



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



United States
Department of
Agriculture

Economic
Research
Service

Agricultural
Economic
Report
Number 590

Food Marketing Review, 1987



Crisp
Green Cabbage
5 lbs. **99¢**
Cole Slaw Mix. ^{2 1/4-oz. pkg.} **49¢**



Fresh
Cherry Tomatoes
2 pints **\$1**
Chopped Garlic ^{4 1/4-oz. jar} **1 99**



Fresh
Imported Red Plums
lb. **79¢**
Mixed Fruit..... ^{8-oz. pkg.} **1 99**



Fresh California
Romaine Lettuce
2 lbs. **69¢**
Salad Crunchies... ^{2-oz. pkg.} **59¢**

USDA GRADE A FRESH CHICKEN
BREAST QUARTERS
WITH WING & BACK PORTION
89¢ lb.
Breast Quarters... lb. **99¢**
USDA GRADE A
SMOKED TURKEY
2 49

USDA GRADE A
NON-BASTED TURKEYS
FROZEN
OVER 16 lbs.
69¢ lb.
USDA GRADE A
BONELESS HAMS
2 49

BONELESS BEEF
EYE ROUND ROAST
2 69 lb.
USDA CHOICE lb. **2 89**
BEEF
CUBED STEAK
2 79 lb.
USDA CHOICE **2 99** lb.

BONELESS
BEEF BOTTOM ROUND ROAST
1 99 lb.
USDA CHOICE lb.
FRESH
GROUND ROAST
ANY SIZE PACKAGE
2 49 lb.

Additional copies of this report ...

can be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Ask for Food Marketing Review, 1987 (AER-590). Write to the above address for price and ordering instructions. For faster service, call the GPO order desk at 202-783-3238 and charge your purchase to your Visa, MasterCard, or GPO Deposit Account. A 25-percent bulk discount is available on orders of 100 or more copies shipped to a single address. Please add 25 percent extra for postage for shipments to foreign addresses.

Microfiche copies (\$6.95 for each report plus \$3 per order for processing) can be purchased from the order desk, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. Enclose check or money order payable to NTIS. For faster service, call NTIS at 703-487-4650 and charge your purchase to your Visa, MasterCard, American Express, or NTIS Deposit Account. NTIS will ship rush orders within 24 hours for an extra \$10; charge your rush order by calling 800-336-4700.

The Economic Research Service has no copies for free mailing.

ABSTRACT

Sales of the U.S. food marketing system rose about 4 percent to \$600 billion in 1987. Competition for shelf space in the Nation's foodstores intensified, as reflected in over 10,000 new product introductions and a 5-percent increase in advertising expenditures to \$10 billion. The number of food marketing mergers and divestitures declined slightly from the record 584 in 1986. The foodservice sector increased its share of total food expenditures to 45 percent. U.S. food marketing firms invested almost \$13.5 billion in foreign operations in 1986; the return flow of foreign investment in U.S. food marketing reached \$17.5 billion. Both were record investment levels. The United States posted its sixth consecutive trade deficit for processed food. Food processors spent \$11.3 billion in new plant and equipment and \$1.3 billion on research and development.

Keywords: Food service, retailing, manufacturing, wholesaling, marketing, size, structure, behavior.

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

ACKNOWLEDGMENTS

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

Anthony E. Gallo	Project coordinator	202/786-1866
	and food manufacturing	
Walter B. Epps	Food wholesaling	
Phillip R. Kaufman	Food retailing	
Charles R. Handy	Food retailing and section leader	
Harold R. Linstrom	Food service	
Lester H. Myers	Branch chief	

The authors are grateful to Frank Panyko and Alden Manchester for their technical assistance. Charlene Price prepared the charts and assisted with the foodservice section. Karen Yvonne Davis typed the manuscript. Lindsay Mann edited the final manuscript.

CONTENTS

	<u>Page</u>
SUMMARY	iii
GLOSSARY	iv
INTRODUCTION	1
BACKGROUND	2
MARKET SIZE	2
Food Marketing and the American Economy	4
Changing Structure and Organization	5
Performance and Conduct in 1986 and 1987	8
FOOD MANUFACTURING	12
Size	13
Economic Climate	13
Market Competition	15
Structure and Organization	16
1987 Performance	17
FOOD PROCESSING SECTORS	18
Meat Products	18
Dairy	21
Preserved Fruits and Vegetables	22
Bakery Products	22
Beverages	23
FOOD WHOLESALING	24
Sales	24
Structure and Organization	27
Performance	32
FOOD RETAILING	32
Growth	34
Structure and Organization	35
Foreign Developments	41
Performance	43
FOOD SERVICE	46
Composition	47
Sales	47
Franchising	48
Mergers	50
Productivity	51
Advertising	52
Menu Prices	53
Costs	54
Outlook	55
REFERENCES	57
LIST OF APPENDIX TABLES	61

SUMMARY

Total sales of the U.S. food marketing system reached more than \$600 billion in 1987, including \$238 billion for food consumed at home, \$205 billion for food consumed away from home, and \$71 billion for alcoholic drinks and packaged beverages. Merger activity increased markedly throughout the U.S. food marketing system, reaching 584 mergers in 1986 (the most recent data), compared with 480 in 1985. Plant and equipment expenditures reached \$11.3 billion in 1986, up from \$10.5 billion in 1985. This report analyzes these and other developments in the U.S. food marketing system.

Other highlights of the U.S. food marketing system in 1986 and 1987 include:

- o Of the 584 food marketing mergers and divestitures in 1986, 42 involved purchase prices of more than \$100 million.
- o Total food-related advertising probably reached \$10 billion in 1987, after growing by 7 percent to \$9.8 billion in 1986. Advertising spending by food processors rose modestly compared with a rise of more than 10 percent by the foodservice sector.
- o More than 10,000 grocery products were introduced in 1987, about 25 percent more than in 1986. That number included more than 7,900 new food products, also up about 25 percent over 1986.
- o Aftertax profits of food retailers dropped to 13.1 percent in 1986 from 14.2 percent in 1985. In the same years, aftertax profits for food and tobacco processors rose from 15.3 percent to 16.2 percent.
- o The United States posted its sixth consecutive trade deficit in processed foods trade in 1987. The deficit reached a record high of more than \$6 billion.
- o U.S. food marketing firms invested almost \$13.5 billion in foreign operations in 1986. Foreign food firms invested almost \$17.5 billion in U.S. food marketing industries that year.

GLOSSARY

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

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

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

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

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

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

Commercial establishments--Public establishments (free standing or part of a host establishment) with the objective of preparing, serving, and selling meals and snacks for profit to the general public.

Drinking places--Establishments with food service that do not operate as subordinate facilities of different and separately identifiable kinds of businesses and whose primary function is the sale of alcoholic beverages sold for consumption on the premises. Includes bars, beer gardens, taverns, night clubs, and saloons.

Eating places--Establishments that do not operate as subordinate facilities of different and separately identifiable kinds of businesses, and the primary function of which is the sale of prepared meals and snacks for onpremise or immediate consumption. Includes restaurants, lunchrooms, fast food outlets, and cafeterias.

Lodging places--Establishments that provide both lodging and food service to the general public. Included are hotels, motels, and tourist courts. Excluded are rooming and boarding houses and private residences.

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

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

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

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

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

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

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

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

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

Convenience store--A small grocery store selling a limited variety of food and nonfood products, typically open extended hours.

Superette--A grocery store, primarily self-service in operation, selling a wide variety of food and nonfood products with annual sales below \$2.5 million in 1985 dollars.

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

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

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

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

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

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

Megamerger--A very large merger.

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

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

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

Agents and brokers--Wholesale operators who buy or sell on the account of others for a commission and usually do not store or physically handle products.

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

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

General line wholesale merchants--Merchants handling a broad line of dry groceries, health and beauty aids, and household products.

Limited line wholesale merchants--Merchants who handle a narrow range of dry groceries dominated by canned foods, coffee, spices, bread, and soft drinks.

Specialty wholesale merchants--Merchants who handle perishables, such as frozen foods, dairy products, poultry, meat, fish, fruits, and vegetables.

Food Marketing Review, 1987

INTRODUCTION

The U.S. food marketing system, that combination of about 600,000 manufacturers, wholesalers, retailers, and restaurateurs--the four principal food marketing industries--which process and distribute the Nation's food supply, continued to undergo fundamental changes in size, structure, behavior, and performance in 1986 and 1987.

The system accounted for nearly 40 percent of food processing shipments among the 24 member nations of the Organization for Economic Cooperation and Development (OECD) and 10 percent of both the U.S. gross national product (GNP) and employment. The Nation's food retailers and restaurateurs averaged daily sales of over \$1.5 billion. A new fast food franchise opened every 2 hours, an estimated 20 retail foodstores closed each week, and the number of food processing plants also declined sharply. About 15 mergers and divestitures took place each week, and more than 3 a month were worth over \$100 million in 1986. As a result, the sales ranking of the top firms in each of the four food marketing industries changed drastically. Nearly 200 new grocery products were introduced each week. As the Nation's largest advertiser, the food system spent nearly \$1 billion a month advertising and promoting food products.

This report analyzes and assesses recent developments in the U.S. food marketing system, encompassing all firms marketing the U.S. food supply. Much of the yearly and other periodic data used in this report are taken from U.S. Government agencies. Other data are derived from consulting firms, trade associations, academic research, and trade publications. Because availability of information differed, various sections of this report treat industry scope, analyses of market levels, and emphasis of relevant variables in different ways. Some of the analysis is based on 1982 Census data, the most recent year available. These data represent the most complete information for measuring the structural and performance characteristics of the food marketing industries. Chapters on individual industries contain later data from secondary sources, including trade journals and statistics by Government regulatory agencies. Where possible, we have made annual estimates when data are available only every 5 years from the Bureau of the Census.

BACKGROUND

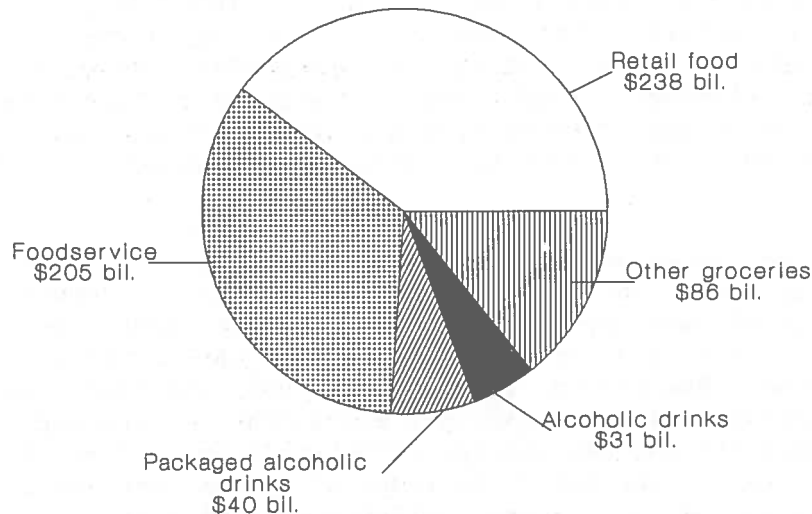
The food marketing system in 1987 faced wage and price stability, especially in agricultural and labor markets, and a strong economy. Last year's below-average growth reflected the food system's trend as a slow growth industry. More significantly, however, both 1986 and 1987 continued to see major restructuring in all segments of the system, reflected by sharp increases in mergers and divestitures, apparent declines in numbers of establishments and companies in both food manufacturing and retailing, and a decline in the market share of smaller firms. Within this background of slow growth and restructuring, many new products were introduced. Advertising expenditures for the food processing industries rose only modestly, but foodstores and fast food chains increased their advertising expenditures sharply. The system's performance was characterized by a profit-to-sales relationship similar to that of all manufacturing and retailing sectors of the economy. Other performance measures continued to reflect declining productivity in retail foodstores, but increases in some food processing industries. New capital expenditures were commensurate in size with the food system's share of total U.S. output. Within the global economy, U.S. food marketing ranked first in production, employment, output, and investment, but continued its trade deficit for the sixth consecutive year. Within the domestic economy, the food system again accounted for 10 percent of GNP and employment, despite a slower growth trend. In 1987, food manufacturers, wholesalers, retailers, and restaurateurs again ranked first in sales among their respective industries.

MARKET SIZE

Sales of food purchased in stores and foodservice establishments, packaged alcoholic beverages and drinks purchased at eating and drinking places, and nonfood items purchased in the retail food system probably reached \$600 billion in 1987 (fig. 1). About \$238 billion of this amount was spent on food in retail groceries and \$205 billion in foodservice establishments (app. table 1). Consumers purchased about \$71 billion in packaged alcoholic beverages and drinks (app. table 2) and \$86 billion in nonfood items. About 23 percent of final retail sales for supermarkets are for nonfood grocery items such as household supplies, paper products, pet foods, health and beauty aids, and general merchandise (app. table 3).

In 1987, the composition of retail sales changed significantly from the 1970's. The portion of sales through the food marketing system for food purchased at foodstores declined from 45 percent to 40 percent, while the foodservice share of food marketing sales rose from 30 to 34 percent. Sales of alcohol showed a slight drop, from 13 to 12 percent, and nonfood items rose from 11 to 14 percent of the estimated market share. In 1986, the Nation's supermarkets accounted for 70 percent of all foodstore sales. Within supermarkets, food accounted for 77 percent of total store volume. Perishables, such as meat, dairy, and produce, accounted for 48 percent and packaged foods for 29 percent. Nonfood items such as health and beauty aids, general merchandise, and grocery noneatables (household supplies, tobacco products, pet foods, and paper products) accounted for over 20 percent of supermarket sales.

Figure 1
**Sales through the food marketing system,
 by sector, 1987**



Source: (21).

The \$200-billion foodservice industry (including alcoholic drinks) in 1987 found restaurateurs controlling about 75 percent of that market, while noncommercial feeding establishments accounted for the other 25 percent. About 50 percent of money spent in separate eating places went into fast food restaurants in 1987 (app. table 4).

The \$70-billion market for alcoholic beverages in 1987 included over \$40 billion in packaged alcoholic beverages and \$31 billion in alcoholic drinks (app. table 2). In recent years, alcoholic beverage sales in foodstores have grown to about the level of liquor store sales. Of greater significance, however, is the shift in market share among distilled spirits, wine, and beer. In 1987, distilled spirits probably accounted for less than 33 percent of total alcoholic beverage sales, compared with over 50 percent in 1977. The wine market appears to account for about 13 percent, increasing its share at a steady pace each year. Beer sales now account for about 54 percent of the alcoholic beverage market (app. table 5).

Despite changes in the size of individual components of the food marketing system, it has not grown as much as the general economy. In 1987, food expenditures, excluding alcoholic beverages, declined for the sixth consecutive year, falling from 15.4 percent of disposable personal income in 1982 to 14.3 percent in 1987 (48).^{1/}

^{1/} Underscored numbers in parentheses identify references listed at the end of the report.

Food Marketing and the American Economy

For the third consecutive year, the economic climate governing the food marketing system in 1987 was excellent in terms of both costs and demand (app. table 27). Moderate inflation and 5 years of uninterrupted economic expansion--the longest peacetime expansion since 1954--benefited the American economy in 1987. For the food sector, economic developments have their greatest effects on costs because of the system's labor intensity and dependence on farm prices. Continued low farm prices, along with minimal increases in food processing, wholesaling, and foodservice wages, benefited the food system. Although demand growth in food and alcoholic beverages is fairly stable, the strong economic growth in 1987 strongly favored the restaurant industry which is very much affected by changes in economic prosperity.

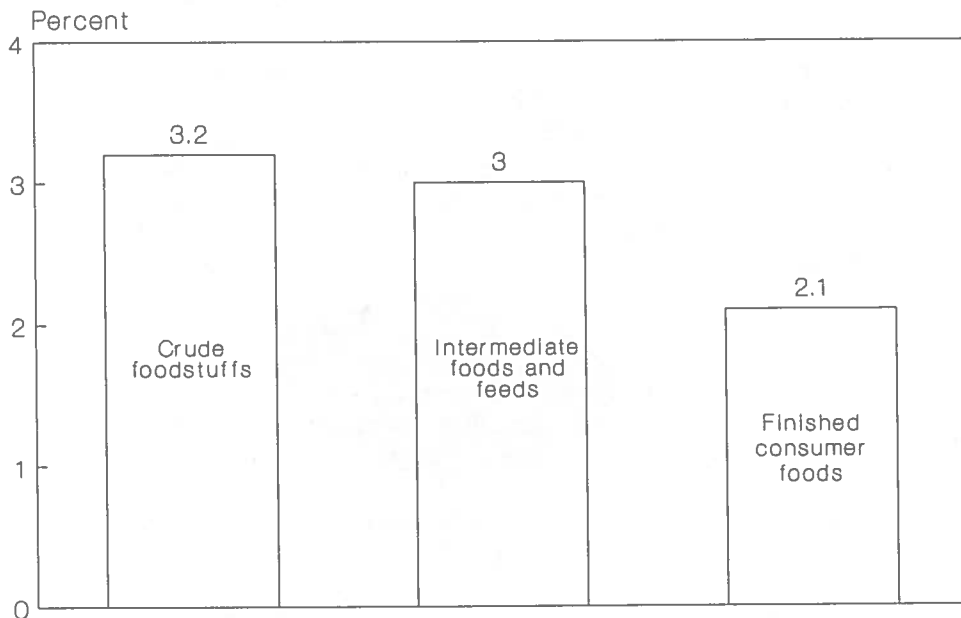
Price stability for purchased food and feed inputs for each channel in the food marketing system is reflected by the producer price index (PPI, fig. 2). The PPI for finished consumer foods, an indicator of changes in prices paid by retailers, wholesalers, and restaurateurs to food manufacturers, rose 2.1 percent above 1986. The PPI for intermediate foods and feeds, an indication of changes in prices food processors pay one another, increased 3 percent. The PPI for foodstuffs and feedstuffs, prices paid by food manufacturers at 37 major markets, rose 3.2 percent. The index of prices received by farmers in 1987 increased 3 percent on average, following a 5-percent decline in 1986 and no change in 1985. The 1987 index reflected a 6-percent increase for livestock products and a 1-percent increase for crop products. Among livestock products, poultry and egg prices dropped 16 percent, but dairy prices were unchanged. The 7-percent increase in meat animal prices was largely due to higher hog prices. Among crop products, food grain prices dropped 6 percent and averaged 40 percent below 1984. Oil crop prices rose 4 percent.

For the fourth consecutive year, labor costs, which include hourly earnings and fringe benefits, constituted the major expense item for the food marketing system. In 1987, the food marketing system had almost 13 million full- and part-time employees (app. table 30). Almost 6 million were employed in food service, and more than 5.5 million were employed in food retailing. About 1.6 million were employed in food processing, and fewer than 800,000 worked in grocery wholesaling. Average hourly earnings in food retailing declined for the third consecutive year, while wholesaling and food processing wages increased less than 2.5 percent (app. table 32). In food retailing, wage concessions, benefit reductions, and lump sum payments in lieu of wage hikes were frequently negotiated.

A number of other cost factors which affect the food system, however, were less positive than farm price and wage developments. Energy prices, which dropped 15 percent in 1986, returned to 1985 levels in 1987, thus increasing both transporting and packaging costs. The food system, the economy's largest advertiser, faced increased advertising costs for evening network television, network radio, magazines, and newspapers (app. table 37). Both long-term and short-term interest rates, which dropped significantly in 1986 and through the first half of 1987, began rising.

Higher interest rates can constrain food manufacturing because of loans which are necessary for the purchase of both short- and long-term assets. By yearend, the prime rate was 8.75 percent, compared with 7.5 percent at the end

Figure 2
Price increases in the food marketing system, 1987



Source: (85).

of 1986. The rates on Moody's AAA 20-year bonds rose from 8.67 percent in the fourth quarter of 1986 to 10.21 percent in the fourth quarter of 1987 (app. table 29). The value of the U.S. dollar also continued its decline in 1987, further raising the price of food imports.

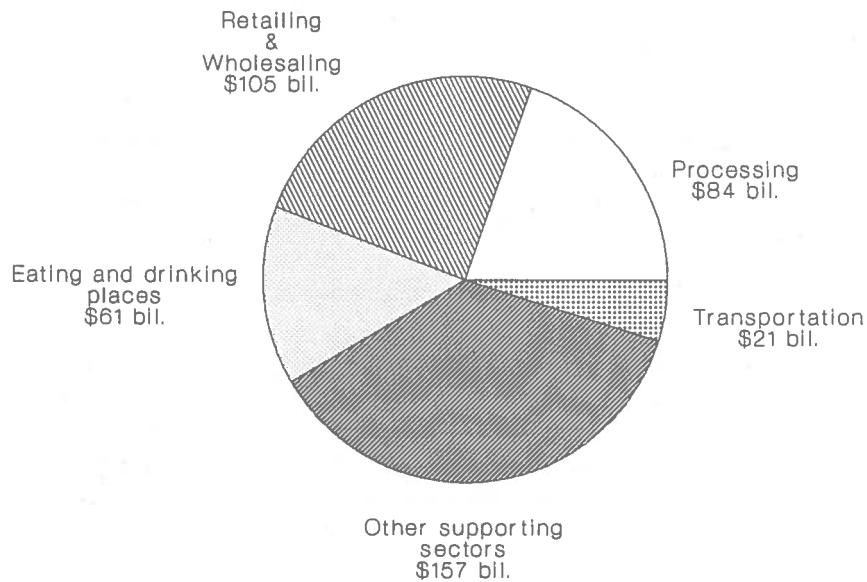
On the demand side, all indicators were favorable to food markets. A 2.2-million increase in population and 2.5-million rise in total Americans employed accompanied a decline in the unemployment rate from 7 percent in 1986 to 6.3 percent in 1987. Per capita disposable income rose about 1 percent after an adjustment for a 3.5-percent inflation rate.

Within this economic framework, the Economic Research Service (ERS) estimates that the food system purchased about \$95 billion in animal and crop products from the U.S. farm sector, about 65 percent of domestic production (42). An additional \$19 billion was spent on imported agricultural products, including \$7 billion for such noncompetitive products as coffee, bananas, cocoa, and spices and \$12 billion for such competitive products as alcoholic beverages, dairy, meats, and produce. Another \$8-\$9 billion was spent on seafood (app. table 52). To this base of \$120 billion of raw agricultural and fishery products, the food system added an estimated \$430 billion in value. Food processors added about \$85 billion in 1987, while wholesalers, retailers, institutional feeders, and transportation firms added another \$125 billion (fig. 3). The contribution of separate eating and drinking places, about 400,000 establishments, topped \$63 billion.

Changing Structure and Organization

Changing structure was the most significant development in the food marketing system in both 1987 and 1986. Structure--the number of firms in an industry

Figure 3
Value added in food marketing, 1986



Source: (20).

and their relative market share--affects not only other firms in the system, but also farmers and consumers. Within the system, structure can affect such performance measures as profitability, research and development, new product introduction, and the ability of new firms to enter the industry. The Nation's farm sector can be affected in prices it receives if the number of purchasers decline. Consumers may be affected by the prices they pay in restaurants and retail foodstores.

In recent years, nearly all sectors of the American economy have been characterized by a drop in the total number of firms and establishments, a sharp decline in the share of market sales by smaller firms (those with fewer than 100 employees), and an increase in market share controlled by the largest four or eight firms. These structural changes have been even more pronounced within the food marketing system. Data acquired by the Bureau of the Census in 1987 will not be available until 1990, but the vast changes in market structure between 1977 and 1982 appear to be continuing well into the later 1980's. Strong merger and divestiture activity, limited entry of new firms trying to make significant inroads into market control, and a decline in the number of companies in food processing, retailing, and food service support the apparently increased concentration. However, tremendous variability exists within the food marketing system. For food wholesaling, retailing, food service, and dairy, bakery, and soft drink processors, the degree of local market competition, or concentration, is very important. Some local markets for food retailing and wholesaling are highly competitive, while others are not. Concentration in food service appears to be minimal. Food manufacturing contains 47 separate industries where four-firm concentration ratios varied from 14 to 95 percent in the 1982 Census data (app. table 14).

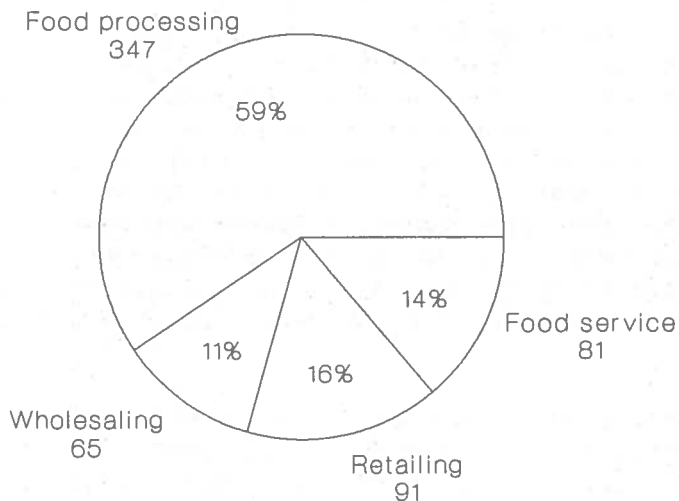
In 1986, the latest year for which complete data are available, there were 584 mergers and divestitures in food marketing, compared with 480 in 1985 and 417 in 1984 (fig. 4). Food retailing mergers and divestitures rose from 52 in 1985 to 91 in 1986 and food processing had 347 mergers and divestitures in 1986. Food wholesaling had 65 mergers and divestitures and food service had 81 in 1986 (app. table 22).

Forty-two food marketing mergers in 1986 were worth more than \$100 million each compared with 25 such transactions in 1985 (app. table 23). The total cost of the 42 largest mergers in 1986 accounted for only 7.5 percent of all food mergers, but amounted to over \$23 billion. In contrast to 1985, some of the largest mergers involved retailing and foodservice firms. The buyout of Safeway stores at \$4.2 billion was the largest in food marketing and the second largest among all industries in 1986. The Unilever Chesebrough-Ponds 1986 merger at \$3 billion was the second largest merger in 1986 and one of five food marketing mergers worth more than \$1 billion. The PepsiCo purchase of Kentucky Fried Chicken at \$850 million and Marriott Corporation's takeover of Saga Corporation at \$500 million were the largest foodservice mergers. Among large-scale mergers, food retailing with 36 and food wholesaling with 39 ranked first among all retailers and wholesalers. Kraft made the most acquisitions at 17, followed by ConAgra and IC Industries at 8 each.

Beatrice divested 10 subsidiaries and RJR Nabisco divested 9 subsidiaries. Divestitures played an even more important role in acquisition activity in 1986 than in 1985. In food processing, 150 of the 347 acquisitions were divestitures, while almost 60 percent of the acquisitions in food retailing were divestitures (app. table 25). Foreign firms also played an important part in food marketing acquisitions, accounting for more than 10 percent of all mergers.

Figure 4

Food marketing mergers--584



Source: (3).

Food merger and divestiture activity continued strongly the first 6 months of 1987, only about 20 percent below the record high of 1986. Food retailing and food processing merger activity was down only slightly from 1986. Food wholesaling and foodservice activity was significantly lower than the first half of the previous year.

Why the interest in acquiring food marketing firms? First, the record activity of 1986 was probably influenced by changes in the Tax Reform Act of 1986 which raised the capital gains tax in 1987 to 28 percent. The existence of some capital gain benefit, although bought at a reduced rate, may also have benefited 1987 activity. However, much of the interest in 1986 and 1987 continued to reflect food marketing attractions as a moderate-growth, but stable, industry. Economic prosperity and the ensuing profitability in American industry have left plenty of cash reserves for acquisitions. But, a very large portion of acquisition activity was comprised of divestitures in which firms exchanged assets. As a consequence, the recorded number of mergers and values involved tend to inflate the pace of merger activity.

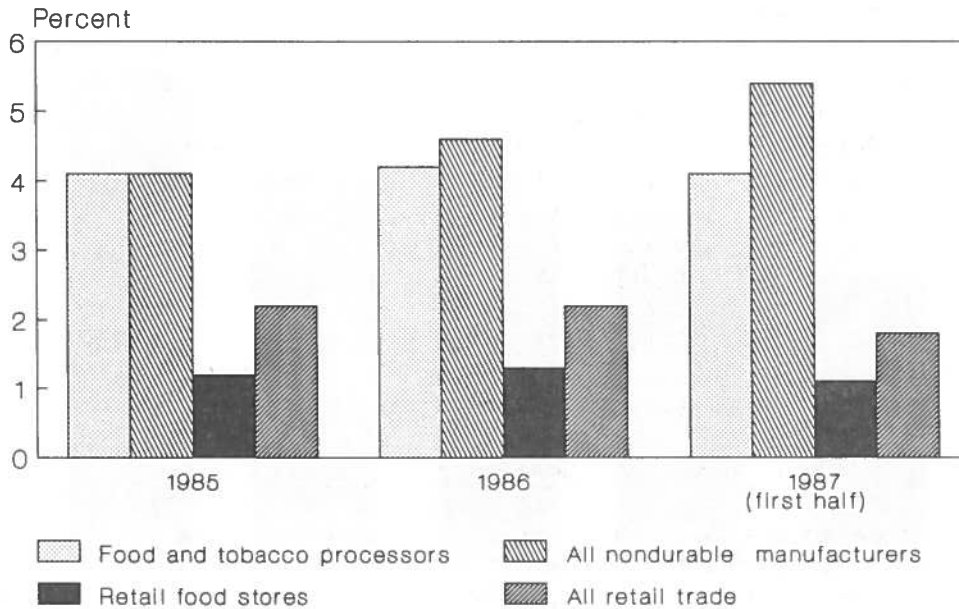
Performance and Conduct in 1986 and 1987

The cost and price scenario in 1987 was essentially a repeat of 1986. A 3- to 6-percent increase in the sales volume of each of the four segments of the food marketing system along with low, stable farm prices, a real decline in payroll, a modest increase in wholesale prices, and a 4-percent increase in retail prices suggest a significantly sharp increase in profitability in 1987. But, because such a large portion of food marketing firms have been amalgamated, discerning a true profit picture is difficult. The Bureau of the Census, in its Quarterly Financial Review, reported food and tobacco as a single industry following the mergers of 1985 (58). The tobacco industry had a much higher profitability than the food processing industry. Profits among the different food processing, retailing, foodservice, and wholesale grocery industries vary significantly, and to an even greater extent among individual firms (app. tables 45-48). Firm size in food marketing also appears to affect profitability: food processing firms with assets below \$25 million have much lower profit/sales ratios than do larger firms.

Nevertheless, within the confines of those restrictions, in the first half of 1987, the profitability of all food and tobacco firms as a percentage of sales was slightly below the profitability of all nondurable-goods industries (58). The \$22 billion in profits after taxes accounted for 4.1 percent of food processing sales, but profits were 5.4 percent of all nondurable-goods industry sales. However, profits after taxes were almost 16 percent of stockholders' equity for food processors, compared with only 14.5 percent for all nondurable manufacturers. Food retailers' profits after taxes were 1.1 percent of sales, considerably below 2.3 percent for all retailers. But, the 12.5-percent return on stockholders' equity compared with 9.5 percent for all retailers (fig. 5).

Research and development (R&D) within the food marketing sector is largely conducted in the food processing industries (app. table 39). Like most other nondurable manufacturing industries, food is not R&D intensive. In 1987, food processors spent about \$1.3 billion, or about 0.4 percent of sales, on R&D. Only about 6 percent of this amount was spent on basic research and another 30 percent was spent on applied research. Over 60 percent of all R&D funding went to process and product R&D. The U.S. Department of Agriculture spent over \$300 million on developing new products and processes, conducting

Figure 5
**Aftertax profits as a percentage
of sales**



Source: (58).

