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America's Eating Habits: Food Away From Home

By Michelle J. Saksena, Abigail M. Okrent, Tobenna D. Anekwe, Clare Cho, Christopher Dicken, Anne Effland, Howard Elitzak, Joanne Guthrie, Karen S. Hamrick, Jeffrey Hyman, Young Jo, Biing-Hwan Lin, Lisa Mancino, Patrick W. McLaughlin, Ilya Rahkovsky, Katherine Ralston, Travis A. Smith, Hayden Stewart, Jessica Todd, and Charlotte Tuttle

Edited by Michelle J. Saksena, Abigail M. Okrent, and Karen S. Hamrick

What Is the Issue?

Over the past several decades, Americans have grown to rely on the convenience of foods prepared outside of the home. Unfortunately, food away from home (FAFH) often contains fewer fruits and vegetables and have more calories, fat, and sodium than food prepared at home (FAH), and consuming FAFH is associated with obesity. Recently passed labeling legislation aims to help consumers make healthier FAFH choices and to encourage FAFH suppliers to produce more healthful options. To explore Americans' eating away from home behavior, this report presents research on three broad FAFH topics: (1) food choices and availability; (2) nutrition and diet quality; and (3) food policies, including menu labeling and food assistance programs.

What Did the Study Find?

Food choices and availability of FAFH. Over the past 30 years, FAFH's share of U.S. households' food budgets and total food spending grew steadily. FAFH options also became more widely available as growing numbers and types of businesses—including grocery stores—served prepared foods. Apart from the Great Recession (2007-09), these trends continued uninterrupted from 1987 to 2017, but the changes were not uniform across socioeconomic groups or business types.

- Spending on FAFH surpassed spending on FAH for the first time in 2010, increasing its share of total food spending from 44 percent (30 years prior) in 1987 to 50.2 percent in 2010.
- Higher income households spent more on FAFH and bought it more frequently than lower income households. Households with incomes greater than 300 percent of the Federal poverty guidelines obtained FAFH on 5.5 occasions per week, while households whose incomes were less than or equal to Federal poverty guidelines obtained FAFH on 4.2 occasions per week.
- For households with an elderly individual (over 64 years old), the share of household food spending on FAFH was 8 percent lower than for other households. Also, Americans who were 35–44 years old consumed FAFH more often than other Americans.

ERS is a primary source of economic research and analysis from the U.S. Department of Agriculture, providing timely information on economic and policy issues related to agriculture, food, the environment, and rural America.

- In 2000–15, quick-service restaurants (QSRs), also referred to as fast-food and limited-service restaurants, drove the industry’s growth both in sales and number of outlets. The fastest-growing segment of the QSRs was fast casuals—e.g., Chipotle Mexican Grill and Panera Bread—which combines counter service with the perceived ambiance and product quality of full-service restaurants (FSRs).
- Much of the growth in foodservice establishments occurred in urban U.S. counties, consistent with patterns of urban and rural migration. As rural populations declined, FSRs in rural areas were particularly hard hit, leaving QSRs to dominate.
- Spending on FAFH declined during the Great Recession, by \$47 billion (18 percent) in real dollars from 2006 to 2010, and rebounded thereafter.
- During the Great Recession, households replaced spending at FSRs with unprepared foods purchased at retail stores (like grocery stores), but households’ share of spending for QSRs stayed constant. In 2014, household expenditures on FAFH had yet to rebound to pre-Recession levels.
- Despite the downturn in household spending on FAFH during the Great Recession, the number of chain QSRs grew, and consumers spent a greater share of their FAFH dollars at these restaurants.

Nutritional composition and diet quality. The nutritional composition of FAFH across all income levels and all FAFH types (except school foods) was consistently lower quality and more caloric than that of FAH. Though FAFH is known to have lower diet quality, access to FAFH did not seem to affect FAFH consumption and did not correlate with diminished overall diet quality.

- FAFH’s share of total average daily energy intake increased from 17 percent in 1977–78 to 34 percent in 2011–12, and consumption of QSR foods was the largest source of this growth.
- On the whole, FAFH contained more saturated fats and sodium, and less calcium, iron, and fiber than FAH—however, the nutritional composition of FAFH varied across outlet types. For example, in 2009–12, the fat content of school lunches (a type of FAFH) was almost identical to that of FAH (33 percent) while the fat content of QSR foods averaged 39 percent.
- Although frequent QSR customers purchased less vegetables, fish, and nuts, their overall diet quality was no worse than that of QSR nonconsumers.

Policies that affect FAFH. FAFH consumption is influenced by public policy mainly on two fronts. First, current food assistance programs with in-kind food benefits affect food choices and diet quality of participating low-income households. For example, new requirements that improve nutrition of school meals directly affect children’s diet quality. Second, new menu labeling regulations may help consumers make more informed food choices at restaurants.

- The average household Healthy Eating Index (HEI-2010) for FAFH was lower than for FAH, regardless of SNAP participation or income.
- School meals provided by the National School Lunch Program and School Breakfast Program contained higher levels of calcium than both FAH and other sources of FAFH and adhered better to USDA’s *Dietary Guidelines for Americans* than other sources of FAFH.

How Was the Study Conducted?

This report uses a variety of data sources and techniques to examine FAFH trends. The analysis was done primarily using descriptive statistics (e.g., means, differences, and correlations) and literature review. The main data sources were the National Health and Nutrition Examination Survey (NHANES), USDA ERS’s Food Expenditure Series, the National Household Food Acquisition and Purchase Survey (FoodAPS), the Consumer Expenditure Survey, U.S. Census Bureau’s Monthly Retail Trade and Foodservices series, NPD ReCount, and Euromonitor Passport. These data sources include self-reported information and measurable individual characteristics collected by household survey, establishment information, and proprietary industry data.

Chapter 4: Food Away From Home During the Great Recession

Clare Cho and Jessica Todd

This chapter examines changes in food spending during and after the 2007-09 Great Recession using the Consumer Expenditure Survey from 2005 to 2014. Households decreased the share of total food expenditures allocated to FAFH, which had not returned to pre-recession levels by 2014. Households shifted some expenditures from FAFH to FAH during the Great Recession and through the recovery, increasing spending on edible and unprepared ingredients and decreasing spending on full-service restaurants.

Unlike prior economic downturns in the past 30 years, during the most recent recession, food expenditure patterns changed substantially as Americans spent less of their food budget on food away from home (FAFH) and more on food at home (FAH) (Kumcu and Kaufman, 2011). Known as the Great Recession, the most recent economic downturn lasted from December 2007 to June 2009 and was the most severe since the Great Depression.¹³ Unemployment continued to rise during the initial recovery, with over 8 million people losing their jobs between December 2007 and February 2010—a 6-percent decline.¹⁴ Labor market conditions were slow to improve thereafter. As a result, employment did not reach pre-recession levels until May 2014; mean and median household income remained below pre-recession levels in 2014.¹⁵

As the economy slowed and unemployment rose, many U.S. households experienced financial hardship and decreased consumption; the decline in aggregate spending was the most severe and persistent since World War II (De Nardi et al., 2012). Food spending was no different, falling 5 percent—from \$726 billion in 2006 to \$690 billion in 2009—largely due to an 11.5-percent decline in FAFH expenditures (Kumcu and Kaufman, 2011). This change was reflected in food consumption patterns as well, with daily calories from FAFH declining 20 percent (166 calories) among working-age adults between 2005 and 2010 (Todd, 2014). Nevertheless, the number of quick-service restaurants continued to grow during this period, while the number of full-service restaurants remained relatively constant (see chapter 6).¹⁶

Although economic downturns can have a negative effect on households by reducing their income, studies show mixed effects of downturns on work hours and health outcomes. While some studies find that reduced work hours during the recession led to healthier lifestyles, including an increase in physical activity and a decline in severe obesity (e.g., Ruhm, 2005), others find negative health effects, particularly among individuals who had unhealthy behaviors prior to the recession (e.g., Charles and DeCicca, 2008). Similarly, changes in food purchasing patterns during the Great Recession reflect changes in financial and time constraints faced by households. Nevo and Wong (2015) find that between 2008 and 2010, individuals went grocery shopping more often but spent less money by taking advantage of coupons and discounts. Using data from the American Time

¹³These are the dates set by the National Bureau of Economic Research, which is considered to determine the official dates of a recession based on various economic indicators.

¹⁴This percentage was calculated using Current Employment Statistics from the U.S. Department of Labor, Bureau of Labor Statistics. February 2010 was the cutoff date because this period marked the lowest employment level during the recession and recovery.

¹⁵The mean and median income were obtained from the Census Bureau's Current Population Survey.

¹⁶Quick-service restaurants typically offer counter service for ordering while full-service are sit-down restaurants with a wait-staff.

