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Factors Impacting Grocery Store Deflation: A Closer Look at Prices in 2016 and 2017

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Factors Impacting Grocery Store Deflation: A Closer Look at Prices in 2016 and 2017

Annemarie Kuhns and Abigail M. Okrent

Abstract

Understanding the underlying factors affecting retail food prices allows farmers, food manufacturers, businesses, and consumers to better understand the future of food prices. Recent retail food price deflation (2016 and 2017) has left consumers and industry, as well as academics, asking what factors have been placing downward pressure on prices and how might this pressure impact future food-at-home price inflation. This report provides an indepth analysis of recent price trends, including discussion of how price changes are transmitted through the supply chain. The authors build on the ERS Food Price Outlook by providing an informative supplement to the summary of retail food prices on the agency's website.

Keywords: Food Price Outlook, food prices, consumer price index, producer price index, price transmission

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Overview

Retail food expenditures are the third largest U.S. consumer spending category at 12.6 percent, behind housing and transportation. Food price changes (particularly upward ones) can be a significant source of uncertainty to the average American consumer (U.S. Bureau of Labor Statistics, 2016).¹ Price changes can be highly variable among individual food categories; core inflation (which includes housing and transportation) has held steady, while nominal food prices have declined in recent years, a phenomenon not seen since 1967 when food prices fell 0.3 percent while core inflation rose 3.6 percent.

While lower prices may benefit consumers, economy-wide deflation can be a concern. Most recently, in 2010, the Federal Reserve Bank voiced uneasiness over lower rates of inflation, or even deflation, due to the Great Recession (Isidore, 2010). The Federal Reserve Bank sets monetary policy to target a 2-percent annual economy-wide or core inflation rate (Federal Reserve, 2015). Core inflation measures economy-wide prices that exclude the more volatile categories of food and energy prices, which often reflect temporary factors that may reverse themselves later.² In part, this reflects the tradeoff inherent in inflation. That is, higher rates could reduce the capacity for businesses, Government, and consumers alike to make long-term economic decisions; conversely, lower rates of core inflation or deflation are often associated with weak economic conditions (Federal Reserve Bank, 2015). Recent data suggest that core inflation has moved into the Federal Reserve's targeted range, rising 2.2 percent in 2016 and 1.8 percent in 2017, after having increased 1.0 percent in 2010. Even though the Federal Reserve Bank largely targets core inflation for gauging overall economy-wide price movements, sustained trends of lower inflation—or deflation—of food prices may indicate a slowdown in overall price growth over time (Motley, 1997).

Two consecutive years of food price deflation have already impacted some large food retailers, who have cited decreased or sluggish sales, and hence profits, because of the deflation. Kroger, one of the largest food retailers in the United States, reported that food price deflation was one of the primary drivers of declining same-store sales for the first time in 13 years (Watkins, 2017). Another large retailer, Albertsons, also reported that same-store sales declined in 2016 and 2017 because of food price deflation (Albertsons Companies, Inc., 2018).

We explore some concurrent factors that resulted in lower food prices: increases in farm- and wholesale-level production and changing input prices for other factors of production; exchange rate variations; marketing costs; market power in food retailing; and increased competition from food services. While there are many reasons for the observed food price deflation, we focus on these factors because they are likely to have had the biggest impact on food prices in 2016 and 2017 based on food industry reports.

¹ In the United States, retail food price inflation is most commonly measured by the U.S. Bureau of Labor Statistics Consumer Price Index (CPI). In this analysis, we always refer to the CPI's nonseasonally adjusted, U.S. average CPI.

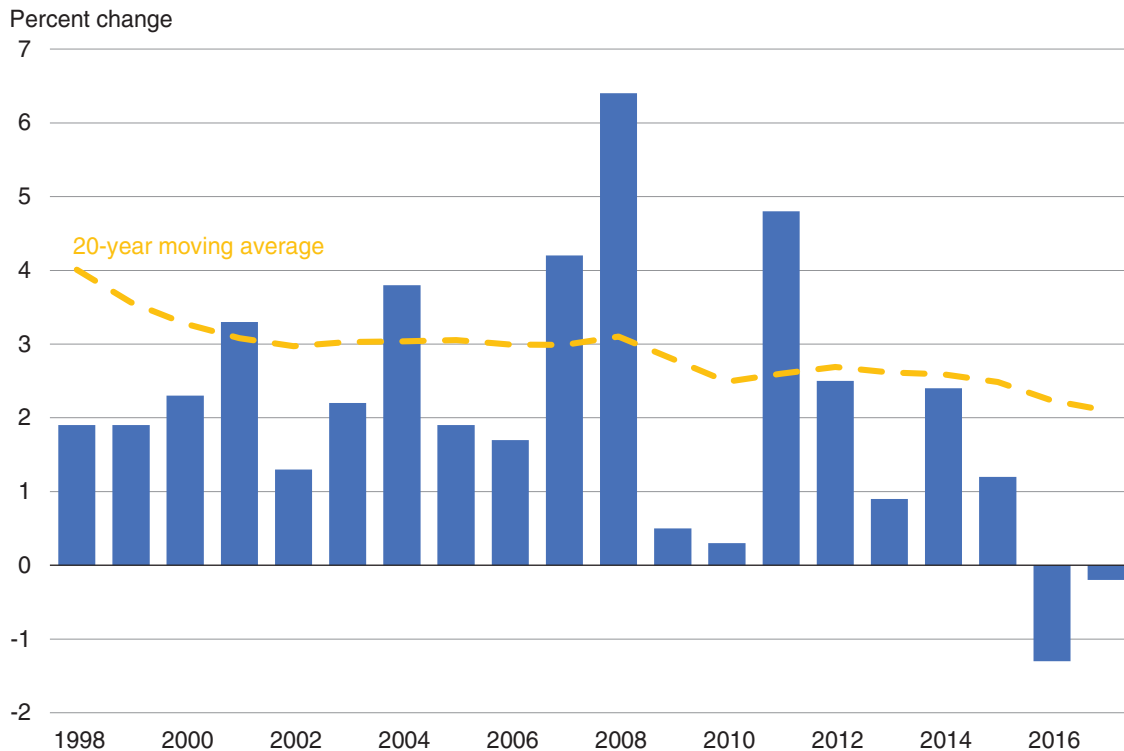
² Both food and energy price fluctuations often result from factors other than an underlying trend-increase in economy-wide prices. For example, food prices respond temporarily and quickly to weather shocks.

