

Household Spending on Food

This section provides information on how much households spent on food, as reported in the December 2007 food security survey. Food insecurity is a condition that arises from lack of money and other resources to acquire food. In most households, the majority of food consumed by household members is purchased—either from supermarkets or grocery stores to be eaten at home, or from cafeterias, restaurants, or vending machines to be eaten outside the home. The amount of money that a household spends on food, therefore, provides insight into how adequately the household is meeting its food needs.¹⁸ When households reduce food spending below some minimum level because of constrained resources, various aspects of food insecurity such as disrupted eating patterns and reduced food intake may result.

Methods

The household food expenditure statistics in this report are based on usual weekly spending for food, as reported by respondents after they were given a chance to reflect on the household's actual food spending during the previous week. Respondents were first asked to report the amounts of money their households had spent on food in the week prior to the interview (including any purchases made with food stamps) at:

- supermarkets and grocery stores;
- stores other than supermarkets and grocery stores such as meat markets, produce stands, bakeries, warehouse clubs, and convenience stores;
- restaurants, fast food places, cafeterias, and vending machines;
- any other kind of place.¹⁹

Total spending for food, based on responses to this series of questions, was verified with the respondent, and the respondent was then asked how much the household usually spent on food during a week. Earlier analyses by ERS researchers found that food expenditures estimated from data collected by this method were consistent with estimates from the Consumer Expenditure Survey (CES)—the principal source of data on U.S. household expenditures for goods and services (Oliveira and Rose, 1996).

Food spending was adjusted for household size and composition in two ways. The first adjustment was calculated by dividing each household's usual weekly food spending by the number of persons in the household, yielding the "usual weekly food spending per person" for that household. The second adjustment accounts more precisely for the different food needs of households by comparing each household's usual food spending to the estimated cost of the Thrifty Food Plan for that household in December 2007.²⁰ The Thrifty Food Plan—developed by USDA—serves as a national standard for a nutritious, low-cost diet. It represents a set of "market baskets" of food that people in specific age and gender categories could consume at home to maintain a healthful diet that meets current dietary standards, taking into account the food consumption patterns of U.S. households.²¹ Each household's reported usual weekly food spending was divided by the cost of the Thrifty Food Plan for that household, calculated

¹⁸Food spending is only an indirect indicator of food consumption. It understates food consumption in households that receive food from in-kind programs, such as the National School Lunch and School Breakfast Programs, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), meal programs for children in child care and for the elderly, and private charitable organizations. (Purchases with food stamps, however, are counted as food spending in the CPS food security survey.) Food spending also understates food consumption in households that acquire a substantial part of their food supply through gardening, hunting, or fishing, as well as in households that eat more meals at friends' or relatives' homes than they provide to friends or relatives. (Food spending overstates food consumption in households with the opposite characteristics.) Food spending also understates food consumption in geographical areas with relatively low food prices and overstates consumption in areas with high food prices.

¹⁹For spending in the first two categories of stores, respondents were also asked how much of the amount was for "nonfood items such as pet food, paper products, alcohol, detergents, or cleaning supplies." These amounts are not included in calculating spending for food.

²⁰The cost of the Thrifty Food Plan is revised each month to account for inflation in food prices.

²¹The Thrifty Food Plan, in addition to its use as a research tool, is used as a basis for setting the maximum benefit amounts of the Food Stamp Program. (See appendix C for further information on the Thrifty Food Plan and estimates of the weekly cost of the Thrifty Food Plan and three other USDA food plans for each age-gender group.)

based on the age and gender of each household member and the number of persons in the household (see table C-1).²²

The medians of the two food spending measures (spending per person per week and spending relative to the cost of the Thrifty Food Plan) were estimated at the national level and for households in various categories to represent the usual weekly food spending of the typical household in each category. Medians are reported rather than averages because medians are not unduly affected by the few unexpectedly high values of usual food spending that are believed to be reporting errors or data entry errors. Thus, the median better reflects what a typical household spent.