Use Survey, Aguiar et al. (2013) find that 30 percent of the foregone market work hours during the Great Recession were reallocated to nonmarket work—including food preparation.¹⁷ However, other studies find that the recession did not have a significant effect on the amount of time spent cooking at home or eating away from home (Smith et al., 2014). Nevertheless, it remains unclear how households adjusted the types of food they purchased throughout the Great Recession and the prolonged recovery.

This chapter explores fluctuations in food expenditures during the Great Recession and the prolonged recovery, examining total food spending as well as spending on FAH and FAFH. In addition, the analysis breaks apart FAFH expenditures by level of service and FAH expenditures by level of preparation needed for consumption to gain insight into the factors affecting spending allocations. This chapter also examines average per capita expenditures among households separated by socioeconomic status and composition, which may affect how households adjusted their food spending patterns. These analyses provide insight on how households adjust their spending in response to changes to financial and time constraints during economic downturns, and the effect it may have on their diets. This information can be used by policymakers to help mitigate the possible health impacts of recessions.

Data

This study uses data from the 2005-2014 Consumer Expenditure Survey (CES) conducted by the Bureau of Labor Statistics (BLS).¹⁸ The period covered by the survey begins nearly 3 years before the recession began and ends at the point for which we have most recent data available, and when employment also recovered to its pre-recession level. The CES is a diary survey sent to about 7,000 households each year. Participant households record all of their purchases for 2 consecutive 1-week periods, including Uniform Commercial Codes (UCC) of each product purchased. Nonfood purchases are removed, and food spending that is representative of a full calendar year is estimated using sampling weights and estimation adjustments provided by BLS.¹⁹

Reported expenditures in the CES are adjusted using the FAH and FAFH Consumer Price Index (CPI) from BLS to account for inflation and any fluctuations in food prices, such as the global spike of 2007-08.²⁰ All of the food expenditures in this chapter are reported in 2005 FAH and FAFH-dollars; total food expenditures are calculated by aggregating the deflated FAH and FAFH expenditures.²¹ It is important to note that the CES data only provide information on the total amount spent

¹⁷Market work hours consist of any hours spent working at a job, including any time spent commuting to work and overtime. Nonmarket work hours consist of any time spent working to take care of a home (e.g., vacuuming), obtain goods (e.g., grocery shopping), and take care of other adults.

¹⁸This chapter's estimations of FAFH and FAH may differ from estimations in chapter 3 for two reasons. First, the ERS Food Expenditures series includes business expenditures. Second, unlike the ERS food expenditure survey, BLS classifies its data according to where the product was purchased. For example, carryout from a full-service restaurant would be considered "Lunch/Dinner at Full-Service," or FAFH.

¹⁹See BLS website for details.

²⁰The 2007-08 spike in food prices has been attributed to increasing grain prices resulting from droughts as well as government policies and international demand.

²¹Although a few of the individual items have their own CPIs, most of the product categories in this analysis do not. Thus, the FAH CPI is used for all FAH categories, even though they may have had different price changes. For example, in 2008, the percentage change in the CPI for FAH was 6.4, although pork prices increased by only 2.3 percent, while egg prices increased by 14.0 percent.

by each household for each UCC code during the week; the data do not include any information on the prices of the products or the quantities purchased.

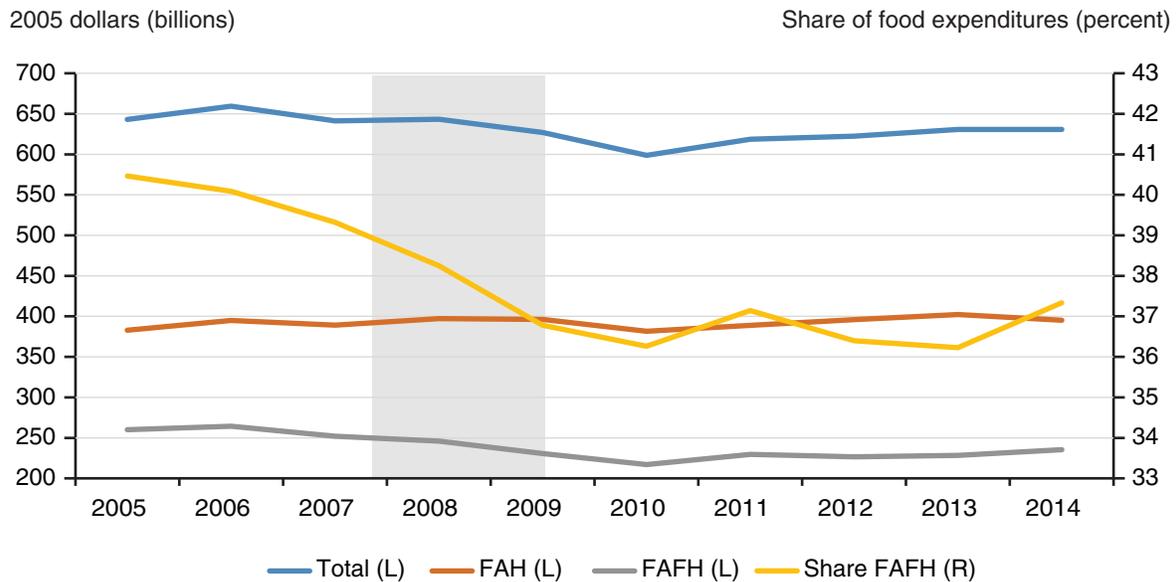
Total Food Expenditures for all Households

During the Great Recession, overall food spending declined and households allocated a greater share of their food budgets to FAH in place of FAFH. Total food expenditures adjusted for inflation fell 7 percent (\$42 billion) between 2007 and 2010 (fig. 4.1).²² This drop was primarily driven by the steady decline in spending on FAFH, which fell by 14 percent (\$35 billion) during this period; its share of total food expenditures fell by 4 percentage points during this period. Although the Great Recession officially ended in June 2009, food expenditures did not begin to increase until 2010, coinciding with employment trends. The increase in FAFH spending was slower than the decline during the Great Recession, reflecting the slow labor market recovery. As a result, real (inflation-adjusted) food expenditures remained 2 percent (\$13 billion) below pre-recession levels in 2014.

The large differences between total, FAH, and FAFH expenditures makes it difficult to examine their relative fluctuations. The percent change in spending levels, relative to 2005, shows the relative fluctuations more clearly, and statistically significant differences are noted with stars (fig. 4.2). Real spending on FAFH declined by 18 percent (\$47 billion) from 2006 to 2010 and remained below its 2005 level through 2014. In contrast, FAH expenditures during 2005-14 exceeded their 2005 level in every year except 2010, reaching a peak in 2013 at 5 percent (\$19 billion) above the initial level. These divergent trends suggest that households were replacing FAFH with FAH, or they were purchasing more groceries rather than eating out at restaurants.

Figure 4.1

Total food, food-at-home, and food-away-from-home expenditures, 2005-14



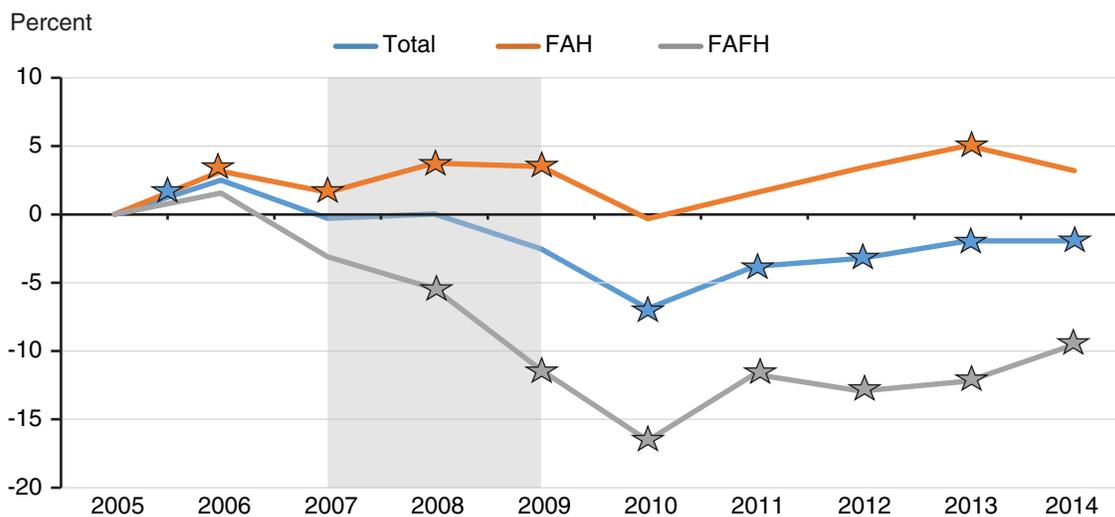
Note: Shaded area is recession. L = left axis. R = right axis.

