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Household Food Spending by Selected Demographics in the 1990s

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Abstract

Average per-person total food expenditures, adjusted for inflation, declined about 7 percent between 1990 and 1998, from \$2,189 to \$2,037. This decline resulted primarily from the average at-home food expenditures per person declining by about 6 percent and the away-from-home food expenditures declining by about 8 percent. Price-adjusted food spending reflects changes in the real price of food as well as any quantity adjustments made by consumers. However, the national average masks the fact that some population subgroups had significantly higher or lower food expenditures than average. For example, while total food spending declined for all demographic groups except female-headed and Black households, these two demographic groups still had the lowest per capita spending. In contrast to this, per-person total food expenditures were greatest for households in the highest income quintile, for one-person households, and for households with heads between 55 and 64 years of age.

Keywords: Food expenditures, food spending, demographics, Consumer Expenditure Survey.

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Introduction

This report analyzes household food expenditures during the 1990s. A household survey such as the one used in this study is designed to obtain a snapshot of a representative group of U.S. households at a given moment in time. By looking at food expenditures by various demographic subgroups over time, one can gain an idea of how each group fares relative to the others. Hence, our goal is to evaluate how food spending has varied during the 1990s by some common demographic subgroups such as female-headed households. While we do not present mutually exclusive categories, expenditure trends are identified by looking at per capita expenditures for total food, food at home, and food away from home based on annual surveys of urban household food spending for 1990-98. Actual expenditures were adjusted to 1998 food price levels to focus on changes in the real cost of food.

Expenditure trends are presented for 1) single female heads of households with children; 2) older versus younger households; 3) larger versus smaller households; 4) poor households versus households that are not; 5) regional differences; and 6) race of households. These demographic variables affect the type and quantity of food purchased by American households. By tracking these expenditures over time and in inflation-adjusted dollars, this work attempts to identify any persistent positive or negative trends by these major demographic groups. It is in the interest of society to determine if female-headed, Black, poor, or elderly households have increased or decreased their food expenditures over the past decade relative to all other households.

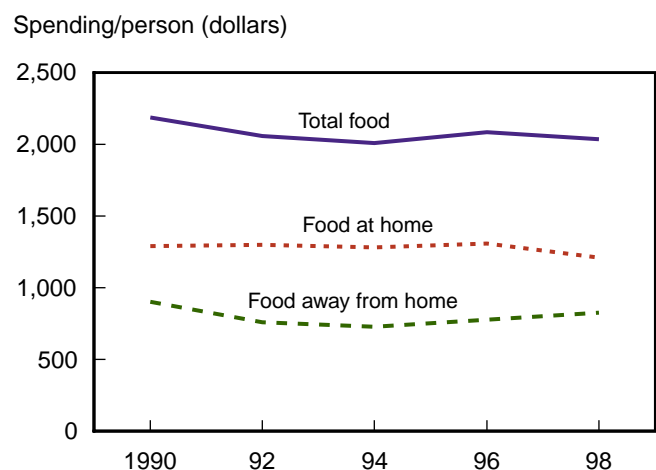
The data used in the analysis are from the annual consumer expenditure surveys (CES) conducted by the U.S. Department of Labor's Bureau of Labor Statistics (BLS). The BLS has conducted these annual surveys since 1980 and the most recent data released are for 1998. This series provides a rich source of information on the spending patterns of American households. The information from these surveys allows us to examine trends in inflation-adjusted food spending for the types of households noted above.

We found that the average inflation-adjusted total food expenditure per person declined about 7 percent

between 1990 and 1998, declining from \$2,189 to \$2,037 (fig. 1). The decline resulted primarily because of a 6-percent decline in the average price-adjusted at-home food expenditure per person, and an 8-percent decline in away-from-home food expenditure. (Price-adjusted food spending reflects changes in the real price of food as well as any quantity adjustments made by consumers.) These declines in expenditures are probably a combination of a declining real cost of food and, perhaps, a downward adjustment in the quantity of food purchased. In any case, the demand for food is such that inflation-adjusted price decreases overwhelm potential positive quantity changes, thereby resulting in lower food expenditures. Note also that the national average masks the fact that some population subgroups had significantly higher or lower food expenditures than average. For example, while total food spending declined for all demographic groups except female-headed and Black households, these two demographic groups still had the lowest per capita spending.

Most U.S. households realized a modest decline in price-adjusted food expenditures, both at home and away from home, between 1990 and 1998. Per-person total food expenditures were greatest for households in the highest income quintile, for one-person households, and for households with heads between 55 and 64 years of age.

Figure 1
Average food spending by all households, 1990-98



1998 prices.

Source: Economic Research Service from Bureau of Labor Statistics data.