Data were weighted using food security supplement weights provided by the Census Bureau so that the interviewed households would represent all households in the United States. About 10 percent of households interviewed in the CPS food security survey did not respond to the food spending questions or reported zero usual food spending and were excluded from the analysis. As a result, the total number of households represented in tables 9 and 10 is somewhat smaller than that in tables 1 and 2, and food spending estimates may not be fully representative of all households in the United States.²³

Food Expenditures, by Selected Household Characteristics

In 2007, the typical U.S. household spent \$42.50 per person each week for food (table 9). Median household food spending relative to the cost of the Thrifty Food Plan—which adjusts more precisely for food needs of persons in different age-gender categories—was 1.20. That is, the typical household spent 20 percent more on food than the cost of the Thrifty Food Plan, taking into account the age and gender of the household members. Median spending for food per person was the same as in 2006 (\$42.50), but spending relative to the cost of the Thrifty Food Plan was lower in 2007 than in 2006 (1.31) (see box, “Food spending down? How can that be?”, page 25).²⁴

Households with children under age 18 generally spent less for food, relative to the Thrifty Food Plan, than those without children. The typical household with children spent 6 percent more than the cost of the Thrifty Food Plan, while the typical household with no children spent 28 percent more than the cost of the Thrifty Food Plan. Median food expenditure relative to the Thrifty Food Plan was lower for households with children headed by single women (0.98) than for married couples with children (1.09). Median food expenditure relative to the Thrifty Food Plan was highest for men living alone (1.47).

Median food expenditures relative to the Thrifty Food Plan were lower for Black households (1.02) and Hispanic households (1.01) than for non-Hispanic White households (1.27). This pattern is consistent with the lower average incomes and higher poverty rates of these racial and ethnic minorities.

As expected, higher income households spent more money on food than lower income households.²⁵ The typical household with income below the poverty line spent about 10 percent less than the cost of the Thrifty Food Plan, while the typical household with income above 185 percent of the poverty line spent 31 percent more than the cost of the Thrifty Food Plan.

²²Thrifty Food Plan costs are estimated separately for Alaska and Hawaii using adjustment factors calculated from USDA’s Thrifty Food Plan costs for those States for the second half of 2007.

²³Households that were unable or unwilling to report food spending were less likely to be food insecure than those that did report food spending (8.5 percent compared with 11.4 percent). Food spending may, therefore, be slightly underestimated from these data.

²⁴The 2006 statistics for household food spending are revised from those published in *Household Food Security in the United States, 2006* (Nord et al., 2007). Usual weekly food spending per person is revised to \$42.50 (from \$41.67), and usual food spending relative to the cost of the TFP is revised to 1.31 (from 1.28) to be consistent with a methodological change in 2007 that was needed to correct for an interviewing problem. The revised methodology omits households that reported zero usual food spending from the analyses.

²⁵However, food spending does not rise proportionately with income increases, so high-income households actually spend a smaller *proportion* of their income on food than do low-income households.

Table 9

Weekly household food spending per person and relative to the cost of the Thrifty Food Plan (TFP), 2007

Category	Number of households ¹	Median weekly food spending	
		Per person	Relative to cost of TFP
	<i>1,000</i>	<i>Dollars</i>	<i>Ratio</i>
All households	106,254	42.50	1.20
Household composition:			
With children < 18 yrs	36,533	33.33	1.06
At least one child < 6 yrs	16,342	30.00	1.06
Married-couple families	24,916	33.33	1.09
Female head, no spouse	8,687	31.50	.98
Male head, no spouse	2,353	33.33	1.00
Other household with child ²	577	33.33	1.08
With no children < 18 yrs	69,721	50.00	1.28
More than one adult	40,966	45.00	1.23
Women living alone	16,131	50.00	1.27
Men living alone	12,624	63.00	1.47
With elderly	24,099	41.67	1.13
Elderly living alone	9,115	50.00	1.23
Race/ethnicity of households:			
White non-Hispanic	75,694	45.00	1.27
Black non-Hispanic	12,432	36.25	1.02
Hispanic ³	12,305	33.33	1.01
Other	5,824	40.00	1.11
Household income-to-poverty ratio:			
Under 1.00	10,892	30.00	.90
Under 1.30	16,208	32.50	.92
Under 1.85	25,460	33.00	.95
1.85 and over	61,628	50.00	1.31
Income unknown	19,165	41.25	1.16
Area of residence: ⁴			
Inside metropolitan area	88,584	44.00	1.23
In principal cities ⁵	29,586	45.00	1.23
Not in principal cities	43,783	45.00	1.26
Outside metropolitan area	17,670	37.50	1.02
Census geographic region:			
Northeast	19,139	43.75	1.23
Midwest	24,130	40.00	1.12
South	38,967	42.50	1.20
West	24,018	45.00	1.25