Retail Food Prices Declined for First Time in Nearly 50 Years

The year 2017 was the second consecutive year that average grocery store (food-at-home) prices declined, with prices falling an additional 0.2 percent after declining 1.3 percent from 2015 to 2016. When price levels fell in 2016, it was largely considered an anomaly as overall prices had not declined at the grocery store since 1967 (Kuhns and Levin, 2017). With the overall rate of food-at-home deflation slowing in 2017, price changes were still negative, on average. Looking at specific food categories, in 2016, prices declined for most foods with the exception of fresh fruits and other foods, which rose 2.2 percent and 0.3 percent, respectively. Price changes in 2017 were more mixed for food categories; prices of beef and veal, other meats, eggs, fresh vegetables, processed fruits and vegetables, sugar and sweets, and cereals and bakery products declined, while prices for pork, poultry, fish and seafood, dairy, fats and oils, nonalcoholic beverages, and other foods increased.³

While grocery store prices can be volatile year to year, the average rate of inflation for food at home has slowly been declining. The 20-year moving average for retail food prices, which is a measure of general long-term trends in prices, rose an average of 4 percent in 1998, 3.1 percent in 2008, and 2.1 percent in 2017 (fig. 1). Though less pronounced for some other consumer spending categories, the 20-year moving average has also been trending downwards for housing, apparel, and medical care. Changes to transportation costs tend to be the most volatile year to year.

Figure 1
Annual changes in food-at-home prices, 1998-2017



Source: USDA, Economic Research Service, using data from the U.S. Bureau of Labor Statistics Consumer Price Index.

³ The “other meat category” includes lunch meats and hotdogs.

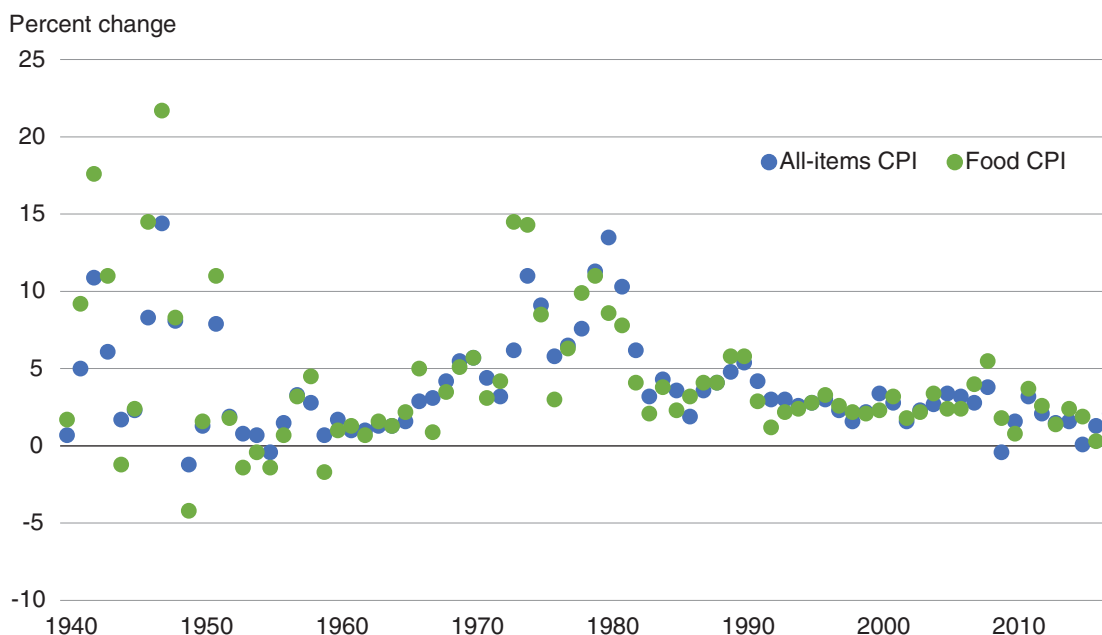
This downward trend may continue in the near future. In 2018, retail food prices rose 0.4 percent, again lowering the 20-year historic average, this time to 2.0 percent. Looking to 2019, the USDA, Economic Research Service (ERS) Food Price Outlook forecasts that retail food prices will rise 0.5 to 1.5 percent—again increasing at a rate below the 20-year historical moving average. If realized, this lower than average annual increase could still leave overall price levels in 2019 lower than 2015. While food prices on average are expected to rise in 2019, declines are forecast for the major food categories of retail pork, other meats, eggs, fats and oils, and processed fruits and vegetables.

Food Prices Through the Decades

The extent to which consumers are seriously impacted by changing food prices depends on the duration and magnitude of the changes. Examination of U.S. food price inflation over time—both for foods purchased at grocery stores and restaurants—shows several emerging patterns (fig. 2). Specifically, the Consumer Price Index (CPI) for food reveals that food price inflation has both become less volatile and downward-trending over time.

Figure 2

Annual percent change in prices



CPI = Consumer Price Index.

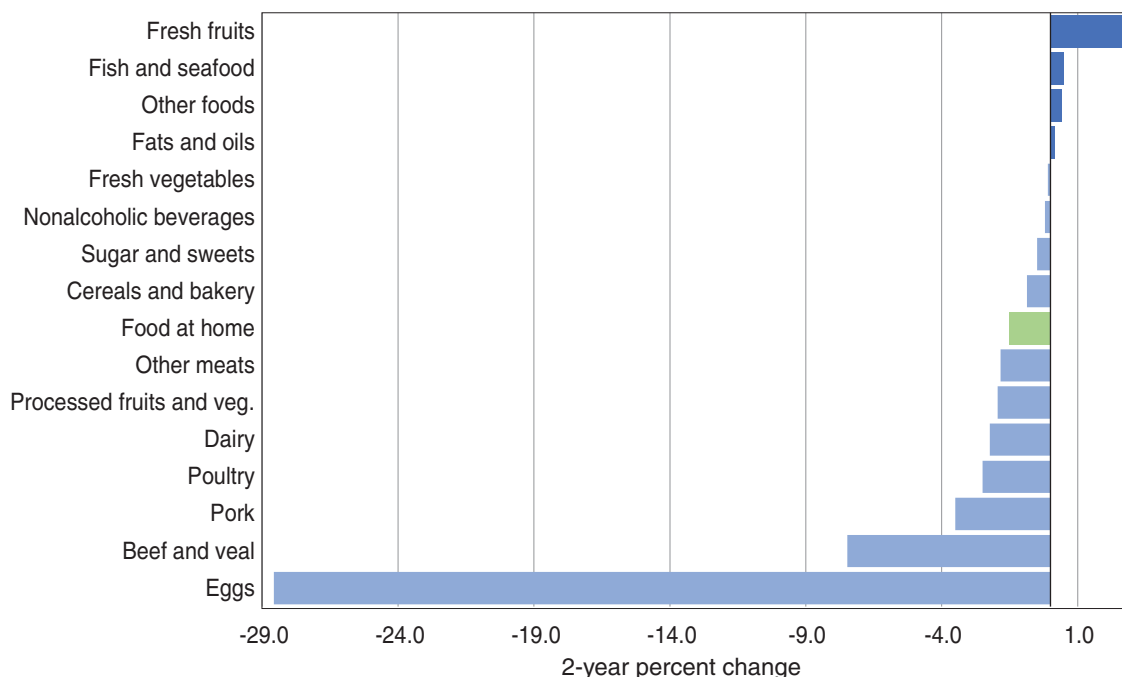
Source: USDA, Economic Research Service, using data from the U.S. Bureau of Labor Statistics Consumer Price Index.