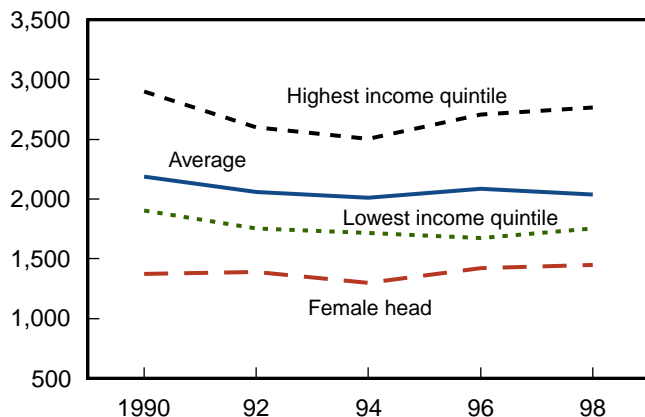
Single Female-Headed Households with Children Spent the Least on Food

Single female-headed households with children spent less per person on food than both the average U.S. household and the poorest U.S. households during 1990-98 (fig. 2). However, single female-headed households did increase their total food spending (in real, inflation-adjusted terms) by about 6 percent (from \$1,374 to \$1,451) between 1990 and 1998. This rise can be attributed to a 24-percent increase in spending for food away from home (from \$404 to \$503) and a 2-percent decline (from \$970 to \$948) in spending for food at home between 1990 and 1998 (fig. 3).

In 1998, female-headed households spent about \$263, or 22 percent, less per person than the average household on food at home (the average was \$1,211) and about \$323, or 39 percent, less on food away from home (the average was \$826) (figs. 4 and 5). Food away from home represented about 35 percent of the per-person food budget in single female-headed households, compared with about 41 percent of the per-person food budget in the average household. The households of the highest income quintile (highest 20 percent of the income distribution) spent about \$256, or 17 percent, more than the average household on food at home and about \$475, or 37 percent, more than the average household on food away from home.

Figure 2
Total food spending: Female-headed households compared with other households, 1990-98

Spending/person (dollars)



1998 prices. A quintile is 20 percent of a surveyed group.

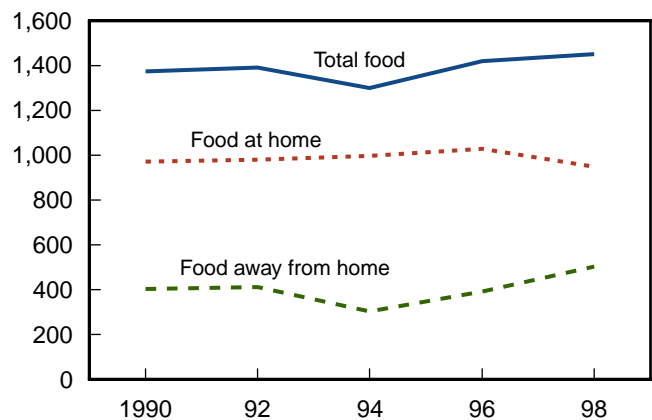
Source: Economic Research Service from Bureau of Labor Statistics data.

For households in the highest income quintile, food-away-from-home expenditures represented about 47 percent of the per-person food budget.

A major factor associated with the disparity in food spending between female-headed households and all other households is income. Female-headed households had an average before-tax income of \$22,860 in 1998 compared with \$42,584 for the average household. However, female-headed households also spent \$303

Figure 3
Food spending by female-headed households

Spending/person (dollars)

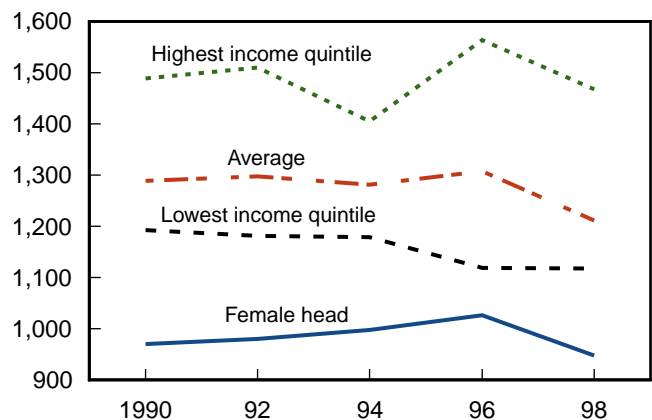


1998 prices.

Source: Economic Research Service from Bureau of Labor Statistics data.

Figure 4
At-home food spending: Female-headed households compared with other households

Spending/person (dollars)



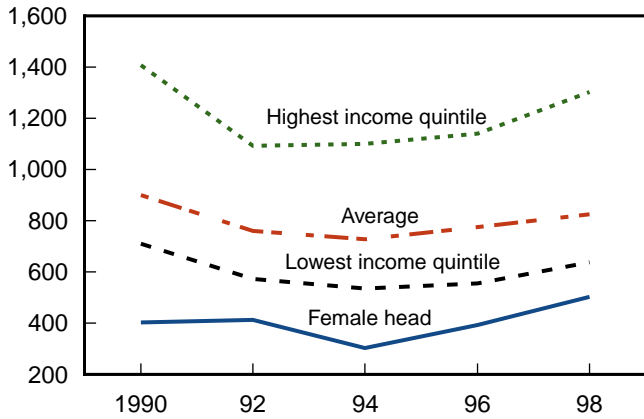
1998 prices. A quintile is 20 percent of a surveyed group.