Source: U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey.

²²The dollar values are lower than those presented in Kumcu and Kaufman (2011) because we do not include alcoholic beverages.

Figure 4.2

Percentage change in total food, food-at-home, and food-away-from-home expenditures, 2005-14



Note: Shaded area is recession. The stars indicate that the expenditures are statistically different from 2005. FAH = food-at-home. FAFH = food-away-from-home. Source: U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey.

Total Food Expenditures by Category

Examining changes in aggregate FAH and FAFH expenditures provides a broad view of changes in household food spending in response to the Great Recession. However, there are a number of ways households could have adjusted their food spending within FAH and FAFH as well. For example, households could have reduced their FAFH expenditures by patronizing full-service restaurants less frequently but maintaining their spending at fast-food restaurants. Conversely, they could have increased their FAH spending by purchasing prepared foods and ready-to-heat meals or by cooking more meals with cheaper, raw ingredients, particularly if their leisure time had grown and they were financially constrained. Although the data limit analysis on whether households purchased fewer or cheaper items, the data do allow examination of changes in FAH expenditures according to preparation time and FAFH expenditures based on level of service.

FAH spending consists of six categories: prepared food; ready-to-heat food; edible ingredients; unprepared ingredients; nonalcoholic drinks; and other.²³ Similar to categories used in Okrent and Kumcu (2016), the first four categories used in this study are distinguished by the level of preparation required to consume the food.²⁴ Prepared foods are those that are eaten only in their current form, such as cake or prepared salads. Ready-to-heat foods, such as canned soup and frozen meals, only need to be heated. Edible ingredients are foods that may be eaten in their current form but that could also be used as ingredients in other dishes that require more preparation. These include

²³There were a total of 139 UCC codes. See appendix to see which UCC codes are included in each category.

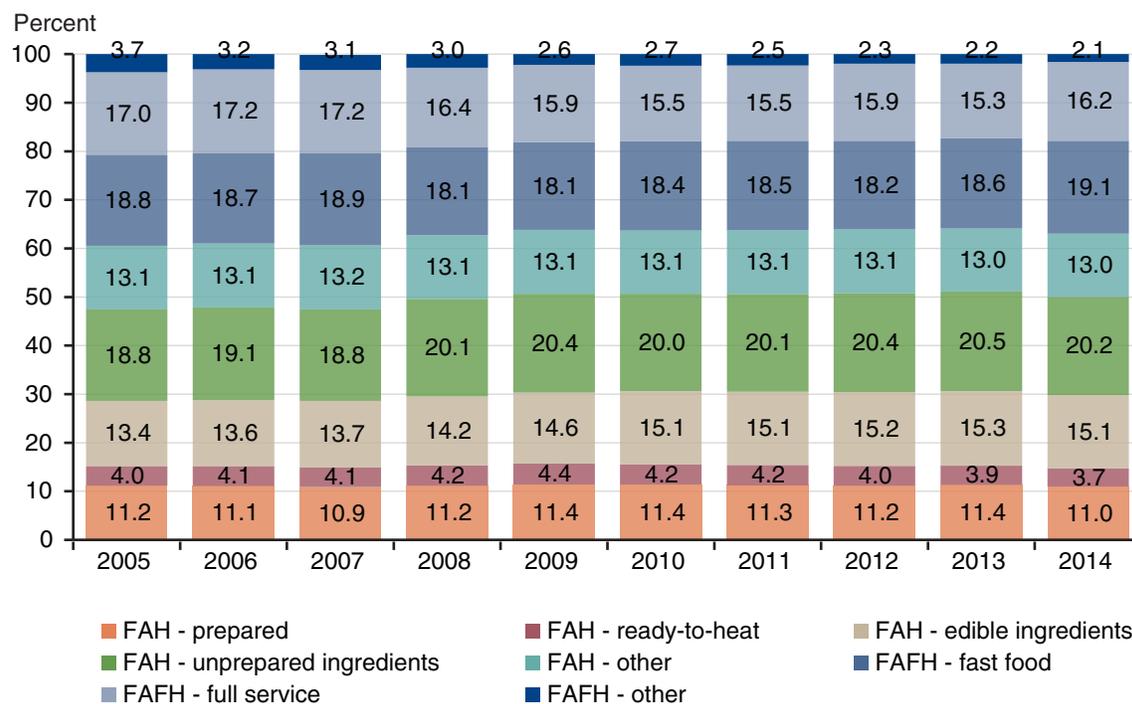
²⁴The categories and their names are not identical to those in Okrent and Kumcu (2016) because the UCCs provided by CES are less detailed than the UPCs used in their dataset.

canned meats, fruits, and vegetables, and fresh fruits and vegetables.²⁵ Finally, unprepared ingredients are foods that require preparation prior to consumption, such as eggs, rice, or raw meat. Nonalcoholic drinks are self-explanatory. The other FAH food category includes candy and chewing gum, baby food, and vitamin supplements. FAFH spending on meals and snacks is separated into three categories: fast food, full service, and other (e.g., catered affairs and vending machines).

Households allocated the largest shares of food expenditures to fast food (FAFH) and unprepared ingredients (FAH) throughout all of the years examined, with each category accounting for almost one-fifth of the total food budget (fig. 4.3). Changes in expenditure shares for each category during the period studied ranged from 0.5 percentage points (prepared foods) to 1.9 percentage points (edible ingredients and full-service restaurants). From 2006 to 2010, the 4-percentage-point decline in the share of FAFH expenditures was largely due to the 1.7-percentage-point decline in spending at full-service restaurants, whereas the increase in FAH expenditures mostly stemmed from the 1.5-percentage-point increase in spending on edible ingredients.

Figure 4.3

Percentage change in total food, food-at-home, and food-away-from-home expenditures, 2005-14



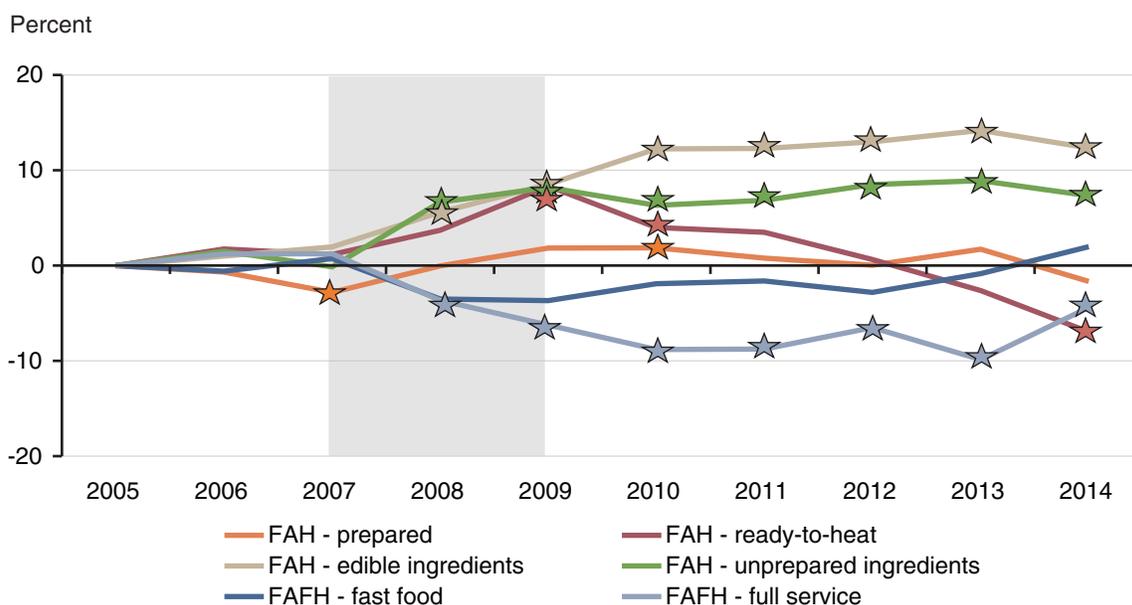
Note: FAH = food at home. FAFH = food away from home.
 Source: U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey.

²⁵This category includes salad dressings because it does not need to be cooked, and is generally used with other items in this section, particularly fresh vegetables.