Throughout the 1940s, U.S. prices grew at their fastest rates, for food as well as other goods and services (all items CPI), due primarily to World War II. Retail food price inflation peaked at 21.7 percent between 1946 and 1947. Prices were stable and even deflated in the period directly following the war, and this trend continued into the early 1960s. In the late 1960s, however, inflation grew as the Federal Reserve believed that higher inflation would reduce unemployment, leading to both prosperous growth and inflation (Reed, 2014). Food prices continued to rise at higher rates throughout the 1970s and 1980s due to energy prices, which grew on average 17.0 percent between 1974 and 1980. Since that time, however, the United States has enjoyed a period of relatively moderate (2.0 to 3.0 percent) food price inflation.

However, food prices have still fluctuated with changing input costs. Just over the past decade, grocery store prices rose as much as 6.4 percent in 2008 and declined as much as 1.3 percent in 2016. Due to rapid increases in farm-level rice, grain, and oilseed prices, production costs for many consumer foods using these ingredients rose in 2007 and 2008 (Trostle et al., 2011; Bobenrieth et al., 2009; Reed, 2014). Prices then rose at a below-average rate post-Great Recession before declining in 2016 and 2017. Recent deflation has been attributed to decreasing input prices throughout the supply chain—lower food commodity and oil and other energy prices, as well as lower prices for many imported foods.

Not surprisingly, price changes can vary substantially by food category. In comparing retail price changes from 2015 to 2017 among the major food categories (fig. 3), this variation becomes apparent. During this time, egg prices decreased by as much as 28.6 percent, while fresh fruit prices rose 2.7 percent—the only increase greater than 1 percent across all foods.⁴ With the exception of fresh fruits, fish and seafood, other foods, and fats and oils, the remaining food categories saw lower prices from 2015 to 2017.⁵

Figure 3
Changes in price levels, 2015-17



Source: USDA, Economic Research Service, using data from the U.S. Bureau of Labor Statistics Consumer Price Index.

However, a comparison of nominal and real at-home food prices tells a slightly different story (fig. 4).⁶ The relatively flat, solid green line for the real food-at-home index indicates that food-at-home inflation was generally in line with economy-wide inflation. However, perhaps more interesting is that food prices grew at a slower rate than economy-wide inflation over several years. For instance, while nominal grocery prices rose an average 2.5 percent from 1998 to 2007, they rose at a lower rate compared to economy-wide inflation and even declined in real terms many of those years (1999-2000, 2002-03, 2005-06, 2010, 2013, and 2016-17). However, the rate of decline in real prices for the most recent years is steeper compared to the other periods.

⁴ Egg prices tend to be the most volatile retail food price category. In 2016 and 2017, the large rates of price deflation were primarily driven by an increase in supply from lows in 2015 due to the Highly Pathogenic Avian Influenza (Kuhns and Harvey, 2016).

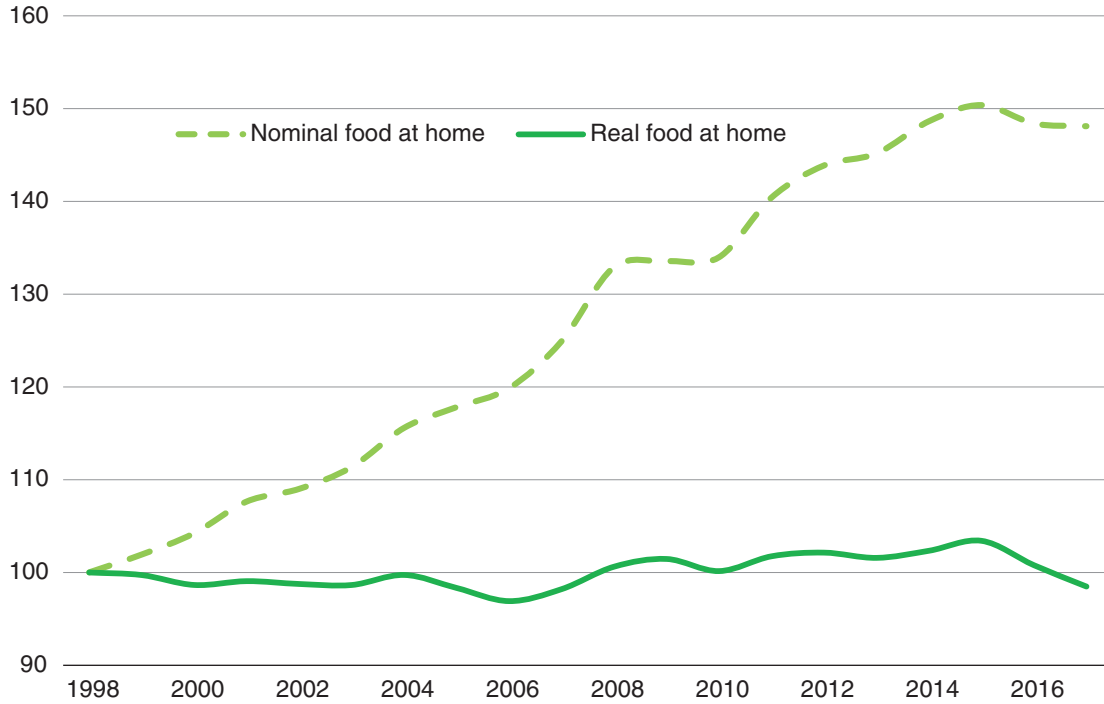
⁵ The “other foods” category includes soups, frozen entrees, snacks, and baby food.

⁶ The real price of food at home is the nominal value divided by all-items CPI ($Real\ Food\ At\ Home\ Index = \frac{Nominal\ Value}{All\ Items\ CPI(Decimal\ Form)}$); By dividing by the all-items CPI, the real price eliminates the effects of overall inflation in the economy.

Figure 4

Real and nominal food-at-home prices

Index (1998 = 100)



Source: USDA, Economic Research Service, calculated using data from the U.S. Bureau of Labor Statistics Consumer Price Index.

Factors Affecting Retail Food Prices

The prices consumers pay for both food at home and away from home are determined by a variety of factors throughout the food supply chain. For instance, changing input costs can translate directly into changes in the CPI as they impact the cost of producing, manufacturing, transporting, and selling the final consumer good. However, the passthrough effect varies depending on the input and the retail food category, as well as retailers' incentives to pass along price changes through the supply chain. Changes in farm-level commodity prices have a larger and quicker passthrough effect on grocery prices than changes in energy prices or grocery store wages (Leibtag, 2009; Roeger et al., 2011).