Source: Economic Research Service from Bureau of Labor Statistics data.

Figure 5

Away-from-home food spending: Female-headed households compared with other households

Spending/person (dollars)



1998 prices. A quintile is 20 percent of a surveyed group.

Source: Economic Research Service from Bureau of Labor Statistics data.

less per person on total food compared with households in the lowest income quintile (the lowest 20 percent of the income distribution), although these households had an average income of just \$7,306. This relationship is partly due to the fact that female-headed households are usually larger than households in the lowest income quintile and usually have more children. Larger households and households with children tend to spend less per person than other types of households.

Older Urban Households Spent More on Food than Younger Households

Urban households headed by 55- to 64-year-olds spent more on food per person than households whose head was some other age. Typically, food spending per person increases with the age of the household head, at least until age 55-64. Surprisingly, this expectation was not totally fulfilled during most of the 1990s, since households whose head was 25-34 years old outspent those whose head was 35-44 years old (fig. 6). However, one would expect food spending to rise with the age of the household head, at least until the late 50s and early 60s, since income normally peaks in this age group before declining with retirement. By way of example, per-person food spending for urban households headed by someone under 25 years old was \$1,629 in 1998 but was \$2,349 for urban households headed by someone 55-64 years old.

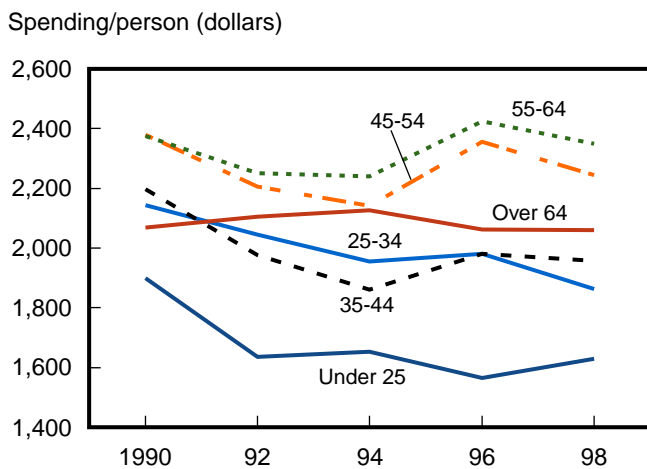
Total per-person food spending declined for all age groups between 1990 and 1998. Households with the greatest decline were those headed by someone under the age of 25 (down \$270 or 14 percent) and those headed by someone 25-34 years old (down \$281 or 13

percent). In contrast, households headed by someone age 55-64 saw their per-person expenditures decline by about 1 percent, while households with a head over 64 years of age saw their expenditures decline by less than one-half percent. Again, these declines in real per-capita food expenditures are most likely due to the fact that food prices have risen less than the overall CPI.

Figures 7 and 8 present food-at-home and food-away-from-home expenditures. As noted above for total food, per-person spending for food at home increases with the age of the household head. However, households with a head under 25 years of age experienced a per-person expenditure decline of about \$75 (9 percent), whereas per-person expenditures for the next older group declined by about \$140 (12 percent). Households headed by someone over the age of 64 realized a per-person expenditure decline of about \$82 (6 percent) while households headed by someone age 55-64 realized a price-adjusted decline of \$30 (about 2 percent).

The only households that realized an increase in per-person expenditures on food away from home were those headed by someone over 64 years old and those headed by someone between the ages of 55 and 64.

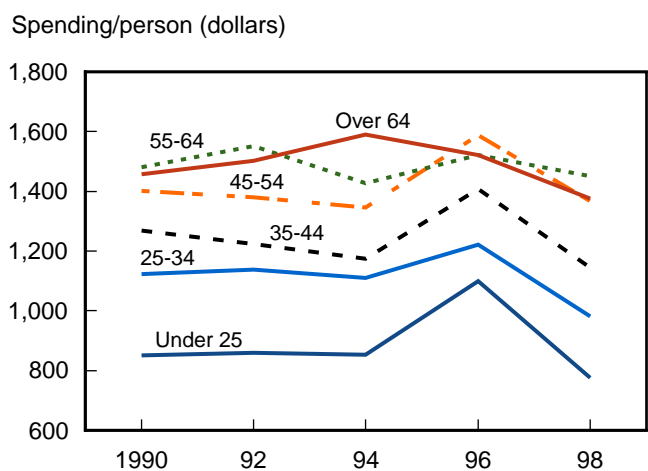
Figure 6
Total food spending by age of household head



1998 prices.