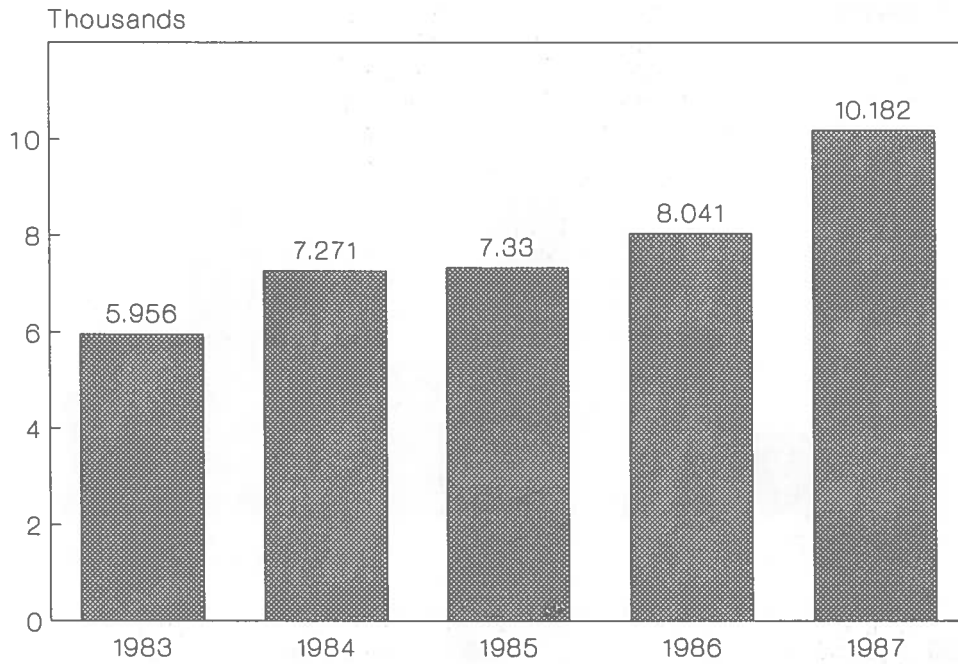
health and nutrition research, expanding export markets, and improving market efficiency.

The result of much of this research enters the market as new products. In 1987, an estimated 10,000 new grocery products appeared on the Nation's grocery shelves, up about 23 percent over the 7,500 new products (excluding size and shape changes) introduced in 1986 (fig. 6).

Another performance measure is the system's ability to expand, modernize, and fully use its production capacity. Food processors spent \$11.3 billion on new plants and equipment in 1987, up about 6.5 percent over 1986 (fig. 7 and app. table 49). During the previous Census years, new capital expenditures for food wholesaling, retailing, and eating and drinking places accounted for about 30 percent of total food marketing capital expenditures. If this same pattern was maintained in 1987, the food marketing sector may have invested around \$15 billion in capital expenditures. We do not yet have information on the extent to which firms used their existing capacity in 1987, but in the 4th quarter of 1986, food processing firms used 78 percent of existing capacity, down 1 percentage point from 1985 (app. table 50). The number of retail stores fell by 2,000 in 1987, but new retail outlets were considerably larger, averaging about 40,000 square feet per store. About 8,000 new fast food restaurants opened in 1987.

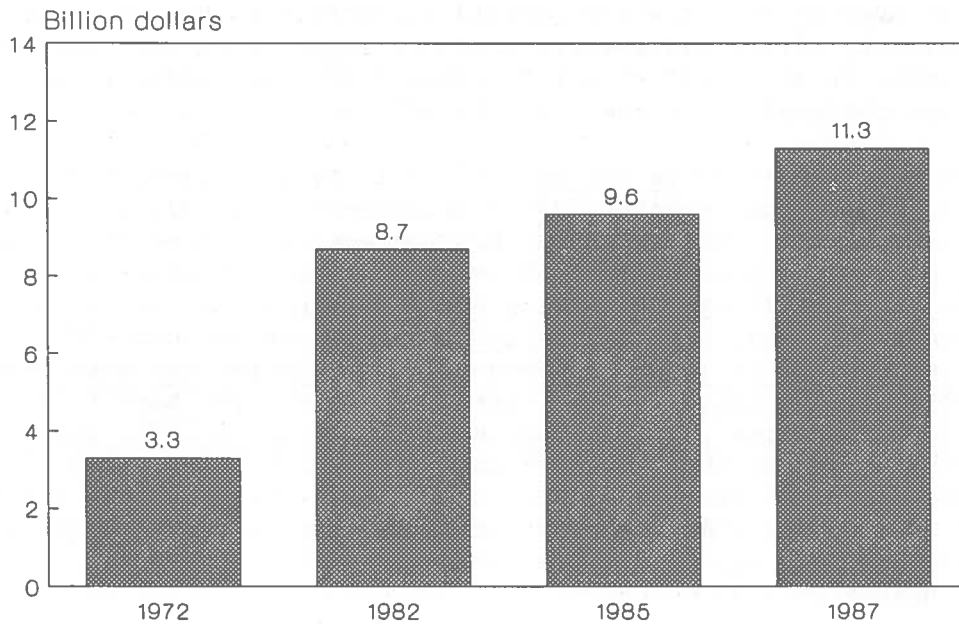
Productivity for 1986, the most recent data available, indicated a continuing decline in output per employee in food retailing, but an increase for food service. This index of labor productivity also increased in many food processing industries (fig. 8).

Figure 6
Grocery product introductions



Source: (29).

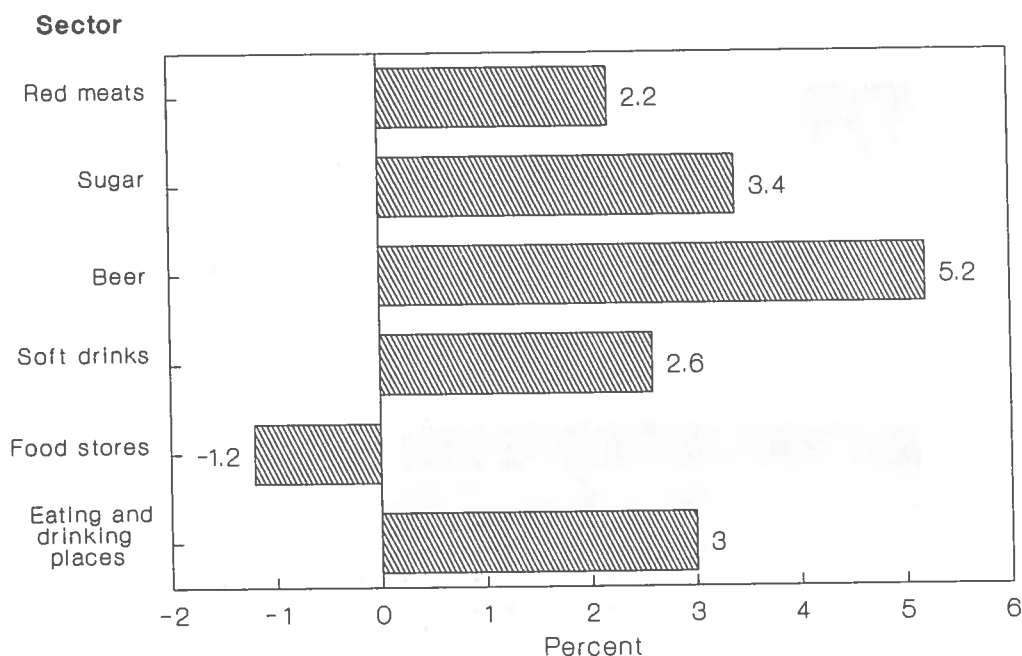
Figure 7
Plant and equipment expenditures in food processing industries



Source: (48).

Figure 8

Changes in output per employee hour, 1985-86*



*Preliminary
Source: (82).

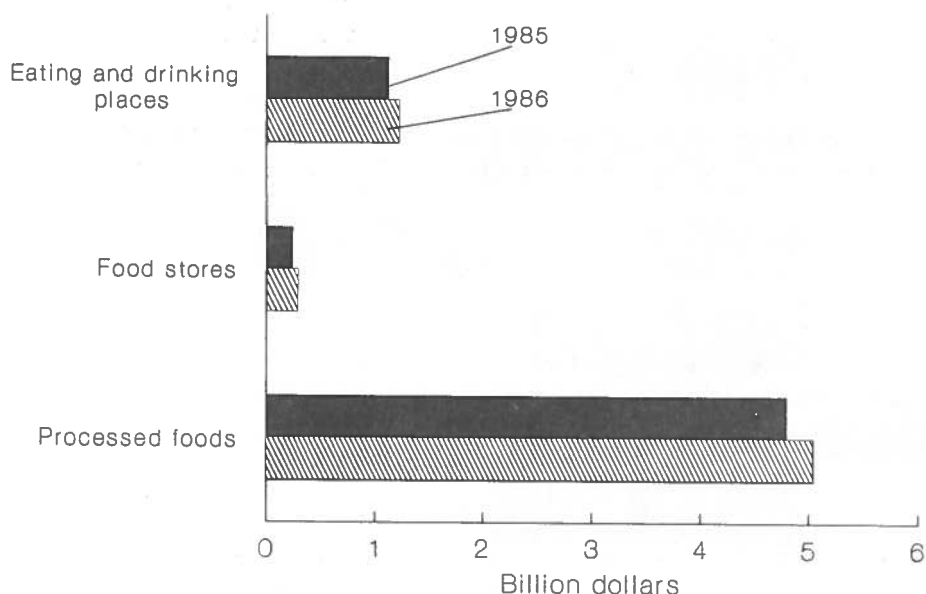
Most of these performance measures are the result of the marketing system's competition among firms and channels to acquire a greater share of the food dollar. Given a moderately growing market and a declining number of firms, remaining companies within each segment of the food marketing system attempted to acquire greater market share in 1987. Food marketing firms spent over \$10 billion on advertising in 1987 to acquire or maintain market share. Food and beverages sales accounted for less than 16.5 percent of disposable personal income in 1987, but the food system accounted for nearly 30 percent of all advertising (figs. 9 and 10).

Food manufacturers' more than 10,000 new products compete vigorously for scarce shelfspace in the Nation's retail outlets. Money spent on food that was consumed at home declined as a share of per capita income for the fourth consecutive year. In each geographic locality, food retailers scramble to acquire a greater market share by developing new store formats and retailing techniques. Sales of eating and drinking places have kept up with changes in income, as continued sharp expansion in outlets and advertising expenditures characterized the behavior of fast food chains. Vertical integration proceeded, reflected by manufacturers' continued entry into food service and wholesalers' entry into retailing.

The food system's performance in the domestic market is related to its role in the international economy. The United States has traditionally been in the forefront of introducing technological changes in food marketing. The supermarket and other retailing methods, fast food facilities, and many of the technological processes and new product introductions (such as frozen foods) have been American introductions. In 1987, the United States accounted for about 40 percent of all processed food production, 25 percent of all food

Figure 9

**Advertising in food marketing,
by sector in seven major media**



Source: (4).

industry employment, and 36 percent of all food R&D in the OECD countries. In 1986, direct foreign investment in the U.S. food marketing system amounted to \$17 billion, while the U.S. food marketers had investments of over \$12 billion abroad.

But the U.S. balance of trade in 1987 showed a \$6-billion deficit, the sixth consecutive yearly deficit (app. table 54). Seafood imports accounted for more than half of this deficit, and alcoholic beverages, many of which command high prices, accounted for much of the remainder (app. table 53). Other significant portions of the deficit come from sugar, cocoa and other noncompetitive items, and specialty foods. Offsetting the deficit were large surpluses for U.S. grain mill products and fats and oils.

FOOD MANUFACTURING

The 53 U.S. food processing industries contributed about \$85 billion in value to the food supply in 1987 and shipped about \$330 billion in processed food products. Despite the food processing sector's \$6-billion trade deficit, the United States remained the world leader of processed food production. Over 7,900 new food products were introduced, and the industry spent nearly \$7 billion on advertising and promotion and \$1 billion on R&D. Labor productivity per hour in 1986 and apparently 1987 increased for most food processing industries and capital expenditures for new plant and equipment rose to \$11.5 billion. Net income after taxes for the 53 industries reached about \$22 billion, as farm prices were stable and wage increases for the 1.7 million employees were moderate. The nearly 350 mergers and divestitures of

1986 compared with 290 in 1985, and merger activity for the first 9 months of 1987 moved at a brisk pace. However, the food processing industries are diverse, and merger activity, other changes in structure, size, competitive conduct, and performance varied greatly among them.

Size

In 1987, food manufacturers' shipments reached \$330 billion, 5 percent more than in 1986 (app. table 7). The apparent growth was lower than the estimated 8-percent annual increase for all manufacturers' shipments. Because of the stability of food consumption, food manufacturing shipments tend to be more stable than those in other industries, falling less during recessions and rising less during expansion.

The overall growth rate in food manufacturing conceals wide variations across individual food industries. Cheese, poultry processing, chips, soft drinks, wines, and many frozen specialty products have grown rapidly in recent years. By contrast, butter, fluid milk, canned fruits and vegetables, and sugar have held steady or declined. Preliminary data from the Bureau of the Census indicate that 1987 meat shipments rose 8 percent above those of 1986 and that dairy shipments were 11.5 percent higher. Beverage shipments increased 7 percent, but fats and oils rose only 2 percent. Shipments of all other foods amounted to about \$1 billion. Annual variations in the value of shipments can result from higher inventory buildup by purchasers and higher prices. More than 25 percent of manufacturers' shipments are sold to other manufacturers (for example, cheese processors sell to frozen pizza manufacturers).

Economic Climate

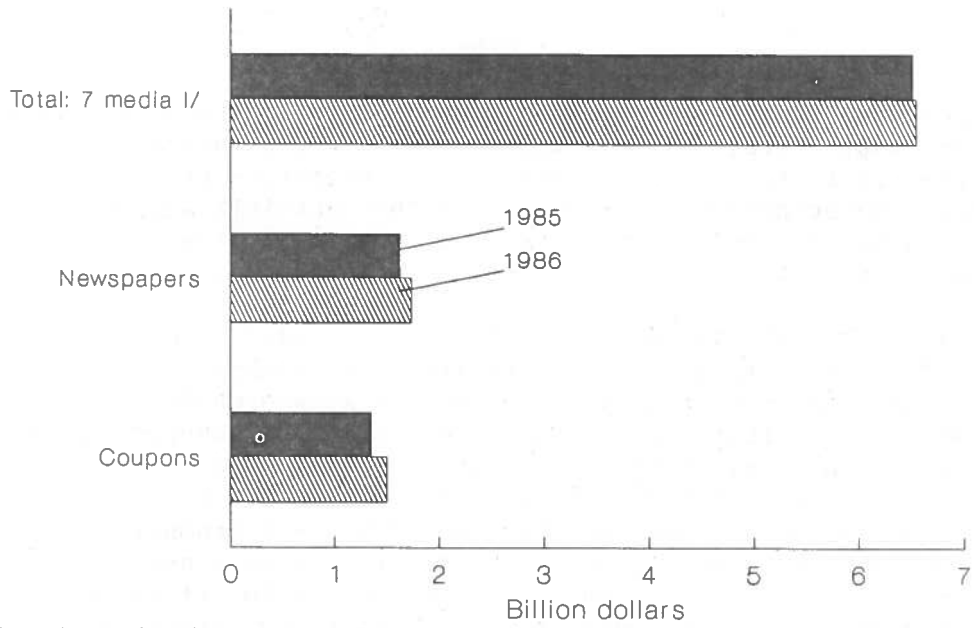
For the third consecutive year, the food processing industries enjoyed strong economic growth on the demand side and wage and price stability on the supply side (fig. 11). Farm prices in 1987 averaged only 4 percent above the depressed levels of 1986. Food manufacturers paid 3 percent more at wholesale. Dairy prices were about the same as in 1986, but cattle prices in 17 markets averaged 15 percent more. Poultry prices dropped about 20 percent (app. table 28).

Average hourly labor costs rose modestly for the third consecutive year, averaging 2 percent above 1986; thus, real earnings declined (fig. 11). Employment increased about 2 percent to about 1.2 million employees (app. table 31).

Among other cost components affected by the economic environment were interest rates on long-term debt such as funds for the \$11.3 billion in new plant and equipment investments and on short-term operating debt in this moderately leveraged industry. The prime interest rate, which fell to 7 percent by mid-1987, had risen to about 9.5 percent by yearend. Energy prices for the year averaged about 10.5 percent above 1986, but packaging materials such as glass, paperboard, and plastics were 6 percent higher. Advertising prices in this advertising-intensive industry rose sharply. Advertising time on evening network programming cost 9 percent more in 1987.

Food processors purchased over \$122 billion in raw materials in 1987, including \$95 billion of U.S. agricultural products, \$19 billion of imported foods, and \$8 billion of seafood. Food processors added \$85 billion of value, about 5 percent above the estimated 1986 value. This added value includes

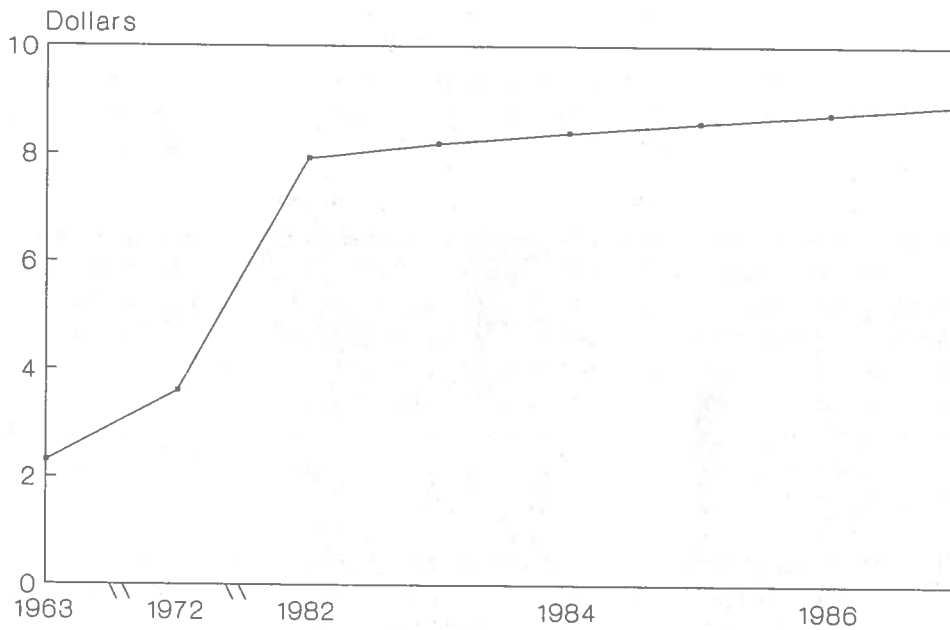
Figure 10
**Advertising in food marketing,
 by media**



1/ Network, spot (local), and cable television, network radio, billboards, magazines, newspaper supplements.

Source: (1, 4, 27).

Figure 11
**Average hourly wage rates
 in food processing**



Source: (84).

production and managerial labor, energy, profits, packaging, advertising, interest, and other processing costs involved in changing raw agricultural products to food products. However, the value added by processing varies among the food processing industries.

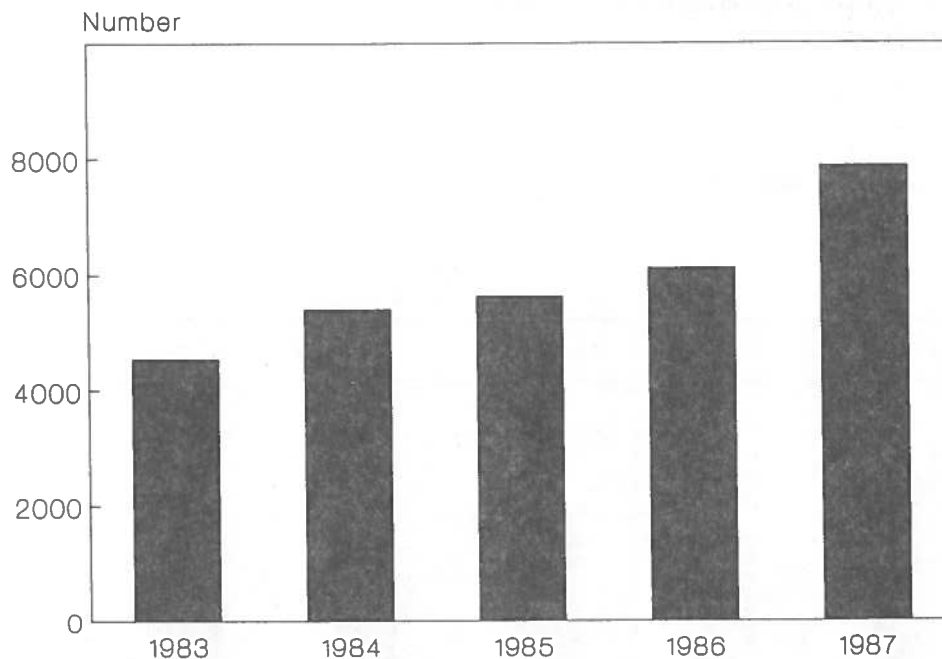
Market Competition

The food manufacturing industries face a slow-growth but stable market, although there is tremendous variation among the 53 industries. Therefore, to acquire a greater share of a slowly growing market, food processors try to attract consumers by product differentiation through both advertising and new product introduction. Only about 40 percent of all food manufacturer shipments are branded, packaged goods which lend themselves to high product differentiation and mass media advertising. More than 25 percent of product shipments are sold to other manufacturers, and another 33 percent are sold to foodservice operations or are undifferentiated. Nevertheless, the trend in recent years has been for more product differentiation through promotion and advertising even among such traditionally undifferentiated products as red meats, poultry, fish, and dairy.

Almost 7,900 new food products were introduced in 1987, compared with 6,100 in 1986 and 5,600 in 1985 (fig. 12). This estimate excludes new size introductions, which would make the estimate even higher if included. We have no data measuring the success of these new products or the number of recent products which have been removed from the market.

As the Nation's largest food advertisers, food processors spent more than \$5 billion on advertising in seven media in 1986 (app. table 34). (The seven

Figure 12
New food product introductions



Source: (26).

media are network television, spot (local) television, cable television, magazines, newspaper supplements, network radio, and billboards.) The three largest advertisers--Procter & Gamble, Philip Morris Cos., and RJR Nabisco--are all involved in food processing and account for 10 percent of all advertising in the American economy. Eight of the Nation's top 10 advertisers are food processors. Food processors are also the leading users of coupon advertising, accounting for about \$1.5 billion in coupon redemptions. Total advertising, including newspapers, amounted to an estimated \$7 billion in 1987. Promotional discounts and allowances to retailers, which are believed to about match consumer advertising expenditures, are not included in this estimate. Media expenditures for the first 9 months of 1987 averaged 2.5 percent above 1986, with major drops for cooking products, distilled spirits, confectionery, and wine.

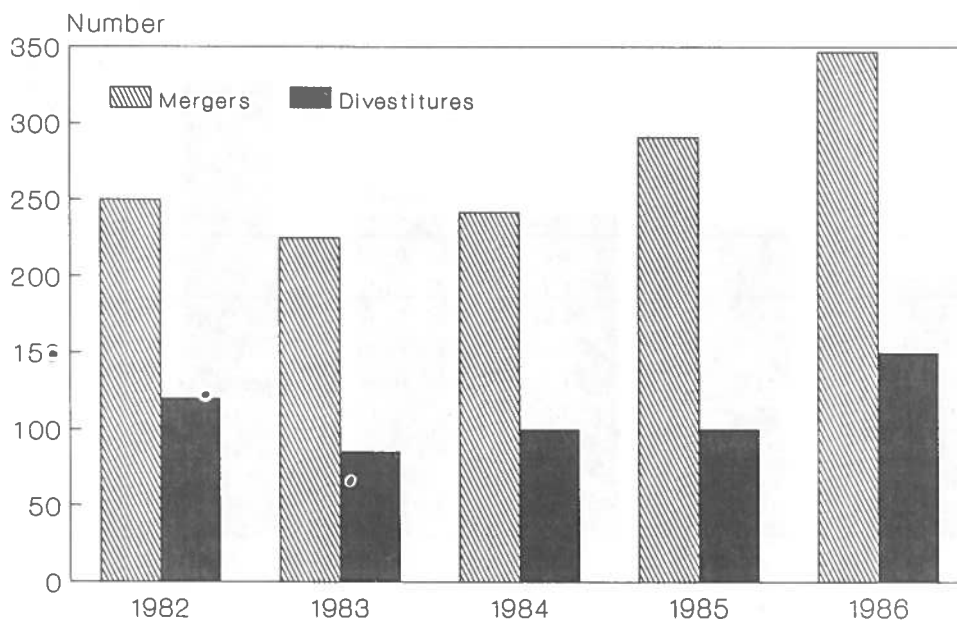
Structure and Organization

The food manufacturing industries have been characterized by major structural changes in recent years. Nearly all of the 53 food processing industries have experienced a sharp decline in both the number of firms and establishments, limited entry of new firms, and increasing share of total sales by the four or eight largest firms. The food manufacturing industries have actively pursued mergers and divestitures during the past few years. In 1986, the latest year for which complete data are available, the number of acquisitions and mergers increased sharply, jumping to 347, compared with 291 in 1985. However, divestitures also rose sharply, rising to 150 from 103 in 1985 (fig. 13).

Of the 347 mergers in food processing in 1986, 35 had a price of \$100 million or more, compared with only 23 in 1985 (app. table 23). The Unilever, N.V., purchase of Chesebrough-Ponds for more than \$3 billion was the largest.

Figure 13

Mergers and divestitures in food processing



Source: (3).

Ralston Purina and Coca-Cola each purchased nonfood operations of about \$1.4 billion. Coca-Cola also purchased the Canadian bottling operations of Beatrice Companies for \$1 billion.

Kraft was the most aggressive acquirer, purchasing 17 companies. ConAgra and IC Industries each acquired eight companies, while Coca-Cola, Pillsbury, W.R. Grace, and Borden each acquired seven. But, the food processing industries are also divestiture leaders. Beatrice ranked first in divestitures with 10, followed by RJR Nabisco with 9. Colgate Palmolive and W.R. Grace had six divestitures each and International Multifoods had five.

Foreign firms acquired 38 U.S. food processors or subsidiaries of U.S. food processors (3). In 27 of these acquisitions, the foreign firm purchased a subsidiary rather than the entire firm. U.S. food processors also acquired several firms or subsidiaries of foreign firms. In 1986, U.S. food processors acquired 22 foreign firms or their subsidiaries.

In 1987, merger and divestiture activity continued strong. During the first 6 months, 51 mergers and acquisitions were recorded among diversified food processors, down only slightly from 1986. Borden, Cargill, ConAgra, Kraft, and Sara Lee were among the most active. The number of mergers for dairy and poultry processors matched or exceeded 1986 levels.

The continued interest in the food processing industry in 1986 and 1987 largely mirrored strong merger activity throughout the U.S. economy. Many mergers in both 1986 and 1987 reflected the divestiture of companies or subsidiaries of previous mergers. Thus, much of the activity continues to involve restructuring and spinoffs. Lower interest rates and the capital gains preferences in 1986, and to a lesser degree in 1987, continued to encourage selloffs in those particular years.

1987 Performance

The performance of the 53 food processing industries is difficult to assess for such commonly accepted indicators as profitability, productivity, capacity utilization, capital expansion, foreign trade, investment, and producer prices. These performance measures range widely in a composite industry, running the gamut from breakfast cereals to frozen specialties. Much of this information is not available for the individual food processing industries. Measuring these performance barometers for all food processing industries, however, indicates composite performance among all the 53 industries.

In 1986, food and tobacco manufacturers had profits of \$22 billion on sales of about \$300 billion on an enterprise basis, as opposed to establishment basis (58). Only firms whose principal activity is food processing are included. Profits after taxes as a percentage of sales show a return of 4.2 percent for food and tobacco processors, slightly below the return on sales of 4.6 percent of all nondurable manufacturing (app. table 42). However, the after-tax return on stockholders' equity for food and tobacco manufacturers was nearly 16.5 percent compared with only 11.5 percent for nondurable manufacturers. Preliminary data for the first 9 months of 1987 show a similar pattern. Food and tobacco processors had a 16-percent return on stockholders' equity and their after-tax income was 4.1 percent of sales. The average for all nondurable manufacturers was a 14.5-percent return on stockholders' equity and a 5.5-percent return on sales.

Labor productivity, another performance measure, has increased in some food manufacturing industries in recent years. For 1986, output per employee hour for red meats, beer, sugar, and soft drinks showed sharp increases (app. table 40). Output per employee hour in 1985 (the latest year available) also increased for milk, preserved fruits and vegetables, and bakery products. The overall productivity record may seem high, because it has had no dramatic technical breakthroughs. However, employment levels in food manufacturing industries have remained unchanged while output has been increasing. Thus, output per employee hour has been rising.

The food processing industries on an enterprise basis invested about \$11.3 billion in new plants and equipment in 1987 (fig. 7). This investment was about 10 percent of all new capital expenditures, about the same share as for all manufacturing industries. Existing plants operated at 80 percent of capacity, slightly above the 1985 level, with wide variations among the 53 different industries. R&D expenditures in 1987 by food manufacturers probably reached the \$1.3-billion level, and the Federal Government spent another \$300 million. Over the long term, R&D expenditures by food processors have accounted for less than 0.4 percent of sales, about the same as all nondurable industries' expenditures on R&D. About 70 percent of food processing R&D expenditures is for new product and process development and another 25 percent is for applied research. Only about 5 percent is for basic research.

In foreign trade and international investment, two performance characteristics have become apparent: the United States is the world's leading processor, and the United States generally imports a greater value of processed food than it exports (app. table 53). The United States accounts for 40 percent of the value of production and employment among the 24 OECD countries, the leading processed food producers among developed market-economy countries (fig. 14). U.S. food processors account for 36 percent of the R&D undertaken in these countries (app. table 62).

U.S. firms had investments of almost \$13.5 billion in foreign food marketing operations in 1986, compared with \$17.4 billion invested by foreign owners in U.S. food marketing firms (app. table 55). The 1987 foreign trade deficit in processed foods of over \$6 billion was the sixth consecutive deficit and the highest in history, despite a weakening of the U.S. dollar (fig. 15). Exports of grain mill products and fats and oils only partially offset food imports, led by seafood and beverages (app. table 54). Canned fruits and vegetables--largely orange juice concentrate from Brazil--account for another \$1-billion deficit. Cheese, sugar, and roasted coffee also show major deficits.