Therefore, understanding the underlying factors driving retail food price inflation, or in this case deflation, helps policymakers, retailers, farmers, and consumers to understand and better plan for the future. In the next section, we will introduce three important factors that can influence food prices—changing input prices, exchange rates, and market power—and discuss how they have contributed to deflating retail food prices throughout 2016 and 2017.

Lower Input Costs Contributed to Deflation

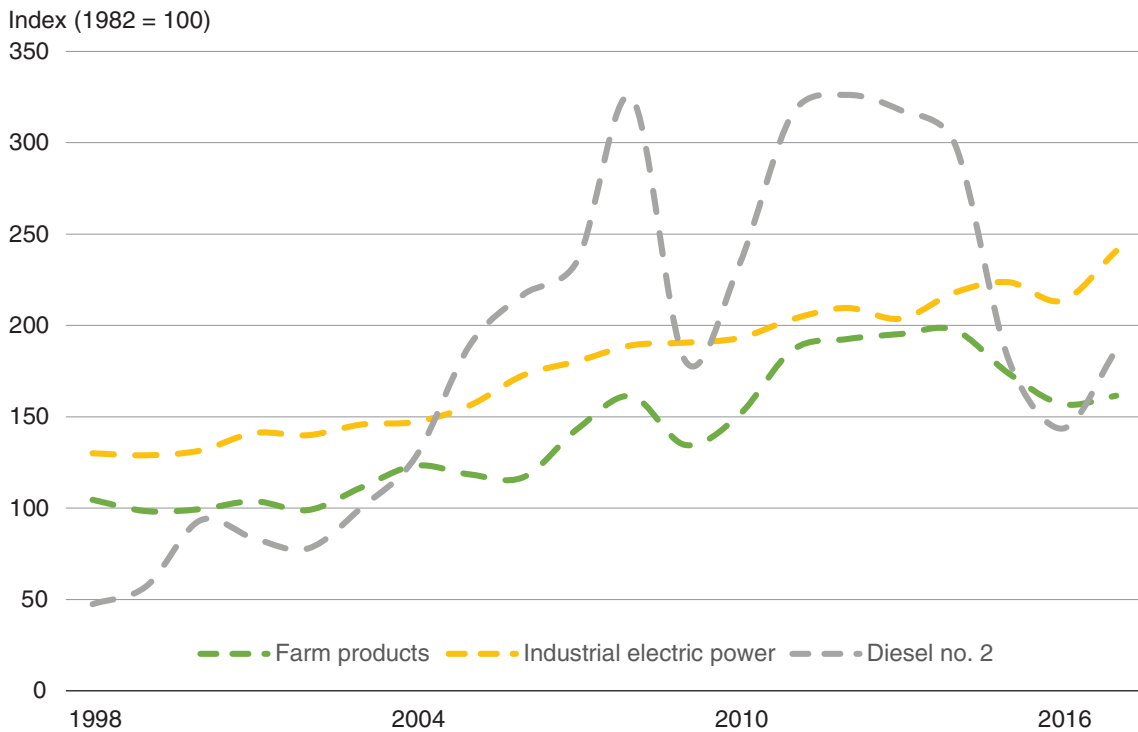
The prices consumers pay for food at the grocery store are determined by a combination of factors, including changing farm-level prices, food processing costs, changes in production, retailer decisions, strength of the U.S. dollar, and consumers' tastes and preferences, to name just a few (Gilbert, 2010; Kuhns and Levin, 2017; Lamm and Westcott, 1981).

Each of these factors has a role in determining retail prices. Here, we will focus on the specific factors that placed downward pressure on prices in recent years. During 2016-17, lower food-at-home prices were driven, in part, by decreasing input prices of agricultural commodities and other inputs (e.g., energy) that are used in manufacturing and marketing foods. Analysis by Volpe et al. (2013) showed how oil and energy prices influence retail prices through costs associated with production (e.g., electricity) and transportation (diesel fuel, oil, etc.). Looking at the Producer Price Index (PPI) for farm products, industrial electric power and diesel, prices trended downwards in late 2015 and into 2016 (fig. 5).⁷ Diesel fuel prices had the biggest declines, falling 39.5 percent in 2015 and an additional 20.9 percent in 2016. The PPI for farm products—including both crops and livestock—fell 12 percent in 2015 and 9.7 percent in 2016. However, both categories increased in 2017 but still remain relatively low compared to recent years (U.S. Bureau of Labor Statistics PPI; USDA Economic Research Farm Sector Income Forecast, 2018). This is expected as price levels at earlier stages of production tend to be more volatile year to year and even month to month (Kuhns and Volpe, 2014).

⁷ The PPI measures the average change in prices paid to domestic producers for their output. The PPI collects data for nearly every industry in the goods-producing sector of the economy.

Figure 5

PPIs for farm products, electricity, and diesel fuel, 1998-2017



PPI = Producer Price Index.

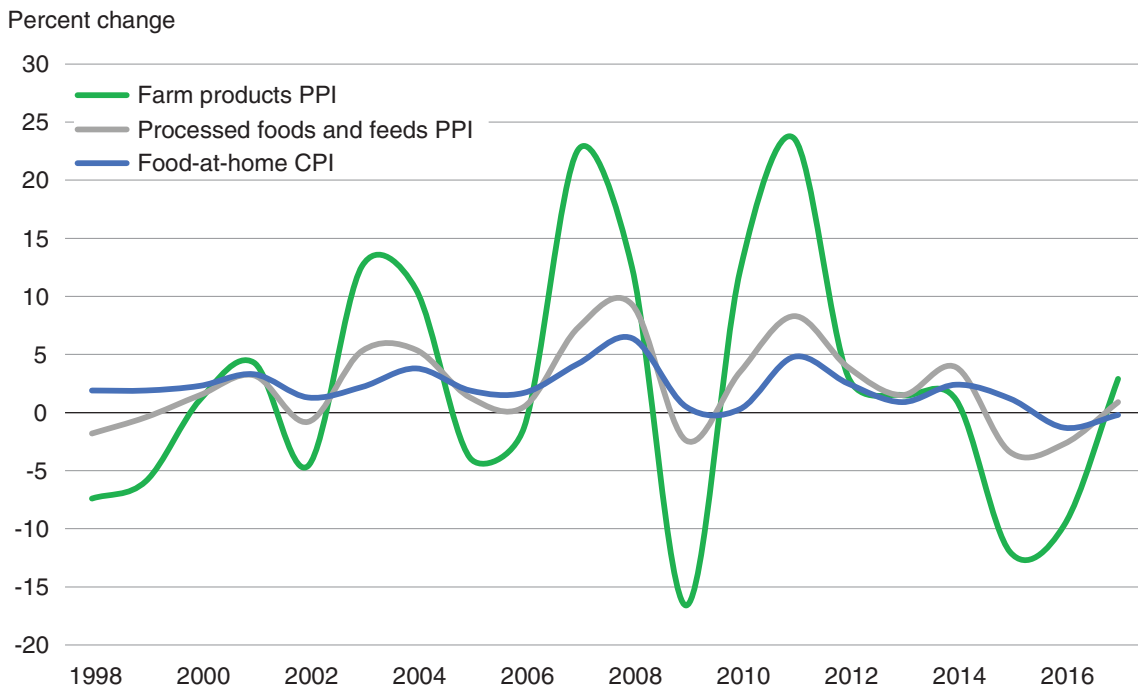
Source: USDA, Economic Research Service, using data from the U.S. Bureau of Labor Statistics Producer Price Index data, 2015-2017.

