grocery retailer. These wholesalers provide service to chains that, by virtue of their size, are capable of self-supplying but do not.

Top Food Service Distributors Continue Rapid Consolidation

In 2001, the ten largest broadline distributors to food service establishments accounted for nearly 31 percent of total food service distributor sales ($170 billion) (table 2-2). Sysco Corporation is the Nation's largest broadline food service distributor, outpacing its nearest competitor by $4.9 billion in sales, or 28 percent. The company accounted for 13 percent of total food service distribution sales. Sysco also ranked 80th in the S&P 500 (based on growth in sales, profits, return to shareholders, etc.); the nearest food industry company, Kroger, ranked 120th. Through a series of vertical acquisitions, Sysco has also entered specialty meat processing (app. table 35).

In recent years, food service distributors have been especially active in acquiring other food service dis-

Table 2.2—Sales of the top 10 broadline food service distributors

Firms	1995	1996	1997	1998	1999	2000	2001
				$ billion			
Sysco Corporation	12.7	14.1	14.8	16.1	18.3	20.6	22.6
U.S. Food Service (JP Foodservice, Inc.)[1]	11.1	8.3	13	14.6	15.6	18.6	17.7
Performance Food Group	0.7	0.7	1.2	1.6	2.1	2.6	3.2
Gordon Food Service, Inc.	1.3	1.5	1.7	1.8	2	2.3	2.8
Food Services of America	0.9	1	1	1.1	1.2	1.3	1.3
Reinhart Food Service	0.4	0.5	0.6	0.6	0.7	1.1	1.3
Shamrock Foods Co.	0.6	0.7	0.8	0.8	0.9	1	1
Maines Paper & Foodservice	0.4	0.4	0.4	0.4	0.5	0.8	1
Ben E. Keith Foods	0.3	0.3	0.4	0.4	0.5	0.6	0.7
The IJ Co.	ne	ne	ne	ne	ne	ne	0.6
Total	28.4	27.5	33.9	37.4	41.8	48.9	52.2

ne = New entrant. A consistent time series was not maintained for this company in earlier years as it was a new entrant into the top 10 in 2001.
[1] Includes JP Foodservice's acquisition of U.S. Foodservice, Inc. and U.S. Food Service's (a subsidiary of Ahold) acquisitions of PYA/Monarch, Inc., and Alliant Foodservice, Inc. (formerly Kraft Foodservice).

Sources: *Institutional Distribution*, various issues; *Food Institute Report*, various issues; just-food.com.

tributors (table 2-3, app. table 35). The pace and complexity of consolidation among food service distributors is demonstrated by acquisitions involving U.S. Foodservice. The company initially was purchased by JP Foodservice, which was extremely active in mergers and acquisitions, and operated under the "U.S. Foodservice" name. As a result, U.S. Foodservice moved ahead of Alliant Foodservice, Inc., to become the second largest food service distributor. Reasons given for the merger included efficiency gains from greater purchasing power, lower transportation costs by rescheduling of customer drops for greater route density, and elimination of administrative cost redundancies. The merger extended JP's presence to 85 percent of the Nation, with customers such as Subway and Pizzeria Uno. Subsequently, in April 2000, Royal Ahold, the fourth largest grocery retailer in the world, moved into the food service business by purchasing U.S. Foodservice. The acquisition gave Ahold a reliable supply of food service products for its instore cafe and deli. U.S. Foodservice subsequently purchased Alliant Foodservice and GFG Foodservice, moving it ever closer to Sysco's sales.

Performance Food Group's (PFG) recent acquisitions extended the company geographically and diversified its customer mix. While these acquisitions increase the number of large, higher volume chain accounts serviced (which are generally lower gross-margin accounts), they allow for more efficient operations and lower operating costs. In 2001, PFG vertically integrated into fresh-cut produce by purchasing the largest independent processing company, Fresh Express, a pioneer in retail packaged salads.

In a major development, Ameriserve Food Distribution, Inc., one of the largest quick-service food service distributors to restaurants in North America, declared bankruptcy in 2000. After acquiring PepsiCo Food Systems and ProSource in 1997 and 1998, the company accumulated $2 billion in debt, stretching its leverage and management. The combined operation served restaurants such as Arby's, Burger King, Pizza Hut, Long John Silver, KFC, and Taco Bell. Ameriserve recently lost one of its biggest accounts, Burger King, due to service complaints. These financial problems constrained earnings at quick-service restaurants and their suppliers, especially the poultry sector.

The consolidation trend among food service companies in the United States is expected to continue. In 2001, the top four distributors accounted for 27 percent of sales, compared with 15 percent in 1994. According to infor-

Table 2.3—Grocery and foodservice wholesaler acquisitions by type of firm acquired

Acquisitions	1998	1999	2000
		Number	
Food processors	10	7	5
Foodservice distributors	28	26	24
Retailers	6	13	4
Grocery wholesalers	21	13	9
Equipment suppliers	4	0	1
Raw product suppliers	0	1	0
Soft drink & water bottler	0	0	1
Restaurant	0	0	1
Unclassified	2	3	1
Total acquisitions by wholesalers	71	63	46

Source: Compiled by USDA/ERS from The Food Institute. "Food Business Mergers and Acquisitions," 1998, 1999, and 2000.

mation documented by the Food Institute, food service distributors accounted for over half of all acquisitions by food wholesalers in 2000 (table 2-3).

Warehouse Clubs

Rapid inventory turnover, high sales volume, and reduced operating costs enable warehouse clubs to operate at lower gross margins (8-12 percent) than discount chains and supermarkets, which operate on gross margins of 20 to 30 percent (Warehouse Club Focus). Warehouse clubs have become a powerful retailing force over the past decade, and their sales continue to increase both domestically and abroad (table 2-4). Costco and Sam's (a subsidiary of Wal-Mart) account for 93 percent of the club store market. BJ's is a distant third.

Grocery sales typically account for 30 to 40 percent of total wholesale club sales (*The Food Institute Report*). In 2000, club stores accounted for $23.7 billion in sales of grocery items (*Progressive Grocer Annual Report*).

Despite predictions that rapid growth in the late 1980s would limit future growth, sales have continued to increase each year. Operators have focused on renovating or relocating existing units, and maintaining and attracting new members. Sam's Clubs and Costco intensified their emphasis on business customers and launched marketing efforts, such as coupons and gift catalogs. Leading clubs are adding fresh departments and convenience products, such as rotisserie chicken, microwaveable entrees, and home meal replacement lines.

Most of the expected growth in warehouse clubs will be from international markets where industry leaders Sam's and Costco are focusing. In May 1995, Wal-Mart Stores opened its first Sam's Club outlet in South America in Sao Paulo, Brazil. The store serves mainly small dues-paying retail members such as restaurants, bars, and other businesses. The first Sam's Club in Argentina opened in August 1995. Sam's also operates 50 stores in Brazil, China, Mexico, and Puerto Rico. Costco operates 60 warehouses in Canada, 11 in the United Kingdom, 5 in Korea, 3 in Taiwan, 2 in Japan, and 20 in Mexico through a joint venture. The company recently opened its first Japanese units, both near Tokyo. On the other hand, BJs has chosen to grow domestically, not internationally.

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Table 2.4—Total sales by warehouse clubs, 1995 to 2000

Firms	1995	1996	1997	1998	1999	2000
			$ billion			
Costco Cos.	17.87	19.85	21.5	26	29.926	31.9
Sam's Wholesale Club	19.28	19.8	20.7	24.4	26.669	26.4
BJ's Wholesale Club	2.46	2.85	3.2	3.4	4.026	4.7
Warehouse Club[1]	0.09	NA	NA	NA	NA	NA
Others[2]	0.21	2.4	3.3	0.1	0.0792	0.186
Total	39.91	44.9	48.7	53.9	60.7	63.186

NA = Not applicable.
[1] Closed remaining units in August 1995.
[2] In 2000, based on sales of Cost-U-Less. In previous years, calculated as a residual using total segment sales.

Source: *Food Institute Report*, Various issues; and *www.warehouseclubfocus.com*.

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Food Retailing

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Foodstore sales growth slowed over 1997-2002, as competition for the consumers' food dollar intensified from nontraditional retailers selling food, and from food service outlets. Retailing profits stayed relatively high, however. Food retailers sought operational cost savings both in procurement and selling, in part through the greater use of information technologies. Mergers and acquisitions, including investor takeovers, continued to play an important role, building on a consolidation wave that began after 1996. Meanwhile, investment and acquisitions in U.S. food retailing by overseas retailers increased. Employment growth slowed as retailers aimed to contain growth in payrolls and improve productivity. Labor productivity has increased since 1997 as a result, reversing a long-term decline.

Introduction

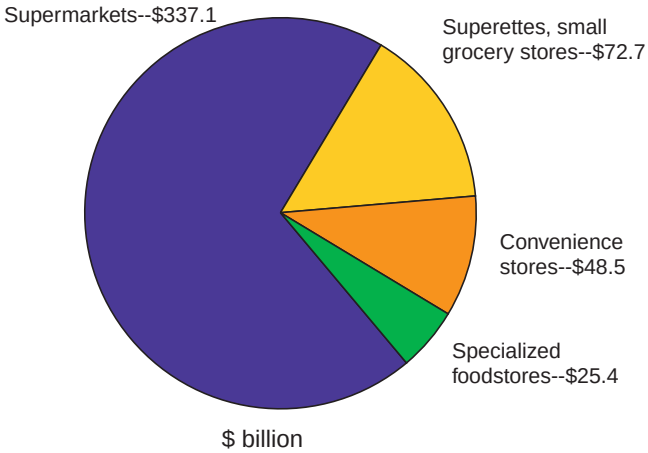
Foodstore sales have grown slowly in recent years (after adjusting for inflation), due to slow population growth and heightened competition by other retailers selling food. In addition, food service operators—including restaurants and fast-food outlets—increased their share of consumers' food spending during 1997-2002, continuing a long-term trend. The economic downturn of 2000-2001 has likely contributed to depressed foodstore sales as many consumers aim to curb food spending and seek out lower cost shopping alternatives.

Long-term trends show that as household incomes increase, a larger share of food spending is devoted to prepared foods and meals. In addition, foodstores face increasing competition from other retailers selling food products, including mass-merchandisers and warehouse club outlets. In order to gain sales, supermarket operators made efforts to increase consumer satisfaction by introducing natural food products, developing or improving prepared food offerings, promoting store/private label brands, introducing self-scanning checkout stations, expanding frequent shopper card programs, and offering online home shopping services.

Sales and Sales Growth

Foodstore sales reached $483.7 billion in 2000, an increase of 5.5 percent over 1999 receipts (fig. 3-1, table 3-1). Grocery stores accounted for 94.9 percent of foodstore sales in 2000. Specialized foodstores made up the remainder of sales (see box, p.23, for definition of terms).

Figure 3-1
U.S. foodstore sales, 2000



Source: Census of Retail Trade; ERS, USDA.

Supermarket sales reached $337.1 billion in 2000 (the most recent year available)—an increase of 3.5 percent over 1999 (table 3-2). However, inflation-adjusted growth was flat, as prices of food and nonfood items sold in supermarkets increased by an almost equal amount. Supermarket sales growth has been relatively flat over 1990-2000, as food service and other retail outlets selling food compete for a share of consumers' food spending.

Table 3-1—Foodstore sales by segment, 1980-2000[1]

Year	Foodstores	Grocery stores[2]				Specialized foodstores
	Total	Total	Supermarkets	Convenience stores	Superettes small grocery stores	
			$ million			
1980	220,224	205,630	157,000	18,900	29,730	14,594
1981	236,188	220,580	165,500	22,800	32,280	15,608
1982	246,122	230,696	171,966	19,500	39,230	15,426
1983	256,018	240,402	184,568	21,032	34,802	15,616
1984	271,909	256,465	193,059	24,565	38,841	15,444
1985	285,062	269,546	203,129	25,700	40,717	15,516
1986	297,019	280,833	213,448	26,406	40,979	16,186
1987	309,461	290,979	219,890	30,641	40,448	18,482
1988	325,483	307,173	230,640	31,398	45,135	18,310
1989	347,045	328,072	247,312	34,641	46,119	18,973
1990	368,333	348,243	261,700	37,019	49,524	20,090
1991	374,523	354,331	270,180	37,883	46,268	20,192
1992	377,099	358,148	275,512	39,145	43,491	18,951
1997	382,709	363,583	281,933	39,792	41,858	19,126
1996	394,216	374,645	290,631	40,316	43,698	19,571
1995	402,479	382,246	300,415	39,591	42,240	20,233
1996	414,325	393,389	306,025	41,056	46,308	20,936
1997	423,725	402,310	312,504	44,358	45,448	21,415
1998	435,383	412,720	316,240	47,941	48,539	22,663
1999	458,269	434,695	325,684	47,247	61,764	23,574
2000	483,698	458,256	337,083	48,486	72,687	25,442

[1] Sales reporting based on Standard Industrial Classification (SIC) code definitions.
[2] Excludes supercenter and warehouse club store sales.

Sources: Census of Retail Trade, various years; *Progressive Grocer* magazine, and ERS estimates.

Supermarkets accounted for 73.5 percent of grocery store sales in 2000, marking the lowest share in 10 years and continuing a steady downward trend since 1995 (table 3-2). Supermarket retailers continue to expand their stores both in floor space and number of products offered. Due to higher fixed costs, these larger supermarkets must serve an expanded customer base in order to meet minimum sales requirements. As a result, the number of supermarkets has steadily declined, from 27,765 stores in 1985 to 24,640 supermarkets in 2000 (table 3-2). Meanwhile, average supermarket floor space has grown to accommodate an increasing array of products and services consistent with the "one-stop shopping" concept. And the median number of unique items (according to brand, package size, and type) carried has expanded from an estimated 14,000 in 1980 to 40,333 items in 1999 (FMI, 2000).

Convenience stores, another grocery store segment, had estimated sales of $48.5 billion in 2000, an increase of 2.75 percent over 1999 sales, and 9.3 percent above sales in 1997, the most recent census reporting year. The number of convenience stores rose to 55,125 in 1997, up from 53,783 stores in 1992, the most recent reporting years (Census of Retail Trade, 1992 and 1997). During that time, convenience stores with gasoline sales increased from 42.8 percent of all convenience stores to 51 percent of stores. Convenience store retailers have encountered competition from major petroleum-based operators who have sought growth by expanding their gasoline outlets to include convenience store products. According to *Convenience Store News* (CSN), 96 percent of new convenience stores included gasoline pumps in 2000. However, as other retailers—including warehouse club stores, mass-merchandise retailers, and supermarkets—are adding onsite fuel centers, growth in gasoline sales among convenience stores is likely to slow (CSN Industry Report).

Other grocery stores, which include superettes, "mom and pop" grocery stores, delicatessens, and bodegas (see box, p. 23), accounted for $72.7 billion in 2000, or 16 percent of total grocery store sales. These grocery retailers are typically concentrated in both low-density rural areas where supermarkets are less feasible, and in high-density urban neighborhoods where supermarkets are less accessible. Many urban grocery stores may also offer more ethnic and specialty foods to serve local neighborhoods.

Coming to Terms—A Guide to Retail Food Outlets

Foodstore. A retail outlet having at least 50 percent of sales in food products intended for off-premise preparation and consumption.

Grocery Store. A foodstore that sells a general line of food products, such as canned and frozen foods; fresh fruits and vegetables; fresh and prepared meats, fish, and poultry; and nonfood grocery products. Supermarkets, superettes and small grocery stores, and convenience stores are included.

Supermarket. A grocery store, primarily self-service, providing a full range of food departments, having sales equivalent to $2 million or more in 1980 dollars. A number of supermarket formats have evolved:

- Conventional. The original supermarket format containing all major food departments, nonfood grocery, and limited general merchandise products. May offer service deli and bakery departments.
- Superstore. A supermarket, larger in size and offering a greater number of unique items carried than a conventional supermarket. General merchandise and personal care products account for at least 10 percent of sales.
- Combination food and drug. A supermarket containing a pharmacy and nonprescription medicines, combined with the larger variety and size of a superstore format.
- Warehouse store. A "no frills" supermarket with limited product variety and fewer services than a conventional supermarket, incorporating case-lot stocking and shelving practices. An expanded "superwarehouse" format adds greater variety and often includes service deli, meat, seafood, and bakery departments.
- Limited-assortment store. An "economy" supermarket offering fewer than 2,000 unique items, and limited perishable products.
- Hypermarket. The largest supermarket formats, typically 150,000 square feet or more of selling area. General merchandise accounts for 40 percent of sales, while food and nonfood grocery products represent 60 percent of sales.

Convenience store. A small grocery store, selling a limited variety of food and nonfood products, typically open extended hours. Customers normally use a convenience store to purchase a few items, whereas grocery stores are used for large, volume purchases. Convenience stores normally have less than 2,500 square feet of total under-roof floor space. Many convenience stores operate gasoline pumps.

Superette. A grocery store, primarily self-service, offering all five major supermarket departments but having annual sales less than $2 million in 1980 dollars.

Small grocery store. A "neighborhood" or "mom and pop" grocery store offering limited staple foods and nonfood items.

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

General Merchandise Stores. These retail outlets include discount/mass-merchandise stores selling general merchandise and food products, excluding department stores. They include warehouse club stores and supercenters.

Warehouse Club Stores. A membership-based wholesale-retail hybrid outlet, serving both small businesses and individual consumers. Both grocery products (in large and multipack sizes) and a wide variety of general merchandise are offered.

Supercenter. A large combination supermarket and discount general merchandise store, with grocery products accounting for up to 40 percent of selling area.

Table 3-2—Number and sales of supermarkets[1]

Year	Minimum annual sales needed to classify as a supermarket[1]	Stores[2]	Sales[3]	Share of grocery store sales
	$1,000	*Number*	*$ million*	*Percent*
1958	747	15,185	23,245	51.3
1963	763	20,990	30,846	59.3
1967	826	23,305	41,381	64.4
1972	1,000	26,997	63,205	67.7
1977	1,545	29,699	112,018	73.9
1982	2,266	27,141	171,140	74.2
1983	2,322	27,331	184,354	76.7
1984	2,403	27,440	193,561	75.5
1985	2,453	27,765	203,129	75.4
1986	2,554	27,494	213,448	76.0
1987	2,659	26,227	222,861	76.6
1988	2,786	25,845	233,408	76.0
1989	2,956	25,287	249,850	76.1
1990	3,138	25,004	262,224	75.1
1991	3,257	24,908	270,598	76.4
1992	3,299	25,088	275,865	77.0
1993	3,375	25,611	281,300	76.9
1994[3]	3,469	24,557	289,030	76.3
1995	3,518[4]	24,749	290,631	78.6
1996	3,751[4]	24,205	306,025	77.8
1997	3,832[4]	24,600	312,504	77.7
1998	3,928	24,364	316,240	76.8
1999	4,038	24,430	325,681	75.2
2000	4,180	24,640	337,083	73.5

[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 in order to account for inflation. Sales exclude sales taxes.
[2] Supermarkets open at year-end.
[3] Includes food and nonfood.
[4] Revised using price index with current-year weights.

Sources: *Progressive Grocer Magazine* annual industry report, and ERS.

Specialized foodstores—including retail bakeries, produce markets, meat and seafood markets, and dairy stores—accounted for sales of $25.4 billion in 2000. The largest segment—retail bakery stores, which include on-premise baking and selling outlets—had sales of $8 billion, followed by meat, fish, and seafood markets ($7.4 billion). The growing popularity of cookie shops and bagelries has contributed to the expansion of the retail bakery segment. All other specialized foodstore sales—including candy and nut shops, dairy stores, produce markets, and health and nutrition stores—amounted to $10 billion in 2000.

Traditional food retailers are competing not only among themselves, but with other retailers selling comparable food and nonfood grocery products. These nontraditional food retailers include mass-merchandisers (Wal-Mart, Kmart, and Target, for example), warehouse club stores (Costco, Sam's, and BJ's, for example), as well as other retailers, including drugstores, department stores, gasoline stations, and liquor stores.

Nontraditional food retailers accounted for 24.5 percent of total food sales ($105.2 billion) in 2000 (USDA, 2002). Mass merchandisers (including supercenters) and warehouse club stores were the fastest growing segment, with food sales accounting for 8.5 percent of the total in 2000, up from 1.5 percent in 1990. Mass merchandisers have increased the number of supercenters, a very large store consisting of a discount general merchandise store and a self-contained supermarket area within it. Wal-Mart is in the forefront of this growth by rapidly expanding their supercenter outlets. In 2001, Wal-Mart operated 888 supercenter stores in the U.S., while Kmart, the second largest mass merchandiser, operated 104 supercenters.

Other retailers—including drugstores, department stores, gasoline stations, and liquor stores—made up the largest segment of food sales by nontraditional retailers (11.1 percent), amounting to $47.5 billion in 2000, up from 6.3 percent in 1990. Drugstores have added dry grocery items to their shelves in recent years, and gasoline stations have added convenience marts selling beverages and snack foods. Meanwhile, supermarkets' share of retail food sales fell to 58.6 percent in 2000, from 61.6 percent in 1990.

Supermarkets and Supermarket Formats

A number of different supermarket formats have arisen in order to tailor products and services to identifiable consumer segments (see box, p. 23). Introduced in the 1980s, these new formats include superstores, combination food and drug stores, warehouse and limited-assortment stores, superwarehouse stores, and hypermarkets. Grocery retailers have looked to supermarket formats as a growth-seeking strategy. For example, warehouse and superwarehouse stores are no-frills outlets that appeal to price-conscious consumers who are willing to forgo some services and product variety. As a result, the conventional supermarket has been eclipsed by the more focused supermarket formats. Combination food-and-drug supermarkets grew from less than 4.0 percent of sales in 1980 to 24.3 percent by 2000 as many retailers pursued sales growth in pharmacy and personal care products. The share of conventional supermarkets fell to 40.2 percent in 2000 from 80.2 percent in 1980, while their share of sales dropped from 73.1 percent to 18.8 percent over the period (table 3-3).

Grocery retailers continue to experiment with supermarket formats as a competitive strategy. In the past several years, natural food retailers (Wild Oats, Whole Foods, Trader Joe's) have developed supermarket-sized stores to address the needs of more health-

Table 3-3—Supermarket number and sales, by format[1]

	1980	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
						1,000						
Number:												
Supermarkets[3]	26.8	24.5	24.7	25.0	25.7	24.7	25.3	24.2	24.6	24.4	24.4	24.6
Conventional	21.5	13.2	12.6	12.9	13.4	12.2	12.3	11.6	11.6	10.9	10.3	9.9
Superstore[4]	3.2	5.8	5.9	6.0	6.3	6.5	6.8	7.1	7.3	7.4	7.6	7.9
Warehouse[5]	1.7	3.4	3.5	3.4	3.1	2.9	2.7	2.4	2.2	2.2	2.4	2.4
Combination food and drug[6]	0.5	1.6	2.1	2.1	2.2	2.4	2.7	2.4	2.8	3.2	3.4	3.7
Superwarehouse[7]	--	0.3	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5
Hypermarket[8]	--	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
						$ billion						
Sales:[2]												
Supermarkets[3]	157.0	261.7	270.2	275.5	281.3	290.6	300.4	306.0	312.5	316.2	325.7	337.3
Conventional	114.7	92.3	83.1	83.5	78.9	79.5	76.4	67.7	64.2	65.3	63.6	63.4
Superstore[4]	27.8	87.6	91.1	94.5	100.6	107.6	116.7	127.0	132.9	133.8	138.9	142.4
Warehouse[5]	6.6	33.1	35.3	33.6	31.9	27.7	20.7	24.3	22.2	19.3	20.9	22.0
Combination food and drug[6]	6.3	29.3	40.9	42.8	45.8	51.7	59.3	61.3	64.7	72.0	75.5	81.8
Superwarehouse[7]	1.6	12.6	13.8	14.1	15.3	16.2	17.8	15.3	16.6	16.7	17.1	17.4
Hypermarket[8]	NA	6.8	6.0	7.0	8.8	7.9	9.5	10.4	11.9	9.1	9.7	10.3

-- = Less than 0.05 percent. NA = Not available.

[1] Estimates based on *Progressive Grocer*, company annual reports, and Willard Bishop Consulting, *Competitive Edge*.

[2] Includes nonfood items.

[3] A grocery store, primarily self-service in operation, providing a full range of departments, and having at least $2.5 million in annual sales in 1985 dollars.

[4] Contains greater variety of products than conventional supermarkets, including specialty and service departments, and considerable nonfood (general merchandise) products.

[5] Contains limited product variety and fewer services provided, incorporating case-lot stocking and shelving practices.

[6] Contains a pharmacy, a nonprescription drug department, and a greater variety of health and beauty aids than that carried by conventional supermarkets.

[7] A larger warehouse store that offers expanded product variety and often service meat, deli, or seafood departments.

[8] A very large store offering a greater variety of general merchandise—like clothes, hardware, seasonal goods, and personal care products—than other grocery stores.

conscious consumers, while ethnic-oriented formats are likely to appeal to the growing population of immigrant households.

Mergers and Acquisitions

The number of major acquisitions has risen sharply since 1996, as large food retailers opted to grow through acquisition of other retailers rather than investing in new stores. Cost savings, in the form of reduced headquarters and management expenses and lower procurement costs, were often cited by these retailers as benefits to the acquiring firms. The recent consolidation may also be a response to increased food sales by nontraditional retailers and the growth of the food-away-from-home sector, including restaurants and fast-food outlets.

The number of food retailers acquired fell from 50 in 1999 to 35 in 2000 (Food Institute, 2001) (table 3-4). Of the acquisitions in 2000, 22 of these represented purchases of a portion of another food retailer's assets, such as one or more individual supermarkets, while the remaining 13 acquisitions consisted of food retailers' entire assets.

Over 1997-2000, 4,100 supermarkets were acquired, accounting for combined annual sales of $69.3 billion. The Pacific region led in supermarkets merged or acquired (1,333), but inter-regional acquisitions posted the highest sales of supermarkets acquired ($24.2 billion) (fig. 3-2).