Examination of the percent change in expenditure shares for each category (excluding other FAH and FAFH), relative to the 2005 shares, provides a more clear picture (fig. 4.4). The categories with the greatest food expenditure shares had the greatest percent change from 2005 to 2010: edible ingredients (12-percentage-point increase) and full-service restaurants (9-percentage-point decrease). The percent change from 2005 was statistically significant beginning in 2008 for both of these categories and for unprepared ingredients. FAFH expenditures rebounded beginning in 2010, but the shares of food expenditures spent at full-service restaurants remained 4 percentage points below pre-recession shares in 2014. Although spending on FAFH substitutes—prepared and ready-to-heat foods—increased during the recession, both declined by 2014, with prepared food returning to the 2005 level and ready-to-heat food falling even further below the 2005 level. The consistently higher budget shares on edible and unprepared ingredients after the recession suggest that while the recession may have pushed households to prepare more food at home, there may also have been a general shift in preferences for home-cooked meals.

Figure 4.4

Percent change in share of real food expenditures by type, 2005-14



Note: FAH = food at home. FAFH = food away from home. The stars indicate that the shares are statistically different from 2005 ($p < 0.05$).

Source: USDA, Economic Research Service calculations from U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey data.

Differences Across Household Types

Studies find that income, prices, and time constraints can affect total food expenditures, particularly for convenient FAH (i.e., prepared and ready-to-heat food) and fast food (e.g., Jabs and Devine, 2006; Okrent and Kumcu, 2016). This next section explores changes in food expenditure allocations during the Great Recession across various household types—by income and participation in

USDA's Supplemental Nutrition Assistance Program (SNAP),²⁶ presence of at least one elderly individual or child in the household, and age of the oldest child for households with children. To ensure that differences in household size do not overstate differences across these various socioeconomic groups, the analysis compares average per capita expenditures within each group.²⁷

Comparison by Income Quintiles

Households in the lowest, middle, and highest income quintiles had average incomes of \$11,467, \$48,351, and \$149,498, respectively, in 2005.²⁸ As expected, households in the highest income quintile had the highest average per capita food expenditures in all years examined, while households in the lowest income quintile had the lowest (table 4.1). Middle-income households decreased their average per capita food expenditures during the Great Recession, which reduced the gap between the lowest and middle quintile by \$279 from 2005 to 2014.

Similar to total food expenditures, the share of food expenditures allocated to FAFH was highest for the highest income quintile and lowest for the lowest income quintile but declined during the Great Recession for all households, regardless of income (table 4.1). The lowest income quintile had the sharpest decline in the share of FAFH between 2007 and 2009 (3 percentage points, or 10 percent). Households in the middle-income quintile had the slowest recovery following the recession; in 2014, the share allocated to FAFH for this group remained 3 percentage points (7 percent) below the 2005 share.

Table 4.1
Food expenditures by income quintiles, 2005-14

	Average food expenditures (per capita, 2005 dollars)			Percent of food expenditures on FAFH		
	Lowest quintile	Middle quintile	Highest quintile	Lowest quintile	Middle quintile	Highest quintile
2005	\$2,255	\$2,766	\$3,293	32.2	40.9	44.6
2006	\$2,281	\$2,763	\$3,521**	31.6	39.8	44.7
2007	\$2,256	\$2,751	\$3,451**	33.1	39.5	44.9
2008	\$2,340	\$2,691	\$3,378	29.8**	37.9**	44.0**
2009	\$2,309	\$2,631**	\$3,260	29.8**	37.9**	41.8**
2010	\$2,227	\$2,557**	\$3,290	30.9	36.8**	41.3**
2011	\$2,229	\$2,489	\$3,390	30.2**	36.0**	42.1**
2012	\$2,304	\$2,532	\$3,296	29.8**	37.4**	42.2**
2013	\$2,304	\$2,549	\$3,190	30.0**	36.6**	41.2**
2014	\$2,313	\$2,545	\$3,324	31.0	38.1**	43.7

Note: ** indicates that the expenditures are statistically different from 2005 ($p < 0.05$).

Source: USDA, Economic Research Service estimates using U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey data.

²⁶The Food, Conservation, and Energy Act of 2008 (farm bill) changed the name of the Food Stamp Program to SNAP as of October 1, 2008.

²⁷Annual averages for each group are calculated on a per capita basis—i.e., household expenditures divided by household size. See BLS website for details.

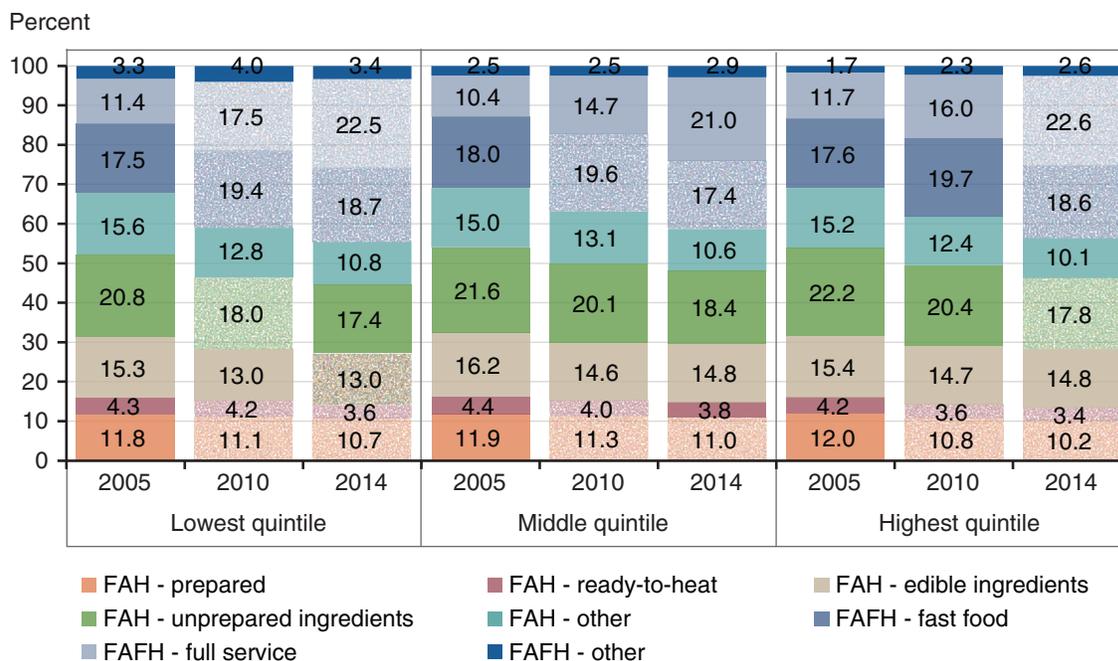
²⁸Income quintiles are based on pre-tax income. This includes all potential income sources, such as unemployment insurance, workers' compensation, and alimony, in addition to wages received. In 2005, the income quintiles are separated by the following thresholds: \$20,000, \$37,710, \$60,000, and \$91,240.

Changes in the share of FAFH expenditures over time for all three income quintiles were driven largely by changes in spending at full-service restaurants (fig. 4.5). The share spent at full-service restaurants is positively related to income, with the highest income quintile allocating at least 10 percentage points more than the lowest income quintile. Between 2005 and 2010, middle- and high-income households decreased their share of expenditures at full-service restaurants. In comparison, over the same period, only households in the highest income quintile decreased fast-food expenditures. Throughout all the years examined, all income quintiles maintained similar shares of expenditures at fast-food restaurants (between 17.1 and 19.7 percent).

Over all 9 years examined, households in the lowest income quintile spent the most on unprepared ingredients and had a larger share of their food expenditures in every FAH category than households in the middle and highest income quintiles. From 2005 to 2010, middle- and high-income households increased their share of expenditures on edible and unprepared ingredients; middle-income households maintained these higher shares through 2014 for both categories, while high-income households only did so for edible ingredients. Low-income households increased their share of edible ingredients in 2010, relative to 2005, and increased their share of unprepared ingredients in 2014.

Figure 4.5

Percent change in share of real food expenditures by type, 2005-14



Note: FAH = food at home. FAFH = food away from home. FAH – Other includes all beverages. A solid color for 2010 and 2014 indicates statistically significant change from 2005 ($p < 0.05$), whereas the lighter shading indicates an insignificant change.

Source: USDA, Economic Research Service calculations from U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey data.