Source: Economic Research Service from Bureau of Labor Statistics data.

Figure 7
At-home food spending by age of household head

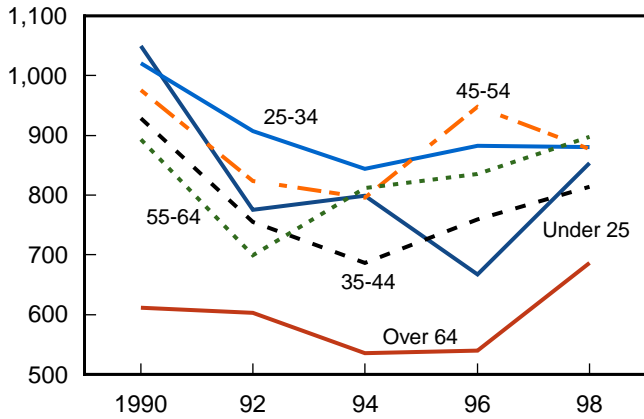


1998 prices.

Source: Economic Research Service from Bureau of Labor Statistics data.

Figure 8
Away-from-home food spending by age of household head

Spending/person (dollars)



1998 prices.

Source: Economic Research Service from Bureau of Labor Statistics data.

The oldest group realized a price-adjusted increase of approximately \$74 (12 percent), while the second oldest group realized an increase of \$4 (less than 0.5 percent). In 1998, the oldest and second oldest household heads spent \$686 and \$897, respectively, per person on food expenditures away from home. In contrast, the youngest and second youngest groups spent \$854 and \$880, respectively. Despite the fact that the urban, under-25-year-old group had considerably lower incomes (less than \$21,000 in 1998) than the urban 45- to 54-year-olds (\$49,000 in 1998), the younger group spent only \$43 less per person on away-from-home food in that year. One reason for this difference is the tendency of younger people to spend more of their entertainment budget on away-from-home dining.

Small Households Spent More Per Person on Food Expenditures

One-person households spent almost twice as much per person, per year, on food as five-person households do. For example, in 1998 one-person households spent about \$2,522, while 5-person households averaged \$1,336 (fig. 9). Per-person food spending almost always declines as household size increases, but larger households still have a much larger food bill than smaller households. For example, while one-person households spent \$2,522 on food in 1998, five-person households averaged \$6,680. Household food spending does not increase proportionally with household size, because larger households can take advantage of economies of size, such as buying in bulk. Larger households also have a different age mix than smaller households and usually buy a different market basket of foods. Also, smaller households may not have sufficient choices of food unit sizes that meet their needs.

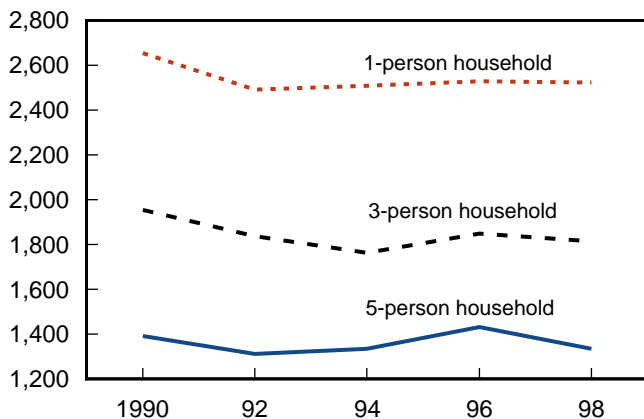
Between 1990 and 1998, one-person households saw their total food expenditures decline by \$132 from \$2,654 to \$2,522 (about 9 percent), and spending by three-person households declined by about \$140 per person, from \$1,953 to \$1,813 (7 percent). On the other hand, five-person households reduced per-person

food spending by just \$56, from \$1,392 to \$1,336 (about 4 percent).

Spending on food consumed at home was flat for one-person households but declined for other households (fig. 10). Households with three persons had the largest decline in per-person spending, about 8 percent, while households of five persons had a decline 7 percent. Spending on food away from home declined for all household sizes, except for five-person households (fig. 11). Per-person food-away-from-home expenditures declined by about 10 percent for one-person households and by about 6 percent for three-person households.

There has been a general shift from spending the U.S. food dollar on at-home food to away-from-home food that modestly continued during the 1990s, with the exception of one-person households. In 1990, one-person households spent 48 percent of their food dollars away from home, but that share had declined to 45 percent by 1998. While the per person food-away-from-home expenditures for three-person households declined by about 6 percent, the share of food dollars going to food away from home increased from 38 to 39 percent. Likewise, five-person households increased their share of food dollars spent away from home by 2 percentage points to 33 percent. In general, the smaller the household, the larger the share of the food dollar spent away from home.