FOOD PROCESSING SECTORS

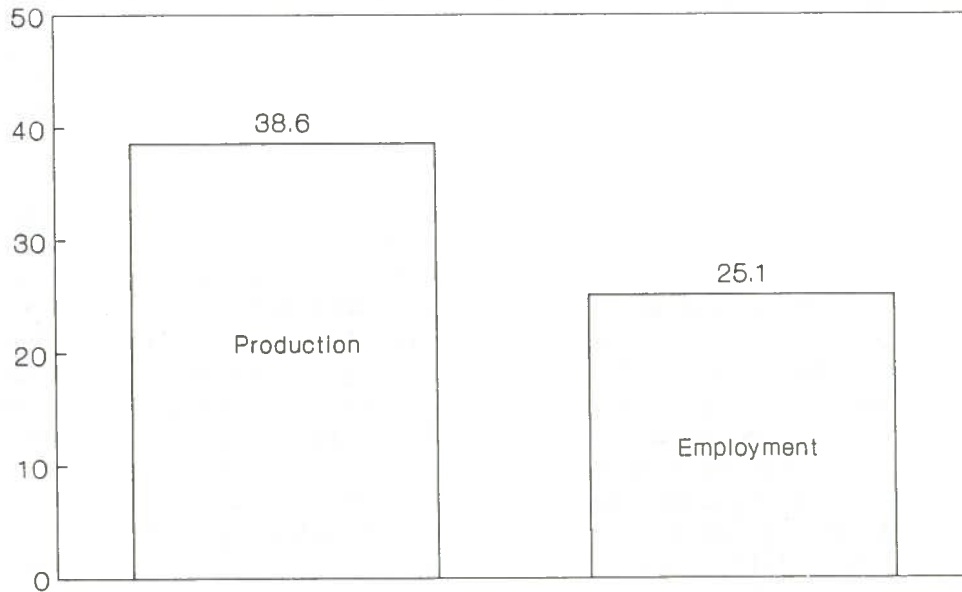
The size, structure, behavior, and performance of the food processing industries vary sharply. An assessment of five of these industries--meats, dairy, processed fruits and vegetables, bakery, and beverages--follows. These five industries accounted for about 65 percent of the value of shipments in 1987.

Meat Products

The meat products industry is the largest of the food processing industries, accounting for 22 percent of the value of processed food output, or an

Figure 14

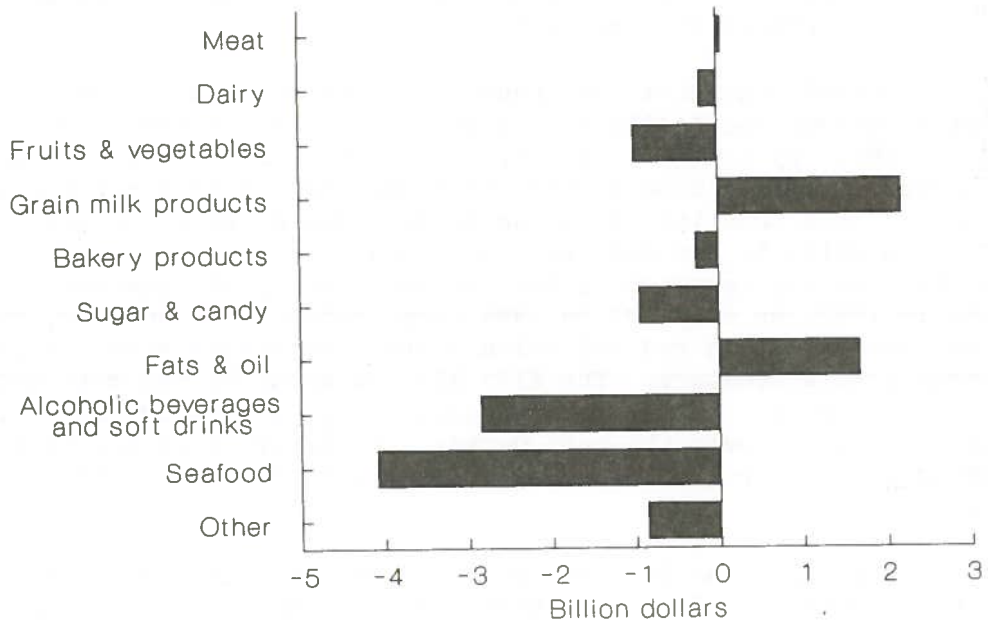
U.S. share of food processing production and employment among OECD countries, 1985



Source: (17).

Figure 15

Foreign trade balance in food processing, 1987



Source: (20).

estimated \$70 billion in 1987. Meatpackers, prepared meats processors, and poultry processing firms employed an estimated 310,000 people, or more than 20 percent of all employees in food processing. In recent years, meatpackers have accounted for about 63 percent of the value of meat shipments. However, sales of poultry products in recent years have risen much more sharply than sales of red meats. Exports typically account for only a small portion of meat shipments, about 5 percent in 1986. But the \$3.1 billion in export sales in 1987 accounted for 25 percent of our export trade in processed foods (app. table 53). The value of meat imports and exports generally negate one another, although the traded products differ.

The structure of the meat products industry has undergone vast changes in recent years. Between 1977 and 1982, for instance, the total number of meat processors fell by 20 percent, from about 4,000 to about 3,200, including about 750 meatpacking and 80 poultry firms. The data collected by the U.S. Bureau of the Census in 1987 are not yet available, but the net decline in firm numbers probably has continued. More significantly, concentration in meatpacking has increased sharply in recent years. Sales of the four largest meatpacking firms rose from 19 percent of the industry's total sales in 1977 to 29 percent in 1982 on a dressed-weight basis. Since 1982, this four-firm concentration in meatpacking has increased substantially. In 1987, ConAgra acquired E. A. Miller Enterprises and Monfort and proposed the purchase of Swift Independent Holding Co., thus becoming the largest U.S. meatpacker. Eighteen mergers took place in 1985 and 1986. Throughout much of the 1980's, most plants that have closed have been packers of red meat.

In 1987, meat producers paid about 15 percent more than in 1986 for cattle in 37 primary producer markets, but hog prices were down 1.5 percent. Average hourly wages in this labor-intensive industry dropped 1.5 percent from \$8.80 in 1986 to \$8.70 in 1987. Employment remained steady at about 185,000. Poultry prices fell 22 percent. The number of poultry workers rose from 127,000 to 138,000, and average hourly earnings were up 3 percent to \$6.08. Prices which processors charged wholesalers and retailers included an 8-percent increase for beef and a nearly 5-percent rise for pork. Finished poultry prices dropped 11.5 percent.

Despite increased concentration, packers of red meat face a declining market: per capita consumption declined to about 137 pounds in 1987, down from 145 pounds in 1985. By contrast, poultry consumption rose from 67 pounds in 1984 to 78 pounds in 1987. Some of the shift may reflect consumer nutrition perceptions. But this influence was small compared with changes in poultry prices in relation to red meat prices. Competition for a greater share of the meat protein dollar resulted in the introduction of 581 new meat and poultry products in 1987, up from 401 in 1986 (app. table 48). However, the meat products industry, both red and white meats, advertises very little compared with other food processors. The \$190 million spent by red meat and poultry producers in 1986 was less than 4 percent of all processed food advertising, virtually unchanged over the past decade. Advertising is expected to increase in 1988 as generic programs for beef (\$50 million) and pork (\$25 million) are implemented.

New capital expenditures for 1986 and 1987 are not yet available from the Bureau of the Census. In recent years, meat products have typically accounted for around 10 percent of all new capital expenditures, about equal to the corresponding share of value added. In 1985, poultry plants accounted for

more than 30 percent of all meat product capital expenditures, reflecting the industry's sharp rise in automation.

Dairy

The Nation's dairy industries, at \$44 billion in 1987, accounted for about 13.5 percent of the value of shipments for all food processing industries. Less than 50 percent of this value is accounted for by fluid milk, and cheese processors produce more than 25 percent of the value of all dairy products. The annual \$4-billion ice cream industry is about three times the size of the butter industry, and evaporated and condensed milk firms had sales of about \$6 billion in 1987. The approximately 140,000 employees in this labor-intensive industry account for nearly 1 of every 10 food processing employees. Exports normally account for only about 1 percent of dairy shipments and imports are about 1.5 percent of shipments. The negative trade balance for dairy products always reflects heavy imports of cheeses. Partially offsetting those imports are exports of other dairy products.

The structure of the dairy industries in 1987 was characterized by an apparent continued decline in the number of firms and continued merger activity. Twelve mergers occurred during the first half of 1987 compared with four during the first half of 1986. All of 1986 saw 9 dairy mergers compared with 20 in 1985. None of the mergers appears to have had a discernible effect on industry structure.

The dairy industries are also among the least concentrated food processing industries at the national level because fluid milk markets tend to be localized. Nevertheless, between 1977 and 1982, four-firm concentration ratios dropped for every dairy industry, except for condensed and evaporated milk. The leading four firms controlled less than 16 percent of all milk products production, but the top four firms produced about 33 percent of all cheese and condensed milk.

The number of companies in each of the industries continued a long-term decline. Fluid milk companies fell from nearly 3,000 in 1967 to about 850 in 1982 while the number of butter companies fell from over 500 to about 40.

The dairy industry continued to face stable milk prices and wage increases in 1987. Milk prices rose 1 percent above 1986, but were 8 percent below 1983, while wages rose 2 percent to \$10.04 per hour. The number of production workers remained about the same at 85,000.

The competitive characteristics for this slow-growth and unconcentrated industry were reflected in continued new product introduction and a sharp increase in generic advertising. Over 1,100 new dairy products were introduced in 1987, compared with 852 in 1986. The industry's \$390 million spent on advertising in 1986 accounted for nearly 8 percent of all food processing advertising, compared with only 3.5 percent in the early 1980's. The \$90-million increase above 1985, however, was largely due to the expenditure of funds for generic advertising by regional groups and the National Dairy Promotion Board. Even with the infusion of generic advertising, the dairy industry has one of the lowest advertising sales ratios in food processing, less than 1 percent. The dairy industry's 1986 advertising expenditures in the seven major media were only slightly above those of Pepsico, Inc.

Retail prices rose less than 3 percent, reflecting the wage and price stability at the processing level. Capacity utilization rates for the fourth quarter of 1986 averaged 80 percent in this industry which normally accounts for about 10 percent of new plant and equipment expenditures in food processing.

Preserved Fruits and Vegetables

Nearly 200 new processed fruit and vegetable products, 1,200 condiments, 140 soups, and 38 baby food products were introduced in this \$37-billion industry in 1987. Preserved fruits and vegetables can be frozen, canned, or dried.

Canned fruits and vegetables accounted for 45 percent of all shipments in 1987. Canned specialties products ranging from baby foods and soups to all types of ethnic specialties accounted for another 14 percent. Frozen specialties, such as frozen dinners and soups, combined with frozen fruits and vegetables, formed an \$8-billion market. Also included among the preserved fruit and vegetables industries were pickles, sauces, and salad dressing processors, whose \$5.5-billion shipments included catsup, mustard, relish, and pickles. Dehydrated fruits, vegetables, and soups accounted for less than \$2 billion in one of the smallest and slowest growing segments.

About 20 mergers took place in this industry in 1986, none of which appeared to be of any great significance. Concentration varied sharply; the eight largest firms controlled well over 50 percent of output for both canned specialties and pickles, sauces, and salad dressings but only about 20 percent for canned fruits and vegetables and 27 percent for frozen fruits and vegetables. The number of companies declined for all subindustries, except frozen fruits and vegetables, between 1977 and 1982.

Preserved fruits and vegetables accounted for about 12 percent of all processed fruit and vegetable advertising because of high product differentiation in such products as soups, sauces, salad dressing, and relishes. Fruit juices accounted for over 30 percent of all advertising in this product group.

About 220,000 people were employed in these capital-intensive industries, which usually account for about 14 percent of all new plant and equipment expenditures in food processing. Wages rose only moderately.

Imports of preserved fruits and vegetables have accounted for about 25 percent of the trade deficit in processed foods in recent years. These imports also accounted for about 20 percent of the total U.S. supply of canned fruits and vegetables.

Bakery Products

With sales of about \$23 billion, the bakery industry accounted for 7 percent of all processed foods shipments in 1987. Bread, cakes, and other related products normally amount to about 70 percent of industry shipments while cookies and crackers account for the remainder. The bakery products industry is a high-value-added industry because the value added vastly exceeds the cost of materials. Bakery firms accounted for less than 4 percent of purchases by all food processors, but 13 percent of the value added by the food industry came from these same firms.

Only two mergers occurred in this industry during the first half of 1987 compared with eight during the first half of 1986. There were nearly 30 mergers during 1985-86, with much involvement by both Flowers Industries and Sara Lee. Industry concentration has generally remained unchanged in recent years.

Much of the market for bakery products tends to be localized, lessening the significance of national concentration ratios. The leading four firms accounted for about 33 percent of production for bread and cakes and about 60 percent for cookies and crackers in 1982. Neither showed much change from 1977. The number of bread and cake companies, however, dropped from 3,500 in 1967 to fewer than 1,900 in 1982.

The bakery industry is one of the highest advertisers in food processing. Nearly \$345 million was spent on advertising in seven major media in 1986. New product introductions numbered 681 in 1986 and 553 in 1985 (app. table 48).

Ingredient prices and labor costs rose moderately in 1987 and were reflected in a 2.5-percent increase in retail prices.

Beverages

Among food processors, beverage processors who produce beer, wine, liquor, soft drinks, and soft drink syrups ranked second only to meat processors in the value of shipments. The \$45 billion in beverage shipments accounted for about 14 percent of all processed food shipments in 1987. This industry was also the highest value-added industry in food processing and accounted for nearly 20 percent of all food processing value added. By contrast, beverages were one of the lowest users of domestic agricultural products and one of the principal purchasers of packaging materials. Industry shipments have grown at a faster rate than any other processing industry. Soft drinks and syrups (mostly soft drinks) accounted for over half of industry shipments. U.S. per capita soft drink consumption rose sharply from about 27 gallons per person in 1975 to nearly 46 gallons in 1985. Beer (malt and malt beverages) accounted for 30 percent of shipments, and wines accounted for only about 6 percent of shipments. Distilled spirits shipments accounted for about 8 percent of total beverages; consumption has been falling in recent years.

Foreign trade has long been more important to beverage processing than any other food manufacturing industry except seafood. Beverage imports exceeded exports by nearly \$3 billion in 1987. Wine imports were almost 20 times greater than exports in 1987 (app. table 53). Wine exports are negligible. Over \$1 billion in distilled and blended liquor imports and nearly \$1 billion in beer imports were slightly offset by only \$224 million in exports in 1987 (app. table 53).

Beer and soft drinks have shown the greatest increase in output per person of any food processing industry over the past 20 years (app. table 40). Employment in all of the beverage industries, except wines, was down sharply from the late 1970's. The industry has been traditionally capital-intensive, however, accounting for 20-25 percent of all new capital expenditures in food processing. The ratio of new capital expenditures per employee, especially for breweries and soft drink bottlers, has been overwhelmingly the highest of all food processing industries.

Beverages were also the most advertised of processed food products. Beverages accounted for 14 percent of all industry sales, but the advertising of beverage products in seven major media accounted for over 30 percent of all food advertising (app. table 34). The \$1.6 billion spent by beverage processors for advertising in 1986 included a 14-percent increase to \$688 million for brewers. Wineries increased their expenditures from \$148 million to \$235 million in 1986, largely to acquire a greater share of the wine cooler market. However, beverage advertising expenditures moderated sharply in 1987, reflecting a 9-percent drop for liquor and 15-percent decline for wine.

The beverage industry has become one of the most concentrated of the food processing industries. Among beverage processors in 1987, soft drink bottlers had the lowest four-firm national concentration ratio, 14 percent. The number of firms, however, in that largely local market industry dropped from over 3,000 in 1967 to about 1,200 in 1982. The number of breweries declined from 125 to 67 during that period, raising the national four-firm concentration from 40 percent to 77 percent. The number of wineries, conversely, rose from 175 to 324, but four-firm concentration still increased from 48 percent to 51 percent. Seventeen mergers of brewers and 35 mergers of soft drink bottlers took place between January 1985 and June 1987.

FOOD WHOLESALING

Continuing expansion and a tendency toward greater diversification mark the major developments in food wholesaling in 1987. Large firms have continued their geographic expansion through mergers and acquisitions, establishing themselves as truly national distributors. Sustained growth in productivity still eludes the industry, but individual firms have improved productivity by combining mechanized warehouse systems and warehouse rearrangements.

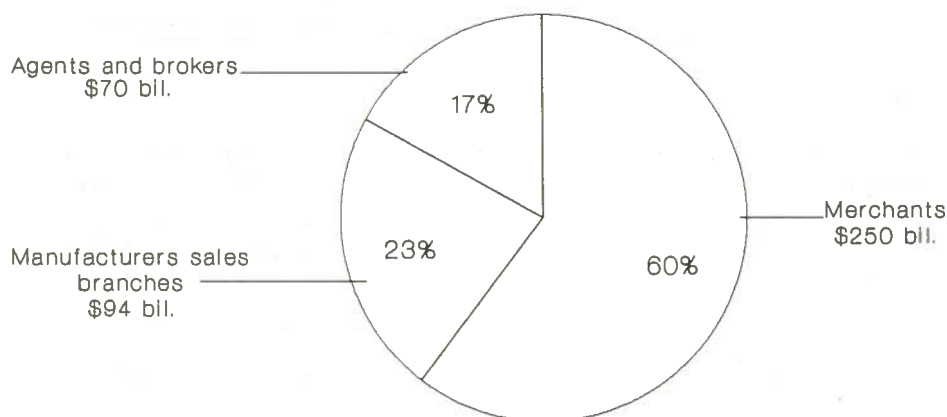
Nonintegrated suppliers of restaurants, hospitals, company mass-feeding operations, and other such institutions still predominate in the foodservice sector. Integrated firms have moved into foodservice wholesaling, however, and the development intensifies competition among entrants and established firms. Rapid growth and the attendant cash drain have pressed profit margins of membership wholesale clubs and consolidations or mergers are likely.

Sales

Wholesale food volume reached \$414 billion in 1987, a 7-percent increase from 1986 (fig. 16 and table 1). Underlying this steady growth in wholesale food demand was an expanding clientele led by independent supermarket operators who operated larger stores than ever before. Convenience store growth also strengthened demand. In recent years, wholesalers have supplied larger shares of supermarket chain volume to those chains that have abandoned their distribution functions to concentrate on merchandising, store operations, and other aspects of retailing. For example, wholesale firms supplied 27 percent of chain volume in 1986, up from 19 percent 5 years earlier. Finally, retailers have increasingly stocked, and wholesalers have supplied, more rapid-turnover, high-value products such as packaged dinners, entrees, fresh flowers, designer makeup, and greeting cards which have boosted sales for both types of businesses.

Figure 16

Wholesale sales by sector, 1987 1/



1/ ERS projections
Source: (57).

Export Sales

The domestic market has traditionally been the primary source of industry growth, but expansion-minded wholesalers have begun looking at export markets for growth. Exports have accounted for a relatively small proportion of sales, although they have become significant for some firms. Food wholesalers exported \$6.6 billion worth of products or 2.3 percent of their sales in 1982, the most recent year of record for the entire industry (table 2). Exporters of coffee, tea, spices, canned foods, and grocery specialties such as beverage concentrates, flour, soft drinks, and sugar accounted for about 30 percent of wholesale food exports. Produce wholesalers and meat wholesalers each realized sales of \$1.1 billion in international markets in 1982. Higher proportions of fish and seafood are exported than any other products moving through wholesale export channels. Almost 12 percent of wholesale fish was exported in 1982, the highest proportion of any group of products; however, this percentage represented sales of only \$662 million.

Among wholesalers, merchants have been the primary exporters, although brokers and manufacturers' sales offices exported higher proportions of some products. For example, 6.5 percent of produce brokers' sales were in export markets in 1982, compared with 4.2 percent of produce merchants' sales. But, that 4.2 percent represented \$800 million for merchants compared with \$400 million for brokers. Manufacturers' sales offices sell almost exclusively in the domestic market. The manufacturers that own those sales offices, however, operate food processing facilities abroad and sell that output in those countries. For example, PYA/Monarch's parent company, Sara Lee Corp., had \$1.3 billion in foreign sales in 1986, primarily from a Dutch-based unit supplying coffee and

Table 1--Wholesale food sales, by type of wholesaler

Type of wholesaler	1967	1972	1977	1982	1983
	<u>Billion dollars</u>				
Merchants	43.3	64.0	111.6	174.7	190.3
Manufacturers' sales branches	15.1	21.7	41.6	63.9 <u>1/</u>	69.0 <u>1/</u>
Agents and brokers	15.9	20.6	29.7	50.0 <u>1/</u>	53.5 <u>1/</u>
Total	74.3	106.3	182.9	288.6	312.8

	1984	1985	1986	1987
	<u>Billion dollars</u>			
Merchants	208.9	216.0	233.6	249.8
Manufacturers' sales branches	74.5 <u>1/</u>	80.4 <u>1/</u>	86.9 <u>1/</u>	93.8
Agents and brokers	57.2 <u>1/</u>	61.2 <u>1/</u>	65.5 <u>1/</u>	70.2
Total	340.6	357.6	386.0	413.8

1/ ERS estimates.

Sources: (53, 57).

tea to markets in Western Europe (37). Kraft's international food operations were a network of wholly owned subsidiary companies in 13 nations (19).

Thus, diversified manufacturer-distributors exert more influence in foreign markets than export volume alone suggests.

Wholesale merchants assemble products from many different processors and then combine them and ship economical container loads. The combination of technical assistance and merchandising advice to foreign retailers has helped some wholesale merchant-exporters become competitive with manufacturers who have been able to sell to foreign customers at prices lower than their U.S. list prices. Wholesale exporters seek business in places closest to their domestic warehouses. Super Valu's estimated \$25 million in export sales in 1987 went to Far East and Pacific Rim countries from its West Coast Grocery subsidiary in California (31). According to the National-American Wholesale Grocers Association (NAWGA), its typical member-exporter realized almost \$18 million in export sales in 1987 (23).

Table 2--Wholesale food exports, 1982

Type of wholesaler	Total sales	Export sales	Exports as a share of total sales
----- Thousand dollars -----		Percent	
General line	70,573,655	382,868	0.5
Limited line	84,442,754	2,061,069	2.5
Specialty wholesalers:			
Frozen	22,628,771	746,749	3.3
Dairy	22,939,285	91,757	.4
Poultry	8,752,473	140,040	1.6
Confectionery	10,876,794	195,782	1.8
Fish	5,706,059	661,902	11.6
Meat	38,585,104	1,157,553	3.0
Fruits/vegetables	24,153,738	1,135,226	4.7
All wholesalers	288,658,633	6,572,946	2.3

Source: (53).

Structure and Organization

The principal structural changes in food wholesaling were continuing diversification of primary wholesale food companies, integration into foodservice wholesaling by food processors, and rapid growth of wholesale clubs.

Diversification

The pace of diversification has quickened, led by those general line merchants who service supermarkets and retail foodstores. General line foodservice distributors have also continued to diversify geographically, primarily by acquiring existing operations. Paralleling the diversification surge of these primary wholesale food merchants, some food processors have moved into foodservice distribution.

Wholesale merchant firms have grown tremendously by diversifying geographically. They have built new distribution centers and expanded from adjacent territory. Firms have also acquired existing regional operations. Some leading wholesale merchants have also built and operated prototype supermarkets in new markets and operated supermarkets acquired from regional and national chains.

Historical employment patterns denote the trend toward greater diversification. Diversified wholesale companies, overall, employed 32.5 percent of all workers in primary wholesale firms in 1982, the most recent industrywide Census enumeration (table 3). Among diversified firms, employment in nonwholesale lines annually grew 7.5 percent during 1972-82,

Table 3--Employment diversification of multi-industry wholesale food firms

Firms and industry	1972		1977		1982	
	Number	Percent	Number	Percent	Number	Percent
Multi-industry firms:						
Wholesale trade	72,814	14.5	105,937	20.6	123,342	21.3
Other industries	34,666	7.0	49,582	9.7	64,520	11.2
Single-industry firms	393,272	78.5	358,247	69.7	390,712	67.5
All firms	500,752	100.0	513,766	100.0	578,574	100.0

Source: (53).

compared with a 6-percent rate in wholesale food lines. That is, firms' diversified growth generally outpaced growth in wholesale food.

Wholesale firms have diversified primarily into food retailing. In 1977, about 20 percent of the employees of diversified wholesalers worked in supermarkets and foodstores. Retail supermarkets have become long-term profit centers for some leading wholesale merchants and this development has led to intensified wholesaler integration into retail food. For example, industry leaders initiated 128 acquisitions of other businesses during 1975-86; 25 percent of these were retail foodstores. In 1986, these leaders owned over 450 supermarkets, or 2 percent of the stores that they served (table 4). These corporate stores tend to be larger than average, generating above-average sales and requiring larger staffs.

Diversified wholesale firms also process sausages and meat products and operate meatpacking plants, fluid milk plants, bakeries, canneries, and bottling plants. Together, wholesaler-owned manufacturing and processing operations used 10,000 workers, or 6 percent of the work force in diversified wholesale firms in 1977, the last complete Census enumeration year. Few firms engaged in food wholesaling have moved into lines of business other than food retailing and processing. For example, only 1 percent of the employees of diversified firms worked in primary agriculture.

Foodservice Distribution

Perhaps no other recent development in the food manufacturing, retailing, and distribution trades has the potential to affect one segment of wholesale grocery distribution as profoundly as the growth in food service. Still predominant in servicing restaurants, hospitals, company mass-feeding operations, and such institutions are broad line foodservice wholesalers such as the Sysco Corporation (table 5). The structure of distribution may shift as integrated firms diversify into foodservice wholesaling.

Table 4--Retail stores of leading wholesale firms, 1986

Firm	: Retail : stores : owned	: Retail : stores : served	: Owned stores as : a share of all : stores served
	----- Number -----		Percent
Fleming Companies, Inc.	55	4,030	1.4
Super Valu Stores, Inc.	105	3,300	3.2
Wetterau, Inc.	56	2,450	2.3
Scrivner, Inc.	108	2,405	4.5
Malone and Hyde, Inc.	5	2,300	.2
Wakefern Food Corp.	26	178	14.6
Roundys, Inc.	15	1,500	1.0
Certified Grocers (California)	0	4,177	0
Associated Wholesale Grocers	0	728	0
Nash-Finch Co.	93	1,585	5.9
Total	463	22,653	2.0

Source: (33).

Table 5--Sales of the top 10 foodservice distributors, 1987

Firm	: Sales
	: Million dollars
Sysco Corp.	3,700
Kraft Foodservice	2,600
CFS Continental, Inc.	2,500
PYA Monarch, Inc.	2,000
Rykoff-Sexton, Inc.	1,200
White Swan, Inc.	530
Food Service of America	515
Gordon Food Service, Inc.	510
Shamrock Foods Co.	330
Biggers Brothers, Inc.	320
Total	14,205

Source: (2).

Kraft Inc., primarily a food manufacturer, ranked fourth among foodservice distributors in 1986 with sales of \$1.3 billion in its Kraft Foodservice division, a 70-percent increase from 1984. In 1986, Kraft acquired 14 foodservice distributors at a cost of \$232 million (19). Further, Kraft had approximately \$2.6 billion in foodservice sales by the end of 1987, produced by growth of that base foodservice business and by continuing acquisitions (table 5). In a similar vein, Staley Continental, Inc., increased its foodservice sales from \$81 million to \$1.9 billion between 1984 and 1986, primarily by acquiring CFS Continental, Inc. (38). Foodservice sales jumped from 6 percent of company sales in 1984 to 64 percent in 1986 (38).

Some foodservice distributors have organized separate divisions designed to service fast food, limited-menu chains. In contrast to the traditional provision of a broad line of products, these divisions handle a few rapid-turnover items customized for a fast food chain in a particular geographic area. For example, one division of CFS Continental exclusively serves the McDonald's restaurant system. From its domestic and Hong Kong distribution centers, this subsidiary services more than 900 McDonald's units (38).

Distributors that exclusively service fast food chains and their franchised units have emerged from the increasingly segmented foodservice distribution market. With the leverage of their vast buying power, national and regional fast food firms often deal directly with manufacturers and use these distributors for storage and delivery only. That is, fast food firms pay these specialized distributors storage and delivery fees and thus incur no distribution costs. The largest of the specialized distributors to chains is Martin-Brower, with 1987 sales of \$2.3 billion. This firm is a major supplier to McDonald's and other limited-menu chains, such as Bojangle's (2). Other distributors specializing in serving limited-menu chains are Golden State Foods Corporation, M.B.M. Corporation, and Proficient Food Company, a subsidiary of Denny's Restaurants (2).

Some general-line wholesale merchants have long supplied foodservice operations, although supermarkets continue to be their primary customers. A number of large general-line merchants created foodservice divisions or later acquired firms already specializing in servicing foodservice outlets.

Fleming's subsidiary, White Swan, sold \$530 million worth of food and supplies to foodservice firms in 1987, placing it sixth among firms that distributed a general product line to foodservice outlets (table 5). Scrivner, a major supplier of supermarkets and foodstores, counted \$92 million in sales to foodservice outlets (2). Peter J. Schmitt expanded its foodservice division by merging with Hickman, Coward, and Wattles and by acquiring Kotok and Heims Corporation, both foodservice distributors (32).

Thus, three distinct groups of suppliers service the spectrum of foodservice units: general-line distributors such as Sysco Corporation, manufacturer-distributors such as Kraft, Inc., and specialist-distributors such as Martin-Brower. The focus of the several groups denotes logical and, apparently, efficient market segmentation with each group servicing unique demands.

Large national distributor-manufacturer firms have developed mainly by acquiring existing distributors in local areas. Kraft alone acquired 14 foodservice firms in 1986, as noted, and added 7 in 1987. Sysco merged with

six formerly independent companies in 1986 and continued with three acquisitions in 1987. These giants compete largely with each other. Smaller independent foodservice firms have allied themselves with large, national buying groups. That alliance is similar to the earlier competitive response of independent supermarket operators in affiliating with voluntary wholesale grocers to realize the same economies in such areas as purchasing and promotion enjoyed by chain supermarket firms. Thus, independent foodservice firms affiliate with North American Foodservice Companies, Code Federated, and Pocahontas, all large buyer-marketing groups for the foodservice industry. The combined 1986 volume of the top 11 groups (generated by their 902 independent members) is estimated to have reached \$18.9 billion (2). Through advertising, buyer-marketing groups have developed strong brands. They have also given participating independents the buying leverage of large national firms such as Kraft, Inc. and Rykoff-Sexton.

Aggregate concentration is low in the foodservice distribution sector; the 50 largest distributors control about 20 percent of the market. The low level of concentration denotes the intensity of competition among distributors within groups in the sector.

Wholesale Clubs

Rapid growth of wholesale clubs and the attendant cash drain have pressed market leaders' profit margins. Price Club, originator of the current wholesale club format and the industry leader, had 1987 sales of \$3.2 billion, controlling about 35 percent of an estimated \$9.1-billion market. Costco, Pace, and Sam's Wholesale Clubs claim an additional 45-percent market share. Thus, the four top-ranked firms account for 80 percent of all wholesale club revenues (39). Sales concentration is high, but the sector is very competitive. Fueling the competition is expansion of existing firms whose operating units reached 301 by the end of 1987, up from 170 only 18 months earlier.

In 1986, only three of the sector's leading firms were profitable, primarily because of the cash drain from expansion coupled with the slow buildup of sales in newly opened units and large operating expenses (48). BJ's Wholesale Club lost \$11.9 million in 1986. Pace reported a net loss of \$1.2 million in fiscal year 1986 (39).