A similar pattern was observed as recently as 2009. Declining commodity prices during this period may have also placed downward pressure on retail prices, which rose a modest 0.5 percent from 2008 to 2009. In fact, examining the PPI is a useful tool for understanding what may happen to the CPI in the future as price changes at earlier stages of production tend to trickle down the supply chain. For instance, a decrease in animal feed prices can lower the prices for cattle or broilers, which would then lower wholesale beef, veal, and poultry prices and, to some extent, raise retail meat prices as well. Due to multiple stages of processing in U.S. food systems, the CPI typically lags movements in the PPI and is less volatile. A picture of this price transmission process—how price changes for inputs are transmitted to prices for final products—emerges when annual price fluctuations at the farm, wholesale, and retail level are examined (fig. 6).

One important factor driving lower agricultural commodity prices was increased domestic production of many agricultural commodities, which due to abundant supply placed downward pressure on prices from farm to retail (table 1). In fact, world production for all grains and oilseeds was higher in the 2016/2017 marketing year compared to the previous marketing year.⁸ The same trend held for U.S. production of meats, eggs, and milk, which all increased from 2015 to 2016 and, with the exception of turkey, increased again from 2016 to 2017.

⁸ It is important to note that production of farm commodities can be volatile year to year. While production of most commodities was higher in 2016-17, this does not necessarily mean production was at an alltime high.

Figure 6
Annual price changes in PPI and CPI, 1998-2017



PPI = Producer Price Index; CPI = Consumer Price Index.
Source: USDA, Economic Research Service, using data from the U.S. Bureau of Labor Statistics Producer Price Index and Consumer Price Index data, 2015-2017.

Table 1

U.S. and world production of selected commodities

Commodity	Measure	2015	2016	2017 Estimate	2018 Projection
World production					
Wheat	Million tons	728.3	735.2 (1.0)	750.7 (2.1)	759.8 (1.2)
Coarse grain	Million tons	1,306.1	1,259.2 (-3.6)	1,364.9 (8.4)	1,315 (-3.7)
Corn	Million tons	1,014.0	972.2 (-4.1)	1,075.5 (10.6)	1,041.7 (-3.1)
Rice	Million tons	478.6	472.9 (-1.2)	486.2 (2.8)	487.5 (0.3)
Oilseeds	Million tons	536.9	521.5 (-2.9)	574.9 (10.2)	568.8 (-1.1)
U.S. Production					
Beef	Million lbs.	23,760.0	25,288.0 (6.4)	26,240.0 (3.8)	27,702.0 (5.6)
Pork	Million lbs.	24,517.0	24,956.0 (1.8)	25,597.0 (2.6)	26,821.0 (4.8)
Broilers	Million lbs.	39,620.0	40,261.0 (1.6)	41,217.0 (2.4)	41,897.0 (1.6)
Turkeys	Million lbs.	5,627.0	5,981.0 (6.3)	5,981.0 (0.0)	5,945.0 (-0.6)
Eggs	Million dozen	8,052.5	8,578.7 (6.5)	8,807.80 (2.7)	8,930.0 (1.4)
Milk	Billion lbs.	208.6	212.4 (1.8)	215.4 (1.4)	219.0 (1.7)

Lbs = pounds.

Note: Percent changes from previous calendar/marketing year are in parenthesis. World production of commodities is measured for marketing years 2014/15, 2015/16, 2016/17 and 2017/18 rather than calendar years 2015, 2016, 2017, and 2018. Tons are measured in metric units.

Source: USDA, World Agricultural Outlook Board Supply and Demand Estimates (WASDE), April 2018.

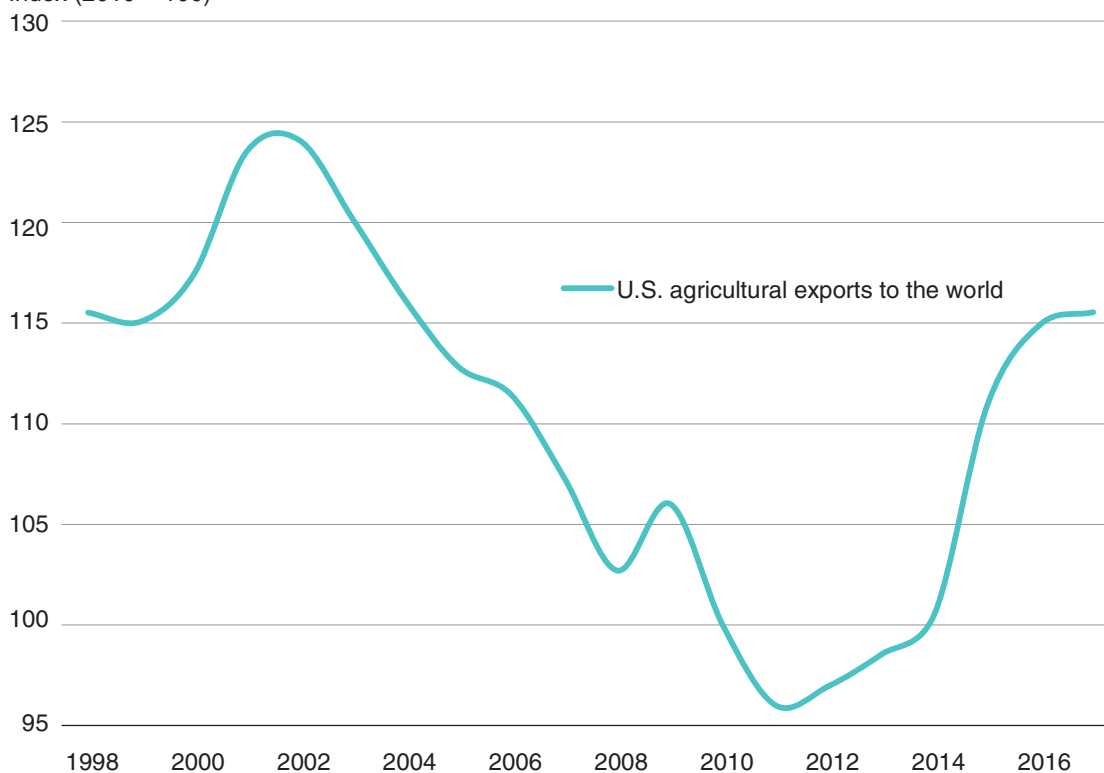
Strong U.S. Dollar Places Downward Pressure on Domestic Prices

