

Consumer Spending for Necessities

ABBY DULY

The proportion of household¹ spending used to purchase basic necessities is of interest to policymakers and social researchers as an elementary indicator of economic well-being. There are several complexities, however, in this application of the data; for example, the definition of “well-being” itself is not necessarily universal, and, even when the term is defined, the criteria upon which to evaluate well-being also are subjective and debatable. This article does not attempt to address these complexities; rather, data on consumer spending for necessities are presented in a manner that may be interpreted by a variety of readers for a variety of uses.

The discussion that follows is organized into three main sections. The first is a description of the data, including the definition of “necessities” used in this study and the demographic variables chosen for comparison. The second section is an evaluation of the Prussian mathematical statistician Ernst Engel’s proposition, using data from the 2000 Consumer Expenditure (CE) Survey to determine whether the relationship between income and the pro-

portion of expenditures spent on necessities that Engel observed in 1857 still holds true. In the third part of the text, spending on necessities as a share of total spending is presented for various additional demographic groups.

Study methodology

The study uses the expenditure shares tables published in the CE Survey. These tables provide the proportions of average annual expenditures (or total spending) allocated to various categories of items. The categories of interest here are those designated to be necessities: Food, housing, and apparel. These three types of expenses are chosen to be consistent with the work done by Engel, which, as previously mentioned, is used as a basis for analyzing spending for necessities by households of differing income levels. For consistency, the same definition of necessities is used in the comparisons among demographic groups. It is important to note that, while food, housing, and apparel are certainly reasonable candidates for necessities in 2000, there have been changes to these spending categories over time. For example, within the necessity category of food, the allocation among subcomponents has shifted such that the share of the food dollar spent on food away from home (including meals at restaurants or fast food, carryout, and home delivery) has grown from 3.0 percent in

¹The basic unit of measurement in the Consumer Expenditure Survey is the consumer unit. (See the glossary at the end of this anthology for the definition of a *consumer unit*. For convenience, *consumer unit* and *household* are used interchangeably throughout this article.)

Abby Duly is an economist in the Branch of Information and Analysis, Division of Consumer Expenditure Surveys, Bureau of Labor Statistics.

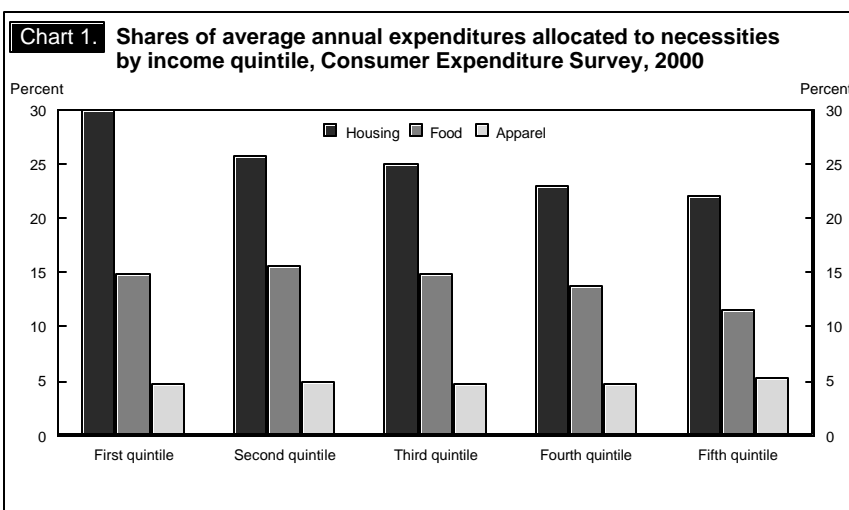
1909, to 29.0 percent in 1987,² to 41.0 percent in 2000.³

While data on food and apparel presented here are taken directly from the published CE tables, the housing category is constructed specifically out of two main subcomponents: Shelter⁴ and utilities. This is an important deviation from the published data. The reason is that, arguably, shelter and utilities are the actual necessities of housing and that other components collected in the CE Survey, such as household furnishings and equipment, are not, in fact, basic goods.

In the next section, necessity shares are compared across income quintiles, using Engel's proposition as a guide. The final analyses presented here provide a broad overview of necessity spending by additional demographic groups: Homeowners and renters, urban consumers and rural consumers, black households and white and other households, Hispanic and non-Hispanic households, consumer units living in different regions, and consumer units of varying compositions.

