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## CONSUMER SPENDING PATTERNS IN THE PHILADELPHIA METROPOLITAN AREA, 2006-2007

Consumer units ${ }^{1}$ in the Philadelphia-Wilmington-Atlantic City, Pa.-Del.-N.J.-Md. metropolitan area spent an average of $\$ 48,649$ per year in 2006-2007, according to results from the Bureau of Labor Statistics' Consumer Expenditure Survey. Sheila Watkins, the Bureau's regional commissioner, noted that this figure was 1.3 percent lower than the $\$ 49,279$ average expenditure level for a typical household in the United States. Although households in the Philadelphia area spent an amount close to the U.S. average, they tended to allocate their shares of total expenditures differently among the major categories. Expenditures for housing, education, and personal insurance and pensions accounted for a significantly larger ${ }^{2}$ portion of the total budget in the Philadelphia area compared to the U.S., whereas spending on transportation, health care, and cash contributions represented significantly smaller-thanaverage shares of the total budget. (See chart A.)
Chart A. Percent distribution of total average expenditures in the United States and Philadelphia metropolitan area, Consumer Expenditure Survey, 2006-2007


[^0]This report contains annual data averaged over a two-year period, 2006 and 2007. The data are from the Consumer Expenditure Survey (CE), which is collected on an ongoing basis by the U.S. Census Bureau for the Bureau of Labor Statistics (BLS). The CE is the only national survey that provides both complete data on household expenditures and the demographic characteristics of those households. Data from the CE are available for the nation, the 4 geographic regions of the country, and 18 metropolitan areas. Survey data cannot be used to make cost of living comparisons between areas. Expenditures vary among areas not only because of economic factors such as the prices of goods and services and family income, but also because of differences such as the age of the population, climate, consumer tastes, family size, etc. However, expenditure shares, or the percentage of a consumer unit's budget spent on a particular category, can be used to compare spending patterns across areas. The survey provides average expenditures for consumer units. An individual consumer unit may spend more or less than the average, depending on its particular characteristics.

Housing, the largest expenditure category, accounted for 37.8 percent of a Philadelphia area household's total budget, significantly above the 33.9-percent national average. Among five other metropolitan areas with population sizes similar to that of Philadelphia, expenditure shares for housing were also significantly higher than that for the nation in Miami (40.5 percent), Washington (38.7 percent), and Boston (36.6 percent), but were similar to the national average in Dallas (33.4 percent) and significantly lower in Houston (32.1 percent). (See table 1.) Overall, 10 of the published 18 metropolitan areas had expenditure shares for housing significantly above the U.S. average and only Houston had a lower-than-average share. (See chart 1.)

The majority of housing expenditures in Philadelphia went toward shelter ( 58.4 percent), which includes mortgage interest, property taxes, repairs, and rent, among other items; this was not significantly different from the 59.0 percent spent nationally. (See table A.) Utilities, fuels, and public services expenses accounted for 21.6 percent of total housing expenditures in Philadelphia, significantly higher than the national percentage of 20.6. The rate of homeownership in Philadelphia, 70 percent, was close to the national average of 67 percent. Among the other five areas chosen for comparison, homeownership rates in Washington ( 69 percent) and Houston ( 65 percent) were also close to the U.S. average, whereas those in Boston ( 62 percent), Miami ( 63 percent), and Dallas ( 64 percent) were lower.

Table A. Percent distribution of housing expenditures, United States and selected metropolitan areas, Consumer Expenditure Survey, 2006-2007

| Category | United <br> States | Philadelphia | Washington | Dallas | Houston | Miami | Boston |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Total housing | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Shelter | 59.0 | 58.4 | 66.8 | 54.2 | 56.1 | 65.2 | 64.8 |
| Utilities, fuels, and public services | 20.6 | 21.6 | 15.8 | 25.0 | 24.2 | 19.3 | 19.1 |
| Household operations | 5.8 | 5.7 | 6.2 | 6.6 | 6.1 | 6.4 | 5.1 |
| Housekeeping supplies | 3.8 | 3.3 | 2.8 | 4.0 | 4.2 | 3.0 | 2.7 |
| Household furnishings and equipment | 10.7 | 11.0 | 8.4 | 10.2 | 9.4 | 6.1 | 8.3 |

Note: Columns may not add to 100.0 due to rounding.