Food retailers announced two blockbuster mergers in 1998. Kroger, the largest grocery retailer in the United States in 1997 with sales of $26 billion, acquired sixth-largest supermarket operator Fred Meyer. In 2000, the consolidated retailer had $49 billion in combined sales, and operated 2,210 supermarkets in 31 States (and 816 convenience stores in an additional 6 States).

Also in 1998, the fourth-largest U.S. food retailer, Albertson's, initiated its merger with second-ranked American Stores—operator of Lucky Stores, Jewel, and Acme Markets. The combination became the second-largest grocery retailer, operating 1,796 supermarkets in 38 States.

Among other significant developments:

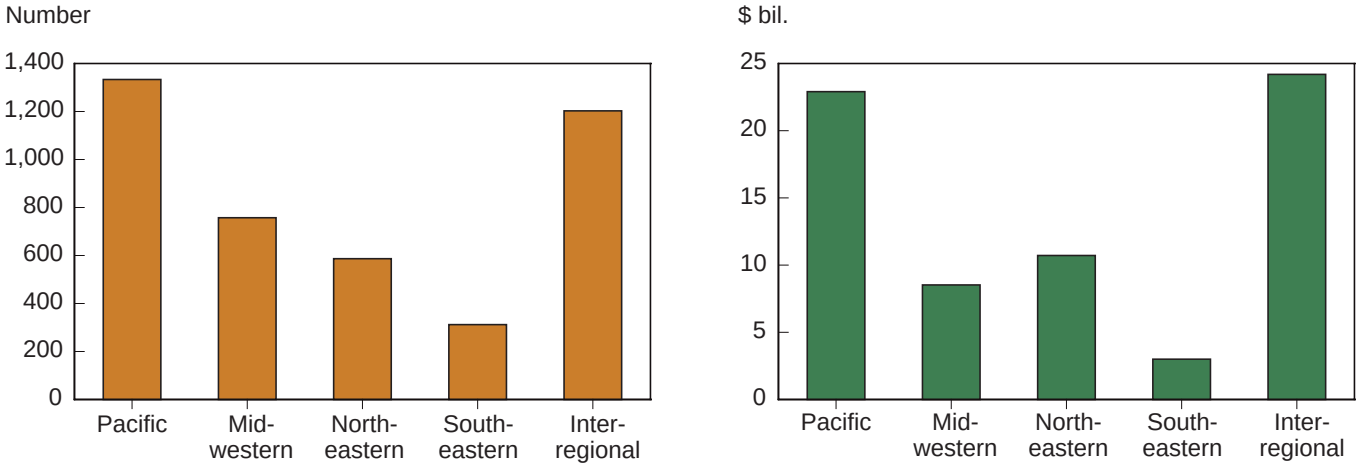
- In 2001, Ahold, USA, a subsidiary of Royal Ahold, the Netherlands, acquired Bruno's Supermarkets, operator of 169 supermarkets in Alabama, Georgia, Florida, and Mississippi. As a condition for the acquisition, the Federal Trade Commission required the sale of two of Ahold's BI-LO supermarkets in Georgia where competition would have been "substantially reduced."
- In 1998, Ahold purchased Giant Food, Inc. (Landover, MD), operator of 176 combination food and drug supermarkets in the Washington, DC, metro area. Giant Food had sales of $4.2 billion in 1998, the year of the takeover. Ahold has expanded

Table 3-4—Mergers and divestitures in food retailing

	Acquisitions of food retailers			
Year	By U.S. food retailing firms	By all other firms	Total	Divestitures
		Number		
1984	37	23	60	28
1985	36	16	52	33
1986	56	35	91	57
1987	39	26	65	34
1988	41	35	76	51
1989	28	25	53	37
1990	14	23	37	22
1991	20	15	35	28
1992	17	12	29	24
1993	22	17	39	23
1994	41	19	60	49
1995	27	15	42	14
1996	25	12	37	22
1997	38	11	49	26
1998	35	16	52	14
1999	41	9	50	33
2000	30	5	35	22

Source: Food Institute. "*Food Business Mergers and Acquisitions*" (annual).

Figure 3-2
Number and sales of acquired supermarkets, 1997-2000



Sources: *Food Business Mergers and Acquisitions*, The Food Institute; company annual reports; company press releases.

its U.S. subsidiary primarily through buyouts of supermarket retailers.

- In 2001, third-ranked Safeway (Oakland, CA) purchased Genuardi's Family Markets, operator of 39 supermarkets in Pennsylvania, Delaware, and New Jersey. The acquisition was preceded by the purchases of 116-store retailer Randalls Food Markets (Houston, TX) for $1.8 billion (1999); and Dominick's, operator of 115 supermarkets in the Chicago metro area.
- First-ranked Kroger Co. (Cinncinati, OH) also took over 74 supermarkets in Oklahoma and Texas from seventh-ranked Winn-Dixie in 2001.
- In 2000, Delhaize America, operator of Food Lion in the southeastern U.S., purchased Hannaford Bros. Shop & Save supermarkets (New England) to become the eighth-largest grocery retailer.
- Also in 2000, Shaw's supermarkets (12th-ranked nationally) acquired Star Markets, operator of supermarkets in the Boston, MA, metro area, for $1.08 billion.

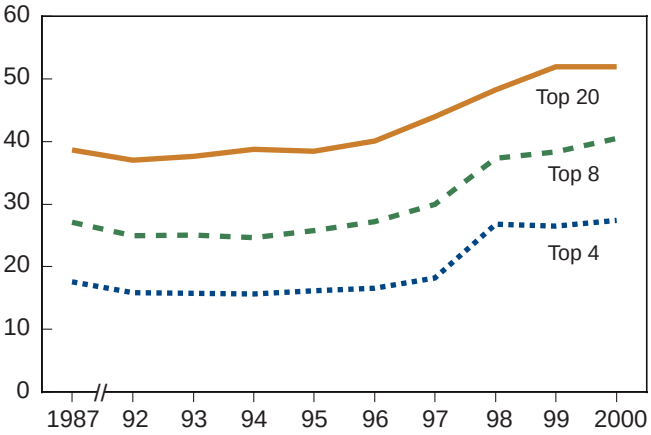
These mergers are part of a recent strategy among the largest U.S. grocery store retailers, in part, to seek growth opportunities and operating economies. Although consolidation contributed to increased share of sales by the largest 20 firms, most transactions did not involve local geographic areas common to both acquiring and acquired firms, thereby limiting potential anticompetitive effects in cities and towns (see Public Policy Issues and Developments, p. 32).

Aggregate Concentration

The largest 4, 8, and 20 food retailers accounted for 27.4, 40.5, and 52.0 percent of the Nation's grocery store sales in 2000, representing significant gains since 1996. In prior years, sales shares had been relatively stable, despite turnover among the leading grocery retailers (fig. 3-3, app. table 18). Because food retailers compete for sales in local markets such as cities and towns, national concentration measures are not comparable with those of food manufacturing industries, whose markets are regional or national. Nevertheless, aggregate concentration is an indicator

Figure 3-3
U.S. food retailing concentration

Percent of U.S. grocery store sales



Sources: Monthly Retail Trade Survey, Census Bureau; Company annual reports.

of changing structure and organization of the food retailing industry. Growing retailer concentration also has potential implications for upstream purchases; as food retailers become fewer but larger, they are able to negotiate more favorable procurement and marketing services terms.

Between 1997 and 2000, the four largest retailers' share rose from 18.2 to 27.4 percent of U.S. grocery store sales. Three of the leading four retailers relied extensively on mergers and acquisitions in order to become larger. Kroger and Albertson's carried out major acquisitions in 1998 and 1999. Safeway also purchased regional supermarket operators. In contrast, fourth-ranked Wal-Mart Supercenters grew internally by greatly expanding the number of supercenter outlets since their introduction in 1988 (table 3-5).

The eight largest retailers' share of sales increased from 29.9 percent to 40.5 percent between 1997 and 2000. Fifth-ranked supermarket retailer Ahold USA—a subsidiary of Royal Ahold, the Netherlands—made a series of acquisitions in the New England and Mid-Atlantic regions, boosting its sales 52 percent since 1997. Eighth-ranked Delhaize, operator of Food Lion supermarkets in the southeastern U.S. contributed to sales share gains through its acquisition of Hannaford in the New England region.

Acquisitions by lesser retailers also contributed to increasing sales share of the largest 20 grocery retailers, which rose from 43.9 percent in 1997 to 52 percent in 2000. Twelfth-ranked Shaw's Markets grew almost 30 percent with its acquisition of Star Markets (Boston, MA) in 2000. Raley's Supermarkets increased its sales by 46 percent through the purchase of Albertson's stores in Nevada and New Mexico.

Employment and Wages

Foodstore employment reached 3.5 million in 2000, a gain of 1.2 percent over 1997 employment (app. table 11). Of that total, 88 percent were employed in grocery stores. Since 1990, foodstore employment growth has averaged 0.9 percent annually. Employment measures exclude nontraditional retailers such as supercenters and warehouse club stores, which, if included, would considerably bolster total employment and growth rates.

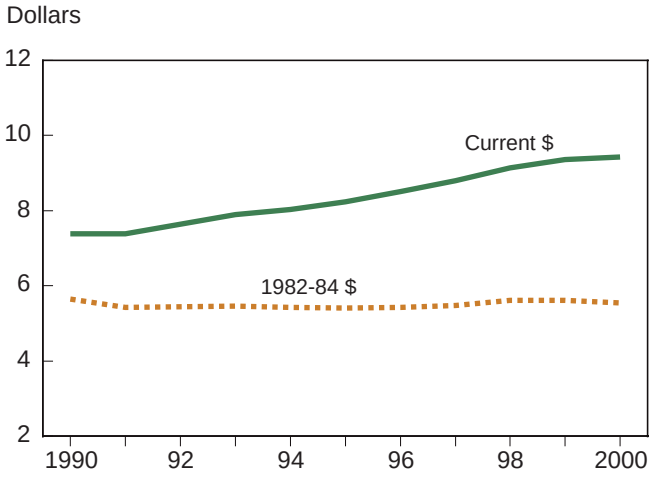
Average hourly earnings of foodstore employees rose to $9.38, up 1.2 percent from 1999 levels (app. table 27). On a real, inflation-adjusted basis, hourly earnings fell slightly, to $5.54 in 2000, compared with $5.61 in 1999 (fig. 3-4). Real wages have been stable year to year since 1990, as inflation has matched nominal wage gains. Average hourly earnings do not include lump-sum payments and bonuses, such as those earned from a company profit-sharing plan.

Many foodstore employees are also members of a labor union. Labor unions such as the United Food and Commercial Workers (UFCW) negotiate on behalf of their members with the retailers concerning wages, benefits, work rules, and grievance procedures. These terms and conditions are incorporated into a labor contract having a specified duration, usually 1 to 3 years. Typically, when a contract expires, the union's local chapter must renegotiate with an industry council consisting of the major grocery retailers in the market area, such as a city and its suburbs. Many nonunion retailers are often present in these market areas as well, including smaller supermarket operators, mass-merchandise stores, and warehouse club stores.

Performance

Performance measures of the food retailing industry serve as indicators of relative economic efficiency. These measures include various financial statistics, labor productivity indexes, and the introduction of new technology and innovation. In recent years, food retailers have lowered procurement and operating costs, introduced new innovations, and achieved efficiency gains.

Figure 3-4
Average hourly earnings for U.S. grocery stores



Source: *Current Employment Statistics*, U.S. Bureau of Labor Statistics.

Table 3-5—Sales of the largest 20 U.S. grocery retailers in 2000[1]

Rank (2000)	Company	Sales 2000	1999	1998	1997
		$ billion			
1	The Kroger Company/Fred Meyer	49.0	45.3	43.1	33.9
2	Albertson's, Inc. / American Stores, Inc.[2]	31.5	28.9	16.0	14.7
3	Safeway Stores, Inc.[3]	28.5	25.5	21.2	19.1
4	Wal-Mart Supercenters[5]	22.9	15.7	12.8	11.5
5	**Ahold, USA[4]**	21.8	20.3	16.1	14.3
6	Publix Supermarkets	14.7	13.1	12.1	11.2
7	Winn-Dixie Stores	13.7	13.9	13.9	13.2
8	**Delhaize America (Food Lion, Hannaford)**	12.7	10.9	10.5	10.2
9	**Great Atlantic & Pacific Tea Co.**	8.2	8.0	8.3	8.3
10	Supervalu[7]	8.1	6.3	5.1	4.7
11	H.E. Butt Grocery Company	7.9	7.5	6.9	6.5
12	Shaw's Supermarkets	4.0	3.1	2.8	2.5
13	**Southland Corporation (7-Eleven)**	3.9	3.8	4.1	4.0
14	Raley's	3.8	2.6	2.5	2.0
15	Pathmark Stores	3.8	3.7	3.7	3.7
16	Meijer Inc.[6]	3.5	3.6	3.0	2.8
17	Hy-Vee Food Stores, Inc.[8]	3.4	3.3	3.2	2.9
18	Fleming[7]	3.3	2.2	2.1	2.0
19	Wegman's Food Markets	2.8	2.3	2.4	2.3
20	**Aldi USA, Inc.**	2.5	2.0	2.4	1.8

Note: Boldface = Foreign-owned retailer
[1] Sales exclude nongrocery store sales in the U.S., and all foreign sales.
[2] Excludes sales of drugstores.
[3] Includes sales of Randall's Supermarkets, acquired September 1999.
[4] Primary divisions are: BI-LO; Stop & Shop; Giant Food, Landover, MD; Giant Foodstores, Carlisle, PA; Tops Markets; and Peapod online shopping service. Excludes foodservice sales by U.S. Foodservice = $6.0 billion (ann. rpt).
[5] Sales of food and nonfood grocery items only. (Source: *Progressive Grocer*, April, 2001)
[6] Sales of food and nonfood grocery items, only = est. 33 percent of sales total, 1998, 1997 = food sales, only(*Marketing Guidebook*, 2000).
[7] Excludes sales other than company-owned grocery stores and supermarkets, = 21 percent of total sales in 2000 (SN - Top 75 firms).
[8] Excludes sales of 28 drug stores (est. 1/2 of avg. store sales).

Sources: USDA-ERS estimates; *Progressive Grocer*, April 2001; Hoovers.com; company annual reports.

Financial Measures

Operating income as a share of industry sales increased from 3.5 percent of sales in 1997 to 3.8 percent in 2000 (app. table 23). A number of retailers have cited reduced operating expenses (lower procurement costs and supply chain management efficiencies) as increasing operating income in recent years. At the same time, nonoperating expenses have not risen, averaging 2.5 percent of sales since 1997. Net income before taxes amounted to 2.6 percent of sales in 2000, compared with 2.4 percent in 1997. Despite the recent consolidation wave, long-term debt fell to 37.4 percent of industry assets in 2000, down from 38.1 percent in 1997.

As a measure of profits, return on stockholders' equity generally improved during the mid-1990s. More recently, returns have declined, falling from 17.2 percent of equity in 1997 to 12.4 percent in 2000. Retailers have added to stockholders' equity, partly by reducing debt and partly by investing in larger supermarkets and remodeling existing ones to provide greater product variety and services. Between 1997 and 2000, stockholders' equity increased from 25.4 percent to 29.1 percent.

Another profit measure, return on industry assets, reached 4.4 percent in 1998 compared with 1.3 percent in 1993. Retailers shed unprofitable operations and investments during the 1990s, resulting in improved asset returns and stable profit levels. Food retailers have managed to improve debt levels following a wave of leveraged buyouts in the 1980s. The share of equity to total debt rose from 30 percent in 1990 to 70 percent in 2000, likely helped by lower interest rates and reduced debt financing.

Labor Productivity

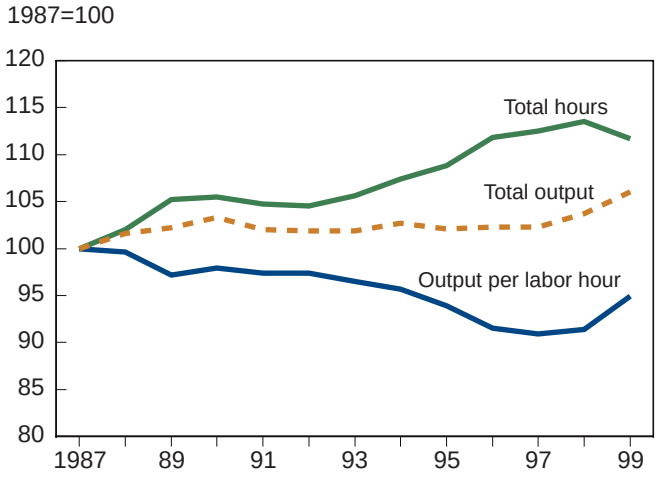
Output per labor hour for foodstore employees increased after 1997, reversing a long-term decline in the index during the 1980s and early 1990s. The index of labor productivity for foodstores reached 94.9 in 2000 (1987=100) (fig. 3-5, app. table 24). According to the Bureau of Labor Statistics, the index of labor hours decreased from 113.5 in 1998 to 111.7 in 1999 (1987=100). Meanwhile, the index of total output (inflation-adjusted sales) increased from 103.7 to 106. Food retailers have not experienced labor productivity gains, unlike many other food industries, in part due to the labor-intensive service departments introduced during the 1980s and 1990s.

Retailers have attempted to streamline their operations through mergers and consolidation, which has allowed for reductions in headquarter and division-level staffing. One source of improved store-level productivity is in labor-intensive service departments such as deli and bakery departments. To control labor costs, retailers have introduced more prepackaged, self-service items, or eliminated some service departments altogether.

Innovation and New Technology

Retailers are introducing innovations and new technology that offer greater convenience and timesaving for consumers. A number of supermarket operators are adding self-checkout lanes to speed processing of smaller purchases. In 2001, Kroger Co. had 400 stores equipped with self-checkout express lanes. Stop & Shop (Quincy, MA), a subsidiary of Royal Ahold (The Netherlands), plans to introduce a wireless shopping cart device that accesses an individual's loyalty card transactions to assist customers with selecting items, announcing promotional offers and the like. Retailers are also enhancing convenience by introducing onsite fuel centers, often selling gasoline at discount prices and promoting sales through supermarket purchases. In 2001, Alberston's operated 160 fuel centers, Kroger Co. operated 77, and Wal-Mart operated 407.

Figure 3-5
Foodstore productivity indexes



Source: Office of Productivity, Bureau of Labor Statistics.

With more consumers online, both retailers and Internet shopping services have invested in home shopping and delivery services, often with mixed results. Initially, online services such as Peapod, Groceryworks, and Webvan operated "virtual" supermarkets that were independent of store-based food retailers. These online retailers eliminated frequent trips to the supermarket in exchange for a small delivery fee. Although many consumers indicated they had an interest in online shopping services, expected growth in revenues and new customers did not materialize as expected.

A number of logistical difficulties also hampered the growth of online grocery retailing. These include: (1) meeting consumers' expectations for timely delivery, (2) the need for access to the place of delivery service, and (3) preventing spoilage of perishables, especially frozen foods, meat, and produce. In addition, the lack of high-density service areas inflated per-customer delivery costs.

To ensure their viability, some of these online shopping services have partnered with traditional retailers, while others, including Webvan, ceased operations altogether. In 2001, supermarket retailer Safeway purchased GroceryWorks, and Ahold USA, operator of six supermarket firms in the New England and Mid-Atlantic regions, acquired Peapod, in order to provide online shopping services for their customers.

In addition to investing in existing home shopping providers, a number of food retailers have initiated their own online shopping services. Albertson's and Hy-Vee, for example, have developed significant home delivery capabilities. Both home delivery and store pickup of online purchases are available to consumers for a fee. Retailers use existing stores to fulfill orders, requiring minimal investment, unlike most virtual (strictly online) retailers that used warehouse-based fulfillment methods. Sales by online retailer shopping services are estimated at 1 to 5 percent of grocery store annual sales (Willard Bishop Consulting).

Retailers are also investing in online exchanges—such as Transora, Globalnetxchange, UCCnet, and Worldwide Retail Exchange—that allow business-to-business transactions via the Internet. For many grocery retailers, the use of the Internet for transactions with suppliers and distributors promises greater flexibility and lower transaction costs compared with the earlier and more costly Electronic Data Interchange (EDI) system used primarily by larger firms. Online exchanges allow suppliers and buyers to interact at lower cost relative to EDI. They are also able to provide both procurement and supply change management capabilities under the guiding concept of collaborative planning, forecasting, and replenishment (CPFR). In addition to online exchanges, individual retailers such as Wal-Mart operate private Internet-based exchanges in order to provide up-to-date sales and inventory information to their suppliers. According to industry observers, the expanded use of Internet-based transactions will depend on the creation of industrywide standards that can be used by manufacturers, wholesalers and distributors, and retailers.

Convenience stores are also investing in new technology. To speed consumer purchases, gasoline "smart pumps" allow credit and debit purchases, and can provide additional account and other information through wireless Internet capability. In recent years, several online convenience store shopping services have been introduced, including both nonstore/Internet-based and online retailers. However, results have been mixed for these businesses. For example, Kozmo.com recently ceased operations as an online retailer of convenience foods and nonfoods, and PDQuick also closed its doors after failing in its attempt to transform itself from a 16-store convenience store retailer to a national online retailer.

Foreign Investment in U.S. Food Retailing

Foreign investment in U.S. food retailing reached $9.5 billion in 1998, the most current year available, while sales by foreign-owned subsidiaries amounted to $70.7 billion (app. table 43). The fast-growing presence of foreign-owned retailers in the United States is attributed in part to acquisition strategies by Ahold USA, a subsidiary of Royal Ahold (The Netherlands), operator of Giant Food Stores, Giant Food, Inc, Stop & Shop Supermarket Company, Tops Markets, and Bi-Lo supermarkets; and Delhaize USA, a subsidiary of Delhaize (Belgium), operator of Food Lion and Hannaford Bros. supermarkets.

Food retailing sales by foreign-owned companies amounted to 15.4 percent of total U.S. grocery store sales in 1998, compared with 12.8 percent of sales in 1992, and 7.2 percent of sales in 1988. U.S. affiliates of foreign firms include those companies in which a foreign investor owns at least 10 percent of its voting stock. Foreign investment and ownership can occur through outright purchase of assets, or through equity (shareholder) purchases.

Of the retail grocery store sales made by U.S. subsidiaries of foreign firms, majority-owned grocery retailers accounted for almost 70 percent of the total in 1998. The degree of control exercised by foreign investors with less than 50 percent ownership in a U.S. food retailer varies considerably.

The 5 largest majority-owned U.S. food retailing affiliates of foreign firms were among the 20 largest food retailers nationwide, generating sales of $49.1 billion in 2000 (table 3-6). Foreign-owned retailers have grown both by building new stores and by acquiring other food retailers. There are successful examples of both strategies among the largest retailers. Eighth-ranked Delhaize (Food Lion) has relied mostly on internal growth strategies, including building new supermarkets. Royal Ahold (The Netherlands) and Tenglemann, AG (Germany), the parent firm of A&P, have achieved growth largely by acquiring local and regional supermarket chains and preserving the company identity of acquired stores. It is unlikely that most Americans could identify the largest foreign-owned food retailers, as they have imitated U.S. food retailers' marketing and merchandising practices.

U.S. Investment in Foreign Food Retailing

Investment in foreign food retailing by U.S. firms reached $804 million in 1998. Sales by foreign affiliates of U.S. food retailers amounted to $8.6 billion in 1998, according to current statistics (app. table 42). Seven U.S. food retailers operated 16 affiliates abroad. Safeway, Inc., owns and operates 213 supermarkets in western Canada, and, with Casa Ley, S.A. de C.V., owns 97 food and general merchandise supermarkets in Mexico. HEB Grocery Co. (San Antonio, TX) has opened 110 supermarkets in Mexico in recent years.

Among mass merchandisers, Wal-Mart has made considerable investments in overseas operations, including warehouse club stores, supermarkets, and supercenters. In 2001, Wal-Mart operated 832 outlets in 10

Table 3-6—Five largest foreign-owned food retailers

U.S. affiliate	Parent firm and country	U.S. national rank (2000)	U.S. grocery store sales	
			2000	1999
			$ billion	
Ahold, USA	Royal Ahold, The Netherlands	5	21.8	20.3
Delhaize America (Food Lion, Hannaford Bros.)	Delhaize, Le Lion, Belgium	8	12.7	10.9
Great Atlantic and Pacific Tea Co. (A&P)	Tenglemann, AG Germany	9	8.2	8.0
7-Eleven Stores, Inc.	Ito-Yokado and Seven Eleven-Japan (jointly), Japan	13	3.9	3.8
Aldi, USA, Inc.	Aldi Group, Germany	20	2.5	2.0

Sources: Hoovers Online (*www.hoovers.com*), company annual reports, *Marketing Guidebook, 2000*, and *Progressive Grocer* magazine, various issues.

foreign countries. Its overall international retail sales rose to $32.1 billion in 2001, compared with $12.2 billion in 1999.

In addition to outright ownership and equity positions, U.S. food retailers have used joint ventures, franchising, and licensing agreements as means to participate in foreign food retailing. IGA, Inc. (Independent Grocers Alliance), headquartered in Chicago, IL, is a cooperative-based operator of licensed IGA foodstores, mostly supermarkets, in the United States and 40 countries abroad. Since 1995, IGA has added licensed supermarkets in southern China, the West Indies, and Brazil. IGA-licensed supermarkets overseas generated sales of more than $13 billion in 2000 through 2,200 supermarkets.

Public Policy Issues and Developments

Public policy issues often arise that pertain to the food retailing industry. The consolidation wave that began after 1996 has led to increasing concentration of sales by the Nation's largest 20 food retailers. These developments have raised concerns about the potential for market power, and its implications for consumers and food suppliers alike.

Consolidation in Food Retailing

Widespread consolidation among food retailers has raised questions about the forces driving these developments and their implications for both consumers and food market suppliers such as grower-shippers and food processors. Consumers may fear that fewer food retailers will mean higher grocery prices, less variety, and fewer shopping alternatives. While many recent mergers and acquisitions have involved retail operations located in one or more regions common to both firms, food retailers compete directly within smaller geographic markets, such as a city or town. As a result, the potentially negative consequences of consolidation for consumers is greatest when local market concentration—the combined sales of the largest firms expressed as a share of local market sales—is significantly increased.

