

Food Cost Review, 1950-97. By Howard Elitzak, Food and Rural Economics Division, Economic Research Service, U.S. Department of Agriculture. Agricultural Economic Report No. 780.

Abstract

Food prices, as measured by the Consumer Price Index (CPI), increased 2.6 percent in 1997. This increase was greater than the overall increase in the CPI (which rose 2.3 percent) for the third consecutive year. Higher charges for processing and distributing food, as measured by the farm-to-retail price spread, were primarily responsible for the 1997 increase. The prices farmers received for commodities, as measured by the farm value of USDA's market basket of foods, dropped 4.4 percent. The farm value share of the food dollar spent in grocery stores in 1997 was 23 percent, a decrease of 2 percent from 1996. The farm-to-retail price spread of USDA's market basket of foods rose 4.7 percent, partly reflecting higher prices of inputs, such as labor.

Keywords: Retail food prices, farm-to-retail price spread, farm value share, food marketing costs, food spending, profits, productivity.

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Summary

Food prices rose 2.6 percent in 1997, as measured by the Consumer Price Index (CPI), a smaller increase than the 1996 increase of 3.3 percent. The CPI for all goods and services rose 2.3 percent in 1997.

Grocery store food prices rose 2.5 percent in 1997, a smaller increase than the 3.7-percent rise of 1996. The food groups whose retail prices increased the most in 1997 were pork, nonalcoholic beverages, and other prepared foods. Higher grocery store food prices were largely due to higher marketing costs. These price increases were held in check by lower grain prices, large supplies of competing meats, and ample supplies of fresh produce.

Restaurant meal prices went up 2.8 percent, slightly more than the 2.5-percent increase in 1996, consistent with the pattern of relatively small restaurant price increases during the 1990's. These small price hikes were largely due to increased competition among restaurants, which held down menu price increases. However, the 1997 increase was the largest since 1991's 3.4-percent hike. This rise reflected a tight labor market that featured low unemployment rates due to the strong economy. A Federally mandated minimum wage increase further augmented 1997 restaurant operating costs and, therefore, prices paid by consumers.

The farm value of USDA's market basket of foods—based on prices farmers received for commodities—declined 4.4 percent in 1997, the first decrease since 1994, and the largest drop since 1991. (The market basket contains the average quantities of food that mainly originate on U.S. farms and are purchased for consumption at home in a base period, and excludes seafood and nonalcoholic beverages.) This decline reflected lower farm prices for most commodities. The 1997 farm value of food averaged 23 percent of the retail cost of the market basket, about 2 percent less than in 1996. However, the share has generally declined over time as abundant food supplies held down farm prices, and rising processing/distributing charges boosted retail prices. The farm value share was 37 percent in 1980.

The farm-to-retail price spread—the difference between the farm value and retail price of food—rose 4.7 percent in 1997, partly reflecting higher prices of marketing inputs such as labor and energy. The increase in the 1997 farm-to-retail price spread was larger than in 1996. The farm-to-retail price spread increased for all food groups. Higher costs for labor, packaging, energy, transportation, and other marketing inputs push the spread wider nearly every year. The cost of these inputs after the products leave the farm has a greater effect on retail prices than do fluctuations in prices received by farmers.

Consumers spent \$561 billion for food produced on U.S. farms in 1997. This amount includes purchases of farm foods in grocery stores (which account for about 60 percent of total consumer food expenditures) and at away-from-home eating places. Seventy-nine percent of this total, or \$441 billion, went to pay the

marketing bill. The remaining 21 percent of 1997 food spending went to farmers, who received about \$120 billion for food commodities. This figure is lower than the 23-percent farm value share for the market basket of foods because it includes the much lower farm value share of away-from-home food spending.

Food Cost Review, 1950-97

Howard Elitzak

Why USDA Measures Price Spreads

Consumers, farmers, and legislators want to know what causes food prices to change. They are also interested in the farm-to-retail price spread, which measures the difference between what farmers get for the food they sell and what consumers pay for food that was processed and marketed. To answer these concerns, Congress has directed the U.S. Department of Agriculture (USDA) to measure price spreads for food originating on farms. Specifically, the Agricultural Marketing Act of 1946 directs USDA to measure, analyze, and disseminate farm-to-retail price spread data (7 U. S. Code 1622 (b)).

This report presents USDA's findings for 1997, including answers to the following questions:

- How much did food prices rise in 1997? Why?
- How much of the retail food price does the farm value represent?
- How did farm-to-retail price spreads change in 1997, both for a market basket of food and for such food groups as meat and dairy products?
- How have recent developments affected food industry costs, profit margins, and productivity?
- Finally, how much did Americans spend for farm-produced food, and how were these dollars divided among costs of producing and marketing food?

The 1997 Economy: An Overview

The 1997 economy featured the unusual combination of low inflation and strong growth in gross domestic product, employment, and personal income. The economic expansion that began in 1991 was still evident during 1997. Real gross domestic product rose 3.9 percent, a half percentage point higher than the 1996 increase of 3.4 percent. Aggregate employment grew 2.3 percent in 1997, while unemployment stood at the lowest level since 1989. Higher wages and salaries produced a 1.9-percent increase in real per capita income, a gain that was 0.6 percent higher than in 1996, and continued the pattern of sustained growth observed during the 1990's. Meanwhile, the Consumer Price Index (CPI) for all items grew only 2.3 percent, the smallest increase since a 1.9-percent rise in 1986. However, as in 1996, the relatively strong economy failed to translate into stronger consumer food expenditures. Sales of food purchased in grocery stores and restaurants were nearly constant in 1997 when adjusted for inflation.

Retail food prices in 1997, as measured by the CPI, averaged 2.6 percent above those in 1996 (table 1). This increase was slower than 1996's rise of 3.3 percent. Food price inflation in 1997 was higher than the overall increase in the CPI (2.3 percent), for the third consecutive year. The general rate of inflation was higher than food price inflation from 1991 to 1994. These opposing trends made it difficult to raise prices and thus produced nearly constant sales at both grocery stores and restaurants in 1997.

Food prices in 1997 rose slightly more at restaurants than at supermarkets and other grocery stores. Food prices in grocery stores rose 2.5 percent, while prices for restaurant meals advanced at the slightly faster pace of 2.8 percent. Grocery store prices of foods increased less in 1997 than in 1996. The food groups whose retail prices increased the most in 1997 were pork, nonalcoholic beverages, and other prepared foods (table 2). Prices for cereal and cereal products, fresh fruits, and fats and oils increased less than 1 percent (table 2), while egg prices declined (table 3).

Modest price increases were recorded for most other food groups. The food-at-home index was held in check by low grain prices, large supplies of competing meats (especially poultry and pork), and large supplies of fresh produce. Higher marketing costs were a major factor that raised food prices, as is the case in most years. Prices of restaurant meals increased slightly more in 1997 than they had the year before, but were still consistent with the pattern of relatively small restaurant price increases during the 1990's. These small price hikes were largely due to increased competition among restaurants, which held down menu price increases. However, the 1997 increase was the largest since 1991's 3.4-percent hike, reflecting a tight labor market that featured low unemployment rates due to the strong economy. A federally mandated minimum wage increase further augmented 1997 restaurant operating costs and, therefore, prices paid by consumers.

Food prices in 1997 rose more than prices for most other consumer products and services (fig. 1). Among major items in the CPI, housing prices, the largest component, went up 2.6 percent, while transportation and apparel and upkeep both rose 0.9 percent. The largest increase was again in medical costs, which climbed 2.8 percent—the smallest increase since 1965.

The marketing spread, the difference between the farm value and retail price of food, consistently contributes more to food price increases than do volatile farm prices. Higher costs for labor, packaging, and other marketing inputs push the spread wider nearly every year. The 1997 rise in the farm-to-retail price spread was 5 percent, larger than in 1996 and larger than the annual average increase of the last 5 years (table 4). During this period, the cost of marketing farm products has tended to rise at a faster pace than aggregate prices of farm commodities.

Market Basket Prices

USDA uses its market basket concept to analyze changes in grocery store food prices by separating the two major components of food prices—prices received by farmers for food commodities and charges for marketing services (see box, p. 15). The market basket contains the average quantities of food that originate mainly on U.S. farms and are purchased for consumption at home in a base period, and excludes seafood and nonalcoholic beverages. Changes in retail prices of the market basket are components of the CPI for food consumed at home.

USDA divides the retail cost for a market basket of food into the farm value and the farm-to-retail price spread (table 4). The farm value represents prices farmers receive for raw commodities equivalent to foods in the market basket. The farm-to-retail price spread represents the difference between the retail price and the farm value. The price spread includes the charges for assembling foods from farms, and for processing, distributing, and retailing foods. The 1997 farm value decreased for the first time since 1994. However, marketing costs account for a much larger portion of retail food prices, 77 percent, than does the farm value. Therefore, higher marketing

costs had a larger effect on 1997 retail prices than the farm value decline.

Farm Value

Farm value is a measure of the return, or payment, farmers received for the farm-product equivalent of retail food sold to consumers. The market basket farm value is an index of prices farmers receive for products later used for food. Farm values for individual food items are expressed in dollar amounts for comparison with the item's retail price. Farm value is calculated by multiplying farm price by the quantity of farm-product equivalent of food sold at retail. An allowance is made in farm values if byproducts are obtained in processing. The farm value usually represents a larger quantity than the retail unit, because the foodstuffs that farmers produce lose weight through storage, processing, and distribution. For example, nearly 2.4 pounds of live animal yield 1 pound of Choice beef on the meat counter. The payment the cattle farmer receives for that larger quantity of live animal is the gross farm value in the price of 1 pound of retail beef.

The average farm value (what farmers receive) of USDA's market basket of foods declined 4.4 percent in 1997, the first decrease since 1994 (table 6) and the largest drop since a 6.2-percent decline recorded in 1991. The 1997 farm value of foods was about 12 percent higher than the value a decade earlier. Since that time, the farm value has either declined or increased only slightly, except for 1989, 1990, and 1996 (fig. 2).

Red meat accounts for about 36 percent of the farm value of USDA's market basket. Farm value of red meat rose 0.8 percent in 1997 (table 6), mainly reflecting smaller supplies due to reduced cow slaughter, which is indicative of the herd-building phase of the cattle cycle. However, large supplies of competing meats prevented beef prices from posting large increases. For 1 pound of Choice grade beef selling for an average retail price of \$2.80, cattle producers received \$1.37 for the equivalent quantity of

Figure 1

Consumer price indexes

The nonfood price increase was smaller than the food price increase in 1997 for the third consecutive year.

Annual percentage change

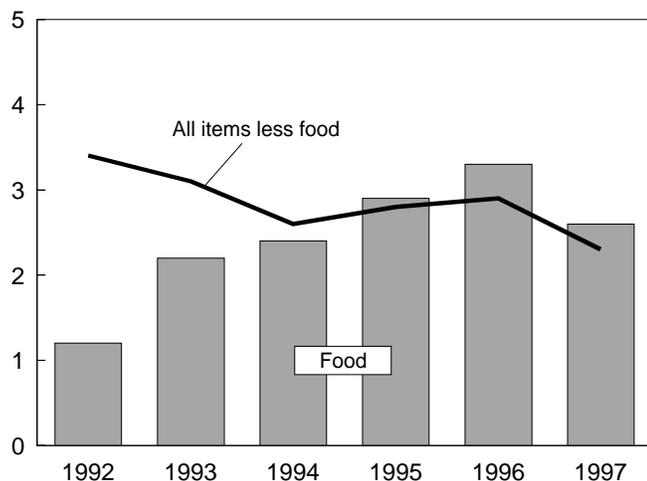
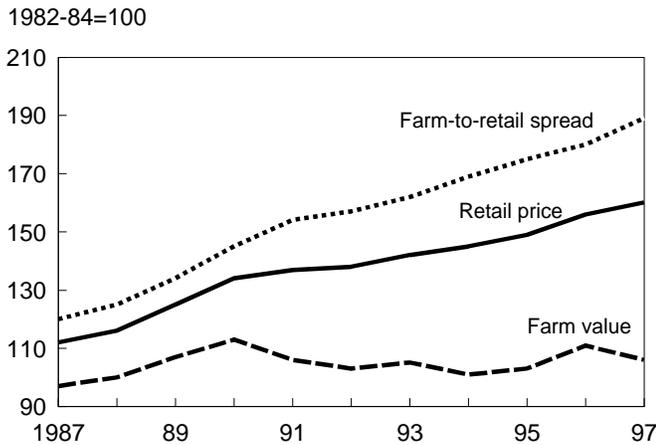


Figure 2

Food price components

Farm value of food products declined in 1997, following three consecutive annual increases. The farm value is 9 percent higher than a decade earlier.



Retail price based on the Consumer Price Index for food eaten at home. Farm value based on prices received by farmers. Price spread represents processing and distributing charges.

live animal (2.4 pounds) in 1997, up slightly from 1996. This increase was partially offset by lower pork prices. The decline in the farm value of pork reflected several factors—higher production reflecting an expansionary phase of the hog cycle, a weak export market, lower feed costs, and lower prices for competing chicken. For 1 pound of pork selling at retail for \$2.32 in 1997, hog producers received 81.1 cents for the equivalent quantity of live animal (1.7 pounds), about 3.5 cents less than in 1996.

Poultry producers increased broiler and turkey output in 1997 by 3.0 percent, a slower growth rate than in 1996. These higher supplies caused the farm value of poultry to drop 4.4 percent, after surging 11 percent in 1996. Another year of record broiler production in 1997 dropped the farm value in the face of lower export demand and lower feed costs than in 1996. Strong aggregate domestic demand continued to provide producer incentives to increase broiler output. Broiler chicken producers received 53 cents of the average retail price of \$1.00 per pound of whole frying chicken in 1997, a lower percentage than in 1996.

The farm value of eggs plummeted 13 percent in 1997, reflecting a 1.4-percent production increase in response to lower feed costs and higher 1996 whole-

sale egg prices. The 1997 farm value averaged 60 cents for a dozen eggs, with an average price of \$1.06 at grocery stores.

A drop in producer prices for milk decreased the farm value of dairy products by an average of 8.6 percent. Milk production rose in 1997 following a decline in 1996. This expansion was stimulated by record 1996 farm milk prices, which induced higher milk production. A half-gallon of fluid milk retailing for \$1.59 returned the producer about 59 cents in 1997, 8 cents more than in 1996. (Half a gallon of fresh milk has a net weight of approximately 4.3 pounds. An allowance of 2 percent is made for milk lost in assembling, processing, and packaging. Thus, the farm-product equivalent is 4.39 pounds.)

The farm value of cereals and baked goods dropped 14 percent in 1997, mainly reflecting lower wheat prices stemming from higher domestic and foreign production. Farmers received 4.7 cents in 1997 for the wheat in a 1-pound loaf of white bread selling for 87 cents in supermarkets, 0.4 cent less than in 1996. The 1997 farm value of other bread ingredients, mainly shortening and sweeteners, was 0.7 cent, slightly lower than in 1996.

The farm value of fruit averaged 10 percent lower in 1997, due mainly to abundant supplies of both citrus and noncitrus fruits. In particular, Washington State produced its second-largest apple crop. Moreover, large harvests were recorded for a variety of fresh fruits, including peaches, plums, apricots, and cherries. The farm value of fresh vegetables averaged 4.8 percent higher in 1997, primarily due to adverse weather conditions at the end of the year in Florida and the desert Southwest, which curtailed supplies and raised farm prices of a number of major fresh vegetables, particularly lettuce and tomatoes. In addition, potato growers produced a smaller crop by lowering planted acreage in response to low farm prices that reflected a record 1996 crop.

Farm Value Share of Food Dollar

The farm value share is the proportion farmers get from the amount consumers spend on the market basket of food purchased in retail grocery stores. The

farm value share averaged 23 percent of the retail price of all foods in the market basket in 1997, a drop of 2 percentage points from 1996 (table 4). The farm value share reflects relative changes in farm and retail food prices. The 1997 farm value share decreased because there was a small rise in retail prices and a moderate decrease in farm prices. This decrease conforms with the longrun trend, in which rising farm productivity has created abundant food supplies. These supplies have depressed farm prices while rising food processing and distributing charges boosted retail prices. These opposing forces lowered the farm value share from 37 percent in 1980 to 30 percent in 1987. The farm value share remained stable until a sharp decline in 1991, reflecting a large decline in farm prices. The share has gradually declined since 1991, except for a small uptick in 1996.

Farm value share varies greatly among foods (table 5). In 1997, farm value share for a sample group of 40 foods varied from 57 percent for eggs to 5 percent for corn flakes. Generally, the farm value share decreases as the degree of processing increases. For instance, wheat is the principal ingredient of both flour and bread, but the additional manufacturing processes required for bread result in a lower farm value share of its retail price. Foods derived from animal products tend to have a higher farm value share than do those derived from crops, because farm inputs are greater for animal products than for crops. For example, the 1997 farm value share was 49 percent for Choice beef and 53 percent for chicken, but only 6 percent for bread. Other factors influencing the farm value share among foods include costs of transporting from farm to consumer, product perishability, and charges for retailing. These factors partly explain why the farm value share for fresh fruits and vegetables is relatively low.

The farm value of most foods that come from grains and oilseeds represents a small share of the retail price. In 1997, farmers received about 7 percent of retail bakery and cereal prices and 19 percent of retail prices of processed fruits and vegetables (table 7). Because the farm value of these foods is small, the rise in retail prices in 1997, as in most other years, resulted mostly in a widening of the farm-to-

retail price spread. For example, the farm value of cereal and bakery products decreased 14.3 percent in 1997. But this decline did not cause the retail price to drop, because there was a 2.1-percent increase in the farm-to-retail spread.

Marketing charges are largely independent of farm prices, as reflected in instances when retail prices have held firm or risen in the face of a decline in farm prices. Over the years, there has been a persistent tendency for such charges to rise, regardless of whether farm prices were rising or falling. Thus, increases in marketing charges can, and often do, exceed the effect of a change in farm prices on retail prices.

Farm-to-Retail Price Spread

The farm-to-retail price spread is the difference between the farm value and the retail price. It represents payments for all assembling, processing, transporting, and retailing charges added to the value of farm products after they leave the farm. Price spreads are sometimes confused with marketing margins. Margins represent the difference between the sales of a given firm and the cost of goods sold. There is often a time lag between receipt and final sale of merchandise involved in the calculation of this figure. Spreads, on the other hand, represent the difference between retail and farm prices of a specific product at a given point in time.

The farm-to-retail price spread is a much larger proportion of food prices than the farm value of commodities and has grown at a greater annual rate than the farm value nearly every year of the past decade. The spread, therefore, has consistently contributed much more to rising food prices than has farm value. Higher costs of labor, packaging, and other marketing inputs push the spread wider nearly every year, reflecting more intense use of these inputs over time. The farm-to-retail spread for the market basket of foods averaged 4.7 percent higher in 1997, the largest rise in the spread since a 6.7-percent increase in 1991. This continued rise in the spread reflected a lower farm value, coupled with a modest rise in retail food prices.