Comparison by SNAP Participation and Eligibility

SNAP provides households with a cash-like benefit that can be used to purchase groceries that will be taken home; benefits cannot be used to purchase hot foods and food that will be eaten in the store.²⁹ SNAP caseloads increased by 56 percent during the Great Recession. This change stemmed partially from increasing need, as the number of people in poverty increased by 26 percent, but also from changes in SNAP policies that made the application process easier and the benefits more generous (Andrews and Smallwood, 2012). For example, the 2009 American Recovery and Reinvestment Act (ARRA) expanded eligibility by temporarily suspending the work requirement for able-bodied adults without dependents. ARRA also increased SNAP benefit amounts, which helped reduce food insecurity and increased the SNAP budget share allocated to food by a greater amount than a similar increase in income (Nord and Prell, 2011; Beatty and Tuttle, 2015). Thus, changes in food expenditures during the Great Recession among low-income households likely vary by SNAP participation status. In the next section, we compare food expenditures among SNAP participants with those of income-eligible and income-ineligible nonparticipants.³⁰

From 2005 to 2014, income-ineligible nonparticipants had the highest average per capita food expenditures, while SNAP participants had the lowest (table 4.2). Over the same period, SNAP participants and eligible nonparticipants had insignificant changes in their food expenditures. Ineligible nonparticipants increased per capita spending in 2006 and 2007 relative to 2005. The difference in food expenditures between SNAP participants and income-eligible nonparticipants was driven largely by differences in household size. The lower per capita food expenditures for SNAP households may be partially attributable to economies of scale. In this dataset, SNAP households tend to be larger than income-eligible nonparticipant households because a higher proportion of SNAP households have children. When food expenditures are compared for the entire household rather than for each household member, the average for SNAP participant households is nearly three times higher than that for income-eligible nonparticipant households.³¹

Eligible nonparticipants also had a higher share of their food budget allocated to FAFH than did SNAP participants, which is not surprising given that SNAP supports the purchase of food for home preparation and consumption (table 4.1).³² While income-ineligible households decreased their share of food spending on FAFH in 2008-14 relative to 2005, SNAP households had no statistically significant changes in FAFH share throughout the entire 2005-14 period. However, relative to 2005, income-eligible nonparticipants had a 2-percentage-point decline in the share of FAFH in 2008 and 2012 (8- and 9-percent decline, respectively).

²⁹Restaurants can also be authorized to accept SNAP benefits from qualified homeless, elderly, or disabled individuals for low-cost meals in some areas. See USDA Food and Nutrition Service website on SNAP for more details.

³⁰A household is eligible to participate in SNAP if its monthly gross income is below 130 percent of the poverty line and its monthly net income is below 100 percent of the poverty line. However, categorical eligibility raises or eliminates these limits in some States. Furthermore, the Consumer Expenditure Survey (CES) reports annual income, and low-income households can experience income volatility over the year, making them eligible during some months but not others. Thus, the income limit is set at 150 percent of the poverty line according to household size.

³¹Some of the eligible nonparticipant households may also be misclassified SNAP participants, as studies find that survey respondents underreport SNAP participation (e.g., Meyer et al., 2009).

³²SNAP benefits can only be redeemed at authorized food retailers (see FNS website for details).

Table 4.2

Food expenditures by participation in and eligibility for the Supplemental Nutrition Assistance Program, 2005-14

	Average food expenditures (per capita, 2005 dollars)			Percent of food expenditures on FAFH		
	SNAP participants	Eligible non- participants	Ineligible non- participants	SNAP participants	Eligible non- participants	Ineligible non- participants
2005	\$1,685	\$2,136	\$2,917	26.9	33.5	41.6
2006	\$1,685	\$2,113	\$3,023**	26.6	32.1	41.3
2007	\$1,627	\$2,173	\$2,994**	26.3	34.8	40.9
2008	\$1,745	\$2,236	\$2,962	27.3	30.8**	39.5**
2009	\$1,761	\$2,215	\$2,895	25.0	31.4	38.7**
2010	\$1,647	\$2,138	\$2,850	24.9	32.5	38.9**
2011	\$1,695	\$2,180	\$2,891	25.9	31.6	38.7**
2012	\$1,652	\$2,261	\$2,888	25.3	31.2**	39.1**
2013	\$1,816	\$2,197	\$2,881	26.9	31.5	38.5**
2014	\$1,667	\$2,257	\$2,849	26.3	33.2	39.9**

Note: SNAP = Supplemental Nutrition Assistance Program. ** indicates that the expenditures are statistically different from 2005 ($p < 0.05$).

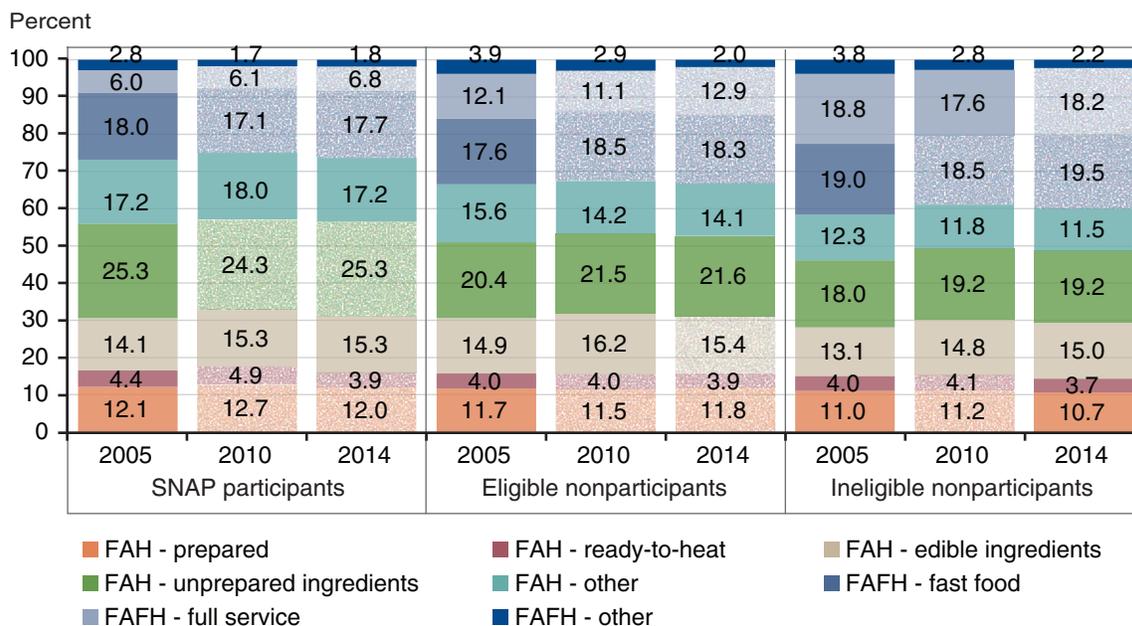
Source: USDA, Economic Research Service estimates using U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey data.

The decline in the share of FAFH expenditures from 2005 to 2010 for ineligible nonparticipants was primarily driven by the 1-percentage-point (6 percent) decline in the share of expenditures at full-service restaurants (fig. 4.6). Similar to the differences when viewed by income quintile, SNAP participants allocated at least 11 fewer percentage points in food expenditures to full-service restaurants than did income-ineligible nonparticipants for the entire period examined; eligible nonparticipants allocated at least 5 fewer percentage points than income-ineligible nonparticipants. In contrast, the share of food expenditures allocated to fast food was relatively similar across all three groups and exhibited no significant changes in response to the Great Recession.

All three household groups increased the share of spending allocated to FAFH edible ingredients during the Great Recession; for SNAP participants and ineligible nonparticipants, the share remained higher in 2014. The share allocated to unprepared ingredients increased by a little over 1 percentage point in 2010 for both nonparticipant groups and remained higher than 2005 in 2014. However, both groups consistently spent a lower share of expenditures on unprepared ingredients than SNAP participants, which may partially explain why the share did not increase for SNAP participants in response to the recession. Ineligible households also decreased the share of expenditures on ready-to-heat and prepared foods in 2014.

Figure 4.6

Share of food expenditures by type and by participation in and eligibility for the Supplemental Nutrition Assistance Program—2005, 2010, 2014



Note: FAH = food at home. FAFH = food away from home. FAH – other includes all beverages. A solid color for 2010 and 2014 indicates statistically significant change from 2005 ($p < 0.05$), whereas the lighter shading indicates an insignificant change.

Source: USDA, Economic Research Service calculations from U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey data.

Comparison by Presence of an Elderly Person in the Household

On average, per capita expenditures did not change between 2005 and 2014 among households with an elderly individual (table 4.3).³³ In contrast, expenditures for households without an elderly individual were significantly different from their 2005 expenditures for all but 2 of the years examined, decreasing by \$230 (8 percent) from 2006 to 2010 and remaining relatively stable thereafter. Thus, by 2014, households without an elderly individual spent \$133 (5 percent) less per person than they did in 2005.

The FAFH share of total food spending was at least 8 percentage points lower for households with an elderly individual than for households without older individuals for all 9 years examined (table 4.3). During the Great Recession, the share of expenditures allocated to FAFH by households without an elderly member declined 3 percentage points (8 percent) from 2005 to 2010 and remained below 2005 levels through 2014. In contrast, households with an elderly individual increased their share of spending on FAFH by 2 percentage points (8 percent) in 2014 relative to 2005. This difference suggests that elderly individual(s) may have a less volatile income, coinciding with studies that find that economic downturns affect elderly poverty rates much less than poverty rates for other age groups (e.g., Bitler and Hoynes, 2015). Furthermore, findings in this analysis indicate that the recession did not have long-term effects on elderly households, which recovered more quickly than other households, consistent with findings by Todd (2014).