A further downward pressure on prices was the strength of the U.S. dollar. Between mid-2014 and early 2015, the U.S. dollar (as measured by the Bloomberg Dollar Spot Index) had the fastest rise in almost 40 years—increasing nearly 25 percent over a 9-month period.⁹ The dollar remained strong throughout much of 2015, 2016, and 2017. USDA agricultural exchange rate data confirm this when we factor in major U.S. agricultural trade partners (fig. 7).¹⁰ From 2013 to 2017, the index rose 17.2 percent, whereas between 2008 and 2012, it fell 5.6 percent.

Figure 7

Real annual commodity trade-weighted exchange rate indexes

Index (2010 = 100)



Source: USDA, Economic Research Service Agricultural Exchange Rate data, 1998-2017.

A strong dollar impacts retail food prices in two ways. First, it increases consumer spending power relative to other currencies by making imported foods relatively less expensive. Second, it can also increase the supply of domestically grown or produced foods on the U.S. market. Just as a strong dollar makes foreign goods relatively less expensive, it makes U.S.-produced goods comparatively more expensive on the foreign market, making them less attractive to other countries (Boz et al., 2017).

⁹ The Dollar Spot Index is a measure of the value of U.S. currency compared to a basket of foreign currencies.

¹⁰ USDA, ERS Annual Commodity Trade Weighted Exchange rate is obtained by estimating a geometric index of country exchange rates (in real terms) multiplied by the weights of different commodities.

Many of the foods households buy at the grocery store are imported. In 2015, imports represented 99.9 percent of the U.S. banana supply, 61.7 percent of fresh seafood, and 55.3 percent of peppers (table 2). Although fresh fruits, vegetables, and seafood in particular are imported at high rates, the international market plays a vital role in most, if not all, major food markets. The United States is both an importer and exporter of products such as dairy, eggs, pork, and poultry. International markets can also affect U.S. prices of products that are exported. The demand and the price paid on the international market can impact domestic availability and prices. For example, lower export demand leaves more goods on the domestic market, increasing supply and lowering domestic prices for those goods.

Table 2
Import share of total supply for selected farm commodities

Category	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bananas	99.7	99.8	99.7	99.8	99.8	100	99.8	99.9	99.9
Fresh seafood	58.9	60.2	60.1	60.6	58.8	60.5	61.3	59.9	61.7
Canned seafood	51.5	51.3	55.2	55.4	57	56.3	52.5	57.5	52.8
Peppers	46	47.7	46.1	51.3	48.6	55.2	56.3	55.9	55.3
Tomatoes	38.3	40.9	41	50.9	48.4	49.7	51	50.2	50.8
Sugar	15.2	19.2	19.6	22.1	25.3	21.2	19.9	30.3	27.3
Orange juice	22.8	20.8	15.7	17.7	15.2	14.2	24.5	25.9	29.6
Tree nuts	17.7	14	15	14.3	12.3	13.7	15.1	17.1	16.9
Beef	10.1	8.5	9	7.8	7.1	7.7	7.9	10.6	12.2
Potatoes	9	9.7	7.8	7.5	9.3	6.6	7.2	8.8	7.4
Oranges	8.5	3.9	5.1	5.2	4.7	5.4	6.4	7.7	8.7
Apples	5.9	5.5	6	5	5.7	6.1	6.4	4.4	5.7
Head Lettuce	2.6	3.3	3.8	4.2	4.9	4.2	5	6	6.5
Pork	4.1	3.4	3.4	3.6	3.3	3.3	3.6	4.1	4.3
All dairy	3.6	2.6	2.7	2	1.7	1.9	1.7	2	2.5
Butter	1	0.7	0.9	0.5	0.5	0.8	0.6	1.2	2.1
Eggs	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.4	1.5
Poultry	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4

Note: Categories are sorted by the largest to smallest average import share.

Source: USDA, Economic Research Service Food Availability data, 2007-2015.

In addition to affecting prices for finished consumer foods, such as a banana or imported cheese, the international market also impacts prices of various imported food components. For example, if world milk prices decline, this may not only lower retail dairy prices but can also impact prices for other goods that use milk as an ingredient, like yogurt and ice cream. Another prime example of an input is feed grains. According to ERS data on agricultural exports, 19.63 percent of feed grains were exported in 2008 to 2016 (USDA WASDE, 2018). Changes in feed prices could impact retail prices for animal-based products such as meats, poultry, dairy, and eggs.

Marketing Costs and Market Power May Dampen the Effect of Declining Farm Commodity Prices on Retail Food Prices

Lower farm and food processing prices are being transmitted, albeit in a muted way, to food retailers through lower marginal costs of operating. Retailer competition and the marketing of food products (e.g., transportation, advertising, and packaging) can affect the passthrough of changes in farm commodity prices to retail prices. Hence, the relative stability of retail food prices compared to farm commodity prices, which was apparent in the beef and veal example, may reflect the market power and the contribution of marketing inputs of food in the food retailing industry (Martinez and Kaufman, 2008; Leibtag, 2008; Assefa et al., 2017).