To learn more about the impact of recent consolidation on consumers, ERS analyzed changes in local market concentration for the 100 largest metropolitan areas in the United States (*Agricultural Outlook*, August 2000). Individual firm market shares in each market area, consisting of a core city and its surrounding suburbs, were used to calculate the share of total supermarket sales accounted for by the largest four food retailers. Concentration levels in 1992 were compared with those in 1998—a period of rapid consolidation.

Overall, the 100 largest cities had an average four-firm concentration share of 68.6 percent in 1992, compared with 72.3 percent in 1998. Concentration change over the 6-year interval varied among cities, however. Cities with four-firm concentrations in the 50- to 59.9-percent range in 1992 had the largest jump in concentration, averaging 9.8 percentage points. The smallest change took place in cities with concentration in the 30- to 39.9-percent range; their four largest firms lost an average 4.4 percentage points between 1992 and 1998.

Thus, changes in local market concentration appear small in relation to changes in national concentration over the same period. Between 1992 and 1998, the four largest grocery retailers increased their share of national sales by 68.6 percent, while four-firm concentration among the largest 100 cities increased 5.4 percent, on average. Antitrust enforcement has likely played a role in cities and towns affected by mergers between retailers. Antitrust regulators have required the sale of one or more stores to other retailers in order to limit increases in local market concentration. As a requirement of the Albertson's-American Stores merger, 144 supermarkets were sold to other retailers in order to preserve competition in local market areas where both retailers operated stores.

Consolidation among large retailers will likely contribute to increased direct procurement of products from food and agricultural suppliers. Large, self-distributing retailers made an estimated 42 percent of the $500 billion in retail sales by foodstores and mass-merchandiser supercenters in 2000. These retailers operate their own warehouses, trucking fleets, and buying offices, which enables them to negotiate directly with food and agricultural product suppliers. Increased purchase volumes by retail and wholesale buyers may favor reliance on larger suppliers, to the detriment of medium and smaller-sized firms.

In response to these developments, many smaller grocery suppliers may seek to form joint ventures, cooperatives, or other alliances among themselves in order to meet the procurement and marketing needs of large retailers. Other small supplier firms may seek niche markets for a limited range of product offerings—such as specialty fruits and vegetables or organically grown products—in order to meet the procurement needs of all sizes of retailers. With the advent of the Internet and the increasing development of online business-to-business services, smaller suppliers are now able to locate buyers through a growing number of virtual marketplaces. These online marketplaces may allow small suppliers to reach small buyers that previously were difficult and costly to identify, as an alternative to serving larger buyers such as wholesalers and retailers.

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Food Service

Charlene Price

America has more than 844,000 food service eating establishments. This number continues to grow as the share of dollars spent on food away from home increases (47 percent in 2001). In 2000, food service establishments sold $358 billion worth of meals and snacks (excluding alcoholic beverages and tax/tips). Real sales rose 5.2 percent in 2000, compared with 4.5 percent in 1999. Total food service sales reached $400 billion in 2001 and are projected to capture 49 percent of the food dollar by the year 2010.

Introduction

The food service industry in 2000 continued to grow, but at a slow pace. Food service firms competed aggressively with each other and with food retailers for a bigger share of the consumer food dollar (fig. 4-1). Supermarkets are attempting to regain food dollars lost to the foodservice industry by offering their own menu of fully prepared meals intended for home consumption—widely referred to as Home Meal Replacement (HMRs). Large food service firms, particularly fast-food chains, continued to gain market shares by introducing new products that are heavily advertised and promoted with coupons and discounts.

These firms also built new units and bought existing restaurants in prime locations. However, merger activity was down in 1999 and 2000 compared with earlier years. Rather, food service firms are entering nontraditional locations such as supermarkets, department stores, convenience stores, and airports. For example, Little Caesar's now reigns in K-Mart stores and McDonald's arches grace Wal-Mart.

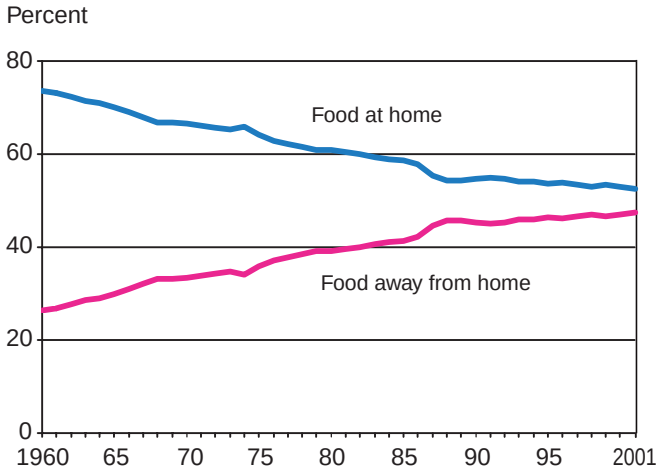
Also growing more popular is the multiple branding concept, whereby several restaurant chains operate at the same location in an attempt to draw more customers (ex., Taco Bell and KFC). Chains that engage in multiple-branding concepts can better absorb fixed operating costs.

Sales and Leading Firms

Food service sales reached $358 billion in 2000, an increase of 7.6 percent over 1999 sales (table 4-1). Separate eating places, which derive revenue mainly from sales of meals and snacks, accounted for $249 billion or 70 percent of total food service sales in 2000. These establishments include full-service restaurants, fast-food or quick-service outlets, lunchrooms, commercial cafeterias, and social caterers. Another 12 percent was accounted for by commercial outlets such as hotel restaurants and drugstore lunch counters, recreation and entertainment establishments, and separate drinking places (fig. 4-2). Noncommercial segments of the food service industry—like schools, the military, and hospitals—made up the remainder of sales, about $64 billion.

Figure 4-1

Share of U.S. food expenditures for food at home and away from home, 1960-2001



Source: ERS, USDA.
http://www.ers.usda.gov/Briefing/CPIFoodAndExpenditures/Data/table1.htm

Commercial food service sales reached $294 billion in 2000, an increase of 8.6 percent over 1999 (table 4-1). Separate eating places account for the bulk of commercial food service sales. Fast-food outlets accounted for 50 percent of separate eating place sales in 2000, followed by restaurants and lunchrooms (46 percent combined). Fast-food and restaurant/lunchroom sales totaled $239.2 billion in 2000, which was 67 percent of total food service sales compared with 65 percent in 1995. Sales in fast-food or quick-service restaurants are the largest, reaching $125 billion in 2000, up from 1999 sales of $117 billion. Sales at restaurants and lunchrooms grew 9.7 percent in 2000.

Catering grew most among commercial segments from 1999 to 2000, with sales increasing 70 percent from $4.0 billion to $6.8 billion. Growth in catering can be attributed to the growing number of higher-income households, as well as the rising number of upscale corporate events, marriages, and other celebrations.

Total sales in the **noncommercial** segment amounted to $64 billion in 2000, up 3.1 percent from 1999. School-based vendors (elementary/secondary schools and colleges/universities) accounted for the largest share of noncommercial sales, 40 percent.

Table 4.1—U.S. foodservice sales by industry segment, 1993-2000[1]

Segment	1993[2]	1994[2]	1995[2]	1996[2]	1997[2]	1998[2]	1999[2]	2000[2]
				Million				
Commercial:								
Separate eating places--								
Fast-food outlets	87,218	90,752	96,314	98,356	101,430	105,810	117,446	124,943
Restaurants and lunchrooms	75,947	80,100	81,502	85,413	96,904	99,898	104,149	114,284
Cafeterias	3,878	4,143	4,273	4,319	2,579	2,659	2,772	3,042
Social caterers	1,461	1,616	2,130	2,536	3,209	3,696	4,036	6,788
Total	168,504	176,611	184,219	190,624	204,122	212,063	228,403	249,057
Lodging places	11,157	11,727	12,157	12,601	10,859	11,606	12,315	12,942
Retail hosts	12,187	13,038	14,212	15,131	15,830	17,014	18,764	19,963
Recreation and entertainment	8,327	8,764	9,424	10,100	7,616	8,606	9,209	9,836
Separate drinking places	1,561	1,456	1,480	1,478	1,462	1,477	1,474	1,691
Commercial feeding total	201,736	211,596	221,492	229,934	239,889	250,766	270,165	293,489
Noncommercial:								
Education--								
Elementary and secondary	9,463	9,955	10,400	10,960	11,452	11,866	12,536	12,847
Colleges and universities	9,737	10,400	10,992	11,416	11,848	12,235	12,590	12,905
Total	19,200	20,355	21,392	22,376	23,300	24,101	25,126	25,752
Military--								
Troop feeding	984	1,112	1,130	1,102	1,070	1,054	1,040	1,040
Clubs and exchanges	839	844	850	852	858	881	900	923
Total	1,823	1,956	1,980	1,954	1,928	1,935	1,940	1,963
Plants & office buildings	5,537	6,230	5,432	5,273	5,315	5,438	5,498	5,706
Hospitals	3,762	3,646	3,570	3,602	3,576	3,514	3,700	3,738
Extended care facilities	6,030	5,870	5,758	6,158	6,234	6,268	6,344	6,434
Vending	4,497	4,187	3,376	2,744	1,876	1,890	1,908	1,990
Transportation	4,711	4,428	4,101	4,201	4,640	4,720	4,910	4,968
Assoc., incl. civic, soc. & frat. org.	1,167	1,039	913	738	1,059	1,151	1,232	1,288
Correctional facilities	2,470	2,710	3,050	3,072	5,578	6,068	6,396	6,814
Child day care	1,393	1,522	1,675	1,745	1,937	2,054	2,223	2,320
Elderly feeding	154	177	172	169	174	173	177	182
Other	2,219	2,245	2,326	2,440	2,659	2,599	2,707	2,914
Noncommercial feeding total	52,963	54,365	53,745	54,472	58,276	59,911	62,161	64,069
Total	254,699	265,961	275,237	284,406	298,165	310,677	332,326	357,558

[1] Excludes sales tax and tips.
[2] Sales reporting based on Standard Industrial Classification (SIC) code definitions.

Sources: Census of Retail Trade, various years and ERS, USDA, Food Markets Branch, (202) 694-5384.

Food Service Definitions

Food Service. The dispensing of prepared meals and snacks intended for on-premise or immediate consumption. The following products qualify as food service when other foods are not available: candies, popcorn, pretzels, nuts, and drinks. Vended food service is operated by firms engaged in the retail sale of meals and snacks through vending machines. Such service may be provided at plants, office buildings, and other locations.

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

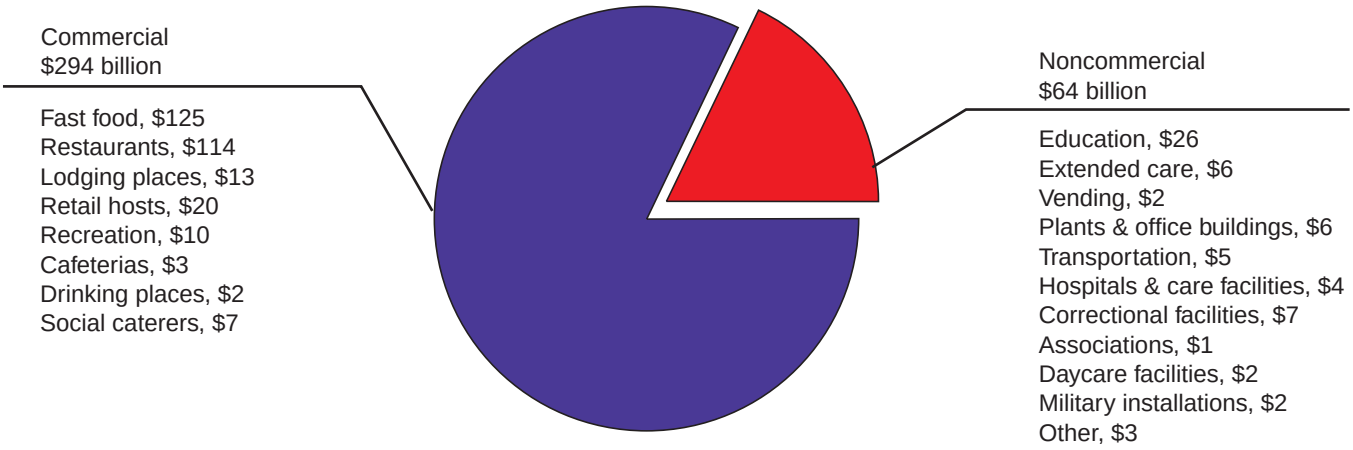
- *Drinking places.* Establishments with food service that do not operate as subordinate facilities of different and separately identifiable kinds of businesses and the primary function of which is the sale of alcoholic beverages for on-premise or immediate consumption. These include bars, beer gardens, taverns, nightclubs, and saloons.
- *Eating places.* Establishments that do not operate as subordinate facilities of different and separately identifiable kinds of businesses and the primary function of which is the sale of prepared meals and snacks for on-premise or immediate consumption. These include restaurants, lunchrooms, fast-food outlets, and cafeterias.
- *Lodging places*. Establishments that provide both lodging and food service to the general public. These establishments include hotels, motels, and tourist courts, but exclude rooming and boarding houses and private residences.
- *Recreation/entertainment.* Food service operations in theaters; bowling alleys or billiard or pool halls; commercial sports establishments (race tracks 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.* Food service operations that operate in conjunction with or as part of retail establishments, stores, drugstores, and miscellaneous retailers.

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

Figure 4.2

Foodservice sales, 2000

Sales reached $358 billion, with commercial sales accounting for 82 percent



Source: ERS, USDA, Food Markets Branch.

As commercial vendors have taken over food service operations in some traditionally noncommercial settings (ex., Pizza Hut in schools), noncommercial sales fell to 18 percent of the food service total compared with 20 percent just 5 years earlier. Correctional facilities had the highest sales growth among noncommercial segments, 6.8 percent, in 2000 (table 4-1).

The four largest restaurant firms in 2000 sales were McDonald's Corporation (including Boston Market, Donatos Pizza, and Chipotle Mexican Grill); Tricon Global Restaurants, Inc.; Diageo PLC (Burger King and Haagen-Dazs); and Wendy's International, Inc. (table 4-2).

Leading Franchised Restaurants

Franchised restaurants, both company owned and franchisee owned, are key to the commercial restaurant industry. The top 50 U.S. restaurant franchisers accounted for 39 percent of separate eating place sales in 2000, up from 28 percent in 1999. According to Technomic, a research consulting firm in Chicago, sales of the top 50 franchisers in 2000 were $97 billion, 4.2 percent above sales in 1999. The number of units operated by the top 50 franchisers increased 1.4 percent to 112,201 in 2000. Twenty-five restaurant chains accounted for 88 percent of the top 50 franchisers' sales and 85 percent of the top 50 restaurant chains' units (table 4-3). Hamburger, pizza, and chicken restaurants continue to dominate the commercial restaurant industry.

McDonald's, Burger King, Wendy's, Taco Bell, and Pizza Hut were the five largest restaurant franchisers in terms of U.S. sales in 2000. Eighty-five percent of McDonald's restaurants are franchised. In 2000, its U.S. sales amounted to $19.6 billion, up 3 percent from 1999. Tricon Global's Taco Bell franchises 80 percent of its units, 75 percent of KFC units, and all Pizza Hut units. Though sales decreased slightly at Burger King in 2000, it is still the number two burger chain at $8.5 billion. In 2000, Burger King had 8,326 units and 94 percent were franchised. Sales from Wendy's restaurants were up 7 percent in 2000 to $5.8 billion. Wendy's franchises 80 percent of its units. Taco Bell's sales fell in 2000 by 1.9 percent, and Pizza Hut's sales remained stable at $5 billion (table 4-3).

McDonald's operated 12,804 restaurants in the U.S in 2000. Subway Sandwiches ranked second with 12,253, up 3.4 percent from 2000. Among the top 10 franchisers, Applebee's had the largest growth in units in 2000, 9.5 percent; compared with Wendy's (4.7 percent), Subway (3.4 percent), Burger King (2.3 percent), and McDonald's (1.4 percent).

Market Share by Type of Food Sold

The National Restaurant Association breaks down restaurant sales by segment. Among sandwich chains, McDonald's and Burger King led with 34 percent and 15 percent of the U.S. market in 2000. Pizza Hut and Domino's Pizza led the pizza segment with 42 percent and 23 percent of the U.S. market. KFC controlled 55 percent of the chicken market, followed by Chick-fil-A at 13.6 percent and Popeyes at 13.5 percent. Chicken chains are offering their products in more one-stop shopping establishments such as grocery stores and gas stations. They are also emphasizing "home-style" chicken and an increasing number of side dishes to compete with the home meal replacement market.

Denny's accounted for slightly more than 23 percent of the family restaurants' market share in 2000, followed by International House of Pancakes/IHOP (15 percent) and Cracker Barrel (13 percent). Family chains such as these emphasize value, quality, service, cleanliness, and convenience and cater to all three meals—breakfast, lunch, and dinner.

In the grill-buffet segment, Golden Corral held 37 percent of the market in 2000, followed by Ryan's Family Steak House (29 percent) and Ponderosa (22 percent). Grill-buffet restaurants emphasize budget dining for the family.

Dinner house restaurants are usually more formal, upscale eating places. Applebee's Neighborhood Grill & Bar accounted for the largest market share in this category (15 percent), followed by Red Lobster (12 percent) and Outback Steakhouse (11 percent).

Two chains control nearly 40 percent of the contract food service segment. Contract food service companies provide food and facilities management to corporate, health care, and education markets. Aramark Global Food/Leisure Services holds 27 percent of the contract chains market share, followed by LSG/Sky Chefs with 9 percent.

Home Meal Replacements, Delis, and Other Take-Out Meals

Supermarkets are jumping on the takeout food bandwagon with menu offerings of fully prepared meals

Table 4.2—Top U.S. restaurant companies and chains' sales and number of units

2000 Rank	1999 Rank	Company/Chain	2000 U.S. sales	1999 U.S. sales	Change from 1999	2000 U.S. units	1999 U.S. units	Change from 1999
			------- *$ million* -------		*Percent*	------- *Number* -------		*Percent*
1	1	McDonald's Corporation	20,415.8	19,171.3	6.5	13,771	12,815	7.5
		McDonald's	19,572.8	19,005.6	3.0	12,804	12,629	1.4
		Boston Market	626.0	NA		707	NA	
		Donatos Pizza	150.0	134.7	11.4	156	148	5.4
		Chipotle Mexican Grill	67.0	31.0	116.1	104	38	173.7
2	2	Tricon Global Restaurants, Inc.	14,500.0	14,500.0	0.0	20,037	20,194.0	-0.8
		Taco Bell	5,100.0	5,200.0	-1.9	6,746	6,879	-1.9
		Pizza Hut	5,000.0	5,000.0	0.0	7,927	8,084	-1.9
		KFC	4,400.0	4,300.0	2.3	5,364	5,231	2.5
3	3	Diageo PLC	8,619.9	8,726.2	-1.2	8,558	8,345	2.6
		Burger King	8,542.9	8,652.2	-1.3	8,326	8,139	2.3
		Haagen-Dazs	77.0	74.0	4.1	230	206	11.7
4	4	Wendy's International, Inc.	5,837.1	5,435.1	7.4	5,215	5,008	4.1
		Tim Hortons	80.1	64.1	25.0	120	108	11.1
		Wendy's Old Fashioned Hamburgers	5,757.0	5,371.0	7.2	5,095	4,900	4.0
5	5	Darden Restaurants, Inc.	3,825.5	3,486.5	9.7	1,109	1,086	2.1
		Bahama Breeze	100.0	35.0	185.7	19	10	90.0
		The Olive Garden	1,644.8	1,519.8	8.2	463	458	1.1
		Red Lobster	2,071.7	1,931.7	7.2	620	618	0.3
		Smokey Bones BBQ	9.0	NA		7	NA	
6	6	Doctor's Associates, Inc.	3,800.0	3,200.0	18.8	12,253	12,008	2.0
		Subway	3,800.0	3,200.0	18.8	12,253	12,008	2.0
7	9	Allied Domecq	3,092.7	2,857.0	8.2	6,416	6,443	-0.4
		Baskin-Robbins	576.7	554.5	4.0	2,439	2,557	-4.6
		Dunkin' Donuts	2,324.2	2,139.8	8.6	3,643	3,611	0.9
		Togo's Eatery	189.8	162.7	16.7	334	275	21.5
8	7	CKE Restaurants, Inc.	3,074.3	3,131.2	-1.8	3,596	3,724	-3.4
		Carl's Jr.	927.0	887.2	4.5	945	908	4.1
		Hardee's	2,050.0	2,138.8	-4.2	2,526	2,673	-5.5
		Taco Bueno	97,316	92,350	5.4	125	122	2.5
9	8	International Dairy Queen, Inc.	2,965.6	2,901.5	2.2	5,319	5,402	-1.5
		Dairy Queen	2,898.6	2,831.0	2.4	5,058	5,113	-1.1
		KarmelKorn	6.0	6.0	0.0	31	36	-13.9
		Orange Julius of America	61.0	64.5	-5.4	230	253	-9.1
10	12	Brinker International	2,805.3	2,462.0	13.9	1,014	929	9.1
		Brinker Specialty Restaurants	58.0	56.0	3.6	13	12	8.3
		Chili's Grill & Bar	1,695.3	1,500.1	13.0	648	597	8.5
		Corner Bakery	107.3	86.8	23.6	60	56	7.1
		Cozymel's	40.2	40.3	-0.2	13	13	0.0
		Maggiano's	120.2	97.8	22.9	13	11	18.2
		On the Border	298.3	262.1	13.8	116	103	12.6
		Romano's Macaroni Grill	486.0	418.9	16.0	151	137	10.2
11	10	Domino's, Inc.	2,647.2	2,660.0	-0.5	4,818	4,629	4.1
		Domino's Pizza	2,647.2	2,660.0	-0.5	4,818	4,629	4.1
12	13	Applebee's International, Inc.	2,624.6	2,316.7	13.3	1,251	1,142	9.5
		Applebee's Neighborhood Grill & Bar	2,624.6	2,316.7	13.3	1,251	1,142	9.5
13	11	Advantica Restaurant Group	2,602.3	2,533.0	2.7	2,071	2,042	1.4
		Carrows	182.7	190.0	-3.8	141	145	-2.8
		Coco's	255.6	264.0	-3.2	179	182	-1.6
		Denny's	2,164.0	2,079	4.1	1,751	1,715	2.1
14	14	Triarc Companies, Inc.	2,409.9	2,266.4	6.3	3,153	3069	2.7
		Arby's	2,409.9	2,266.4	6.3	3,153	3,069	2.7

Continued--

Table 4.2—Top U.S. restaurant companies and chains' sales and number of units--Continued

2000 Rank	1999 Rank	Company/Chain	2000 U.S. sales	1999 U.S. sales	Change from 1999	2000 U.S. units	1999 U.S. units	Change from 1999
			------- *$ million* -------		*Percent*	------- *Number* -------		*Percent*
15	15	Outback Steakhouse, Inc.	2,254.0	1,932.0	16.7	702	646	8.7
		Carrabba's Italian Grill	217.0	170.0	27.6	81	72	12.5
		Fleming's Prime Steakhouse	21.0	3.0	600.0	10	3	233.3
		Outback Steakhouse	2,016.0	1,759.0	14.6	611	571	7.0
16	16	AFC Enterprises	2,003.6	1,782.4	12.4	2,962	2,787	6.3
		Church's Chicken	698.7	655.6	6.6	1,218	1,179	3.3
		Cinnabon	171.4	144.4	18.7	389	358	8.7
		Popeyes Chicken & Biscuits	1,095.5	953.8	14.9	1,248	1,160	7.6
		Seattle's Best Coffee	38.0	28.6	32.9	107	90	18.9
17	17	Jack in the Box, Inc.	1983.3	1,757.6	12.8	1,666	1,517	9.8
		Jack in the Box	1,983.3	1,757.6	12.8	1,666	1,517	9.8
18	21	Starbucks Corporation	1,892.0	1,465.0	29.1	2,962	2,136	38.7
		Starbucks	1,892.0	1,465.0	29.1	2,962	2,136	38.7
19	18	CBRL Group, Inc.	1,857.7	1,677.4	10.7	519	488	6.4
		Camine's Gourmet Market	19.9	12.7	56.7	3	2	50.0
		Cracker Barrel Old Country Store	1649.2	1,509.7	9.2	434	418	3.8
		Logan's Roadhouse	192.0	154.9	24.0	82	68	20.6
20	19	Sonic Corp.	1,811.4	1,643.9	10.2	2,219	2,056	7.9
		Sonic Drive-Ins	1,811.4	1,643.9	10.2	2,219	2,056	7.9
21	22	Papa John's International, Inc.	1,669.0	1,426.0	17.0	2,533	2,254	12.4
		Papa John's	1,669.0	1,426.0	17.0	2,533	2,254	12.4
22	24	Carlson Restaurants Worldwide	1,530.2	1,364.9	12.1	500	452	10.6
		Carlson Specialty Restaurants	41.0	22.0	86.4	15	8	87.5
		Italianni's	9.2	13.0	-29.2	4	6	-33.3
		T.G.I. Friday's	1,480.0	1,329.9	11.3	481	438	9.8
23	25	Metromedia Restaurant Group	1,334.1	1,274.6	4.7	867	882	-1.7
		Bennigan's	525	460.3	14.0	259	237	9.3
		Ponderosa/Bonanza	635.0	641.1	-1.0	500	536	-6.7
		Steak and Ale	175	173.2	0.8	108	109	-0.9
24	20	Little Caesar Enterprises, Inc.	1,300.0	1,465.0	-11.3	3,300	3,700	-10.8
		Little Caesars	1,300.0	1,465.0	-11.3	3,300	3,700	-10.8
25	23	Shoney's, Inc.	1,217.5	1,398.7	-13.0	1,023	1,106	-7.5
		Captain D's	495.3	498.8	-0.7	564	567	-0.5
		Shoney's	722.2	868.8	-16.9	459	525	-12.6
		TOTAL	98,073.0	92,934.4	5.5	107,834	104,860	2.8

Source: Technomic, Inc.