Sales in newly opened units should reach projected levels and thus improve profitability, but clubs face certain limitations that can slow growth. Market saturation is a potential drag on expansion. A club needs about 400,000 members to be profitable. Thus, even areas with large populations can support only a limited number of clubs. However, because small business members represent most of the clubs' volume, the strength of their demand is more important than sheer customer numbers. Another possible obstacle to expansion is competition from supermarkets and general merchandise stores. For example, wholesale clubs encroach on supermarket sales to small restaurants and small foodservice operations. Clubs also attract those shoppers who tend to patronize the clubs' closest retail food equivalents, warehouse stores and super stores. This competition will intensify as more wholesale clubs expand their perishable food lines, install pharmacies, or offer no-fee credit cards as some have done within the past year. At the same time, many supermarkets are reducing prices where wholesale clubs encroach on their markets. Faced with increased competition, both among themselves and from supermarkets and general merchandise stores, wholesale clubs may be

tempted to loosen membership requirements, upgrade decor, and add services to increase sales. The risk is that such deviations from their no-frills, minimum-services, restricted-membership mold could increase the cost of operations and negate their greatest strength, low prices (5).

Performance

Sustained productivity growth continued to elude the food wholesaling industry in 1987. The early promise of gains from fully automated distribution centers has not been realized. More immediate results have been realized by combining features of mechanized picking systems, manual operations, and data processing to maximize warehouse inventory turnover. Productivity improvement, however, is only one of a number of reasons why firms install mechanized systems.

Such systems save space, reduce utility costs, and improve inventory control. These systems also effectively expand existing warehouse capacity and, thus, reduce the need for costly facility expansion. Mechanized systems are expensive. A complete system, fully installed, may cost \$15 million or more (39). By contrast, firms have measurably increased warehouse inventory turnover and inventory investment earnings by using computer-based buying systems and by electronically transmitting business documents.

Commonly called the Uniform Communication Standard (UCS) system, the electronic transmission of purchase orders and invoices between distributors and manufacturers allows wholesalers to reduce inventory, thus saving inventory investment costs and increasing the capacity of existing warehouses by reducing safety stocks. Additional savings accrue from reduced volumes of purchase orders and invoices and from fewer clerical errors. An Economic Research Service analysis of the UCS system found that adoption rates differed markedly in different areas of the country and for the same firm in different markets (13). Firms were most likely to use UCS in fast growing markets and in markets where the leaders faced competition from distributors in adjacent areas.

Firms appear to be selective in adopting this system, moving first in areas of intense competition. These results imply that wholesale firms are particularly sensitive to the advantages of market share protection and improved service levels offered by this new technology.

FOOD RETAILING

The basic segments of the food retailing industry are grocery stores and specialized foodstores (table 6). These two segments account for all foodstores: retail outlets having at least 50 percent of sales in food products intended for off-premise consumption (fig. 17).

Foodstore sales in 1987 grew an estimated 4.2 percent in current dollars over 1986 sales. In real, inflation-adjusted dollars, however, 1987 sales showed no increase compared with 1986. Although expansion in food retailing has historically followed population growth, an increasing share of the consumers' food dollar is being spent in the foodservice sector for food consumed away from home.

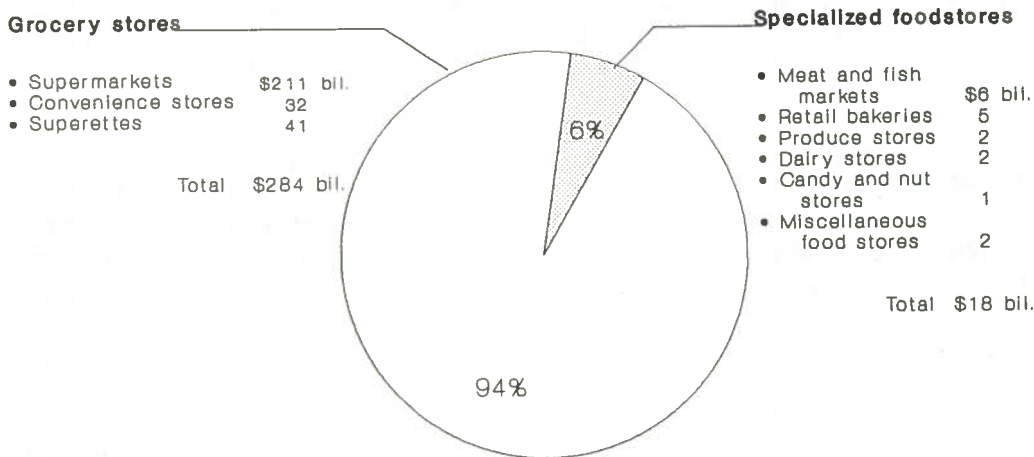
Table 6--Number of foodstores

Year	Total foodstores	Grocery stores				Specialized foodstores
		Total	Supermarkets	Convenience stores	Superettes	
1958	355,508	259,796	15,282	NA	NA	95,712
1963	319,433	244,838	21,167	NA	NA	74,595
1967	294,243	218,130	23,808	NA	NA	76,113
1972	267,352	194,346	27,231	NA	NA	73,006
1977	251,971	179,346	30,831	30,000	118,515	72,625
1982	241,737	168,041	26,640	38,700	102,701	73,696
1983 <u>1/</u>	240,528	167,615	26,821	40,400	100,394	72,914
1984 <u>1/</u>	239,326	167,186	26,947	42,950	97,289	72,140
1985 <u>1/</u>	238,129	166,755	27,266	45,400	94,089	71,347
1986 <u>1/</u>	236,938	166,322	26,995	47,000	92,327	70,616
1987 <u>1/</u>	235,754	165,887	NA	NA	NA	69,867

NA = Not available.
1/ ERS projection.

Sources: (32, 52).

Figure 17
 Foodstore sales by sector, 1986



Net profits of medium- to large-sized food retailers declined in 1986 to 13.1 percent of stockholders' equity, from 14.2 percent in the previous year. The number of food retailing acquisitions increased sharply in 1986 to 91 compared with 52 in 1985. Safeway Stores initiated major divestitures in 1987, shedding six divisions totaling 962 supermarkets. Average hourly earnings of foodstore workers fell 4 percent in 1987 to \$6.95 per hour.

Growth

U.S. foodstores' sales reached \$314 billion in 1987, a 4.2-percent increase over 1986. Grocery store sales increased 4.2 percent to \$296 billion in 1987. The annual growth rate in foodstore and grocery store sales was much lower in 1987 than in the previous 5 years (table 7). There was no real growth in 1987 (adjusting for inflation), compared with a 2-percent increase in 1986 and a 3.3-percent increase in 1985 (fig. 18).

Within the food retailing industry, larger operators (those with sales of \$50 million or more) grew much more rapidly than their smaller counterparts. Real sales of these large food retailers grew about 1 percent in 1987 compared with a decline of about 4 percent for smaller grocery store firms. Specialized foodstores such as meat and fish stores, retail bakeries, and dairy stores fared even worse with real sales falling about 6 percent in 1987 compared with 1986. Specialized foodstores are apparently losing sales to supermarkets

Table 7--Foodstore sales ^{1/}

Year	Total food- store sales	Grocery stores sales				Specialized foodstore sales
		Total	Supermarkets	Conven- ience stores	Superettes	
<u>Million dollars</u>						
1958	50,263	43,696	23,562	NA	NA	6,567
1963	57,254	52,566	31,484	NA	NA	4,688
1967	69,371	64,215	43,433	NA	NA	5,156
1972	99,035	92,273	63,791	4,200	24,282	6,762
1977	157,941	147,759	110,849	8,722	28,188	10,182
1982	246,122	230,696	171,966	24,867	33,863	15,426
1983	257,055	241,117	184,455	27,677	28,985	15,938
1984	274,187	257,956	192,822	33,320	31,814	16,231
1985	288,598	271,903	201,480	33,707	36,716	16,695
1986	301,762	284,126	210,537	32,339	41,250	17,636
1987	314,287	296,105	NA	NA	NA	18,182

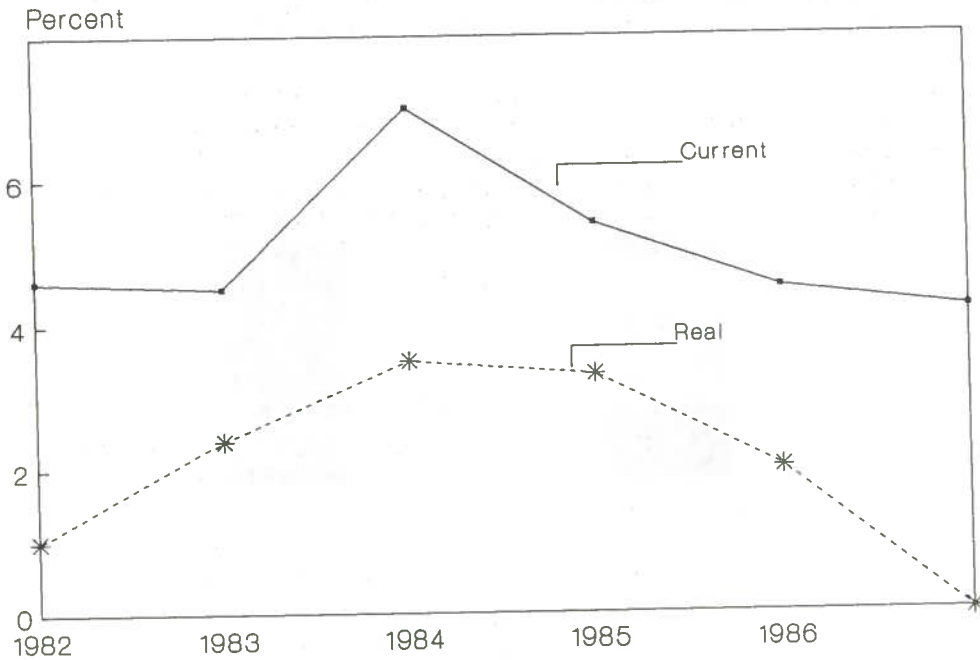
NA = Not available

^{1/} ERS projection.

Sources: (32, 52).

Figure 18

Annual changes in grocery store sales



which increasingly offer instore bakeries, service meat and seafood departments, hot and cold delicatessens, specialty cheese shops, and greatly expanded produce departments.

Supermarkets and convenience stores are increasingly emphasizing prepared take-out foods ready for immediate consumption. According to the Food Marketing Institute, the total take-out food market in 1986 was \$62.4 billion. Restaurants' share of this take-out market was 64 percent and foodstores captured 36 percent. However, only 2 of 10 respondents mentioned supermarkets when asked where they go to buy take-out food. This indicates supermarkets and convenience stores have the potential to increase take-out food sales. Such an increase in sales at foodstores will contribute to the continued blurring of the markets for food consumed at home and away from home.

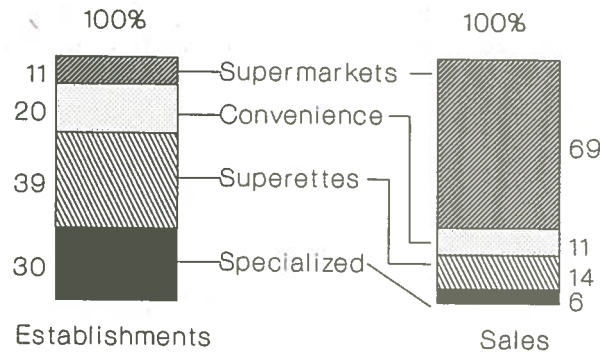
The slow growth in retail foodstore sales in 1987 means the at-home share of consumers' food expenditures resumed its gradual decline after a short pause during 1984-85. The at-home share of the food market dropped to 55 percent in 1986 from 56 percent in both 1985 and 1984. Preliminary data indicate the at-home share may have fallen to 54 percent in 1987 (app. table 1).

Structure and Organization

Grocery stores, which include supermarkets and superettes, smaller grocery stores, and convenience stores, numbered an estimated 165,887 or 70.4 percent of all foodstores in 1987. Specialized foodstores--such as retail bakeries, produce markets, meat and seafood markets, and health-food stores--declined to 69,867 in 1987, but still accounted for almost 30 percent of all foodstores (fig. 19).

Figure 19

Foodstore types: shares of establishments and sales



1986

Total foodstore selling area--a measure of industry capacity--has expanded (app. table 50). The number of grocery stores and specialized foodstores, however, has declined (table 6). Fewer, larger supermarkets are replacing older, conventional format stores that are too small to provide the greater variety of specialty and service departments of modern outlets. As a result, the number of supermarkets in 1986 remained well below the 1977 peak. Among smaller grocery stores, convenience stores grew to 47,000 in 1986.

The greater variety of products and services offered by larger stores has cut into the market traditionally held by specialty outlets like butcher shops and bakeries. Many large grocery chains offer expanded delicatessen and baked goods counters, gourmet coffee sections, and gourmet meat counters. Thus, specialized foodstores are declining in both number and area. As consumers seeking greater convenience turn to one-stop shopping, the trend will probably continue.

Sales by Segment

Grocery store sales reached about \$296 billion in 1987, or 94.2 percent of total foodstore sales. Specialized foodstores accounted for the remaining \$18 billion in foodstore sales (table 7). Grocery stores have captured a steadily increasing share of foodstore sales, an indication of the slowing real growth among specialized foodstores.

Supermarkets accounted for about 75 percent of all grocery store sales in 1986 (table 7). Sales in 1986 increased by 4.5 percent, to reach \$210.5 billion. Superettes' sales totaled \$41.2 billion. Convenience store sales declined somewhat in 1986, largely due to lower gasoline prices. Convenience store

sales excluding gasoline reached \$21.6 billion, up 5.9 percent from 1985. Total sales in 1986 were \$32.3 billion.

The number of foodstores by segment contrasts sharply with those segments' share of total sales. Although superettes made up the largest single foodstore segment by number, they accounted for only 14 percent of foodstore sales in 1986. Conversely, supermarkets were the smallest segment by number, but they captured the largest share of sales that year (fig. 19).

Grocery chains have accounted for about 60 percent of total grocery store sales since 1982 (table 8). Independent retailers matched the growth rates of chain stores in recent years by introducing warehouse and superwarehouse stores and by occupying sites obtained by full service food wholesalers who then resell them to independent retailers.

Grocery Store Formats

Grocery store formats continue to evolve as food retailers experiment with price and merchandising strategies critical to competitive success. Consumers have been offered an ever-expanding number of foodshopping alternatives since the late 1970's. The low-price, high-volume retailers have faced increasing competition from wholesale club stores in recent years. Most sales of these wholesale outlets are to small businesses, but most of the stores are open to the public as well.

The larger superstore has grown considerably to become the secondmost popular format, representing 27.5 percent of supermarket sales. The number of superstores increased by 8.2 percent between 1984 and 1986.

The sales growth of the warehouse and limited-assortment store segment slowed somewhat after 1984, dropping to 12.3 percent of supermarket sales in 1986 (table 9). The number of limited-assortment stores has been declining due to consolidation among firms in this segment. Some of the remaining retailers have announced aggressive growth plans, and some industry observers expect the number of limited-assortment stores to increase by 50 percent by 1990 (70).

Table 8--Chain stores' share of grocery store sales

Chain type	: 1958	: 1963	: 1967	: 1972	: 1977	: 1982	: 1985	: 1986
	<u>Percent</u>							
Supermarket	41.2	43.7	46.3	48.9	52.4	55.0	NA	NA
Other	2.8	3.3	5.1	7.0	6.3	6.5	NA	NA
Total	44.0	47.0	51.4	55.9	58.7	60.0	61.3	62.3

NA = Not available.

Table 9--Number and sales shares of grocery store formats

Type of store	Share of all stores of category		Share of all stores' sales	
	1984	1986	1984	1986
	<u>Percent</u>			
Grocery stores:				
Supermarkets	16.1	16.2	74.8	74.1
Superettes	58.2	55.5	12.9	14.5
Convenience stores	25.7	28.3	12.3	11.4
Supermarkets:				
Conventional	65.8	63.6	49.7	47.4
Superstore	17.1	18.5	28.3	27.5
Combination, food and drug	3.5	4.2	8.0	8.0
Warehouse or limited assortment	13.3	12.3	11.9	12.3
Superwarehouse	.4	1.1	1.7	3.2
Hypermarket	<u>1/</u>	.3	.4	1.6

1/ Less than 0.05 percent.

Food and drug combination stores offer extended grocery variety and service departments and include a prescription pharmacy. They have increased their share of total supermarkets from 3.5 percent to 4.2 percent between 1984 and 1986, and their relative sales have remained stable.

Superwarehouse stores are an expansion of the warehouse store. They include more perishables (meat, produce) and service departments such as delicatessens and bakeries. These stores, such as Cub Foods, headquartered in Stillwater, Minnesota, owe their growth to large full service food wholesalers that most often franchise their operation to independent retailers. The number of superwarehouse stores increased from 108 to 305 between 1984 and 1986 and accounted for 3.2 percent of supermarket sales in 1986.

Hypermarkets, initially introduced by foreign food retailers, have up to 200,000 square feet and offer a greater variety of general merchandise and personal care products than other grocery store formats. Hypermarkets increased from 60 to 80 between 1984 and 1986. Several retailers have since announced plans to build hypermarkets.

Convenience stores accounted for 28.3 percent of all grocery stores in 1986. More than half of all convenience stores sold gasoline that year, which totaled an estimated \$11 billion, or about 34 percent of all their sales. Much of their growth in the 1980's has been the result of new product and service offerings such as expanded selections of prepared foods, videocassette rentals, and gasoline sales.

Aggregate Concentration

Sales of the 20 largest food retailers reached \$106.7 billion in 1986, or 37.6 percent of total grocery store sales, up from 36.7 percent in 1985 (table 10 and app. table 20). The four largest companies captured 18.2 percent of total grocery store sales, about the same as their 1985 share. The eight largest food retailers sales measured 26.8 percent of total sales in 1986, a slight increase from 1985 levels.

Aggregate concentration measures the sales of the 4, 8, and 20 largest food retailers in relation to the Nation's total grocery store sales. Because none of these top retailers operates in all regions of the country, measures of national concentration in food retailing are less comparable than for industries with nationwide markets, such as many of the food manufacturing industries. Aggregate concentration measures are, however, useful as indicators of the importance of the largest retailers among all food retailers.

Equally important is the rate of change in aggregate concentration. Rising concentration during periods of high merger and acquisition activity may indicate a net consolidation effect within the industry. Divestitures of assets of the largest retailers tend to moderate the concentration effects of mergers and acquisitions.

Divestitures helped stabilize the top four firm concentration ratio in 1986. Kroger closed or sold over 100 supermarkets and American Stores sold its White Hen Pantry convenience stores.

Among the fifth through eighth largest, Lucky Stores divested its Eagle Supermarket division in the Chicago area and supermarkets in Houston. The Great Atlantic and Pacific Tea Company (A&P) acquired Shopwell and Waldbaums during the second half of 1986, boosting its grocery stores sales by 20 percent over 1985. Internal growth was important to all retailers in this group as company sales were all higher in 1986.

Among the 9th through 20th largest retailers, internal expansion was responsible for all sales growth in 1986. Grocery store sales grew by a significant 12 percent and was responsible for 47 percent of the increase in sales for the top 20 between 1985 and 1986.

Table 10--Sales share of leading grocery chains

Item	:	:	:	:	:	:	:	:	:
	1958	1963	1967	1972	1977	1982	1985	1986	
	:	:	:	:	:	:	:	:	
	<u>Percent</u>								
4 largest chains	21.7	20.0	19.0	17.5	17.4	16.1	18.4	18.2	
8 largest chains	27.5	26.6	25.7	24.4	24.4	23.6	26.6	26.8	
20 largest chains	34.1	34.0	34.4	34.8	34.5	34.9	36.7	37.6	

Source: (53).

Divestiture activity stepped up significantly in 1987. Safeway Stores (ranked number 2) sold over 962 supermarkets as part of its debt amortization plan. Some of these assets are to be sold to other top 20 retailers, including Vons in Los Angeles and San Diego.

Other top 20 food retailers grew significantly through internal expansion, such as Food Lion (14th largest) which boosted sales by 26.8 percent in 1986 by opening 71 new stores.

Mergers and Divestitures

The total number of acquisitions increased sharply in 1986 to 91 compared with 52 in 1985 (table 11). This activity includes all acquisitions or divestitures made by U.S. food retailing firms regardless of whether the acquired assets were inside or outside the food retailing industry. The count also includes any food retailing assets acquired by nonfood retailing firms. U.S. food retailing firms made 56 of the 91 acquisitions in 1986. Firms not involved in U.S. food retailing made the remaining 35 acquisitions.

Retailers continue to restructure themselves by divesting assets as well as acquiring new assets. Of the 91 acquisitions in 1986, 57 were divestitures. Divestitures range from selling off one or two stores to selling entire divisions or subsidiaries. In 1986, Kroger made six divestitures, selling its drug stores and over 100 supermarkets, but also acquired supermarkets from four other firms. Full service food wholesalers frequently purchase these disposed supermarkets and later sell them to their independent retailer customers. For example, Super Valu acquired supermarkets from four chains in 1986, while Wetterau acquired stores from Kroger and Cooks.

Following a \$4.3-billion leveraged buyout in August 1986, Safeway has restructured considerably as it continues to sell off assets to reduce debt. Since the buyout, Safeway has sold its divisions in Dallas, Salt Lake City, and El Paso. Safeway also sold its Liquor Barn, Brentway superwarehouse stores in Florida, and supermarket operations in the United Kingdom. Safeway is in the process of selling its Oklahoma, Kansas City, Little Rock, and southern California divisions and has announced that it is also considering

Table 11--Mergers and divestitures in food retailing

Year	Acquiring company		Total	Divestitures
	Food retailing firm	Other than food retailing firm		
1982	25	13	38	22
1983	35	10	45	33
1984	37	23	60	28
1985	36	16	52	33
1986	56	35	91	57

Source: (3).

selling its Houston and Denver divisions. Safeway also acquired 23 Woodward's Food Stores in western Canada during 1987. As a result of these activities, the number of Safeway stores fell from 2,331 before the buyout to 1,369 by the end of 1987 if the southern California sale is approved by the Federal Trade Commission.

In other divestitures, Southland (operator of 7-Eleven convenience stores) sold its 47 Gristede's and Charles & Company supermarkets in New York to Red Apple. Southland completed a \$4-billion leveraged buyout in late 1987 and will sell off most of its nonconvenience store assets to reduce debt from the buyout. By the end of 1987, Southland had agreed to sell its 470-store Chief Auto Parts chain for over \$130 million; its video cassette rental operation for \$51 million; and its 270 Houston area 7-Eleven stores for about \$80 million. Supermarkets General (Pathmark Supermarkets) went private in a leveraged buyout deal for \$1.8 billion in 1987 and has since sold off 22 drugstores to reduce debt.

Major consolidations also took place in 1986 and 1987. Among convenience store firms, Circle K bought a 187-store chain from National Convenience Stores, Dairy Mart purchased the 370-store Conna Corporation, and Southland bought High's Dairy convenience stores. In the supermarket industry, A&P became the largest food retailer in New York City by acquiring Waldbaum and Shopwell. If Vons' purchase of Safeway's southern California division goes through, Vons will become the market share leader in Los Angeles (increasing its market share from about 17 percent to 23 percent) and will increase its market share lead in San Diego (from about 22 percent to 33 percent).

Foreign Developments

Slow growth prospects in Europe and a more restrictive business climate there have bolstered foreign investment in U.S. food retailing. Much of this foreign investment allows domestic food retailers to recapitalize and expand current operations, or to make new acquisitions. A&P has benefited from both aspects of overseas investment through its foreign parent, Tengelmann A.G. (Federal Republic of Germany).

Other foreign ventures in domestic food retailing have brought about merchandising innovations and new store concepts, which have in turn prompted food retailers here to follow suit. The introduction of the hypermarket by European retailers--Biggs in Cincinnati and Carrefour in Philadelphia, for example--has spurred the growth of a store format that incorporates considerable general merchandise and personal care products. Foreign-owned Food Lion, the Nation's fastest growing supermarket chain, builds smaller conventional format stores, imposes strict cost controls, and maintains an "everyday low price" marketing strategy. Foreign investment in U.S. food retailing may benefit American consumers much like it has in the automotive, electronic, and publishing industries by providing a wider diversity of products often at lower prices.

Five foreign-owned companies--A&P, Grand Union, Food Lion, Ahold International, and Shaw's Supermarkets--were among the 25 largest food retailers operating in the United States. Their combined sales reached \$14.2 billion in 1986 (table 12 and app. table 20).

Foreign investment developments in 1986 and 1987 included the acquisition of Shaw's Supermarkets by Sainsbury, Ltd. (United Kingdom) for \$261 million.

Table 12--Five largest foreign investors in U.S. grocery retailing

Foreign investor/ country of headquarters	U.S. subsidiary	Grocery store sales	
		1986	1985
<u>Million dollars</u>			
Tenglemann A.G. (Federal Republic of Germany)	A&P Shopwell Waldbaum	6,179 <u>1/</u> <u>1/</u>	5,164 N/A N/A
General Occidentale (France)	Grand Union	2,746	2,612
Delhaize, Le Lion (Belgium)	Food Lion	2,355	1,857
Ahold, International (The Netherlands)	BI-LO Giant Food Stores <u>2/</u>	1,127 529	1,562
Sainsbury, Ltd. (United Kingdom)	Shaw's Supermarkets	1,100	812
	Total	14,036	12,007

NA = Not applicable.

1/ Included in A&P subsidiary total sales.

2/ Giant Food Stores, Carlisle, PA.

Shaw's operated 49 stores in the New England region, with sales of \$1.1 billion in 1986. This friendly takeover will allow Shaw's to expand its presence in the region.

Tenglemann A.G. acquired Shopwell, which had 53 supermarkets in New York City through its A&P subsidiary, for \$64 million. A&P also purchased another chain, Waldbaum, which also operated in the New York area, for \$275 million. Another foreign-owned food retailer, Supermarket Development Corporation (owner of Furr's Supermarkets, Lubbock, Texas), purchased the El Paso division of Safeway Stores for \$94 million plus \$50 million in inventory. The Furr's chain is owned by Asko Deutche Kaufhaus AG (Federal Republic of Germany).

One of the largest limited-assortment store retailers, Aldi (Federal Republic of Germany) announced that it will expand its U.S. operation by as much as one-third from its 1987 level of 198 stores. Most of its stores are located in the rural Midwest, where planned investment will probably continue.

The overseas activities of U.S. food retailers included the sale of Safeway Stores' United Kingdom subsidiary to Argyll Group for \$1.04 billion. Argyll received 132 supermarkets and rights to the Safeway banner in the United Kingdom in return. It was the first major divestiture made by Safeway following the leveraged buyout of the company in November 1986. Circle K, operator of convenience stores, entered into a 25-percent partnership with

Imperial Brewing & Leisure, Ltd. (United Kingdom), which subsequently became a wholly owned Circle K subsidiary when their foreign partner was acquired by another company. Another joint venture was initiated with Shell of Canada to operate 43 convenience stores at Shell gasoline stations there. Other Circle K store licensing agreements are in effect with companies in Hong Kong, Indonesia, and Japan.

Performance

This section examines performance measures of the food retailing industry: employment and wages, productivity, profits, and technology.

Employment and Wages

Employment in food retailing increased 2.8 percent to more than 2.9 million persons, about 25 percent of all food marketing workers in 1987 (app. table 30). Food retailing employment has experienced moderate annual growth rates in the 1980's partly because of the expanding variety of service departments and nongrocery product offerings such as general merchandise which increase staffing requirements. This trend will probably continue with the growth of the larger store formats.

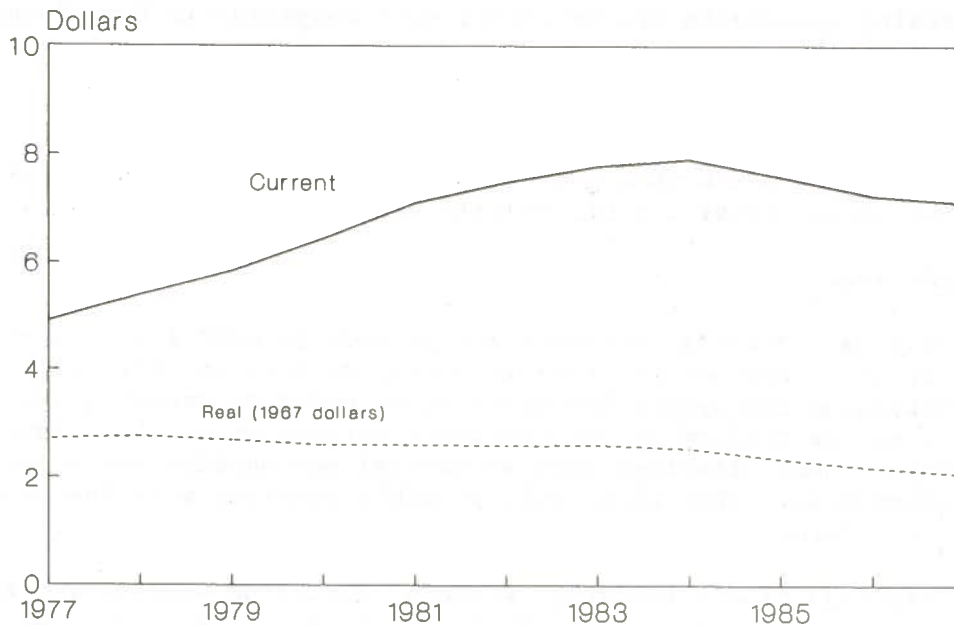
The average earnings of all foodstore workers, including specialized foodstore workers' earnings, fell 4 percent to \$6.95 per hour in 1987. Grocery store worker earnings also decreased from \$7.24 to \$7.11 per hour. Hourly grocery store earnings had reached \$7.92 in 1984, but declined for the following 3 years (app. table 32). Real earnings (average hourly earnings adjusted by the Consumer Price Index) fell 5.1 percent in 1987 (fig. 20). Factors affecting average industry earnings include the outcome of wage negotiations, the extent of part-time employment, the proportion of nonunion employment, and the substitution of incentive pay (lump sum, profit sharing, and company stock options) for wage increases, which are not included in average earnings statistics. Over longer time periods, changes to the minimum wage established by State and Federal Governments and economic inflation will also affect average earnings.

Only about a third of union contract workers renegotiate their wage and benefits agreements in any given year. Safeway Stores' divestiture of several divisions and their subsequent acquisition by other food retailers, however, prompted additional contract termination and renegotiation activity in 1987. Significant wage reductions amounting to \$2.17 per hour for top-scale employees were conceded by Safeway Stores workers in the Richmond and Norfolk, Virginia, areas. Wage freezes were imposed for others and severance pay of up to \$2,000 per employee was given to workers at stores slated to close. In Houston, Safeway reached an agreement to cut hourly full-time wages by \$1.75 and part-time wages by \$0.60. Kroger supermarkets, a major competitor in Houston, also received concessions amounting to \$1.25 per hour for full-time employees, a reduction of premium pay on Sunday to 1-1/4 time, an increase in the share of part-time hours, and the establishment of severance pay.

Striking workers of King Soopers stores in Denver (a Kroger division) agreed to a general wage decrease of \$1 per hour as part of a wage settlement there. The contract also provided an end-of-year incentive payment of \$250. Kroger employees in southern Indiana and Kentucky received a lump-sum payment or company stock in lieu of wage increases. To ensure greater job security,

Figure 20

Average hourly earnings, grocery store employees



Source: (84).

Kroger also agreed to a \$90-million construction plan for the area. In addition to modest wage rises, Kroger employees in San Antonio, Texas, divided 15 percent of their stores' annual profits under a new incentive pay plan.

Alpha-Beta, Frys, and Safeway workers in Arizona received a \$500 lump-sum annual payment in lieu of wage boosts. Shoprite, Pathmark, Grand Union, and Foodtown supermarkets in northern New Jersey agreed to increases of \$1,040 per year for full-time and \$0.40 per hour for part-time wage earners and to improved benefits. Acme and Giant Eagle supermarkets in Pennsylvania also agreed to wage increases.