³³The CES identifies an individual older than age 64 as elderly. Elderly households are those with at least one elderly individual, regardless of the composition of the remainder of the household (e.g., whether there are any children).

Table 4.3

Food expenditures by presence of elderly, 2005-14

	Average food expenditures (per capita, 2005 dollars)		Percent of food expenditures on FAFH	
	Elderly	No elderly	Elderly	No elderly
2005	\$2,713	\$2,722	29.9	42.1
2006	\$2,705	\$2,838**	30.6	41.4
2007	\$2,787	\$2,799**	30.6	41.6
2008	\$2,753	\$2,784	29.4	39.8**
2009	\$2,819	\$2,670	28.7	39.0**
2010	\$2,673	\$2,608**	28.8	39.0**
2011	\$2,835	\$2,618**	29.4	38.7**
2012	\$2,781	\$2,616**	29.8	38.6**
2013	\$2,787	\$2,604**	30.4	38.2**
2014	\$2,763	\$2,589**	32.2**	39.5**

Note: **indicates that the expenditures are statistically different from 2005 ($p < 0.05$).

Source: USDA, Economic Research Service estimates using U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey data.

The higher share of FAFH expenditures among households without an elderly individual was mostly due to their higher share of fast-food expenditures, which was at least 8 percentage points higher than that among households with elderly individuals over all of the years examined (fig. 4.7). Both household types had small, but significant, increases in the share of food spending allocated to unprepared and edible ingredients between 2005 and 2010; these increases persisted through 2014 for households without an elderly individual. In 2014, households with an elderly person had a small decline in expenditures on prepared and ready-to-heat foods—0.7 and 0.6 percentage points (5 and 13 percent), respectively.

Comparison by Presence of Children in the Household

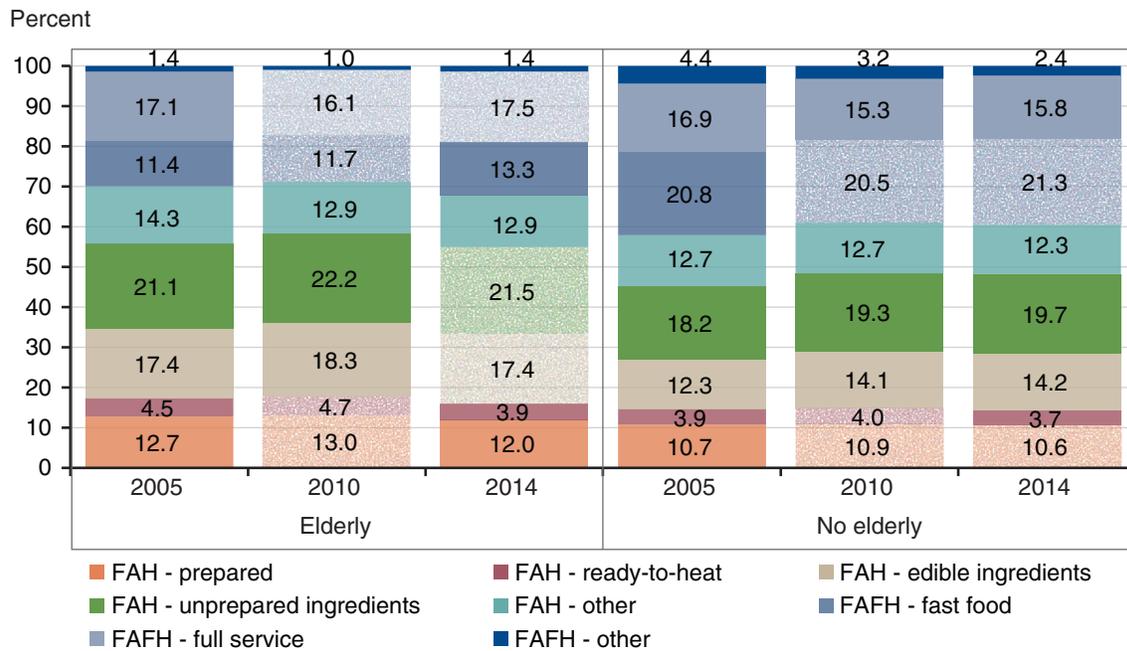
Households with at least one child spent about \$1,000 less per capita per year than households without children from 2005 to 2014 (table 4.4).³⁴ This is not surprising given that households with children are generally larger, allowing for economies of scale in food purchases. Furthermore, young children generally require fewer calories than adults. Households with children had a more rapid decline in average per capita food expenditures in response to the Great Recession, falling by \$83 (4 percent) from 2005 to 2009; spending among households without children decreased by \$91 (3 percent) from 2005 to 2010. Both household types remained below their respective 2005 spending level in 2014: expenditures dropped \$148 (7 percent) for households with at least one child and \$128 (4 percent) for those without a child.

Throughout the period, the share of food expenditures allocated to FAFH was consistently higher for households without children, suggesting that it could be more difficult, financially and logistically, for households with children to eat out (table 4.4). Nevertheless, both groups responded similarly to the Great Recession. From 2005 to 2010, the share allocated to FAFH decreased by about 4 percentage points (9 percent) for households with children and by 3 percentage points (7 percent) for those without children. By 2014, the shares remained 3 and 2 percentage points (7 and 4 percent), respectively, below 2005 levels.

³⁴The CES identifies a child as an individual under age 18.

Figure 4.7

Share of food expenditures by food type and by presence of elderly (2005, 2010, 2014)



Note: FAH = food at home. FAFH = food away from home. FAH – other includes all beverages. A solid color for 2010 and 2014 indicates statistically significant change from 2005, whereas the lighter shading indicates an insignificant change ($p < 0.05$).

Source: USDA, Economic Research Service calculations from U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey data.

Table 4.4

Food expenditures by presence of at least one child, 2005-2014

	Average food expenditures (per capita, 2005 dollars)		Percent of food expenditures on FAFH	
	Child	No child	Child	No child
2005	\$2,043	\$3,114	38.6	40.0
2006	\$2,052	\$3,231*	38.3	39.5
2007	\$2,011	\$3,202*	37.7	40.0
2008	\$1,992	\$3,183	36.8*	37.8*
2009	\$1,960*	\$3,086	35.4*	37.2*
2010	\$1,840*	\$3,022*	35.1*	37.3*
2011	\$1,885*	\$3,069	35.6*	36.9*
2012	\$1,886*	\$3,049	34.8*	37.2*
2013	\$1,883*	\$3,012*	35.1*	36.6*
2014	\$1,895*	\$2,986*	35.8*	38.3*

Note: The stars indicate that the expenditures are statistically different from 2005 ($p < 0.05$).

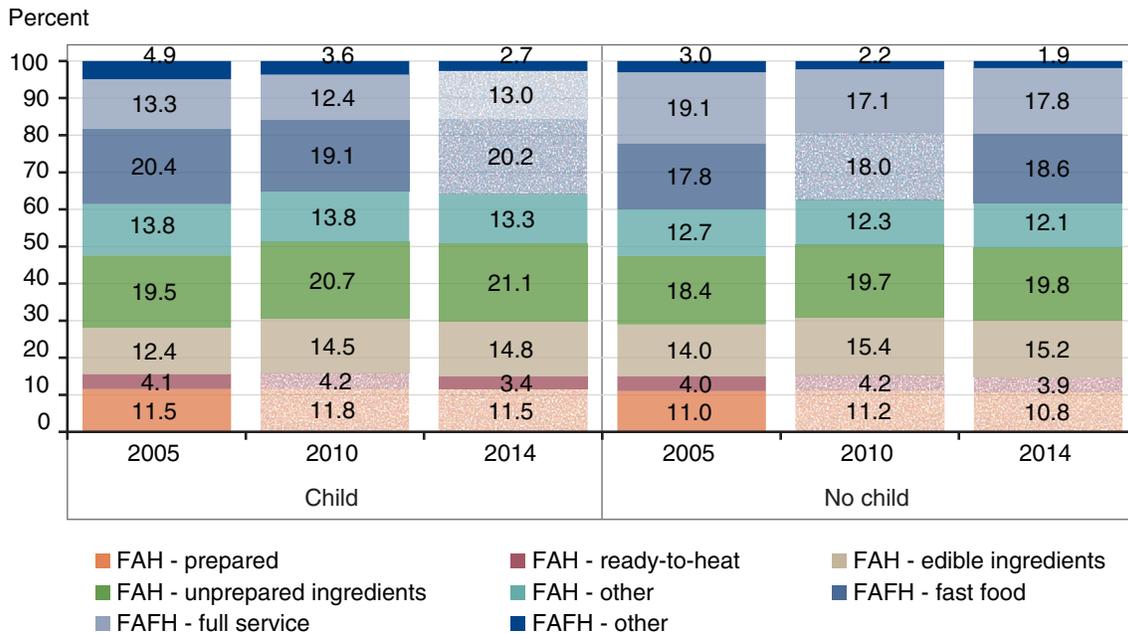
Source: USDA, Economic Research Service estimates using U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey data.