At 15.1 percent of the total budget, transportation was the second-largest expenditure category in the Philadelphia area; this was significantly below the national average of 17.7 percent. Like Philadelphia, households in Washington (14.5 percent) and Boston (15.8 percent) allocated smaller shares of their budgets to transportation when compared to the national average. However, consumer units in Houston (20.1 percent) spent a significantly larger-than-average share of their budget on transportation. Among the 18 metropolitan areas, 8 had lower-than-average expenditure shares for transportation, while just 2 had above average shares. (See chart 2.)

Of the $\$ 7,345$ annual expenditure for transportation in Philadelphia, 92.5 percent was spent buying and maintaining private vehicles; this compared to the national average of 94.0 percent. (See table 2 for detailed expenditure levels.) The average number of vehicles per household in Philadelphia and Miami, at 1.5 each, was below the national average of 1.9. The average number of vehicles was equal to the U.S. in Dallas (1.9), and close to the national average in Washington and Houston (each at 1.8) and Boston (1.7).

The remaining 7.5 percent of a Philadelphia household's transportation budget was spent on public transit, which includes fares for taxis, buses, trains, and planes. (See table B.) This share was not significantly different from the national average of 6.0 percent. Among all 18 published metropolitan areas only 3 allocated at least 10.0 percent of their transportation dollars to public transportation: New York (13.5 percent), San Francisco (11.5 percent), and Seattle (10.9 percent). Households in Cleveland ( 3.0 percent) and Dallas (4.1 percent) spent the smallest portions of their transportation budgets on public transit. (See table C.)

Table B. Percent distribution of transportation expenditures, United States and selected metropolitan areas, Consumer Expenditure Survey, 2006-2007

| Category | United States | Philadelphia | Washington | Dallas | Houston | Miami | Boston |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total transportation | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Vehicle purchases (net outlays) | 38.1 | 30.6 | 34.8 | 45.2 | 40.9 | 36.0 | 39.3 |
| Gasoline and motor oil | 26.4 | 28.7 | 23.8 | 23.8 | 26.4 | 31.0 | 23.3 |
| Other vehicle expenses | 29.5 | 33.3 | 33.2 | 27.0 | 28.3 | 26.4 | 30.3 |
| Public transportation | 6.0 | 7.5 | 8.2 | 4.1 | 4.4 | 6.7 | 7.1 |

Note: Columns may not add to 100.0 due to rounding.

Table C. Spending on public transportation in the United States, regions, and 18 metropolitan areas, Consumer Expenditure Survey, 2006-2007

| Area | Transportation <br> Spending | Public <br> Transportation | Share |
| :---: | ---: | ---: | ---: |
| United States | $\$ 8,737$ | $\$ 521$ | 6.0 |
| Northeast | 8,107 | 688 | 8.5 |
| New York | 8,048 | 1,085 | 13.5 |
| Philadelphia | 7,345 | 548 | 7.5 |
| Boston | 8,707 | 618 | 7.1 |
| South | 8,578 | 342 | 4.0 |
| Washington, D.C. | 9,531 | 778 | 8.2 |
| Atlanta | 8,053 | 570 | 7.1 |
| Miami | 7,938 | 530 | 6.7 |
| Baltimore | 8,673 | 554 | 6.4 |
| Houston | 11,119 | 490 | 4.4 |
| Dallas | 10,764 | 439 | 4.1 |
| Midwest | 8,159 | 428 | 5.2 |
| Chicago | 8,846 | 806 | 9.1 |
| Minneapolis-St.Paul | 8,694 | 649 | 7.5 |
| Detroit | 8,743 | 433 | 5.0 |
| Cleveland | 8,371 | 253 | 3.0 |
| West | 10,116 | 7.5 |  |
| San Francisco | 10,792 | 102 | 7.5 |
| Seattle | 10,047 | 7,238 | 11.5 |
| San Diego | 7,258 | 10.9 |  |
| Los Angeles | 10,141 | 702 | 9.7 |
| Phoenix | 12,424 | 727 | 7.2 |