Table 4.3—Top 25 franchised U.S. chain restaurants, sales and number of establishments

Company/Chain	2000 U.S. sales	1999 U.S. sales	Change from 1999	2000 U.S. units	1999 U.S. units	Change from 1999
	------- *$ million* -------		*Percent*	------- *Number* -------		*Percent*
McDonald's	19,572	19,006	3.0	12,804	12,629	1.4
Burger King	8,543	8,652	-1.3	8,326	8139	2.3
Wendy's Old Fashioned Hamburgers	5,757	5,371	7.2	5,095	4,868	4.7
Taco Bell	5,100	5,200	-1.9	6,746	6,879	-1.9
Pizza Hut	5,000	5,000	0.0	7,927	8,084	-1.9
KFC	4,400	4,300	2.3	5,364	5,231	2.5
Subway	3,800	3,200	18.8	12,253	11,845	3.4
Dairy Queen	2,899	2,831	2.4	5,058	5,113	-1.1
Domino's Pizza	2,647	2,660	-0.5	4,818	4,629	4.1
Applebee's Neighborhood Grill & Bar	2,625	2,317	13.3	1,251	1,142	9.5
Arby's	2,410	2,266	6.4	3,153	3,069	2.7
Dunkin Donuts	2,324	2,139	8.6	3,643	3,611	0.9
Denny's	2,164	2,079	4.1	1,751	1,715	2.1
Hardee's	2,050	2,139	-4.2	2,526	2,673	-5.5
Outback Steakhouse	2,016	1,759	14.6	611	571	7.0
Jack in the Box	1,983	1,793	10.6	1,666	1,552	7.3
Sonic Drive-Ins	1,811	1,643	10.2	2,219	2,056	7.9
Chili's Grill & Bar	1,695	1,500	13.0	648	597	8.5
Papa John's	1,669	1,426	17.0	2,533	2,254	12.4
T.G.I. Friday's	1,480	1,330	11.3	481	438	9.8
Little Caesars	1,300	1,465	-11.3	3,300	3,700	-10.8
International House of Pancakes	1,200	1081	11.0	925	859	7.7
Popeye's Chicken & Biscuits	1,095	954	14.8	1,248	1,160	7.6
Golden Corral	966	897	7.7	452	455	-0.7
Carl's Jr.	927	887	4.5	945	908	4.1
Total	85,433	81,895	4.3	95,743	94,177	1.7

Source: Technomic, Inc.

called Home Meal Replacements (HMRs). Technomic, Inc., a consulting firm in Chicago, reported that HMR sales by supermarkets rose 3 percent in 1999 to $12 billion (overall supermarket sales rose 2.9 percent), and projects that HMR sales will grow to $15 billion by 2004.

Although supermarket delis are part of the retail grocery market, they have been one of the fastest growing outlets for prepared meals and snacks in recent years. The number of supermarkets with delicatessens increased steadily after 1982 and began to level off in 1998 (fig. 4-3). Eighty-one percent of all supermarkets had delicatessens with service employees in 2000. Deli sales increased 6.1 percent to $13 billion in 2000, the biggest increase since 1996. The bulk of deli sales comes from meat and cheese, with prepared foods second. Fastest growing categories include chicken, sandwiches, and salads (see "Food Retailing").

According to the *Food Institute* report for 2000, takeout food sales totaled $126.4 billion in 1997 and are expected to reach $195.4 billion in 2007, a 55-percent increase in just 10 years. Most of the growth will be generated by supermarkets and full-service restaurants, with fast-food restaurants, business and industry food service, and convenience store sales lagging. According to *Takeout Business*, in 1997, fast food accounted for 61.2 percent of total takeout sales, but by 2007 that number is expected to drop to 57.6 percent, a victim of supermarket, deli/pizza parlor/bagel, and coffee/donut shop sales.

Nontraditional Food Service Formats

Food service continues to be a growing part of the convenience store (c-store) industry. According to the National Association of Convenience Stores (NACS), food service purchases are trending upward. In 2000, 13.3 percent of all merchandise sales in c-stores, or $13.8 billion, involved food service products (table 4-4). Food service (food prepared onsite) accounts for the largest share of food-related purchases. Branded fast-food concepts are popular as well, with more than 20 different franchisers established in c-stores. Among

Table 4.4—Food service sales in convenience stores, 1997-2000

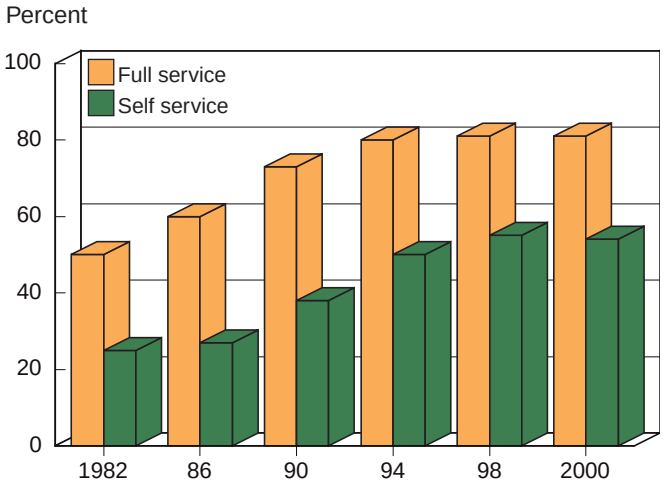
Category	Instore sales				Average store sales				Industry total			
	2000	1999	1998	1997	2000	1999	1998	1997	2000	1999	1998	1997
	Percent				*Dollars*				*$ million*			
Foodservice (food prepared onsite)	3.58	3.42	3.00	3.91	31,146	29,275	23,310	29,600	3.4	3.4	2.3	2.8
Cold dispensed beverages	2.63	2.93	3.10	3.62	22,881	25,081	24,476	27,403	2.7	2.9	2.4	2.6
Hot dispensed beverages	3.36	3.30	3.50	2.32	29,232	28,248	27,273	17,562	3.5	3.3	2.6	1.7
All other foodservice	0.75	0.65	1.17	1.13	6,525	5,564	9,089	8,554	0.8	0.6	0.9	0.8
Packaged sandwiches	1.01	0.87	0.85	0.79	8,787	7,447	6,605	5,980	1.1	0.9	0.6	0.6
Frozen dispensed beverages	1.94	2.44	2.18	0.28	16,878	20,886	16,939	2,120	2.1	2.4	1.6	0.2
Subtotal	13.27	13.61	13.90	12.05	115,449	116,502	107,692	91,219	13.8	13.6	10.4	8.7
Total instore	100.00	100.00	100.00	100.00	870,000	856,000	777,000	757,000	104.1	99.8	75.1	72.4

Note: Food service categories were redefined in 1997; therefore, no comparisons can be made from previous years.

Source: *State of the Industry Report*, National Association of Convenience Stores, 1998-2001.

Figure 4-3

Share of supermarkets with delis, 1982-2000



Source: *Progressive Grocer*.

these are A&W, America's Favorite Chicken Company, Arby's, Baskin-Robbins, Blimpie, Burger King, Dunkin Donuts, Hardee's, KFC, Long John Silver's, McDonald's, Pizza Hut, Subway, Taco Bell, Wendy's, and White Castle.

Food service operations are also appearing in department stores. In 2000, Kmart operated over 1,800 instore restaurants in its 2,100-store chain, over 500 of which were Little Caesars franchises. Kmart is overhauling all of its restaurants with Little Caesars, renaming them KCafes, and discontinuing more than 25 separate agreements with regional and local distributors for restaurant service.

Wal-Mart stores house 636 McDonald's. In some locations, customers can even place a McDonald's order at the Wal-Mart checkout, where it is relayed to the McDonald's kitchen, usually in the back of the store. The order can be placed on a credit card and picked up at the front of the store upon departure. Potential areas for growth in branded concepts are hospitals, corporate cafeterias, hotels, and airports.

Employment and Wages

Employees in eating and drinking places numbered 8.1 million in 2000, a 1.9-percent increase from 1999 (app. table 11) but down from the 2.5-percent increase posted in 1999 (excludes all noncommercial eating facilities and commercial outlets such as hotel restaurants, department store coffee shops, and ballpark food). Although the growth slowed, eating and drinking places added more than 153,000 jobs during the year, marking the eighth consecutive year in which the industry's employment increased by at least 100,000. This helped solidify the food service industry's position as one of the largest private-sector employers in the United States, accounting for 57 percent of all food marketing employees. Average hourly earnings of workers in eating and drinking places was $6.93 in 2000, up 4.7 percent from 1999 (app. table 27).

The overall restaurant industry—which includes food contractors, lodging-place restaurants, institutional-restaurant services, and other foodservice operations—employed more than 11.3 million people in 2000. Most tableservice and quickservice operators responding to a National Restaurant Association survey identified recruiting and retaining employees as the biggest challenge in 2000. They reported that the number of

applicants had declined from 2 years earlier and that it was taking longer to fill job vacancies. Restaurant respondents also reported that turnover among hourly employees had increased in the past 2 years. The labor shortage at tableservice operations was the most significant among kitchen workers and waitstaff, according to the 2000 survey.

In response to the current labor situation, roughly two-thirds of the quickservice respondents reported that they had intensified recruitment efforts, expanded cross-training of employees, and increased hours worked by hourly employees. Tableservice respondents reported the same. Restaurant operators also indicated that a larger portion of their budget would be allocated for training in 2001.

Technological Developments And Productivity

Labor productivity at eating and drinking places increased from an index of 100.6 in the mid-1990's to 104.3 in 1999 (1987 = 100). The Bureau of Labor Statistics has defined output by sales receipts rather than by a physical quantity because food service operators do not generally produce definable hard goods. Labor input in the productivity ratio is defined as the total hours worked by all employees, both supervisory and nonsupervisory. Quickservice operators are trying to improve productivity at their establishments through better working conditions, training, benefits, and technology.

Restaurants are rapidly expanding their presence on the Internet. In 2000, 56 percent of restaurants had a website, compared with 30 percent in 1999. Restaurants primarily design their website to attract customers. Annual expenditures to maintain an online presence (including site development, ads, and e-commerce) range from under $5,000 per restaurant to more than $1 million per chain.

Advances in technology enable supermarket retailers to offer new services, such as electronic ordering and home delivery, for relatively low startup costs. Cybermeals, the world's largest online meal ordering system, offers consumers the opportunity to order takeout and delivery from supermarkets and restaurants in their neighborhood free of charge. Since its start in December 1996, this service has become available nationwide with more than 13,000 locations under contract. Cybermeals has been named the exclusive online ordering service for America Online, Excite, Yahoo!, and Lycos. The Great Atlantic and Pacific Tea Company (A&P) signed an agreement with Cybermeals to create individual custom websites for 700 units of their Farmer Jack, Food Emporium, Super Fresh, Kohl's, and Waldbaums stores. A&P will be the first grocery chain to offer online ordering of prepared meals from their delis and bakeries. With Cybermeals' 24-hour operations, consumers can order online from their local stores everything from rotisserie chicken to potato salad and view full menus, hours of operation, instore specials, and store directions.

USA Technologies in Philadelphia, PA, is working on turning vending machines into vehicles for Internet electronic commerce. It is also one of several companies, such as e-Vend-net in Kennett Square, PA, that is equipping vending machines with modems or sensors that relay instant inventory, sales, and other information over computer networks. With such technology, vending companies can better target their prospects. They can know, for example, that workers on the third floor prefer doughnuts, while their colleagues on the first floor want peanuts.

The first food service program to allow students to order school meals from home using either a toll-free number or a secure Internet website (*http://www.myschoollink.com*), called *MyLunch@School*, was launched in March 2000 by School Link Network, Inc. Students can customize and order lunch for the next school day, then pick up their custom lunch at the MyLunch station in the cafeteria by showing their MyCard@School student phone ID card. Students can also pay for their lunch using their MyCard@School student ID card as a personalized debit card.

The Nation's first electronic restaurant, WELLSTEADS, is located in Arlington, VA. It offers takeout and delivery of meals to people who want a healthier, more balanced lifestyle through a patent-pending process that allows customers to order online, on the phone, or in the store (by touching a kiosk screen). This process enables the customer to personalize, name, and save their meals for easy future ordering.

FreedomPay Inc., has developed a network that will enable customers to make cashless purchases simply and efficiently. By simply waving a wand over a sensor at the point of sale, consumers' purchases are automatically deducted from their account through FreedomPay's network. At FreedomPay's website, members can check their personal profile, view their account balance and purchase history, and learn

Significant food service mergers and acquisitions, 1997-2000

Acquirer	Acquired	Amount
Compass Holdings, Inc., Subsidiary of Compass Group, PLC	Daka International, Danvers, MA Daka's 250 restaurant holdings will be spun off into a separate company called Unique Casual Restaurants.	$200 million
CKE Restaurants, Inc	Hardee's Food Systems, Inc.	$277 million + CKE convertible note.
Grand Metropolitan, PLC	Merged with Guinness, PLC, forming a new company, Diageo, PLC.	—
Kitchen Investment Group	Country Kitchen	$218 million
Long John Silver's	Merged with A&W Restaurants to form Yorkshire Global Restaurants.	—
McDonald's	Boston Market	$173.5 million
McDonald's	Donatos Restaurants Aroma Ltd. Coffee Shoppes	Undisclosed Undisclosed
SR Acquisition Corporation	Scott's Restaurants Inc.	$236 million
Host America Corp. Hamden, CT	Lindley Food Service Corp. New Haven, CT	Undisclosed
Capricorn Investors III L.P.	TCBY Enterprises Inc., Little Rock, AK	$140 million
Aramark Philadelphia, PA	Ogden Corporation's entertainment division	$236 million
American Securities Capital Partners L.P., NY private investment firm	El Pollo Loco, a subsidiary of Advantica Restaurant Group, Inc.	$128 million

Source: The Food Institute.

about promotioned offers. McDonald's has already successfully used the network in its North Carolina, Connecticut, and Idaho facilities. For added convenience on vending machines, FreedomPay's members can access their account using a keypad. The entire transaction takes less than 15 seconds. Canteen, the world's largest vending company, has signed an exclusive agreement to install FreedomPay in 50,000 vending machines by the end of 2002.

Menu Prices and Firm Profits

Growth in menu prices (average prices as measured by the CPI for food) slowed for the third consecutive year in 2000. According to BLS, menu prices increased 2.4 percent in 2000, which was down slightly from increases of 2.8 percent in 1997, 2.6 percent in 1998, and 2.5 percent in 1999. Growth in menu prices fell below the overall inflation rate for the first time since 1996. Driven by strong gains in energy prices, overall

consumer prices increased 3.4 percent in 2000—a full percentage point above the 2.4-percent increase in menu prices. In comparison, grocery store prices grew 2.3 percent in 2000. Menu prices at limited-service restaurants accounted for the strongest growth in 2000. These prices increased 2.6 percent, versus 2.4 percent for menu prices at full-service restaurants. Prices at the establishments serviced by food contractors increased just 1.2 percent in 2000, while vending and mobile-vendor prices increased 1.1 percent.

Profit performance varied widely over food service sector firms. According to *Business Week's* Corporate Scoreboard list, seven food service companies increased their profits significantly during 2000 (table 4-5).

McDonald's Corporation—parent to McDonald's, Donatos Pizza chain, Boston Market restaurants, and Chipotle Mexican Grill—had the largest aftertax profits in 2000 of $1.9 billion, a 2-percent increase from 1999. Although profits were up in 2000, McDonald's is considering closing 250 poorly performing restaurants in view of the European beef safety crisis and adverse currency movements.

Other firms experienced more dramatic increases in profits. Wendy's International—parent to Wendy's Old Fashioned Hamburgers, and Tim Horton's, the number 1 coffee and baked goods chain in Canada—had profits of $169.6 million in 2000, a 42-percent increase over 1999. Brinker International—one of the largest casual dining operations in the world, and parent to Chili's Grill and Bar, Romano's Macaroni Grill, Maggianos Little Italy, On the Border Mexican Grill and Cantina, and Cozymel's Coastal Mexican Grill—had profits in 2000 of $132.7 million, 33 percent above 1999's. Darden Restaurants, Inc.—number one in casual dining, and parent to Red Lobster, the Olive Garden, and Bahama Breeze Caribbean restaurants—had profits in 2000 of $191.4 million, up 19 percent.

Mergers and Acquisitions/Divestitures

In 2000, mergers and acquisitions in the food service industry decreased to 61 from 81 in 1999 (table 4-6). Of these acquisitions, 47 were by U.S. food service firms, while 14 were by other types of firms.

Advertising

According to LNA Mediawatch Multi-Media Service, the top three food service advertisers for 1999 (latest year available) were McDonald's Corporation; Tricon Global Restaurants, Inc., parent to KFC, Taco Bell, and Pizza Hut; and Diageo PLC, parent to Burger King (table 4-7). These top three advertisers spent $1.5 billion on television advertising in 1999, up 7.2 percent from 1998. Network TV accounted for the largest share of restaurant advertising, followed by spot TV, cable TV, and syndicated TV. McDonald's led in television advertising in 1999, spending $626.2 million, up from $570.9 million in 1998.

Foreign Direct Investment

Foreign-owned firms with U.S. affiliates accounted for $9.1 billion in eating and drinking place sales in 1998 (last year available), up 31.5 percent from 1997 sales, according to industrywide BEA data (app. table 43).

Table 4.5—Profits of selected foodservice companies, 2000

Firm	Profits 2000	Change from 1999	Return on common equity over 12-month period ending December 2000
	$ million	---------- *Percent* ----------	
Bob Evans Farms	50.8	-12	11.6
Brinker International	132.7	33	16.2
CBRL Group	61.5	5	7.3
CKE Restaurants	-107.7	NM	-21.6
Darden Restaurants	191.4	19	19.2
McDonald's	1,977.3	2	22.5
Sodexho Marriott Services	71.0	42	NM
Wendy's International	169.6	2	15.7

Note: Profits are from total revenues, which include sales by company-operated restaurants and fees from restaurants operated by franchisees and affiliates. These fees include rent, service fees, and royalties that are based on a percent of sales with specified minimum payments, along with initial fees.
NM = Not meaningful.

Source: *Business Week*, February 26, 2001.

Table 4.6—Mergers and divestitures in food service

Year	Acquisitions by food service firms	All other firms	Total	Divestitures
			----------*Number*----------	
1982	33	18	51	33
1983	43	21	64	35
1984	39	39	78	30
1985	49	24	73	39
1986	58	23	81	35
1987	56	21	77	35
1988	46	29	75	29
1989	38	34	72	30
1990	32	15	47	25
1991	21	15	36	16
1992	39	20	59	34
1993	56	15	71	23
1994	62	16	78	35
1995	71	12	83	24
1996	96	24	120	61
1997	112	46	158	53
1998	111	34	145	47
1999	70	11	81	29
2000	47	14	61	27

Source: Compiled by ERS from *Food Business Mergers and Acquisitions*, The Food Institute.

Table 4.7—Top restaurant company expenditures in U.S. advertising[1]

Chain	Expenditures 1999	1998	1997	Increase from 1998
		---------- *Thousands* ----------		*Percent*
McDonald's Corporation	626,238	570,949	580,458	9.7
Tricon Global Restaurants, Inc.	551,409	496,314	501,137	11.1
Diageo PLC	404,169	407,978	427,501	-0.9
Wendys International, Inc.	219,810	189,731	173,015	15.9
Darden Restaurants	136,884	139,448	138,446	-1.8
Doctors Associates, Inc.	132,380	99,342	85,005	33.3
Domino's	114,025	114,029	122,629	0.0
CKE Restaurants	85,510	84,497	83,460	1.2
Advantica Restaurant Group	71,163	69,576	68,266	2.3
Total	2,341,588	2,171,864	2,179,917	7.8

[1] Includes magazines, Sunday magazines, newspapers, national newspapers, outdoor, network TV, spot TV, syndicated TV, cable TV, network radio, national spot radio.

Source: LNA/MediaWatch Multi-Media Service.

Sales of major foreign investors in U.S. restaurants amounted to $16.6 billion in 2000, down 3.5 percent from 1999 (includes sales by company-owned and franchised units according to *Nation's Restaurant News* magazine). The number of U.S. units operated by these investors increased 6.2 percent to 38,225 units in 2000 (see table 4-8 for subsidiaries).

The United States spent $5.7 billion on direct foreign investment in eating and drinking places. In 1998, the latest year for which data are available, there were 9 U.S. parent companies with 117 foreign affiliates (app. table 42).

Leading U.S. restaurants continue to move into other countries. Industry-level trade data were used by ERS to compile information at the firm and chain level for 1999 (the latest year available). The top 50 U.S. restaurant chains operated 46,863 units outside the U.S. in 2000, up from 41,891 units in 1999. The top 10 chains accounted for 40,178 (86 percent) of those units. McDonald's, the largest food service

organization in the world, had 14,895 units outside the U.S. in 2000, operating in 120 countries and territories. This represents 54 percent of McDonald's total units, compared with 53 percent in 1999 (table 4-9). McDonald's also leads in foreign sales, accounting for $20 billion in 2000. Major markets include Canada, Japan, Germany, England, Australia, and France. McDonald's Corporation will open the first Boston Market restaurant outside the U.S. in Australia in 2002. KFC, a division of Tricon Global, Incorporated, has the second largest number of international units, 5,974. Fifty-three percent of KFC's total units operated overseas with foreign sales totaling $4.8 billion in 2000.

Pizza Hut, also a Tricon Global subsidiary, operates 4,157 of its 12,084 units outside the United States. Pizza Hut's foreign sales for 2000 totaled $2.6 billion.

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Table 4.8—Foreign investors in U.S. restaurant operations

Foreign investor/ headquarters	U.S. chains	Type	2000	1999	1998	1997	1996
				Number			
U.S. units:[1]							
Diageo, PLC (London, England)	Burger King	Sandwich	8,064	8,139	7,946	7,414	6,925
Allied Domecq, PLC (London, England)	Dunkin Donuts	Snack	3,641	3,650	3,537	3,342	3,188
	Baskin-Robbins	Snack	2,435	2,438	2,651	2,655	2,562
Compass Group, PLC (London, England)	Canteen Services	Contract	20,000	18,000	17,000	17,000	16,050
	Eurest Dining Services	Contract	2,150	2,100	2,000	2,000	1,600
	Chartwell's	Contract	625	600	580	580	285
	Morrison Management Spec.	Contract	560	436	409		
Onex Corporation (Toronto, Canada)	LSG Lufthansa Service/ Sky Chef	Contract	103	89	75	56	56
Albert Abela Group (Paris, France)	The Wood Company	Contract	530	450	400	370	352
Autogrill SpA (Milan, Italy)	HMS Kost (proprietary)	Contract Airport	61	62	63	63	63
SAir Group (Zurich, Switzerland)	Dobbs International Services	Contract	56	50	46	42	40
Total			38,225	36,014	34,707	33,522	31,121
				$ billion			
U.S. sales:							
Diageo, PLC (London, England)	Burger King	Sandwich	8.7	8.6	8.2	7.9	7.3
Allied Domecq, PLC (London, England)	Dunkin Donuts	Snack	2.2	2.0	2.0	1.7	1.6
	Baskin-Robbins	Snack	0.5	0.6	0.6	0.6	0.6
Compass Group, PLC (London, England)	Canteen Services	Contract	1.1	1.0	0.9	0.9	0.8
	Eurest Dining Services	Contract	1.0	0.9	0.8	0.8	0.7
	Chartwell's	Contract	0.5	0.5	0.4	0.4	0.2
	Morrison Management Spec.	Contract	0.5	0.4	0.3		
Onex Corporation (Toronto, Canada)	LSG Lufthansa Service/ Sky Chef	Contract	0.6	1.3	0.5	1.6	1.5
Albert Abela Group (Paris, France)	The Wood Company	Contract	0.5	5.3	0.5	0.4	0.4
Autogrill SpA (Milan, Italy)	HMS Kost (proprietary)	Contract Airport	0.5	0.5	0.5	0.5	0.4
SAir Group (Zurich, Switzerland)	Dobbs International Services	Contract	0.5	0.9	0.8	0.8	0.7
Total			16.6	17.2	1.5	15.6	14.2

[1] Inchuisee-owned and franchisee-owned operations.

Source: Compiled by ERS from *Nation's Restaurant News*.