The market basket farm-to-retail price spread attempts to measure charges for performing services connected with a fixed quantity of foods of a constant type and quality. However, the types of services incorporated into food sold in grocery stores have changed over time, a result of new product introductions and greater food preparation, such as boneless meat and poultry products, and fruits and vegetables sold at salad bars. Prices for these new and usually higher value foods are incorporated into the market basket retail price calculations over time, thus changing the type and quality of foods in the market basket. These changes in foods marketed with added services may increase price spreads.

Price spreads increased for every market basket food group in 1997. The largest increases were for eggs, dairy products, and poultry, while the spreads for most other food groups posted more moderate gains. The farm-to-retail price spread for red meats rose 4.3 percent, larger than both the 1996 increase and the 3.7-percent annual average rise of the last 5 years. Tight beef supplies were responsible for raising the farm value for meat products in 1997, while large pork supplies mitigated the extent of the increase. Strong demand for pork products, particularly bacon in restaurants, was responsible for higher retail pork prices. Retail prices were higher for both beef and pork. Retail meat prices rose at a faster pace than farm prices, thereby resulting in a wider spread for red meats. The higher meat spread was mitigated by the Choice beef spread, which averaged 2.1 percent lower, due to a 1.7-percent rise in cattle prices and a 0.2-percent decline in retail prices whose combined effects squeezed the price spread. The farm-to-retail price spread for pork rose at the faster rate of 10.3 percent, following a 6.4-percent rise in 1996. Retail pork prices rose 4.8 percent, despite a 4.1-percent fall in the farm value.

Cereals and bakery products accounted for 21 percent of the farm-to-retail spread of the market basket. The spread for this food category rose 3.7 percent in 1997, while the farm value of ingredients dropped 14.3 percent (table 6). Revised figures from USDA's *Food Consumption, Prices, and Expenditures, 1970-95* (SB-939, August 1997) indicate that cereal consumption increased an average of 2.5 percent per

year during the last decade in response to positive nutritional perceptions, after posting increases of only 0.9 percent per year from 1976 to 1986.

The price spread for poultry rose 8.5 percent in 1997, a considerably faster rate than for 1996. This sharp rise was due to lower farm value and a modest retail price rise that combined to widen the spread. The price spread for eggs jumped 11.3 percent in 1997, slightly more than the fast-paced rise recorded in 1996. Retail egg prices dropped slightly in 1997, and at a much smaller rate than the farm value for eggs.

The average farm-to-retail price spread for dairy products jumped 8.6 percent in 1997, a much greater increase than in 1996. The price spread for dairy products rose the most of any food group in 1997, in contrast with the general trend of the past decade. This increase reflected an 8.6-percent farm value drop, combined with a modest rise in retail dairy prices. The farm-to-retail price spread for a half-gallon of whole milk retailing for \$1.59 was \$1.00 in 1997, up 11 cents from 1996.

The farm-to-retail price spread rose 3.4 percent for fresh fruit in 1997, and 2.3 percent for fresh vegetables. Retail fresh produce prices were primarily affected by changes in farm value during 1997. Retail fresh fruit prices rose 0.9 percent, and were restrained by a 9.7-percent farm value decrease, while retail fresh vegetable prices rose 2.9 percent, reflecting a 4.8-percent farm value increase. However, a 5-year average of price changes reveals that increases in farm-to-retail price spreads had the most significant effect on retail prices. For example, the spread for fresh fruit rose an average of 6.0 percent, but the farm value posted a 2.9-percent increase during 1991-97. Similarly, the spread for fresh vegetables rose an average of 5.7 percent, while the farm value increased an average 0.1 percent per year.

Prices of Marketing Inputs

Increases in farm-to-retail price spreads mainly reflect rising costs that food industry firms face, including wages and salaries of workers and supplies and services that marketing firms buy from other parts of the economy. ERS maintains a food market-

ing cost index (FMCI) for monitoring and analyzing changes in variable operating costs incurred in processing, wholesaling, and retailing foods. The FMCI consists of hourly earnings of workers and price indexes of various marketing inputs, weighted by the share of each input in total operating costs. The FMCI is not a substitute for measures of marketing costs such as farm-to-retail price spreads and the marketing bill (see box, p. 15, for an explanation of these concepts). Farm-to-retail price spreads include nonfarm inputs that are not components of current operating costs, such as profits, depreciation, and long-term interest costs that are not included in the FMCI. The marketing bill allows for changes in product price, mix, quantity, and the quantity of marketing services. With the exception of product price, these factors are fixed in both the FMCI and the farm-to-retail price spread. However, the behavior of the index at least partially indicates changes in operating costs of the food marketing sector.

The largest component of the index (45 percent) is labor costs. Food containers and packaging materials (15 percent), transportation rates (11 percent), and energy costs (8 percent) complete the list of leading cost components of the index. Other cost components include advertising, maintenance and repair services,

insurance, short-term interest, rent, and miscellaneous supplies and services.

In 1997, the FMCI rose 1.7 percent, somewhat more than the 0.6-percent increase of 1996. Labor prices increased 3.2 percent in 1997, but were restrained by declines in the prices of other major marketing inputs. Packaging prices declined 2.3 percent, reflecting lower prices for paper, metal cans, and glass. Energy prices also dropped slightly, reflecting lower prices of electricity and oil, which were offset by a sizeable increase in natural gas prices (table 8).

Because businesses attempt to recover increases in variable costs, the rise in the FMCI partially explains the observed increase in the farm-to-retail price spread and food prices at retail. The smaller rise in the FMCI than the farm-to-retail price spread indicates that other factors are affecting marketing charges. These factors could include lower productivity; rising fixed costs, such as asset depreciation and interest on long-term debt; and higher profits. Weak retail sales growth and consumer price sensitivity have sparked food industry efforts to improve efficiency and minimize costs. Efforts have been made to improve labor use, conserve energy, and increase the use of technology for inventory management and other tasks.

Price Spreads for Selected Foods

Red Meats

Beef supplies and consumption were down slightly in 1997 after increasing each year since 1993 while pork consumption has decreased each year since 1994. Pork supplies did, however, increase during the fourth quarter of 1997 and increased substantially in 1998. The retail price of beef decreased slightly while the farm price increased in 1997, resulting in a decrease in the farm-to-retail price spread for beef in 1997. The highest nominal spread for beef was in 1995. Retail pork prices increased in 1997 to a record nominal high, while the farm price decreased, resulting in a record high farm-to-retail pork spread on a nominal basis.

Choice Beef

Retail Choice weighted-average beef prices in 1997 were \$2.80 per retail pound, nearly the same as in 1996, staying well below the nominal record level price of \$2.93 in 1993 (table 9). Prices at both retail and farm levels were relatively stable throughout the year. Prices of individual cuts ranged from an average of \$1.40 per pound for ground beef for 1997 to nearly \$6.00 per pound for the most expensive steaks.

Farm value of beef increased 2 cents in 1997 from 1996 levels. The farm value share increased to 49 percent of the retail price of beef in 1997 from 48 percent in 1996. The farm value share has trended down over the years (table 9). The highest farm value on a nominal basis was in 1990, 31 cents above 1997. Farm value is computed using the USDA Agricultural Marketing Service's five-region direct market price series for live slaughter steers, 65- to 80-percent Choice. Prices per pound of slaughter steers are multiplied times 2.4 pounds, the quantity of live animal required to sell 1 pound of Choice beef at retail. We then estimate the value of byproducts, principally the hide, obtained from the slaughtered animal. We subtract this byproduct value to obtain the net farm value of the meat alone.

The farm-to-retail price spread for Choice beef has decreased the last two years to \$1.42 in 1997 from

the record high of \$1.46 per pound in 1995. The spread varied from a high of \$1.48 in January 1997 with a low of \$1.36 in March 1997 and was \$1.44 in December. The price spread for beef on a nominal basis has increased over time, but at slightly less than the rate of inflation since 1980.

The farm-to-retail price spread pays for various marketing functions, most of which tend to increase in cost over time. The estimated cost of slaughtering and boxing beef was 19.4 cents per pound in 1996 and 17.1 cents in 1997 (table 10). Transportation of beef from the packer to the retailer cost 3.8 cents per retail pound in 1996 and 3.9 cents in 1997. Warehousing and store delivery were estimated to cost 12.9 cents per pound at retail in 1997, based on data in the *1992 Census of Wholesale Trade*, published by the U.S. Department of Commerce, which indicated that warehousing and delivery costs represented 5.8 percent of gross sales by meat wholesalers.

Cutting and merchandising of Choice beef cost \$1.08 per pound in 1997. The cost has trended up over time but decreased slightly in 1997 from 1996. This cutting and merchandising cost represents the difference between the total of other functions and the retail price. Data for 1991-97 indicate an upward trend in the cost of cutting and merchandising beef, reflecting the effects of inflation on marketing costs. In contrast, warehousing and store delivery costs have been lower in recent years than in 1991, while slaughtering and boxing costs have varied widely.

Pork

Retail pork prices averaged \$1.97 per pound during 1992-95, down from 1990-91 levels of \$2.12, but increased to record levels of \$2.21 in 1996 and \$2.32 in 1997 on a nominal basis. Even so, prices in 1997 were only 37 percent above prices in 1982-84 (table 9), smaller than the 57-percent increase in overall food prices between 1982-84 and 1997. Per capita pork consumption on a retail-weight basis decreased in 1996 and 1997 (which fits with the price increase noted above), but began to increase in the last quarter of 1997 and continued into 1998. The net farm value

also increased in 1996 and 1997. Meanwhile, the farm value share decreased from 38 percent in 1996 to 35 percent in 1997.

Farm value is computed from the average price of barrows-and-gilts at five midwestern markets. This average price is then multiplied by 1.7 pounds, the quantity of live animal needed to sell 1 pound of pork at retail. A value for lard and other byproducts is then subtracted to obtain the net farm value.

Retail price changes lag farm price changes, particularly when farm prices decrease. These lags result in spread increases when farm prices decrease, as they did in the last half of 1997. The farm-to-retail price spread for pork increased 14 cents to a record-high \$1.50 for 1997 (table 9), eclipsing the previous record set in 1996. This increase reflected the effects of an increase in retail price combined with a net decline in farm value. The farm-to-wholesale component of the total spread in 1997 (36 cents) was an increase, but not to a record high. The wholesale-to-retail spread increased in 1997 to a record high \$1.14 per retail pound equivalent on a nominal basis.

The slaughtering and processing component represents charges for slaughtering the hog, cutting the carcass into primals, and includes processing hams, bacon, and other products. We estimate this spread by deducting the farm value and intercity transportation costs from the composite wholesale price of pork. The transportation portion of the price spread for pork between the packer and retail marketing areas has stayed about the same for several years. The warehousing and store delivery spread increased slightly in 1997 (table 10).

Cutting and merchandising costs (\$1.04) made up the largest component of the farm-to-retail price spread for pork in 1997. This figure was 13 cents higher than pork's cutting and merchandising cost in 1991. The cutting and merchandising component is calculated as a residual between the total of all other functions and the retail price. The trend in this component had been fairly flat until the last 2 years.

Other Animal Products

Retail prices rose 2.7 cents per pound for whole, ready-to-cook chicken in 1997, while farm value dropped 2.0 cents (table 11). Thus, the marketing spread widened 4.7 cents in 1997, only the third increase of the 1990's. The spread was stable from 1981 to 1986, averaging 33.5 cents per pound. From 1986 to 1991, the marketing spread trended up to average 44.5 cents per pound in 1991. Since that time, the spread has risen only 2.8 cents to 47.3 cents per pound in 1997. Broiler processing costs have increased little in recent years, reflecting gains in labor productivity that have offset rising labor and other input costs.

Much of the demand for broilers is for further processed products. Broiler producers are cutting chicken into parts, and most producers are further processing chicken into fillets, nuggets, and other value-added products according to buyers' specifications. The processor generally realizes a more favorable gross margin and increased volume from this further processing. Most of these products are served through fast-food and institutional outlets, but considerable volumes of chicken parts are sold through retail stores for home consumption. These further processed products are not included in farm-to-retail price spread computations, but they represent a source of market strength that supported prices in 1997 as per capita consumption of broilers continued to rise at the relatively sharp pace of 2.7 percent per year.

Egg prices dropped 5 cents in 1997, after rising 18 cents in 1996. For 1997, retail shell-egg prices averaged \$1.06 per dozen of grade A, large (table 11). The farm value also declined, dropping 9.2 cents to 59.5 cents. Meanwhile, the price spread between the farm value and the retail price rose 4.4 cents. This rise is consistent with the general upward trend in the price spread for eggs since 1985, and primarily reflects the faster rate of decrease in the farm value, relative to the retail price drop. However, the spread is the primary determinant of retail prices during most years.

The retail price of fluid whole milk rose 2.7 cents per half-gallon in 1997. Since the early 1980's, retail milk prices have tended to rise less than broader measures of consumer prices. The 1997 average retail price for a half-gallon of whole milk was \$1.59, which was 39 percent higher than in 1987 (table 11). This compares with a 41-percent average increase in grocery store food prices.

A 12-percent farm value drop, coupled with a 12-percent expansion in the farm-to-retail price spread, shaped retail milk prices in 1997. The farm-to-retail price spread for fluid milk increased 10.7 cents to \$1.00 in 1997. The spread is 63 percent of the price of a half-gallon of fluid milk, and thus plays a more important role in determining milk prices. Therefore, the retail price of milk rose 1.7 percent in 1997, even though the farm value and price spread rose on an equal, but opposing, percentage basis. Farmers received an average of 58.5 cents for milk equivalent to a half-gallon at retail in 1997, 8.0 cents less than in 1996.

Fruits and Vegetables

The farm-to-retail price spread for fresh fruits and vegetables increased about 2.9 percent in 1997, slower than the average of all foods. The increase that did occur was primarily due to higher spreads for fresh fruits, whose farm value dropped 9.7 percent, the first decline since 1994. Meanwhile, retail prices rose 0.9 percent, thereby producing a wider spread. Vegetable spreads offset the fresh fruit results to produce the slow growth in the aggregate price spread for fresh fruits and vegetables. The farm value of fresh vegetables increased 4.8 percent. Although retail prices for fresh vegetables rose nearly 3 percent, the higher farm value squeezed the spread, resulting in a smaller percentage rise in the price spread.

Produce wholesale-to-retail margins generally exceed the average margin of the typical supermarket, and produce is the most profitable and fastest growing department of the typical store. For example, *Supermarket Business* indicates that the fresh produce margin was 44.1 percent in 1996, considerably

larger than the 30.1-percent average for all foods. The larger margin reflects larger retailing costs associated with increased perishability and the labor required to handle fresh produce. The cost of transportation and refrigeration required to move a product such as peaches is also included in the margin. Retail prices may not necessarily drop proportionately to lower farm prices stemming from a larger crop.

While gross margins alone do not reflect actual profitability, the percentage of storewide gross profit dollars that fresh produce contributed has been much greater than their contribution to store sales would suggest. Produce accounts for 8.7 percent of total sales of the typical supermarket, but yields about 20 percent of net profit dollars, according to a survey by the Produce Marketing Association.

The price spread for processed fruits and vegetables rose 4.2 percent in 1997. The principal item in this food group is frozen concentrated orange juice. The retail price of a 12-ounce can of frozen juice rose 1.6 percent in 1997 to \$1.30 (table 12). This increase mainly reflected a 3.7-percent rise in the price spread. However, the retail price increase was mitigated by a 2.1-percent farm value decline, which reflected an 11-percent increase in the Florida orange crop.

Other Crop Products

The farm-to-retail spread—consisting of wheat-milling, breadbaking, and distribution costs—accounts for nearly all of bread's retail price, which averaged 87 cents per pound in 1997, slightly lower than in 1996 (table 13). This price is the average of monthly prices reported by the U.S. Bureau of Labor Statistics. The farm value of wheat, at 4.7 cents, was 1.2 cents lower in 1997 than in 1996. The farm value represents the payment to farmers for the quantity of wheat (approximately 0.86 pound) required to produce the flour for a 1-pound loaf of bread. The payment is computed from the average farm price for all wheat. A deduction is made for the value of millfeed, a byproduct of milling the wheat. The value of the millfeed ranges from 15 to 20 percent of the value of the wheat, depending on the flour-milling extraction rate, the price of flour, and the price of millfeed.

Other farm-derived ingredients, including lard, soybean oil, high-fructose corn syrup, and soy-whey blend, contributed 0.7 cent to a total farm value of 5.4 cents. The farm value percentage of all ingredients was 6 percent of the retail price in 1997, 2 percentage points less than in 1996.

Because of the stability provided by the price-support program for sugar, retail sugar prices, together with the farm value and price spreads, changed relatively little from year to year. On balance, farm values rose slightly in 1996/97. This relatively stable pattern may not hold in the future as price supports are rescinded, pursuant to the Federal Agriculture Improvement and Reform Act of 1996.

The 1996/97 farm value of a pound of sugar was 14.2 cents, about 1.4 percent higher than that of a year earlier (table 14). The farm value is based on the season-average prices that growers received in the United States for sugarcane and sugar beets, based on raw and refined sugar prices. The farm value accounted for 34 percent of the retail price of sugar in 1996/97, lower than the previous 2 years. The farm-to-retail price spread for sugar was 28 cents in 1996/97, 1 cent higher than the previous year. This spread covers all the functions of transporting sugarcane and sugar beets to processing plants, processing sugarcane and refining raw cane sugar, processing sugar beets, and selling sugar to wholesalers, intercity transportation, and wholesaling and retailing charges.

Food Industry Costs, Profits, and Productivity

Many factors influence how much the food industry charges for its services. Food industry input costs, profits, and productivity largely determine the price of food products when they reach the consumer.

How Food Spending Was Distributed

Food spending for domestically produced food represents the retail market value of food purchased by or for civilian consumers. Both the quantities of food bought and the prices paid affect spending levels. The expenditures reported in this section include spending at grocery stores, restaurants, and institutions. These estimates are smaller than the amount consumers spent for all food because expenditures for imported food and fishery products are excluded. In this section, food expenditures are broken into two components (see box on page 15 for more information):

- The farm value is a measure of the payments farmers received for the raw commodities equivalent to food purchased by consumers at food stores and eating places.
- The marketing bill is the difference in dollars between the farm value and consumer expenditures for food produced on U.S. farms.

Changes in last year's bill can be evaluated by breaking down the bill into costs of principal inputs, such as labor and packaging.

Most of these estimates are based on secondary data, and are not direct measures of consumer expenditures or actual marketing costs. The limited accuracy of the data reported in this section makes them general indicators, and not precise measures, of levels and yearly changes.