By far the largest single group of food retailing workers to reach new agreements was in southern California. Some 65,000 employees negotiated a 3-year contract providing for a \$500 lump-sum payment in 1987, \$1,000 in 1988, and a \$0.50 per hour wage increase in 1990 (64).

Agreements reached in 1987 have had mixed effects on industry wage trends. Wage rates will probably rise slowly into the 1990's (12). Many 1987 contracts will phase out two-tier pay scales. Lump-sum and incentive pay plans have gained in popularity and will substitute to an extent for lack of wage increases. Some workers accepted reduced premium pay for Sundays and holidays, but others won a greater share of full-time hours in relation to part-time hours. Low unemployment rates in some areas pushed entry-level wages upward. Minimum wage increases were approved in 10 States during 1987, including California, Massachusetts, and Texas. Congress and some other State legislatures may also raise the minimum wage.

Profits

Net profits after taxes for food retailers declined in 1986 to 13.1 percent of stockholders' equity, down from 14.2 percent in 1985 and 16.2 percent in 1984 (app. table 42). Profits as a share of food retailer sales averaged 1.2 percent. Profits increased slightly in the first quarter of 1987 over the year-earlier period. Profit rates are typically lowest in the first quarter and highest in the fourth quarter, reflecting holiday sales.

Profits generally increased during 1987 as food retailers focused on reducing operating costs and improving their ordering and inventory efficiency by implementing such computer-assisted controls as direct product profit models. Among retailers with substantially higher profits in 1987 were Kroger, Food Lion, Albertson's, Winn-Dixie, and Grand Union. However, two large chains, Safeway and Supermarkets General Corporation, suffered sharply lower profits in 1987 due to high debt servicing costs and asset disposal resulting from leveraged buyouts (2).

Productivity and Technology

As the variety of goods and services offered by food retailers continues to expand, so have their labor requirements. Labor growth has actually exceeded sales growth in recent years. Employment grew by 3.5 percent in 1986, but total sales increased in real terms by only 2.5 percent (after adjusting for inflation).

The Bureau of Labor Statistics (BLS) index of foodstore productivity declined to 93 in 1986 (1977=100), down from 94.2 in 1985. This output-per-labor-hour measure has continued to deteriorate from peak levels reached in the early 1970's. Total output has increased by 12.2 percent since 1977, but the number of labor hours employed has risen 20.6 percent during the same 10-year period. Output per labor hour has generally declined since 1980 with only slight improvements in 1983 and 1985 (fig. 21).

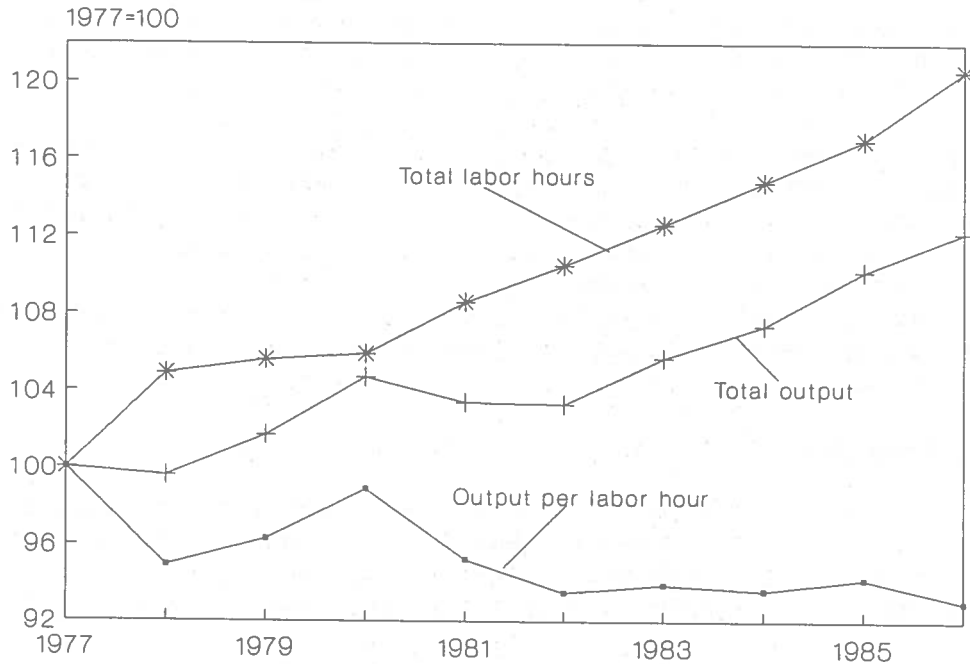
Food retailers are investing in productivity-enhancing technology. The number of supermarkets with universal pricing code (UPC) scanning checkouts increased by 13 percent in 1986 to reach 13,226 stores, accounting for 50 percent of all grocery store sales (39). Scanning systems applications are also expanding to include inventory control and administrative functions.

A number of supermarket companies have introduced point of sale (POS) debit and checking systems, partly because of the systems' labor-saving and time-reducing potential at the checkout stand. Of the 17,300 POS terminals operating in 1986, 13 percent were located in supermarkets and 8 percent were located in convenience stores. The number of terminals is expected to increase more than tenfold by 1990, with supermarkets being the largest single segment, accounting for 42 percent of the installed base (28).

The evaluation of new technology by individual retailers may be a precursor to other industrywide developments. Kroger added a second store to its self-service scanning checkout pilot program in 1987. Kroger is also testing a radio-controlled shelf label system that could potentially reduce labor devoted to item labeling and pricing (39).

Figure 21

Foodstore productivity



Source: (88).

FOOD SERVICE

America's 720,000 foodservice establishments (47) sold \$177 billion worth of meals and snacks, excluding alcoholic beverages, in 1986, up 5.4 percent from 1985 (fig. 22, app. table 4). Real sales rose 3 percent in 1986 compared with 2 percent in 1985 and 4 percent in 1984.

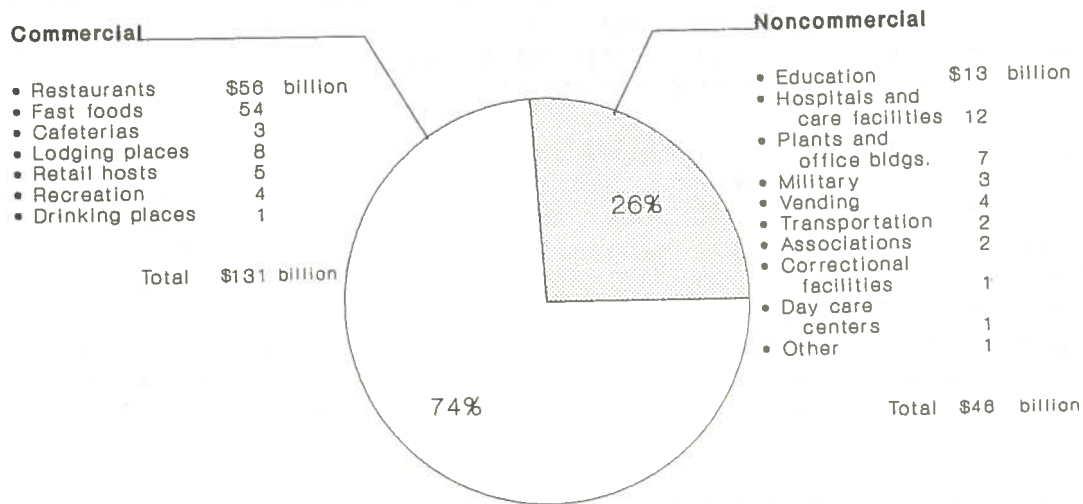
The foodservice industry in 1987 continued to be a mature, slower growing market. Foodservice firms competed aggressively with each other and with food retailers for a bigger share of the consumer food dollar. Large foodservice firms, particularly fast food chains, continued to gain market shares by introducing new products that are heavily advertised and promoted with coupons and discounts. Large foodservice firms also continued to build new units and buy existing restaurants in prime locations.

Several important legislative and regulatory issues faced the foodservice industry in 1986 and 1987. The minimum wage, parental leave benefits, and mandated health benefits are among the issues which will continue to affect the industry during 1988.

The Federal minimum wage has remained at \$3.35 per hour since 1981. However, by late 1987, nine States and the District of Columbia had enacted legislation requiring a minimum wage above the Federal standard.

Figure 22

Foodservice sales by sector, 1986



Employer-sponsored health insurance coverage and unpaid parental leave of up to 18 weeks are other proposed employee benefits that surfaced in recent years and will probably be addressed in upcoming labor negotiations. These issues, combined with recent legislation requiring foodservice operators to pay Social Security payroll taxes on employee tips, are contributing to the continued squeeze operators feel as they simultaneously strive to meet increasing costs and keep menu prices down.

Composition

The 720,000-establishment foodservice industry consists of numerous individual market segments commonly divided into two major sectors, commercial and noncommercial. Commercial foodservice establishments exist for profit. The primary purpose of noncommercial foodservice operations in establishments such as nursing homes, child daycare centers, factories, and the military is to serve food rather than make a profit.

Separate eating places are defined as those outlets that derive revenue mainly from sales of meals and snacks. They were 62 percent of commercial foodservice establishments in 1986 and accounted for 86 percent of sales. The remaining sales in this sector are in outlets, such as hotel restaurants or drugstore lunch counters, that are part of a larger facility whose foodservice sales are less than other revenues.

Sales

Sales in the foodservice industry reached almost \$177 billion in 1986 (app. table 4). Sales in the commercial sector were up about 5.8 percent in 1986.

Noncommercial sales for the year grew a more modest 4.3 percent, bringing overall foodservice sales up about 5.4 percent. Preliminary 1987 figures from the Bureau of the Census reveal that total eating and drinking place sales were up 5.4 percent over 1986. Sales of full-menu establishments increased by 5.9 percent in 1987 and sales of limited-menu (fast food) establishments rose 4.9 percent. Real sales for all eating and drinking places were up only 1.6 percent in 1987, according to preliminary figures.

Grocery store foodservice, not included in the ERS data base (no industrywide definition exists for this segment), was reportedly the biggest gainer in 1985. The grocery store segment, which includes convenience stores, increased by 26 percent over 1984. A more modest increase of about 15 percent was recorded in 1986. For 1987, industry predictions call for gains of 10-12 percent over 1986. The rapid growth in this sector has been caused by the increasing popularity of takeout products at supermarkets and the growth of foodservice in convenience stores. Many convenience stores are now involved in "dual concepts," a convenience store linked with a fast food chain, for example.

For 1987, various industry scenarios called for real growth of 1.6-2.4 percent. Strongest growth in the commercial sector was predicted for convenience stores and supermarket delicatessens. The transportation industry and nursing homes were expected to lead noncommercial growth.

Franchising

Franchised restaurants, both company-owned and franchisee-owned, represent a key segment of the commercial restaurant industry. They commanded a 43-percent share of total eating-place sales in 1986 compared with 21 percent in 1970. Franchised restaurant sales rose from \$4.6 billion in 1970 to \$52.5 billion in 1986. The number of franchise outlets more than doubled from 32,584 units in 1970 to 78,288 units in 1986. These units were operated by 470 U.S. restaurant franchise firms (18).

In 1985, 15 big franchisers operated over 1,000 units each. They represented 53 percent of all restaurants in the franchise system, or 37,467 restaurants, and accounted for \$26 billion, or 60 percent, of franchised restaurants sales.

Hamburger, roast beef, and frankfurter restaurants had the largest share of units, accounting for 41 percent of franchised restaurants and 50 percent of franchised restaurant sales in 1986.

Franchising firms have continued to expand their international operations. In 1985, the most recent year for which data are available, 61 restaurant franchisers operated 6,122 units in foreign countries compared with 67 restaurant franchisers and 5,990 units in 1984. In 1971, restaurant franchisers operated 930 units in foreign countries.

Canada accounted for the largest number of U.S.-franchised restaurants in 1985, followed closely by Japan (table 13). However, the Republic of Korea and countries in Africa and the Middle East have become popular expansion candidates. Negotiations have been made recently with the Chinese and Soviet

Governments to bring fast food restaurants to those countries. Kentucky Fried Chicken, a division of PepsiCo, Inc., opened its first restaurant in Beijing, China, in November 1986.

Of the total number of units operating overseas, 3,200 or 53 percent sold hamburgers, roast beef, and franks. Chicken was sold by 31 percent of the overseas U.S. franchise units, and pizza, the third most popular type of restaurant, accounted for less than 10 percent of the units.

Table 13--International scope of U.S. restaurant franchising, 1985

Type of franchise	U.S. firms 1/	Units abroad	Canada	United Kingdom	Europe
<u>Number</u>					
Chicken	8	1,878	11	371	62
Hamburger, roast beef, franks	13	3,251	1,146	236	462
Pizza	14	578	127	6	15
Mexican	6	109	83	0	0
Seafood	3	13	6	0	0
Pancakes, waffles	2	15	3	0	0
Steak, full menu	13	271	161	2	0
Sandwich, other	2	7	5	0	0
Total	61	6,122	1,542	615	539

	Japan	Australia/ New Zealand	Africa	Caribbean	Central/ South America
<u>Number</u>					
Chicken	540	292	183	144	88
Hamburger, roast beef, franks	754	244	2	98	97
Pizza	74	173	10	43	52
Mexican	0	2	0	22	1
Seafood	0	0	0	0	0
Pancakes, waffles	12	0	0	0	0
Steak, full menu	56	16	0	4	19
Sandwich, other	0	0	0	1	0
Total	1,436	727	195	312	257

1/ Firms that operate international franchises.

Source: (18).

In 1986, McDonald's, Kentucky Fried Chicken, Burger King, and Wendy's, the four largest U.S. restaurant franchisers, accounted for 31 percent of all units worldwide. They also dominated the foreign market, operating 4,626 restaurants internationally, up from 272 units in 1974.

McDonald's, the leading foodservice chain, had over 9,400 units worldwide in 1986. McDonald's also dominated the international restaurant scene with 2,138 units and \$2.9 billion in sales, up 34 percent since 1985. In 1982, their international market consisted of just 370 units. In 1987, McDonald's expected to open one-third of its 500 new units outside the United States.

Kentucky Fried Chicken operated more than 6,500 units worldwide. The chain operates the only major quick-service chicken restaurants outside the United States. In 1986, 28 percent of all Kentucky Fried Chicken's outlets were located overseas in 54 countries. Over 33 percent of Kentucky Fried Chicken's foreign outlets were in Japan. Great Britain followed with 17 percent.

Of the four largest franchisers, only Kentucky Fried Chicken operated outlets in Africa. In fact, African nations constituted the fourth largest overseas Kentucky Fried Chicken market. Kentucky Fried Chicken was also the only U.S. franchiser in the Middle Eastern countries.

Burger King, a division of Pillsbury Foodservice, operated 4,744 outlets around the world in 1986. Over 8 percent of those, 403 units, were located in 25 countries outside the United States, up from 312 outlets in 1982. Burger King's international restaurants are mostly in Canada, Puerto Rico, Australia, New Zealand, and the Federal Republic of Germany.

Wendy's, another hamburger chain, opened its first outlets in 1970. Since then, it has grown to be the fourth largest restaurant chain in the world. In 1986, the firm operated almost 4,000 restaurants in 50 States and 17 foreign countries. Sales grew from \$300,000 in 1970 to \$2.7 billion in 1986. In 1986, Wendy's operated 231 units outside the United States, compared with only 10 in 1982.

Franchise growth will continue in existing markets both here and abroad. Many additional U.S. restaurant franchisers are planning to extend their operations to foreign countries by the end of 1988.

Mergers

Merger and acquisition activity in the foodservice industry continued at a high level during 1986. Foodservice firms were involved in 81 such transactions over the year (table 14).

Of the top 20 companies in Restaurants and Institutions magazine's "400" list, several were involved in a merger or acquisition (35). PepsiCo acquired Kentucky Fried Chicken, Marriott obtained Saga Corp., and Pantero purchased Pizza Inn to name a few. This merger activity is reducing the number of privately held chain operations, especially in the fast food and coffeeshop segments. Some such operations have disappeared from the foodservice scene, while others have been revitalized by the infusion of capital and management expertise.

The reasons behind acquisition are as varied as the companies involved. Some firms use acquisitions to move into a different, but complementary, line of

Table 14--Mergers and divestitures in food service

Year	Acquiring company			Total	Divestitures
	U.S. foodservice firm	Other than U.S. foodservice firm			
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	

Source: (3).

food or foodservice concept. Cost efficiency is another reason. Often the acquiring company is large and can bring to the merger economies of scale in operating systems, advertising budgets, and purchasing that the acquired firm did not enjoy.

Some observers feel that merger activity is further evidence of the industry's quest to meet ever-changing consumer needs for new products, more convenience, healthier foods, and higher quality. Because building costs are extremely high, acquiring additional physical plants is sometimes more cost efficient than building them. Furthermore, in many areas, the best locations for foodservice outlets have been purchased or leased, leaving little alternative to merger and acquisition.

Productivity

Over the past decade, labor productivity at eating and drinking places has been declining. According to the Bureau of Labor Statistics (BLS), the productivity index for the industry has fallen by 8.1 percent since 1977 (66). In the case of eating and drinking places, BLS has defined output by sales receipts rather than by a physical quantity because foodservice operators do not generally produce readily definable "hard" goods. The labor input part of the productivity ratio is defined as the total hours worked by all employees, both supervisory and nonsupervisory. After steadily increasing throughout the 1960's and mid-1970's, productivity--measured as output per labor hour--in the eating and drinking place industry began to decline. The index hit a high of 103.6 in 1973, declined to 99.5 by 1980, and dropped further to 96.3 in 1986. The downward trend has mostly taken place since 1982 (table 15).

Lower levels of output did not cause the decline in productivity in the eating and drinking place industry. Although the growth rate has slowed slightly since 1980, output has continually advanced each year since 1974. Instead, the decrease in the productivity index can be traced to the tremendous growth in the number of hours worked by eating and drinking place employees. Since 1958, hours worked by all employees have increased 2.7 percent each year. During 1980-85, however, the growth rate jumped to 4 percent. With employee

Table 15--Index of productivity for eating and drinking places

Year	Output	Hours of all persons	Output per hour of all persons
<u>1977 = 100</u>			
1958	56.3	62.9	89.5
1965	68.0	72.6	93.7
1970	79.3	78.5	101.0
1980	107.9	108.4	99.5
1981	108.1	111.4	97.0
1982	109.6	113.4	96.6
1983	115.3	118.8	97.1
1984	120.0	126.5	94.9
1985	123.2	131.8	93.5
1986	128.3	133.2	96.3

Source: (66).

hours growing at a faster rate than output, productivity has consequently declined.

As eating and drinking places expanded their operations in the 1960's and 1970's by adding more units, the increased sales volume was more than enough to compensate for added employees. But in the 1980's, the growth of the foodservice market has slowed, resulting in increased competition. And at the same time, restaurants have had to respond to a rising demand for improved customer service. Thus, some operators have expanded their staffs at a time when expectations of sales growth are lower.

In addition to increased foodservice competition and greater consumer demands for service, the industry faces a labor shortage. The number of U.S. teenagers, a traditional source of labor in the industry, is shrinking, sending operators searching for alternative sources of labor or forcing them to operate shorthanded.

Advertising

After spending a record \$1.2 billion on television advertising in 1986 (40), the restaurant and fast food chains spent at an even faster pace through the first 6 months of 1987 (table 16).

The rapidly expanding Domino's Pizza chain posted the biggest gain, with a 47-percent jump in television spending compared with the same period in 1986. Other significant increases in television spending were made by Sizzler (up 32 percent), Hardee's (up 29 percent), Red Lobster Inns (up 24 percent) and Taco Bell (up 23 percent). McDonald's is by far the biggest television advertising spender, having spent about \$160 million in 1987.

Table 16--Leading television advertisers, January-June, 1987

Chain	:	Total	:	Change from 1986
		<u>Million dollars</u>		<u>Percent</u>
McDonald's		160.3		0
Burger King		80.2		10
Kentucky Fried Chicken		44.5		15
Pizza Hut		40.8		9
Wendy's		38.4		6
Taco Bell		29.9		23
Red Lobster Inns		20.1		24
Domino's Pizza		19.7		47
Hardee's		16.1		29
Long John Silver		14.4		2
Sizzler		9.6		32
Dairy Queen		8.9		4
Jack in the Box		8.2		-6
Arby's		5.4		-20
Roy Rogers		5.4		2
Total		611.8		9

Source: (40).

Menu Prices

Tough competition among restaurateurs is keeping a tight rein on menu prices (table 17). The price index for eating and drinking places averaged 117 in 1987 (1982-84=100), up 4 percent from 1986. The gain in the CPI for food consumed away from home in 1987 was only modestly higher, 4 percent, than the 3.9-percent 1986 increase (62).

The average price consumers are paying to dine at restaurants is rising at all meal periods (table 18). The rate of gain, however, varies. Last year, menu prices posted the largest increase for breakfast and snacks for the first time since 1983, 4.5 percent. Breakfast and snack menu prices are continuing to climb at a faster rate than prices for other meal items, moving up 4.7 percent during the first half of 1987.

The cost of eating out at lunch has risen by about 4 percent each year since 1983. In 1984 and 1985, dinner menu prices increased at a somewhat faster pace. This trend reversed itself in 1986 as lunch menu prices climbed 3.9 percent compared with a 3.6-percent advance at the evening meal. During the first 6 months of 1987, lunch menu prices again increased more rapidly (4.1 percent) than dinner menu prices (3.8 percent) over 1986 levels (36).

Table 17--Percentage change in wholesale food costs, menu prices, and grocery store prices

Item	: 1983	: 1984	: 1985	: 1986	: 1987 1/
	<u>Percent</u>				
Wholesale food costs	1.2	4.5	-1.7	1.5	3.5
Menu prices	4.4	4.2	4.0	3.9	3.4
Grocery store prices	1.1	3.7	1.4	2.9	3.3

1/ June 1987 compared with June 1986.

Source: (36).

Table 18--Percentage change in menu prices by meal

Meal	: 1983	: 1984	: 1985	: 1986	: 1987 1/
	<u>Percent</u>				
Breakfast and snacks	5.5	4.3	3.5	4.5	4.7
Lunch	4.0	3.8	3.9	3.9	4.1
Dinner	4.0	4.6	4.2	3.6	3.8

1/ June 1987 compared with June 1986.

Source: (36).

Costs

Foodservice labor costs will probably rise 4 percent in 1988, following a 3.6-percent increase in 1987 and a 3.2-percent rise in 1986. Low unemployment rates and the continuing decline in the number of teenagers in the work force will exert upward pressure on wages in 1988. The heaviest user of teenage labor, the fast food sector, has been especially hard hit by the declining labor pool. In some areas of the country, starting hourly wages have risen dramatically to attract workers. Employee benefits, another growing cost component for the foodservice operator, have also increased as the industry improves benefits to recruit and retain workers. Alternative sources of labor, such as older workers, are now being tapped.

Costs other than labor are predicted to increase 4.6 percent in 1988, after a rise of 4 percent in 1987 and 3.6 percent in 1986 (36). Increases are expected in interest rates, insurance, repairs, advertising, and most utilities. Some observers predict that electricity prices will remain steady through 1988.

Outlook

Shortly after the October 1987 stock market crash, a Crain's New York Business survey revealed that 22 percent of the respondents planned to cut back on eating out during the coming year, and 20 percent expected to reduce spending on food consumed at home (2). The National Restaurant Association, however, has predicted a 7.1-percent increase in sales for the commercial and noncommercial sectors combined (25).

A 3.5-percent increase in U.S. foodservice sales in 1988 seems more likely, however. The declining dollar, trade deficits, a continuing expansive Federal budget, the pending increase in the minimum wage, and consumers' plans for their discretionary income are all factors holding down sales and profits in the away-from-home market for food.

Foodservice sales in 1988 will probably be slow in the first quarter. The second quarter will show much improvement, and the third quarter will account for nearly 40 percent of sales for the entire year. Fourth quarter foodservice sales will trail off to near the second quarter level.

In 1988, sales among fast food outlets will probably exceed those of restaurants and lunchrooms for the first time since such statistics have been kept. The fast food sector was within a few percentage points of matching restaurant sales in both 1986 and 1987. During 1988, some foodservice customers will probably patronize fast food eateries instead of completely abandoning their away-from-home eating habits. This shift will add to 1988 fast food receipts at the expense of the more expensive restaurant segment.

Convenience of all types will continue to be the watchword of the foodservice industry. In addition to the take-out foods of supermarkets and convenience stores, more upscale restaurants and lunchrooms will offer takeout and home delivery. Most fast food chains continue to look for new ways to make their businesses even more convenient for consumers. More drive-through and home delivery operations are now in place than ever before and still more are planned.

Households with microwave ovens and video cassette recorders (VCR's) are at an all-time high. Seventy percent of U.S. households now have microwaves and over 50 percent have VCR's. These households often have two incomes and one or more children. The members of these households eat meals while watching a movie or a previously recorded program. Because time is critical in these households, convenience is an important factor in selecting foods. Both foodservice establishments and supermarkets are prepared to provide that convenience.

Some foodservice outlets have added automatic teller machines to make paying for a meal more convenient. In some outlets, a consumer may now patronize a foodservice drive-through, punch in a bank account number and food item selections, verify choices on a computer screen, be presented with a bill on the screen, and press "O.K." to bill his or her account for the amount of the purchase. This trend will probably continue at least throughout the decade.

The small Burger Bundles and Chicken Littles of 1986-87 may be joined by other hand-held fast foods. In late 1987, McDonald's began test marketing its 7-inch open-faced "McPizza" in 60 selected outlets. The McPizza comes in two

varieties: cheese priced at \$1.15 in test markets, and pepperoni and sausage at \$1.30 each.

Although several fast food chains have provided nutrition information to consumers, the industry continues to be criticized for its high-cholesterol, high-sodium food. Ingredients, types of cooking oils used, consumer information programs, and general nutrition concerns will probably continue to be issues for the foodservice industry throughout the decade.

Competition for the fast food market has greatly increased in recent years. Supermarket delicatessens and soup and salad bars have made inroads into traditional foodservice sales. Convenience stores have also increased their share of that market. Convenience stores numbered 47,000 in 1986 with nearly \$22 billion in nongasoline sales. About 14 percent of nongasoline sales among convenience stores are in fast foods, \$3.1 billion in 1987, and the share continues to grow. Industry sources look for fast foods to make up 16 percent of nongasoline sales among convenience stores by the end of 1988. Supermarkets have entered the fast foods race with delicatessens, salad bars, sit-down restaurants, drive-through windows, and call-ahead meal orders.

Packaging is the latest addition to the industry's concerns. In mid-1987, McDonald's product packaging was criticized in the U.S. Senate. A ranking member of the Environment and Public Works Committee called on the fast food leader to stop using plastic foam containers made from chlorofluorocarbons. These compounds are used as refrigerants, industrial solvents, and as a component in some plastic packaging such as those used by some fast-food restaurants. Chlorofluorocarbons are believed to erode the ozone layer in the upper atmosphere which filters out much of the sun's harmful ultraviolet rays.

REFERENCES

1. Advertising Age. Selected issues.
2. American Institute of Food Distribution, Inc. The Food Institute Report. Fair Lawn, NJ. Selected issues.
3. _____. Mergers and Acquisitions. Fair Lawn, NJ. Selected issues.
4. BAR/LNA Multi-Media Service. Class/Brand Year-to-date. Selected years.
5. Biernacki, Sherrie. "'I Can Get It For You Wholesale,'" Farmline News Service, U.S. Dept. Agr., Econ. Res. Serv., Dec. 1986.
6. Brannigan, Martha. "A Shortage of Youths Brings Wide Changes to the Labor Market: Opportunities Rise for Poor, Elderly and Handicapped; Pressure for Immigration?" The Wall Street Journal, Sept. 2, 1986.
7. Business Week. Selected issues.
8. Connor, John M., Richard T. Rogers, Bruce W. Marion, and Willard F. Mueller. The Food Manufacturing Industries, 1985. Lexington, MA: Lexington Books, D.C. Heath and Co., 1985.
9. Decisions Publications Inc. Marketing and Media Decisions. New York. Selected issues, 1987.
10. Directory of Retailer Owned Coops, Wholesaler Sponsored Voluntaries and Wholesale Grocers. New York: Lebhar and Friedman, 1986 and 1987.
11. Distilled Spirits Council of the United States, Inc. Unpublished tables, 1987, Washington, DC.
12. Elitzak, Howard, and Phillip Kaufman. "Labor Costs and the Marketing Bill," Agricultural Outlook, Oct. 1987.
13. Epps, Walter B. Factors Affecting Adoption of the Uniform Communication Standard in Major Wholesale Grocery Markets. Paper presented at the Food Distribution Research Society Meeting, Ft. Lauderdale, FL, Oct. 1985.
14. Federal Reserve Board. Federal Reserve Bulletin. Selected issues.
15. Grimm, W. T. Mergerstat Review, 1985. Chicago: W. T. Grimm and Co., 1986.
16. Institutional Distribution. New York: Bills Publications, Dec. 1987.
17. Internal memo on food processing industries, Organization for Economic Cooperation and Development, May 1987.
18. Kostecka, Andrew. Franchising in the Economy. U.S. Dept. Commerce, Intl. Trade Admin. Jan. 1986.
19. Kraft, Inc. Annual Report, 1987.

20. Lee, Chinkook. Measuring the Size of the U.S. Food and Fiber System. AER-566. U.S. Dept. Agr., Econ. Res. Serv., Mar. 1987.
21. Manchester, Alden. Developing An Integrated Information System for the Food Sector. AER-575. U.S. Dept. Agr., Econ. Res. Serv., Aug. 1987.
22. Marion, Bruce W. The Organization and Performance of the U.S. Food System. Lexington, MA: Lexington Books, D.C. Heath and Co., 1985.
23. National-American Wholesale Grocers Association. Import - Export Survey, 1987. Falls Church, VA, 1987.
24. National Science Foundation. Research and Development in Industry. Selected issues.
25. Nation's Restaurant News. Selected issues.
26. New Products News. Selected issues.
27. Newspaper Advertising Bureau. Media Records. New York, 1986.
28. PC Week. Dec. 1, 1987.
29. Personick, Valerie A. "A Second Look At Industry Output and Employment Trends Through 1995," Monthly Labor Review, Nov. 1985.
30. Prepared Foods. Selected issues.
31. Private Label. Jan.-Feb. 1987.
32. Progressive Grocer. Selected issues.
33. Progressive Grocer Information Sales. Marketing Guidebook. Stamford, CT, 1986 and 1987.
34. Radio Advertising Bureau. New York.
35. Restaurants & Institutions. Selected issues.
36. Restaurants U.S.A. Selected issues.
37. Sara Lee Corp. Annual Report, 1987.
38. Staley Continental, Inc. Annual Report, 1987.
39. Supermarket News. Selected issues.
40. Television Bureau of Advertising, New York.
41. U.S. Chamber of Commerce. 1984 Employee Benefits. 1984.
42. U.S. Department of Agriculture, Economic Research Service. Agricultural Outlook. Selected issues.
43. _____, Economic Research Service. Food Cost Review, 1986. AER-574. U.S. Dept. Agr., Econ. Res. Serv., July 1986.