Table 4.9—Top U.S. food service chains in foreign markets, by number of units and sales

Rank	Chain	Total systemwide units, 2000	Units: Foreign units, 2000	Units: Foreign units, 1999	Units: Increase from 1999	International share of units, 2000
		---------- *Number* ----------			------ *Percent* ------	
1	McDonald's	27,699	14,895	13,464	10.6	53.8
2	KFC	11,338	5,974	5,595	6.8	52.7
3	Pizza Hut	12,084	4,157	3,961	4.9	34.4
4	Burger King	11,345	3,019	2,711	11.4	26.6
5	Subway	14,681	2,428	2,243	8.2	16.5
6	Baskin-Robbins	4,611	2,172	2,169	0.1	47.1
7	Domino's Pizza	6,977	2,159	1,930	11.9	30.9
8	Yogen Fruz	4,170	2,000	2,250	-11.1	48.0
9	Tim Hortons	1,980	1,860	1,709	8.8	93.9
10	Dunkin' Donuts	5,157	1,514	1,379	9.8	29.4
11	Starbucks	3,817	855	538	58.9	22.4
12	Dairy Queen	5,904	846	842	0.5	14.3
13	Wendy's	5,792	697	683	2.0	12.0
14	Shakey's	437	345	345	0.0	78.9
15	Church's	1,525	307	315	-2.5	20.1
16	Coco's	481	302	303	-0.3	62.8
17	Little Caesars	3,600	300	250	20.0	8.3
18	TCBY Treats	2,271	275	257	7.0	12.1
19	Popeyes	1,501	253	236	7.2	16.9
20	Taco Bell	6,995	249	232	7.3	3.6
21	A&W Restaurants	837	204	189	7.9	24.4
22	Arby's	3,319	166	159	4.4	5.0
23	T.G.I. Friday's	646	165	136	21.3	25.5
24	Haagen-Dazs	395	165	165	0.0	41.8
25	Hardees	2,660	134	115	16.5	5.0
	Total	140,222	45,441	42,176	7.7	32.4

Continued--

Table 4.9—Top U.S. food service chains in foreign markets, by number of units and sales--Continued

Rank	Chain	Total systemwide sales, 2000	Sales: Foreign sales, 2000	Sales: Foreign sales, 1999	Sales: Increase from 1999	International share of sales, 2000
		---------- *$ million* ----------			------ *Percent*------	
1	McDonald's	39,576	20,003	19,394	3.1	50.5
2	KFC	9,230	4,830	4,550	6.2	52.3
3	Burger King	11,230	2,688	2,532	6.2	23.9
4	Pizza Hut	7,610	2,610	2,500	4.4	34.3
5	Tim Horton's	1,287	1,207	1,019	18.4	93.8
6	Domino's	3,543	896	700	28.0	25.3
7	Wendy's	6,412	655	630	4.0	10.2
8	Subway	4,396	596	491	21.4	13.6
9	Starbucks	2,452	560	318	76.1	22.8
10	Dairy Queen	3,379	480	415	15.7	14.2
11	T.G.I. Friday's	1,865	386	290	33.1	20.7
12	Hard Rock Cafe	675	375	384	-2.3	55.6
13	Coco's	625	370	338	9.5	59.2
14	Baskin-Robbins	914	336	386	-13.0	36.8
15	Yogen Fruz	487	300	350	-14.3	61.6
16	Dunkin' Donuts	2,578	254	203	25.1	9.9
17	Shakey's	305	240	265	-9.4	78.7
18	Taco Bell	5,305	205	196	4.6	3.9
19	Planet Hollywood	320	200	220	-9.1	62.5
20	Church's	879	180	160	12.5	20.5
21	Popeyes	1,230	135	127	6.3	11.0
22	Sizzler	472	132	115	14.8	28.0
23	Chili's	1,816	121	106	14.2	6.7
24	Tony Roma's	427	111	98	13.3	26.0
25	Red Lobster	2,179	107	80	33.8	4.9
	Total	109,192	37,977	35,867	5.9	34.8

Source: Technomic, Inc.

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Appendix table 1—Food and nonfood sales or shipments in food marketing[1]

Year	Processing [2]	Wholesaling	Food service [3]	Foodstores
		Million dollars		
1972	115,051	106,457	NA	99,035
1977	192,912	182,905	NA	157,941
1982	280,529	288,658	NA	246,122
1983	289,314	NA	135,982	256,018
1984	304,584	NA	146,054	271,909
1985	308,606	NA	152,773	285,062
1986	318,203	NA	139,415	297,019
1987	329,725	380,900	153,461	309,461
1988	351,518	NA	167,993	325,493
1989	364,403	NA	177,829	347,045
1990	384,009	NA	190,149	368,333
1991	387,050	NA	191,424	374,523
1992	394,830	504,600	200,164	377,099
1993	413,988	NA	210,443	385,386
1994	429,631	NA	217,106	399,252
1995	446,405	NA	222,081	407,392
1996	461,297	NA	228,172	420,980
1997	421,737	588,970	236,159	429,805
1998	428,478	NA	266,410	435,383
1999	429,053	NA	285,371	458,269
2000	497,678 [4]	NA	293,489	483,698

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. Shipment or sales of the four sectors are noncumulative.

[2] Industry shipments.

[3] Excludes noncommercial sales.

[4] NAICS, food and beverage.

Sources: (1) *Annual Survey of Manufacturers*, selected issues, (2) *Census of Manufactures*. selected issues, (3) *Monthly Retail Trade Report,* annual issues, (4) *Census of Retail Trade*, selected issues, (5) *Census of WholesaleTrade*, selected issues.

Appendix table 2—Food processing product shipments

Industry group and industry	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
					Million dollars					
Meat products	90,776	89,391	94,164	99,393	98,116	100,954	102,103	110,423	107,129	110,054
Meatpacking plants	51,069	49,362	50,434	53,297	50,444	51,314	51,089	54,284	50,039	52,717
Sausages and other prepared meats	18,779	18,361	19,972	20,742	20,257	20,711	20,854	24,261	24,416	25,021
Poultry slaughtering and processing	20,927	21,703	23,757	25,371	27,415	28,929	30,160	31,878	32,674	32,316
Dairy products	50,962	48,852	54,144	55,028	53,761	55,797	58,123	58,671	62,479	62,327
Creamery butter	1,307	1,231	1,034	979	872	947	1,180	1,368	1,600	1,421
Cheese, natural and processed	16,155	16,379	18,352	19,021	17,402	18,411	19,840	20,232	22,553	22,515
Condensed and evaporated milk	6,135	6,343	7,541	7,672	7,446	7,500	7,489	9,218	9,122	9,399
Ice cream and frozen desserts	4,660	4,761	5,291	5,608	5,566	6,039	6,160	5,858	5,957	5,578
Fluid milk	22,703	21,137	21,927	21,748	22,474	22,899	23,455	21,995	23,247	23,414
Preserved fruit and vegetables	44,494	46,806	46,400	46,896	50,239	51,041	51,708	52,427	55,490	55,859
Canned specialties	6,332	6,474	6,663	6,979	7,445	7,664	8,051	8,051	8,293	8,071
Canned fruit and vegetables	14,697	15,579	15,066	14,658	14,481	14,362	14,895	15,801	16,878	17,410
Dehydrated fruit, vegetables, and soups	2,453	2,708	2,853	2,471	2,601	2,949	2,928	3,074	2,949	3,151
Pickles, sauces, and salad dressings	5,749	6,220	6,398	6,632	8,366	7,747	6,898	5,810	6,393	6,486
Frozen fruit and vegetables	7,473	7,395	7,535	7,883	8,482	9,056	9,532	9,549	9,863	9,382
Frozen specialties	7,797	8,427	7,886	8,272	8,864	9,263	9,404	10,142	11,114	11,359
Grain mill products	46,538	47,110	50,052	52,369	54,303	57,496	58,473	60,653	59,113	57,112
Flour and other grain mill products	5,624	5,207	6,294	6,837	7,089	7,258	7,384	8,002	7,360	6,314
Breakfast cereals	8,704	8,954	9,799	10,615	11,507	11,479	9,105	9,099	9,644	10,812
Rice milling	1,771	1,739	1,651	1,944	2,004	1,890	2,468	2,365	2,257	2,240
Blended and prepared flour	3,155	3,302	3,866	3,948	4,079	4,752	4,914	5,000	5,029	5,396
Wet corn milling	6,696	7,114	7,045	6,886	7,623	8,537	8,956	8,455	7,972	7,578
Dog, cat, and other pet food	7,015	7,097	7,024	7,245	6,938	7,253	7,572	8,688	8,967	8,565
Other prepared feeds	13,570	13,696	14,374	14,892	15,064	16,327	18,075	19,044	17,884	16,207
Bakery products	26,121	26,538	28,501	29,916	31,427	32,276	32,741	33,897	34,747	37,116
Bread, cake, and related products	17,019	17,278	18,143	18,669	19,285	19,762	19,859	21,495	21,863	24,080
Cookies and crackers	7,803	8,021	8,688	9,460	10,094	10,069	10,347	9,890	10,289	10,308
Frozen bakery products, except bread	1,298	1,238	1,671	1,787	2,049	2,445	2,536	2,512	2,595	2,728
Sugar and confectionery products	21,044	21,958	22,713	23,573	23,896	24,569	26,265	28,047	29,826	29,637
Raw cane sugar	1,295	1,374	1,460	1,519	1,563	1,403	1,467	1,457	1,501	1,495
Cane sugar, refined	3,075	2,925	2,823	2,661	2,593	2,582	2,666	3,209	3,321	3,083
Beet sugar	2,133	2,330	2,282	2,468	2,522	2,765	2,839	2,733	2,673	2,691
Confectionery products	7,991	8,745	10,207	10,679	10,887	11,237	12,453	12,960	13,371	13,885
Chocolate and cocoa products	3,061	3,013	3,106	3,203	3,233	3,334	3,451	3,755	4,576	3,952
Salted and roasted nuts and seeds	2,373	NA	2,834	3,044	3,098	3,248	3,390	3,933	4,384	4,531
Fats and oils	19,499	18,735	18,743	20,062	20,775	21,528	23,389	25,937	24,466	21,525
Soybean oil mills	10,966	9,965	10,651	11,705	12,496	13,276	14,197	14,036	12,696	11,196
Other oilseed processing	1,340	1,171	1,404	1,465	1,434	1,561	1,656	1,721	1,805	1,427
Animal and marine fats and oils	1,766	1,725	1,858	1,874	1,858	2,020	2,349	2,557	2,285	1,916
Edible fats and oils	5,415	5,873	4,830	5,018	4,988	4,672	5,187	7,623	7,680	6,986
Beverages	52,198	54,610	57,939	59,577	61,347	64,398	68,387	67,051	68,548	71,200
Malt beverages	15,186	15,924	17,340	17,671	16,795	17,151	18,220	18,203	18,032	17,039
Malt	700	610	576	576	590	718	854	775	619	540
Wines, brandy, and brandy spirits	3,657	3,585	4,302	4,514	4,301	4,798	5,548	6,195	6,829	6,877
Distilled spirits, except brandy products	3,473	3,656	3,394	3,569	3,888	3,703	3,673	3,911	3,899	3,750
Bottled and canned soft drinks	23,847	25,191	25,416	25,998	28,334	30,203	32,024	31,376	32,268	35,523
Flavoring extracts and syrups	5,332	5,642	6,911	7,249	7,440	7,825	8,068	6,591	6,901	7,471
Miscellaneous foods and food products	32,374	32,597	34,500	36,444	37,100	38,808	40,136	47,874	50,225	50,904
Canned and cured fish and seafood	998	1,029	968	1,042	897	813	864	862	830	1,032
Fresh or frozen prepared fish	6,088	6,079	6,996	6,701	6,848	6,808	6,742	6,057	6,813	6,935
Coffee and tea	6,622	5,919	5,292	5,536	6,127	6,439	6,552	7,975	7,717	7,765
Potato chips and other snacks	6,062	6,646	7,324	7,748	8,167	8,749	9,133	9,657	10,795	10,852
Manufactured ice	326	324	358	397	398	421	403	425	463	466
Macaroni and spaghetti	1,229	1,276	1,389	1,518	1,347	1,558	1,471	1,766	1,457	1,251
Other food preparations	11,047	11,322	12,170	13,502	13,315	14,022	14,971	21,132	22,150	22,603
Total food and kindred products	384,009	397,000	407,156	423,258	430,964	446,867	461,325	484,980	492,023	495,734

NA = Not available.

Source: *Annual Survey of Manufactures*. Data are compiled according to the SIC code.

Appendix table 3—Sales of top 50 North American food processing companies, 1997 and 1998

Sales rank	Company	1998	1997
		Million dollars	
1	Philip Morris	31,416	31,891
2	PepsiCo, Inc.	22,348	20,917
3	Coca-Cola Company	18,813	18,868
4	ConAgra, Inc.	17,928	18,072
5	IBP, Inc.	12,849	13,259
6	Sara Lee Corp.	10,832	10,542
7	Anheuser-Busch	9,239	9,043
8	H.J. Heinz Company	9,209	9,357
9	Nabisco, Inc.	8,400	8,734
10	Bestfoods	8,374	8,400
11	Tyson Foods, Inc.	7,414	6,356
12	Kellogg Company	6,762	6,830
13	Campbell Soup Company	6,696	6,614
14	General Mills	6,033	5,609
15	Quaker Oats Company	4,843	5,016
16	Seagram Company	4,670	5,051
17	Hershey Foods	4,436	4,302
18	Dole Food Company	4,424	4,336
19	Procter and Gamble	4,376	4,107
20	Flowers Industries Inc.	3,776	1,441
21	Interstate Bakeries Corp.	3,266	3,212
22	Hormel Foods	3,261	3,257
23	Suiza Foods Corp.	2,816	1,743
24	Dean Foods Co.	2,736	2,461
25	Chiquita Brands International	2,720	2,434
26	Ralston Purina Co.	2,582	2,309
27	International Multifoods Corp.	2,300	2,250
28	Maple Leaf Foods Inc.	2,144	2,403
29	Wm. Wrigley Jr. Co.	2,005	1,937
30	Smithfield Foods Inc.	1,946	1,948
31	Adolph Coors Co.	1,900	1,821
32	Warner-Lambert Co.	1,888	1,869
33	Imperial Holly Corp.	1,853	1,958
34	George Weston Ltd.	1,756	1,567
35	Earthgrains Co.	1,719	1,663
36	International Homefoods Inc.	1,700	1,222
37	McCormick and Company, Inc.	1,692	1,595
38	Canandaigua Brands Inc.	1,497	1,212
39	Brown-Forman Corp.	1,385	1,347
40	Pilgrim's Pride Corp.	1,332	1,278
41	Fortune Brands, Inc.	1,266	1,278
42	Dreyer's Grand Ice Cream Inc.	1,022	970
43	Michael Foods Inc.	1,020	956
44	Seaboard Corp.	1,015	1,008
45	Colgate-Palmolive Co.	996	965
46	Cott Corp.	968	866
47	Aurora Foods Inc.	947	874
48	WLR Foods Inc.	946	995
49	Molson Companies	936	855
50	Triarc Companies Inc.	736	556

Source: *Prepared Foods Magazine*.

Appendix table 4—Total sales of grocery wholesalers, by type of wholesaler

Year	Merchants	Manufacturers' sales branches and offices	Agents and brokers	Total
		Billion dollars		
1963	34.7	12.4	13.8	60.9
1967	43.4	15.1	15.9	74.4
1972	64.0	21.7	20.6	106.3
1977	111.6	41.6	29.7	182.9
1982	174.7	63.9	50.0	288.6
1987	223.0	89.2	68.7	380.9
1992	279.2	127.3	98.1	504.6
1997	330.2	145.6	113.2	589.0
		Percent of total		
1963	57	20	23	
1967	58	20	21	
1972	60	20	19	
1977	61	23	16	
1982	61	22	17	
1987	59	23	18	
1992	55	25	19	
1997	56	25	19	

Source: *Census of Wholesale Trade*.

Appendix table 5—Grocery sales by merchant wholesalers, 1992-2001

Year	Merchants	Real[1]
	Billion dollars	
1992	274.8	222.9
1993	283.7	225.7
1994	289.9	228.6
1995	309.0	239.5
1996	317.8	237.9
1997	330.2	245.5
1998	344.4	256.4
1999	361.5	267.6
2000	387.4	282.6
2001	402.9	285.1

[1] Deflated by the Producer Price Index for Processed Foods and Feed.

Source: *Annual Wholesale Trade Survey*, U.S. Census Bureau.

Appendix table 6—Sales of the top 10 convenience store distributors, 1999 and 2000

Firms	2000	1999
	Billion dollars	
McLane Co. Inc.	14.9	11.8
Eby-Brown Co.	3.0	2.0
Core-Mark International Inc.	2.8	2.5
H.T. Hackney Co.	1.8	1.8
GSC Enterprises Inc.	1.1	1.1
Spartan Stores (Convenience Store Division)	0.9	0.8
Miller and Hartman Co. Inc.	0.9	NA
S. Abraham & Sons Inc.	0.8	0.7
Harold Levinson Associates	0.5	0.5
Fleming Convenience Marketing & Distribution	0.5	0.5
Total	27.2	21.7

NA = Not available.

Source: Compiled by ERS/ USDA from *Food Logistics*, October 2000.

Appendix table 7—Share of supermarket sales, 2000[1]

Category	Volume	Share of store sales	Annual change
	Million dollars	*Percent*	*Percent*
Grocery foods	119,103	31.0	3.7
Baby foods	3,427	0.9	3.4
Baking flour	438	0.1	-3.1
Baking mixes	1,419	0.4	1.3
Baking supplies	1,902	0.5	2.6
Beer, wine & liquor	12,422	3.2	8.4
Breakfast food	1,747	0.5	5.1
Candy	4,396	1.1	6.3
Cereal	8,056	2.1	-2.0
Coffee	3,222	0.8	0.9
Condiments/sauces	5,501	1.4	1.7
Cookies	4,146	1.1	3.8
Crackers	2,951	0.8	3.2
Desserts, gelatin, syrup	1,384	0.4	7.2
Fruit - canned	1,611	0.4	-3.2
Fruit - dried & snacks	934	0.2	5.6
Gum	645	0.2	7.2
Jams, jellies & spreads	1,665	0.4	-0.9
Juices, drinks	6,124	1.6	4.0
Nuts	1,324	0.3	10.3
Packaged milk/modifiers	1,604	0.4	2.9
Pasta	1,266	0.3	-2.4
Pickles, olives & relish	1,541	0.4	0.4
Prepared food - dry mixes	3,640	1.0	4.9
Prepared food (RTS)	3,151	0.8	2.1
Salad dressings	2,866	0.7	3.9
Salad oils/cooking	1,675	0.4	2.4
Seafood - canned	1,555	0.4	-6.6
Snacks	8,810	2.3	6.0
Soft drinks - carbonated	12,958	3.4	5.0
Soft drinks - noncarbonated	1,137	0.3	0.8
Soup	3,816	1.0	2.1
Spices, seasonings	1,813	0.5	4.2
Sugar, sweeteners	1,455	0.4	-1.6
Syrup, molasses	583	0.2	0.3
Tea	1,608	0.4	2.6
Vegetables - canned	3,408	0.9	0.0
Vegetables/grains-dried	784	0.2	-3.8
Water, bottled	2,083	0.5	11.9
Grocery (nonfood)	33,757	8.8	0.9
Charcoal, logs	563	0.2	3.5
Detergents	3,825	1.0	0.5
Disposable diapers	1,888	0.5	-5.6
Fresheners/deodorizers	522	0.1	12.4
Household/cleaners	1,494	0.4	2.2
Household/supplies	1,019	0.3	2.2
Insecticides/pesticides	273	0.1	-1.2

See footnotes at end of table.

Appendix table 7—Share of supermarket sales, 2000[1]--Continued

Category	Volume	Share of store sales	Annual change
	Million dollars	*Percent*	*Percent*
Grocery (nonfood)--continued	33,757	8.8	0.9
Laundry supplies	1,605	0.4	1.4
Paper products	7,180	1.9	4.2
Personal soap & bath	1,085	0.3	-2.7
Pet food	5,510	1.4	5.7
Tobacco & accessories	6,785	1.8	-2.4
Wrapping materials & bags	2,009	0.5	0.9
Bakery, instore	8,250	2.1	8.5
Bread & baked goods	12,139	3.2	6.4
Dairy	34,941	9.1	3.6
Butter & margarine	2,491	0.7	-0.9
Cheese	8,193	2.1	4.5
Cottage cheese, sour cream	2,038	0.5	4.8
Dough products	1,503	0.4	0.8
Eggs	2,208	0.6	5.8
Juices, drinks - Ref.	4,099	1.1	5.4
Milk	11,181	2.9	1.0
Pudding, desserts	340	0.1	1.2
Snacks, spreads, dips	695	0.2	11.0
Yogurt	2,190	0.6	12.8
Deli, instore (service)	13,000	3.4	6.1
Deli, ref. (self-service)	2,956	0.8	12.1
Frozen foods	26,734	7.0	5.7
Baked goods	1,459	0.4	8.3
Breakfast foods	1,106	0.3	-0.6
Desserts/toppings	798	0.2	4.0
Ice cream	1,888	0.5	5.6
Ice cream - novelties	4,395	1.1	2.4
Juices, drinks	982	0.3	-9.3
Meal starters	122	0.0	-30.5
Pizza/snacks	3,055	0.8	8.4
Prepared foods	7,445	1.9	10.2
Meat/poultry/seafood	2,418	0.6	10.3
Vegetables	3,066	0.8	3.5
Meat & seafood-fresh	55,096	14.3	4.6
Fresh	45,513	11.8	-5.5
Packaged	9,583	2.5	10.1
Produce	37,325	9.7	5.0
Floral	700	0.2	4.0
General merchandise	13,261	3.5	6.5
GM (scanned)	5,931	1.5	3.3
GM (nonscanned, est.)	6,455	1.7	9.3
Video rental	875	0.2	-10.0
Health & beauty care	14,331	3.7	0.3
Pharmacy	9,600	2.5	10.0
Unclassified	3,607	0.9	NA
Total supermarket	384,800	100.0	5.3

NA = Not available.

[1] Supermarkets and supercenters with annual sales of $2 million or more.

Source: *Supermarket Business*, Sept. 15, 2001.

Appendix table 8—Food retailing mergers and acquisitions: Number and sales of supermarkets acquired, by region, 1997-2000 [1, 2]

Year	Pacific	Midwestern	Northeastern	Southeastern	Inter-regional
			Number of supermarkets		
1997	836	56	0	244	0
1998	49	43	176	0	112
1999	448	610	224	0	990
2000	0	47	185	68	100
			Sales (billion dollars)		
1997	14.0	4.0	0	2.4	0
1998	0.6	0.8	4.2	0	2.3
1999	8.3	3.2	4.6	0	18.4
2000	0	0.5	1.9	0.6	3.5

[1] Excludes acquisitions of fewer than 25 supermarkets.

[2] Acquisition year determined by date of Federal Trade Commission consent decree.

Sources: Company annual reports and SEC filings; press releases; Federal Trade Commission, Hoovers Online, *Food Institute Weekly Digest*.

Appendix table 9—Specialized foodstore number and sales, census years[1]

Store type (SIC basis)	Number of stores		Sales	
	1997	1992	1997	1992
	Number		*Million dollars*	
Specialized foodstores	44,511	47,251	18,793	16,641
Meat and fish/seafood markets	7,081	8,941	4,881	5,041
Fruit and vegetable markets	3,179	2,917	2,107	1,809
Candy, nut, and confectionery	4,473	5,029	1,516	1,224
Dairy products stores	1,760	2,340	425	515
Retail bakeries	18,502	20,418	5,580	5,387
Miscellaneous specialized stores	9,516	7,606	4,284	2,665

[1] Establishments with paid employees only.

Source: *Census of Retail Trade*, 1997.

Appendix table 10—Number of food marketing companies and establishments

Year	Processing	Wholesaling	Food services[1]	Retailing	Total
		Number of establishments			
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
1992	20,805	42,874	553,879	277,629	895,174
1997	28,956[2]	41,760	486,906[2]	148,528[2]	706,150
		Number of companies			
1963	32,617	35,666	175,117	162,273	405,673
1967	26,549	33,848	170,851	131,926	363,174
1972	22,171	32,053	179,578	122,592	356,394
1977	20,616	31,670	186,625	120,107	359,018
1982	16,800	31,290	198,088	109,567	355,745
1987	15,692	34,155	191,798	108,439	350,084
1992	16,075	35,177	260,863	105,370	417,485
1997	21,958[2]	35,088	365,588[2]	110,886[2]	533,520

[1] Based on U.S. Census Bureau's definition of food services and drinking places, which is less comprehensive than that used in the food service chapter.
[2] NAICS.
Sources: *Census of Manufactures*, selected issues; *Census of Retail Trade*, selected issues; *Census of Wholesale Trade*, selected issues; and *Census of Accomodation and Foodservices*, selected issues.

Appendix table 11—Number of employees in food marketing[1]

Year	Processing	Wholesaling	Eating and drinking places [2]	Food-stores [3]	Grocery stores	Total
			Thousands			
1963	1,752.0	472.9	1,747.9	1,383.8	NA	5,356.6
1967	1,786.3	513.0	2,191.4	1,571.6	NA	6,062.3
1972	1,745.2	536.3	2,860.2	1,805.1	1,577.8	6,946.8
1977	1,711.0	611.7	3,948.6	2,106.3	1,837.2	8,377.3
1982	1,635.9	666.8	4,829.4	2,477.3	2,169.6	9,609.4
1983	1,614.4	682.1	5,038.0	2,555.5	2,234.2	9,890.0
1984	1,611.4	706.6	5,380.9	2,635.9	2,297.3	10,334.8
1985	1,600.9	733.8	5,698.6	2,773.5	2,428.9	10,806.8
1986	1,606.9	761.1	5,901.5	2,896.3	2,544.5	11,165.8
1987	1,616.8	790.5	6,085.9	2,958.3	2,607.7	11,451.5
1988	1,626.1	820.9	6,250.2	3,073.9	2,723.5	11,771.1
1989	1,644.4	836.7	6,401.9	3,163.5	2,874.5	12,046.5
1990	1,660.5	849.3	6,509.1	3,215.0	2,880.1	12,233.9
1991	1,666.9	846.4	6,467.3	3,203.7	2,874.1	12,184.3
1992	1,662.5	846.9	6,609.3	3,179.5	2,847.1	12,298.2
1993	1,679.6	847.0	6,821.4	3,224.1	2,883.7	12,572.1
1994	1,678.0	871.0	7,077.8	3,291.2	2,934.0	12,918.0
1995	1,691.9	892.1	7,354.2	3,366.0	2,987.5	13,304.2
1996	1,691.9	895.6	7,516.6	3,435.5	3,034.9	13,539.6
1997	1,685.3	906.2	7,645.7	3,478.1	3,065.3	13,715.3
1998	1,683.2	919.9	7,767.8	3,483.5	3,071.9	13,854.4
1999	1,682.3	937.2	7,960.6	3,496.8	3,086.4	14,076.9
2000	1,683.8	949.0	8,113.7	3,521.0	3,106.6	14,267.5

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 concessions.

[3] Grocery stores are also included in foodstore column.

Source: *Employment and Earnings*, selected issues, U.S. Department of Labor, Bureau of Labor Statistics.