Spending on necessities by income group

In 1857, Engel observed a relationship between household income and the proportion of total expenditures used to purchase food, housing, and apparel. He found that, as income increases, the proportion of spending devoted to food decreases, while the shares of expenditures used to provide housing and apparel remain stable.⁵ Are the same patterns visible in the most recent CE Survey? Chart 1 illustrates the shares



of total spending allocated to each of the three categories of necessity.

In support of Engel's proposition, the share of average annual expenditures used to purchase food declines from 14.9 percent to 11.6 percent as income increases from the third quintile to the fifth quintile. (See table 1.) However, consumer units in the first quintile allocate a smaller proportion of total spending to food (14.9 percent) than do consumer units in the second quintile (15.7 percent), which would seem to violate Engel's proposition. But, as published by the CE Survey in 2000, the average income before taxes of the lowest income quintile is \$7,683, whereas the average annual (total) expenditures for the same quintile are **\$17,940**. Although this sounds contradictory, there are some explanations for the discrepancy. One is the effect of missing income: even though the responses of complete income reporters⁷ are used, the respondents may not have provided a complete accounting of all income from all sources. Also, some consumer units in the lowest quintile—retirees and full-time students, for example—may be able to spend beyond their apparent means by using loans or cashing in on invest-

ments that are not included as income in the CE Survey. Therefore, caution should be used in interpreting the food share of the first income quintile as a violation of Engel's proposition.

Expenditure shares for housing clearly decline across income quintiles, as shown in chart 1. While consumer units in the highest income quintile devote 22 percent of their total spending to shelter and utility costs, those in the lowest income quintile spend almost 30 percent. This pattern is not the same one observed by Engel in 1857, and it may be related to rather large differences in housing tenure. In 2000, 57 percent of consumer units in the first income quintile are renters, while 88 percent of consumer units in the fifth quintile are homeowners.

The shares of average annual expenditures allocated to apparel are barely discernible in chart 1, supporting Engel's observation that spending on apparel remains stable across income levels. In fact, the range of apparel shares is less than 1 percentage point, from 4.7 percent spent by those in the lowest income quintile to 5.3 percent spent by those in the highest income quintile.

Spending on necessities by selected demographic characteristics

As mentioned previously, the share of total spending allocated to housing is much greater for lower income households, and those households are also more likely to be renters. Looking at

² Eva Jacobs and Stephanie Shipp, "How family spending has changed in the U.S.," *Monthly Labor Review*, March 1990, pp. 20–27.

³ "Table 1. Quintiles of income before taxes: Average annual expenditures and characteristics, Consumer Expenditure Survey, 2000," <http://www.bls.gov/cexann00.pdf>, January 2003.

⁴ Shelter includes out-of-pocket expenditures for mortgage interest and charges, property taxes, rent, and maintenance and repair services and commodities.

⁵ Louis Philips, *Applied Consumption Analysis: Revised and Enlarged Edition* (Amsterdam, Elsevier Science Publishers, B.V., 1990), p. 103.

⁶ "Table 1. Quintiles of income before taxes: Average annual expenditures and characteristics, Consumer Expenditure Survey, 2000."

⁷ See "Glossary" in Appendix A at the end of this anthology for the definition of a *complete income reporter*.

Table 1. Shares of average annual expenditures allocated to necessities, by selected demographic characteristics, Consumer Expenditure Survey, 2000

Characteristic	Food	Housing ¹	Apparel
All consumer units	13.5	25.2	4.9
Income quintile²			
First	14.9	29.9	4.7
Second	15.7	25.7	4.9
Third	14.9	25.0	4.7
Fourth	13.8	22.9	4.8
Fifth	11.6	22.0	5.3
Housing tenure			
Homeowner	13.1	24.2	4.7
Renter	15.0	28.5	5.4
Type of area			
Urban	13.5	25.7	5.0
Rural	14.1	21.2	4.2
Race of reference person			
White and other	13.5	24.8	4.8
Black	14.5	29.3	6.0
Hispanic or non-Hispanic origin of reference person			
Hispanic	16.4	26.3	6.3
Non-Hispanic	13.3	25.2	4.8
Region of residence			
Northeast	13.8	27.7	5.4
Midwest	13.4	23.3	4.9
South	13.6	24.3	4.7
West	13.4	26.4	4.7
Composition of consumer unit			
Husband and wife only	13.2	23.3	4.1
Husband and wife with oldest child under 6	11.5	26.0	5.1
Husband and wife with oldest child 6 to 17	13.9	24.4	5.2
Husband and wife with oldest child 18 or older	14.4	22.0	4.9
One parent with at least one child under 18	14.7	30.0	6.6
Single-person and other consumer units	13.4	27.9	4.9

¹ Shelter plus utilities.