44. _____, Economic Research Service. Food Consumption, Prices, and Expenditures: 1964-84. SB-736. Dec. 1985.
45. _____, Economic Research Service. Food Marketing Review, 1986. AER-565. Feb. 1987.
46. _____, Economic Research Service. National Food Review. Selected issues.
47. _____, National Agricultural Statistics Service. Agricultural Statistics, 1987.
48. U.S. Department of Commerce, Bureau of Economic Analysis. Survey of Current Business. Selected issues.
49. _____, Bureau of the Census. Annual Survey of Manufactures. Selected issues.
50. _____, Bureau of the Census. Census of Manufactures. Selected issues.
51. _____, Bureau of the Census. Census of Retail Trade. Special Tabulation. 1982.
52. _____, Bureau of the Census. Census of Retail Trade. Selected issues.
53. _____, Bureau of the Census. Census of Wholesale Trade. Selected issues.
54. _____, Bureau of the Census. County Business Patterns. Selected issues.
55. _____, Bureau of the Census. Current Industrial Reports, Survey of Plant Capacity. Selected issues.
56. _____, Bureau of the Census. Current Population Reports. Selected issues.
57. _____, Bureau of the Census. Monthly Wholesale Trade, Sales and Inventories. Current Business Reports (1 - 12), 1987.
58. _____, Bureau of the Census. Quarterly Financial Report. QFR-86-1. 1986.
59. _____, Bureau of the Census. Revised Monthly Retail Sales and Inventories: January 1974 through December 1985. 1985.
60. _____, International Trade Administration. 1988 U.S. Industrial Outlook. 1988.
61. _____, National Oceanic and Atmospheric Administration. Fisheries of the United States, 1985. Current Fishery Statistics, No. 8380. Apr. 1986.

62. U.S. Department of Labor, Bureau of Labor Statistics. CPI Detailed Report. Selected issues.
63. _____, Bureau of Labor Statistics. Current Wage Developments. Selected issues.
64. _____, Bureau of Labor Statistics. Employment and Earnings. Selected issues.
65. _____, Bureau of Labor Statistics. Unpublished Producer Price Index Data. July 1986 and previous years.
66. _____, Bureau of Labor Statistics. Productivity Measures for Selected Industries, 1958-1984. Bulletin No. 2256. Mar. 1986.
67. U.S. Department of the Treasury, Internal Revenue Service. Corporation Source Book. Selected issues.
68. Wall Street Journal. Selected issues.
69. Weinstein, Jeff. "Fast-food operators report most labor problems," Restaurants & Institutions, Vol. 96, No. 20, Oct. 1, 1986.
70. Willard Bishop Consulting Economists, Ltd. Competitive Edge. Chicago, June 1987.

LIST OF APPENDIX TABLES

<u>Table</u>	<u>Page</u>
<u>Market Size and Sales</u>	
1. Food expenditures through the food marketing system	63
2. Alcoholic beverage sales through the food marketing system	64
3. Supermarket sales by product category	65
4. Foodservice sales by industry segment	66
5. Alcoholic beverage sales by product category	67
6. Distilled spirits entering U.S. trade channels	68
7. Food and nonfood sales or shipments in food marketing	69
<u>Industry Size and Structure</u>	
8. Number of food marketing establishments	70
9. Number of food marketing establishments covered by unemployment insurance	70
10. Number of food marketing establishments (county business patterns).	71
11. Number of retail and wholesale alcoholic beverage establishments ..	71
12. Number of food marketing companies	72
13. Aggregate concentration in food marketing	72
14. Share of shipment value for the four and eight largest food processing firms	73
15. Concentration in food wholesaling	74
16. Average concentration of four leading food retail firms in Standard Metropolitan Statistical Areas	75
17. Concentration among separate eating places	75
18. Sales of top 50 food processing companies	76
19. Sales of top 20 wholesale food companies	78
20. Sales of top 25 food retailing companies	79
21. Sales of top 25 foodservice chains	80
22. Food marketing mergers	81
23. Food marketing mergers and divestures costing more than \$100 million, 1986	81
24. Food marketing mergers among the 100 largest transactions in history	83
25. Acquisition and divestiture leaders in food marketing, 1986	84
26. Food processing mergers	84
<u>Industry Economic Characteristics</u>	
27. Major economic indicators	85
28. Food marketing price indexes	86
29. Value of U.S. dollar and interest rates	87
30. Number of employees in food marketing	88
31. Number of production workers in food marketing	89
32. Average hourly earnings in food marketing	90
33. Average weekly earnings in food marketing	91
34. Food-related advertising	92
35. Leading food advertisers, 1986	93
36. Largest food marketing firms' share of food advertising, 1986	94
37. Advertising price indexes	96

Performance Measures

38.	Value added and employment generated by the food marketing system.	97
39.	Research and development in food and tobacco marketing	98
40.	Food marketing productivity, by processing and retailing sectors .	99
41.	Value added in food marketing per full-time equivalent employee ..	100
42.	Profit margins in food marketing	101
43.	Income statement for food processing and retailing	102
44.	Balance sheet for food processing and retailing	103
45.	Profits of selected processors, 1986	104
46.	Profits of selected retailers, 1986	105
47.	Profits of selected restaurant firms, 1986	106
48.	New products introduced in 20 selected categories	107
49.	Capital expenditures in food marketing	108
50.	Capacity measures in food marketing	109

Food Marketing Purchases

51.	Food marketing system purchases from U.S. agriculture	110
52.	Food marketing system purchases from fisheries	111

Food Marketing and the International Economy

53.	Foreign trade in processed foods	112
54.	Composition of the foreign trade deficit in processed foods	114
55.	Foreign investment in food marketing	115
56.	International restaurant franchising: Location and number of establishments of U.S. restaurant firms	116
57.	Composition of food processing industries in selected countries ...	117
58.	Food processing share of total manufacturing production and employment within each country of the OECD	118
59.	Shares of food marketing production and employment by OECD countries, 1985	119
60.	OECD trade in processed foods	120
61.	Productivity in food processing industries in selected OECD countries	121
62.	Private research and development expenditures by OECD food-related industries, 1981	122

Market Size and Sales

Appendix table 1--Food expenditures through the food marketing system 1/

Year	Off-premise use				Foodservice				Total
	Food-stores	Other-stores	Home-delivered, mail order	Farmers, manufacturers, wholesalers	Total	Commercial	Noncommercial	Total	

Billion dollars

1963	44.1	3.0	2.7	1.6	51.5	NA	NA	22.5	74.0
1967	52.1	3.3	2.5	1.6	59.5	NA	NA	0.4	89.9
1972	75.2	3.9	2.4	1.8	83.6	NA	NA	46.3	128.9
1977	118.3	7.0	2.3	2.9	130.5	58.6	26.4	85.0	215.7
1982	179.2	10.8	2.6	4.2	196.8	100.1	.9	140.9	338.7
1983	187.0	12.1	2.6	4.3	206.0	111.3	43.3	154.2	360.2
1984	196.3	13.1	2.6	4.5	216.5	123.5	43.4	166.7	383.2
1985	203.8	13.7	2.4	4.6	224.5	131.2	46.1	177.2	401.7
1986	209.0	14.5	2.6	4.8	231.0	141.1	49.6	190.5	421.3
1987 <u>2/</u>	214.8	15.1	2.7	4.8	237.5	151.8	53.4	205.2	442.7

NA = Not available.

1/ = Includes taxes and tips

2/ = ERS projections.

Source: (21).

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

Year	Packaged alcoholic beverages				Alcoholic drinks				Total
	Liquor stores	Food-stores	All other	Total	Eating and drinking places <u>1/</u>	Hotels and motels	All other	Total	
<u>Million dollars</u>									
1963	4,465	2,594	725	7,984	5,306	458	385	6,149	14,133
1967	6,005	3,211	955	10,975	6,642	667	587	7,896	17,156
1972	8,810	5,137	1,113	15,060	7,911	961	704	9,576	24,636
1977	11,686	8,041	1,946	21,673	11,981	1,713	1,266	14,960	36,633
1982	15,984	13,379	3,377	32,720	18,371	2,849	1,516	22,736	55,476
1983	16,859	14,750	3,872	35,841	19,459	3,128	1,608	24,195	59,676
1984	16,074	16,541	4,196	36,811	20,721	3,386	1,664	25,771	62,582
1985	17,182	16,862	4,438	38,482	22,011	3,642	1,795	27,445	65,930
1986	17,447	17,594	4,833	39,874	23,945	3,900	1,861	29,706	69,580
1987 <u>2/</u>	16,871	18,020	4,820	39,711	24,636	4,250	1,931	30,817	70,528

1/ Includes tips.

2/ ERS projections.

Source: (21).

Appendix table 3--Supermarket sales by product category

Category	: 1986 sales : volume	: Share of : supermarket : sales	: Change : from 1985
	<u>Million dollars</u>	----- <u>Percent</u> -----	
Baby food	1,193.76	0.54	4.60
Baking needs	4,015.76	1.83	-1.67
Beer and wine	6,599.99	3.01	2.80
Breakfast foods	4,829.66	2.20	3.99
Candy and gum	2,610.88	1.19	6.54
Coffee	3,968.60	1.81	16.70
Cookies and crackers	4,609.27	2.10	2.70
Desserts and toppings	582.65	.27	4.60
Diet and low-calorie foods	905.66	.41	-.14
Dressings	1,431.38	.65	.77
Dried fruits	458.66	.21	13.81
Dried vegetables	713.53	.33	5.46
Fish	1,784.51	.81	3.80
Fruit	1,128.57	.51	4.27
Juice	2,929.66	1.33	3.73
Meat and specialty foods	1,124.80	.57	3.50
Nuts	830.60	.38	3.30
Pasta products	1,175.44	.54	8.82
Pickles and olives	849.45	.39	2.80
Sauces	2,079.60	.95	4.60
Snacks	3,271.88	1.49	8.30
Soft drinks and mixes	8,483.84	3.87	5.12
Soup	1,668.16	.76	2.71
Spices and extracts	774.22	.35	4.20
Spreads	1,059.36	.48	.71
Syrups	445.36	.20	4.61
Tea	735.81	.34	7.19
Vegetables	2,476.51	1.13	.17
Total grocery edibles	62,856.57	28.63	4.61
Household supplies	7,780.22	3.54	3.47
Paper, plastic film, and foil	8,305.00	3.78	2.20
Pet foods	4,485.72	2.04	2.74
Tobacco products	7,749.95	3.53	1.03
Total grocery nonedibles	28,320.89	12.90	2.31
Bakery foods	7,585.89	3.46	3.60
Dairy products	20,665.49	9.41	5.87
Delicatessen products	5,163.25	2.35	7.80
Frozen foods	13,903.28	6.33	.20
Ice cream	2,283.61	1.04	8.10
Meat	36,994.74	16.85	2.57
Produce	19,449.63	8.86	8.30
Total perishables	106,045.89	48.32	4.33
General merchandise	9,827.37	4.48	5.24
Health and beauty aids	8,679.67	3.95	5.84
Unclassified ^{1/}	3,769.61	1.72	
Total supermarket	219,500.00	100.00	4.61

^{1/} Includes prescription and nonprescription drug products, fresh fish, catering services, sit-down foodservice, off- and onsite baked goods, seasonal merchandise, liquor, money orders, and other such goods and services.

Sources: (2, 32).

Appendix table 4--Foodservice sales by industry segment 1/.

Industry segment	1978	1979	1980	1981	1982	1983	1984	1985	1986
Million dollars									
Separate eating places:									
Restaurants, lunchrooms	28,981	33,534	35,615	38,805	40,931	44,731	48,419	52,296	55,767
Fast food outlets	22,226	25,112	28,706	31,523	36,492	41,898	47,319	51,455	54,077
Cafeterias	2,075	2,343	2,426	2,575	2,699	2,871	3,022	2,992	2,817
Total	53,900	61,653	67,557	73,787	80,967	90,356	99,582	106,743	112,661
Lodging places	4,304	4,937	5,258	5,939	6,164	6,756	7,264	7,355	7,862
Retail hosts	2,988	3,322	3,535	3,835	3,943	4,318	4,779	4,910	5,242
Recreation, entertainment	1,928	2,110	2,362	2,471	2,813	3,093	3,394	3,520	3,935
Separate drinking places	1,000	1,045	1,100	1,121	1,098	1,111	1,076	982	903
Commercial feeding total <u>2/</u>	64,121	73,067	79,814	87,154	94,985	105,643	116,095	123,500	130,343
Education:									
Elementary, secondary	6,494	7,313	7,875	8,099	7,368	7,537	7,930	8,472	8,673
Colleges, universities	2,306	2,494	2,824	3,126	3,487	3,886	4,092	4,230	4,403
Other education	106	118	134	152	175	201	217	240	267
Total <u>2/</u>	8,907	9,925	10,833	11,376	11,303	11,624	12,239	12,942	13,343
Plants, office buildings	4,070	4,658	5,145	5,669	5,919	6,258	6,793	7,186	7,365
Hospitals	3,955	4,403	4,919	5,366	5,609	5,715	5,817	5,905	6,392
Care facilities	2,758	3,198	3,602	4,072	4,797	4,983	5,281	5,452	5,522
Vending	2,642	2,853	3,094	3,183	3,214	3,348	3,553	3,730	3,685
Military services:									
Troop feeding	1,275	1,421	1,496	1,619	1,644	1,709	1,765	1,853	1,933
Clubs, exchanges	373	400	438	490	522	546	601	617	627
Total <u>2/</u>	1,648	1,821	1,934	2,109	2,166	2,255	2,366	2,470	2,560
Transportation	1,255	1,426	1,563	1,656	1,685	1,793	1,922	1,996	2,296
Associations	994	1,058	1,153	1,276	1,431	1,501	1,562	1,610	1,692
Correctional facilities	567	626	705	786	1,018	1,092	1,155	1,205	1,388
Child daycare centers	299	367	469	641	607	663	760	835	920
Elderly feeding programs	292	388	456	544	579	629	689	744	804
Other	162	178	192	208	223	238	252	268	287
Noncommercial feeding total <u>2/</u>	27,518	30,901	34,064	36,886	38,279	40,098	42,390	44,343	46,254
Grand total <u>2/</u>	91,639	103,968	113,878	124,040	133,264	145,733	158,485	167,843	176,857

Note: Totals may not add due to rounding.

1/ Excludes sales taxes and tips.

2/ Preliminary.

Source: (47).

Appendix table 5--Alcoholic beverage sales by product category

Year	Total retail	Market shares		
		Distilled spirits	Wine	Beer
	<u>Million dollars</u>	<u>Percent</u>		
1967	17,516	50.8	6.0	43.2
1972	24,636	48.0	9.1	42.9
1977	36,633	41.8	10.0	48.2
1983	59,676	33.8	12.3	53.9
1984	62,583	32.1	12.4	54.5
1985	65,956	32.7	12.9	54.4
1986	69,527	32.6	13.4	54.0
1987	70,528	NA	NA	NA

NA = Not available.

Sources: (11, 21).

Appendix table 6--Distilled spirits entering U.S. trade channels

Year	Total	Market shares			
		Domestic	Imported	Whiskey	Gin
	Million gallons ^{1/}	----- Percent -----			
1975	448	71.5	28.5	53.2	9.8
1977	441	72.1	28.0	49.5	10.0
1982	447	69.4	30.7	43.9	9.3
1983	448	68.3	31.7	42.5	9.3
1984	439	67.4	32.6	41.3	9.1
1985	431	68.3	31.7	39.9	8.7
1986	403	68.3	31.7	38.7	8.7

Year	Market shares				
	Vodka	Rum	Brandy	Cordials	Other
	----- Percent -----				
1975	19.4	4.0	3.5	7.0	3.1
1977	20.6	5.2	3.8	7.1	3.5
1982	22.4	7.3	4.6	9.0	3.5
1983	22.7	7.8	4.9	8.8	4.0
1984	22.5	7.9	5.1	10.1	4.0
1985	22.9	7.9	5.1	11.2	4.0
1986	23.5	7.8	5.1	11.9	3.8

^{1/} Equivalent to wine.

Source: (11).

Appendix table 7--Food and nonfood sales or shipments in food marketing

Year	Processing	Wholesaling	Food service	Retailing
<u>Million dollars</u>				
1972	115,051	106,457	NA	99,035
1977	192,912	182,905	81,776	157,941
1982	280,794	288,658	133,264	246,122
1983	286,967	312,800	145,733	255,678
1984	300,890	340,600	158,485	271,278
1985	307,358	357,600	172,749	283,987
1986	315,000	382,100	183,114	296,040
1987 <u>1/</u>	330,000	413,800	194,101	303,737

NA = Not available.

1/ ERS projections.

Sources: (47, 50, 51, 52, 53).

Industry Size and Structure

Appendix table 8--Number of food marketing establishments

Year	Processing	Wholesaling	Eating and drinking places 1/	Retailing	Total
<u>Number</u>					
1963	37,521	41,890	334,481	319,433	733,325
1967	32,517	40,005	271,182	294,243	637,947
1972	28,193	38,531	359,524	267,352	693,420
1977	26,656	37,960	368,066	252,853	685,135
1982	22,130	38,516	379,444	241,737	684,084

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

Sources: (50, 52, 53).

Appendix table 9--Number of food marketing establishments covered by unemployment insurance 1/

Year	Processing	Wholesaling	Eating and drinking places 2/	Retailing	Total
<u>Number</u>					
1978	24,999	39,339	284,531	127,974	476,843
1979	24,172	40,009	288,016	128,114	480,311
1980	24,218	40,613	290,959	129,402	484,320
1981	24,061	41,629	292,570	129,921	488,181
1982	24,180	42,626	297,630	132,067	496,503
1983	24,127	43,498	305,684	135,125	508,434
1984	23,845	44,856	308,966	136,651	514,318
1985	23,669	45,584	314,257	138,641	521,896
1986	23,331	46,657	319,206	138,999	528,193

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

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

Source: (64).

Appendix table 10--Number of food marketing establishments (county business patterns) 1/

Year	Processing	Wholesaling	Eating and drinking places <u>2/</u>	Retailing	Total
<u>Number</u>					
1974	25,383	34,736	241,253	160,233	461,605
1975	24,550	34,577	245,774	159,710	464,611
1976	24,113	34,893	252,267	162,010	473,283
1977	24,294	35,951	275,761	167,088	503,094
1978	23,748	35,019	278,609	161,230	498,606
1979	21,362	36,127	275,447	159,162	492,098
1980	20,983	35,636	271,236	157,649	485,504
1981	20,720	35,535	273,726	162,952	492,933
1982	20,808	36,521	299,684	173,311	530,324
1983 <u>3/</u>	21,757	39,517	351,935	187,451	600,720
1984	21,667	37,492	350,619	185,133	594,911
1985	21,569	39,694	333,994	182,725	577,982

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

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

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

Source: (54).

Appendix table 11--Number of retail and wholesale alcoholic beverage establishments

Year	Liquor stores	Wholesale distributors
<u>Number</u>		
1963	40,188	7,598
1967	39,719	7,109
1972	41,991	6,383
1977	44,354	6,714
1982	41,507	6,378

Sources: (52, 53).

Appendix table 12--Number of food marketing companies

Year	Share of market controlled by top firms						Total
	Processing firms	Wholesaling firms	Grocery	Liquor	Food service	Retailing Food- stores	
1963	32,617	35,666	7,598	NA	NA	NA	NA
1967	26,549	33,848	6,246	NA	NA	NA	NA
1972	22,171	32,053	5,792	221,883	218,320	36,670	536,889
1977	20,616	31,670	5,518	226,421	200,486	38,951	523,059
1982	16,800	31,290	5,158	198,088	198,815	1/37,773	487,924

NA = Not available.

1/ Estimated.

Sources: (50, 52, 53).

Appendix table 13--Aggregate concentration in food marketing

Year	Share of market controlled by top firms			
	Top 50 processing firms	Top 50 wholesaling firms	Top 20 retailing firms	Top 50 foodservice firms
1963	NA	NA	34.0	NA
1967	35.0	NA	34.4	NA
1972	38.0	48.0	34.8	13.3
1977	40.0	57.0	34.5	17.8
1982	43.0	64.0	34.9	20.2

NA = Not available.

Sources: (50, 52, 53).

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

Industry	1982				1977				1967			
	Number	Share of shipment value			Number	Share of shipment value			Number	Share of shipment value		
		Total firms	Four largest firms	Eight largest firms		Total firms	Four largest firms	Eight largest firms		Total firms	Four largest firms	Eight largest firms
Meatpacking	1,658	29	43	2,404	19	37	2,529	26	38			
Sausages	1,193	19	28	1,213	23	30	1,294	15	22			
Poultry dressing	231	22	36	313	16	27	NA	NA	NA			
Poultry and egg processing	136	22	35	124	21	35	NA	NA	NA			
Butter	61	41	61	123	49	66	510	15	22			
Cheese	575	34	47	660	35	48	891	44	51			
Condensed and evaporated milk	132	35	50	167	30	46	179	41	56			
Ice cream	482	22	34	567	28	40	713	33	43			
Fluid milk	853	16	27	1,516	18	28	2,988	22	30			
Canned specialties	171	61	77	172	61	77	150	69	83			
Canned fruits and vegetables	541	21	35	648	22	35	930	34	52			
Dehydrated fruits and vegetables	119	42	59	143	37	53	134	32	50			
Pickles, sauces, and salad dressing	325	56	65	380	55	62	479	33	44			
Frozen fruits and vegetables	195	27	42	187	22	40	495	36	55			
Frozen specialties	318	38	54	330	40	55	NA	NA	NA			
Flour and grain milling	251	40	60	301	33	54	438	30	46			
Breakfast cereals	32	86	NA	32	89	98	30	88	97			
Rice milling	49	47	75	47	51	76	54	46	68			
Blended and prepared flour	91	58	74	111	51	69	126	68	82			
Wet corn milling	25	74	94	24	63	89	32	68	89			
Pet food	222	52	71	218	58	74	NA	NA	NA			
Prepared feeds	1,245	20	30	1,435	22	30	NA	NA	NA			
Breads and cakes	1,869	34	47	2,549	33	40	3,445	26	38			
Cookies and crackers	269	59	71	263	59	68	286	59	70			
Raw cane sugar	43	61	41	49	42	62	61	43	65			
Cane sugar refining	19	65	91	27	63	90	22	59	82			
Beet sugar	14	67	95	14	67	95	15	66	96			
Confectionery	718	40	53	867	38	49	1,091	25	35			
Chocolate and cocoa	77	75	89	47	73	88	27	77	89			
Chewing gum	9	95	NA	14	93	NA	19	86	96			
Cottonseed oil mills	47	51	62	62	45	62	91	42	60			
Soybean oil mills	52	61	83	65	54	73	60	55	76			
Vegetable oil mills	26	52	83	37	54	80	34	56	78			
Animal and marine fats and oils	270	34	48	384	28	40	477	28	36			
Shortening and cooking oils	79	43	60	66	43	63	63	43	67			
Malt beverages	67	77	94	81	64	83	125	40	59			
Malt	24	60	80	27	59	81	32	39	62			
Wines, brandy	324	51	64	223	49	62	175	48	63			
Distilled liquor	371	46	89	64	52	71	70	54	71			
Bottled and canned soft drinks	1,236	14	23	1,758	15	22	3,057	13	20			
Flavoring extracts and syrups	297	65	71	319	64	71	401	67	75			
Canned or cured seafood	170	62	70	215	52	65	268	44	59			
Fresh or frozen seafood	697	14	24	906	14	23	463	26	38			
Roasted coffee	118	65	76	113	65	79	206	53	71			
Manufactured ice	530	18	26	543	24	38	688	33	42			
Macaroni and spaghetti	208	42	66	289	36	54	190	31	48			
Other food preparations	1,746	32	40	1,872	28	36	1,824	24	35			

NA = Not available.

Source: (50).

Appendix table 15--Concentration in food wholesaling

Wholesaler category:	1972				1977	
	4	8	20	50	4	8
	: largest	: largest	: largest	: largest	: largest	: largest

	Percent					
General line	9.9	16.2	29.8	47.5	15.0	22.4
Limited line	10.4	21.7	30.7	42.3	13.3	19.5
Specialty	7.2	10.9	16.5	26.5	10.3	15.1
Frozen foods	9.8	15.0	25.7	41.0	11.3	17.5
Dairy	11.0	15.9	25.9	38.6	14.0	21.6
Poultry	6.2	9.5	15.9	27.7	8.6	12.9
Confectionery	6.8	11.2	18.4	29.8	11.9	17.3
Fish and seafoods	4.8	8.3	15.8	28.5	15.5	20.4
Meat	5.2	8.0	13.7	22.9	6.9	10.8
Fresh fruit and vegetables	6.6	8.6	12.2	17.9	7.0	10.4

	1977			1982			
	20	50		4	8	20	50
	: largest	: largest		: largest	: largest	: largest	: largest

	Percent					
General line	36.8	56.6	17.4	26.5	42.8	63.6
Limited line	31.4	46.6	9.0	13.8	23.8	37.2
Specialty	21.1	33.5	14.9	20.9	25.4	34.0
Frozen foods	28.7	43.3	16.5	23.5	34.3	49.1
Dairy	34.2	46.8	15.8	22.6	35.0	49.4
Poultry	21.0	34.2	11.8	16.9	25.3	38.3
Confectionery	25.5	37.1	12.5	18.2	27.7	40.1
Fish and seafoods	28.9	39.6	12.5	16.3	24.5	37.1
Meat	17.9	29.1	5.5	8.1	14.7	25.5
Fresh fruit and vegetables	15.0	22.1	7.4	10.2	14.5	21.6

Source: (53).

Appendix table 16--Average concentration of four leading food retail firms in Standard Metropolitan Statistical Areas 1/

Item	1958	1963	1967	1972	1977	1982
	<u>Percent</u>					
All SMSA's	49.3	50.0	50.9	52.4	56.3	58.3
173 SMSA's <u>2/</u>	48.7	49.4	50.2	52.2	56.4	58.7

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

2/ SMSA's that were present in all census years, 1958-82.

Source: (52).

Appendix table 17--Concentration among separate eating places

Year	Top 4 firms	Top 8 firms	Top 20 firms	Top 50 firms
	<u>Percent</u>			
1972 <u>1/</u>	3.6	5.5	8.9	13.3
1977	4.5	7.3	12.4	17.8
1982	5.4	8.9	15.1	20.2

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

Source: (52).

Appendix table 18--Sales of top 50 food processing companies

Rank	Company	Sales 1/		Change
		1986	1985	
		<u>Billion dollars</u>		<u>Percent</u>
1.	Philip Morris Companies Inc., New York	12.70	4.54	180.0
2.	RJR Nabisco, Inc., Winston-Salem, NC	10.10	6.97	45.0
3.	PepsiCo, Inc., Purchase, NY	9.29	7.65	21.0
4.	The Coca-Cola Company, Atlanta, GA	8.66	7.21	20.2
5.	Kraft Inc., Glenview, IL	7.78	7.07	10.0
6.	Anheuser-Busch Companies, Inc., St. Louis, MO	7.45	6.83	9.0
7.	Sara Lee Corp., Chicago, IL	5.65	5.90	-4.9
8.	Borden, Inc., Columbus, OH	5.0	4.70	6.3
9.	Unilever N.V., London, UK	4.46	4.19	6.4
10.	Campbell Soup Company, Camden, NJ	4.37	3.98	9.8
11.	H.J. Heinz Company, Pittsburgh, PA	4.36	4.04	7.9
12.	Ralston Purina Co., St. Louis, MO	3.69	3.55	3.9
13.	Kellogg Co., Battle Creek, MI	3.34	2.93	14.0
14.	ConAgra, Inc., Omaha, NE	3.25	3.56	-8.6
15.	General Mills, Inc., Minneapolis, MN	3.06	2.77	10.5
16.	Pillsbury Co., Minneapolis, MN	3.02	2.58	17.0
17.	Seagram Company Limited Montreal, (The) Quebec, Canada	2.97	2.82	5.3
18.	Quaker Oats Co., Chicago, IL	2.95	2.77	6.6
19.	Procter & Gamble Co., Cincinnati, OH	2.92	2.81	3.8
20.	CPC International Inc., Englewood Cliffs, NJ	2.77	2.52	10.0
21.	Hershey Foods Corp., Hershey, PA	2.16	1.99	8.7
22.	Geo. A. Hormel & Co., Austin, MN	1.96	1.50	30.5
23.	Monfort of Colorado, Inc., Greeley, CO	1.57	1.46	7.8
24.	Tyson Foods, Inc., Springdale, AR	1.50	1.14	32.0
25.	Wilson Foods Corp., Oklahoma City, OK	1.45	1.53	-5.2
26.	Adolph Coors Co., Golden, CO	1.31	1.28	2.6
27.	G. Heileman Brewing Co., Inc., La Crosse, WI	1.30	1.30	-.2
28.	Mars, Incorporated, Hackettstown, NJ	1.30	1.20	8.3
29.	Land O'Lakes, Inc., Minneapolis, MN	1.22	1.21	.4
30.	Dean Food Co., Franklin Park, IL	1.21	1.12	8.0
31.	Federal Co., Memphis, TN	1.10	1.12	-1.6
		<u>Million dollars</u>		
32.	McCormick & Co., Inc., Hunt Valley, MD	976	873	12.0
33.	Brown-Forman, Corp., Louisville, KY	972	905	7.4
34.	IC Industries, Inc., Chicago, IL	966	882	9.5
35.	American Home Products Corp., New York, NY	960	969	-.9
36.	Anderson Clayton, Houston, TX	927	1,040	-11.0
37.	John Labatt, Limited (U.S.-based businesses only) London, Ontario, Canada	905	314	180.0

See footnotes at end of table.

Continued--

Appendix table 18--Sales of top 50 food processing companies--Continued

Rank	Company	Sales 1/		Change
		1986	1985	
		Million dollars		Percent
38.	Southland Corp., Dallas, TX	868	804	8.0
39.	Smithfield Foods, Inc., Arlington, VA	864	669	29.0
40.	American Brands, Inc., New York	787	756	4.0
41.	Interstate Bakeries Corp., Inc., Kansas City, MO	708	703	0.6
42.	Flowers Industries, Inc., Thomasville, GA	698	626	12.0
43.	International Multifoods, Corp., Minneapolis, MN	688	526	30.7
44.	Ocean Spray Cranberries, Inc., Plymouth, MA	635	541	17.4
45.	Thorn Apple Valley, Inc., Southfield, MI	611	658	-7.2
46.	Curtice-Burns Foods Inc., Rochester, NY	607	636	-4.5
47.	Universal Foods, Corp., Milwaukee, WI	603	493	22.0
48.	Gerber Products, Co., Fremont, MI	498	498	NC
49.	California Almond Growers Exchange, Sacramento, CA	425	347	22.3
50.	Cadbury Schweppes PLC London, England	415	357	16.0

NC = No change.

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

Source: (30).

Appendix table 19--Sales of top 20 wholesale food companies 1/

Company	1986		1985
	Rank	Sales	Sales
		<u>Million dollars</u>	
Fleming Companies, Inc.	1	7,095	5,511
Super Valu Stores, Inc.	2	6,837	5,589
Wetterau Incorporated	3	3,292	2,915
Scrivner, Inc.	4	2,752	2,166
Malone and Hyde, Inc.	5	2,700	2,682
Wakefern Food Corp.	6	2,550	2,500
Roundy's Inc.	7	1,850	1,380
Certified Grocers	8	1,663	1,874
Associated Wholesale Grocers (K.C.)	9	1,573	1,475
Super Food Services Inc.	10	1,422	1,397
Gateway Foods Inc.	11	1,400	800
Spartan Stores, Inc.	12	1,345	1,312
McLane Company, Inc.	13	1,300	1,001
Associated Grocers, Inc.	14	906	757
Richfood, Inc.	15	892	870
Twin County Grocers, Inc.	16	890	858
Springfield Sugar and Products Co.	17	850	850
Nash Finch Company	18	760	715
Certified Grocers Midwest, Inc.	19	750	700
Grocers Supply Co., Inc.	20	750	620

1/ Firms serving supermarkets and retail food stores primarily. Foodservice distributors are listed in table 5.