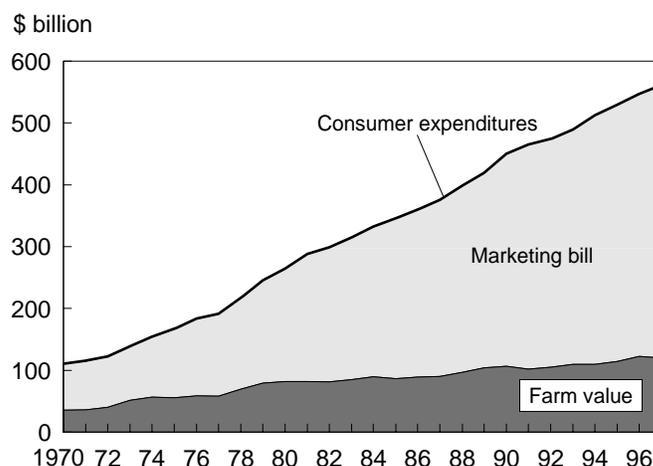
Food Expenditures

Consumers spent \$561 billion for food originating on U.S. farms in 1997 (fig. 3 and table 15). About 60 percent of consumers' food expenditures was spent at retail grocery stores on food for use at home. The

remaining 40 percent represented the retail value of food served in public eating places, hospitals, schools, and other institutions. Market shares have held steady in recent years.

Consumer expenditures for domestic farm foods in 1997 rose about 2.6 percent, a slower pace than in 1996. This slower pace reflects an environment in which the slow rate of inflation has made it difficult for grocery stores to raise prices. Moreover, fierce competition among restaurants has restrained price increases in the foodservice sector. However, spending for food purchased away from home grew more than food purchased at grocery stores, consistent with the general trend. Sales data reported by the U.S. Census Bureau suggest that consumer purchases were relatively flat at both grocery stores and restaurants. Sales at restaurants rose 3.2 percent in 1997 current dollars, but when adjusted for inflation, they were 0.4 percent higher than those in 1996. A similar story holds for grocery stores, where food spending increased 2.0 percent in current dollars, but just 0.3 percent in real dollars. Therefore, consumers purchased only marginally greater quantities of food in 1997 than in 1996.

Figure 3
Distribution of food expenditures
The marketing bill was 79 percent of 1997 food expenditures.



Data for foods of U.S. farm origin purchased by or for consumers for consumption both at home and away from home.

Farm Value

The farm value of food commodities originating on U.S. farms was about \$120 billion in 1997, a \$2-billion decrease from 1996. The farm value share of food commodities dropped 1 percent in 1997, and represented 21 percent of consumer expenditures. The lower farm value reflected lower farm prices of wheat, eggs, pork, and poultry. The largest share of the money farmers received for domestic food sales was for meat products. In 1997, the farm value of meat was about 28 percent of the total value of farm food. The next largest share, 19 percent, was for dairy products. Livestock and dairy farmers garnered about half of the total farm value, but they bought substantial amounts of grain from crop farmers. Fruits and vegetables were the third largest category, accounting for 18 percent of the 1997 farm value.

The farm value is a much smaller part of expenditures for food eaten away from home than for food bought at stores, because the cost of preparing and serving food is a major part of the cost of food eaten away from home.

Marketing Bill

The marketing bill, the difference between what consumers spent for food and the farm value of the food, amounted to \$441 billion in 1976, \$16.6 billion more than in 1996. Of last year's increase in the marketing bill, consumers paid about \$14.4 billion in higher expenditures, and producers received \$2.2 billion less for food commodities.

The marketing bill rose 3.9 percent in 1997, considerably more than 1996's 2.1-percent rise. This increase was the result of a 1.8-percent drop in the farm value, coupled with a modest 2.6-percent increase in consumer food expenditures. These developments contrasted with the situation in 1995 and 1996, when the marketing bill rose at a slower (percentage) pace than the farm value. Higher labor costs accounted for nearly 70 percent of the 1997 increase in the marketing bill, while most other marketing inputs rose at a slower pace than the marketing bill.

Marketing costs contributed less than usual to food expenditure increases in 1996. In 1997, these costs resumed their normal long-term pattern as the most persistent source of rising food expenditures. Consumer expenditures for farm foods have increased \$186 billion since 1987, about \$156 billion of which was marketing charges. Farm value has increased only \$30 billion since 1987.

What the Marketing Bill Bought

The food processing and marketing industry is an important part of the American economy. The \$441 billion the industry received from consumers in 1997 paid the wages and salaries of 13.7 million employees (10.6 percent of total civilian nonagricultural employment) and paid for all the other costs of doing business.

The marketing bill pays for all of the major functions performed by the food industry—processing, wholesaling, transporting, and retailing. Last year's marketing bill increase can be analyzed by looking at the specific cost items that the food industry incurred to perform these functions.

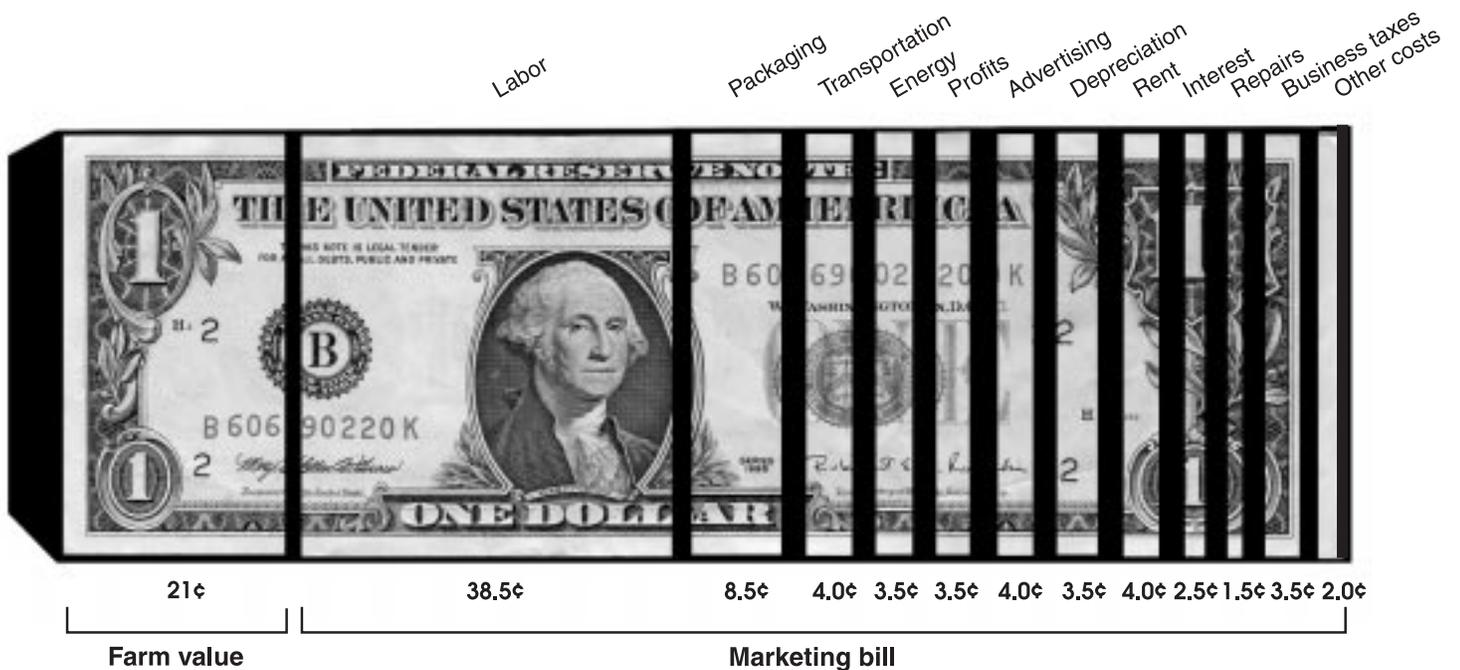
Labor Costs

Labor costs overshadow all other cost components of the marketing bill. Rising labor costs have accounted for about 55 percent of the total increase in the marketing bill during the last decade. Higher labor costs are primarily responsible for the 4.0-percent increase in the marketing bill from 1996 to 1997. Direct labor costs amounted to about \$216.2 billion in 1997, or 38.5 percent of food expenditures (fig. 4 and table 16). Labor costs consist of wages and salaries, employee benefit costs such as group health insurance, estimated earnings of proprietors and family workers, and tips for food service. Direct labor costs do not include the costs of labor engaged in for-hire transporting of food or in manufacturing and distributing supplies that food industry firms use.

Labor costs in the food industry rose about 5.7 percent in 1997, faster than the 5.2-percent average annual rise of the last decade. This faster pace primarily reflected average hourly earnings, which increased at a faster rate for food manufacturing,

Figure 4

What a dollar spent for food paid for in 1997



Economic Research Service, USDA

wholesaling, and restaurant employees in 1997, relative to 1996. These increases were mitigated by slower rises in the cost of benefits and a slower increase in hiring rates. The following discussion identifies developments in each of these components.

Hourly earnings of food manufacturing employees rose 2.6 percent in 1997, slightly faster than the 1996 increase (table 17). Average hourly earnings of food-store employees rose 2.3 percent, compared with 3.1 percent in 1996. Wage increases in these two sectors continue to reflect union contract provisions negotiated during the last few years. Meanwhile, average hourly earnings of wholesale trade employees rose 3.3 percent, slightly higher than the 1996 increase. The average hourly earnings of eating and drinking place employees advanced 4.5 percent in 1997, following a 3.6-percent increase in 1996. This was the fastest pace of any food industry sector, and reflected the Federally legislated increase in the minimum wage to \$5.15. Moreover, restaurants experienced a tight labor market that reflected the very low unemployment rate that was prevalent in the general econ-

omy. The foodservice sector has both the largest workforce and the highest proportion of minimum wage employees of the aggregate food industry.

Food retailing employment rose about 1.8 percent in 1997, a slightly smaller rate of increase than the 1.9-percent rise recorded in 1996. This smaller rate of increase reflects flat retail sales, which have reverberated throughout the food marketing sector. In 1997, 13.7 million people were employed in the food sector beyond the farm. About 25 percent worked for foodstores, 12 percent for food manufacturers, and 7 percent for wholesalers. Eating and drinking places represented the single largest share, 56 percent. These shares are comparable to trends recorded in recent years. Many food retailing employees are part-time workers. Part-time employees lower labor costs in several ways. They are often paid less and receive fewer benefits than full-time employees. Part-timers also cut labor costs by reducing overtime work by full-time employees. Greater use of part-time workers has likely held down the rise in hourly earnings in food retailing. Employment rose 1.6 percent in eating

The Market Basket and Marketing Bill Measure Food Marketing Costs in Different Ways

USDA uses its **market basket** concept to track food price changes in grocery stores and to determine the underlying causes of changes in grocery store prices. The market basket contains the average annual quantities of foods purchased per household in a base period (currently 1982-84). Since the basket relies on a fixed set of quantities, changes in the value of the market basket are strictly the result of changes in price. The market basket consists of three components—the retail price, the farm value, and the farm-to-retail price spread.

The **retail price** component of the market basket is a subset of the Consumer Price Index for Food at Home, adjusted to exclude imported foods, nonalcoholic beverages, and seafood. Food purchased for away-from-home consumption is excluded from this estimate. The retail price index for the market basket has two parts:

The **farm value** represents the prices received by farmers for the quantities of raw farm commodities that must be purchased from farmers in order to sell a unit of food product at retail.

The **farm-to-retail price spread** is the difference between retail price and farm value, and represents

the costs of processing, wholesaling, and retailing foods. The price spread concept should be distinguished from the concept of margins as defined and used in the food trade. The farm-to-retail price spread represents the difference between average prices at two levels of the food marketing system *at a given point in time*. A margin is the difference between sales of a good or goods and the cost of goods sold. Margins allow for pricing inputs *at a different point in time* than the one in which the product is sold.

The **marketing bill** differs from the farm-to-retail price spread in several important ways. The bill is the difference between consumer expenditures for foods produced on U.S. farms and an associated farm value. However, product quantities are allowed to vary from year to year, in contrast to the fixed quantities used to develop market basket estimates. Therefore, changes in the marketing bill may result from changes in price, product mix, product quantity, and the quantity of marketing services. Thus, the bill measures changes in marketing costs, whereas the market basket measures changes in prices. Moreover, the bill includes both the at-home and away-from-home markets.

places and declined marginally in the food manufacturing industry. Altogether, 13.7 million workers were employed in processing and distributing food in 1997, up 1.3 percent from 1996. More than half, or 7.6 million people, were employed in away-from-home eating places. Foodstores employed 3.5 million people, food processors employed 1.7 million people, and food wholesalers employed about 895,000 people.

Wage supplements comprise about 20 percent of total labor costs. However, the cost of medical care had a smaller effect on labor costs, relative to recent years. The 2.8-percent increase in the Consumer Price Index for medical services in 1997 was considerably

smaller than the 6.1-percent annual average increase over the last 10 years. Similarly, the Bureau of Labor Statistics Employment Cost Index (ECI) for private industry benefits rose just 2.1 percent in 1997, less than half the 4.6-percent average annual rise of the last decade. These figures are in marked contrast to the situation over much of the last decade, when health benefits were the number one issue in collective bargaining discussions.

The Employment Cost Index (ECI), a quarterly series published by the Bureau of Labor Statistics, can also be used to track labor cost changes. The ECI has several advantages over average hourly earnings. Changes in wages and salaries are based on wage

rates, rather than on average earnings, thereby eliminating the effects of shifts in the occupational employment mix. Changes in the proportion of full-time and part-time workers in food retailing probably have caused average earnings both to increase at a slower rate than the ECI series and to understate the change in the price of labor. The ECI includes employers' cost of employee benefits and lump-sum payments to workers.

The ECI for foodstores (the only food industry sector for which these data are available) rose 2.4 percent in 1997, compared with 3.1 percent for all private industry (table 18). This rise in worker compensation costs was considerably smaller than the 1996 gain of 3.6 percent. The 1997 compensation increase included a wage and salary gain of 3.1 percent, also smaller than 1996 (3.5 percent). Compensation costs rose less than wages and salaries in 1997 because benefit cost increases were smaller than gains in wage rates for the first time in the history of the ECI series, begun in 1989. Although not reported separately, benefit costs probably decreased about 0.4 percent in 1997. Lower benefits reflect union contracts negotiated for foodstores that have required workers to pay a greater portion of their medical care costs. Thus, benefit costs dropped slightly for foodstores, although they rose modestly for private industry.

Labor Productivity

Productivity measures are calculated for the purpose of relating real physical output to real input. The Bureau of Labor Statistics (BLS) measures overall business productivity in terms of output per hour of all employees. Labor productivity rose a moderate 0.7 percent during 1996 in the Nation's total business sector (excluding farming), reflecting a slightly larger increase in output than in hours worked. By contrast, labor productivity in foodstores (SIC 54) declined 1.2 percent in 1996 (the most recent year for which data are available), consistent with the general downward trend of the last 15 years. Increased use of labor inputs, as reflected in a 1.9-percent rise in foodstore hiring, and a small increase in output, as measured by real sales, likely combined to produce another productivity decline in 1997. Output per unit of labor among supermarkets exhibited a consistent downward trend between 1985 and 1996. However, it

should be noted that the CPI for food at-home items has been found to overstate inflation by 1 to 1.9 percent per year (see "Consumer Price Index Overstates Food-Price Inflation," by James MacDonald, *Food Review*, September-December 1995). Therefore, real supermarket output, calculated by using the CPI to deflate retail sales, would be understated, as would the resulting productivity figure for supermarkets. In short, productivity may be higher than the BLS figures suggest.

Labor productivity in food manufacturing industries has risen moderately over the years. The average annual increase in output per unit of labor in nine food manufacturing industry groups ranged from -0.7 to 3.5 percent over 1980-96 (table 19). In most instances, higher productivity resulted from increased output and a small decline in hours worked. The reverse situation held for those industries that experienced lower productivity. Labor productivity among food manufacturers increased most in beverages, dairy products, and preserved fruits and vegetables. Meanwhile, labor productivity declined in the meat products and bakery sectors during this period. Productivity has grown erratically for most industries, partly because of fluctuating output and business conditions. Productivity dropped in 1996 after a 1995 rise for most food manufacturing sectors.

Productivity among eating and drinking places dropped 0.5 percent in 1996, in contrast to generally higher productivity levels since the mid-1980's. Productivity declined because hours worked rose about 2.7 percent, while output was down 0.6 percent.

Packaging Costs

Packaging is the second largest component of the marketing bill, accounting for 8.5 percent of the food dollar. Costs of these materials increased 2.1 percent in 1997, well below the 5 percent average annual increase of the last decade. The prices of most major packaging materials declined in 1997. The aggregate price of packaging materials dropped 2.4 percent in 1997, following 1996's sharp 3.8-percent decline. Aggregate packaging cost increases were mainly due to greater use of shipping boxes, food containers, and plastic materials.

Paperboard boxes and containers are the largest packaging cost. The food industry spent approximately \$19.5 billion, or about 40 percent of total packaging expenses, on paper and paperboard products in 1997. Fiber (cardboard) boxes, the primary container used to ship nearly all processed foods, represented about 33 percent of total packaging expenses. Sanitary food containers, including those for such products as fluid milk, margarine and butter, ice cream, and frozen food, also totaled almost 33 percent of paperboard packaging expenses. The third largest paperboard item was folding boxes used for such dry foods as cereal and perishable bakery products. Prices of paperboard shipping boxes and other paper products fell 6.0 percent in 1997 for a second consecutive annual decrease, while the price of paper bags and sacks rose 0.9 percent. Excess production capacity continued to plague the paperboard industry in 1997, a trend that carried over from 1996.

Metal containers are the second largest packaging expense, making up about 20 percent of total food packaging costs. Prices of metal cans fell 1.2 percent in the face of excess beverage can capacity due to increased demand for competing plastic containers. The demand for competing plastic containers continued to weaken the market for metal cans, reducing their prices for the fourth consecutive year. Cans have become less important for food packaging because of the increased popularity of glass and plastic bottles, the year-round availability of fresh fruits and vegetables, and the increased use of microwavable dishes for frozen foods. The price of glass containers, which are largely used to enhance product image, was nearly 3 percent lower in 1997.

Costs of plastic containers and wrapping materials account for nearly 20 percent of food packaging costs. Plastic is an important source of trays for meat and produce; bottles for milk and fruit juices; jars and tubs for cottage cheese and other dairy products; and flexible wrapping materials, such as polyethylene film for protective covering of baked goods, meat, and produce. The price of plastic held steady in 1997. Lower prices for plastic packaging offset higher demand for these products, which are oil derivatives. Demand for packaging products prevented sales volume from falling as fast as packaging prices.

Transportation Rates and Costs

Intercity truck and rail transportation for farm foods amounted to \$23.6 billion in 1997, or about 4 percent of retail food expenditures, consistent with the trend of recent years. Transportation costs rose at a slightly faster pace than in 1996, mainly due to higher trucking rates, which rose 2.9 percent in 1997, higher than in 1996.

The new BLS index of agricultural trucking rates showed an increase of 2.9 percent. Some meat and fresh fruits and vegetables are shipped by rail in truck trailers on flat cars (TOFC), but information on charges for these products is not available. TOFC shipments of fresh fruits and vegetables held steady in 1997, but still accounted for about 2.4 percent of all produce shipped. The quantity of produce shipped by railcars was slightly higher in 1997, but the market share accounted for by this transportation mode, 3.7 percent, was somewhat smaller than in 1997.