Appendix table 12—-Number of food processing establishments, value added, and cost of materials, 1992 and 1997

Industry group and industry	1992				1997			
	Number of establishments		Value added	Cost of materials	Number of establishments		Value added	Cost of materials
	Total	With 20/ more employees			Total	With 20/ more employees		
	------- *Number* ------		----- *Million dollars* -----		------- *Number* ------		----- *Million dollars* -----	
Meat products	3,242	1,486	19,076	75,108	3,164	1,395	29,724	81,521
Meatpacking plants	1,387	431	6,928	43,586	1,393	386	8,525	45,996
Sausages and other prepared meats	1,264	623	5,491	14,455	1,297	622	9,137	15,847
Poultry slaughtering and processing	591	432	6,657	17,067	474	387	12,062	19,678
Dairy products	2,024	1,148	16,063	38,122	1,834	1,037	17,514	41,244
Creamery butter	32	17	148	884	34	21	242	1,134
Cheese, natural and processed	576	314	4,472	13,881	524	307	4,412	15,918
Condensed and evaporated milk	214	134	3,380	4,172	213	122	4,016	4,991
Ice cream and frozen desserts	456	177	2,097	3,211	451	152	2,533	3,313
Fluid milk	746	506	5,966	15,974	612	435	6,311	15,888
Preserved fruit and vegetables	2,052	1,113	22,827	23,481	2,117	1,099	26,457	26,295
Canned specialties	220	76	3,618	3,057	140	64	5,193	2,876
Canned fruit and vegetables	683	397	6,959	8,033	824	418	7,018	8,978
Dehydrated fruit, vegetables, and soups	155	84	1,515	1,318	154	90	1,340	1,694
Pickles, sauces, and salad dressings	376	152	3,749	2,651	329	116	2,970	2,895
Frozen fruit and vegetables	255	201	2,910	4,613	258	198	4,530	5,055
Frozen specialties	363	203	4,076	3,809	412	213	5,406	4,797
Grain mill products	2,618	1,077	21,086	28,916	2,531	1,039	23,560	37,448
Flour and other grain mill products	365	172	1,625	4,675	383	172	1,899	6,139
Breakfast cereals	65	42	7,338	2,471	71	47	6,672	2,596
Rice milling	53	33	437	1,204	68	38	669	1,812
Blended and prepared flour	209	122	1,822	2,040	249	119	2,392	2,423
Wet corn milling	51	34	3,258	3,742	58	39	3,071	5,361
Dog, cat, and other pet food	161	105	3,730	3,296	188	98	4,359	4,427
Other prepared feeds	1,714	569	2,876	11,488	1,514	526	4,498	14,690
Bakery products	3,152	1,259	17,904	10,594	3,384	1,446	21,787	12,146
Bread, cake, and related products	2,539	946	11,462	6,680	2,766	1,073	14,009	7,445
Cookies and crackers	441	212	5,523	3,151	380	184	6,395	3,540
Frozen bakery products, except bread	172	101	919	763	238	189	1,383	1,161
Sugar and confectionery products	1,129	492	10,951	12,957	1,884	528	13,482	14,848
Raw cane sugar	45	41	562	888	39	31	638	882
Cane sugar, refined	17	15	737	2,138	18	12	540	2,678
Beet sugar	40	37	800	1,559	36	36	969	1,768
Confectionery products	759	298	6,349	3,903	1,486	337	7,899	5,127
Chocolate and cocoa products	156	32	1,475	1,632	164	33	1,892	2,030
Salted and roasted nuts and seeds	112	69	1,028	2,837	141	79	1,544	2,363
Fats and oils	540	322	3,759	15,947	519	327	4,788	21,151
Soybean oil mills	99	70	1,274	9,373	93	69	1,695	12,835
Other oilseed processing	71	49	345	1,043	54	37	247	1,419
Animal and marine fats and oils	268	137	755	2,085	240	143	1,257	1,325
Edible fats and oils	102	66	1,385	3,446	132	78	1,589	5,572

Continued--

Appendix table 12—Number of food processing establishments, value added, and cost of materials, 1992 and 1997--Continued

Industry group and industry	1992				1997			
	Number of establishments		Value added	Cost of materials	Number of establishments		Value added	Cost of materials
	Total	With 20/ more employees			Total	With 20/ more employees		
	------- Number ------		----- Million dollars -----		------- Number ------		----- Million dollars -----	
Beverages	2,064	972	29,256	28,913	2,243	965	34,514	33,822
Malt beverages	194	75	10,189	7,180	529	156	11,234	6,967
Malt	26	18	176	387	35	19	210	562
Wines, brandy, and brandy spirits	553	136	2,089	2,394	687	178	3,161	3,664
Distilled spirits, except brandy products	65	48	1,946	1,447	60	42	2,211	1,713
Bottled and canned soft drinks	926	572	9,586	15,853	757	502	12,753	19,268
Flavoring extracts and syrups	300	123	5,270	1,652	175	68	4,945	1,648
Miscellaneous foods and food products	3,984	1,469	16,322	18,199	4,159	1,549	21,246	21,667
Canned and cured fish and seafood	158	61	362	607	165	58	331	533
Fresh or frozen prepared fish	684	366	2,325	4,671	678	329	2,216	3,904
Coffee and tea	172	90	2,753	2,530	247	109	3,642	4,396
Potato chips and other snacks	409	215	3,913	3,409	416	205	5,947	3,808
Manufactured ice	562	59	255	104	582	75	298	129
Macaroni and spaghetti	199	41	831	565	266	42	1,045	716
Other food preparations	1,800	637	5,883	6,313	1,805	731	7,767	8,181
Total food and kindred products	20,805	9,338	157,244	252,237	21,835	9,385	193,072	290,142

Source: *Census of Manufactures*. The census is conducted every 5 years.
For comparison with 1992, data for 1997 are compiled according to the SIC code.

Appendix table 13—Share of market controlled by top 20 firms, 1992 and 1997

	1992	1997
Manufacturing firms	43.7[1]	51.1[1]
Wholesaling firms	25.2	25.7
Retailing firms	37.0	43.9
Foodservice firms	17.0	14.3[2]

[1] Rodgers, *Structural Change in U.S. Food Manufacturing, 1958 to 1997*.
[2] Based on NAICS, not comparable with earlier SIC data.

Appendix table 14—Share of shipment value for the four and eight largest food processing firms, 1992

Industry	Companies	Share of shipment value: 4 largest firms	Share of shipment value: 8 largest firms
		-----Percent-----	
Meatpacking	1,296	50	66
Sausages	1,128	25	33
Poultry and egg processing	373	34	45
Butter	31	49	78
Cheese	418	42	60
Condensed and evaporated milk	153	43	55
Ice cream	411	24	40
Fluid milk	525	22	30
Canned specialties	200	69	84
Canned fruit and vegetables	502	27	42
Dehydrated fruit and vegetables	124	39	59
Pickles, sauces, and salad dressings	332	41	56
Frozen fruit and vegetables	182	28	42
Frozen specialties	308	40	57
Flour and grain milling	230	56	68
Breakfast cereals	42	85	98
Rice milling	44	50	73
Blended and prepared flour	156	39	57
Wet corn milling	28	73	93
Pet food	102	58	77
Prepared feeds	1,161	23	33
Breads and cakes	2,180	34	49
Cookies and crackers	374	56	70
Raw cane sugar	37	52	69
Cane sugar refining	12	85	99
Beet sugar	13	71	93
Confectionery	705	45	59
Chocolate and cocoa	146	75	88
Cottonseed oil mills	22	62	81
Soybean oil	42	71	91
Vegetable oil	18	89	97
Animal and marine fats and oils	159	37	52
Shortening and cooking oils	72	35	56
Malt beverages	160	90	98
Malt	16	65	97
Wines and brandy	514	54	66
Distilled spirits	43	62	82
Bottled and canned soft drinks	637	37	48
Flavoring extracts and syrups	264	69	75
Canned or cured seafood	144	29	50
Fresh or frozen seafood	600	19	28
Roasted coffee	134	66	75
Manufactured ice	513	24	32
Macaroni and spaghetti	182	78	85
Other food preparations	1,644	22	34

Source: *Census of Manufactures*, selected issues.

Appendix table 15—Share of shipment value for the four and eight largest food processing firms, 1997[1]

Industry	Companies	Percent of shipment value: 4 largest firms	Percent of shipment value: 8 largest firms
	Number	*-----Percent-----*	
Animal food	1,077	23.1	34.7
Dog and cat food	129	58.4	80.2
Other animal food	962	23.7	36.3
Grain and oilseed milling	534	45.3	59.1
Flour milling	254	48.4	62.5
Rice milling	56	51.8	75.3
Malt	19	69.0	94.5
Wet corn milling	30	71.7	90.3
Soybean processing	43	79.6	94.5
Other oilseed processing	32	66.6	81.9
Fats and oils refining & blending	91	36.7	63.0
Breakfast cereal	48	82.9	93.5
Sugar & confectionery product	1,556	41.9	56.4
Sugarcane mills	34	56.6	71.4
Cane sugar refining	12	98.7	99.9
Beet sugar	8	85.0	100.0
Chocolate-confectionery from cacao beans	152	79.5	92.5
Chocolate-confectionery from purchased chocolate	796	65.2	75.3
Nonchocolate confectionery	578	40.7	60.1
Fruits & vegetable preserving	1,394	26.6	35.6
Frozen fruit, juice & vegetable	177	34.3	47.4
Frozen specialty food	363	40.2	56.9
Fruit & vegetable canning	661	24.9	38.0
Specialty canning	122	67.2	83.5
Dried & dehydrated food	125	30.3	51.1
Dairy product	1,329	16.5	26.0
Fluid milk	402	21.3	31.0
Creamery butter	32	52.4	73.2
Cheese	399	34.6	50.9
Dry, condensed, & evaporated dairy prod.	169	47.1	58.6
Ice cream & frozen dessert	409	32.3	48.7
Meat product mfg	2,794	35.0	47.5
Animal (except poultry) slaughtering	1,307	57.0	70.8
Meat processed from carcasses	1,163	20.4	30.3
Rendering & meat byproduct processing	137	37.4	54.1
Poultry processing	257	40.6	54.0
Seafood product preparation & packaging	731	12.4	20.9
Seafood canning	152	25.9	42.5
Fresh & frozen seafood processing	586	13.6	22.9
Bakeries & tortilla	10,437	28.6	40.1
Retail bakeries	6,906	2.5	3.9
Commercial bakeries	2,401	39.2	51.3
Frozen cakes, pies, & other pastries	223	38.2	49.8
Cookies & crackers	322	59.9	71.9

See footnotes at end of table.

Continued--

Appendix table 15—Share of shipment value for the four and eight largest food processing firms, 1997[1]--Continued

Industry	Companies	Percent of shipment value: 4 largest firms	Percent of shipment value: 8 largest firms
	Number	*-----Percent-----*	
Bakeries & tortilla--continued			
Flour mixes & dough mfg from purchased flour	206	43.7	58.2
Dry pasta	249	57.1	74.3
Tortilla	217	57.2	64.2
Other food	2,493	34.7	42.7
Roasted nuts & peanut butter	128	37.5	57.6
Other snack food	340	70.9	76.5
Coffee & tea	215	52.5	65.6
Flavoring syrup & concentrate	149	80.7	87.9
Mayonnaise, dressing, & other prepared sauce	293	40.3	56.5
Spice & extract	241	43.7	53.5
Perishable prepared food	415	24.3	35.6
All other miscellaneous food	785	23.5	34.6
Beverage	2,169	40.9	52.1
Soft drink	388	47.2	55.6
Bottled water	109	51.7	64.4
Ice mfg	514	24.4	31.3
Breweries	494	89.7	93.4
Wineries	637	43.2	59.2
Distilleries	44	59.8	77.0

[1] NAICS.

Source: *1997 Economic Census - Concentration Ratios in Manufacturing*.

Appendix table 16—Percent of sales accounted for by top grocery wholesalers

	Top 4	Top 8	Top 20	Top 50
		Percent		
All grocery wholesalers				
1992	11.2	16.9	25.2	34.5
1997	8.9	15.2	25.7	39.0
Meat				
1992	33.6	38.7	45.1	54.2
1997	35.8	41.9	50.7	60.0
Poultry				
1992	9.6	NA	25.2	41.9
1997	16.7	22.2	34.1	50.8
Dairy				
1992	25.0	32.4	44.6	61.9
1997	15.8	25.8	43.2	59.9
Fresh fruits and vegetables				
1992	7.2	11.3	15.7	23.0
1997	8.3	11.9	16.9	24.3
General line				
1992	25.6	32.2	44.8	61.3
1997	28.0	40.5	55.4	70.8
Merchant				
1992	13.8	17.9	25.2	34.5
1997	13.3	18.0	26.3	35.7

NA = Not available.

Source: U.S. Dept. of Commerce, Bureau of the Census, *Census of Wholesale Trade*: *Establishment and Firm Sizes*, 1992 and 1997.

Appendix table 17—Concentration in merchant food wholesaling

	Top 4	Top 8	Top 20	Top 50
		Percent		
Meat				
1987	6.6	10.4	18.1	30.5
1992	6.9	10.9	19.6	32.0
1997	12.7	18.5	28.7	41.6
Poultry				
1987	7.4	12.0	22.6	39.0
1992	6.0	10.8	21.9	41.1
1997	20.2	25.8	38.4	55.2
Dairy				
1987	15.7	25.1	39.0	52.6
1992	13.2	20.7	35.4	51.1
1997	15.7	24.8	38.8	54.4
Fresh fruits and vegetables				
1987	8.9	11.0	15.4	NA
1992	8.0	12.0	17.0	24.6
1997	9.5	13.5	18.7	26.2
General line				
1987	26.0	36.9	53.8	71.4
1992	35.4	44.0	59.3	76.4
1997	40.9	49.9	65.0	79.8

NA = Not available.

Source: U.S. Dept. of Commerce, Bureau of the Census, *Census of Wholesale Trade*: *Establishment and Firm Size*, 1992 and 1997.

Appendix table 18—Sales share of leading U.S. grocery retailers

Year	Share of grocery store sales [1, 2]		
	4 largest	8 largest	20 largest
		Percent	
1963	20.0	26.6	34.0
1967	19.0	25.7	34.4
1972	17.5	24.4	34.8
1977	17.4	24.4	34.5
1982	16.1	23.6	34.9
1985	18.4	26.6	36.7
1986	18.2	26.8	37.6
1987	17.1	26.0	36.5
1988	15.7	24.4	35.5
1989	17.0	26.0	39.3
1990	16.9	25.9	39.3
1991	16.3	25.1	39.1
1992	15.9	24.9	37.0
1993	15.8	25.0	37.6
1994	15.7	24.6	38.7
1995	16.2	25.8	38.4
1996	16.6	27.2	40.1
1997	18.2	29.9	43.9
1998	26.8	37.3	48.2
1999	26.5	38.3	51.9
2000	27.4	40.5	52.0

[1] Sales exclude all nongrocery store firm sales, and all sales outside the U.S.

[2] Includes comparable grocery product sales by Wal-Mart Supercenters.

Sources: *Census of Retail Trade*, company annual reports.

Appendix table 19—Concentration among separate eating places

Year	Top 4 firms	Top 8 firms	Top 20 firms	Top 50 firms
		Percent of sales		
1972 [1]	3.6	5.5	8.9	13.3
1977	4.5	7.3	12.4	17.8
1982	5.4	8.9	15.1	20.2
1987	8.1	12.0	17.0	22.3
1992	8.4	12.0	17.0	22.6
1997 [2]	6.4	12.0	14.3	19.8

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

[2] Based on NAICS, not comparable with earlier SIC data.

Source: U.S. Census Bureau.

Appendix table 20—Multifactor productivity indexes in U.S. food manufacturing, 1949-99

Year	Gross output	Capital services	Labor hours	Energy	Materials	Purchased services	Multifactor productivity
				Index (1996 = 100)			
1949	34.9	42.4	110.4	35.5	33.9	26.6	81.5
1950	35.6	43.4	110.8	34.7	33.6	29.0	83.2
1951	36.4	44.1	113.0	35.5	34.0	33.1	83.6
1952	37.8	43.3	112.7	35.6	35.1	33.9	84.8
1953	38.7	43.2	112.5	34.2	35.5	33.1	86.4
1954	38.5	42.8	110.8	40.9	35.2	34.1	86.5
1955	40.7	43.2	111.4	43.6	38.2	35.5	86.2
1956	42.8	43.9	112.0	46.4	39.7	38.3	87.6
1957	43.1	43.3	108.8	44.6	39.0	40.5	89.8
1958	43.8	44.9	106.7	50.8	42.0	43.7	86.5
1959	45.2	45.1	108.0	50.7	42.5	44.6	88.3
1960	46.4	45.2	107.7	50.8	43.1	45.7	89.7
1961	47.3	45.6	106.9	50.8	44.9	46.1	88.8
1962	48.6	46.1	106.2	51.3	45.3	46.9	90.8
1963	49.7	46.8	105.4	52.3	46.0	48.5	91.8
1964	52.2	47.9	105.5	60.0	48.6	52.4	92.3
1965	52.4	48.5	106.5	58.7	47.9	52.5	93.2
1966	53.5	49.6	107.5	61.7	48.7	55.0	93.6
1967	57.5	51.3	107.3	65.0	53.1	60.7	94.1
1968	58.2	52.5	106.5	74.2	53.1	59.1	95.3
1969	58.9	53.7	106.6	72.4	53.3	59.7	95.9
1970	59.3	54.7	104.9	79.5	53.9	59.0	96.1
1971	60.9	56.1	103.3	81.4	56.0	55.2	96.8
1972	63.9	58.0	103.1	78.7	57.6	55.6	99.6
1973	61.9	60.5	101.1	78.8	58.2	56.3	95.8
1974	64.7	62.2	99.8	79.3	65.6	59.7	91.8
1975	63.9	64.1	96.5	81.1	63.9	62.3	92.3
1976	68.4	67.4	98.9	83.5	65.3	65.5	96.3
1977	69.2	70.6	99.2	83.2	68.3	66.9	94.0
1978	71.2	71.1	99.5	85.8	68.6	64.7	96.6
1979	71.0	73.0	100.4	82.1	68.3	62.9	96.4
1980	72.5	74.7	98.8	82.0	68.6	59.9	98.6
1981	74.1	76.2	96.4	78.8	72.0	64.8	97.5
1982	76.2	77.1	93.4	80.1	69.2	57.4	104.1
1983	76.9	77.6	92.2	77.4	70.1	56.9	104.5
1984	78.5	78.5	92.0	79.5	73.5	57.5	103.3
1985	81.9	80.5	91.9	78.7	77.1	62.0	103.8
1986	83.2	82.6	93.3	81.5	79.1	69.4	102.4
1987	84.6	84.5	94.4	84.3	80.6	63.9	102.9
1988	87.2	85.4	94.8	86.8	78.9	71.0	106.5
1989	86.9	86.6	97.1	87.7	81.9	79.8	102.3
1990	89.3	88.6	99.0	88.2	85.5	87.4	101.0
1991	91.0	90.5	97.4	91.1	86.0	93.6	101.9
1992	95.8	92.7	97.5	93.1	92.8	102.5	101.4
1993	97.5	94.4	99.0	95.8	92.5	103.9	102.8
1994	98.5	95.6	99.6	99.8	97.4	101.9	100.6
1995	101.9	97.8	100.9	104.7	95.5	101.4	104.6
1996	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1997	103.4	101.7	101.1	99.8	102.8	101.9	101.1
1998	106.6	105.7	100.2	103.4	107.3	102.0	101.2
1999	107.9	108.9	102.2	104.5	104.9	98.2	103.3

Source: *Productivity Measures for Selected Industries, 1949-1999*. Bureau of Labor Statistics web site.

Appendix table 21—Capacity utilization rates in food and beverage processing, fourth quarter 1997-99

Industry	Full production 1999	Full production 1998	Full production 1997	National emergency production 1999	National emergency production 1998	National emergency production 1997
	Percent					
All food products[1]	74	74	74	61	58	60
Animal food	79	71	73	64	60	62
Dog and cat food	77	77	81	59	75	78
Other animal food	80	67	66	69	51	52
Grain and oilseed milling	76	83	84	69	75	76
Flour milling	75	75	82	71	68	74
Rice milling	92	80	81	86	73	52
Malt	74	87	86	45	82	72
Wet corn milling	91	86	92	88	81	92
Soybean processing	85	90	95	84	89	94
Other oilseed processing	80	86	90	74	77	84
Fats and oils refining & blending	72	75	83	71	65	81
Breakfast cereal	70	85	80	61	74	69
Sugar & confectionery product	72	71	69	60	59	58
Sugarcane mills	98	84	95	97	80	92
Cane sugar refining	85	77	83	57	52	59
Beet sugar	92	90	91	96	85	86
Chocolate/confectionery from cocoa beans	75	74	75	70	65	71
Chocolate/confectionery from purchased chocolate	64	67	58	50	53	49
Nonchocolate confectionery	74	67	76	60	57	59
Fruits & vegetable preserving	69	76	73	59	60	61
Frozen fruit, juice & vegetable	82	83	83	76	76	74
Frozen specialty food	82	83	80	70	69	66
Fruit & vegetable canning	59	66	62	52	54	56
Specialty canning	61	82	78	58	69	70
Dried & dehydrated food	74	69	71	58	55	58
Dairy product	78	78	78	68	67	69
Fluid milk	82	76	78	73	65	71
Creamery butter	81	89	85	75	84	81
Cheese	78	90	89	74	87	85
Dry, condensed, & evaporated dairy prod.	75	78	77	58	62	64
Ice cream & frozen dessert	69	65	65	58	49	53
Meat product	85	83	84	61	60	65
Animal (except poultry) slaughtering	88	79	81	72	51	59
Meat processed from carcasses	78	79	84	43	59	69
Rendering & meat byproduct processing	82	86	79	44	47	57
Poultry processing	90	88	87	77	70	69
Seafood product preparation & packaging	62	51	57	33	30	44
Seafood canning	66	56	64	42	43	53
Fresh & frozen seafood processing	61	51	56	32	29	42
Bakeries & tortilla	73	74	75	62	53	55
Retail bakeries	74	81	NA	52	50	NA
Commercial bakeries	76	74	76	67	52	53
Frozen cakes, pies, & other pastries	76	76	80	64	47	57
Cookies & crackers	63	70	71	55	59	54

Continued--

Appendix table 21—Capacity utilization rates in food and beverage processing, fourth quarter 1997-99--Continued

Industry	Full production			National emergency production		
	1999	1998	1997	1999	1998	1997
	Percent					
Bakeries & tortilla--continued						
Flour mixes & dough mfg from purchased flour	80	79	78	64	62	65
Dry pasta	70	64	76	71	36	64
Tortilla	78	NA	NA	66	NA	NA
Other food	68	63	64	58	52	51
Roasted nuts & peanut butter	82	72	73	63	61	61
Other snack food	74	72	79	64	55	62
Coffee & tea	77	59	68	64	51	53
Flavoring syrup & concentrate	61	53	49	52	43	37
Mayonnaise, dressing, & other prepared sauce	58	70	74	52	61	64
Spice & extract	65	64	61	53	55	50
Perishable prepared food	67	51	51	53	43	40
All other miscellaneous food	68	68	65	60	57	55
Beverages	70	68	68	59	52	50
Soft drink	64	61	66	54	47	50
Bottled wate	56	45	56	36	34	15
Ice	40	43	31	33	19	16
Breweries	85	82	71	86	82	57
Wineries	71	79	80	49	39	63
Distilleries	55	63	65	41	37	44

NA = Not available.

[1] Excludes beverages.

Source: *Current Industrial Reports, Survey of Plant Capacity,* U.S. Department of Commerce, Bureau of the Census.

Appendix table 22—Financial performance of food manufacturing and kindred products companies [1, 2]

Year	Share of sales: Operating income	Share of sales: Nonoperating expenses	Share of sales: Income before taxes	Share of assets: Long-term debt	Share of assets: Stock-holders' equity	Profit rate: Return on stock-holders' equity	Profit rate: Return on assets	Total stock-holders' equity to total debt
	---Percent---							*Ratio*
1982	4.8	0.2	4.6	19.0	48.1	13.0	6.3	1.8
1989	7.6	0.5	7.1	29.6	38.9	21.0	8.2	1.1
1990	8.5	-2.2	6.3	34.4	32.5	16.1	5.3	0.8
1991	8.4	-1.2	7.2	32.7	34.5	17.6	6.1	0.9
1992	8.8	-1.9	6.9	31.2	35.3	15.6	5.5	0.9
1993	7.7	-2.1	5.6	30.6	34.5	13.5	4.7	0.9
1994	8.4	-1.0	7.4	29.4	34.6	17.8	6.1	0.9
1995	8.3	-1.1	7.2	22.8	35.6	18.5	6.6	1.0
1996	8.7	-2.0	6.7	28.9	35.3	19.1	6.7	1.0
1997	9.0	-1.2	7.8	29.3	34.3	19.8	6.8	0.9
1998	9.5	3.0	6.5	29.6	33.3	20.1	6.7	0.9
1999	9.2	4.0	5.2	29.6	31.2	21.1	6.6	0.8
2000	9.6	4.6	5.0	29.0	30.3	24.1	7.3	0.8

[1] Includes tobacco industry data.
[2] Annual measures based on averages of quarterly data.

Source: *Quarterly Financial Report*, various years (U.S. Census Bureau).

Appendix table 23—Financial performance of food retailing companies with assets of $50 million or more[1]

Year	Share of sales: Operating income [2]	Share of sales: Nonoperating expenses	Share of sales: Income before taxes	Share of assets: Long-term debt	Share of assets: Stock-holders' equity	Profit rate: Return on stock-holders' equity [3]	Profit rate: Return on assets [3]	Total stock-holders' equity to total debt
	---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	43.9	16.2	14.6	2.4	0.3
1990	2.7	1.7	1.0	45.1	14.5	11.2	1.6	0.3
1991	2.7	1.4	1.3	43.0	17.0	14.5	2.4	0.4
1992	2.8	1.6	1.2	44.8	16.4	9.8	1.6	0.4
1993	2.9	1.6	1.3	40.8	17.7	7.5	1.3	0.4
1994	3.1	1.0	2.1	38.6	20.1	14.0	2.8	0.5
1995	3.1	1.3	2.1	35.8	23.7	17.2	4.2	0.3
1996	3.2	1.4	2.3	36.9	24.5	16.9	4.1	0.3
1997	3.5	1.4	2.4	38.1	25.4	17.2	4.1	0.3
1998	3.6	1.0	2.6	37.6	27.1	16.1	4.4	0.7
1999	3.9	1.3	2.6	38.3	27.6	15.7	4.3	0.7
2000	3.8	1.3	2.5	37.4	29.1	12.4	3.6	0.7

[1] Annual measures based on average of quarterly data.
[2] Before taxes.
[3] After taxes.