Although households without children allocated a greater share of food expenditures to full-service restaurants (at least 4 percentage points) than households with children for the entire sample period, they allocated a smaller share (less than 3 percentage points) to fast-food restaurants (fig. 4.8). Nevertheless, both household types reduced the share allocated to full-service expenditures in 2010 relative to 2005. Households with children also reduced the share of food spending at fast-food restaurants, although the shares allocated to both FAFH categories returned to pre-recession levels by 2014. Households without children maintained a lower share of expenditures at full-service restaurants from 2010 to 2014 relative to 2005 but increased spending at fast-food restaurants. Both household types increased the share of food expenditures on edible and unprepared ingredients from 2005 to 2010 and maintained these higher shares through 2014.

There are clear differences in FAFH expenditure patterns for households with children by age— younger than age 6, age 6 to 11, and age 12 to 17. As expected, households whose oldest child was age 12 to 17 had the highest average per capita food expenditures throughout the period, likely because older children generally require more calories (table 4.5). Food expenditures for households in the two categories with children younger than age 12 were relatively similar to each other, which could be an indication that the dietary needs among children are relatively similar until their teenage years, when their calorie requirement rises.

Figure 4.8

Share of food expenditures by presence of at least one child—2005, 2010, 2014



Note: FAH = food at home. FAFH = food away from home. FAH – other includes all beverages. A solid color for 2010 and 2014 indicates statistically significant change from 2005 ($p < 0.05$), whereas the lighter shading indicates an insignificant change.

Source: USDA, Economic Research Service calculations from U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey data.

Table 4.5

Food expenditures by children's age, 2005-14

	Average food expenditures (per capita, 2005 dollars)			Percent of food expenditures on FAFH		
	Oldest younger than 6	Oldest 6-11	Oldest 12-17	Oldest younger than 6	Oldest 6-11	Oldest 12-17
2005	\$1,917	\$1,992	\$2,194	40.2	39.9	38.8
2006	\$1,984	\$2,049	\$2,173	39.9	38.5	39.2
2007	\$1,897	\$1,994	\$2,184	37.3	38.9	38.2
2008	\$1,903	\$1,924	\$2,197	37.3*	37.4*	37.7
2009	\$2,008	\$1,916	\$2,082*	33.6*	37.5	37.3
2010	\$1,778*	\$1,795*	\$2,019*	35.8*	36.3*	36.4*
2011	\$1,890	\$1,874	\$2,012*	37.2*	37.3*	35.7*
2012	\$1,830	\$1,911	\$2,070*	36.1*	36.7*	34.8*
2013	\$1,914	\$1,807*	\$2,030*	35.7*	35.7*	35.1*
2014	\$1,869	\$1,925	\$2,023*	37.1*	37.2*	35.6*

Note: The stars indicate that the expenditures are statistically different from 2005 ($p < 0.05$).

Source: USDA Economic Research Service estimates using U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey data.

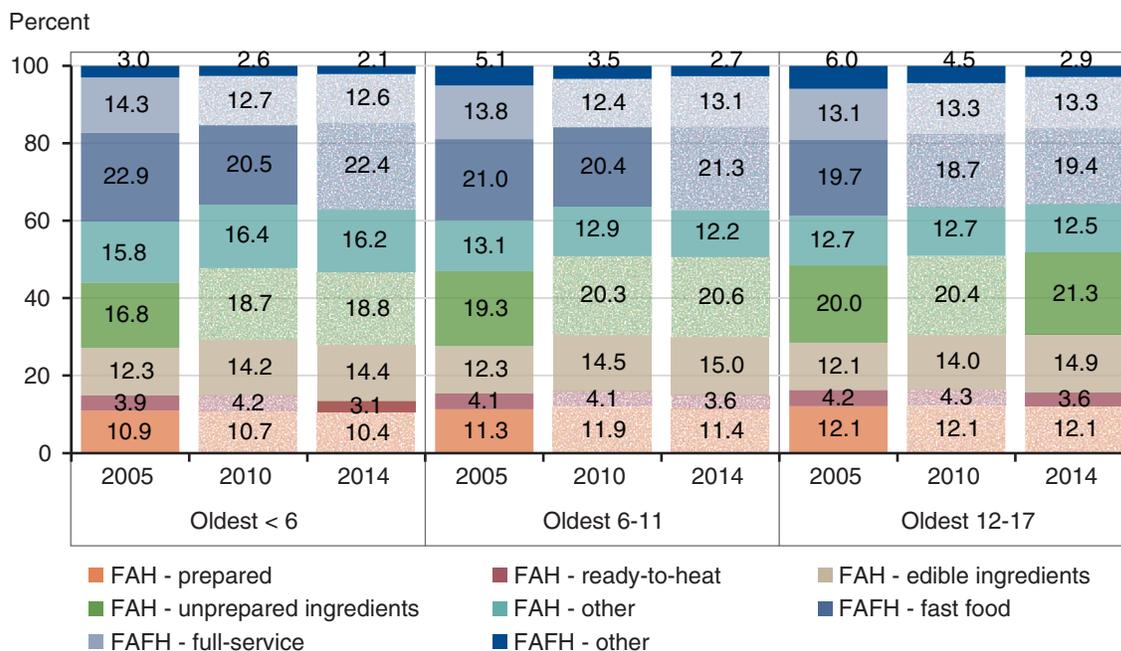
Average per capita food expenditures declined for all groups of households with children between 2005 and 2010. During this period, by ascending age of the oldest child, household expenditures declined by \$139, \$197, and \$174 (7, 10, and 8 percent), respectively. Although households whose oldest child was age 6 to 11 had the greatest decline, by 2014, average per capita food expenditures were not statistically different from those in 2005. In contrast, per capita food expenditures for households whose oldest child was age 12 to 17 did not recover by 2014, remaining \$171 (8 percent) below 2005 levels.

Despite the differences in total food expenditures, all households with children, regardless of the oldest child's age, allocated a similar share to FAFH (table 4.5). Between 2005 and 2010, all three household types had a significant decline in the share of FAFH expenditures: 4 percentage points for those whose oldest child was younger than age 6 or age 6 to 11 (11 and 9 percent, respectively), and 2 percentage points (6 percent) for those whose child was age 12 to 17. By 2014, FAFH shares for all three household types remained 3 percentage points (8, 7, and 8 percent by ascending age of oldest child) below the 2005 shares.

Despite the statistically significant decline in the overall share of FAFH expenditures for all three household types, only the share allocated to fast food declined significantly between 2005 and 2010 among households whose oldest child was age 11 or younger—it dropped 2.4 percentage points (11 percent) for households whose oldest child younger than age 6 and 0.6 percentage points (3 percent) for those whose oldest child was age 6 to 11 (fig. 4.9). For these households, the share spent at fast-food restaurants returned to pre-recession shares by 2014. The change in the share allocated to full-service restaurants was not statistically significant for any of the household groups in 2010 and 2014. With respect to FAFH spending, the share allocated to edible ingredients increased for all three household types by 2010: 1.9 percentage points for households with an oldest child younger than age 6 or age 12 to 17 (15 and 16 percent, respectively), and 2.2 percentage points (18 percent) for those with an oldest child age 6 to 11. By 2014, the share of these expenditures had grown even more.

Figure 4.9

Share of food expenditures by children’s age—2005, 2010, 2014



Note: FAH = food at home. FAFH = food away from home. FAH – Other includes all beverages. A solid color for 2010 and 2014 indicates statistically significant change from 2005, whereas the lighter shading indicates an insignificant change (p<0.05).

Source: USDA, Economic Research calculations from U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey data.

In addition, for those with an oldest child age 12 to 17, the share of food expenditures allocated to unprepared ingredients increased by 1.3 percentage points (6 percent) relative to 2005.