Payments for personal insurance and pensions accounted for 11.9 percent of the typical Philadelphia household's budget, significantly higher than the 10.8-percent share allocated nationally. Like Philadelphia, consumer units in Washington (12.8 percent), Dallas (12.2 percent), and Boston (11.5 percent) allocated expenditure shares that were significantly above the national average for personal insurance and pensions. On the other hand, households in Miami ( 9.5 percent) allocated a significantly lower-than-average share, while those in Houston (11.3 percent) had a share similar to that of the nation. Of the 18 metropolitan areas published, only Washington and San Diego spent a measurably larger share of their budgets on personal insurance and pensions than on food.

The portion of Philadelphia consumer units' budgets spent on food, 11.5 percent, was not significantly different from the 12.4 -percent U.S. average. In the other five similar-sized metropolitan areas, households in Miami (12.4 percent), Boston (12.1 percent), and Houston (11.8 percent) also allocated expenditure shares similar to that of the nation. On the other hand, consumer units in Dallas (11.3 percent) and Washington (11.4 percent) spent significantly smaller-than-average shares of their budgets on food. (See chart 3.)

Households in Philadelphia spent $\$ 3,028$, or 54.1 percent, of their food dollars on food at home and the remaining 45.9 percent on food away from home, such as restaurant meals, carry-outs, board at school, and catered affairs. In comparison, the average U.S. household spent 56.2 percent of its food budget on food at home and 43.8 percent on food away from home. Among the other five similarsized metropolitan areas being compared, residents of Miami allocated a measurably smaller-thanaverage share ( 33.1 percent) of their food budget to dining out, while residents of Washington spent a significantly higher-than-average share ( 50.3 percent).

Philadelphia area households allocated 4.8 percent of their budgets to entertainment, not significantly different from the 5.4 -percent national average. Entertainment spending in Boston (6.1 percent) and Houston ( 5.0 percent) was also similar to the national average. However, consumer units in Miami ( 3.4 percent), Washington ( 4.5 percent), and Dallas ( 4.6 percent) allocated significantly smaller shares of their total budgets to entertainment when compared to the nation.

Out-of-pocket health care expenses-which include health insurance premiums, medical services, drugs (prescription and nonprescription), and medical care supplies-represented 4.5 percent of total household expenditures in Philadelphia, significantly less than the 5.7 percent recorded nationwide. Like Philadelphia, the percentage spent on out-of-pocket health care expenses was also significantly less than the national average in Washington ( 4.0 percent), Miami ( 4.7 percent), and Boston (5.1 percent). Expenditure shares in Houston ( 5.9 percent) and Dallas ( 5.5 percent) were close to the national average.

Spending on apparel and services accounted for 4.2 percent of total expenditures in Philadelphia, similar to the 3.8-percent national average. Among the other five areas, households in Houston ( 4.2 percent), Boston ( 3.8 percent), Washington ( 3.7 percent), and Dallas ( 3.5 percent), also allocated a similar share of their total budget for clothing when compared to the nation, while Miami ( 2.7 percent) had an expenditure share significantly lower than that for the nation.

Cash contributions accounted for 3.1 percent of an average consumer unit's spending in Philadelphia, significantly lower than the national average of 3.7 percent. Shares for cash contributions were also significantly smaller than the national average in Boston ( 2.2 percent) and Miami ( 3.1 percent), but were close to that for the nation in Dallas ( 4.1 percent) and Houston and Washington (each at 3.3 percent).

Out-of-pocket expenses for education accounted for 2.5 percent of a Philadelphia area household's total budget, significantly above the 1.9-percent nationwide average. In Boston and Washington ( 2.5 percent each), expenditure shares for education were also significantly higher than that for the nation. Expenditure shares for education in Miami (2.3 percent) and Houston (1.7 percent) were similar to the national average, while the share in Dallas (1.4 percent) was significantly below average.