Approximately 94 percent of fresh produce was transported by truck in 1997. Operating costs of trucks hauling produce, as reported by USDA's Agricultural Marketing Service, increased 0.7 percent in 1997 (table 20). Labor costs incurred by truckers increased 1.2 percent and accounted for nearly 40 percent of total transportation labor costs. Fuel costs, which accounted for 21 percent of trucking costs, declined 1.8 percent, due to lower crude oil prices resulting from mild weather and petroleum production that exceeded demand. Truckers also incurred higher interest expenses, which jumped 7.5 percent. A variety of miscellaneous costs incurred by truckers (depreciation, licenses, insurance, overhead, and maintenance) rose an average of 1.4 percent in 1997. Meanwhile, railroad rates were only 0.5 percent higher. Most foods shipped by railroad are canned and bottled products.

Energy Costs

Last year's energy bill for food marketing costs came to about \$203 billion, making up about 3.5 percent of retail food expenditures. Energy costs rose 2.0 percent last year, roughly half the rate of increase for the marketing bill. The energy bill included only the costs of electricity, natural gas, and other fuels used in food processing, wholesaling, retailing, and food-

service establishments. Transportation fuel costs, except for those incurred for food wholesaling, were excluded.

Energy costs rose despite a 0.4-percent drop in the price of electricity. Higher energy costs were largely the result of a 6.8-percent rise in the price of natural gas and increased volume of marketing services. In contrast to transportation, lower fuel costs did not greatly affect direct energy costs because electricity supplies most of the food industry's energy requirements. Natural gas and electricity prices exert the greatest effect on the energy costs of processing and retailing food, with oil prices having little effect.

Public eating places and other foodservice facilities incur nearly 40 percent of the fuel and electricity costs of food marketing. Their energy expenses have risen because of large growth in the away-from-home food market. Also, away-from-home food service has the highest energy costs per dollar of sales, about 3.1 percent. About 85 percent of this cost comes from the use of electric power. Energy costs of food retailers are the second largest at about 33 percent of the energy bill, and consist mainly of electricity. The food processing sector is responsible for another 26 percent of the total energy bill, while foodservice accounts for 22 percent. Wholesaling comprises the remaining 19 percent of food sector energy costs. Electric power is responsible for 56 percent of food manufacturing energy costs, with natural gas making up the remaining 44 percent.

Other Costs Added Up

The major costs discussed above total about 69 percent of the 1997 food marketing bill. The rest of the bill included a variety of miscellaneous costs, about 24 percent of the total, and profits, about 4 percent (table 16). Miscellaneous costs totaled \$104 billion. The largest of these costs (advertising, business taxes, net interest, depreciation, rent, and repairs) are estimated using data from trade publications, the Internal Revenue Service, and the U.S. Bureau of the Census.

Advertising. Advertising expenses rose 1.9 percent in 1997, and account for about 4 percent of food expenditures. The largest increases occurred in food

service (3.5 percent) and food retailing (2.0 percent). Meanwhile, advertising expenditures by food wholesalers rose 1.7 percent, and processors increased their advertising expenditures by 1.1 percent. Food manufacturing accounts for 51 percent of total food industry advertising expenditures, with food service contributing another 27 percent, and food retailing 15 percent. A mix of print and broadcast media promote food industry products.

Business Taxes and Interest. Business taxes are the second largest of the miscellaneous costs, comprising 3.5 percent of consumer food expenditures. Business taxes include property, State, unemployment insurance, and Social Security taxes, but exclude Federal income taxes. Business taxes rose 2.5 percent in 1997.

Net interest, while accounting for only 2.5 percent of total consumer expenditures, had the second fastest rate of increase, jumping 60 percent over the last decade. Most of the increase occurred in the food-store sector and reflected higher debt acquired due to merger and acquisition activity, particularly leveraged buyouts. The 7.4-percent increase in 1997 interest expense occurred as a result of increased debt stemming from long- and short-term loans booked during years of rising interest rates (such as 1995), which are included in the estimates.

Depreciation, Rent, and Repairs. Depreciation, rent, and repairs together totaled \$49.5 billion in 1997, accounting for 9 percent of the consumer food dollar. The foodservice sector incurred about 42 percent of these costs, while foodstores made up 27 percent. Manufacturing and wholesaling firms together accounted for the remaining 31 percent. Foodservice establishments incurred high property rental expenses, and thus had the highest total of any food sector. Indeed, net rent expenses grew 93 percent over the last decade, the fastest growth rate of the miscellaneous costs. Rent grew at especially fast rates for processing (120 percent) and foodservice firms (112 percent).

Sufficient data are not available for estimating many individual smaller costs, such as insurance, for-hire local truck transportation, professional services, and food service in schools and institutions. Together,

these costs account for about 0.5 percent of the food dollar.

Corporate Profits. Food industry firms earned approximately \$18 billion in pre-tax profits from marketing U.S. farm foods in 1997, a 4.2-percent decrease from 1996. About 3.5 cents of every food dollar went to pre-tax corporate profits in 1997. Retail foodstore profits rose 6.5 percent in 1997, despite marginal sales increases, by attracting customers to cheaper generic brands and nonfood services such as in-store pharmacies, greeting cards, health and beauty care, and video rentals. These items are especially appealing to customers seeking one-stop shopping convenience. *Supermarket Business* reports that these products account for as much as 20 percent of total store profits, while comprising only 10 percent of store volume. The stronger economy, technological improvements, and increased sales of store-label products also stimulated higher 1997 retail profits. Retailers continued to make greater use of technology (particularly checkout scanning, satellite communications, and more sophisticated merchandising and labor scheduling systems) to increase efficiency and control labor costs, their largest operating expense. Thus, the factors responsible for higher 1996 retail profits also played important roles in 1997. However, profits were held down by a variety of conditions in the other food sectors. For example, food processors' profits declined 14 percent from 1996 levels, largely due to accounting losses stemming from restructuring activities at several large processing firms. Moreover, processors were unable to raise prices due to the slow inflationary environment. With food manufacturers able to hold down costs with gains in labor productivity, profits rose for many in 1997. However, manufacturers' profits continue to be tempered by increased consumer purchases of less costly store-label foods, which cut into sales and profits of manufacturers' brand-name foods.

Meanwhile, competition among restaurants, particularly fast-food outlets, has restrained profit levels among eating and drinking places. Moreover, the slow inflationary pace in the general economy has made it difficult for restaurants to raise prices. In

addition, the rise in the minimum wage contributed to higher labor costs in this sector, where a large share of employees are paid minimum wage. Foodservice continues to capture an expanding share of total food expenditures. However, the demand for convenience is also being seen at grocery stores, where prepared foods are also generating profits and accounting for higher percentages of supermarket sales. The distinction between the at-home and away-from-home markets has become increasingly blurred as these two segments compete for the consumer's food dollar.

The profit estimate was developed by a two-step procedure. First, profit ratios per dollar of sales were derived from IRS corporate income tax returns for each food sector. This estimate was then multiplied by the annual sales of food retailers, wholesalers, manufacturers, and public eating places.

Two financial ratios provide further insight into the 1997 food industry profit picture: profit margin and return on stockholder equity. The profit margin is net income as a percentage of sales, and measures the portion of the sales dollar left after paying all expenses, including the cost of food products. The profit margin helps explain the importance of profits compared with costs that, together, make up the consumer food dollar. Return on stockholder equity, which reflects the earning power of the owner's investment, shows food industry profitability compared with that of other industries.

The after-tax profit margin of food and tobacco manufacturers averaged 5.6 percent of sales in 1997, the same as 1996, based on data from the U.S. Bureau of the Census. Returns on stockholders' equity increased to 19.8 percent in 1997 (table 21). Returns on equity for the food and tobacco industry were thus higher than the 17.0-percent average for all manufacturers of nondurable products. Profit margins of retail food chains were much narrower than those of food manufacturers, and averaged 1.6 percent of sales in 1997, the same as a year earlier. Returns on equity were also slightly lower for retail food chains (17.4 percent) than manufacturers in 1997, down by 2.0 percentage points.

Food Spending in Relation to Income

Food spending has increased considerably over the years, but the increase has not matched the gain in disposable income (the amount of money families and individuals have available to spend or save). As a result, the percentage of income spent for food has declined (table 22). In 1929, the first year data of this type were recorded, 23.9 percent of disposable income was spent for food. This percentage has since tapered off fractionally almost every year. By 1970, the percentage had dropped to 13.8 percent. During the 1970's, the percentage held fairly constant because of high food-price inflation. By 1980, food spending was still 13.4 percent of disposable income, but has since declined steadily to reach a low of 10.7 percent in 1997 (fig. 5).

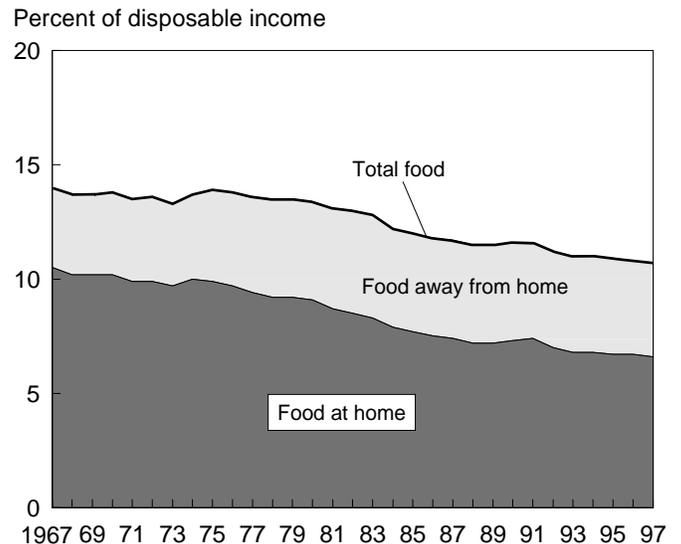
The decline in the percentage of income spent for food is the result of the inelastic nature of the aggregate demand for food: as income rises, the proportion of income spent for food declines, and the proportion spent for nonfood items increases. A decline in the percentage of income spent for food generally reflects a highly developed economy in which there is money to spend for personal services and other discretionary items. Some of these additional services ordinarily are purchased along with food, which largely explains why the percentage of income spent for food away from home has not fallen as has the percentage of income spent for food at home. It should be noted that the food-at-home market itself now includes a larger service component through packaging and foods that require little preparation by consumers (but greater use of labor inputs), such as frozen dinners.

ERS developed the estimates of food expenditures in table 22, which differ from the U.S. Department of Commerce estimates of personal consumption expenditures (PCE). The trend in food expenditures is similar, but the ERS series shows a lower level of spending for food than does the PCE series, particularly for food purchased at grocery stores and other retail outlets for consumption at home. The ERS estimates of at-home expenditures are lower partly because they exclude pet food, ice, and prepared feeds, which are included in PCE estimates. ERS estimates also deduct more from grocery store sales for nonfoods, such as drugs and household supplies, in estimating food purchases for at-home consumption.

Figure 5

Share of income spent for food

Food spending by families and individuals has declined to 10.7 percent of disposable personal income in the last 30 years.



Food Spending as a Proportion of Income

An annual consumer expenditure survey by the U.S. Department of Labor reveals comprehensive information about how much average households spend for food and other products and services. The findings for 1996 show that annual food expenditures averaged \$4,913 (table 23).

Spending varies for households of differing size, income, and other characteristics. For example, married couples with children, where the oldest child is 6-17 years old, spent an average of \$6,992 for food in 1995, or about \$134 per week. This finding is in sharp contrast to a household with one parent that has at least one child under 18 years of age. In this latter category, food spending averaged \$3,930 in 1996, or about \$76 per week. Among major food categories, spending was highest for bakery products, beef, and dairy products.

The proportion of income spent for food varies widely by household income. For example, households

with incomes of \$5,000-\$9,999, before taxes, spent about 34 percent of their after-tax income for food. Households with before-tax income of \$15,000-\$19,999 spent 21 percent of their after-tax income for food. Households with incomes of \$30,000-\$39,999 spent 15 percent of after-tax income for food. The average for all households was 14.1 percent. This figure, based on the consumer survey data, is higher than the estimates using total food expenditures and disposable personal income. Several factors account for this difference. First, households may not have fully accounted for income from all sources. Moreover, household income does not include pension and welfare funds, such as insurance premiums paid by employers. Finally, the reported income is capped to protect the privacy of some survey households. All of these factors tend to cause an upward bias in the estimated percentage of income spent for food.

Special Article

Historical Changes in CPI-Food Weights

Gerald E. Schluter¹

The Consumer Price Index (CPI) for food is probably the most widely used measure of changes in food prices. To the shopper in the neighborhood supermarket, with its abundant array of different foods and different brands, the analytical value of representing the prices and quantities of all these foods with one index number may seem surprising. Yet representing prices and quantities by index numbers is an indispensable tool not only of applied economic analysis, but of informed policy analysis as well. For example, a reliable estimate of the change in overall food prices allows both economists and policy analysts to split estimates of the changes in consumer food spending into two components:

- 1) Changes in actual consumption of food and food-related services, and
- 2) Changes in prices paid for food and food-related services.

Presumably, the change in actual consumption of food and food-related services has changed the level of consumer well-being. Presumably, except for their effect on the consumers' budget constraint, changes in prices paid for food and food-related services have not affected the level of consumer well-being.

The supermarket shopper may be apprehensive about one number representing the prices of all foods. The advantage of index numbers is that they summarize, in one number, information that is contained in an array of numbers—in this case, prices for food items. Analysts who construct the CPI index numbers do so by choosing representative consumer items to represent various classes of consumer spending. The prices of these representative consumer items are

weighted by their shares in consumer spending. This article reviews annual changes in these weights for CPI-Food since 1980.

A review of changing weights is not a simple evenly evolving story. The CPI weights are based on changing consumer spending patterns and thus are subject to periodic revisions. Butter, as a representative food commodity, illustrates the underlying dynamics of maintaining meaningful weights. In 1960, when per capita butter consumption was 7.5 pounds, butter was one of five unique commodities representing “Dairy Products” with a weight of 0.4 in the CPI-All items index. By 1980, butter had lost its unique commodity status as per capita butter consumption had fallen to 4.5 pounds. Butter then became a representative commodity within the processed dairy products group, with a weight of 0.083 in the overall CPI for all urban consumers (CPI-U). With the 1987 change to the item structure (which introduced 1982-84 expenditure weights) and per capita butter consumption stable, butter remained in the processed dairy products group, but was included in a new group, “other dairy products, including butter.” The group had a weight of 0.123 in 1986 (the first revision year), but butter did not have an individual weight. The introduction of blended butter-margarine products made it impossible to separate dairy fat and vegetable fat products in consumer spending. Butter, therefore, was moved from “other dairy products, including butter” to a new “other food at home” category under the “fats and oils” subcategory in the “butter and margarine” group. With the 1998 change to the item structure (and the introduction of 1993-95 expenditure weights), the group had a weight of 0.091 in 1997 (the first revision year). Again, butter did not have an individual weight.

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CPI-Food in CPI-U

As an economy's per capita income grows, its consumers normally spend a smaller share on essentials such as food. This expected behavior appears in the CPI-Food weights and is reflected in a downward trend for the CPI-Food weights as a percentage of the CPI-U index. The share declined from 28.5 percent in 1960 to 21.99 percent in 1970. The index did not differentiate a Food and Beverage share for alcoholic beverages from 1960 to 1970. Therefore, it is unclear if these estimates are comparable to the 18.309 percent share for Food and Beverages in 1980 or the 17.322 percent share for Food in 1980. By 1990, the share had fallen to 17.706 percent for Food and Beverages (including alcoholic beverages) and 16.188 percent for Food. The latest estimates continue this trend, with 16.310 percent for Food and Beverages and 15.326 percent for Food.

CPI-Food-at-Home Versus CPI-Food-Away-From-Home

The effects of rising affluence are not the only factors responsible for decreasing the share of consumer spending on food. The rise in two-income households, the share of women in the workforce, and time constraints associated with modern lifestyles also have changed the nature of consumer spending on food. The CPI-Food comprised 28.5 percent of the total 1960 CPI and was split 23.6 percent (82.8 percent of total food) for food at home and 4.9 percent (17.2 percent of total food) for food away from home. Since then, this mix has steadily changed so that by 1997 the CPI for Food accounted for 15.326 percent of the total CPI, and was split 9.646 percent for food at home (62.9 percent of total food) and 5.680 percent (37.1 percent of total food) for food away from home. From 1960 to 1997, the weight for CPI-Food-Away-from-Home slowly increased. All the adjustment for the lower food share of consumer spending was absorbed by the CPI-Food-at-Home category.

Broad Expenditure Categories of CPI-Food-at-Home

Before the 1998 revisions, the CPI-Food-at-Home index was a weighted average of five broad component groups:

- 1) Cereals and bakery products,
- 2) Meats, poultry, fish, and eggs,
- 3) Dairy products,
- 4) Fruits and vegetables, and
- 5) Other food at home.

This section will discuss trends through 1997 for the first two groups and through 1996 for the last three groups. With the 1998 revision to the item structure (which introduced 1993-95 expenditure weights), the last three groups changed. The previously discussed revisions involving butter changed the dairy products and other food at home groups. In addition, BLS defined a new broad group, nonalcoholic beverages and beverage materials, that includes nonalcoholic beverages from group 5 (other food at home) and juices from group 4 (fruits and vegetables).

Cereals and Bakery Products

The share of consumers' at-home food spending and therefore the weights representing cereals and bakery products have increased from 1.507 to 1.561 percent since 1980. While bakery products are the dominant representative commodity group, much of the growth has been in cereals.

Meats, Poultry, Fish, and Eggs

The share of consumers' at-home food spending and, therefore, the weights representing meats, poultry, fish, and eggs have decreased since 1980 (table 24). While meats dominate this group, their weights have fallen steadily since 1980 and at a faster pace than the CPI-Food-at-Home weights. Only pork has maintained its share compared with the CPI-Food-at-Home index. Poultry has been the growth commodity within this group, its weight within CPI-U increasing 13 percent and its share within CPI-Food-at-Home increasing 35 percent. The range of changes in weights for fish and eggs combined elements of the changes noted for the meats and poultry categories. Their weights within CPI-U decreased 4 and 8 percent, respectively, while their share within CPI-Food-at-Home increased 14 and 9 percent.

Dairy Products

The share of consumers' at-home food spending and, therefore, the weights representing dairy products have decreased since 1980. While the components of this group were not consistent enough to examine trends at a more detailed level, this group's weights within CPI-U have fallen 22 percent since 1980. Moreover, dairy weights have fallen faster than the CPI-Food-at-Home weights, with a 7-percent decrease in its share within CPI-Food-at-Home.