Conclusion

This analysis finds that households replaced a declining share of FAFH expenditures with FAH expenditures during the Great Recession and through the recovery period until 2014. Disaggregating food expenditures by the level of preparation needed for at-home consumption (FAH) or by the level of service when dining out (FAFH) illustrates that the main substitution across categories was an increase in the share of expenditures allocated to edible and unprepared ingredients in place of full-service restaurants. These results are consistent with findings that service industries were hit the hardest during the Great Recession (e.g., Petev et al., 2012; De Nardi et al., 2012). In contrast, most households maintained their share of expenditures at fast-food restaurants throughout the period, which coincided with the continued growth in the number of quick-service restaurants throughout the recession (chapter 6) and the observed increase in the share of calories from fast foods among working age adults in 2013-14, relative to 2005-06 (Todd, 2017). Overall, changes in food spending allocations across categories were relatively small, with the largest change from one year to the next being less than 1 percentage point for all categories. This suggests that households have strong preferences for their food choices, trying to find ways to lower spending within categories rather than making changes across categories.

Spending levels and patterns differ across household types. Higher income households spent more per capita and allocated a larger share of their food spending to FAFH, while the lowest income households, particularly those that participate in SNAP, had the lowest share of FAFH expenditures. These differences in FAFH shares are mostly attributed to differences in expenditures at full-service restaurants. The shares of expenditures allocated to fast-food restaurants are relatively similar across household types, which may be partially due to fast-food restaurants being cheaper on average than quick-service and full-service restaurants.

Households with an elderly individual or with children spent a smaller share of their food budgets on FAFH than households without such members. It could be that cooking is more cost-effective for these larger household or that children and elderly individual(s) can help prepare meals at home, although some elderly individuals are less mobile. It could also be an indication that there are generational differences in preferred types of meals or consumption patterns, or that dietary restrictions make it difficult for these households to purchase FAFH. Households with an elderly individual allocated a lower share of their food budgets to fast-food restaurants than did households without elderly members, which could suggest that elderly individuals are less time-constrained (a main appeal of fast food). Households with children spent less per capita on food than households without children, likely due to economies of scale. Lower prices for children's meals, on average, may also contribute to lower per capita food expenditures for these household types.

Differences in spending patterns across household types were greater than their changes within each household type from 2005 to 2014. Across household types, the share of food expenditures allocated to FAFH decreased during the Great Recession and the share of spending on edible and unprepared FAH ingredients increased. These trends continued through 2014 for most household types, perhaps suggesting a general shift toward home-cooked meals, particularly if these trends persist. However, most households maintained their spending on fast food throughout the period, which suggests that time constraints remain or that fast food plays an important role in most household diets. It could also be that there are cheaper items available at fast-food restaurants, although data limitations prevent us from exploring how prices or quantities of food purchased changed during this period.

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Appendix: Categories by Uniform Commercial Codes

FAH – PREPARED

010210 CEREAL
020310 FRESH BISCUITS, ROLLS, MUFFINS
020410 CAKES AND CUPCAKES
020510 COOKIES
020610 CRACKERS
020620 BREAD AND CRACKER PRODUCTS
020710 DOUGHNUTS, SWEETROLLS, COFFEECAKE
020820 FRESH PIES, TARTS, TURNOVERS
100410 ICE CREAM AND RELATED PRODUCTS
180310 POTATO CHIPS AND OTHER SNACKS
180611 PREPARED SALADS
180612 PREPARED DESSERTS
180710 MISC. PREPARED FOODS

FAH – PREPARED (READY-TO-HEAT)

020810 FROZEN & REFRIG. BAKERY PROD.
130121 FROZEN FRUITS
140110 FROZEN VEGETABLES
180110 SOUP
180210 FROZEN MEALS
180220 FROZ/PREP. FOOD OTH THAN MEALS

FAH – UNPREPARED (EDIBLE INGREDIENTS)

020110 WHITE BREAD
020210 BREAD OTHER THAN WHITE
040610 CANNED HAM
070110 CANNED FISH AND SEAFOOD
100210 CHEESE
110110 APPLES
110210 BANANAS
110310 ORANGES
110410 OTHER FRESH FRUITS
110510 CITRUS FRUITS EXCL. ORANGES
120210 LETTUCE
120310 TOMATOES
120410 OTHER FRESH VEGETABLES
130310 CANNED FRUITS
130320 DRIED FRUITS
140210 CANNED BEANS
140220 CANNED CORN
140230 CANNED VEGETABLES MISC
140310 OTHER PROCESSED VEGETABLES
140320 OTHER PEAS

140330 OTHER BEANS
140340 OTHER VEGETABLES MISC
160212 SALAD DRESSINGS
160320 PEANUT BUTTER
180320 NUTS
180420 OLIVES, PICKLES, RELISHES

FAH – UNPREPARED (INGREDIENTS)

010110 FLOUR
010120 PREPARED FLOUR MIXES
010310 RICE
010320 PASTA CORNMEAL OTH CEREAL PRODS
030110 GROUND BEEF EXCLUDE CANNED
030210 CHUCK ROAST
030310 ROUND ROAST
030410 OTHER ROAST
030510 ROUND STEAK
030610 SIRLOIN STEAK
030710 OTHER STEAK
030810 OTHER BEEF (EXCLUDE CANNED)
040110 BACON
040210 PORK CHOPS
040310 HAM (EXCLUDE CANNED)
040410 OTHER PORK
040510 PORK SAUSAGE
050110 FRANKFURTERS
050210 BOLOGNA, LIVERWURST, SALAMI
050310 OTHER LUNCHMEAT
050410 LAMB AND ORGAN MEATS
050900 MUTTON, GOAT, GAME
060110 FRESH & FROZEN WHOLE CHICKEN
060210 FRESH OR FROZEN CHICKEN PARTS
060310 OTHER POULTRY
070230 FRESH FISH & SHELLFISH
070240 FROZEN FISH & SHELLFISH
080110 EGGS
090210 CREAM
100110 BUTTER
100510 OTHER DAIRY PRODUCTS
120110 POTATOES
150211 SUGAR
150212 ARTIFICIAL SWEETENERS
150310 OTHER SWEETS
160110 MARGARINE
160211 FATS & OILS
160310 NONDAIRY CREAM SUBSTITUTES
180410 SALT/OTHER SEASONINGS & SPICES

180510 SAUCES AND GRAVIES
180520 OTHER CONDIMENTS

DRINKS

090110 FRESH MILK ALL TYPES
130110 FROZEN ORANGE JUICE
130122 FROZEN FRUIT JUICES
130211 FRESH FRUIT JUICE
130212 CANNED/BOTTLE FRUIT JUICE
140410 FROZEN VEGETABLE JUICES
140420 FRESH & CANNED VEGETABLE JUICES
170110 COLA DRINKS
170210 OTHER CARBONATED DRINKS
170310 ROASTED COFFEE
170410 INSTANT/FREEZE DRIED COFFEE
170510 NONCARB FRUT FLAV/LEMADE NONFROZ
170520 TEA
170530 OTHER NONCARB. BEVERAGES/ICE

FAH – OTHER

150110 CANDY AND CHEWING GUM
180620 BABY FOOD
180720 VITAMIN SUPPLEMENT

FAFH – FAST FOOD

190111 LUNCH AT FAST FOOD
190211 DINNER AT FAST FOOD
190311 SNACKS AT FAST FOOD
190321 BREAKFAST AT FAST FOOD

FAFH – FULL SERVICE

190112 LUNCH AT FULL SERVICE
190212 DINNER AT FULL SERVICE
190312 SNACKS AT FULL SERVICE
190322 BREAKFAST AT FULL SERVICE

FAFH – OTHER

190113 LUNCH AT VENDING MACHINE
190114 LUNCH AT EMPLOYER
190115 LUNCH AT BOARD
190116 LUNCH AT CATERED AFFAIRS
190213 DINNER AT VENDING MACHINE
190214 DINNER AT EMPLOYER
190215 DINNER AT BOARD
190216 DINNER AT CATERED AFFAIRS
190313 SNACKS AT VENDING MACHINE

190314 SNACKS AT EMPLOYER
190315 SNACKS AT BOARD
190316 SNACKS AT CATERED AFFAIRS
190323 BREAKFAST AT VENDING MACHINE
190324 BREAKFAST AT EMPLOYER
190325 BREAKFAST AT BOARD
190326 BREAKFAST AT CATERED AFFAIRS
190911 BOARD AT FAST FOOD
190912 BOARD AT FULL SERVICE
190913 BOARD AT VENDING MACHINE
190914 BOARD AT EMPLOYER
190915 BOARD AT BOARD
190916 BOARD AT CATERED AFFAIRS
190921 CATERED AFF AT FAST FOOD
190922 CATERED AFF AT FULL SERVICE
190923 CATERED AFF AT VEND MACHINE
190924 CATERED AFF AT EMPLOYER
190925 CATERED AFF AT BOARD
190926 CATERED AFF AT CATERED AFF