¹Totals exclude households that did not answer the questions about spending on food. These represented 9.6 percent of all households.

²Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.

³Hispanics may be of any race.

⁴Metropolitan area residence is based on 2003 Office of Management and Budget delineation. Food spending statistics by area of residence are comparable with those for 2004 and later years, but are not precisely comparable with those of earlier years.

⁵Households within incorporated areas of the largest cities in each metropolitan area. Residence inside or outside of principal cities is not identified for about 17 percent of households in metropolitan statistical areas.

Source: Calculated by ERS using data from the December 2007 Current Population Survey Food Security Supplement.

“Food spending down? How can that be?”

The decline in reported food expenditures in the food security survey may seem unexpected considering that from 2006 to 2007, food prices increased at a higher rate than the overall Consumer Price Index (CPI) (Bureau of Labor Statistics, 2008).

Most of the decline actually reflects those increases in food prices. Food spending “relative to the cost of the TFP,” as reported in table 9, is calculated as the dollar amount a household usually spends for food, divided by the cost of the Thrifty Food Plan (TFP) for December of the survey year. Food spending relative to the cost of the Thrifty Food Plan declines if the prices of foods that make up the TFP increase while the dollar amount households spend for food falls, remains constant, or increases more slowly than the cost of the TFP.

The 8.4 percent decline in food spending relative to the cost of the TFP from 2006 to 2007 can be broken down as follows:

- About four-fifths was due to the rise in the cost of the TFP, which increased by 6.6 percent from December 2006 to December 2007. The increase in the cost of the TFP was somewhat higher than the 5.6-percent inflation in the price of “food at home” for the same period as reported by the U.S. Department of Labor’s Bureau of Labor Statistics (Bureau of Labor Statistics, 2008). The TFP comprises, on average, more basic, less highly processed foods than those consumed by the average U.S. household, and inflation was higher for less highly processed foods than for other foods.
- The remaining 1.8 percent was due to a decline in the dollar amount households spent for food, adjusted for household size but not for inflation. (For this calculation, food spending was adjusted for household size using the same weights for both years.)

Further research examining spending for food as well as for other goods and services will be required to confirm these findings, to better understand changes in household food spending, and to see which competing demands received priority over food.

Median food spending relative to the cost of the Thrifty Food Plan for households outside metropolitan areas was 1.02, compared with 1.23 for households inside metropolitan areas. Regionally, median spending on food was lowest in the Midwest (1.12 times the cost of the Thrifty Food Plan) and highest in the Northeast (1.23) and West (1.25).

Food Expenditures and Household Food Security

Food-secure households typically spent more on food than food-insecure households. Median food spending relative to the cost of the Thrifty Food Plan was 1.24 among food-secure households, compared with 0.92 among food-insecure households (table 10). Thus, the typical food-secure household

Table 10

Weekly household food spending per person and relative to the cost of the Thrifty Food Plan (TFP) by food security status, 2007

Category	Number of households ¹	Median weekly food spending	
		Per person	Relative to cost of TFP
	<i>1,000</i>	<i>Dollars</i>	<i>Ratio</i>
All households	106,254	42.50	1.20
Food security status:			
Food-secure households	94,079	45.00	1.24
Food-insecure households	12,086	32.50	0.92
Households with low food security	7,681	33.33	0.95
Households with very low food security	4,405	31.00	.90

¹Total for all households excludes households that did not answer the questions about spending on food. These represented 9.6 percent of all households. Totals in the bottom section also exclude households that did not answer any of the questions in the food security scale.