As noted, Philadelphia is 1 of 18 metropolitan areas nationwide for which Consumer Expenditure Survey data are available. We encourage users interested in learning more about the Consumer Expenditure survey to contact the Mid-Atlantic Information Office at (215) 597-3282. Metropolitan area CE data and that for the four geographic regions and the United States are available on our Web site at www.bls.gov/ro3/.

## Changes in 2007

In 2007 there were a number of revisions to the survey questionnaires to capture new products and services that are available to consumers. This was the latest in a series of periodic revisions to keep the surveys current with changes in the marketplace. Also for 2007, a number of expenditure items changed survey source from the Interview Survey to the Diary Survey or vice versa. Due to the overlap in the item coverage between the two surveys, the survey source is periodically reviewed and statistical methods are used to select the best source.

## Technical Note

The current Consumer Expenditure Survey (CE) program began in 1980. Its principal objective is to collect information on the buying habits of American consumers. The consumer expenditure data are used in a wide variety of research by government, business, labor, and academic analysts. The data are also required for periodic revision of the Consumer Price Index (CPI).

The survey consists of two components, a diary or recordkeeping survey, and an interview survey. The Diary Survey, completed by participating consumer units for two consecutive 1-week periods, collects data on frequently-purchased smaller items. The Interview Survey, in which the expenditures of consumer units are obtained in five interviews conducted every 3 months, collects data for larger-cost items and expenditures that occur on a regular basis. The U.S. Census Bureau collects the survey data.

Each component of the survey queries an independent sample of consumer units which is representative of the U.S. population. Over the year, about 7,000 consumer units are sampled for the Diary Survey. The Interview Survey is conducted on a rotating panel basis, with about 7,000 consumer units participating each quarter. The data are collected on an ongoing basis in 91 areas of the country.

The integrated data from the BLS Diary and Interview Surveys provide a complete accounting of consumer expenditures and income, which neither survey component alone is designed to do. Due to changes in the survey sample frame, metropolitan area data in this release are not directly comparable to those prior to 1996.

The expenditure data in this release should be interpreted with care. The expenditures are averages for consumer units with the specified characteristics, regardless of whether or not a specific unit incurred an expense for that specific item during the recording period. The average expenditure may be considerably lower than the expenditure by those consumer units that purchased the item. This study is not intended as a comparative cost of living survey, as neither the quantity nor the quality of goods and services has been held constant among areas. Differences may result from variations in demographic characteristics such as consumer unit size, age, preferences, income levels, etc. Users should keep in mind that prices for many goods and services have risen since the survey was conducted.

In addition, sample surveys are subject to two types of errors. Sampling errors occur because the data are collected from a representative sample rather than the entire population. Nonsampling errors result from the inability or unwillingness of respondents to provide correct information, differences in interviewer ability, mistakes in recording or coding, or other processing errors. The year-to-year changes are volatile and should be interpreted carefully. Sample sizes for the metropolitan areas are much smaller than for the nation, so the U.S. estimates and year-to-year changes are more reliable than those for the metropolitan areas.

Some expenditure components are subject to large fluctuations from one year to the next because these components include expensive items that relatively few consumers purchase each year. Thus, shifts from year to year in the number of consumers making such purchases can have a large effect on average expenditures. Examples of these types of expenses are purchases of new cars and trucks in the transportation component, and spending on boats and recreational vehicles in the entertainment component.

The CE significance tests are used in this release to compare expenditure shares for 14 expenditure categories in the United States to selected metropolitan areas (areas in this release are listed below). Expenditure shares for housing and transportation that are above or below that for the nation after testing for significance at the 95-percent confidence interval are identified in charts 1 and 2 for the 18 published metropolitan areas.

NOTE: A value that is statistically different from another does not necessarily mean that the difference has economic or practical significance. Statistical significance is concerned with the ability to make confident statements about a universe based on a sample. It is entirely possible that a large difference between two values is not significantly different statistically, while a small difference is, since both the size and heterogeneity of the sample affect the relative error of the data being tested.