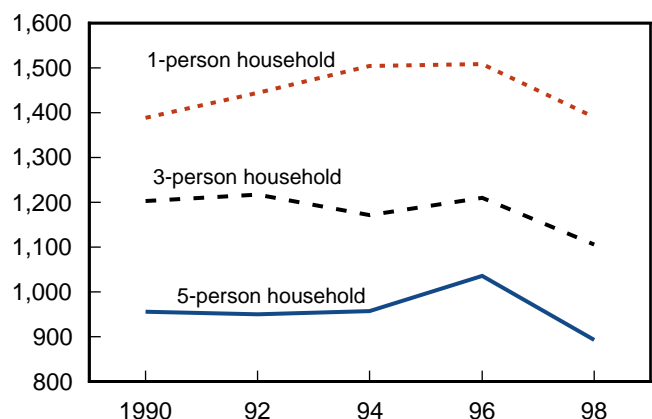
Figure 9
Total food spending by household size
Spending/person (dollars)



1998 prices.

Source: Economic Research Service from Bureau of Labor Statistics data.

Figure 10
At-home food spending by household size
Spending/person (dollars)



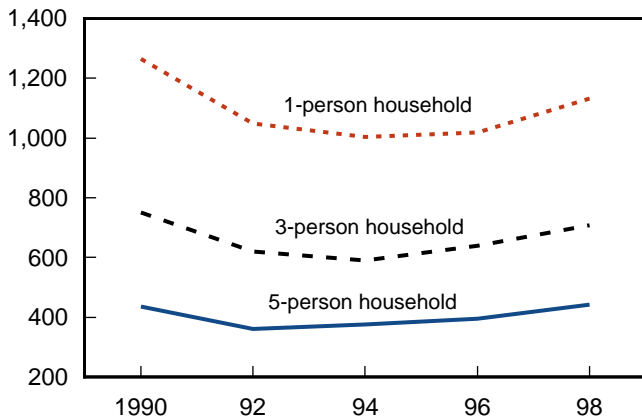
1998 prices.

Source: Economic Research Service from Bureau of Labor Statistics data.

Figure 11

Away-from-home food spending by household size

Spending/person (dollars)



1998 prices.

Source: Economic Research Service from Bureau of Labor Statistics data.

Convenience is a factor in the trend toward more spending on away-from-home food, but economics probably plays an even larger role. Smaller households tend to have higher per-capita incomes than larger households, which gives them more discretionary income to spend on away-from-home food. Also, a smaller household's total cost to eat out is considerably less than a larger household's outlay, even if per-capita costs are the same. The decline in the share of the food dollar spent away from home by one-person households might in part be explained by the fact that many of these households are comprised of young people just starting out in careers. One might speculate that job turnover has increased over the 1990s, and that the uncertainty created by this has adversely impacted the away-from-home food market, although one might make the argument that because of time pressures and opportunity costs one might expect the opposite.

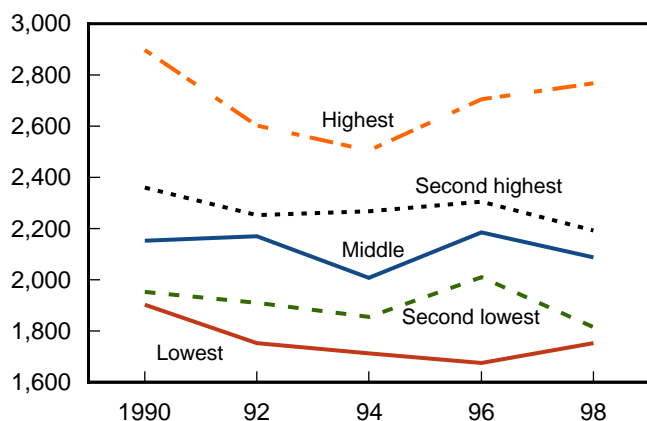
Total Food Spending Fell the Most in Poorest Households

Per-person total food spending for the poorest 20 percent of the population fell from \$1,903 in 1990 to \$1,754 in 1998 (about 8 percent, fig. 12). In contrast, spending for the wealthiest 20 percent of all households decreased from \$2,897 per person in 1990 to \$2,768 in 1998 (about 5 percent). Total food spending was down for the other quintiles as well. The largest decline, already noted, was for the poorest households, while the smallest decline was for the middle-income households, about 3 percent from \$2,153 to about \$2,088.

Per-person at-home food spending declined in 1990-98 for all income groups, but declined most for the second lowest and second highest income quintiles, 8 and 7 percent, respectively (fig. 13). For the wealthiest households, at-home food spending declined just 1 percent. Likewise, per-person spending on food away from home fell for all groups (fig. 14). Food-away-from-home expenditures for the lowest income quintile declined from \$711 to \$637 per person (about 10 percent). Even the wealthiest households realized a decline of about 8 percent from \$1,407 per person in 1990 to \$1,301 in 1998.