Source: *Quarterly Financial Report,* various years (U.S. Census Bureau).

Appendix table 24—Labor productivity in food processing and retailing

Year	Food processing						Food-stores	Eating and drinking places
	Red meats	Milk	Bakery products	Candy and confectionery	Malt	Soft drinks		
	Output per person per hour, Index (1987=100)							
1967	61.3	37.9	72.1	65.3	26.9	41.4	102.2	103.6
1972	69.7	51.4	81.9	76.5	37.5	47.0	114.2	108.7
1977	81.9	60.3	86.9	84.6	56.7	62.2	107.3	106.7
1982	91.9	81.6	89.8	76.6	69.5	71.1	102.2	103.5
1983	95.5	86.1	93.4	82.3	75.5	75.7	102.1	102.5
1984	97.0	89.4	93.9	82.5	80.2	81.6	102.4	98.9
1985	99.7	92.2	95.5	85.9	76.8	85.2	102.4	96.2
1986	98.4	96.3	101.1	88.5	90.9	91.4	102.0	99.2
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.7	109.1	96.4	100.7	99.3	109.6	99.6	103.0
1989	97.3	109.0	94.1	107.9	106.4	119.5	97.2	102.5
1990	95.8	106.0	89.8	108.2	111.9	127.4	97.9	104.0
1991	98.8	103.4	87.9	111.6	110.1	136.0	97.4	103.8
1992	104.1	102.9	89.3	103.2	114.1	144.9	97.4	103.4
1993	104.1	105.8	87.6	107.9	111.9	146.0	96.5	103.8
1994	104.8	111.8	88.4	110.7	122.4	152.7	95.7	102.1
1995	104.2	116.0	89.7	110.2	123.1	161.6	93.9	102.0
1996	96.3	112.1	86.7	115.2	127.5	164.9	91.5	100.6
1997	99.4	107.7	92.9	117.1	136.8	167.5	90.9	101.6
1998	102.3	108.0	94.3	121.4	140.2	168.3	91.4	102.0
1999	104.2	106.3	104.6	138.2	132.4	167.4	94.9	104.3

Source: *Productivity Measures for Selected Industries, 1949-99*. Bureau of Labor Statistics web site.

Appendix table 25—Food marketing system purchases from U.S. agriculture, 1982-2000

Year	Meat	Fruit and vegetables[1]	Dairy products	Bakery products
		Billion dollars		
1982	31.5	11.5	16.7	3.4
1983	31.4	12.9	18.0	3.5
1984	32.4	13.5	18.1	3.7
1985	30.5	13.3	17.7	3.4
1986	30.9	14.6	17.8	2.9
1987	32.7	14.3	18.2	2.8
1988	33.5	16.2	17.9	3.6
1989	34.0	17.8	19.6	4.3
1990	36.9	16.5	20.5	3.7
1991	34.7	17.0	18.4	3.3
1992	34.4	17.7	20.1	3.7
1993	35.1	18.4	20.1	3.9
1994	32.7	18.4	21.1	4.0
1995	32.6	20.3	21.4	5.0
1996	34.5	19.4	24.7	5.7
1997	34.0	21.0	22.7	4.9
1998	28.9	23.8	26.6	3.8
1999	30.8	26.3	25.5	3.3
2000	34.8	27.3	22.7	3.4

	Poultry	Grain mill products [2]	Eggs	Other foods [3]	Total [4]
			Billion dollars		
1982	6.0	1.4	2.5	8.4	81.4
1983	6.6	1.4	2.7	8.8	85.3
1984	8.0	1.4	3.0	9.7	89.8
1985	7.9	1.3	2.3	10.0	86.4
1986	9.0	1.1	2.5	10.0	88.8
1987	8.1	1.0	2.2	11.0	90.4
1988	9.9	1.3	2.2	12.2	96.8
1989	11.4	1.6	2.8	12.3	103.8
1990	11.1	1.4	2.8	13.3	106.2
1991	11.2	1.3	2.7	13.0	101.8
1992	12.0	1.4	2.3	13.5	101.6
1993	13.2	1.4	2.6	14.9	109.6
1994	13.9	1.5	2.6	15.4	109.6
1995	13.9	1.7	2.8	16.1	113.8
1996	15.9	2.0	3.4	16.7	122.3
1997	15.5	1.8	3.2	16.8	120.0
1998	16.4	1.6	3.1	15.5	119.7
1999	16.5	1.3	3.1	15.5	122.3
2000	16.3	1.3	3.2	14.3	123.3

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

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

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

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

Source: ERS, USDA.

Appendix table 26—Food marketing mergers, 1994-2001

Year	Processors	Mergers and acquisitions by: Wholesalers	Retailers	Food service
		Number		
1994	175	43	69	71
1995	168	45	44	78
1996	139	30	43	108
1997	186	76	54	127
1998	230	71	67	140
1999	229	63	66	112
2000	169	46	53	91
2001[1]	148	38	47	59

[1] Preliminary.

Source: Food Institute, *The Food Institute Report*.

Appendix table 27—Average hourly earnings in food marketing[1]

Year	Processing	Wholesaling	Eating and drinking places [2]	Food-stores [3]	Retail grocery stores [3]
			Dollars		
1963	2.3	2.2	NA	1.9	NA
1967	2.6	2.7	1.5	2.2	NA
1972	3.6	3.7	2.1	3.2	NA
1977	5.4	5.4	2.9	4.8	4.9
1982	7.9	8.3	4.1	7.3	7.5
1983	8.2	8.7	4.3	7.5	7.8
1984	8.4	9.0	4.3	7.6	7.9
1985	8.6	9.2	4.3	7.2	7.6
1986	8.7	9.3	4.4	6.9	7.2
1987	8.9	9.5	4.4	6.9	7.1
1988	9.1	9.8	4.6	7.1	7.1
1989	9.4	10.2	4.8	7.2	7.3
1990	9.6	10.5	5.0	7.3	7.4
1991	9.9	10.8	5.2	7.3	7.4
1992	10.2	11.1	5.3	7.6	7.6
1993	10.5	11.5	5.4	7.8	7.9
1994	10.7	11.8	5.5	7.9	8.0
1995	10.9	12.1	5.6	8.2	8.2
1996	11.2	12.5	5.8	8.4	8.5
1997	11.5	12.9	6.1	8.7	8.8
1998	11.8	13.4	6.4	9.0	9.1
1999	12.1	13.7	6.6	9.3	9.4
2000	12.5	14.1	6.9	9.4	9.4

NA = Not available.

[1] Includes full- and part-time workers.

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

[3] Grocery stores are also included in foodstore column.

Source: *Employment and Earnings,* U.S. Department of Labor, Bureau of Labor Statistics.

Appendix table 28—New capital expenditures in food and beverage processing, 1997-99

Industry	1999	1998	1997
		Thousand dollars	
All food products[1]	13,207,585	11,512,338	10,799,165
Animal food	637,528	600,681	548,273
Dog and cat food	246,533	211,127	261,079
Other animal food	390,995	389,554	287,294
Grain and oilseed milling	1,968,665	1,806,891	1,565,272
Flour milling	168,091	185,013	196,633
Rice milling	43,326	21,599	45,454
Malt	24,969	51,888	41,101
Wet corn milling	798,320	423,752	540,906
Soybean processing	387,729	299,419	188,422
Other oilseed processing	72,281	93,910	83,999
Fats and oils refining & blending	166,572	368,784	168,506
Breakfast cereal	307,377	362,526	300,251
Sugar & confectionery product	978,643	924,655	831,995
Sugarcane mills	53,746	61,110	67,796
Cane sugar refining	37,306	31,329	44,528
Beet sugar	198,616	244,467	167,511
Chocolate/confectionery from cocoa beans	147,772	110,510	69,718
Chocolate/confectionery from purchased chocolate	338,496	277,744	272,269
Nonchocolate confectionery	202,707	199,496	210,173
Fruits & vegetable preserving	2,065,755	1,640,853	1,648,372
Frozen fruit, juice & vegetable	574,386	462,788	397,733
Frozen specialty food	368,206	322,567	353,555
Fruit & vegetable canning	716,766	475,024	529,704
Specialty canning	247,263	228,795	219,783
Dried & dehydrated food	159,134	151,679	147,597
Dairy product	1,478,317	1,492,193	1,337,286
Fluid milk	545,974	474,903	423,487
Creamery butter	11,085	10,057	8,522
Cheese	508,957	437,114	478,340
Dry, condensed, & evaporated dairy prod.	274,068	384,919	269,050
Ice cream & frozen dessert	138,233	185,200	157,887
Meat product	2,108,345	1,653,656	1,799,220
Animal (except poultry) slaughtering	485,880	431,533	533,909
Meat processed from carcasses	659,793	478,442	526,880
Rendering & meat byproduct processing	127,905	103,655	114,353
Poultry processing	834,768	640,027	624,078
Seafood product preparation & packaging	189,864	133,126	175,210
Seafood canning	16,378	12,022	21,599
Fresh & frozen seafood processing	173,486	121,104	153,611
Bakeries & tortilla	2,143,223	1,597,599	1,440,509
Retail bakeries	149,511	79,535	75,760
Commercial bakeries	1,104,295	830,797	724,834
Frozen cakes, pies, & other pastries	146,210	103,334	88,520
Cookies & crackers	426,707	340,810	300,040
Flour mixes & dough from purchased flour	159,637	178,877	158,993
Dry pasta	111,833	31,697	43,051
Tortilla	45,031	34,549	49,311

Continued--

Appendix table 28—New capital expenditures in food and beverage processing, 1997-99--Continued

Industry	1999	1998	1997
		Thousand dollars	
Other food	1,637,244	1,662,682	1,452,928
Roasted nuts & peanut butter	64,508	103,893	81,964
Other snack food	598,508	673,137	406,407
Coffee & tea	179,047	143,583	166,837
Flavoring syrup & concentrate	95,284	79,272	144,097
Mayonnaise, dressing, & other prepared sauce	140,496	84,963	139,688
Spice & extract	142,011	118,589	115,389
Perishable prepared food	129,466	171,584	124,442
All other miscellaneous food	287,925	287,661	274,104
Beverages	2,282,309	2,221,883	2,381,973
Soft drink	804,283	877,411	832,284
Bottled water	195,929	56,330	47,508
Ice	31,506	23,883	33,527
Breweries	739,357	783,247	1,021,428
Wineries	429,435	424,075	371,286
Distilleries	81,798	56,936	75,940

[1] Excludes beverages.

Source: *Annual Survey of Manufactures*, U.S. Census Bureau.

Appendix table 29—Gross book value of total assets in food processing, 1992 and 1997

Industry group and industry	1992				1997			
	Assets at beginning of year	Added capital	Retired capital	Assets at end of year	Assets at beginning of year	Added capital	Retired capital	Assets at end of year
	Million dollars							
Meat products	12,303	1,262	344	13,220	16,624	1,683	403	17,907
Meatpacking plants	3,902	368	91	4,179	5,303	536	102	5,738
Sausages and other prepared meats	3,726	404	98	4,032	4,841	527	92	5,277
Poultry slaughtering and processing	4,675	490	155	5,009	6,480	620	209	6,892
Dairy products	10,031	1,062	162	10,938	12,279	1,344	290	13,331
Creamery butter	132	9	3	140	150	9	2	156
Cheese, natural and processed	2,278	267	0	2,551	3,393	486	50	3,828
Condensed and evaporated milk	1,903	197	32	2,067	2,574	262	85	2,751
Ice cream and frozen desserts	1,537	202	28	1,710	1,832	159	42	1,949
Fluid milk	4,181	387	99	4,470	4,330	428	111	4,647
Preserved fruit and vegetables	13,497	1,228	312	14,489	17,597	1,783	508	18,873
Canned specialties	1,574	275	0	1,712	2,489	220	116	2,593
Canned fruit and vegetables	4,049	164	160	4,363	5,114	534	125	5,523
Dehydrated fruit, vegetables, and soups	858	103	35	926	1,028	130	45	1,113
Pickles, sauces, and salad dressings	1,631	169	41	1,759	1,616	140	29	1,727
Frozen fruit and vegetables	3,042	267	76	3,231	4,138	404	110	4,432
Frozen specialties	2,343	250	0	2,498	3,212	355	83	3,485
Grain mill products	23,513	1,641	3,742	21,372	25,227	1,749	2,340	24,634
Flour and other grain mill products	5,278	260	3,565	1,973	4,403	199	2,065	2,536
Breakfast cereals	3,665	396	65	4,000	3,651	254	68	3,838
Rice milling	545	24	0	554	686	46	12	720
Blended and prepared flour	848	177	13	1,012	1,219	156	16	1,358
Wet corn milling	5,121	409	32	5,500	7,868	541	71	8,338
Dog, cat, and other pet food	1,584	180	0	1,733	2,000	262	49	2,213
Other prepared feeds	6,472	195	67	6,600	5,400	291	59	5,631
Bakery products	9,231	881	333	9,818	10,870	1,116	285	11,699
Bread, cake, and related products	5,729	543	239	6,033	6,501	725	197	7,028
Cookies and crackers	3,051	338	83	3,306	3,689	302	72	3,919
Frozen bakery products, except bread	451	0	11	479	680	89	16	752
Sugar and confectionery products	8,038	672	109	8,858	9,261	923	202	9,131
Raw cane sugar	1,046	59	9	1,100	900	68	28	941
Cane sugar, refined	774	56	0	835	564	45	3	605
Beet sugar	1,143	97	0	1,233	1,156	168	9	1,315
Confectionery products	3,397	407	85	3,719	4,468	482	108	4,842
Chocolate and cocoa products	996	0	0	1,252	1,296	77	35	1,337
Salted and roasted nuts and seeds	682	53	15	719	877	83	19	91
Fats and oils	4,400	292	51	4,784	5,409	555	90	5,873
Soybean oil mills	2,105	124	21	2,214	2,154	200	20	2,334
Other oilseed processing	522	23	0	523	634	84	13	705
Animal and marine fats and oils	859	82	21	1,020	1,154	114	33	1,235
Edible fats and oils	914	63	9	1,027	1,467	157	24	1,599

Continued--

Appendix table 29—Gross book value of total assets in food processing, 1992 and 1997--Continued

Industry group and industry	1992				1997			
	Assets at beginning of year	Added capital	Retired capital	Assets at end of year	Assets at beginning of year	Added capital	Retired capital	Assets at end of year
	Million dollars							
Beverages	22,043	1,560	291	23,311	25,051	2,466	463	27,055
Malt beverages	10,745	577	58	11,263	11,195	978	106	12,067
Malt	536	0	0	561	609	42	4	647
Wines, brandy, and brandy spirits	1,879	119	29	1,969	2,541	350	59	2,832
Distilled spirits, except brandy products	904	57	0	950	1,051	76	12	1,115
Bottled and canned soft drinks	6,930	732	204	7,458	8,915	876	258	9,533
Flavoring extracts and syrups	1,049	75	0	1,110	740	144	24	861
Miscellaneous foods and food products	9,284	1,044	287	10,068	13,306	1,405	369	14,241
Canned and cured fish and seafood	236	22	10	248	383	22	11	294
Fresh or frozen prepared fish	1,672	166	39	1,799	2,182	156	60	2,278
Coffee and tea	1,221	150	32	1,350	1,872	167	69	1,970
Potato chips and other snacks	2,194	259	62	2,400	3,176	409	94	3,491
Manufactured ice	271	14	6	283	432	34	11	455
Macaroni and spaghetti	596	75	21	654	634	43	12	665
Other food preparations	3,094	358	117	3,334	4,627	574	112	5,088
Total food and kindred products	112,340	9,642	5,631	116,858	135,624	13,024	4,950	142,744

Source: *Census of Manufactures,* U.S. Census Bureau. The census is conducted every 5 years. Data for 1997 are compiled according to the SIC code.

Appendix table 30—Food-related advertising, 1995-99

Item	1999	1998	1997	1996	1995
			Million dollars		
Eating and drinking places	3,412	3,164	3,148	2,961	2,646
Foodstores[1]	947	920	893	824	813
Processed foods	7,253	7,059	6,864	6,523	6,347
Cooking products and seasoning [4]	595	702	698	729	685
Prepared and convenience foods [2]	1,329	1,284	1,332	1,312	1,379
Dairy products and substitutes	489	475	508	441	478
Fruits, vegetables, grains, and beans	165	300	168	235	126
Meat, poultry, and fish	281	314	217	271	256
Bakery goods	458	263	397	448	347
Confectionery and snacks [3]	1,207	1,123	1,094	966	856
Alcoholic beverages	1,245	1,188	1,090	1,022	1,028
Soft drinks and bottled water	799	708	689	247	541
Other beverages[5]	617	626	628	809	585
General promotions	69	78	43	45	67
Total advertising	11,613	11,143	10,906	10,309	9,807

[1] Includes foodstores and supermarkets, bake shops, dairy stores, meat, poultry, and fish markets, and food and beverage retailers.

[2] Soups, cereals, jams, jellies, peanut butter, infant foods, pasta products and dinners, all prepared dinners and entrees.

[3] Candy, gum, mints, cookies, crackers, nuts, chips, and other salty snacks.

[4] Sugar, syrups, artificial sweeteners, shortening, cooking oils, margarine, baking mixes, crusts, flour and other baking ingredients, seasoning, spices, extracts, puddings, pickles, relishes, sauces, gravies, dips, salad dressings, mayonnaise, and other miscellaneous ingredients.

[5] Coffee, tea, cocoa, fruit juices and drinks, and vegetable juices.

Source: Economic Research Service, BAR/LNA Multi-Media Service.

Appendix table 31—Share of food advertising expenditures by the largest food marketing firms, 1999

Industry	Share of expenditures spent by: 3 largest advertisers	10 largest advertisers
	Percent	
Restaurants, national	49.3	75.1
Foodstores and supermarkets	29.0	54.1
Food processing:		
Sugar, syrups, and artificial sweeteners	68.5	98.4
Shortening, oil, margarine, and nonstick products	77.0	98.0
Baking mixes, pie crusts, and baking ingredients	76.0	97.4
Seasonings, spices, and extracts	80.3	98.8
Gelatins and puddings (mixes and prepared)	100.0	100.0
Condiments, pickles, and relishes	70.7	97.7
Sauces, gravies, and dips	47.6	93.1
Salad dressing and mayonnaise	90.6	99.1
Soups	96.2	99.8
Breakfast cereals	85.4	100.0
Nutritional supplements and weight control products	51.5	80.6
Infant foods	98.1	100.0
Pasta products and pasta-product dinners	84.8	98.8
All other prepared dinners and entrees	52.2	89.0
Jellies, jams, preserves, and peanut butter	96.6	99.2
Milk, butter, and eggs, yogurt, cream and sour cream	64.0	91.4
Cheese	90.1	96.2
Ice cream, frozen novelties, and sherbet	43.5	77.5
Dairy product substitutes	98.5	100.0
Citrus fruit	98.9	98.9
Other fruit	57.0	94.7
Vegetables	61.0	92.0
Beans and grains	53.7	97.6
Meat, poultry, and fish	39.1	75.9
Bread and rolls, waffles, and pancakes	58.3	96.8
Cakes, pies and pastries, donuts	72.6	99.4
Cookies and crackers	89.2	99.5

Continued--

Appendix table 31—Share of food advertising expenditures by the largest food marketing firms, 1999--Continued

Industry	Share of expenditures spent by: 3 largest advertisers	10 largest advertisers
	Percent	
Coffee, tea, cocoa, and milk derivatives	73.3	96.1
Fruit juices and drinks	46.7	89.3
Vegetables juices	100.0	100.0
Candy, mints, and gum	62.3	94.2
Chips, nuts, popcorn, and pretzels	72.9	95.1
Regular carbonated drinks	99.2	100.0
Dietary carbonated drinks	99.8	100.0
Noncarbonated soft drinks	88.2	92.0
Bottled waters	66.7	94.4
Beer and ale	81.7	98.3
Wine and wine coolers	40.0	68.6
Distilled spirits:		
Bourbon	83.8	100.0
Canadian whiskey	99.7	100.0
Scotch	75.4	99.7
Other whiskey	99.6	100.0
Brandy, cognac, or armangnac	86.7	97.4
Cordials and liqueurs	65.6	85.8
Gin	99.9	100.0
Rum	95.6	100.0
Tequila	97.5	100.0
Vodka	81.3	99.8
Other alcoholic beverages	84.0	92.2
Pet foods		
Dog food	87.2	99.7
Cat food	84.4	100.0
Other pet food	92.7	100.0

Source: *Competitive Media Reporting and Publishers Information Bureau*.

Appendix table 32—Advertising price indexes in cost per 1,000 targeted viewers or readers

Media	1984	1985	1986	1987	1988	1989	1990	1991	1992	1996	2000
	Index (1975 = 100)										
Network	279	301	318	318	343	363	399	399	399	423	441
Spot TV	190	203	215	228	242	254	269	269	280	308	311
Network radio	237	268	284	301	313	332	345	338	331	333	359
Spot radio	155	161	170	177	182	193	205	205	203	215	240
Magazines	223	236	249	261	271	287	301	322	338	354	362
Supplements	192	204	220	229	240	254	267	301	316	NA	NA
Newspaper	252	267	286	306	327	347	368	390	410	422	428
Outdoor	198	208	218	229	238	250	263	274	274	280	308

NA = Not available.

Source: Compiled by ERS from Bar/LNA Multi-Media Service.

Appendix table 33—New products introduced, 1987-2000

Category	1987	1988	1989	1990	1991	1992	1993
				Number			
Food categories:							
Baby food	10	55	53	31	95	53	7
Bakery Products	1,088	1,180	1,348	1,546	1,966	1,854	1,803
Beverages	832	936	913	1,143	1,367	1,538	1,845
Breakfast cereals	92	97	118	123	104	122	99
Condiments	1,145	1,608	1,701	2,028	2,787	2,555	3,147
Candy, gum, and snacks	1,367	1,310	1,355	1,486	1,885	2,068	2,043
Dairy	1,132	854	1,348	1,327	1,111	1,320	1,099
Desserts	56	39	69	49	124	93	158
Entrees	691	613	694	753	808	698	631
Fruit and vegetables	185	262	214	325	356	276	407
Pet food	82	100	126	130	202	179	276
Processed meat	581	548	509	663	798	785	454
Side dishes	435	402	489	538	530	560	680
Soups	170	179	215	159	265	211	248
Total, food	7,866	8,183	9,192	10,301	12,398	12,312	12,893
Nonfood categories:							
Health and beauty aids	2,039	2,000	2,308	2,379	3,064	3,690	3,864
Household supplies and paper products	208	333	493	491	588	627	612
Tobacco products	51	12	29	31	19	45	38
Pet products	18	30	33	42	74	116	160
Total, nonfood	2,316	2,375	2,863	2,943	3,745	4,478	4,674
Total	10,182	10,558	12,055	13,244	16,143	16,790	17,571

Category	1994	1995	1996	1997	1998	1999	2000
				Number			
Food categories:							
Baby food	45	61	25	53	35	21	16
Bakery Products	2,180	2,432	1,759	1,622	1,471	1,126	1,087
Beverages	2,250	2,854	2,003	1,606	1,547	1,576	1,271
Breakfast cereals	110	128	121	83	84	114	88
Condiments	3,271	3,698	2,815	2,631	1,994	1,676	1,808
Candy, gum, and snacks	2,450	2,462	2,310	2,505	2,065	1,983	1,924
Dairy	1,323	1,614	1,345	862	940	921	858
Desserts	215	125	100	109	117	73	78
Entrees	694	748	597	629	678	543	550
Fruit and vegetables	487	545	552	405	375	254	192
Pet food	161	174	121	251	105	158	157
Processed meat	565	790	637	672	728	646	583
Side dishes	980	940	611	678	597	421	317
Soups	264	292	270	292	299	254	216
Total, food	15,006	16,863	13,266	12,398	11,035	9,766	9,145
Nonfood categories:							
Health and beauty aids	4,368	4,897	5,702	6,226	6,467	6,257	6,573
Household supplies and paper products	609	571	381	371	265	453	384
Tobacco products	38	102	54	127	51	32	42
Pet products	55	139	169	202	120	138	143
Total, nonfood	5,070	5,709	6,306	6,926	6,903	6,880	7,142
Total	20,076	22,572	19,572	19,324	17,938	16,646	16,287

Source: ERS, *New Product News.*

Appendix table 34—Major economic indicators, 1989-2000

Year	Population	Real gross domestic product[1]	Unemployment rate	Real per capita disposable personal income[1]
	Million	*Billion dollars*	*Percent*	*Dollars*
1989	247.4	6,592	5.3	19,833
1990	250.0	6,708	5.6	20,058
1991	252.7	6,676	6.8	19,867
1992	255.4	6,880	7.5	20,217
1993	258.1	7,063	6.9	20,233
1994	260.6	7,348	6.1	20,504
1995	263.1	7,544	5.6	21,795
1996	265.5	7,813	5.4	21,069
1997	268.0	8,160	4.9	21,464
1998	270.6	8,516	4.5	22,354
1999	273.0	8,876	4.2	22,641
2000	275.4	9,224	4.0	23,148

	3-month T-bill rate	Exchange rate	CPI (1982-84 = 100)
	Percent	*Yen per dollar*	*All Items*
1989	8.1	138.07	124.0
1990	7.5	145.00	130.7
1991	5.4	134.59	136.2
1992	3.5	126.78	140.3
1993	3.0	111.08	144.5
1994	4.3	102.18	148.2
1995	5.5	93.96	152.4
1996	5.0	108.78	156.9
1997	5.1	121.06	160.5
1998	4.8	130.99	163.0
1999	4.7	113.73	166.6
2000	5.7	107.80	172.2

[1] 1996 dollars.