Fruits and Vegetables

The share of consumers' at-home food spending and, therefore, the weights representing fruits and vegetables have increased since 1980. Much of this growth has been in fresh fruits and vegetables. The fresh fruit weight within CPI-U was 88 percent higher in 1996 than in 1980, and the fresh vegetable weight was 17 percent higher. Through 1996, the weights for processed fruits fell 9 percent and were 32 percent lower for processed vegetables. The 1998 revisions eliminated separate categories for processed fruits and processed vegetables. Fresh fruits' share within CPI-Food-at-Home more than doubled to 8 percent, while fresh vegetables' share grew 40 percent. Despite the 9-percent drop in processed fruits' weight, its share within the falling CPI-Food-at-Home weight grew 8 percent. Processed vegetables' share within the falling CPI-Food-at-Home weight dropped 19 percent.

Other Food at Home

The share of consumers' at-home food spending and, therefore, the weights representing other food at home decreased from 1980 to 1996. Of the subcategories comprising other food at home, only the other prepared food (other foods after the 1998 revisions) group had a higher CPI-U weight (3 percent) in 1996 than in 1980. This higher weight resulted in a 24 percent higher share within CPI-Food-at-Home in 1996 than in 1980. Sugar and sweets dropped 34 and 22 percent in its CPI-U weight and CPI-Food-at-Home share, respectively. Fats and oils dropped 26 and 12 percent, and non-alcoholic beverages fell 45 and 34 percent.

Conclusion

The picture that emerges from an examination of recent historical CPI-Food weights is of food accounting for a shrinking share of consumer spending, but more of this spending is for food away from home. Within broad food commodity categories, we find consumers spending larger shares of their food expenditures on fresh fruits and vegetables, cereals and bakery products, poultry, fish and seafood, eggs, processed fruits (through 1996), and other prepared foods. Smaller shares were spent on meats, dairy products, processed vegetables (through 1996), sugar and sweets, fats and oils, and non-alcoholic beverages. These trends reflect broad demographic and economic changes and change in consumer tastes that have reverberated and continue to reverberate through the food marketing sector.

Table 1—Consumer Price Indexes for food and percentage changes from previous years

Year	Food		Food at home		Food away from home	
	Index	Change	Index	Change	Index	Change
	1982-84=100	Percent	1982-84=100	Percent	1982-84=100	Percent
1973	48.2	14.5	49.7	16.4	44.2	7.8
1974	55.1	14.3	57.1	14.9	49.8	12.7
1975	59.8	8.5	61.8	8.2	54.5	9.4
1976	61.6	3.0	63.1	2.1	58.2	6.8
1977	65.5	6.3	66.8	5.9	62.6	7.6
1978	72.0	9.9	73.8	10.5	68.3	9.1
1979	79.9	11.0	81.8	10.8	75.9	11.1
1980	86.8	8.6	88.4	8.1	83.4	9.9
1981	93.6	7.8	94.8	7.2	90.9	9.0
1982	97.4	4.1	98.1	3.5	95.8	5.4
1983	99.4	2.1	99.1	1.0	100.0	4.4
1984	103.2	3.8	102.8	3.7	104.2	4.2
1985	105.6	2.3	104.3	1.5	108.3	3.9
1986	109.0	3.2	107.3	2.9	112.5	3.9
1987	113.5	4.1	111.9	4.3	117.0	4.0
1988	118.2	4.1	116.6	4.2	121.8	4.1
1989	125.1	5.8	124.2	6.5	127.4	4.6
1990	132.4	5.8	132.3	6.5	133.4	4.7
1991	136.3	2.9	135.8	2.6	137.9	3.4
1992	137.9	1.2	136.8	.7	140.7	2.0
1993	140.9	2.2	140.1	2.4	143.2	1.8
1994	144.3	2.4	144.1	2.9	145.7	1.7
1995	148.4	2.9	148.8	3.2	149.0	2.3
1996	153.3	3.3	154.3	3.7	152.7	2.5
1997	157.3	2.6	158.1	2.5	157.0	2.8

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Table 2—Consumer Price Index changes for food eaten at home, by food group

Food group	1992	1993	1994	1995	1996	1997
	<i>Percentage change from year earlier</i>					
Cereal and cereal products	3.9	3.0	4.4	1.4	1.4	0.4
Bakery products	3.9	3.5	4.0	3.4	5.2	2.8
Beef and veal	-.1	3.6	-.8	-.8	-.3	1.7
Pork	-4.7	3.1	1.7	.7	9.9	5.2
Other meat	.2	1.6	2.4	1.5	3.6	2.8
Poultry	-.1	4.2	3.4	1.4	6.2	2.8
Eggs	-10.6	8.1	-2.4	5.4	18.0	-1.5
Fish and seafood	2.3	3.2	4.5	4.8	0.9	2.3
Dairy products	2.7	.7	1.8	0.8	7.0	2.4
Fresh fruit	-5.0	2.5	6.6	8.8	7.1	0.8
Fresh vegetables	2.2	6.6	2.3	12.1	-2.0	2.8
Processed fruit	4.5	-3.9	.6	3.1	5.8	2.5
Processed vegetables	.2	1.6	4.4	1.3	4.0	2.3
Fats and oils	-1.4	.2	2.7	2.8	2.4	0.9
Sugar and sweets	2.9	.2	1.3	1.7	4.5	2.9
Nonalcoholic beverages	.2	.3	7.5	6.9	-2.4	3.7
Other prepared food	2.2	2.6	2.6	2.4	3.4	3.2

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Table 3—Average retail food prices, selected items

Item	Unit	1993	1994	1995	1996	1997	Item	Unit	1993	1994	1995	1996	1997
<i>Dollars</i>						<i>Dollars</i>							
Flour, white	Pound	0.23	0.23	0.25	0.29	.30	Apples, red delicious	Pound	0.83	0.80	0.84	0.93	.91
Rice, white, uncooked	Pound	.51	.55	.53	.55	.57	Bananas	Pound	.44	.46	.49	.49	.49
Spaghetti and macaroni	Pound	.83	.87	.86	.87	.87	Oranges, navel	Pound	.54	.54	.60	.62	.60
Bread, white	Pound	.75	.76	.79	.88	.87	Oranges, Valencia	Pound	.65	.59	.64	.70	.63
Bread, French	Pound	—	1.51	1.53	1.50	1.54	Cherries	Pound	—	—	—	—	—
Cookies, chocolate chip	Pound	2.46	2.54	2.47	2.58	2.61	Grapefruit	Pound	.53	.51	.55	.57	.56
Ground beef	Pound	1.57	1.48	1.37	1.37	1.40	Grapes, Thompson						
Chuck, ground	Pound	1.94	1.86	1.84	1.80	1.84	seedless	Pound	1.47	1.51	1.55	1.69	1.71
Chuck roast, bone-in	Pound	2.10	2.13	2.07	2.06	—	Lemons	Pound	1.08	1.11	1.14	1.11	1.25
Round roast, boneless	Pound	3.06	2.98	2.88	2.80	2.82	Peaches	Pound	.95	.95	1.09	1.18	1.05
Rib roast	Pound	4.84	4.79	4.96	5.38	5.15	Pears, Anjou	Pound	.86	.80	.77	.92	.99
Round steak, boneless	Pound	3.40	3.25	3.21	3.12	3.10	Strawberries	12 oz.	1.12	1.13	1.32	1.17	1.36
Sirloin steak, bone-in	Pound	3.91	3.77	—	—	—	Potatoes, white	Pound	.35	.37	.38	.38	.36
T-bone steak	Pound	5.66	5.83	5.97	5.78	5.90	Lettuce, iceberg	Pound	.66	.61	.80	.65	.69
Bacon, sliced	Pound	1.93	1.99	1.99	2.47	2.68	Tomatoes, field-grown	Pound	1.08	1.09	1.16	1.21	1.29
Chops, center-cut	Pound	3.24	3.22	3.21	3.41	3.48	Beans, green	Pound	—	—	—	—	—
Ham, rump	Pound	1.58	1.64	1.56	1.87	1.94	Cabbage	Pound	.41	.37	.43	.40	.40
Ham, shoulder picnic	Pound	1.16	1.13	1.11	1.23	1.28	Carrots	Pound	.43	.44	.53	.51	.51
Sausage	Pound	2.11	1.98	1.91	2.01	2.15	Celery	Pound	.60	.50	.68	.51	.58
Ham, canned	Pound	—	—	—	—	—	Cucumbers	Pound	.62	.62	.69	.70	.66
Frankfurters	Pound	2.11	2.11	2.03	2.08	2.27	Onions, yellow	Pound	.48	.46	.46	.44	.48
Bologna	Pound	2.38	2.29	2.31	2.33	2.37	Peppers, sweet	Pound	1.15	1.13	1.37	1.28	1.34
Chicken, fresh, whole	Pound	.89	.90	.92	.97	1.00	Orange juice,						
Chicken breast	Pound	2.08	2.06	1.98	2.03	2.04	frozen concentrated	16 oz.	1.63	1.61	1.61	1.70	1.73
Chicken legs	Pound	1.10	1.13	1.16	1.24	1.23	Potatoes, frozen,						
Turkey, frozen	Pound	1.00	1.00	1.02	1.04	1.05	french-fried	Pound	.86	.86	.86	.90	.94
Tuna, canned	Pound	1.97	2.04	1.99	1.97	2.01	Tomatoes, canned	Pound	—	—	—	—	—
Eggs, Grade A, large	Dozen	.91	.86	.93	1.11	1.06	Margarine, tub	Pound	1.18	1.15	1.04	1.00	—
Milk, fresh, whole	½ gal.	1.39	1.44	1.43	1.56	1.59	Margarine, stick	Pound	.80	.82	.83	.81	.83
Milk, low-fat	½ gal.	—	—	—	—	—	Shortening	Pound	.80	.85	.89	.87	.87
Butter	Pound	1.66	1.60	1.61	2.05	2.17	Peanut butter	Pound	1.79	1.85	1.80	1.79	1.78
Ice cream	½ gal.	2.53	2.63	2.65	2.86	2.92	Potato chips	Pound	2.88	2.97	3.01	3.06	3.13
Yogurt	½ pt.	.59	.60	.62	.65	.66	Sugar, white	Pound	.41	.40	.40	.42	.43
Cheese, cheddar	Pound	3.34	3.35	3.39	3.25	3.22	Coffee, roasted	Pound	2.47	3.40	4.02	3.41	4.11
Cheese, processed	Pound	3.09	3.07	3.07	3.34	3.45	Cola, nondiet, cans	16 oz.	.46	—	—	—	—

— = Not available.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Table 4—Indexes of retail price, farm value, and the farm-to-retail price spread, and farm value as a share of the retail price¹

Year	Retail price	Farm value	Farm-to-retail price spread	Farm value share of retail price
	-----	1982-84 = 100	-----	Percent
1952	34	44	28	47
1953	32	41	28	45
1954	32	39	28	43
1955	31	36	29	41
1956	32	36	29	40
1957	33	37	30	40
1958	35	40	32	41
1959	34	37	32	39
1960	34	38	32	39
1961	34	37	33	39
1962	34	38	33	39
1963	34	36	33	38
1964	34	36	34	36
1965	35	40	33	38
1966	37	43	34	39
1967	37	40	35	39
1968	38	42	36	38
1969	40	46	37	39
1970	42	46	40	37
1971	43	46	41	37
1972	45	50	42	38
1973	52	68	45	44
1974	60	73	53	42
1975	64	76	58	40
1976	65	72	61	38
1977	66	72	63	37
1978	74	83	68	38
1979	82	92	77	38
1980	88	97	84	37
1981	95	100	92	36
1982	98	99	98	35
1983	99	97	100	34
1984	103	104	103	35
1985	104	96	108	32
1986	106	95	112	31
1987	112	97	120	30
1988	116	100	125	30
1989	125	107	134	30
1990	134	113	145	30
1991	137	106	154	27
1992	138	103	157	26
1993	142	105	162	26
1994	145	101	169	24
1995	149	103	175	24
1996	156	111	180	25
1997	160	106	189	23

Source: Calculated by ERS based on data from government and private sources.

¹ For a market basket of food bought in foodstores in a base period, currently 1982-84. The retail price index is derived from data from the U.S. Department of Labor, Bureau of Labor Statistics. Farm value is based on prices farmers received for commodities. The spread between the retail price and farm value represents charges for processing and marketing.

Table 5—Retail price, farm value, and farm value share for selected foods

Food	Retail price			Farm value			Farm value share of retail price ¹		
	1995	1996	1997	1995	1996	1997	1995	1996	1997
	-----Dollars-----						-----Percent-----		
Animal products:									
Eggs, Grade A large, 1 doz.	.93	1.11	1.06	0.55	0.69	0.60	59	62	57
Beef, Choice, 1 lb.	2.84	2.80	2.80	1.38	1.35	1.37	49	48	49
Chicken, broiler, 1 lb.	.92	.97	1.00	.49	.55	.53	53	57	53
Milk, ½ gal.	1.43	1.56	1.59	.58	.67	.59	41	43	37
Pork, 1 lb.	1.95	2.21	2.32	.67	.85	.81	34	38	35
Cheese, natural cheddar, 1 lb.	3.39	3.25	3.22	1.16	1.30	1.17	34	40	36
Fruits and vegetables:									
Fresh—									
Lemons, 1 lb.	1.14	1.11	1.25	.30	.27	.31	26	24	25
Apples, red delicious, 1 lb.	.84	.93	.91	.21	.21	.19	25	23	21
Potatoes, 10 lbs.	3.79	3.81	3.56	.80	.80	.60	21	21	17
Oranges, California, 1 lb.	.62	.65	.61	.12	.15	.12	19	23	20
Grapefruit, 1 lb.	.55	.57	.56	.10	.10	.09	18	18	16
Lettuce, 1 lb.	.80	.65	.69	.18	.12	.15	22	18	22
Frozen—									
Orange juice conc., 12 fl. oz.	1.21	1.28	1.30	.48	.47	.46	40	37	35
Broccoli, cut, 1 lb.	1.16	1.19	1.20	.26	.26	.22	22	22	18
Corn, 1 lb.	1.12	1.10	NA	.14	.14	.14	13	13	NA
Green beans, cut, 1 lb.	1.00	1.01	NA	.11	.11	.11	11	11	NA
Canned and bottled—									
Peas, 303 can (17 oz.)	.45	.47	NA	.11	.12	.11	24	26	NA
Corn, 303 can (17 oz.)	.40	.42	.45	.11	.11	.11	28	26	24
Applesauce, 25-oz. jar	1.05	1.07	1.17	.17	.22	.21	16	21	18
Pears, 2-1/2 can	1.22	1.32	1.41	.18	.24	.23	15	18	16
Peaches, cling, 2-1/2 can	1.13	1.23	1.28	.18	.18	.18	16	15	14
Apple juice, 64-oz. bottle	1.44	1.65	NA	.45	.46	.46	31	28	NA
Green beans, cut, 303 can	.39	.42	NA	.06	.06	.06	15	14	NA
Tomatoes, whole, 303 can	.53	.56	.56	.05	.05	.04	9	9	7
Dried—									
Beans, 1 lb.	.71	.74	.77	.25	.23	.19	35	31	25
Raisins, 15-oz. box	1.64	1.68	NA	.42	.50	.50	26	30	NA
Crop products:									
Sugar, 1 lb.	.38	.41	.42	.13	.14	.14	34	34	33
Flour, wheat, 5 lbs.	1.23	1.44	1.51	.43	.48	.38	35	33	25
Shortening, 3 lbs.	2.66	2.61	2.61	.80	.73	.71	30	28	27
Margarine, 1 lb.	.83	.81	.83	.23	.21	.20	28	26	24
Rice, long grain, 1 lb.	.53	.55	.57	.11	.13	.14	21	24	25
Prepared foods:									
Peanut butter, 1 lb.	1.80	1.79	1.78	.48	.48	.48	27	27	27
Pork and beans, 303 can (16 oz.)	.40	.40	.44	.08	.07	.06	20	18	14
Potato chips, regular, 1-lb. bag	1.95	1.95	NA	.35	.33	.28	18	17	NA
Chicken dinner, fried, frozen, 11 oz.	1.17	1.17	NA	.17	.18	.18	15	15	NA
Potatoes, french fried, frozen, 1 lb.	.86	.90	.94	.12	.12	.10	14	13	11
Bread, 1 lb.	.79	.88	.87	.06	.07	.05	8	8	6
Corn flakes, 18-oz. box	1.75	1.89	1.98	.10	.13	.10	6	7	5
Oatmeal regular, 42-oz. box	2.56	2.57	NA	.18	.25	.21	7	10	NA
Corn syrup, 16-oz. bottle	1.63	1.67	NA	.06	.08	.06	4	5	NA

Source: Calculated by ERS based on data from government and private sources.

¹ Computed from unrounded farm values.

NA=Not available.

Table 6—Price changes for market basket of foods¹

Item	1992	1993	1994	1995	1996	1997 ²
	<i>Annual percentage change</i>					
Market basket:						
Retail price	.7	2.5	2.5	2.8	4.4	2.4
Farm value	-2.7	1.6	-3.3	1.4	8.1	-4.4
Farm-to-retail spread	2.1	2.9	4.4	3.3	3.2	4.7
Meat products:						
Retail price	-1.4	3.0	.6	.1	3.4	3.1
Farm value	-5.0	2.6	-10.4	-2.4	7.0	.8
Farm-to-retail spread	1.2	3.4	7.9	1.4	1.5	4.3
Dairy products:						
Retail price	2.7	.7	1.8	.8	7.0	2.4
Farm value	6.4	-2.9	1.5	-2.3	16.3	-8.6
Farm-to-retail spread	.8	2.6	2.0	2.5	2.3	8.6
Poultry:						
Retail price	-.1	4.2	3.4	1.4	6.2	2.8
Farm value	1.5	7.2	2.8	-.8	11.0	-4.4
Farm-to-retail spread	-1.2	2.0	3.9	3.0	2.8	8.5
Eggs:						
Retail price	-10.6	8.1	-2.4	5.4	17.9	-1.5
Farm value	-22.9	14.3	-6.1	9.1	25.9	-13.4
Farm-to-retail spread	3.6	2.8	1.0	2.2	10.5	11.3
Cereal and bakery products:						
Retail price	3.9	3.4	4.9	2.0	3.9	2.1
Farm value	10.3	-2.1	12.1	7.1	14.1	-14.3
Farm-to-retail spread	3.4	3.8	3.5	2.4	3.0	3.7
Fresh fruit:						
Retail price	-5.2	3.3	6.6	8.7	7.1	0.9
Farm value	-29.2	10.1	-11.4	14.1	11.4	-9.7
Farm-to-retail spread	3.8	1.5	11.7	7.4	6.1	3.4
Fresh vegetables:						
Retail price	2.3	6.6	2.3	12.1	-2.0	2.9
Farm value	8.8	5.4	-7.1	10.2	-12.9	4.8
Farm-to-retail spread	.2	7.1	5.5	12.6	1.2	2.3
Processed fruits and vegetables:						
Retail price	2.7	-1.6	2.3	2.2	5.0	2.4
Farm value	5.4	-16.8	5.1	7.1	.8	-4.6
Farm-to-retail spread	1.9	2.9	1.5	1.1	6.2	4.2
Fats and oils:						
Retail price	-1.4	.2	2.7	2.8	2.3	0.9
Farm value	-5.0	15.5	16.8	-3.4	-7.4	-2.6
Farm-to-retail spread	-.6	-3.6	-1.2	4.8	5.5	1.8
Other prepared food:						
Retail price	2.2	2.6	2.6	2.4	3.4	3.2
Farm value	-4.1	6.2	-1.3	3.2	3.7	-6.7
Farm-to-retail spread	3.0	2.1	3.1	3.4	3.4	4.3

Source: Calculated by ERS based on data from government and private sources.