Source: (10).

Appendix table 20--Sales of top 25 food retailing companies 1/

Company	1986		1985	
	Rank	Sales	Rank	Sales
		Million dollars		Million dollars
The Kroger Co.	1	16,492	1	15,677
Safeway Stores, Inc.	2	15,910	2	15,399
American Stores Co.	3	11,096	3	11,190
Winn-Dixie Stores Co.	4	8,225	4	7,774
The Southland Corp. <u>2/</u>	5	6,946	5	6,593
The Atlantic and Pacific Tea Co. <u>3/ 4/</u>	6	6,179	7	5,164
Lucky Stores Inc.	7	5,705	6	5,496
Albertson's, Inc.	8	5,380	8	5,060
Supermarket General Corp.	9	4,846	9	4,575
Publix Supermarkets, Inc.	10	3,760	10	3,446
The Vons Companies	11	2,954	11	2,652
Grand Union Co. <u>4/</u>	12	2,746	12	2,612
Giant Food, Inc.	13	2,528	13	2,247
Food Lion Inc. <u>4/</u>	14	2,355	15	1,857
The Circle K Corp. <u>2/</u>	15	2,111	18	1,682
H. E. Butt Grocery Co.	16	2,055	14	1,936
Ralphs Supermarkets	17	2,046	16	1,814
The Stop & Shop Companies, Inc.	18	1,999	17	1,810
Fred Meyer, Inc.	19	1,688	19	1,584
Dominick's Finer Foods	20	1,700	22	1,300
Ahold International (BI-LO Inc. & Giant Food, Inc.) <u>4/ 5/</u>	21	1,656	20	1,562
First National Supermarkets	22	1,500	21	1,400
Hy-Vee Food Stores, Inc.	23	1,400	NA	1,244
Super Valu	24	1,353	NA	1,008
Shaw's Supermarkets, Inc. <u>4/</u>	25	1,100	NA	812

NA = Not available.

1/ U.S. grocery store sales only.

2/ Convenience store retailers.

3/ Includes part-year sales of Shopwell and Waldbaum, food retailers that were acquired during 1986.

4/ Foreign-owned companies.

5/ Giant Food Stores, Carlisle, PA.

Source: (2).

Appendix table 21--Sales of top 25 foodservice chains

Chain	Parent company	Systemwide sales				Million dollars
		1987 1/	Rank	1986 1/	Rank	
McDonald's	McDonald's Corporation	14,110.0	1	12,432.0	1	
Burger King Corporation	Pillsbury Co.	5,590.0	2	5,032.0	2	
Kentucky Fried Chicken Corp.	PepsiCo, Inc.	3,700.0	3	3,500.0	3	
Hardee's	Imasco Limited	3,030.0	4	2,700.0	5	
Wendy's	Wendy's International Inc.	2,800.0	4	2,747.2	4	
Pizza Hut	PepsiCo, Inc.	2,450.0	6	2,150.0	6	
Dairy Queen	International Dairy Queen Inc.	2,028.0	7	1,723.0	7	
Domino's	Domino's Pizza, Inc.	1,800.0	8	1,550.0	8	
Taco Bell	PepsiCo Inc.	1,500.0	9	1,338.7	9	
Holiday Inns	Holiday Inns, Inc.	1,273.8	10	1,263.0	10	
Denny's	TW Services Inc.	1,265.0	11	1,205.0	11	
ARA Services	ARA Services, Inc.	1,245.0	12	1,048.7	13	
The Sheraton Corporation	ITT Corporation	1,217.5	13	1,193.7	12	
Red Lobster	General Mills	1,030.0	14	975.0	14	
Big Boy	Marriott Corporation	1,027.2	15	974.7	15	
Arby's	Royal Crown Companies, Inc.	950.0	16	886.0	16	
Hilton Hotels	Hilton Hotels Corporation	901.5	17	839.9	17	
Marriott Hotels	Marriott Corp.	866.0	18	770.0	18	
Little Caesar's	Little Caesar Enterprises Inc.	770.0	19	520.0	30	
Sizzler	Collins Foods International, Inc.	760.0	20	632.6	24	
Long John Silver's	Jerrico Inc.	741.0	21	697.4	19	
Shoney's	Shoney's Inc.	721.8	22	644.5	21	
Dunkin' Donuts of America	Dunkin' Donuts Incorporated	712.8	23	648.0	20	
Ponderosa	Ponderosa Inc.	692.1	24	635.0	23	
Canteen Corporation	TW Services Inc.	666.0	25	641.0	22	

1/ Fiscal years.

Source: (35).

Appendix table 22--Food marketing mergers

Year	Processing	Wholesaling	Retailing	Food service	Total
1982	250	38	38	51	377
1983	225	38	45	64	372
1984	242	37	60	78	417
1985	291	64	52	73	480
1986	347	65	91	81	584

Source: (3).

Appendix table 23--Food marketing mergers and divestitures costing more than \$100 million, 1986 1/

Buyer	Seller	Price	Type <u>2/</u>
		Million dollars	
SSI Holdings Corporation	Safeway Stores, Inc.	4,198	2
Unilever NV, Netherlands	Chesebrough-Ponds Inc.	3,092	2
Ralston Purina Co.	Union Carbide Corp.	1,420	1
Coca-Cola Corp.	JTL Corp.	1,400	3
Private group	Beatrice Cos.	1,250	1
Coca-Cola Corp.	Beatrice Cos. (US and Canadian bottling operations)	1,000	1
PepsiCo, Inc.	RJR Nabisco Inc. (Kentucky Fried Chicken)	850	1
Quaker Oats Co.	Anderson, Clayton & Co.	804	2
LLC Corp.	Amalgamated Sugar Co.	685	2
National Distillers & Chemical Corp.	Enron Corp. (Enron Chemical Co.)	575	1
British Petroleum Co. PLC, United Kingdom	Ralston Purina Co. (Purina Mills Inc.)	545	1
Marriott Corp.	Saga Corp.	500	2
Private group	Beatrice Cos.	480	2
Private group	Forstmann Little & Co. (Dr. Pepper Co.)	416	1
Revlon Group Inc.	Beatrice Cos. (cosmetics)	375	1
IC Industries Inc.	Ogden Corp.	320	1
Borden, Inc.	Beatrice Cos. (dairy products division)	315	1
Private group	Marriott Corp. (four Saga Corp. restaurants)	300	1

See footnotes at end of table.

Continued--

Appendix table 23--Food marketing mergers and divestitures costing more than \$100 million, 1986 1/--Continued

Buyer	Seller	Price	Type <u>2/</u>
		Million dollars	
Pelroleos De Venezuela, Venezuela	Southland Corp.	290	1
Great Atlantic & Pacific Tea Co.	Waldbaum Inc.	287	2
Quaker Oats Co.	Golden Grain Macaroni Co.	250	3
Private group	Beatrice Cos.	250	1
PepsiCo, Inc.	Philip Morris Cos.	246	1
Private group	Philip Morris Inc. (Seven-Up domestic business)	240	1
Private group	Ponderosa Inc-Rem 81 percent	231	2
Rowntree Mackintosh, United Kingdom	Sunmark Inc.	230	3
Cadbury Schweppes PLC, United Kingdom	RJR Nabisco Inc. (Canada Dry, Sunkist)	230	1
Coca-Cola Co.	Merv Griffin Enterprises	200	1
Private group	IU International Corp.	200	1
Bruno's Inc.	Delchamps Inc.	192	2
National Distillers and Chemical Corp.	Union Texas Petroleum Holdings, Inc.	185	1
John Labatt Ltd., Canada	Pasquale Food Co.	165	2
Dean Foods Co.	Larsen Co.	164	2
Great Atlantic & Pacific Tea Co.	Delchamps Inc.	161	2
Northern Pacific Corp.	Lucky Stores, Inc.	155	1
CPC International Inc.	Arnold Foods Co.	145	3
Private group	Holly Sugar Co.	140	2
Sara Lee Corp.	Nicholas Kiwin Australasia Ltd. Rem 74 percent Australia	130	4
Shaklee Corp.	RJR Nabisco	123	1
American Brands Inc.	NSS News Agents PLC, United Kingdom	120	4
Tyson Foods Inc.	Lane Processing Inc.	115	3
Revlon Group Inc.	Frigitronics, Inc.	111	2

1/ Completed or pending.

2/ 1 = Divestitures, 2 = public seller, 3 = private seller, 4 = foreign seller.

Source: (15).

Appendix table 24--Food marketing mergers among the 100 largest transactions in history

Buyer/seller	Rank among transactions	Price	Year announced
<u>Million dollars</u>			
Philip Morris Co. General Foods Corporation	7	5,678	1985
Kohlberg, Kravis, Roberts and Co. Beatrice Companies	9	5,362	1985
R.J. Reynolds Industries, Inc. Nabisco Brands, Inc.	12	4,906	1985
SSI Holdings Corp. Safeway Stores, Inc.	17	4,198	1986
Unilever NV - Netherlands Chesebrough-Ponds Inc.	26	3,093	1986
Nestle S.A. - Switzerland Carnation Co.	28	2,885	1984
Seagram Co. Ltd. - Canada Conoco, Inc. (26%)	33	2,576	1981
Kraft, Inc. Dart Industries, Inc.	40	2,400	1980
Nabisco, Inc. Standard Brands, Inc.	50	1,827	1981
Pantry Pride, Inc. Revlon, Inc.	57	1,639	1985
Procter & Gamble Co. Richardson-Vicks, Inc.	59	1,611	1985
Ralston Purina Co. Union Carbide Corp. (battery division)	71	1,420	1986
Coca Cola Company JTL Corp.	72	1,400	1986
R.J. Reynolds Industries, Inc. Heublein, Inc.	78	1,303	1982

Source: (15).

Appendix table 25--Acquisition and divestiture leaders in food marketing, 1986

Company	Acquisitions	Divestitures
	<u>Number</u>	
Dart & Kraft	17	0
ConAgra Inc.	8	0
IC Industries, Inc.	8	0
Coca-Cola Co.	7	0
Pillsbury Co.	7	0
W.R. Grace & Company	7	6
Borden, Inc.	5	0
Beatrice Cos.	0	10
RJR Nabisco, Inc.	0	9
Colgate Palmolive	0	6
International Multifoods	0	5

Source: (15).

Appendix table 26--Food processing mergers

Year	Rank among all industries	Value	Foreign buyers of U.S. firms		U.S. purchases of foreign firms	
			Number	Value	Number	Value <u>1/</u>
		Million dollars	Number	Million dollars	Number	Million dollars
1982	4	4,952	4	131	5	154
1983	8	2,712	9	253	6	105
1984	2	7,948	8	2,994	5	96
1985	5	12,854	8	257	10	70
1986	4	8,432	13	1,246	9	98

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

Source: (15).

Industry Economic Characteristics

Appendix table 27--Major economic indicators

Year	Population	Gross national product	Disposable personal income (DPI)
	<u>Million</u>	<u>Current million dollars</u>	<u>1982 million dollars</u>
1963	189.2	607	1,873
1967	198.7	816	2,271
1972	209.9	1,212	2,608
1977	220.2	1,991	2,959
1982	232.5	3,166	3,166
1983	234.8	3,406	3,279
1984	237.0	3,772	3,501
1985	239.3	4,010	3,607
1986	241.6	4,235	3,713
1987	243.8	4,486	3,820

Year	Per capita DPI	Employment	Unemployment rate
	<u>Current dollars</u>	<u>1982 dollars</u>	<u>Millions</u>
1963	2,197	6,378	69.7
1967	2,828	7,513	76.6
1972	4,000	8,562	87.0
1977	6,262	9,381	99.0
1982	9,724	9,725	102.0
1983	10,339	9,930	102.5
1984	11,872	10,419	106.7
1985	11,872	10,622	108.8
1986	12,508	10,947	111.3
1987	13,048	10,976	114.2

Sources: (48, 56, 64).

Appendix table 28--Food marketing price indexes

Commodity	1983	1984	1985	1986	1987
	<u>1967=100</u>				
Crude foodstuffs and feedstuffs <u>1/</u>	252.2	259.5	235.0	231.0	238.3
Wheat	235.7	226.4	205.0	178.6	170.2
Corn	248.4	250.9	204.8	161.6	130.9
Cattle	242.4	251.5	228.2	223.6	257.3
Hogs	217.6	222.7	205.1	247.9	244.5
Live poultry	206.5	240.6	226.2	248.8	194.3
Fluid milk	282.0	278.3	264.6	256.9	259.5
Soybeans	254.6	261.4	266.4	189.2	193.4
Cane sugar	315.9	312.0	291.3	292.2	307.0
Intermediate materials for food manufacturing <u>2/</u>	258.4	271.1	258.8	251.0	257.0
Flour	186.2	185.2	183.0	173.5	170.3
Refined sugar (1977 = 100)	172.1	173.5	165.6	166.4	171.4
Crude vegetable oils	194.2	262.2	219.6	135.4	134.1
Finished consumer foods <u>3/</u>	261.8	273.2	271.2	278.1	283.9
Fresh fruits	252.0	253.0	256.1	267.5	263.3
Fresh and dried vegetables	248.9	275.3	245.1	241.1	255.8
Eggs	178.7	210.8	171.0	177.9	156.6
Bakery products	285.9	299.1	313.7	321.3	326.2
Milled rice	193.4	195.9	194.3	159.6	152.9
Beef and veal	236.3	237.1	221.3	216.0	233.8
Pork	227.5	226.5	223.8	251.0	262.8
Processed poultry	185.3	206.0	197.3	208.7	184.7
Dairy products	250.6	251.7	249.4	248.8	253.0
Processed fruits and vegetables	277.4	294.3	296.3	287.9	298.1
Confectionery end products <u>4/</u>	137.5	147.3	149.3	157.2	162.2
Soft drinks	327.1	340.2	343.6	349.6	356.8
Roasted coffee	344.6	364.9	365.8	472.3	390.4
Shortening and cooking oils	254.7	311.6	290.6	242.2	243.8

1/ What food manufacturers paid at major markets.

2/ What food manufacturers paid for nonfood materials.

3/ What retailers, wholesalers, restaurateurs, or other institutions paid.

4/ December 1977=100.

Source: (65).

Appendix table 29--Value of U.S. dollar and interest rates

Year/ quarter	Value of U.S. dollar <u>1/</u>		Interest rates	
	Nominal	Real <u>2/</u>	Short-term 3-month Treasury Bill	Long-term corporate bonds AAA (Moody's)
	----- 1973 = 100 -----		----- Percent -----	
1963	NA	NA	3.16	4.26
1967	120.0	NA	4.32	5.51
1972	109.1	NA	4.07	7.21
1977	103.3	93.1	5.26	8.02
1982	116.6	111.7	10.67	13.79
1983	125.3	177.3	8.63	12.04
1984	138.2	128.7	9.58	12.71
1985	143.2	132.0	7.48	11.37
1986	112.0	103.4	5.98	9.02
I	119.5	110.1	6.89	9.57
II	114.2	104.5	6.13	9.00
III	108.5	99.9	5.53	8.83
IV	109.0	98.9	5.34	8.67
1987	96.9	90.6	5.82	9.38
I	99.9	92.6	5.53	8.37
II	97.0	90.3	5.73	9.16
III	98.7	92.5	6.03	9.76
IV	92.3	86.8	6.03	10.21

NA = Not available.

1/ Multilateral trade-weighted.

2/ Adjusted by Consumer Price Index.

Source: (14).

Appendix table 30--Number of employees in food marketing

Year	Processing	Wholesaling	Eating and drinking places <u>1/</u>	Retailing		Total
				Food- stores	Grocery stores <u>2/</u>	
<u>Thousands</u>						
1963	1,752.0	472.9	1,747.9	1,383.8	NA	5,356.6
1967	1,786.3	513.0	2,191.4	1,571.6	NA	6,062.3
1972	1,745.2	536.3	2,860.2	1,805.1	1,577.8	6,946.8
1977	1,711.0	611.7	3,948.6	2,106.3	1,837.2	8,377.3
1982	1,635.9	666.9	4,831.2	2,477.6	2,152.8	9,611.6
1983	1,614.8	682.4	5,041.8	2,556.2	2,234.6	9,895.2
1984	1,612.2	707.3	5,388.0	2,637.1	2,298.1	10,344.6
1985	1,607.9	734.3	5,715.1	2,778.6	2,427.0	10,835.9
1986	1,616.9	757.7	5,878.8	2,872.9	2,522.9	11,126.3
1987	1,635.8	764.9	5,993.6	2,954.4	2,599.2	12,946.9

NA = Not available.

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

2/ Grocery stores are also included in foodstore column.

Source: (64).

Appendix table 31--Number of production workers in food marketing

Year	Processing	Wholesaling	Eating and drinking places <u>1/</u>	Retailing		Total
				Food- stores	Grocery stores <u>2/</u>	
<u>Thousands</u>						
1963	1,157.3	411.3	NA	1,289.9	NA	2,858.5
1967	1,187.3	442.3	2,047.8	1,456.6	NA	5,134.0
1972	1,191.8	462.2	2,673.7	1,676.1	1,467.3	6,003.8
1977	1,161.0	526.3	3,665.4	1,942.1	1,697.4	7,294.8
1982	1,125.6	575.3	4,444.1	2,294.0	2,016.5	8,439.0
1983	1,113.7	588.4	4,632.9	2,374.0	2,085.0	8,709.0
1984	1,119.5	598.3	4,925.9	2,441.7	2,139.7	9,085.4
1985	1,121.9	621.9	5,199.2	2,569.6	2,258.0	9,512.6
1986	1,135.7	641.4	5,345.2	2,654.7	2,343.5	9,777.0
1987	1,152.2	646.7	5,993.6	2,729.8	2,414.7	10,522.7

NA = Not available.

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

2/ Grocery stores are also included in foodstore column.

Source: (64).

Appendix table 32--Average hourly earnings in food marketing

Year	Processing	Wholesaling	Eating and drinking places <u>1/</u>	Retailing	
				Food- stores	Grocery stores
<u>Dollars</u>					
1963	2.30	2.23	NA	1.90	NA
1967	2.64	2.65	1.50	2.23	NA
1972	3.60	3.69	2.07	3.18	NA
1977	5.37	5.43	2.93	4.77	4.92
1982	7.92	8.25	4.09	7.22	7.48
1983	8.19	8.70	4.27	7.51	7.78
1984	8.39	9.03	4.26	7.64	7.92
1985	8.57	9.20	4.33	7.35	7.59
1986	8.74	9.30	4.35	7.03	7.24
1987	8.92	9.52	4.41	6.95	7.11

NA = Not available.

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

Source: (64).

Appendix table 33--Average weekly earnings in food marketing

Year	Processing	Wholesaling	Eating and drinking places <u>1/</u>	Retailing	
				Food- stores	Grocery stores
<u>Dollars</u>					
1963	94.30	92.32	NA	66.69	NA
1967	107.98	107.86	50.10	74.48	NA
1972	145.80	143.91	62.97	104.30	106.92
1977	214.80	209.60	81.75	155.07	161.38
1982	312.05	315.15	107.16	221.65	230.38
1983	323.51	324.96	112.30	229.81	238.85
1984	333.92	347.66	112.04	233.78	244.24
1985	342.60	351.44	111.71	221.97	230.43
1986	349.60	355.26	111.36	211.80	218.65
1987	358.38	361.76	114.22	209.20	216.14

NA = Not available.

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

Source: (64).

Appendix table 34--Food-related advertising

Item	1986		1985		First 9 months		Change
	Million dollars	Percent	Million dollars	Percent	Million dollars	Percent	
Seven media 1/	6,546	6.2	6,159	6.2	4,994	4.8	4.8
Eating and drinking places 2/	1,219	8.3	1,126	8.3	1,008	913	10.4
Food stores	287	20.1	239	20.1	248	198	25.3
Processed foods	5,040	5.1	4,794	5.1	3,738	3,651	2.4
Cooking products and seasonings	571	-16.3	618	-16.3	378	425	-11.1
Prepared and convenience foods	911	8.2	842	8.2	722	629	14.5
Dairy products	381	31.4	290	31.4	275	279	-1.4
Fruits and vegetables	150	5.6	142	5.6	105	103	2.0
Meat, poultry, and fish	190	9.2	174	9.2	152	243	6.3
Bakery	253	10.5	229	10.5	182	165	10.3
Food beverages	423	-1.4	432	-1.4	334	313	6.7
Combination copy	35	6.0	33	6.0	29	23	26.0
Confectionery	569	-4.5	596	-4.5	444	422	5.5
Soft drinks	408	2.0	400	2.0	331	336	-1.5
Beer	688	14.5	601	14.5	511	498	2.6
Wine	235	27.7	184	27.7	142	169	-15.6
Liquor	226	-10.0	251	-10.0	133	146	-8.9
Newspaper	1,736	6.6	1,629	6.6	NA	NA	NA
Retail food stores	1,132	7.1	1,057	7.1	921	813	13.3
Processed foods	139	7.3	150	7.3	NA	NA	NA
Coupons and inserts	465	4.6	421	4.6	NA	NA	NA
Coupons	1,500	11.1	1,350	11.1	NA	NA	NA
Total advertising	9,782	7.0	9,138	7.0	NA	NA	NA

NA = Not available.

1/ Network television, spot television, cable television, magazines, newspaper supplements, network radio, and billboards.

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

Source: (1, 4, 27).

Appendix table 35--Leading food advertisers, 1986

Company	Seven-media total
<u>Million dollars</u>	
Procter & Gamble Co.	819
Philip Morris Companies, Inc.	816
RJR Nabisco, Inc.	464
PepsiCo, Inc.	383
Anheuser-Busch Cos., Inc.	337
McDonald's Corporation	329
Unilever NV	325
General Mills, Inc.	300
Pillsbury Co.	240
American Home Products Corp.	224
Kellogg Co.	219
Coca-Cola Company	200
Kraft, Inc.	191
Mars, Inc.	171
Ralston Purina Co.	166

Source: (4).

Appendix table 36--Largest food marketing firms' share of food advertising,
1986

Industry	Total advertising	Share accounted for by--	
		Three largest advertisers	Ten largest advertisers
	<u>Billion dollars</u>	<u>Percent</u>	
Restaurants	1,219.6	47.4	75.1
Food stores	287.3	29.5	50.8
Food processing			
Sugar, syrups, and artificial sweeteners	75.6	62.4	95.7
Shortening, oil, margarine, and nonstick products	111.5	47.4	93.3
Baking mixes, crust, and baking ingredients	91.1	54.2	93.1
Seasoning, spices, and extracts	30.2	50.3	88.5
Gelatins and puddings (mixes and prepared)	40.9	95.8	100.0
Condiments, pickles, and relishes	74.4	43.5	82.9
Sauces, gravies, and dips	52.9	54.9	87.1
Salad dressing and mayonnaise	65.1	62.3	95.7
Combination copy, miscellaneous ingredients, and mixes	29.4	64.0	96.7
Soups	74.0	89.6	99.0
Cereals	514.5	58.7	78.7
Health and dietary foods	4.7	75.9	98.8
Infant foods	19.1	100.0	100.0
Pasta products and pasta-product dinners	57.3	55.1	90.6
All other prepared dinners and entrees	192.7	36.6	68.2
Jellies, jams, preserves, and peanut butter	36.0	73.6	99.1
Combination copy and miscellaneous prepared foods	13.1	74.2	97.2
Milk, butter, and eggs	73.6	78.8	91.3
Cheese	110.5	77.9	99.4
Ice cream, frozen novelties, and sherbet	118.5	39.9	65.7
Dairy product substitutes	2.9	97.8	100.0
Combination copy and miscellaneous dairy products	75.6	59.9	80.8

Continued--

Appendix table 36--Largest food marketing firms' share of food advertising,
1986--Continued

Industry	Total advertising	Share accounted for by--	
		Three largest advertisers	Ten largest advertisers
	<u>Billion dollars</u>	<u>Percent</u>	<u>Percent</u>
Citrus fruits	10.3	92.0	99.9
Other fruits	41.6	58.7	94.9
Vegetables	39.6	39.6	81.5
Beans and grains	59.1	70.2	95.9
Meats, poultry, and fish	190.9	28.5	58.9
Bread and rolls	86.4	30.1	66.3
Cakes, pies, and pastries	51.6	52.2	93.9
Cookies and crackers	115.7	74.6	97.4
Coffee, tea, cocoa, and derivatives	231.4	40.8	80.9
Fruit juices and drinks	186.1	36.1	75.1
Vegetable juices	6.4	100.0	100.0
Combination copy for food products	35.2	47.1	74.8
Candy and gum	380.7	36.0	62.4
Appetizers, snacks, and nuts	188.7	32.1	61.4
Regular carbonated drinks	280.7	52.0	88.3
Dietary carbonated drinks	111.7	73.7	96.8
Noncarbonated	871.7	99.3	100.0
Bottled waters	15.1	61.1	91.0
Beer	688.8	60.6	87.7
Wine	235.9	38.6	79.7
Liquor	226.4	18.3	39.6
Nonalcoholic preparations, mixes, and mixing ingredients	6.8	99.1	100.0

Source: (4).

Appendix table 37--Advertising price indexes

Media	: 1981	: 1982	: 1983	: 1984	: 1985	: 1986	: 1987
<u>1981 = 100</u>							
Broadcast:							
Daytime network television	100	109	114	125	143	140	122
Evening network television	100	124	133	153	168	168	183
Spot television	100	109	118	131	139	146	149
Network radio	100	107	118	130	138	146	158
Spot radio	100	106	113	121	127	133	140
Print:							
Magazines	100	111	120	130	140	148	157
Supplements	100	112	118	125	130	116	122
Outdoor	100	111	118	129	137	144	151
Newspapers	100	112	123	135	146	158	168
Consumer price index	100	106	109	114	118	120	124

Sources: (9, 27).

Appendix table 38--Value added and employment generated by the food marketing system

Item	Performance Measures									
	1972	1977	1982	1985	1986	1972	1977	1982	1985	1986
	Billion dollars					Percent				
Value added:										
Food sector	143.4	217.6	337.3	416.6	427.5	11.8	10.9	10.7	10.4	10.1
Processing	30.6	45.0	65.0	80.3	83.7	2.5	2.2	2.0	2.0	2.0
Retailing and wholesaling	37.9	57.8	87.0	101.7	105.3	3.1	2.9	2.6	2.5	2.4
Transportation	6.5	9.8	16.9	20.6	20.7	.5	.5	.5	.5	.5
Eating and drinking places	18.5	27.3	46.8	57.7	60.4	1.5	1.4	1.4	1.4	1.4
Other supporting sectors 1/	49.9	77.7	121.6	150.3	157.4	4.1	3.9	3.7	3.8	3.7
Farm sector (food products)	22.0	30.1	48.1	53.0	56.4	1.8	1.5	1.5	1.3	1.3
Nonfood sector	1,047.4	1,742.5	2,780.6	3,540.7	3,751.1	86.6	87.5	87.8	88.3	88.6
Gross national product	1,212.8	1,990.5	3,166.0	4,010.3	4,235.0	100.0	100.0	100.0	100.0	100.0
	Millions									
Full-time equivalent employment:										
Food sector	11.4	11.5	12.1	12.4	12.6	13.2	11.6	11.0	10.7	10.7
Processing	1.6	1.5	1.5	1.4	1.4	1.8	1.5	1.4	1.2	1.2
Retailing and wholesaling	3.0	3.0	3.2	3.3	3.3	3.5	3.0	2.9	2.9	2.9
Transportation	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3
Eating and drinking places	2.9	3.1	3.4	3.6	3.7	3.3	3.1	3.0	3.1	3.1
Other supporting sectors 1/	3.5	3.5	3.6	3.7	3.8	4.0	3.5	3.3	3.2	3.2
Farm sector (food products)	2.4	2.2	1.7	1.9	1.9	2.7	2.2	1.5	1.7	1.6
Nonfood sector	72.7	85.3	96.4	101.2	103.3	84.0	86.2	87.5	87.6	87.7
Civilian labor force	86.5	99.0	110.2	115.5	117.8	100.0	100.0	100.0	100.0	100.0

1/ Value added and employment in "other supporting sectors" includes auxiliary activities needed to provide food to the final user. It includes, for example, the value added and employment needed by the packaging industry to produce containers used in the food sector. It does not include the cost of materials used to produce related products.

Source: (20).

Appendix table 40--Food marketing productivity, by processing and retailing sectors ^{1/}

Year	Output per person hour										
	Red meats	Milk	Preserved : fruits and : vegetables	Bakery : products	Sugar	Beer	Soft : drinks	Food- : stores	Eating and : drinking : places		
	74.8	62.9	73.8	82.8	77.1	47.4	66.6	98.0	97.5		
1967	85.0	85.1	83.1	94.1	90.4	66.1	75.4	110.3	102.3		
1972	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
1977	112.3	135.2	107.9	103.3	90.4	122.6	118.3	93.5	96.6		
1982	115.9	142.4	110.4	106.9	98.6	131.3	127.0	93.9	97.1		
1983	117.0	147.7	113.1	106.8	99.7	137.9	138.3	93.6	95.5		
1984	119.5	152.3	112.6	108.5	105.5	130.3	145.3	94.2	93.5		
1985	122.1	NA	NA	NA	109.1	137.0	149.0	93.0	96.3		
1986											

1977 = 100

NA = Not available.

^{1/} Productivity is expressed as output per employee per hour.

Source: (66).

Appendix table 41--Value added in food marketing per full-time equivalent employee

Sector	:	:	:	:	:	:	:
	1972	1977	1982	1983	1984	1985	
	:	:	:	:	:	:	:
	<u>1982 dollars</u>						
Food marketing	25,636	27,660	27,767	28,902	29,540	29,560	
Processing	36,184	41,009	43,928	45,781	47,416	47,427	
Retailing and wholesaling	25,557	29,498	27,022	28,066	28,972	28,892	
Transportation	39,105	42,068	41,940	43,546	44,634	44,660	
Eating and drinking places	12,822	13,787	13,773	14,069	14,654	14,652	
Other supporting sectors	30,065	32,798	32,284	34,497	35,472	35,888	

Source: (20).

Appendix table 42--Profit margins in food marketing

Year/ quarter	: After-tax profits	: After-tax profits	: After-tax profits
	: for food and tobacco	: processing as a	: for retail food
	: share of--	: general line whole-	: stores as a
		: salers as a share of	: share of--
	: Stockholders'	: stockholders equity	: Stockholders'
	: Sales : equity		: Sales : equity

			Percent		
1977	3.1	13.2	NA	0.8	10.7
1982	3.1	13.0	9.0	1.0	12.6
1983	3.3	12.0	8.6	1.2	13.3
1984	3.3	13.3	7.7	1.4	16.2
1985 <u>1/</u>	4.1	15.3	8.4	1.2	14.2
1986	4.2	16.2	NA	1.2	13.1
I	3.6	13.3	NA	.9	9.2
II	4.0	15.9	NA	1.2	15.2
III	3.9	15.5	NA	1.5	12.7
IV	5.2	20.0	NA	1.5	15.7
1987					
I	3.7	13.6	NA	.9	10.5
II	4.4	17.2	NA	1.2	14.3
III	4.4	16.9	NA	NA	NA

NA = Not available.