Source: (1) U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business;* (2) *Current Population Reports,* selected issues; (3) *Employment and Earnings,* U.S. Department of Labor, Bureau of Labor Statistics.

Appendix Table 35—Wholesale acquisitions at a glance, 1994-2001

Company	Acquisitions
Broadline wholesalers:	
Nash Finch	Super Food Services, Erickson's Supermarkets, Military Distributors of Virginia, Super Food Services, T.J. Morris, United-A.G. Cooperative Inc., Hinky Dinky Supermarkets, Inc., K&N Meats (Producer of beef and other meat for fine dining establishments)
Unified Western Grocers (result of merger between Certified Grocers of California and Unified Grocers)	Market Wholesale Grocery Company
Richfood Holdings	Super Rite, Farm Fresh, Inc., Shoppers Food Warehouse
Spartan Stores	Family Fare, Ashcraft's Markets, Seaway Food Town, Inc., Prevo's Family Markets, Inc. (retailer)
Fleming	Jitney-Jungle retail stores, Minter-Weisman (convenience store distributor), seven Food4Less retail stores from Whitco Foods, Inc.
Supervalu, Inc.	Richfood Holdings, Shop 'N Save, Randall Stores, Inc.
Roundy's	Mega Marts, Ultra Mart, Copps Corp. (retailer and wholesaler)
C&S	Grand Union retail stores
Associated Food Stores	Macey Inc., Lin's A.G. Foodstores
Food service distributors:	
Ahold (managed under U.S. Foodservice name)	U.S. Foodservice, GFG Foodservice, PYA/Monarch, Parkway Foodservice, Mutual Distributors, Inc. (broadline distributor), Mutual Wholesale Co., Alliant
JP Foodservice, Inc. (managed under the U.S. Foodservice name)	Mazo-Lerch, US Foodservice, Squeri Food Service Inc., Arrow Paper Supply and Food Co., Valley Food Distributors, Parkway Food Service, Stock Yards Packing Co., Inc. (Custom meat processor)
U.S. Foodservice	Clark Foodservice, Goode Foodservice, Fort Myers Meat & Seafood, CP Foodservice
Rykoff-Sexton (managed under the U.S. Foodservice name)	U.S. Foodservice
Clayton, Dubilier and Rice (investment firm) (managed under the Alliant Foodservice name)	Alliant (formerly Kraft Foodservices), Belca Foodservice, ACME Food Atlantic Food Services, Leone Foodservice, K-B Foods, Inc., K&N Meats (producer of meats for tablecloth dining establishments)
Performance Food Group	Fresh Express, AFI Food Service Distributors, W.J. Powell Company, McLane Foodservice (certain assets), NorthCenter Foodservice, Carroll County Foods, Inc., Dixon Tom-A-Toe Companies, Inc., State Hotel Supply Co., Nesson Meat Sales (certain assets)
McLane Co. (subsidiary of Wal Mart)	AmeriServe Food Distribution, Inc.
AmeriServe Food Distribution, Inc.	ProSource, Inc., PepsiCo Food Systems
Sysco	Strano Foodservice, Fresh Point Holdings, Watson Foodservice Inc., Malcolm Meats (specialty meat cutter), Buckhead Beef Co. (specialty meat cutter), Newport Meat Co. (Sspecialty meat cutter), Doughtie's Foods, Jordan's Foods, Beaver Street Fisheries, Inc., 5 specialty meat operations from Freedman Food Service, North Douglas Distributors, Ltd. (Canada), Albert M. Briggs Co. (specialty meat supplier), HRI Supply Ltd. (Canadian foodservice distributor), Fulton Provision Co. (specialty meat company)

Sources: *Food Institute Report*, *Supermarket News*, *Feedstuffs*.

Appendix table 36—Producer price indexes for the food marketing system, 1990-2000

Commodity	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
						1982 = 100					
Crude foodstuffs and feedstuffs[1]	113.1	105.5	105.1	102.4	106.5	105.8	121.5	112.2	103.8	98.7	100.2
Fruit and vegetables	117.5	114.7	96.8	106.9	104.6	108.4	122.5	115.5	117.2	117.4	111.1
Grains	97.4	92.0	97.3	94.5	102.7	112.6	151.1	111.2	93.4	80.1	78.3
Livestock	115.6	107.9	104.7	107.0	96.4	92.8	95.2	96.3	82.3	86.4	96.5
Live poultry	118.8	111.2	122.6	122.0	124.4	125.6	140.5	131.0	141.4	129.9	124.7
Fluid milk	100.8	89.5	96.3	94.1	95.8	93.7	107.9	97.5	112.6	106.3	92.0
Oilseeds	112.1	106.4	107.5	115.9	117.4	112.6	139.4	140.8	114.4	90.8	93.8
Sugar and raw cane	119.2	119.2	113.7	113.2	115.2	119.7	118.6	116.8	117.2	113.7	101.8
Intermediate materials for food manufacturing [2]	117.9	115.3	113.9	115.6	118.5	119.5	125.3	123.2	123.1	120.8	119.2
Flour	103.6	96.8	109.3	108.9	110.3	122.8	136.8	118.7	109.2	104.3	103.8
Refined sugar	122.7	121.6	120.0	118.2	118.3	119.4	123.7	123.6	119.8	121.0	110.6
Crude vegetable oils	115.8	103.0	97.0	110.5	135.0	129.8	118.1	116.6	131.1	90.2	73.6
Finished consumer foods [3]	124.4	124.1	123.2	124.7	126.8	129.0	133.6	134.5	134.3	135.1	137.2
Fresh fruit	118.1	129.9	183.8	84.5	82.6	85.7	100.8	99.4	90.0	103.6	91.4
Fresh and dried vegetables	118.1	103.8	115.0	135.2	129.1	144.4	135.0	123.1	139.5	118.0	126.7
Canned fruit and juice	127.0	128.6	134.5	126.2	126.0	129.4	137.5	137.6	134.4	137.8	140.0
Frozen fruit and juice	139.0	116.3	125.8	110.7	111.9	115.9	123.9	117.2	116.1	123.0	120.9
Fresh vegetables, excluding potatoes	107.8	110.2	116.4	126.6	117.8	139.8	120.9	121.3	137.9	117.7	135.0
Canned vegetables and juices	116.7	112.9	109.6	110.5	116.3	116.6	121.2	120.1	121.5	120.9	121.2
Frozen vegetables	118.4	117.6	116.4	120.9	126.0	124.2	125.4	125.8	125.4	126.1	126.0
Potatoes	157.3	125.7	118.3	144.9	142.3	142.6	133.9	106.1	122.5	126.9	100.5
Eggs	117.6	110.7	78.6	86.6	80.9	86.3	105.1	97.1	90.1	77.9	84.9
Bakery products	141.0	146.6	152.5	156.6	160.0	164.3	169.8	173.9	175.8	178.0	182.3
Meats	117.0	113.5	106.7	110.6	104.6	102.9	109.0	111.6	101.4	104.6	114.3
Beef and veal	116.0	112.2	109.7	112.9	103.6	100.9	100.2	102.8	99.5	106.3	113.7
Pork	119.8	113.4	98.5	105.7	101.3	101.4	120.9	123.1	96.6	96.0	113.4
Processed poultry	113.6	109.9	109.1	111.7	114.8	114.3	119.8	117.4	120.7	114.0	112.9
Fish	147.2	149.5	153.0	156.5	161.5	170.9	165.9	178.1	183.0	190.9	198.1
Dairy products	117.2	114.6	118.0	118.1	119.5	119.7	130.4	128.1	138.1	139.2	133.7
Processed fruit and vegetables	124.7	119.6	120.8	118.2	121.2	122.4	127.6	126.4	125.8	128.1	128.6
Shortening and cooking oil	123.2	116.5	114.9	122.9	138.6	142.5	138.5	137.8	143.4	140.4	132.4
Soft drinks	122.3	125.5	125.7	126.2	126.9	133.1	134.0	133.2	134.8	137.9	144.1
Beverages, alcoholic	111.2	123.7	126.1	126.0	124.8	128.5	132.8	135.1	135.2	136.7	140.6
Tobacco products	221.4	249.7	275.2	260.3	224.7	231.3	237.4	248.9	283.4	374.0	397.2

[1] What food manufacturers paid at major markets.

[2] What food manufacturers charged other food manufacturers.

[3] What retailers, wholesalers, restauranteurs, or other institutions paid.

Source: *Producer Price Index*, Bureau of Labor Statistics, U.S. Department of Labor.

Appendix table 37—U.S. trade in processed foods, 1999 and 2000

Industry group and industry	Exports		Imports	
	1999	2000	1999	2000
	Thousand dollars			
Total processed food	28,866,452	30,044,099	34,708,000	36,771,933
Meat products	7,805,073	8,939,915	3,623,868	4,156,057
Meat packing	5,617,410	6,519,571	3,422,835	3,948,207
Sausage and prepared meats	300,106	385,166	137,582	129,478
Poultry dressing plants	1,887,557	2,035,178	63,451	78,372
Dairy products	1,034,401	1,092,828	1,455,658	1,530,225
Creamery butter	4,511	7,428	47,695	29,859
Cheese, natural and processed	130,075	138,437	704,847	685,544
Condensed and evaporated milk	778,298	819,520	647,988	784,399
Ice cream and frozen desserts	88,879	91,283	36,783	17,605
Fluid milk	32,638	36,160	18,345	12,818
Preserved fruit and vegetables	3,206,166	3,257,166	3,853,049	3,833,596
Canned specialties	89,306	104,445	100,034	92,004
Canned fruit and vegetables	1,208,536	1,211,645	1,831,670	1,748,410
Dried fruit and vegetables	681,446	706,929	445,669	476,176
Sauces and salad dressings	320,450	344,731	460,162	500,973
Frozen fruit and vegetables	877,119	859,337	1,004,119	1,001,928
Other frozen specialties	29,309	30,079	11,395	14,105
Grain mill products	3,938,323	3,959,532	1,204,991	1,220,416
Flour and grain mill products	335,281	291,619	89,024	85,028
Breakfast cereals	224,566	215,224	146,290	149,319
Rice milling	820,162	686,357	197,062	190,239
Blended and prepared flours	141,850	153,352	120,933	122,637
Wet corn milling	1,270,385	1,236,847	283,350	283,385
Dog, cat, and other pet food	631,738	774,840	137,906	125,741
Prepared animal feed	514,341	601,293	230,426	264,067
Bakery products	455,447	466,139	921,543	1,031,119
Cookies and crackers	140,840	143,392	410,461	440,863
Frozen bakery products except bread	62,876	65,996	143,218	180,496
Bread and other bakery products	251,731	256,751	367,864	409,760
Sugar and confections	1,718,133	1,909,013	3,605,713	3,470,997
Beet and cane sugar	153,242	158,433	686,164	609,803
Candy and confectionery products	221,639	276,404	612,359	664,619
Chocolate and cocoa products	436,657	534,962	1,522,267	1,404,319
Chewing gum	70,419	82,778	126,792	136,551
Salted and roasted nuts and seeds	836,176	856,436	658,131	655,705

Continued--

Appendix table 37—U.S. trade in processed foods, 1999 and 2000--Continued

Industry group and industry	Exports		Imports	
	1999	2000	1999	2000
	Thousand dollars			
Fats and oils	3,624,651	3,272,857	1,543,218	1,531,589
Soybean oil mills	2,203,808	2,070,122	68,693	71,593
Other oilseeds	525,797	404,383	1,292,916	1,277,531
Animal/marine fats and oils	718,450	610,352	92,124	103,171
Shortening and cooking oils	176,596	188,000	89,485	79,294
Beverages	2,382,392	2,469,906	7,316,693	8,057,864
Malt beverages	282,396	252,434	1,911,876	2,200,755
Malt	39,205	32,497	23,859	40,429
Wines, brandy, and brandy spirits	550,729	564,096	2,605,472	2,706,199
Distilled and blended spirits	521,146	563,115	2,117,343	2,441,206
Soft drinks and carbonated water	264,107	252,066	542,647	576,215
Flavorings, extracts, and syrups	724,809	805,698	115,496	93,060
Miscellaneous foods	4,701,866	4,676,743	11,183,267	11,940,070
Processed fishery products	467,188	383,720	1,767,258	1,756,140
Fresh fish	2,174,956	2,270,865	7,094,442	7,836,919
Roasted coffee	236,585	243,378	362,348	353,700
Potato chips	321,533	298,689	56,742	74,584
Manufactured ice	12,034	11,494	69,823	89,064
Pasta products	112,401	96,723	307,285	303,390
Other food preparations	1,377,169	1,371,874	1,525,369	1,526,273

Source: USDA/ERS, *U.S. Processed Food Trade Data System.*

Appendix table 38—U.S. trade balance in processed foods, 1995-2000

Industry group and industry	1995	1996	1997	1998	1999	2000
			Thousand dollars			
Meat products	5,365	6,063	5,641	4,597	3,996	4,784
Meatpacking	3,607	3,510	2,903	2,175	2,040	2,571
Sausages and other prepared meats	-38	12	251	221	163	256
Poultry slaughtering and processing	2,067	2,541	2,486	2,201	1,794	1,957
Dairy products	-188	-400	-116	-390	-447	-437
Creamery butter	61	32	6	-58	-43	-28
Cheese, natural and processed	-460	-479	-425	-518	-575	-547
Condensed and evaporated milk	92	-76	176	78	105	-35
Ice cream and frozen desserts	85	90	86	80	52	-74
Fluid milk	33	33	41	28	14	-23
Preserved fruit and vegetables	211	-159	-115	-144	-647	-576
Canned specialties	34	29	15	-13	-11	-17
Canned fruit and vegetables	-492	-696	-686	-412	-623	-557
Dehydrated fruit, vegetables, and soups	407	402	389	308	236	-231
Pickles, sauces, and salad dressings	-28	-37	-34	-80	-140	-156
Frozen fruit and vegetables	237	92	136	17	-127	-143
Frozen specialties	53	51	64	35	18	-16
Grain mill products	2,778	2,829	2,749	2,666	2,449	2,739
Flour and other grain mill products	353	243	239	212	246	207
Breakfast cereals	68	55	32	90	78	66
Rice milling	780	749	607	627	623	496
Blended and prepared flour	69	79	64	25	21	31
Wet corn milling	1,177	1,296	1,330	1,179	987	953
Dog, cat, and other pet foods	332	408	477	532	494	649
Other prepared feeds	447	348	380	325	284	337
Bakery products	-221	-253	-265	-340	-466	-565
Bread, cake, and related products	-131	-131	-117	-67	-116	-153
Cookies and crackers	-82	-108	-132	-233	-270	-297
Frozen bakery products	-7	-15	-17	-39	-80	-115
Sugar and confectionery products	-857	-1,431	-1,653	-1,882	-1,888	-1,562
Beet and cane sugar	-456	-961	-920	-725	-533	-451
Confectionary products	-210	-228	-218	-312	-391	-388
Chocolate and cocoa products	-772	-1,023	-1,052	-1,303	-1,142	-869
Salted and roasted nuts and seeds	581	780	537	458	178	-199
Fats and oils	2,330	1,879	2,833	2,900	2,081	1,741
Soybean oil mills	1,947	2,045	3,111	2,941	2,135	1,999
Other oilseed processing	-591	-957	-947	-840	-767	-873
Animal and marine fats and oils	923	739	605	732	626	507
Edible fats and oils	51	53	63	68	87	109

Continued--

Appendix table 38—U.S. trade balance in processed foods, 1995-2000--Continued

Industry group and industry	1995	1996	1997	1998	1999	2000
			Thousand dollars			
Beverages	-2,050	-2,791	-3,316	-4,012	-4,934	-5,588
Malt beverages	-666	-888	-1,096	-1,394	-1,629	-1,948
Malt	23	22	27	27	15	-8
Wines, brandy, and brandy spirits	-1,156	-1,394	-1,608	-1,696	-2,055	-2,142
Distilled spirits, except brandy products	-806	-1,027	-1,081	-1,307	-1,596	-1,878
Bottled and canned soft drinks	-13	-173	-226	-244	-279	-324
Flavoring extracts and syrups	567	668	668	602	609	-713
Miscellaneous foods and food products	-3,661	-3,730	-5,112	-6,338	-6,481	-7,263
Canned and cured fish and seafood	-648	-753	-988	-1,148	-1,300	-1,372
Fresh or frozen prepared fish	-2,897	-2,946	-4,029	-4,848	-4,919	-6,666
Coffee and tea	-100	-101	-101	-148	-126	-110
Potato chips and other snacks	202	192	192	261	265	-224
Manufactured ice	-11	-21	-18	-42	-58	-78
Macaroni and spaghetti	-216	-226	-237	-199	-195	-207
Other food preparations	11	125	69	-215	-148	-154
Total food and kindred products	4,424	2,354	1,026	-2,619	-6,052	-6,728

Source: USDA/ERS, *U.S. Processed Food Trade Data System.*

Appendix table 39—Leading exporters of processed foods to the U.S. and top recipients of U.S. processed food exports

U.S imports from:	Imports, 2000	Share of processed food imports	Change 1998-99	Change 1999-20
	Million dollars	*Percent*		
Canada	8,400.5	22.8	12.6	8.4
Mexico	2,933.5	8.0	11.6	11.3
Thailand	2,233.9	6.1	11.7	9.3
France	1,964.8	5.3	17.8	-3.5
Italy	1,578.4	4.3	4.4	9.9
Australia	1,398.6	3.8	8.1	27.0
Netherlands	1,221.4	3.3	6.8	18.1
United Kingdom	1,199.8	3.3	15.5	2.9
New Zealand	1,073.2	2.9	-1.3	12.9
China (mainland)	1,025.8	2.8	16.3	17.3

U.S. exports to:	Exports, 2000	Share of processed food exports	Change 1998-99	Change 1999-20
	Million dollars	*Percent*		
Japan	6,213.6	20.7	6.1	3.3
Canada	5,746.5	19.1	3.7	5.6
Mexico	3,369.0	11.2	1.0	16.9
South Korea	1,839.6	6.1	46.1	32.9
Hong Kong	885.3	2.9	-12.3	-4.8
United Kingdom	741.3	2.5	-1.1	-11.9
China (Taiwan)	730.2	2.4	4.7	-0.2
Netherlands	704.6	2.3	1.1	-5.2
China (mainland)	661.5	2.2	-46.3	46.3
Germany	497.3	1.7	-20.7	1.7

Source: USDA, ERS.

Appendix table 40—U.S. processed food exports, by food category and top destination countries, 2000

Country	Value
	Thousand dollars
Meats:	
Japan	2,922,858
Mexico	1,372,252
South Korea	1,152,440
Canada	824,319
Hong Kong	555,859
Dairy:	
Canada	209,364
Mexico	199,502
Japan	105,706
China (Taiwan)	51,652
South Korea	43,882
Processed fruits and vegetables:	
Canada	871,130
Japan	700,340
Mexico	315,863
Netherlands	143,881
South Korea	122,257
Grain mill products:	
Canada	826,520
Japan	569,243
Mexico	434,714
Netherlands	203,467
United Kingdom	130,201
Bakery:	
Canada	315,450
Mexico	35,117
Japan	15,385
Australia	8,922
United Kingdom	8,775
Sugar and confectionery:	
Canada	466,858
Mexico	250,480
Japan	187,264
Germany	128,893
Spain	93,305
Fats and oils:	
Canada	426,100
Mexico	396,982
Switzerland	205,794
Philippines	200,887
Japan	170,177

Continued--

Appendix table 40—U.S. processed food exports, by food category and top destination countries, 2000--Continued

Country	Value
	Thousand dollars
Beverages:	
Canada	534,640
Japan	273,932
United Kingdom	225,057
Mexico	158,108
Netherlands	125,642
Miscellaneous food:	
Canada	1,292,154
Japan	1,268,691
South Korea	282,582
Mexico	206,005
Mainland China	144,133

Source: ERS trade database.

Appendix table 41—U.S. processed food imports, by food category and top originating countries, 2000

Country	Value
	Thousand dollars
Meats:	
Canada	1,909,975
Australia	827,615
New Zealand	539,146
Denmark	211,230
Argentina	116,673
Dairy:	
New Zealand	331,027
Italy	148,074
Ireland	133,721
France	130,376
Netherlands	118,399
Processed fruits and vegetables:	
Canada	756,146
Mexico	554,122
Spain	268,292
Mainland China	205,798
Costa Rica	178,977
Grain mill products:	
Canada	631,020
Thailand	161,709
Germany	66,700
India	46,277
Netherlands	41,625
Bakery:	
Canada	467,589
Mexico	104,118
Italy	59,815
Denmark	54,739
Germany	48,450
Sugar and confectionery:	
Canada	616,819
Brazil	270,317
India	246,957
Ivory Coast	246,310
Mexico	238,554
Fats and oils:	
Canada	482,126
Italy	322,191
Philippines	189,408
Malaysia	119,950
Indonesia	92,966

Continued--

Appendix table 41—U.S. processed food imports, by food category and top originating countries, 2000--Continued

Country	Value
	Thousand dollars
Beverages:	
France	1,607,496
Mexico	1,266,413
Canada	870,735
Netherlands	828,432
United Kingdom	792,408
Miscellaneous food:	
Canada	2,547,701
Thailand	1,815,639
Mexico	659,321
China (mainland)	640,776
Chile	491,247

Source: ERS, trade database.

Appendix table 42—Profile of foreign affiliates of U.S. firms, 1995-98

Sector	1995	1996	1997	1998
		Investment position *(million dollars)*		
Direct foreign investment by the United States:[1]				
Food manufacturing	28,896	31,024	32,465	33,871
Wholesaling	2,466	3,039	3,249	3,968
Foodstores	951	552	697	804
Eating and drinking places	4,592	5,177	5,362	5,690
Total	36,905	39,792	41,773	44,333
		Sales *(million dollars)*		
U.S.- owned subsidiaries:				
All food manufacturing	113,166	122,982	127,710	133,141
Grain mill and bakery	22,202	23,721	25,200	27,448
Beverages	36,958	35,535	39,193	42,127
Meat	4,980	4,192	NA	NA
Dairy	4,093	4,308	NA	NA
Fruits and vegetables	7,989	8,858	9,525	9,801
Other food	36,944	46,368	43,435	42,540
Food wholesaling	18,848	22,134	21,585	20,176
Foodstores	13,165	NA	8,017	8,618
Eating and drinking places	12,145	14,537	NA	NA
Food marketing	157,324	159,653	157,312	161,935
		Number of companies		
Parent:				
Food manufacturing	77	72	69	72
Food wholesaling	13	15	16	14
Foodstores	7	8	6	7
Eating and drinking places	13	7	7	9
Food marketing	103	102	98	102
Affiliates:				
Food manufacturing	764	787	789	823
Food wholesaling	223	217	223	216
Foodstores	19	17	14	16
Eating and drinking places	106	105	113	117
Food marketing	1,093	1,126	1,139	1,172

NA = Not available.

[1] U.S. direct investment abroad.

Source: U.S. Department of Commerce, Bureau of Economic Analysis. *U.S. Direct Investment Abroad*.

Appendix table 43—Profile of U.S. affiliates of foreign firms, 1990-98

Item	1990	1991	1992	1993	1994	1995	1996	1997	1998
				Investment position *(million dollars)*					
Direct foreign investment in the United States:[1]									
Food manufacturing	22,543	24,053	23,771	22,778	21,411	27,032	28,088	26,710	18,112
Wholesaling	1,672	1,956	1,921	1,862	2,163	2,656	2,418	2,927	4,373
Foodstores	3,679	4,917	4,526	5,174	5,516	5,562	7,425	8,814	9,455
Eating and drinking places	1,683	1,698	1,415	1,378	1,093	1,290	1,334	1,691	1,793
Total	29,577	32,624	31,633	31,192	30,183	36,540	39,265	40,142	33,733
				Sales (*million dollars*)					
Foreign-owned subsidiaries:									
All food manufacturing	44,986	44,262	46,799	45,765	46,774	49,227	53,992	48,444	49,815
Beverages	6,163	13,367	14,016	6,652	6,832	7,180	7,888	NA	NA
Meat	882	NA	1,499	1,321	1,377	1,797	3,433	3,011	2,297
Dairy	6,722	NA	6,054	5,996	6,099	6,217	5,070	5,531	6,464
Fruits and vegetables	NA	NA	1,247	1,127	1,159	1,305	8,714	1,359	1,704
Grain mill	NA	NA	11,986	11,582	11,738	12,389	6,480	9,558	9,198
Bakery [2]	4,178	NA	4,943	3,904	4,328	4,545	3,627	12,683	12,780
Other foods	16,321	NA	9,054	15,183	15,241	15,814	18,779	13,262	14,010
Food wholesaling	20,476	19,724	18,894	21,734	22,378	24,333	32,420	41,650	40,096
Foodstore	37,440	47,103	48,159	51,537	51,598	56,298	61,350	67,607	70,662
Eating and drinking places	4,821	4,850	4,904	5,236	5,325	6,046	6,396	6,956	9,147
Food marketing	107,723	115,939	118,756	124,272	126,075	135,904	154,158	164,657	169,720
				Employees (*thousands*)					
All food manufacturing:	247	242	242	200	196	229	214	153	159
Beverages	56	57	66	24	25	26	22	22	29
Meat	NA	NA	7	7	8	56	46	NA	NA
Dairy	NA	NA	25	23	23	15	15	17	20
Fruits and vegetables	NA	NA	NA	NA	NA	NA	38	NA	NA
Grain mill	NA	NA	NA	NA	NA	NA	8	10	11
Bakery [2]	NA	NA	45	32	34	33	25	58	62
Other foods	NA	NA	30	54	54	52	59	39	38
Wholesaling	43	44	43	46	49	34	41	54	52
Foodstore	293	333	351	384	406	409	444	475	497
Eating and drinking places	118	NA	127	118	133	131	148	NA	NA
Food marketing	701	619	763	748	784	803	847	682	708

NA = Not available.

[1] Foreign direct investment in the U.S.

[2] Includes tortillas beginning in 1997.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Foreign Direct Investment in the United States.*