¹ Changes in retail prices are from the Consumer Price Index published by the U.S. Department of Labor, Bureau of Labor Statistics. The farm value is based on prices farmers received for commodities equivalent to food at retail. The spread between the retail price and farm value represents charges for processing and marketing.

² Preliminary.

Table 7—Market basket of food products originating on U.S. farms by food group: Indexes of retail cost, farm value, and farm-to-retail price spread, and farm value share of retail cost¹

Year	Meat products				Poultry				Eggs			
	Retail cost	Farm value	Farm-to-retail spread	Farm value share	Retail cost	Farm value	Farm-to-retail spread	Farm value share	Retail cost	Farm value	Farm-to-retail spread	Farm value share
	-----	1982-84 = 100	-----	Percent	-----	1982-84 = 100	-----	Percent	-----	1982-84 = 100	-----	Percent
1967	37	41	34	56	49	45	54	49	52	48	60	59
1968	38	42	33	54	51	48	54	51	56	54	61	61
1969	42	48	35	56	54	51	57	51	66	69	61	67
1970	43	47	40	53	53	46	61	46	66	64	69	63
1971	43	46	40	52	54	47	60	47	57	50	68	57
1972	48	55	42	56	54	48	60	49	56	50	68	57
1973	60	74	46	60	77	84	68	59	84	90	71	70
1974	61	67	55	54	73	76	69	56	84	89	76	68
1975	66	78	56	57	80	88	71	59	82	84	78	66
1976	66	70	63	51	77	79	75	55	91	97	81	68
1977	65	70	60	53	78	80	74	56	88	87	90	64
1978	77	85	69	54	85	93	76	58	82	83	81	65
1979	90	97	84	52	89	92	86	55	90	93	85	66
1980	93	97	89	51	94	96	92	54	89	88	89	64
1981	96	97	95	49	98	95	101	52	96	99	90	66
1982	101	104	98	52	96	91	101	51	93	91	97	63
1983	99	97	102	49	97	96	98	53	98	99	95	65
1984	100	99	100	50	107	113	101	56	109	110	107	65
1985	99	91	107	47	106	106	107	53	91	86	100	61
1986	102	94	110	47	114	115	113	54	97	92	106	61
1987	110	101	118	47	113	94	134	45	92	77	118	54
1988	112	100	125	45	121	110	133	49	94	77	124	53
1989	117	104	130	45	133	117	151	47	118	108	138	58
1990	129	117	140	46	133	108	161	44	124	108	153	56
1991	133	110	156	42	132	103	165	42	121	101	158	54
1992	131	105	158	41	131	104	163	42	108	78	163	46
1993	135	107	163	40	137	112	166	44	117	89	168	49
1994	135	96	176	36	142	115	173	43	114	84	169	47
1995	136	94	178	35	144	114	178	42	121	91	173	49
1996	140	100	181	36	152	126	183	44	142	115	191	52
1997	144	101	189	36	157	121	198	41	140	99	213	46

See footnotes at end of table.

—Continued

Table 7—Market basket of food products originating on U.S. farms by food group: Indexes of retail cost, farm value, and farm-to-retail price spread, and farm value share of retail cost¹ (cont.)

Year	Dairy products ²				Fats and oils ³				Fresh fruit			
	Retail cost	Farm value	Farm-to-retail spread	Farm value share	Retail cost	Farm value	Farm-to-retail spread	Farm value share	Retail cost	Farm value	Farm-to-retail spread	Farm value share
	----- 1982-84 = 100 -----			Percent	----- 1982-84 = 100 -----			Percent	----- 1982-84 = 100 -----			Percent
1967	40	38	42	47	37	38	37	28	31	37	28	31
1968	41	40	42	47	36	35	36	26	36	48	32	35
1969	42	42	43	48	36	35	36	26	34	40	32	31
1970	45	44	45	48	38	43	37	30	34	37	33	28
1971	46	44	47	47	42	49	39	32	37	42	35	30
1972	47	46	48	48	43	42	43	27	39	44	37	30
1973	51	52	50	50	47	66	40	38	44	56	40	33
1974	60	61	60	49	71	124	52	47	49	55	46	30
1975	62	63	61	50	77	97	69	34	50	58	47	30
1976	67	71	64	52	65	79	60	26	50	54	48	28
1977	69	72	68	50	71	95	62	26	58	65	55	29
1978	74	78	71	51	78	98	70	34	71	87	66	32
1979	83	88	78	52	84	106	75	34	80	89	77	29
1980	91	96	86	52	89	96	87	29	84	84	84	26
1981	97	102	93	51	99	100	98	27	88	87	89	26
1982	99	100	97	49	96	80	102	22	100	106	97	33
1983	100	100	100	48	97	96	98	27	94	80	100	27
1984	101	99	103	47	107	124	100	31	107	114	103	34
1985	103	95	110	44	109	104	111	26	118	111	122	30
1986	103	93	113	43	106	76	118	19	120	104	128	27
1987	106	93	118	42	108	74	120	18	136	114	146	26
1988	108	91	125	40	113	103	117	24	145	117	159	25
1989	116	99	131	41	121	96	131	21	155	109	176	22
1990	127	102	150	39	126	107	133	23	175	128	196	23
1991	125	90	157	35	132	98	144	20	200	173	213	27
1992	129	96	159	36	130	93	143	19	190	122	221	20
1993	129	93	163	35	130	108	138	22	196	135	224	22
1994	132	94	166	34	134	126	137	25	209	119	250	18
1995	133	92	170	33	137	121	143	24	227	136	269	19
1996	142	107	174	36	141	112	151	22	243	152	285	20
1997	146	98	189	32	142	109	154	21	245	137	295	18

Table 7—Market basket of food products originating on U.S. farms by food group: Indexes of retail cost, and farm value, farm-to-retail price spread, and farm value share of retail cost¹ (cont.)

Year	Fresh vegetables ⁴				Processed fruits and vegetables				Bakery and cereal products			
	Retail cost	Farm value	Farm-to-retail spread	Farm value share	Retail cost	Farm value	Farm-to-retail spread	Farm value share	Retail cost	Farm value	Farm-to-retail spread	Farm value share
	-----	1982-84 = 100	-----	Percent	-----	1982-84 = 100	-----	Percent	-----	1982-84 = 100	-----	Percent
1967	33	38	31	32	36	33	37	18	34	54	32	17
1968	35	40	33	33	38	38	38	20	35	52	33	16
1969	36	42	35	33	39	39	38	21	36	52	34	16
1970	39	43	38	32	39	37	40	19	38	56	36	16
1971	40	46	38	33	41	38	42	18	40	57	38	16
1972	43	47	41	32	42	40	42	19	40	60	37	17
1973	53	64	48	35	44	43	44	19	44	90	38	22
1974	58	67	54	34	54	60	53	22	57	130	48	25
1975	55	67	51	35	61	66	60	21	63	106	57	18
1976	58	67	55	33	62	63	62	20	62	86	59	15
1977	65	74	62	33	65	59	66	18	63	72	61	12
1978	70	75	69	30	71	88	67	25	68	83	66	13
1979	73	71	73	28	77	91	74	24	75	95	73	14
1980	79	73	81	27	83	97	79	23	84	111	81	14
1981	94	104	90	32	92	106	89	23	92	110	90	13
1982	94	95	94	34	97	100	97	24	97	96	97	12
1983	98	97	98	34	98	93	100	23	100	101	99	12
1984	108	108	108	34	104	107	103	24	104	103	104	12
1985	104	93	109	31	107	118	104	26	108	94	110	11
1986	108	90	117	28	105	102	106	23	111	76	116	8
1987	122	110	128	31	109	111	108	24	115	71	121	8
1988	129	106	141	28	118	137	112	28	122	93	126	9
1989	143	123	153	29	125	132	123	25	132	102	137	9
1990	151	124	165	28	133	144	129	26	140	91	147	8
1991	154	111	177	24	130	122	133	22	146	85	154	7
1992	158	121	177	26	134	129	135	23	152	94	160	8
1993	168	127	190	26	132	107	139	19	157	92	166	7
1994	172	118	200	23	135	113	141	20	164	103	171	8
1995	193	130	226	23	138	121	143	21	168	110	176	8
1996	189	113	228	20	144	122	152	20	174	126	181	9
1997	195	119	234	21	148	116	158	19	178	108	187	7

Source: Calculated by ERS based on data from government and private sources.

¹ See Table 5 for aggregated market basket data and explanations.² Includes butter.³ Excludes butter and includes peanut butter.⁴ Includes potatoes.

Table 8—Price indexes of food marketing costs¹

Year	Labor—hourly earnings and benefits				Packaging and containers							Transportation services
	Total	Processing	Wholesaling	Retailing	Total	Paper boxes and containers	Metal cans	Paper bags and sacks	Plastic packaging	Glass containers	Metal foil	
<i>1982 = 100</i>												
1968	31.1	32.1	31.8	29.8	35.0	37.6	28.7	38.2	39.2	30.2	47.0	27.5
1969	33.2	34.2	33.9	32.0	36.2	39.0	29.5	39.2	40.0	32.2	49.5	28.3
1970	35.7	36.7	37.3	34.1	37.7	39.7	31.1	40.8	43.0	33.8	49.9	30.8
1971	38.5	39.7	39.4	37.0	38.7	40.2	34.0	41.5	40.9	37.0	49.9	34.6
1972	41.8	40.6	42.9	40.7	40.1	41.4	36.2	43.0	41.5	38.0	49.8	35.7
1973	45.0	45.8	45.9	43.8	42.6	45.2	38.1	46.0	43.2	39.0	49.7	36.4
1974	49.2	49.8	50.0	48.3	54.4	59.7	46.8	54.8	64.8	43.7	53.0	42.1
1975	54.7	55.8	54.4	53.7	63.4	66.8	55.1	61.1	85.4	51.1	54.7	47.7
1976	59.5	60.6	59.0	58.5	67.2	69.1	58.3	64.3	94.1	54.9	59.6	52.4
1977	64.9	65.9	65.0	63.8	70.1	69.2	63.6	66.8	96.8	60.3	65.7	55.3
1978	71.3	72.0	71.4	70.7	74.4	70.5	72.6	70.5	96.1	68.7	74.7	59.4
1979	77.6	78.2	77.7	76.8	83.0	79.3	80.6	79.3	108.5	73.4	82.4	67.7
1980	85.4	85.8	84.6	85.3	95.1	92.0	89.6	89.4	119.3	82.3	86.4	80.0
1981	93.8	93.7	92.4	94.2	102.1	101.3	95.1	97.9	131.3	92.4	95.4	93.2
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	104.1	103.6	106.9	103.3	102.0	98.5	102.9	100.4	113.1	99.1	100.4	100.9
1984	106.7	106.1	110.7	105.3	110.3	103.6	109.3	110.0	136.6	101.4	106.4	105.6
1985	105.9	108.5	111.5	101.2	113.4	106.6	114.7	111.5	137.2	106.8	100.3	106.1
1986	104.9	110.1	112.3	96.8	115.4	105.6	118.3	116.5	137.4	111.9	98.2	105.6
1987	105.4	112.2	114.7	95.1	119.9	113.0	119.1	125.3	140.1	113.0	104.2	103.7
1988	108.1	115.6	118.9	96.6	127.5	120.9	121.6	140.8	152.9	112.1	125.2	108.7
1989	111.5	118.8	123.9	99.6	132.5	127.0	121.9	154.8	156.6	115.2	128.7	109.1
1990	115.5	123.0	127.9	103.3	133.6	127.1	125.1	156.2	153.6	120.1	121.2	110.8
1991	118.4	127.7	132.5	103.9	134.9	125.7	129.4	155.4	155.4	125.4	118.0	113.9
1992	122.1	132.3	136.9	106.7	134.5	127.4	131.5	146.7	155.0	124.9	113.0	114.8
1993	126.1	135.8	142.2	110.3	134.9	126.7	134.1	146.5	154.0	125.6	112.0	114.8
1994	129.4	139.6	145.8	113.2	140.1	132.6	142.7	150.2	156.0	127.3	111.8	117.2
1995	132.8	143.2	149.9	116.1	151.1	153.8	138.9	173.1	165.3	130.3	123.4	117.7
1996	134.1	143.8	154.0	116.9	145.3	142.7	137.0	165.6	163.3	129.5	110.6	115.8
1997	138.4	147.3	160.0	121.1	141.9	134.1	135.0	167.1	163.3	125.8	109.5	115.9

See footnote at end of table.

—Continued

Table 8—Price indexes of food marketing costs¹ (cont).

Year	Adver- tising	Fuel and power			Natu- ral gas	Communi- cations, water, and sewage	Rent	Mainte- nance and repair	Busi- ness servi- ces	Sup- plies	Property taxes and in- surance	Inter- est, short- term	Total market- ing cost index
		Total	Elec- tric	Petro- leum									
1982= 100													
1968	39.4	14.1	24.8	10.1	9.4	54.0	39.5	32.5	37.9	35.3	35.2	49.7	31.0
1969	41.3	14.3	25.1	10.1	9.4	55.1	41.4	35.0	39.7	35.6	38.2	65.9	32.7
1970	42.1	15.0	26.1	10.5	10.5	56.3	43.7	37.6	41.7	36.8	42.1	64.9	34.8
1971	41.8	15.9	28.0	10.9	10.9	59.6	46.0	40.4	44.6	37.6	45.8	43.0	36.8
1972	43.5	16.8	29.9	11.2	11.5	63.1	47.8	42.4	46.3	41.5	49.5	39.8	39.1
1973	45.4	18.9	31.8	13.8	12.8	64.7	49.6	45.1	48.1	39.2	51.1	68.6	41.7
1974	47.8	28.2	40.2	26.9	16.4	67.6	55.2	50.5	53.0	50.2	52.6	82.8	47.8
1975	52.6	33.5	47.6	30.6	21.9	70.6	63.2	56.0	57.6	58.8	58.1	53.2	53.5
1976	58.7	37.5	51.1	33.3	29.0	74.1	66.2	60.3	61.8	62.7	62.8	45.0	58.0
1977	63.9	44.1	57.4	38.0	39.2	76.4	70.0	64.3	65.9	65.3	70.7	47.2	62.6
1978	69.7	47.0	61.7	39.3	43.3	79.0	75.4	69.8	70.4	68.4	76.6	67.2	68.0
1979	75.9	59.3	66.6	56.8	55.0	79.6	81.9	76.8	76.1	77.6	79.7	91.8	75.5
1980	82.5	79.9	79.2	84.0	73.2	82.4	88.9	85.2	83.2	89.7	87.2	103.3	85.6
1981	90.3	94.9	90.6	104.4	83.4	90.4	96.5	93.5	91.7	98.2	94.9	124.2	95.1
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	107.7	100.0	102.9	88.5	116.7	106.9	98.6	104.3	105.3	99.1	105.7	74.8	102.7
1984	115.5	101.0	108.3	87.0	117.4	115.4	98.9	107.8	110.5	99.7	110.9	214.3	106.6
1985	123.1	99.3	111.7	81.2	117.0	120.5	99.5	110.8	116.2	99.6	116.8	67.6	107.4
1986	130.6	83.7	112.8	49.4	110.8	126.5	101.0	113.3	120.6	97.8	123.4	53.8	106.3
1987	138.8	84.6	110.9	55.5	105.9	127.7	99.2	117.7	124.9	99.2	128.9	57.1	107.9
1988	147.6	82.0	111.6	49.6	105.2	129.2	100.4	121.8	134.0	105.7	135.5	64.6	111.5
1989	157.3	87.8	115.5	58.5	108.1	132.5	102.1	126.3	140.2	111.2	141.9	74.0	115.6
1990	166.5	95.2	117.6	73.6	108.1	135.6	105.9	131.3	144.2	111.1	149.1	66.8	119.4
1991	176.9	93.0	125.2	64.2	107.5	140.2	107.0	136.2	153.5	110.4	155.1	49.2	121.9
1992	180.1	92.8	126.6	63.2	107.1	143.0	105.3	139.9	159.5	110.0	160.3	32.0	124.1
1993	187.4	95.3	128.6	63.1	114.4	144.6	103.3	143.1	166.0	111.1	165.5	27.8	127.0
1994	195.2	93.7	127.9	58.9	116.3	148.3	103.5	145.3	171.5	112.8	170.9	41.5	130.2
1995	207.3	89.9	125.9	55.3	110.2	152.6	101.8	149.5	177.2	118.5	176.4	48.8	133.2
1996	223.0	95.1	123.4	65.9	114.8	159.0	101.6	153.7	181.1	117.0	182.1	44.7	135.4
1997	234.3	94.8	122.9	60.9	122.6	162.2	100.5	158.4	184.9	116.8	187.2	46.8	137.7

Source: Calculated by ERS based on data from government and private sources.

¹ Indexes measure changes in employee wages and benefits and in prices of supplies and services used in processing, wholesaling, and retailing U.S. farm food purchased for consumption at home.

Table 9—Choice beef and pork: Retail price, farm value, price spreads, and the farm value share of the retail price

Item	Retail price ¹	Wholesale value ²	Net farm value ³	Price spreads			Farm value share ⁶
				Farm-to-retail	Wholesale-to-retail ⁴	Farm-to-wholesale ⁵	
				<i>Cents per retail pound</i>			<i>Percent</i>
Choice beef:							
1980	233.6	171.1	145.7	87.9	62.5	25.4	62
1981	234.7	164.4	139.1	95.6	70.3	25.3	59
1982	238.4	165.9	141.1	97.3	72.5	24.8	59
1983	234.1	160.1	136.8	97.3	74.0	23.3	58
1984	235.5	162.5	140.7	94.8	73.0	21.8	60
1985	228.6	148.8	127.4	101.2	79.8	21.4	56
1986	226.8	146.5	125.0	101.8	80.3	21.5	55
1987	238.4	160.0	138.7	99.7	78.4	21.3	58
1988	250.3	169.4	148.3	102.0	80.9	21.1	59
1989	265.7	176.8	157.6	108.1	88.9	19.2	59
1990	281.0	189.6	168.4	112.6	91.4	21.2	60
1991	288.3	182.5	160.2	128.1	105.8	22.3	56
1992	284.6	179.6	161.8	122.8	105.0	17.8	57
1993	293.4	182.5	164.1	129.3	110.9	18.4	56
1994	282.9	166.7	145.5	137.4	116.2	21.2	51
1995	284.4	163.9	138.4	146.0	120.5	25.5	49
1996	280.2	158.1	134.9	145.3	122.1	23.2	48
1997	279.5	158.2	137.2	142.3	121.3	21.0	49
Pork:							
1980	139.4	98.0	63.2	76.2	41.4	34.8	45
1981	152.4	106.7	70.3	82.1	45.7	36.4	46
1982	175.4	121.8	88.0	87.4	53.6	33.8	50
1983	169.8	108.9	76.5	93.3	60.9	32.4	45
1984	162.0	110.1	77.4	84.6	51.9	32.7	48
1985	162.0	101.1	71.4	90.6	60.9	29.7	44
1986	178.4	110.9	82.4	96.0	67.5	28.5	46
1987	188.4	113.0	82.7	105.7	75.4	30.3	44
1988	183.4	101.0	69.4	114.0	82.4	31.6	38
1989	182.9	99.2	70.4	112.5	83.7	28.8	38
1990	212.6	118.3	87.2	125.4	94.3	31.1	41
1991	211.9	108.9	78.4	133.5	103.0	30.5	37
1992	198.0	98.9	67.8	130.2	99.1	31.1	34
1993	197.6	102.8	72.5	125.1	94.8	30.3	37
1994	198.0	98.9	62.9	135.1	99.1	36.0	32
1995	194.8	98.8	66.7	128.1	96.0	32.1	34
1996	220.9	117.2	84.6	136.3	103.7	32.6	38
1997	231.5	117.1	81.1	150.4	114.4	36.0	35

Source: Calculated by ERS based on data from government and private sources.