Source: Calculated by ERS using data from the December 2007 Current Population Survey Food Security Supplement.

spent 35 percent more for food than the typical household of the same size and composition that was food insecure.

The pattern of higher food spending by food-secure households was consistent across household structure, race/ethnicity, income, metropolitan residence, and geographic region (table 11). For every household type, median food spending relative to the cost of the Thrifty Food Plan was higher for food-secure than food-insecure households. This was true even for households within the same income category. For example, among households with incomes below the poverty line, median food spending relative to the cost of the Thrifty Food Plan was 0.95 for food-secure households compared with 0.86 for food-insecure households.

Although the *relationship* between food expenditures and food security was consistent, the *levels* of food expenditure varied substantially across household types, even within the same food security status. For food-insecure households, food expenditures of typical households in most categories were below the cost of the Thrifty Food Plan, but there were some notable exceptions. Food-insecure individuals living alone—especially men living alone—spent substantially more on food than the cost of the Thrifty Food Plan for their age and gender. Food-insecure households with incomes above 185 percent of the poverty line also registered median food expenditures substantially higher than the cost of the Thrifty Food Plan.²⁶

²⁶ERS analysis has found that the experiences of food insecurity of higher and middle-income households are, disproportionately, occasional and of short duration (Nord et al., 2000). Their food expenditures during those food-insecure periods may have been lower than the amount they reported as their “usual” weekly spending for food.

Table 11

Weekly household food spending relative to the cost of the Thrifty Food Plan (TFP) by food security status and selected household characteristics, 2007

Category	Median weekly food spending relative to TFP ¹	
	Food secure	Food insecure
	<i>Ratio (cost of TFP = 1)</i>	
All households	1.24	0.92
Household composition:		
With children < 18 yrs	1.09	.87
At least one child < 6 yrs	1.10	.87
Married couple families	1.12	.85
Female head, no spouse	1.01	.90
Male head, no spouse	1.04	.91
Other household with child ²	1.16	NA
With no children < 18 yrs	1.29	1.00
More than one adult	1.28	.91
Women living alone	1.28	1.02
Men living alone	1.57	1.11
With elderly	1.15	.93
Elderly living alone	1.24	1.02
Race/ethnicity of households:		
White non-Hispanic	1.29	.94
Black non-Hispanic	1.06	.93
Hispanic ³	1.05	.89
Other	1.13	.91
Household income-to-poverty ratio:		
Under 1.00	.95	.86
Under 1.30	.97	.86
Under 1.85	.98	.87
1.85 and over	1.35	1.11
Income unknown	1.18	.90
Area of residence: ⁴		
Inside metropolitan area	1.27	.95
In principal cities ⁵	1.27	.97
Not in principal cities	1.29	.95
Outside metropolitan area	1.06	.88
Census geographic region:		
Northeast	1.27	1.00
Midwest	1.16	.90
South	1.25	.92
West	1.29	.90

¹Statistics exclude households that did not answer the questions about spending on food and those that did not provide valid responses to any of the questions on food security. These represented 9.7 percent of all households.

²Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.

³Hispanics may be of any race.

⁴Metropolitan area residence is based on 2003 Office of Management and Budget delineation. Food spending statistics by area of residence are comparable with those for 2004 and later years but are not precisely comparable with those of earlier years.

⁵Households within incorporated areas of the largest cities in each metropolitan area. Residence inside or outside of principal cities is not identified for about 17 percent of households in metropolitan statistical areas.

NA=Median not reported; fewer than 100 interviewed households in the category.

Source: Calculated by ERS using data from the December 2007 Current Population Survey Food Security Supplement.