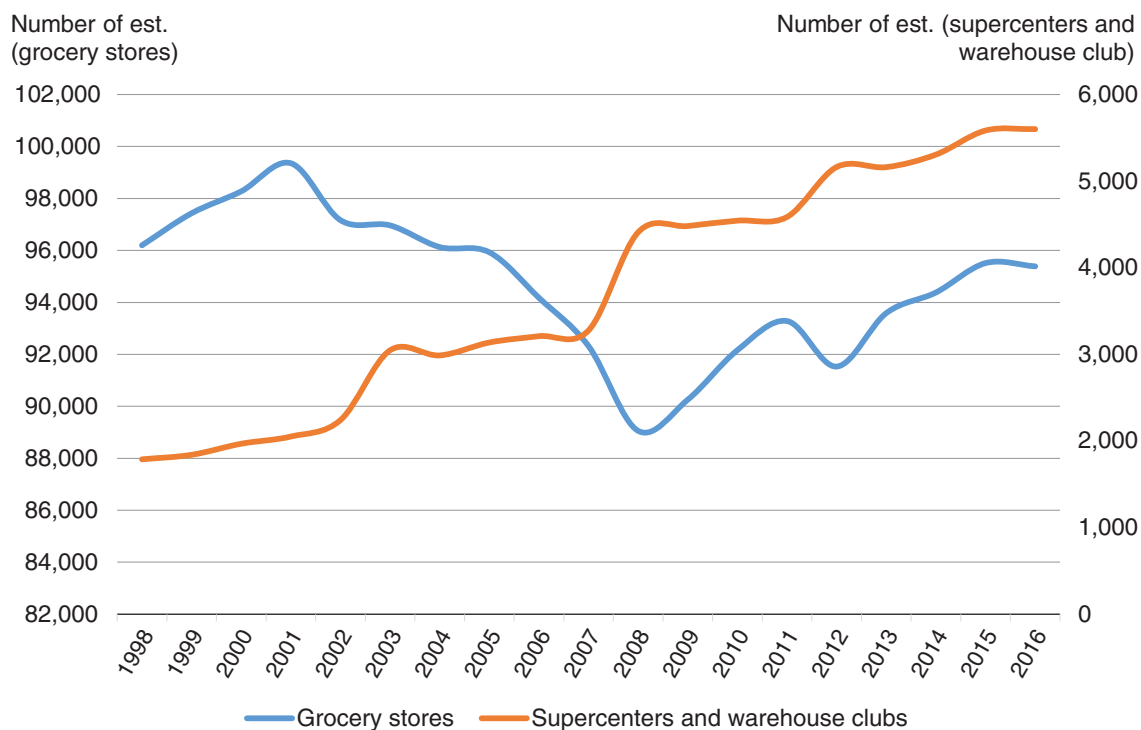
Over time, farm commodity costs have become a smaller portion of the price U.S. consumers pay for retail food. The ERS 2016 Food Dollar Series reports that just 12.7 cents of every food-at-home dollar goes toward farm production expenses (USDA, Economic Research Service, Food Dollar Series). The remainder is allotted to food processing, food service, other administrative, transportation, and retailing costs, categories that are less volatile due to fixed machinery expenses, multiyear contracts for supplies, and relatively small year-to-year changes in wages. However, the distribution of costs can vary significantly depending on the food category. Products that require little processing such as fresh fruits have a larger farm share at 38 percent of retail cost, whereas products requiring multiple ingredients and considerably more processing, such as white bread, have the smallest farm share at 4 percent of retail cost (USDA Price Spreads from Farm to Consumer, 2017).

The degree of market power in the industry can also affect the passthrough of farm commodity price changes to retail prices. In a competitive market, as farm commodity and other input prices fall, retailers have an incentive to pass along the price savings to consumers to sell higher volumes of products and gain a larger share of the market. Conversely, retailers have little incentive to pass along cost savings to consumers in a market with few competitors and often pass along cost increases to consumers (Richards et al., 2012; Loy et al., 2016).

Available evidence of whether the food industry has become more competitive and contributed to the deflationary retail food price trends in the most recent years is inconclusive. First, the majority of food-at-home products in 2016 were purchased from grocery stores and from warehouse clubs and supercenters—59 and 22 percent, respectively (USDA Food Expenditure Series, 2018). Between 1998 and 2006, the number of supercenters and warehouse clubs grew, while grocery stores declined. After the most recent economic slowdown, the number of grocery stores and of warehouse clubs and supercenters generally increased every year from 2009 to 2015, but this growth slowed and even declined between 2015 and 2016 (fig. 8). Increased competition among food retailers may also lead retailers to compete in terms of price (Saitone and Sexton, 2017; Hausman and Leibtag, 2007). Supercenters and warehouse clubs, such as Costco, are able to contract lower prices with suppliers and in turn charge lower prices to the consumer. With cost a primary preference for many consumers, higher priced retailers must respond by also lowering their prices (Hausman and Leibtag, 2007).

Figure 8

Number of grocery store and supercenter and warehouse club establishments, 1998-2016

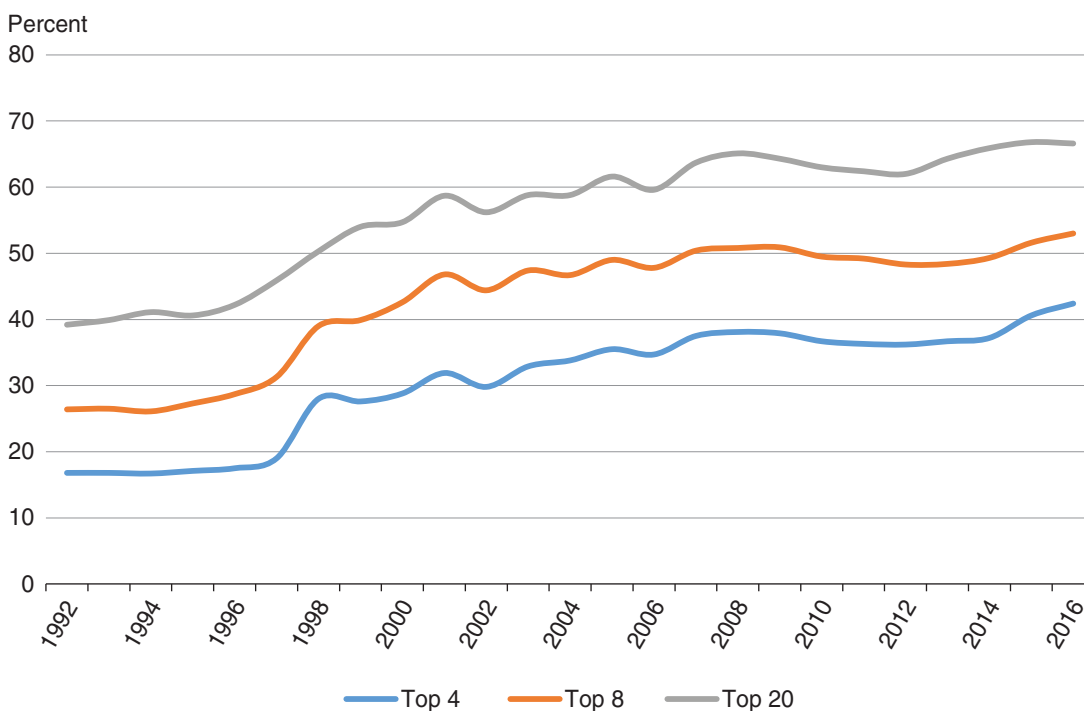


Est. = Establishments.

Source: U.S. Census Bureau County Business Patterns data, 1998-2016.