¹ Composite of all cuts.

² For quantity equivalent to 1 retail pound: beef, 1.142 pounds of wholesale cuts; pork, 1.06 pounds of wholesale cuts.

³ For quantity of live animal equivalent to 1 retail pound, minus byproduct allowance: beef, 2.4 pounds; pork, 1.7 pounds.

⁴ Includes retailing, meat fabricating, wholesaling, and intracity transportation.

⁵ Charges for livestock processing and transporting of meat to city where consumed.

⁶ Percentage of retail price.

Table 10—Choice beef and pork: Farm value, retail price, and estimated marketing costs by function

Item	1991	1992	1993	1994	1995	1996	1997
<i>Cents per retail pound</i>							
Beef:							
Farm value	160.2	161.8	164.1	145.5	138.4	134.9	137.2
Slaughtering and boxing carcass	18.5	14.1	14.6	17.4	21.6	19.4	17.1
Intercity transportation	3.8	3.7	3.8	3.8	3.9	3.8	3.9
Warehousing and store delivery	16.7	13.1	13.5	13.0	13.1	12.9	12.9
Cutting and merchandising	89.1	91.9	97.4	103.2	107.4	109.2	108.4
Retail price	288.3	284.6	293.4	282.9	284.4	280.2	279.5
Pork:							
Farm value	78.4	67.8	72.5	62.9	66.7	84.6	81.1
Slaughtering and processing	27.0	27.7	26.9	32.5	28.6	29.2	32.4
Intercity transportation	3.5	3.4	3.4	3.5	3.5	3.4	3.6
Warehousing and store delivery	12.3	9.1	9.1	9.1	9.0	10.2	10.6
Cutting and merchandising	90.7	90.0	85.7	90.0	87.0	93.5	103.8
Retail price	211.9	198.0	197.6	198.0	194.8	220.9	231.5

Source: Calculated by ERS based on data from government and private sources.

Table 11—Broilers, eggs, and fluid milk: Farm value and retail price

	Broilers, ready-to-cook, whole (pound)		Eggs, Grade A, large (dozen)		Fluid whole milk (half gallon)	
	Farm value ¹	Retail price ³	Farm value ¹	Retail price ³	Farm value ²	Retail price ³
	<i>Cents</i>					
1975	37.0	63.2	50.8	77.0	41.2	76.9
1976	32.6	59.7	58.0	84.9	46.2	81.0
1977	33.0	60.1	53.8	82.3	45.1	82.1
1978	36.8	66.5	49.7	78.5	47.0	86.1
1979	36.8	68.0	53.7	85.9	52.2	96.0
1980	39.4	70.9	51.0	84.3	55.8	104.9
1981	39.4	73.2	56.9	89.9	59.5	111.7
1982	37.8	71.4	54.5	86.7	59.2	112.4
1983	41.2	72.5	59.5	89.4	59.5	112.8
1984	46.7	81.0	66.0	100.5	58.2	112.7
1985	42.4	76.3	51.4	80.4	56.1	113.4
1986	49.0	83.5	55.4	87.0	54.2	111.4
1987	40.2	78.5	46.0	78.3	59.0	113.7
1988	48.1	85.4	46.0	79.0	63.6	116.4
1989	50.8	92.7	64.4	99.8	54.0	126.9
1990	46.3	89.9	64.7	101.4	59.7	142.4
1991	43.6	88.1	59.1	98.9	58.2	136.8
1992	44.6	86.9	46.3	86.0	60.7	139.2
1993	48.2	89.0	53.1	91.1	58.2	139.4
1994	49.4	90.1	49.9	86.3	60.7	144.0
1995	48.8	91.7	54.6	92.5	58.2	142.9
1996	54.7	97.3	68.7	110.6	66.5	155.8
1997	52.7	100.0	59.5	105.8	58.5	158.5

Source: Calculated by ERS based on data from government and private sources.

¹ Farm values are derived from U.S. average broiler and market egg prices that USDA's National Agricultural Statistics Service publishes monthly.

² Prices farmers receive are normally quoted for 3.5 percent butterfat at plant of first receipt. This price has been adjusted for transportation from farm to first plant to get the farm price, then adjusted to get the value of milk containing 3.3 percent butterfat, the usual butterfat content at retail. There are approximately 23.3 half-gallons of milk per 100 pounds.

³ Average of Bureau of Labor Statistics monthly prices.

Table 12—Selected fruits and vegetables: Farm value and retail price

	<u>Oranges, California (pound)</u>		<u>Iceberg lettuce (pound)</u>		<u>Orange juice, frozen concentrate (12 fl. oz.)</u>	
	Farm value ¹	Retail price ²	Farm value ¹	Retail price ²	Farm value ¹	Retail price ²
<i>Cents</i>						
1982	17.1	47.6	8.5	56.2	46.3	106.1
1983	5.3	38.7	6.8	55.5	44.0	104.4
1984	17.2	49.9	5.1	50.4	49.0	121.6
1985	12.4	53.4	8.2	52.6	61.9	131.6
1986	8.2	47.6	6.8	53.9	39.6	115.6
1987	10.0	55.0	11.1	59.5	42.5	114.8
1988	11.8	56.4	10.1	60.3	51.9	136.7
1989	11.3	56.1	10.0	60.6	56.0	139.4
1990	11.3	56.6	9.3	59.6	55.4	162.1
1991	33.6	89.2	8.7	61.1	53.1	137.9
1992	10.0	56.9	9.6	57.7	57.2	141.5
1993	12.6	58.6	12.0	65.6	40.2	122.2
1994	11.0	56.0	11.9	60.8	46.0	120.8
1995	12.3	62.3	17.6	80.1	48.0	120.6
1996	14.6	65.3	12.0	64.8	47.4	127.7
1997	12.1	61.1	14.7	69.4	46.2	129.6

Source: Calculated by ERS based on data from government and private sources.

¹ Payment for the quantity of farm product equivalent to the retail unit minus imputed value of byproducts, computed from average grower prices.

² U.S. average retail prices. Prices of fresh produce weighted by quantities marketed except for 1992.

Table 13—White bread: Retail price, farm value of ingredients, farm-to-retail price spread, and farm value share of retail price per 1-pound loaf

Year	Retail price	Farm value of ingredients			Farm-to-retail spread	Farm value share	
		Wheat ¹	Other farm ingredients ²	All ingredients		Wheat	All ingredients
----- Cents -----					----- Percent -----		
1970	27.7	2.6	0.8	3.4	24.3	9	12
1971	28.5	2.6	.9	3.5	25.0	9	12
1972	28.2	2.9	.9	3.8	24.4	10	13
1973	31.5	4.1	1.4	5.5	26.0	13	17
1974	39.3	5.4	2.5	7.9	31.4	14	20
1975	41.0	4.5	2.3	6.8	34.2	11	17
1976	40.2	3.8	1.7	5.5	34.7	9	14
1977	40.5	2.7	.7	3.4	37.1	7	8
1978	41.7	3.3	.7	4.0	37.7	8	10
1979	46.7	4.1	.8	4.9	41.8	9	10
1980	50.9	4.5	.8	5.3	45.6	9	10
1981	52.5	4.7	.8	5.5	47.0	9	10
1982	53.2	4.4	.6	5.0	48.2	8	9
1983	54.2	4.5	.7	5.2	49.0	8	9
1984	54.1	4.3	.8	5.1	49.0	8	9
1985	55.3	4.1	.7	4.8	50.5	7	9
1986	56.5	3.5	.5	4.1	52.5	6	7
1987	54.7	3.3	.5	3.8	50.9	6	7
1988	61.3	4.1	.7	4.8	56.5	7	8
1989	66.6	4.8	.7	5.5	61.1	7	8
1990	69.5	3.7	.7	4.4	65.1	5	6
1991	71.1	3.4	.6	4.0	67.1	5	6
1992	75.0	4.4	.6	5.0	70.0	6	7
1993	75.2	4.1	.7	4.8	70.4	5	6
1994	76.1	4.5	.7	5.2	70.9	6	7
1995	79.1	5.3	.7	6.0	73.1	7	8
1996	87.6	5.9	.9	6.8	80.8	7	8
1997	87.2	4.7	.7	5.4	81.8	5	6

Source: Calculated by ERS based on data from government and private sources.

¹ Payment to farmers for the quantity of wheat (approximately 0.86 pound) required to produce the flour for a 1-pound loaf of white bread, minus the value of millfeed byproducts. Based on average farm prices for hard winter and spring wheat in 11 States producing these wheats through 1982; all wheat prices used beginning in 1983.

² Value for lard, shortening, granulated sugar, and nonfat dry milk through 1976. Value for 1977 forward is for lard, soybean oil, high-fructose corn syrup, corn syrup, and soy-whey blend.

Table 14—Sugar: Farm value, price spreads, and retail price

Item	Crop year beginning October					
	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97
	<i>Cents per pound</i>					
Farm value ¹	14.9	15.0	14.2	13.7	14.0	14.2
Processing and refining spread ²	18.0	17.5	17.7	17.5	NA	NA
Wholesaling and retailing spread ³	6.8	7.6	6.7	6.7	NA	NA
Retail price ⁴	39.6	40.1	38.6	37.9	41.0	42.0

NA=Not available due to discontinued data.

Source: Calculated by ERS based on data from government and private sources.

¹ Based on season average prices U.S. sugar producers received for sugarcane and sugar beets.

² Difference between the farm value and an average of effective wholesale prices.

³ Difference between the retail price and the wholesale price.

⁴ Average of Bureau of Labor Statistics' monthly retail prices for sugar sold in 33- to 80-ounce packages.

Table 15—Marketing bill and farm value components of consumer expenditures for domestically produced farm foods

Year	Consumer expenditures			Marketing bill	Farm value	Farm value share of expenditures
	Total	At home ¹	Away from home ²			
-----			-----		-----	
			<i>Billion dollars</i>		<i>Percent</i>	
1953	51.0	—	—	31.5	19.5	38
1954	51.1	—	—	32.3	18.8	37
1955	53.1	—	—	34.4	18.7	35
1956	55.5	—	—	36.3	19.2	35
1957	58.3	—	—	37.9	20.4	35
1958	61.0	—	—	39.6	21.4	35
1959	63.6	—	—	42.4	21.2	33
1960	66.9	—	—	44.6	22.3	33
1961	68.7	—	—	45.7	23.0	33
1962	71.3	—	—	47.6	23.7	33
1963	74.0	56.0	18.0	49.9	24.1	33
1964	77.5	58.5	19.0	52.6	24.9	32
1965	81.1	60.2	20.9	54.0	27.1	33
1966	86.9	64.0	22.9	57.1	29.8	34
1967	91.6	66.8	24.8	62.4	29.2	32
1968	96.8	69.5	27.3	65.9	30.9	32
1969	102.6	73.1	29.5	68.3	34.3	33
1970	110.6	78.2	32.4	75.1	35.5	32
1971	114.6	80.6	34.0	78.5	36.1	32
1972	122.2	85.4	36.8	82.4	39.8	33
1973	138.8	98.5	40.3	87.1	51.7	37
1974	154.6	109.5	45.1	98.2	56.4	36
1975	167.0	116.2	50.8	111.4	55.6	33
1976	183.3	127.2	56.1	125.0	58.3	32
1977	190.9	130.8	60.1	132.7	58.2	30
1978	216.9	149.2	67.7	147.4	69.5	32
1979	245.2	169.4	75.8	166.0	79.2	32
1980	264.4	180.1	84.3	182.7	81.7	31
1981	287.7	194.0	93.7	206.0	81.7	28
1982	298.9	196.7	102.2	217.5	81.4	27
1983	315.0	204.6	110.4	229.7	85.3	27
1984	332.0	213.1	118.9	242.2	89.8	27
1985	345.4	220.8	124.6	259.0	86.4	25
1986	359.6	226.0	133.6	270.8	88.8	25
1987	375.5	230.2	145.3	285.1	90.4	24
1988	398.8	242.1	156.7	301.9	96.8	24
1989	419.4	255.5	163.9	315.6	103.8	25
1990	449.8	276.2	173.6	343.6	106.2	24
1991	465.1	286.1	179.0	363.5	101.6	22
1992	474.5	289.6	184.9	369.4	105.1	22
1993	489.2	294.9	194.3	379.6	109.6	22
1994	512.2	308.7	203.5	402.6	109.6	21
1995	529.5	316.9	212.6	415.7	113.8	21
1996	546.7	328.0	218.7	424.5	122.2	22
1997 ³	561.1	334.7	226.4	441.1	120.0	21

Source: Calculated by ERS based on data from government and private sources.

— = Not available.

¹ Includes food purchased primarily at retail food stores.

² Includes food purchased at restaurants, fast-food outlets, and other public eating places, and food served in institutions, such as hospitals, schools, and rest homes.

³ Preliminary. Some historical data have been revised.

Table 16—Components of the marketing bill for domestically produced farm food

Year	Labor ¹	Packaging materials	Intercity rail and truck transportation	Fuels and electricity	Corporate profits before taxes	Other ²	Total marketing bill ³
<i>Billion dollars</i>							
1967	25.9	7.3	4.3	—	3.4	21.5	62.4
1968	28.0	7.6	4.5	—	3.6	22.2	65.9
1969	30.4	7.9	4.6	—	3.6	21.8	68.3
1970	32.2	8.2	5.2	2.2	3.6	23.7	75.1
1971	34.5	8.5	6.0	2.4	3.9	23.2	78.5
1972	36.6	8.9	6.1	2.5	4.0	24.3	82.4
1973	39.7	9.4	6.4	2.8	5.4	23.4	87.1
1974	44.3	11.8	7.5	3.7	6.1	24.8	98.2
1975	48.3	13.3	8.4	4.6	7.1	29.7	111.4
1976	53.8	14.5	9.1	5.0	7.7	34.9	125.0
1977	58.3	15.1	9.7	6.0	8.0	35.6	132.7
1978	66.2	16.6	10.5	7.1	9.9	37.1	147.4
1979	75.2	18.6	11.8	8.2	10.0	42.3	166.1
1980	81.5	21.0	13.0	9.0	9.9	48.3	182.7
1981	91.0	22.6	14.3	10.0	9.7	58.4	206.0
1982	96.6	23.7	14.7	11.0	9.4	62.1	217.5
1983	102.4	24.7	15.4	11.7	9.6	65.9	229.7
1984	109.3	26.2	15.9	12.5	9.6	68.7	242.2
1985	115.6	26.9	16.5	13.1	10.4	76.5	259.0
1986	122.9	27.7	16.8	13.2	10.3	79.9	270.8
1987	130.0	29.9	17.2	13.6	11.1	83.3	285.1
1988	137.9	32.6	17.8	14.1	12.0	87.5	301.9
1989	145.1	35.2	18.6	14.8	12.9	89.0	315.6
1990	154.0	36.5	19.8	15.2	13.2	104.9	343.6
1991	160.9	38.1	20.4	16.3	15.2	112.6	363.5
1992	168.4	40.1	20.6	16.7	15.7	107.9	369.4
1993	178.0	40.9	21.2	17.2	18.1	104.2	379.6
1994	186.1	43.3	21.8	17.9	20.9	112.6	402.6
1995	196.6	48.2	22.3	18.6	19.5	110.5	415.7
1996	204.6	47.7	22.9	19.6	19.2	110.5	424.5
1997	216.2	48.7	23.6	20.0	18.4	114.2	441.1

See footnotes at end of table.

—Continued

Table 16—Components of the marketing bill for domestically produced farm food (cont.)

Year	Advertising	Depreciation	Net interest	Net rent	Repairs	Taxes	Other
<i>Billion dollars</i>							
1967	2.5	2.5	0.5	2.3	1.0	2.6	10.1
1968	2.6	2.7	0.7	2.4	1.1	2.8	10.0
1969	2.7	2.8	0.8	2.5	1.2	3.0	8.7
1970	2.7	3.1	1.0	2.7	1.4	3.3	9.4
1971	2.8	3.3	1.0	2.9	1.5	3.6	8.0
1972	3.0	3.5	1.1	3.1	1.6	3.9	8.2
1973	3.0	3.8	1.4	3.3	1.7	4.4	5.9
1974	3.4	4.1	1.7	3.7	1.8	4.8	5.2
1975	4.0	4.6	1.7	4.1	2.1	5.3	8.1
1976	4.8	5.0	1.7	4.7	2.4	6.0	10.3
1977	5.0	5.6	1.9	5.1	2.5	6.3	9.2
1978	5.6	6.2	2.3	5.5	2.9	7.0	7.5
1979	6.7	7.2	2.9	6.1	3.3	7.8	8.3
1980	7.3	7.8	3.4	6.8	3.6	8.3	11.0
1981	8.7	9.4	3.9	7.6	4.0	9.1	15.7
1982	9.0	11.1	4.4	7.7	4.1	9.5	16.3
1983	10.6	12.6	4.6	8.2	4.3	10.3	15.4
1984	11.4	13.9	5.4	8.7	4.5	11.1	13.7
1985	12.5	15.4	6.1	9.3	4.8	11.7	16.7
1986	13.5	15.8	6.7	9.7	5.0	12.2	17.0
1987	13.8	15.8	8.1	10.9	5.1	12.6	17.1
1988	14.1	16.2	9.7	11.7	5.2	13.7	16.8
1989	15.7	16.4	12.3	12.7	5.7	14.6	11.5
1990	17.1	16.3	13.5	13.9	6.2	15.7	22.2
1991	17.5	15.8	12.2	15.9	6.4	16.5	28.3
1992	18.0	16.2	10.9	17.2	6.6	17.5	21.5
1993	18.6	17.2	10.1	17.9	7.2	18.2	15.0
1994	19.3	18.1	11.0	18.9	7.8	18.7	18.8
1995	19.8	18.9	11.6	19.8	7.9	19.1	13.4
1996	20.6	19.6	12.1	20.4	8.2	19.7	9.9
1997	21.0	20.1	13.0	21.0	8.4	20.2	10.5

Source: Calculated by ERS based on data from government and private sources.