Figure 12
Total food spending by income quintile

Spending/person (dollars)



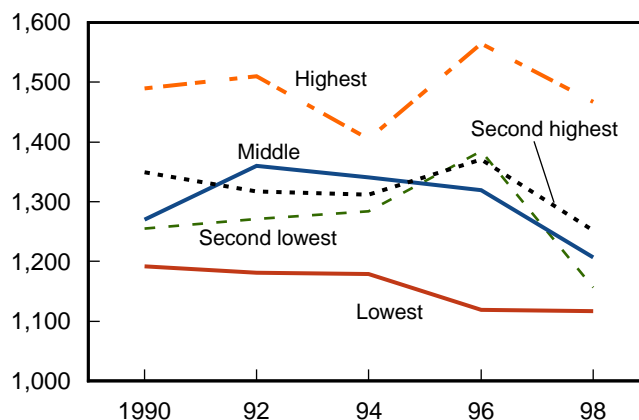
1998 prices.

Source: Economic Research Service from Bureau of Labor Statistics data.

As expected, wealthier households spend about twice as much on food-away-from-home as poor households. While households in the top income quintile spent \$1,301 per person in 1998, the poorest households spent less than half that amount, \$637 per person. For at-home food spending, however, the poorest spent \$1,117 per person in 1998 and the richest households

Figure 13
At-home food spending by income quintile

Spending/person (dollars)

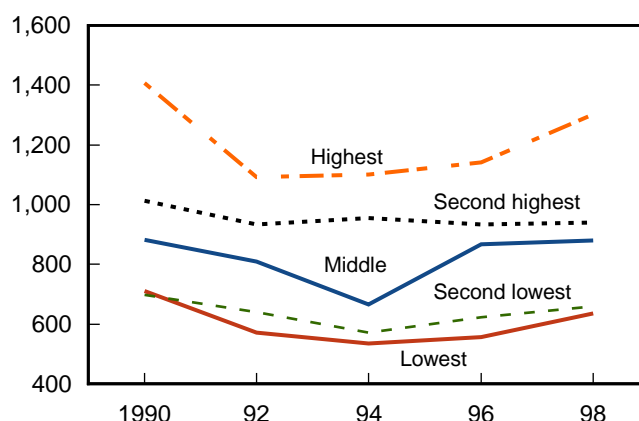


1998 prices.

Source: Economic Research Service from Bureau of Labor Statistics data.

Figure 14
Away-from-home food spending by income quintile

Spending/person (dollars)



1998 prices.

Source: Economic Research Service from Bureau of Labor Statistics data.

spent \$1,467, a 31-percent difference. The wealthiest households tended to spend a greater share of their food budget on eating away from home than the least wealthy households: 47 percent versus 36 percent in 1998.

Not surprisingly, poorer households spend a larger share of their income for food than do wealthier households. However, the amount spent on food

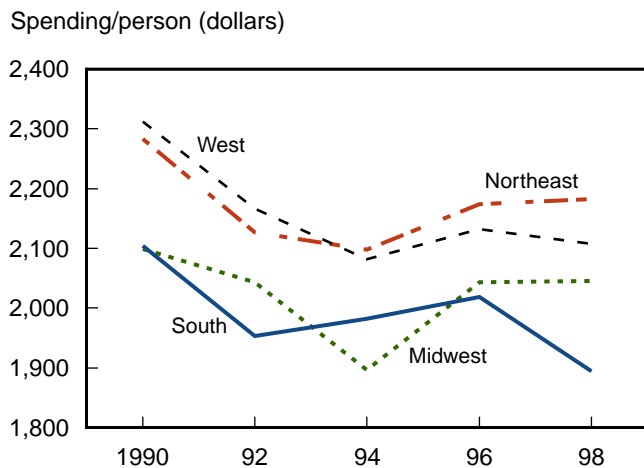
remained remarkably constant during the 1990s. For example, the poorest households spent about 35 percent of their income on food in 1990 and 33 percent in 1998. In contrast, the richest households spent only about 8 percent in 1990 and about 7.5 percent in 1998. The difference between the amount spent by the poorest and the wealthiest households demonstrates a well-known rule in economics that states that the budget share of necessities declines as income increases.

Northeast and West Led in Food Spending

Northeasters spent about \$2,182 or \$75 (3.5 percent) more than westerners, \$137 (7 percent) more than mid-westerners, and \$288 (15 percent) more than southerners on total food in 1998 (fig. 15). People living in the Northeast and West spent the most per person on at-home and away-from-home food (figs. 16 and 17). For example, residents of the Northeast spent \$1,273 on at-home food and \$909 on away-from-home food in 1998, while residents of the West spent \$1,254 at home and \$852 away from home. Southerners spent the least— \$1,123 at home and \$771 away from home.