² Complete income reporters only.

the data classified by housing tenure, one readily sees that consumer units who rent their homes also devote a greater share of their total expenditures to food (15.0 percent) and apparel (5.4 percent) than do their homeowners counterparts (13.1 percent and 4.7 percent, respectively).

Urban consumers spend a higher proportion of their total expenditures on housing (25.7 percent, as opposed to the 21.2 percent spent by consumers living in rural areas) and on apparel (5.0 percent, compared with 4.2 percent, respectively). Food, however, makes up a slightly greater proportion of total spending among rural households (14.1 percent) than among urban households (13.5 percent).

Race and Hispanic origin, which are based on the reference person⁸ of the consumer unit, are the next demographic characteristics listed in the table. Black consumer units spend higher shares of total expenditures on all three of the necessity categories than do white and other⁹ consumer units. The same is true for Hispanic compared with non-Hispanic households, although the relevant housing shares are not very different, with Hispanic consumer units allocating 26.3 percent of total spending to housing and

⁸ See the glossary at the end of this anthology for the definition of *reference person*.

⁹ The "other" race group includes Native Americans, Alaska Natives, Asians, and Pacific Islanders.

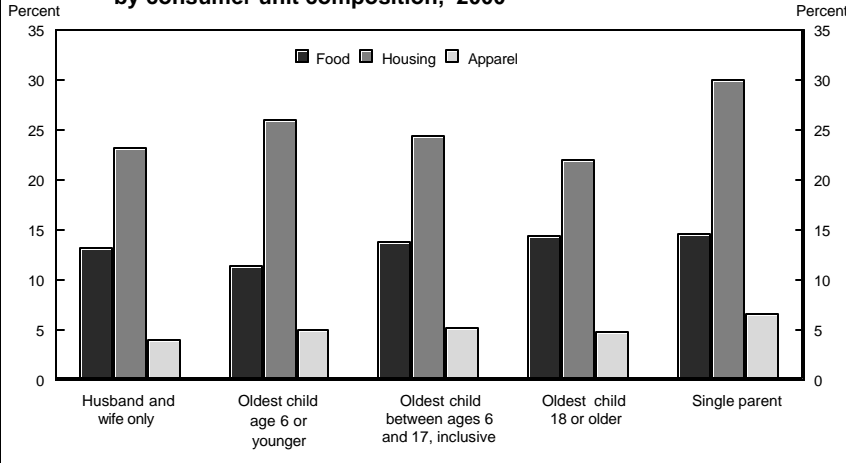
non-Hispanics allocating 25.2 percent.

There is little variation in the necessity shares of consumer units living in different regions. For example, the range of expenditure shares used to purchase food is from 13.4 percent in the West and Midwest to 13.8 percent in the Northeast. (Households in the South spend a comparable 13.6 percent on food). Housing shares across regions are more variable, with consumer units in the Midwest having the lowest share (23.3 percent) of total spending and consumer units in the Northeast region having the highest share (27.7 percent).

Chart 2 depicts the shares of average annual expenditures allocated to necessities by the composition of the consumer unit. The household types selected for this analysis are husband and wife only, husband and wife with the oldest child under 6 years of age, husband and wife with the oldest child between the ages of 6 and 17, husband and wife with the oldest child aged 18 or older, and single parents with at least one child under the age of 18 years. (Table 1 also provides data for single-person and other consumer units.) The chart indicates that single parents devote greater proportions of their total spending to food (14.7 percent), housing (30.0 percent), and apparel (6.6 percent) than do other types of household. Also, the age of the oldest child in the household is inversely related to the share of total spending allocated to housing and directly related to the share allocated to food. Interestingly, the expenditure share for food is greater for husband-and-wife-only consumer units (13.2 percent) than for those with young children (11.5 percent). This difference is attributable to a decline in food away from home, as parents of young children may not eat outside of the home as often, or in restaurants as expensive, as do couples without children.¹⁰

¹⁰ The expenditure shares for food at home are roughly equivalent for husband-and-wife consumer units (7.5 percent) and households with children under 6 years of age (7.2 percent). However, the former allocate 5.7 percent of total spending to food away from home while the latter allocate just 4.3 percent.

Chart 2. Shares of average annual expenditures allocated to necessities by consumer unit composition, 2000



In sum, this article has presented a variety of data on spending for necessities as a proportion of total expenditures, from the 2000 Consumer Expenditure Survey. With respect to Engel's proposition, the expected trends are observed for food and apparel, while a contradictory decrease in housing shares occurs as income increases. Necessity spending also varies among consumer units with different demographic characteristics. ■