— = Not available.

¹ Includes employee wages or salaries and their health and welfare benefits. Also includes estimated earnings of proprietors, partners, and family workers not receiving stated remuneration.

² Includes depreciation, rent, advertising and promotion, interest, taxes, licenses, insurance, professional services, local for-hire transportation, food service in schools, colleges, hospitals, and other institutions, and miscellaneous items. Data for 1967-69 also include fuels and electricity.

³ The marketing bill is the difference between the farm value and consumer expenditures for these foods at both food stores and restaurants. Thus, it covers processing, wholesaling, transportation, retailing costs, and profits. Some historical data were revised.

Table 17—Average hourly earnings of production and nonsupervisory employees of food industries

Year	Manufacturing, food and kindred products	Wholesale trade, groceries, and related products	Food stores	Eating and drinking places
<i>Dollars per hour</i>				
1977	5.37	5.43	4.77	2.93
1978	5.80	5.92	5.23	3.22
1979	6.27	6.39	5.67	3.45
1980	6.85	6.96	6.24	3.69
1981	7.44	7.57	6.85	3.95
1982	7.92	8.25	7.22	4.09
1983	8.19	8.70	7.51	4.27
1984	8.39	9.03	7.64	4.26
1985	8.57	9.22	7.35	4.33
1986	8.75	9.30	7.06	4.35
1987	8.93	9.53	6.95	4.42
1988	9.12	9.79	7.01	4.57
1989	9.38	10.16	7.15	4.75
1990	9.62	10.45	7.31	4.97
1991	9.90	10.77	7.33	5.18
1992	10.20	11.09	7.56	5.29
1993	10.45	11.47	7.79	5.35
1994	10.66	11.77	7.94	5.47
1995	10.94	12.08	8.15	5.59
1996	11.20	12.46	8.40	5.79
1997	11.49	12.87	8.59	6.05

Source: U.S. Department of Labor, *Employment and Earnings*, March 1997

Table 18—Employment Cost Index for workers in foodstores and all private industry

Period	Foodstores		Private industry		
	Total compensation costs	Wages and salaries	Total compensation costs	Wages and salaries	Benefits
<i>Annual percent change in Employment Cost Index (ECI)</i>					
1990	4.4	4.0	5.0	4.2	6.9
1991	4.5	4.2	4.4	3.8	6.1
1992	3.8	3.3	3.7	2.9	5.5
1993	2.9	2.4	3.6	2.9	5.4
1994	2.6	1.9	3.3	2.9	4.0
1995	1.1	0.8	2.7	2.8	2.4
1996	3.6	3.5	2.9	3.3	1.8
1997	2.4	3.1	3.1	3.5	2.1
<i>Indexes, June 1989=100</i>					
1992:					
March	112.6	110.9	113.1	110.9	118.6
June	113.6	112.3	113.9	111.6	119.7
September	114.2	112.9	114.8	112.2	121.2
December	115.1	113.7	115.6	112.9	122.2
Average	113.9	112.5	114.4	111.9	120.4
1993:					
March	115.9	114.6	117.1	113.9	125.2
June	117.2	115.4	118.0	114.6	126.7
September	117.1	114.9	119.1	115.7	127.7
December	118.3	115.9	119.8	116.4	128.3
Average	117.1	115.2	118.5	115.2	127.0
1994:					
March	119.6	117.0	121.0	117.2	130.7
June	120.6	117.8	122.0	118.1	131.7
September	120.3	117.4	123.0	119.1	132.8
December	120.0	117.3	123.5	119.7	133.0
Average	120.1	117.4	122.4	118.5	132.1
1995:					
March	120.8	117.8	124.5	120.6	134.5
June	120.7	117.6	125.4	121.5	135.1
September	121.8	118.6	126.2	122.4	135.6
December	122.4	119.1	126.7	123.1	135.9
Average	121.4	118.3	125.7	121.9	135.3
1996:					
March	123.6	120.5	127.9	124.4	136.6
June	124.4	121.2	129.0	125.6	137.4
September	127.0	123.1	129.8	126.5	138.1
December	128.4	124.7	130.6	127.3	138.6
Average	125.9	122.4	129.3	126.0	137.7
1997:					
March	128.2	124.8	131.7	128.6	139.4
June	128.2	124.7	132.8	129.7	140.1
September	129.8	126.7	133.9	131.0	140.8
December	129.4	128.4	135.1	132.3	141.8
Average	128.9	126.2	133.4	130.4	140.5

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Table 19—Indexes of output per employee hour in selected food manufacturing industries, retail food-stores, and restaurants

Year	Food manufacturing							Retail food-stores	Eating and drinking places
	Meat products	Fats and oils	Dairy products	Preserved fruit and vegetables	Grain mill products	Bakery products	Beverages		
<i>1987 = 100</i>									
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.1	108.9	108.4	99.6	101.3	95.5	106.0	98.9	102.8
1989	99.3	116.4	107.8	105.3	107.6	95.2	112.7	95.9	102.2
1990	97.1	118.1	107.3	105.9	105.3	91.7	117.7	95.9	104.0
1991	99.7	120.1	108.4	111.4	104.9	89.1	120.5	94.8	103.1
1992	104.6	114.1	111.5	110.8	107.7	90.3	127.6	94.2	102.4
1993	104.3	112.6	109.7	116.5	109.1	92.5	127.0	93.1	103.0
1994	101.2	111.8	111.9	118.7	108.4	95.6	130.9	92.6	101.4
1995	102.4	120.3	116.6	118.8	115.3	96.1	134.3	91.1	101.5
1996 ¹	97.7	111.1	115.9	116.7	107.7	94.1	135.7	88.7	98.2
Average annual change:	<i>Percent</i>								
1980-96	-0.3	1.2	1.7	1.7	0.8	-0.7	3.5	-1.2	-0.5

Source: U.S. Department of Labor, Bureau of Labor Statistics.

¹ Preliminary. Some historical data were revised.

Table 20—Annual average trucking costs for fresh fruits and vegetables

Food group	1992	1993	1994	1995	1996	1997
<i>Cents per mile</i>						
Fixed costs:						
Interest	3.7	3.0	2.6	2.9	2.8	3.0
Depreciation	1.6	1.6	1.6	1.6	1.6	1.6
Overhead	13.5	15.2	15.5	16.0	16.4	16.8
Insurance	8.8	9.3	9.6	10.0	10.5	10.8
Licenses	8.6	9.0	9.3	9.5	9.7	9.8
Variable costs:						
Vehicle depreciation	8.7	8.7	8.7	8.7	8.7	8.7
Wages	34.8	36.0	36.5	37.5	38.3	38.8
Fuel costs	20.5	19.9	19.6	19.1	21.3	20.8
Maintenance	14.4	15.1	15.1	15.4	15.6	15.7
Tires	2.8	2.8	2.8	2.7	2.6	2.6
Miscellaneous	6.7	6.7	6.7	6.7	6.9	6.8
Total costs	124.1	127.3	127.8	130.2	134.4	135.4

Source: Agricultural Marketing Service, USDA.

Table 21—Profit margins of food manufacturers and retail food chains, industry averages

Year and quarter	Food manufacturers ¹			Retail food chains ²		
	After-tax profits as a percentage of—					
	Sales	Stockholder equity	Assets	Sales	Stockholder equity	Assets
	<i>Percent</i>					
1980	3.4	14.7	7.1	0.9	13.7	4.5
1981	3.1	13.6	6.5	1.0	13.9	4.7
1982	3.1	13.0	6.3	.9	12.7	4.4
1983	3.3	13.3	6.0	1.1	13.6	4.9
1984	3.3	13.3	6.0	1.4	17.3	6.0
1985	4.1	15.3	6.6	1.3	14.5	5.3
1986	4.2	16.2	6.3	1.1	11.9	4.4
1987	4.6	17.5	6.8	.9	12.8	3.6
1988	5.5	20.9	8.1	.9	13.6	3.2
1989	4.2	17.1	5.5	.8	20.7	2.9
1990	4.0	16.1	5.3	1.1	22.8	3.8
1991	4.8	17.5	6.0	1.1	18.8	3.8
1992	4.3	15.0	5.3	1.0	14.6	3.2
1993	3.7	13.5	4.7	.8	11.7	2.5
1994	5.0	17.8	6.1	1.4	18.4	4.4
1995	5.5	18.5	6.6	1.5	21.3	4.7
1996	5.6	19.1	6.7	1.6	19.4	4.8
1997	5.6	19.8	6.8	1.6	17.4	4.7
1992:						
I	3.2	10.9	3.9	1.1	16.0	3.5
II	5.8	20.4	7.3	.8	11.6	2.6
III	4.4	15.6	5.4	.7	10.4	2.3
IV	3.7	13.2	4.6	1.4	20.0	4.4
1993:						
I	2.8	10.0	3.5	-.5	-6.9	-1.5
II	4.6	16.5	5.7	1.3	19.4	4.2
III	4.2	15.2	5.3	1.0	14.1	3.1
IV	3.4	12.3	4.2	1.3	19.1	4.3
1994:						
I	5.2	18.4	6.3	1.3	17.2	4.0
II	4.3	15.2	5.3	1.6	21.3	5.1
III	5.3	18.8	6.6	1.4	18.5	4.5
IV	5.1	18.5	6.3	1.3	16.7	4.1
1995:						
I	5.4	18.2	6.4	1.3	20.3	4.0
II	6.0	19.8	7.2	1.5	22.7	5.0
III	5.9	19.4	6.9	1.4	19.1	4.4
IV	4.8	16.5	5.8	1.7	23.0	5.5
1996:						
I	5.6	18.4	6.5	1.6	20.0	5.0
II	5.2	17.6	6.2	1.6	20.5	5.0
III	5.7	20.1	7.1	1.5	18.5	4.4
IV	5.9	20.5	7.2	1.6	18.8	4.7
1997:						
I	5.2	18.1	6.2	1.6	18.3	4.9
II	6.0	21.2	7.4	1.2	14.1	3.7
III	6.7	24.2	8.2	1.6	16.2	4.5
IV	4.3	15.8	5.3	2.0	20.7	5.8

Source: U.S. Department of Commerce.

¹ Data represent aggregate estimates for corporations, based on a sample of company reports. Beginning in 1985, data are not comparable with earlier years because the tobacco industry was combined with food manufacturers.

² Data are based on reports from all food retailing corporations having at least \$1 billion in annual sales, at least 70 percent of which are derived from supermarket operations. Beginning in 1990, data reflect a larger sample of firms.

Table 22—Food expenditures by families and individuals as a share of disposable personal income

Year	Disposable personal income	Expenditures for food			Proportion of income spent for food		
		At home ¹	Away from home ²	Total ³	At home	Away from home	Total ³
		----- <i>Billion dollars</i> -----			----- <i>Percent</i> -----		
1929	81.8	16.9	2.6	19.5	20.7	3.2	23.9
1939	69.7	13.0	2.3	15.2	18.6	3.3	21.9
1949	188.1	33.8	7.8	41.5	18.0	4.1	22.1
1959	349.0	49.3	12.1	61.4	14.1	3.5	17.6
1961	378.8	51.1	13.1	64.2	13.5	3.5	16.9
1962	401.3	52.0	13.9	65.9	13.0	3.5	16.4
1963	421.1	52.4	14.5	66.9	12.4	3.5	15.9
1964	457.6	54.5	15.7	70.2	11.9	3.4	15.3
1965	493.9	57.4	16.9	74.3	11.6	3.4	15.0
1966	533.7	59.9	18.6	78.5	11.2	3.5	14.7
1967	571.9	60.3	19.8	80.0	10.5	3.5	14.0
1968	621.4	63.5	21.7	85.2	10.2	3.5	13.7
1969	668.4	68.0	23.4	91.3	10.2	3.5	13.7
1970	727.1	74.2	26.4	100.6	10.2	3.6	13.8
1971	790.2	78.1	28.1	106.2	9.9	3.6	13.4
1972	855.3	84.4	31.3	115.8	9.9	3.7	13.5
1973	965.0	93.1	34.9	128.0	9.7	3.6	13.3
1974	1,054.2	105.4	38.5	143.9	10.0	3.7	13.7
1975	1,159.2	115.2	45.9	161.1	9.9	4.0	13.9
1976	1,273.0	123.1	52.6	175.7	9.7	4.1	13.8
1977	1,401.4	131.8	58.5	190.3	9.4	4.2	13.6
1978	1,580.1	145.3	67.5	212.8	9.2	4.3	13.5
1979	1,769.5	162.2	76.9	239.1	9.2	4.3	13.5
1980	1,973.3	179.1	85.2	264.4	9.1	4.3	13.4
1981	2,200.2	191.0	95.8	286.8	8.7	4.4	13.0
1982	2,347.3	198.4	104.5	302.9	8.5	4.5	12.9
1983	2,522.4	209.0	113.7	322.7	8.3	4.5	12.8
1984	2,810.0	220.9	121.9	342.8	7.9	4.3	12.2
1985	3,002.2	230.7	128.6	359.3	7.7	4.3	12.0
1986	3,187.6	239.3	137.9	377.2	7.5	4.3	11.8
1987	3,363.1	249.0	146.3	395.3	7.4	4.3	11.8
1988	3,640.8	261.9	157.6	419.5	7.2	4.3	11.5
1989	3,894.5	280.9	165.5	446.4	7.2	4.3	11.5
1990	4,166.8	306.0	177.6	483.6	7.3	4.3	11.6
1991	4,343.7	319.5	183.1	502.6	7.4	4.2	11.6
1992	4,626.7	321.6	192.1	513.6	7.0	4.2	11.1
1993	4,829.3	327.7	204.9	532.6	6.8	4.2	11.0
1994	5,052.7	344.6	214.7	559.3	6.8	4.2	11.1
1995	5,355.7	360.4	222.6	583.1	6.7	4.2	10.9
1996	5,608.3	376.0	230.1	606.2	6.7	4.1	10.8
1997	5,885.2	390.3	239.1	629.4	6.6	4.1	10.7

Source: Calculated by ERS based on data from government and private sources.

¹ Food purchased from grocery stores and other retail outlets, including purchases with food stamps and food produced and consumed on farms, because the value of these foods is included in personal income. Excludes Government-donated foods.

² Purchases of meals and snacks by families and individuals and food furnished to employees, because it is included in personal income. Excludes food paid for by Government and business, such as food donated to schools, meals in prisons and other institutions, and expense-account meals.

³ May not add due to rounding.

Table 23—Average household food spending in 1996

Item	All households	Household income before taxes		
		\$5,000 to \$9,999	\$15,000 to \$19,999	\$30,000 to \$39,999
<i>Number</i>				
Average persons per household	2.5	1.7	2.3	2.7
<i>Dollar</i>				
Household income after taxes	34,864	7,419	16,849	32,003
Annual food expenditures	4,913	2,539	3,587	4,929
Food at home	2,999	1,937	2,425	2,970
Cereal products	172	113	131	171
Bakery products	295	177	240	286
Beef	220	147	184	204
Pork	160	121	144	166
Other meat	101	67	75	94
Poultry	151	99	126	149
Fish and seafood	91	57	68	78
Eggs	35	30	34	38
Fresh milk and cream	139	95	113	151
Other dairy products	191	107	146	198
Fresh fruit	158	89	143	158
Fresh vegetables	148	101	132	143
Processed fruit	115	77	96	109
Processed vegetables	83	60	74	82
Sugar and other sweets	121	80	98	124
Fats and oils	87	71	77	86
Miscellaneous food	415	243	315	406
Nonalcoholic beverages	264	180	198	280
Food away from home	1,914	602	1,162	1,959
<i>Percent</i>				
Share of income spent for food	14.1	34.2	21.3	15.4

Source: U.S. Department of Labor, Bureau of Labor Statistics, Office of Prices, *Consumer Expenditures in 1996*, August 1998.

Table 24—Relative importance of food and beverage components in the CPI-U

Item	1980	1985	1990	1992	1994	1995	1996
	<i>CPI-U</i>						
Food and beverages	18.309	19.619	17.706	17.396	17.412	17.332	17.484
Food	17.322	18.513	16.188	15.777	15.838	15.766	15.913
Food at home	12.003	12.380	10.094	9.780	9.934	9.880	10.040
Cereals and bakery	1.507	1.707	1.420	1.441	1.464	1.473	1.479
Cereals	0.391	0.432	0.459	0.465	0.469	0.469	0.449
Bakery products	1.117	1.275	0.961	0.976	0.994	1.004	1.030
Meat, poultry, fish, and eggs	4.047	3.884	3.169	2.955	2.892	2.936	3.002
Meats, poultry, fish	3.823	3.690	2.976	2.790	2.737	2.747	2.797
Meats	3.032	2.864	2.157	1.996	1.930	1.931	1.968
Beef and veal	1.695	1.556	1.092	1.029	0.989	0.964	0.955
Pork	0.822	0.831	0.641	0.563	0.545	0.571	0.615
Other meats	0.515	0.478	0.424	0.404	0.396	0.397	0.398
Poultry	0.401	0.397	0.442	0.430	0.428	0.435	0.454
Fish and seafood	0.390	0.430	0.377	0.364	0.379	0.381	0.375
Eggs	0.224	0.194	0.192	0.166	0.155	0.189	0.205
Dairy products	1.603	1.573	1.258	1.209	1.169	1.169	1.245
Milk	0.922	0.879	0.628	0.605	0.590	0.586	0.632
Butter	0.083	0.082	NA	NA	NA	NA	NA
Cheese	0.339	0.339	0.365	0.351	0.334	0.333	0.348
Ice cream	0.168	0.178	0.160	0.154	0.152	0.152	0.159
Other dairy	0.090	0.096	0.105	0.099	0.093	0.098	0.106
Fruits and vegetables	1.682	1.938	1.830	1.839	2.013	1.936	1.974
Fresh fruits and vegetables	0.902	1.055	1.172	1.219	1.415	1.337	1.357
Fresh fruits	0.419	0.508	0.638	0.639	0.710	0.728	0.790
Fresh vegetables	0.483	0.547	0.534	0.581	0.705	0.609	0.567
Processed fruits and vegetables	0.780	0.883	0.658	0.620	0.598	0.599	0.617
Processed fruit	0.389	0.459	0.382	0.361	0.338	0.341	0.353
Processed vegetables	0.391	0.424	0.276	0.259	0.260	0.258	0.264
Other food at home	3.164	3.279	2.418	2.336	2.396	2.365	2.340
Sugar and sweets	0.505	0.478	0.343	0.338	0.326	0.327	0.331
Fats and oils	0.333	0.349	0.271	0.251	0.249	0.248	0.246
Nonalcoholic beverages	1.321	1.331	0.765	0.716	0.796	0.763	0.724
Other prepared foods	1.005	1.121	1.039	1.031	1.026	1.027	1.039

NA=Not available. Beginning in 1987, butter was included in a new group, "other dairy products, including butter."
CPI-U is the Consumer Price Index for all urban consumers.

Source: Bureau of Labor Statistics, U.S. Department of Labor.