All households spent less per person on at-home food in 1998 than in 1990 except those in the Midwest, which spent the same. At-home food spending declined about 5 percent in the Northeast and about 9 percent in both the West and the South. Likewise, away-from-home food spending declined for all four regions (fig. 17). From 1990 to 1998, away-from-home expenditures declined about 12 percent in the South. These expenditures fluctuated during 1990-98. For example, per-person away-from-home expenditures in the Northeast were as high as \$942 in 1990 and as low as \$694 in 1994. These fluctuations tended to coincide with increases and decreases in disposable household income. Expenditures on food away from home tend to fluctuate more than expenditures on food at home since food away from home tends to be less of a necessity than food at home.

Figure 15
Total food spending by region

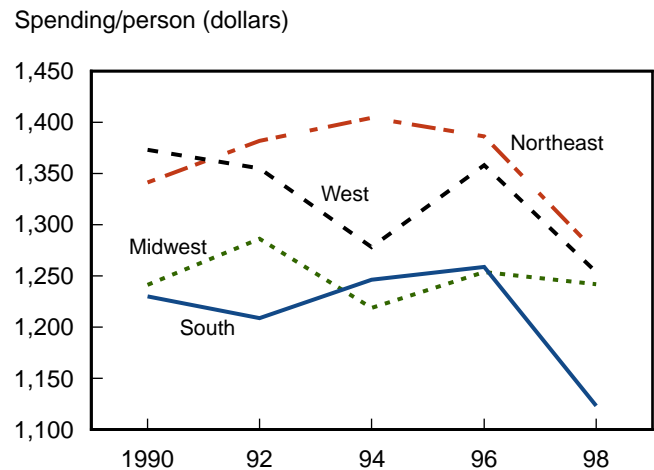


1998 prices.

Source: Economic Research Service from Bureau of Labor Statistics data.

Despite the fluctuations in expenditures on food away from home, the share spent on this food category remained constant during 1990-98. Households in all regions spent about 41 percent of their food budget on food away from home in 1990 except those in the South, which spent 42 percent. However, in 1998, food-away-from-home expenditures were 42, 39, 41, and 40 percent for households in the Northeast, Midwest, South, and West, respectively.

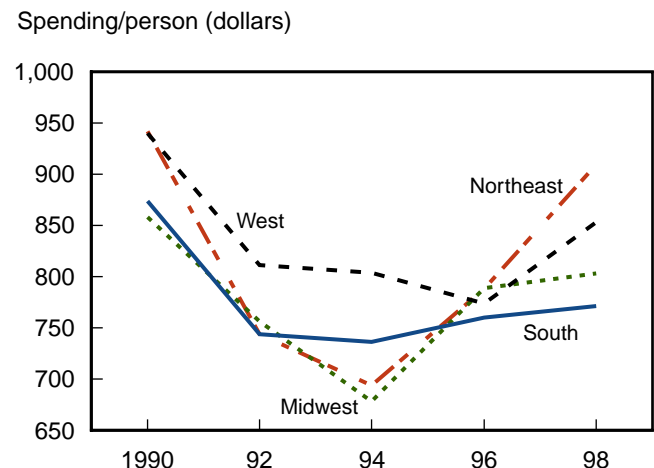
Figure 16
At-home food spending by region



1998 prices.

Source: Economic Research Service from Bureau of Labor Statistics data.

Figure 17
Away-from-home food spending by region



1998 prices.

Source: Economic Research Service from Bureau of Labor Statistics data.

Some of the differences among regions probably are due to tastes and preferences. But relative prices of food items, which vary across the country, are also an influence. Income differentials, labor force participa-

tion rates, home food production, and the population's racial composition are other factors accounting for regional food spending differences.

Food Spending Increased for Black Households

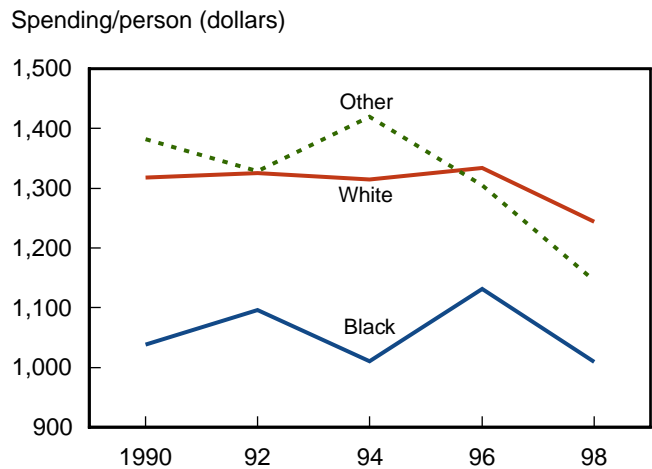
Per-person total food spending in 1990 was 47 percent higher in White households than in Black households, but other races spent about as much as Whites (fig. 18). [Other races are American Indian, Aleut, Eskimo, and Asian/Pacific Islander.] By 1998, the differential between per person food expenditures of White and Black households had declined to 35 percent, while expenditures remained about the same between White households and those headed by other races. Per-person spending in 1998 by households headed by a White declined by about 7 percent from 1990 levels to \$2,107. Over this same timespan, total per-person food expenditures by Black households increased by 1 percent to \$1,556. Total per-person food expenditures by households headed by other races was \$2,073 in 1998.