Second, the top 4, 8, and 20 largest food retailer firms in the United States (including grocery stores and supercenters, but not warehouse clubs) controlled 42, 53, and 67 percent of the food sales in 2016, respectively. These shares, which are sometimes used to indicate market power, stabilized between 2007 and 2012 but have increased 5-6 percentage points for the top 4, 8, and 20 food retailers in the United States since 2012 (fig. 9). However, these measures do not capture the recent U.S. market entry of Lidl, a German discount food retailer, and growing competition from e-commerce food retailing (e.g., Amazon, Peapod food delivery).

Figure 9
Share of U.S. retail food sales for top 4, top 6, and top 20 firms

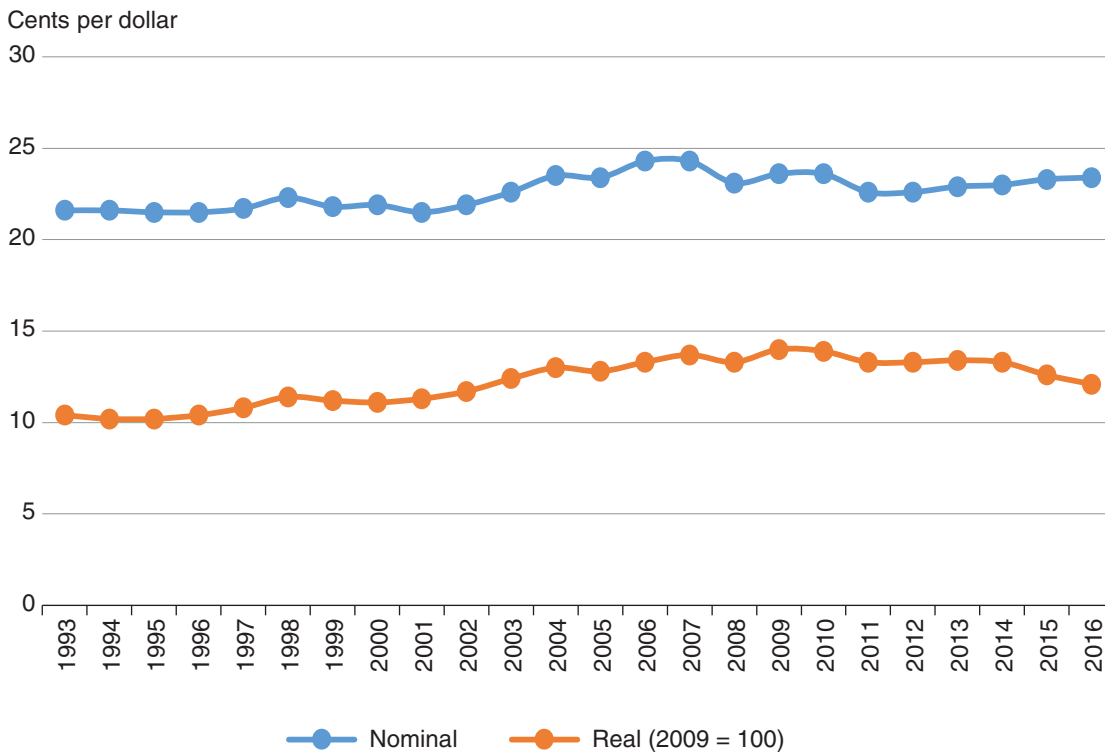


Note: These estimates do not include warehouse clubs.
 Source: USDA, Economic Research Service Retail Trends 2018.

Third, between 2011 and 2016, the share of every dollar spent on food-at-home products that went to retailing services increased from 22.6 to 23.4 cents (fig. 10). During this period, the real, or inflation-adjusted, share of retailing services had been stagnant or most recently had even declined. This means that prices of retail services outpaced those of the retail food-at-home prices and could indicate increased market power in the food retailing industry. However, it may also imply that more grocery stores offer in-store services (e.g., restaurants), which would increase the price of retail services as well.¹¹

¹¹ The USDA, Economic Research Service Food Dollar Series is not a fixed basket, so prices could increase because of an increase in quality of service offered.

Figure 10
Nominal and real retail trade share of the food-at-home dollar



Source: USDA, Economic Research Service Food Dollar Series, 1993-2016.

Last, the effect of marketing and market power in the retail food industry may also be limited, due to increasing competition with the food service industry. Several studies have found that households substitute between foods sold at retail stores and those sold by food services because of increased time constraints and income (Elitzak and Okrent, 2018). The share of the household food budget spent on food away from home has increased steadily (except during some major economic downturns) over the past several decades. In 2016, almost 48 percent of the household food budget was allocated to food away from home, 5 percentage points more than in 1997. Food retailers are increasingly offering more foods for in-store dining and prepared foods for takeout, up 30 percent since 2008 (NPD Group, 2016). In 2014, between 7 to 10 percent of foods purchased at grocery stores were prepared foods, depending on the age of the shopper (Kuhns and Saksena, 2017).

Conclusion

The determinants of retail food prices are much more varied than corresponding factors for farm-level commodities. In 2016-17, price deflation was due to a confluence of factors—increases in farm-level food commodity production, declining input costs for food production and transportation, and a strong U.S. dollar. The food industry may have also become more competitive during this period, though evidence of this is inconclusive. While food-at-home prices may continue to grow at a lower than average rate over the next year (current forecasts call for a 0.5- to 1.5-percent increase), shocks to one or more food inputs could change the course of retail food price inflation this year and in years to come.

It is also important to highlight that not all food categories experienced retail price deflation over the previous 2-year period. Starkly contrasting with many of the major retail food categories, the nominal prices of fresh fruit, fish and seafood, fats and oils, and items in the other foods category rose. The average price of other foods and fats and oils rose 0.4 and 0.2 percent between 2015 and 2017, respectively. Because foods in the other foods and fats and oil categories are more processed, less of the retail price reflects farm costs, and because they are domestically produced (e.g., snacks, frozen entrees, peanut butter, and salad dressing), lower farm commodity prices, lower transportation costs, and a strong dollar have less of an effect on them. However, this is not the case for nominal retail prices of fresh fruit and fish and seafood, which grew 2.7 and 0.5 percent in the same period, respectively. Fresh fruit and fish and seafood are imported more and processed less compared to the other food categories. One explanation is that increases in consumer demand for these products placed upward pressure on prices, perhaps counterbalancing the deflationary pressures (Minor and Perez, 2018; Lin et al., 2016).

The persistence of these lower than average inflation or even deflation price trends into 2018 and 2019 poses a series of interesting questions relating to the retail food sector. Specifically, what will the implications of deflation be throughout the food supply chain in the future? And how will consumers respond to changes in retailers' pricing strategies? Will more households shift from purchasing more meals away from home to purchasing more meals for at-home consumption? As previously mentioned, the food-away-from-home (restaurant) index has not followed the same pattern of price decline. The cost structure at a restaurant is more heavily tied to wages and other overhead costs associated with food service, as opposed to raw food prices.

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