1/ Beginning in 1985, food processing was combined with tobacco processing.

Source: (58).

Appendix table 43--Income statement for food processing and retailing

Item	1/				2/				
	Food and kindred products				Retail foodstores				
	1986 quarter				1987 quarter				
	1	2	3	4	qtr. 1	1	2	3	4
Million dollars									
Net sales, receipts, and operating revenues	74,301	81,046	81,701	80,475	77,880	41,600	42,542	42,643	43,197
Less depreciation, depletion, and amortization of property, plant, and equipment	1,873	1,819	1,993	1,953	1,998	619	598	625	629
Less all other operating costs and expenses, including costs of goods sold and selling, general, and administrative expenses	68,005	73,508	74,013	72,351	70,722	40,236	40,837	41,001	41,492
Income (or loss) from operations	4,423	5,719	5,695	6,172	5,159	746	1,108	1,016	1,076
Net nonoperating income (expense)	-177	-445	-666	371	-588	-80	-83	-206	82
Income (or loss) before income taxes	4,246	5,273	5,029	6,542	4,572	665	1,025	810	1,158
Less provision for current and deferred domestic income taxes	1,560	1,999	1,851	2,390	1,693	314	415	295	517
Income (or loss) after income taxes	2,686	3,275	3,178	4,153	2,879	351	610	515	641
Cash dividends charged to retained earnings in current quarter	1,307	1,229	1,546	1,185	1,419	171	180	147	145
Net income retained in business	1,378	2,046	1,632	2,967	1,460	180	431	368	496
Retained earnings at beginning of quarter	63,196	64,840	67,006	65,758	66,994	10,605	10,670	11,005	11,228
Other direct credits (or charges) to retained earnings (net), including stock and other noncash dividends	-285	-403	-2,555	-1,204	-17	-132	-110	-122	-277
Retained earnings at end of quarter	64,290	66,483	66,083	67,522	68,436	10,653	10,991	11,251	11,447
Percent of net sales									
Income statement in ratio format:									
Net sales, receipts, and operating revenues	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less depreciation, depletion, and amortization of property, plant, and equipment	2.5	2.2	2.4	2.4	2.6	1.5	1.4	1.5	1.5
Less all other operating costs and expenses	91.5	90.7	90.6	89.9	90.8	96.7	96.0	96.2	96.1
Income (or loss) from operations	6.0	7.1	7.0	7.7	6.6	1.8	2.6	2.4	2.5
Nonoperating income (expense)	-.2	-.5	-.8	-.5	-.8	-.2	-.2	-.5	.2
Income (or loss) before income taxes	5.7	6.5	6.2	8.1	5.9	1.6	2.4	1.9	2.7
Less provision for current and deferred domestic income taxes	2.1	2.5	2.3	3.0	2.2	.8	1.0	.7	1.2
Income (or loss) after income taxes	3.6	4.0	3.9	5.2	3.7	.8	1.4	1.2	1.5
Percent									
Operating ratios:									
Annual rate of profit on stockholders' equity at end of period--									
Before income taxes	21.08	25.58	24.59	31.51	21.64	17.32	25.58	19.67	28.26
After taxes	13.33	15.89	15.54	20.00	13.62	9.15	15.23	12.51	15.65
Annual rate of profit on total assets--									
Before income taxes	8.50	10.37	9.30	11.91	8.19	6.36	9.44	7.27	10.33
After taxes	5.38	6.44	5.88	7.56	5.15	3.36	5.62	4.62	5.72
Balance sheet ratios: 3/									
Total current assets to total current liabilities	1.52	1.47	1.45	1.35	1.33	1.28	1.30	1.27	1.25
Total cash, U.S. Government and other securities to total current liabilities	.25	.22	.23	.21	.21	.19	.21	.21	.21
Total stockholders' equity to total debt	1.18	1.24	1.05	1.07	1.02	1.46	1.51	1.51	1.46

1/ Includes tobacco and tobacco products.

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

3/ Based on data presented in app. table 44.

Source: (58).

Appendix table 44--Balance sheet for food processing and retailing 1/

Item	1/					2/			
	Food and kindred products					Retail foodstores			
	1986 quarter					1986 quarter			
	1	2	3	4	qtr. 1	1	2	3	4
Million dollars									
Assets:									
Cash and demand deposits in the United States	4,135	2,722	3,215	3,601	3,359	1,389	1,487	1,483	1,465
Time deposits in the United States, including negotiable certificates of deposit	1,917	1,750	1,808	2,028	1,777	325	360	215	212
Total cash on hand and in U.S. banks	6,053	4,471	5,022	5,630	5,136	1,714	1,846	1,699	1,677
Other short-term financial investments, including marketable and government securities and commercial paper	6,373	7,105	7,615	6,782	7,287	937	1,069	1,353	1,371
Total cash, U.S. Government and other securities	12,426	11,577	12,638	12,412	12,423	2,651	2,915	3,051	3,048
Trade accounts and trade notes receivable (less allowances for doubtful receivables)	24,559	26,710	27,167	25,647	24,753	1,515	1,733	1,717	1,797
Inventories	33,900	32,943	32,973	33,905	33,237	12,124	12,148	12,509	11,971
All other current assets	5,806	4,650	5,878	6,030	8,413	1,439	1,519	1,412	1,437
Total current assets	76,690	75,879	8,656	77,994	78,826	17,728	18,316	18,689	18,252
Depreciable and amortizable fixed assets, including construction in progress	106,210	109,602	113,431	113,150	115,815	29,690	30,715	31,198	31,756
Land and mineral rights	3,522	3,961	3,741	3,947	3,897	2,102	2,120	2,260	2,311
Less accumulated depreciation, depletion, and amortization	39,847	41,415	42,398	41,697	43,512	11,800	12,114	12,333	12,359
Net property, plant, and equipment	69,885	72,148	74,774	75,400	76,200	19,993	20,722	21,125	21,708
All other noncurrent assets, including investment in nonconsolidated entities, long-term investments, and intangibles	53,270	55,314	62,798	66,397	68,585	4,155	4,399	4,795	4,894
Total assets	199,845	203,342	216,228	219,791	223,611	41,877	43,437	44,609	44,855
Liabilities and stockholders' equity:									
Short-term debt, original maturity of 1 year or less--									
Loans from banks	5,420	5,066	5,648	4,973	4,484	184	317	261	247
Other short-term debt including commercial paper	6,117	5,776	6,455	7,857	13,275	709	228	394	306
Trade accounts and trade notes payable	16,017	16,165	16,746	18,473	16,167	7,993	8,398	8,593	8,443
Income taxes accrued, prior and current years, net of payments	2,662	2,763	2,819	3,107	3,477	443	453	380	523
All other noncurrent liabilities; including deferred income taxes, capitalized leases, and minority stockholders' interest in consolidated domestic corporations	15,757	17,649	18,290	18,047	18,085	3,682	3,809	3,870	3,931
Total liabilities	119,279	120,884	134,429	136,736	139,092	26,513	27,406	28,129	28,464
Capital stock and other capital (less Treasury stock)	16,277	15,975	15,716	15,534	16,083	4,711	5,039	5,229	4,943
Retained earnings	64,290	66,483	66,083	67,522	68,436	10,653	10,991	11,251	11,447
Stockholders' equity	80,567	82,458	81,799	83,056	84,519	15,364	16,030	16,480	16,390
Total liabilities and stockholders' equity	199,845	203,342	216,228	219,791	223,611	41,877	43,437	44,609	44,855
Net working capital:									
Excess of total current assets over total current liabilities	26,300	24,412	24,246	20,051	19,504	3,919	4,222	3,990	3,626
Selected balance sheet ratios:	Percent of total assets								
Total cash, U.S. Government and other securities	6.2	5.7	5.8	5.6	5.6	6.3	6.7	6.8	6.8
Trade accounts and trade notes receivable	12.3	13.1	12.6	11.7	11.1	3.6	4.0	3.8	4.0
Inventories	17.0	16.2	15.2	15.4	14.9	29.0	28.0	28.0	26.7
Total current assets	38.4	37.3	36.4	35.5	35.3	42.3	42.2	41.9	40.7
Net property, plant, and equipment	35.0	35.5	34.6	34.3	34.1	47.7	47.7	47.4	48.4
Short-term debt including installments on long-term debt	7.7	7.2	7.6	7.6	9.4	3.6	2.5	3.0	2.9
Total current liabilities	25.2	25.3	25.2	26.4	26.5	33.0	32.4	33.0	32.6
Long-term debt	26.6	25.4	28.6	27.6	27.6	21.6	21.9	21.4	22.1
Total liabilities	59.7	59.4	62.2	62.2	62.2	63.3	63.1	63.1	63.5
Stockholders' equity	40.3	40.6	37.8	37.8	37.8	36.7	36.9	36.9	36.5

1/ Includes tobacco and tobacco products.

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

Source: (58).

Appendix table 45--Profits of selected processors, 1986

Firm	Profits	Change from 1985	Return on capital	Return on equity
	Million dollars		Percent	
Kraft	390.1	-4	NA	15.9
Kellogg Co.	318.9	13	30.4	37.5
H.J. Heinz Co.	326.4	13	17.9	24.0
Ralston Purina Co.	498.4	136	22.5	44.1
Sara Lee Corp.	241.1	10	NA	19.5
General Mills, Inc.	207.6	66	20.9	29.9
Campbell Soup Co.	227.9	6	12.7	13.9
CPC International	219.2	54	NA	22.9
Borden, Inc.	223.3	15	11.8	15.5
Pillsbury Co.	209.1	11	11.4	15.7
Quaker Oats Co.	173.5	10	12.5	17.9
Archer-Daniels-Midland Co.	235.9	17	10.1	10.7
Hershey Foods Corp.	132.8	10	15.0	18.2
Conagra Inc.	119.1	17	16.3	21.3
Tyson Foods, Inc.	55.0	47	15.3	25.1
Castle & Cooke	75.6	63	NA	11.0
Pioneer Hi-Bred Int'l.	64.3	-35	NA	13.3
Wm. Wrigley Jr.	53.8	24	18.5	18.4
Dean Food Co.	39.5	17	15.8	18.0
Gerber Products	37.7	-26	9.0	11.4
The Federal Co.	57.6	43	17.7	19.1
Geo. A. Hormel & Co.	34.6	-12	9.7	10.2
United Brands	53.8	67	11.5	12.9
Lace	35.6	7	NA	19.0
Tejon Ranch	1.2	-43	NA	7.4
Flowers Industries, Inc.	29.9	10	12.3	17.8
McCormick & Co.	29.7	7	10.9	11.0
International Multifoods	21.5	-15	8.6	7.6
Coca-Cola Co.	934.3	38	23.2	26.6
Anheuser-Busch Cos., Inc.	518.0	17	15.3	21.2
PepsiCo, Inc.	457.8	9	NA	23.3
General Cinema	88.5	-2	11.5	17.7
Brown-Forman	86.1	4	13.0	15.2
Coca-Cola Enterprises	27.8	-23	NA	8.3
Adolph Coors Co.	59.4	11	NA	6.0
G. Heileman Brewing Co., Inc.	48.3	12	11.6	14.5

NA = Not available

Source: (7).

Appendix table 46--Profits of selected retailers, 1986

Firm	Profits	Change from 1985	Return on capital	Return on equity
	Million dollars		Percent	
Kroger Co.	55.8	-65	NA	4.5
Southland Corp.	200.4	-6	NA	12.5
Food Lion	61.8	30	22.0	25.1
American Stores Co.	144.5	-6	9.4	14.6
Winn-Dixie Stores Co.	107.8	0	14.4	15.2
Albertson's, Inc.	100.2	18	14.1	17.6
Supermarkets General Corp.	62.7	1	NA	14.0
Weis Markets	65.3	9	16.6	16.5
Great Atlantic and Pacific Tea Co.	61.9	13	79.9	8.4
Lucky Stores, Inc.	49.7	2	NA	7.2
Giant Food, Inc.	51.5	-6	12.2	17.8
Circle K Corp.	47.2	23	NA	14.6
Bruno's	30.9	12	15.9	16.4

NA = Not available

Source: (2).

Appendix table 47--Profits of selected restaurant firms, 1986

Firm	Profits	Change from 1985	Return on capital	Return on equity
	Million dollars		Percent	
McDonald's Corp.	479.7	11	13.0	19.8
Marriott Corp.	191.7	15	13.2	19.9
Hilton Hotels Corp.	97.8	-2	12.5	13.8
Holiday Corp.	103.4	-27	10.7	16.6
Prime Motor Inns	44.7	50	8.9	16.1
Wendy's International Inc.	-4.9	NA	.1	-1.1
Shoney's Inc.	43.3	12	15.5	16.8
Transworld Liquor Trust	87.0	-12	12.1	12.3
Ryan's Family Steak Houses	10.8	99	15.9	15.9
Bob Evans Farms	20.7	3	13.0	13.3
Luby's Cafeterias	22.2	10	NA	19.6
Church's Fried Chicken	17.3	-26	NA	6.3
Jerrico Inc.	27.6	14	10.3	13.7
Collins Foods International Inc.	11.7	-37	NA	8.9
TCBY Enterprises	8.0	156	19.0	21.9
Sizzler Restaurants Int'l.	12.7	13	9.6	11.7
Morrison	19.9	11	NA	12.6

NA = Not available

Source: (25).

Appendix table 48--New products introduced in 20 selected categories

Category	1983	1984	1985	1986	1987
	<u>Number</u>				
Food categories:					
Baby food	24	34	14	38	10
Bakery foods	515	485	553	681	931
Baking ingredients	134	130	142	137	157
Beverages	506	717	625	697	832
Breakfast cereals	34	61	56	62	92
Condiments	906	993	1,146	1,179	1,367
Candy, gum, and snacks	775	858	904	811	1,145
Dairy	486	806	671	852	1,132
Desserts	37	61	62	101	56
Entrees	319	307	409	441	691
Fruits and vegetables	126	146	195	194	185
Pet food	62	87	103	80	82
Processed meat	348	360	383	401	581
Side dishes	133	193	187	292	435
Soups	135	138	167	141	170
Total, food	4,540	5,396	5,617	6,107	7,866
Nonfood categories:					
Health and beauty aids	1,237	1,652	1,446	1,678	2,039
Household supplies	124	133	184	178	161
Paper products	29	41	42	42	47
Tobacco products	21	23	27	27	51
Pet products	4	22	14	9	18
Total, nonfood	1,416	1,875	1,713	1,934	2,316
Grand total	5,956	7,271	7,330	8,041	10,182

Source: (26).

Appendix table 49--Capital expenditures in food marketing

Item	:	:	:	:	:	:
	1972	1977	1984	1985	1986	1987
	<u>Billion dollars</u>					
Food processing (by enterprise):						
Current dollars	3.3	5.7	8.8	10.3	10.6	11.3
1982 dollars	7.4	8.6	8.6	9.6	10.0	NA
	<u>Thousand dollars</u>					
Food processing (by establishment):						
Food and kindred products	NA	NA	6,432	7,049	NA	NA
Meat products	NA	NA	614	717	NA	NA
Dairy	NA	NA	566	671	NA	NA
Fruits and vegetables	NA	NA	890	1,006	NA	NA
Grain mill	NA	NA	790	1,078	NA	NA
Bakery products	NA	NA	584	587	NA	NA
Sugar and confectionery	NA	NA	498	629	NA	NA
Fats and oils	NA	NA	317	337	NA	NA
Beverages	NA	NA	1,527	1,338	NA	NA
Prepared foods	NA	NA	644	685	NA	NA

NA = Not available.

Sources: (48, 49).

Appendix table 50--Capacity measures in food marketing

Item	1972	1977	1982	1983	1984	1985	1986
<u>Percent</u>							
Capacity utilization rates: 1/							
All industries	NA	79	65	72	75	75	75
Food processing	NA	77	76	76	76	79	78
Meat	NA	86	80	80	80	82	87
Dairy	NA	76	77	80	76	81	80
Fruits and vegetables	NA	72	81	77	77	76	71
Grain mill	NA	NA	80	80	80	79	80
Bakery	NA	81	72	70	83	82	83
Sugar	NA	76	82	81	80	82	80
Fats and oils	NA	84	76	82	87	84	81
Beverages	NA	83	68	71	69	75	74
Miscellaneous	NA	55	75	77	69	76	81
<u>Square feet</u>							
Food retailing:							
Total area	765,233	823,510	963,788	NA	NA	NA	NA
Selling area	545,690	606,117	713,065	NA	NA	NA	NA
Typical size of new store	NA	NA	36,400	NA	NA	40,000	43,800
Food wholesaling:							
Warehouse area	370,079	350,532	NA	NA	NA	NA	NA
<u>Thousands</u>							
Food service:							
Seating capacity	9,342	10,099	12,035	NA	NA	NA	NA

NA = Not available.

1/ Data are fourth quarter of indicated years.

Sources: (2, 52, 53, 55).

Food Marketing Purchases

Appendix table 51--Food marketing system purchases from U.S. agriculture

Year	Meat	Fruits and vegetables <u>1/</u>	Dairy products	Bakery products
------	------	---------------------------------	----------------	-----------------

Billion dollars

1982	31.5	13.8	16.7	3.4
1983	31.4	13.3	18.0	3.5
1984	32.4	15.1	18.1	3.7
1985	30.5	15.2	17.7	3.4
1986	30.8	15.2	17.8	3.1

Poultry	Grain mill products <u>2/</u>	Eggs	Other foods <u>3/</u>	Total
---------	-------------------------------	------	-----------------------	-------

Billion dollars

1982	6.0	1.4	2.5	8.4	83.7
1983	6.6	1.4	2.7	8.8	85.7
1984	8.0	1.4	3.0	9.7	91.4
1985	7.9	1.3	2.3	10.0	88.3
1986	9.2	1.2	2.5	9.1	88.9

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.

Source: (43).

Appendix table 52--Food marketing system purchases from fisheries

Edible fishery products	Domestic commercial landings		Imports		Total	
	1985	1986	1985	1986	1985	1986
	<u>Million dollars</u>					
Fin fish	1,076	1,204	1,943	2,354	3,019	3,558
Shellfish	1,122	1,437	2,056	2,409	3,278	3,846
Total	2,198	2,641	3,999	4,763	6,197	7,404

Source: (61).

Food Marketing and the International Economy

Appendix table 53--Foreign trade in processed foods

Item	Exports		Imports	
	1986	1987 <u>1/</u>	1986	1987 <u>1/</u>
<u>Million dollars</u>				
Total processed food	11,485	12,568	16,500	18,862
Meat products	2,816	3,126	2,531	3,069
Meat packing	2,418	2,661	1,795	2,275
Sausage & prepared meats	44	51	703	766
Poultry dressing plants	299	359	22	16
Poultry & egg processing	55	55	11	12
Dairy products	426	398	616	604
Creamery butter	27	13	2	2
Cheese, natural and processed	25	37	389	375
Condensed and evaporated milk	330	289	215	219
Ice cream and frozen desserts	4	8	0	0
Fluid milk	40	51	10	8
Preserved fruits and vegetables	897	1,031	1,954	2,015
Canned specialties	36	36	32	40
Canned fruits and vegetables	238	261	1,638	1,628
Dried fruits and vegetables	274	325	104	120
Sauces and salad dressings	45	44	56	59
Frozen fruits and vegetables	278	340	124	178
Frozen specialties	26	25	0	0
Grain mill products	2,349	2,471	274	286
Flour and grain mill products	323	262	61	65
Cereal breakfast foods	25	31	14	23
Rice milling	567	582	34	37
Blended and prepared flours	9	15	8	7
Wet corn milling	908	988	57	56
Dog, cat, and other pet food	130	195	38	37
Prepared animal feed	387	398	62	61
Bakery products	42	53	284	319
Bread and other bakery goods	13	14	34	44
Cookies and crackers	29	39	250	275
Sugar and confections	528	565	1,715	1,508
Cane sugar, except refined	<u>3/</u>	16	0	0
Cane sugar refined	188	130	633	446
Beet sugar	74	89	85	72
Confectionery products	237	285	326	322
Chocolate and cocoa products	19	36	647	637
Chewing gum	10	9	24	31

See footnotes at end of table

Continued--

Appendix table 53--Foreign trade in processed foods--Continued

Item	Exports		Imports	
	1986	1987 ^{1/}	1986	1987 ^{1/}
	<u>Million dollars</u>			
Fats and oils	2,275	2,209	556	533
Cottonseed oil mills	92	45	8	13
Soybean oil mills	1,468	1,578	^{3/}	^{2/}
Vegetable oil mills	178	103	486	420
Animal/marine fats and oils	419	396	61	99
Shortening and cooking oils	118	87	^{3/}	1
Beverages	521	683	3,254	3,532
Malt beverages	40	56	805	972
Malt	54	59	21	13
Wines, brandy, and brandy spirits	35	61	1,209	1,193
Distilled and blended liquors	135	168	979	1,058
Soft drinks and carbonated water	22	49	108	150
Flavorings, extracts, and syrups	235	290	132	146
Miscellaneous foods	1,631	2,032	5,320	6,986
Canned fish and seafood ^{4/}	140	97	2,800	3,500
Fresh or frozen fish and seafood ^{4/}	1,145	1,520	1,647	2,207
Roasted coffee	94	88	257	203
Manufactured ice	^{2/}	^{2/}	^{2/}	^{2/}
Pasta products	7	6	65	87
Food preparations, not elsewhere classified	245	321	551	989

^{1/} Estimated.

^{2/} Less than \$200,000.

^{3/} Less than \$400,000.

^{4/} International Trade Administration figures.

Source: (60).

Appendix table 54--Composition of the foreign trade deficit in processed foods

Item	Trade balance	
	1986	1987
	<u>Million dollars</u>	
All processed food	-5,585	-6,284
Meat products	285	57
Dairy products	-190	-206
Preserved fruits and vegetables	-1,057	-984
Grain mill products	2,075	2,185
Bakery products	-242	-266
Sugar and confections	-1,187	-943
Fats and oils	1,719	1,676
Beverages	-2,733	-2,849
Miscellaneous foods	-3,689	-4,954
Seafood	-3,162	-4,090
All processed food less seafood	-1,857	-2,194

Source: (60).

Appendix table 55--Foreign investment in food marketing

Item	1980	1981	1982	1983	1984	1985	1986
<u>Million dollars</u>							
Direct foreign investment in United States:							
Food manufacturing	4,864	5,721	6,635	7,447	8,270	10,710	11,864
Wholesaling	616	703	705	1,046	1,124	1,182	1,972
Foodstores and eating and drinking places	1,447	1,966	2,012	2,106	2,774	2,886	3,564
Total	6,932	8,390	9,355	10,596	12,168	15,052	17,400
Foreign investment by United States:							
Food manufacturing	8,278	9,163	7,630	7,661	8,156	9,266	10,640
Wholesaling	601	669	662	801	871	947	1,115
Foodstores and eating and drinking places	1,259	1,365	1,344	1,483	1,408	1,431	1,667
Total	10,138	11,197	9,636	9,945	10,490	11,791	13,420

Source: (48).

Appendix table 56--International restaurant franchising: Location and number of establishments of U.S. restaurant firms 1/

Location	1971	1974	1976	1978	1981	1982	1984	1985
	<u>Number</u>							
Canada	519	860	1,047	1,196	1,220	1,172	1,591	1,542
Mexico	44	71	87	84	99	100	119	119
Caribbean	40	70	96	150	198	234	290	312
United Kingdom	63	429	433	454	442	481	567	615
Continental Europe	40	101	103	164	316	360	514	539
Australia	163	223	224	384	468	522	581	635
Asia	37	306	468	710	1,336	1,535	1,921	1,935
Japan	NA	265	415	590	1,106	1,259	1,490	1,436
Other	NA	41	53	120	230	276	431	499
Other	24	109	162	198	246	271	398	425
Africa	NA	NA	NA	NA	NA	124	172	195
New Zealand	NA	NA	NA	NA	NA	71	88	92
Central America	NA	NA	NA	NA	NA	45	75	71
South America	NA	NA	NA	NA	NA	31	63	67
Total	980	2,169	2,620	3,340	4,325	4,675	5,990	6,122

NA = Not available.

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

Source: (46).

Appendix table 57--Composition of food processing industries in selected countries, 1985

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

Source: (17).

Appendix table 58--Food processing share of total manufacturing production and employment within each country of the OECD

Country	Production			Employment		
	1965	1975	1985	1965	1975	1985
	<u>Percent</u>					
Australia	16.1	18.3	18.3	10.2	13.3	13.9
Austria	14.0	14.1	14.7	14.2	10.0	10.6
Belgium	17.7	15.5	16.1	7.1	7.6	9.2
Canada	16.7	16.0	15.3	12.2	10.7	10.5
Denmark	19.8	26.9	33.0	12.6	13.7	17.0
Finland	26.1	17.4	17.0	11.8	10.4	10.2
France	18.1	16.6	16.8	8.3	7.8	10.2
Germany, Federal Republic of	9.6	9.1	9.5	4.3	4.3	4.9
Greece	23.5	20.0	18.5	16.2	16.2	15.4
Iceland	NA	21.9	22.0	NA	15.4	12.5
Ireland	35.0	40.5	37.0	22.5	23.4	21.6
Italy	NA	11.0	10.5	5.7	5.2	5.3
Japan	10.3	9.6	8.9	8.9	8.9	9.6
Luxembourg	NA	5.7	6.0	2.9	3.0	4.1
Netherlands	25.5	24.8	24.8	12.2	13.2	14.7
New Zealand	32.3	27.0	27.1	18.9	23.6	24.1
Norway	25.2	17.3	20.2	13.5	12.5	14.8
Portugal	17.1	23.1	16.8	10.1	11.9	11.2
Spain	15.3	13.0	16.6	11.6	10.1	11.3
Sweden	16.9	12.2	12.9	7.0	7.0	8.4
Switzerland	NA	NA	NA	5.0	5.5	7.6
Turkey	26.3	18.1	14.5	16.1	13.9	13.5
United Kingdom	NA	11.9	13.3	NA	8.2	9.4
United States	13.6	14.9	12.36	8.4	7.8	7.1
OECD total	10.8	10.4	10.3	8.4	8.2	9.1

NA = Not available.

Source: (17).

Appendix table 59--Shares of food marketing production and employment by OECD countries, 1985

Country	Production	Employment
	<u>Percent</u>	
Australia	1.9	2.6
Austria	1.0	1.5
Belgium	1.0	1.3
Canada	4.7	3.7
Denmark	1.3	1.2
Finland	1.0	1.0
France	7.7	8.7
Germany	5.9	6.7
Greece	.5	1.5
Iceland	.04	.03
Ireland	.6	.8
Italy	4.0	3.1
Japan	14.4	19.6
Luxembourg	.02	.02
Netherlands	3.0	2.3
New Zealand	.6	1.3
Norway	.8	.9
Portugal	.4	1.5
Spain	2.7	4.4
Sweden	1.2	1.2
Switzerland	1.2	1.1
Turkey	.6	2.2
United Kingdom	6.4	8.1
United States	38.6	25.1
OECD total	100.0	100.0

Source: (17).

Appendix table 61--Productivity in food processing industries in selected OECD countries, 1985

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

Source: (17).

Appendix table 62--Private research and development expenditures by OECD food-related industries, 1981 ^{1/}

Country	Total	Share of OECD total	Share of R&D total in manufacturing	Share of government financed R&D in total manufacturing R&D
	Million dollars			Percent
Australia	13.9	0.8	6.3	NA
Austria	10.9	.6	2.6	5.3
Belgium	25.0	1.4	2.8	2.4
Canada	52.0	2.9	3.5	2.9
Denmark	18.8	1.0	7.9	15.5
Finland	13.7	.8	4.8	1.7
France	80.8	4.5	1.3	.1
Germany	132.7	7.4	1.2	.4
Greece	.5	.03	3.1	NA
Iceland	.1	.01	5.1	6.7
Ireland	13.0	.7	20.0	8.8
Italy	19.2	1.1	.8	.3
Japan	438.8	24.3	3.0	.7
Netherlands	89.3	4.9	6.8	NA
Norway	3.7	.2	2.0	.7
Spain	17.9	1.0	4.3	6.5
Sweden	34.7	1.9	2.6	2.2
Switzerland	16.1	.9	1.3	NA
United Kingdom	183.2	10.2	2.6	.3
United States	640.0	35.5	1.3	.1
OECD total	1,804.3	100.0	1.9	.9

NA = Not available.
^{1/} Food-related: food, beverages, and tobacco.

Source: (17).

Get these timely reports from USDA's Economic Research Service

These periodicals bring you the latest information on food, the farm, and rural America to help you keep your expertise up-to-date. Order these periodicals today to get the latest facts, figures, trends, and issues from ERS.

Agricultural Outlook. Presents USDA's farm income and food price forecasts. Emphasizes the short-term outlook, but also presents long-term analyses of issues ranging from international trade to U.S. land use and availability. 11 issues annually. 1 year, \$22; 2 years, \$43; 3 years, \$63.

Farmline. Concise, fact-filled articles focus on economic conditions facing farmers, how the agricultural environment is changing, and the causes and consequences of those changes for farm and rural people. 11 issues annually. 1 year, \$11; 2 years, \$21; 3 years, \$30.

National Food Review. Offers the latest developments in food prices, product safety, nutrition programs, consumption patterns, and marketing. 4 issues annually. 1 year, \$10; 2 years, \$19; 3 years, \$27.

Economic Indicators of the Farm Sector. Updates economic trends in U.S. agriculture. Each issue explores a different aspect of income and expenses: national and State financial summaries, production and efficiency statistics, costs of production, and an annual overview. 5 issues annually. 1 year, \$12; 2 years, \$23; 3 years, \$33.

Rural Development Perspectives. Crisp, nontechnical articles on the results of new rural research and what those results mean. 3 issues annually. 1 year, \$9; 2 years, \$17; 3 years, \$24.

The Journal of Agricultural Economics Research. Technical research in agricultural economics, including econometric models and statistics focusing on methods employed and results of USDA economic research. 4 issues annually. 1 year, \$7; 2 years, \$13; 3 years, \$18.

Foreign Agricultural Trade of the United States. Updates the quantity and value of U.S. farm exports and imports, plus price trends. 8 issues annually. 1 year, \$20; 2 years, \$39; 3 years, \$57.

Situation and Outlook Reports. These reports provide timely analyses and forecasts of all major agricultural commodities and related topics such as finance, farm inputs, land values, and world and regional developments. Each *Situation and Outlook* title costs 1 year, \$10; 2 years, \$19; 3 years, \$27. Titles include:

<i>Agricultural Exports</i>	<i>Cotton and Wool</i>	<i>Oil Crops</i>	<i>Vegetables and Specialties</i>
<i>Agricultural Income and Finance</i>	<i>Dairy</i>	<i>Rice</i>	<i>Wheat</i>
<i>Agricultural Resources</i>	<i>Feed</i>	<i>Sugar and Sweeteners</i>	<i>World Agriculture</i>
<i>Aquaculture</i>	<i>Fruit and Tree Nuts</i>	<i>Tobacco</i>	<i>World Agriculture Regionals.</i>

Also available: *Livestock and Poultry*: 1 year, \$15; 2 years, \$29; 3 years, \$42.

Add 25 percent for shipments to foreign addresses.

To subscribe to these periodicals, or for more information,
call (301) 953-2515, or write to:

USDA-ERS
P.O. Box 1608
Rockville, MD 20850

UNITED STATES DEPARTMENT OF AGRICULTURE
ECONOMIC RESEARCH SERVICE
1301 NEW YORK AVENUE, NW.
WASHINGTON, D. C. 20005-4788