At-home food spending per person declined from \$1,318 to \$1,244 (about 6 percent) in White households from 1990 to 1998, from \$1,038 to \$1,009 (about 3 percent) in Black households, and from \$1,382 to \$1,145 (17 percent) in households of other races (fig. 19). Annual per-person away-from-home food spending increased for Black households by about 9 percent, from \$501 in 1990 to \$547 in 1998 and increased by 4 percent for households headed by other races from \$895 to \$928. This change can be contrasted with a 9-percent decrease in per-person

expenditures by White households, from \$951 to \$863, over the same time period.

Households headed by other races increased their share of the food dollar spent on away-from-home eating by 6 percentage points, while Blacks increased their share by 2 percentage points between 1990 and 1998 (fig. 20). Over this same time period, White households decreased their share of the food dollar spent away from home by 1 percentage point.

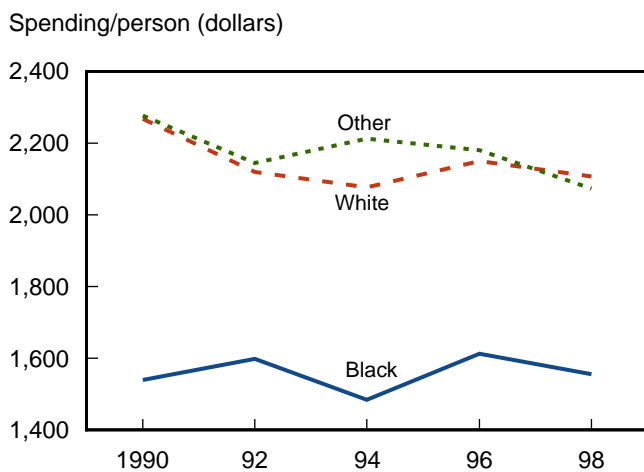
Figure 19
At-home food spending by race



1998 prices.

Source: Economic Research Service from Bureau of Labor Statistics data.

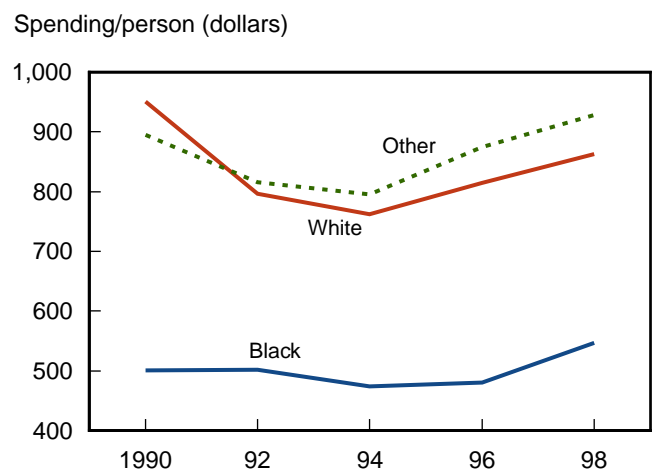
Figure 18
Total food spending by race



1998 prices.

Source: Economic Research Service from Bureau of Labor Statistics data.

Figure 20
Away-from-home food spending by race



1998 prices.

Source: Economic Research Service from Bureau of Labor Statistics data.

Conclusions

Most U.S. households realized a modest decline in price-adjusted food expenditures, both at home and away from home, between 1990 and 1998. Per-person total food expenditures were greatest for households in the highest income quintile, for one-person households, and for households with heads between 55 and 64 years of age. Contrasted to this, households headed by a single female spent the least per capita of all

households, even less than households in the poorest income quintile. However, during 1990-98, female-headed households increased their total food expenditures by about 6 percent. In addition, food expenditures in the poorest income quintile fell about 8 percent while food expenditures declined by 1 percent for the wealthiest income quintile. Note once again that these declines in food expenditures are likely due to declines in the real inflation-adjusted price of food, although quantity adjustments cannot be ruled out.

Additional Readings

Blisard, N., D. Smallwood, and S. Lutz, *Food Cost Indexes for Low-Income Households and the General Population*, TB-1872, U.S. Dept. Agr., Econ. Res. Serv., February 1999.

Harris, J. Michael, and W. N. Blisard, “Decomposing Red Meat, Poultry, and Fish Expenditure Patterns into Age, Time, and Cohort Effects,” Selected Paper, American Agricultural Economics Association Annual Meeting, Tampa Bay, FL, August 2000.

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Want to learn more about how marital status, age, household size, income, race, and region influenced food spending over the 1990s? Visit our website at **www.ers.usda.gov**.

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2. Cost and standard of living--United States.
3. Demographic surveys--United States.
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