Metropolitan areas definitions are based on Core-Based Statistical Areas defined by the U.S. Office of Management and Budget. The metropolitan areas and their component counties and cities discussed in this release are:

Philadelphia-Wilmington-Atlantic City, Pa.-Del.-N.J.-Md. CMSA: includes Bucks, Chester, Delaware, Montgomery and Philadelphia Counties in Pennsylvania; Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester and Salem Counties in New Jersey; New Castle County in Delaware; and Cecil County in Maryland.

Washington, D.C.-Md.-Va.-W. Va. PMSA: includes the District of Columbia; Calvert, Charles, Frederick, Montgomery, Prince George's, and Washington Counties in Maryland; Alexandria, Fairfax, Falls Church, Fredericksburg, Manassas, and Manassas Park cities and Arlington, Clarke, Fairfax, Fauquier, King George, Loudoun, Prince William, Rappahannock, Spotsylvania, Stafford, and Warren Counties in Virginia; and Berkeley and Jefferson Counties in West Virginia.

Dallas-Fort Worth, Texas CMSA: includes Collin, Dallas, Delta, Denton, Ellis, Henderson, Hood, Hunt, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise counties.

Houston-Galveston-Brazoria, Texas CMSA: includes Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, San Jacinto, and Waller counties.

Miami-Fort Lauderdale, Fla. CMSA: includes Broward and Miami Dade counties.
Boston-Brockton-Nashua, Mass.-N.H.-Maine-Conn. CMSA: includes Bristol, Essex, Hampden, Hampshire, Middlesex, Norfolk, Plymouth, Suffolk and Worcester counties in Massachusetts; Hillsborough, Merrimack, Rockingham and Strafford counties in New Hampshire; York County in Maine; and Windham County in Connecticut.

## Definitions

Consumer unit - members of a household related by blood, marriage, adoption, or other legal arrangement; a single person living alone or sharing a household with others but who is financially independent; or two or more persons living together who share responsibility for at least 2 out of 3 major types of expenses - food, housing, and other expenses. The terms household or consumer unit are used interchangeably for convenience.

Expenditures - consist of the transaction costs, including excise and sales taxes, of goods and services acquired during the interview or recordkeeping period. Expenditure estimates include expenditures for gifts, but exclude purchases or portions of purchases directly assignable to business purposes. Also excluded are periodic credit or installment payments on goods or services already acquired. The full cost of each purchase is recorded even though full payment may not have been made at the date of purchase.

Income before taxes - the total money earnings and selected money receipts during the 12 months prior to the interview date.

Table 1. Consumer unit characteristics and percent distribution of expenditures, U.S. and selected metropolitan areas, Consumer Expenditure Survey, 2006-2007


Table 2. Average annual expenditures, U.S. and selected metropolitan areas, Consumer Expenditure Survey, 2006-2007

| Item | United States | Philadelphia | Washington | Dallas | Houston | Miami | Boston |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Average annual expenditures | \$49,279 | \$48,649 | \$65,894 | \$54,334 | \$55,381 | \$46,201 | \$55,189 |
| Food | 6,122 | 5,600 | 7,533 | 6,160 | 6,547 | 5,728 | 6,700 |
| Food at home | 3,441 | 3,028 | 3,747 | 3,498 | 3,447 | 3,830 | 3,893 |
| Cereals and bakery products | 453 | 408 | 451 | 434 | 419 | 476 | 553 |
| Meats, poultry, fish, and eggs | 787 | 734 | 864 | 774 | 802 | 949 | 887 |
| Dairy products | 378 | 343 | 407 | 381 | 355 | 443 | 423 |
| Fruits and vegetables | 596 | 559 | 780 | 605 | 607 | 854 | 657 |
| Other food at home | 1,227 | 984 | 1,244 | 1,304 | 1,264 | 1,107 | 1,374 |
| Food away from home | 2,681 | 2,571 | 3,786 | 2,662 | 3,099 | 1,898 | 2,807 |
| Alcoholic beverages | 477 | 451 | 650 | 381 | 603 | 276 | 565 |
| Housing | 16,684 | 18,411 | 25,525 | 18,169 | 17,752 | 18,708 | 20,174 |
| Shelter | 9,849 | 10,755 | 17,040 | 9,843 | 9,965 | 12,190 | 13,068 |
| Owned dwellings | 6,624 | 7,410 | 12,380 | 6,446 | 6,872 | 8,100 | 8,822 |
| Rented dwellings | 2,596 | 2,613 | 3,947 | 2,892 | 2,533 | 3,809 | 3,175 |
| Other lodging | 629 | 732 | 713 | 505 | 560 | 281 | 1,071 |
| Utilities, fuels, and public services | 3,437 | 3,981 | 4,037 | 4,551 | 4,297 | 3,611 | 3,850 |
| Household operations | 966 | 1,054 | 1,592 | 1,192 | 1,080 | 1,197 | 1,036 |
| Housekeeping supplies | 639 | 602 | 703 | 728 | 746 | 569 | 542 |
| Household furnishings and equipment | 1,793 | 2,020 | 2,153 | 1,856 | 1,664 | 1,140 | 1,678 |
| Apparel and services | 1,893 | 2,041 | 2,440 | 1,907 | 2,345 | 1,269 | 2,093 |
| Transportation | 8,737 | 7,345 | 9,531 | 10,764 | 11,119 | 7,938 | 8,707 |
| Vehicle purchases (net outlay) | 3,332 | 2,244 | 3,319 | 4,866 | 4,544 | 2,859 | 3,420 |
| Gasoline and motor oil | 2,306 | 2,106 | 2,272 | 2,559 | 2,936 | 2,457 | 2,026 |
| Other vehicle expenses | 2,577 | 2,447 | 3,163 | 2,902 | 3,149 | 2,092 | 2,642 |
| Public transportation | 521 | 548 | 778 | 439 | 490 | 530 | 618 |
| Healthcare | 2,810 | 2,175 | 2,641 | 2,967 | 3,293 | 2,167 | 2,809 |
| Entertainment | 2,637 | 2,327 | 2,995 | 2,515 | 2,789 | 1,583 | 3,352 |
| Personal care products and services | 586 | 602 | 682 | 747 | 782 | 641 | 546 |
| Reading | 117 | 109 | 130 | 101 | 89 | 42 | 177 |
| Education | 917 | 1,228 | 1,664 | 739 | 918 | 1,054 | 1,381 |
| Tobacco products and smoking supplies | 325 | 406 | 237 | 265 | 299 | 197 | 350 |
| Miscellaneous | 827 | 689 | 1,234 | 765 | 761 | 770 | 736 |
| Cash contributions | 1,845 | 1,486 | 2,168 | 2,223 | 1,821 | 1,421 | 1,235 |
| Personal insurance and pensions | 5,303 | 5,778 | 8,463 | 6,632 | 6,264 | 4,407 | 6,365 |
| Life and other personal insurance | 316 | 289 | 341 | 346 | 417 | 192 | 254 |
| Pensions and Social Security | 4,987 | 5,488 | 8,123 | 6,286 | 5,847 | 4,215 | 6,111 |

Chart 1. Expenditure shares spent on housing in all 18 metropolitan statistical areas compared to the U.S. average, Consumer Expenditure Survey, 2006-2007


Significantly Above
Not Significantly Different
Significantly Below

NOTE: Statistical significance testing at the 95 percent confidence interval.

Chart 2. Expenditure shares spent on transportation in all 18 metropolitan statistical areas compared to the U.S. average, Consumer Expenditure Survey, 2006-2007


Significantly Above
Not Significantly Different Significantly Below

NOTE: Statistical significance testing at the $\mathbf{9 5}$ percent confidence interval.


[^0]:    ${ }^{1}$ See the Technical Note for the definition of a consumer unit. The terms consumer unit and household are used interchangeably throughout the text for convenience.
    ${ }^{2}$ Statistical significance tests were introduced for metropolitan area expenditure shares beginning with 2004-2005 data. See the Technical Note for further discussion of Consumer Expenditure significance testing.

