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Consumption patterns and economic status of older households in the United States

This article holistically maps the consumption patterns of older Americans and compares the economic status of different groups (clusters) of elderly U.S. consumers. Using data from the 2010–2011 Consumer Expenditure Survey, the analysis focuses on the consumption patterns of households whose heads or spouses were age 65 and over. Our factor and cluster analyses revealed six consumption clusters (listed in order of cluster size): "basic-need-meeters," "housing burdened," "healthcare burdened," "transportation burdened," "happy retirees," and "balanced budgeters." We found that substantial financial vulnerabilities exist for the first three groups, which represent approximately 74 percent of older Americans, and that these vulnerabilities are due to expenses for housing, healthcare, and everyday necessities. These results demonstrate the need for more effective provision and targeting of healthcare services for the vulnerable consumption groups and highlight the importance of timely retirement planning.

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The U.S. population is aging rapidly. The number of Americans age 65 and over was 40.4 million in 2010 and is expected to reach 72.1 million by 2030.[1] This age group accounted for 12.8 percent of the U.S. population in 2011 and is projected to account for 20.4 percent in 2040.[2] The growing size of the elderly population has attracted considerable research and policy interest, raising questions about the economic well-being of retired and older Americans. A household is considered to be adequately prepared for retirement if its accumulated wealth is sufficient for the maintenance of a preretirement level of consumption.[3] By examining household net worth or capital accumulation levels, previous studies have employed various methods for assessing the adequacy of a retirement resource and concluded that most households are not adequately prepared for retirement and thus require additional savings.[4] What is not clear, however, is whether households use their savings or wealth to maintain preretirement consumption levels.

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Many empirical studies of expenditure patterns do not consistently confirm life-cycle or permanent-income theories, which assert that consumers attempt to maintain their lifetime consumption levels by saving during periods of high income and by dissaving when incomes are low. Contrary to the life-cycle hypothesis, several studies have found that older Americans maintain their wealth by reducing consumption, and that this reduction is attributable to uncertainties regarding health, life expectancy, and ability to maintain household independence.[5] These findings imply that income or assets may not fully represent the actual economic well-being of older Americans.

The purpose of this article is to examine the variation in the economic status of older U.S. households—a variation conditioned upon what these households consume, how much they spend, and the types and quantity of financial resources they have. The older population is often viewed as vulnerable; however, some statistics indicate that the current generation is better educated, more productive, and wealthier than past generations.[6] Further, previous research has revealed large differences in the economic well-being of older Americans, differences due to the variety of income sources and the existing stratification of wealth levels.[7] Considering the possible heterogeneity in socioeconomic characteristics, life experiences, tastes and preferences, and financial needs and resources, a more careful investigation is needed to understand that diversity.

Rather than focusing on a specific target group or consumption item, this article attempts to map the demographics of older households on the basis of their consumption patterns, income needs, and expenditure measures. We expect that an approach that combines both expenditure and resource analyses will provide more complete and detailed information about the variation in consumer demands and economic status of older households. Thus, the results of this article may be useful for financial planners and policymakers interested in identifying a target group of elderly Americans with more urgent economic needs.

The specific research questions addressed here are as follows. First, what are the important components of household consumption that determine the consumption patterns of older Americans? Second, how are older Americans segmented into various consumption clusters according to their expenditure shares for different consumption components? Third, how is the economic status of each group assessed in terms of its needs-based income and expenditure measures? Finally, what demographic characteristics are significantly associated with older American household segmentation? The answers to these questions are expected to provide a unique contribution to the field, because our analysis focuses on the entire older population (rather than on a specific subpopulation, such as women or those in poverty) and reveals diverse consumer needs and resource constraints (rather than a single consumption category).

Literature review

Consumption patterns of older households. A number of previous studies have identified household consumption patterns of older Americans. The data used in these studies come mostly from the Bureau of Labor Statistics Consumer Expenditure Survey (CE). Consumption patterns have been investigated in terms of both total dollar expenditures and expenditure (budget) shares of different consumption categories.

Some studies in the relevant literature have contrasted expenditure patterns of elderly people with those of the nonelderly, whereas others (discussed in the next section) have examined differences in expenditure patterns among older households. Studies in the former group have found that older households spend less than do younger households. As noted earlier, the life-cycle hypothesis and the permanent-income hypothesis predict that consumers will maintain their lifetime consumption patterns by saving during periods of high income and by dissaving during periods of low income.[8] However, empirical research on expenditure patterns does not consistently confirm these predictions. Using the 1972–1973 CE, for example, Sheldon Danziger et al. found that not only did older Americans not dissave to finance their consumption during retirement, but they also spent less on consumer goods and services than did nonelderly people at all levels of income.[9] In other words, older Americans maintained their wealth by reducing their consumption. Similar conclusions were proposed in another study, which examined the asset and consumption trends of four cohorts of older Americans.[10] This study found that older Americans' homeownership rates were stable until age 80, showing that the elderly were not converting their housing assets into other types of income or consumption. In addition, other authors have suggested that, contrary to the life-cycle hypothesis, certain household expenditures (e.g., medical expenses) provide an important reason for older households to keep their assets in old age.[11]

Previous studies on how the elderly allocate their expenditures have repeatedly confirmed that older households spend more of their income on basic needs than do younger households. Compared with the nonelderly, the elderly spend more on housing, food, and healthcare—the three most important items in their total consumption—and less on clothing, transportation, and household furnishings.[12]

Further, Jonathan D. Fisher et al. found that older Americans maintained a relatively constant budget share of housing expenditures as they aged—a share of approximately 30 percent.[13] In another study, Stephen Crystal et al. found that out-of-pocket medical expenditures averaged 19 percent of the total income of older Americans.[14] Moreover, Gong-Soog Hong and Soo Yeon Kim reported that, compared with their younger counterparts, older households not only spent more for healthcare but also devoted a greater budget share to healthcare expenses.[15] In terms of food consumption, J. Michael Harris and Noel Blisard showed that older households spent between 8 and 10 percent of their average weekly income on food (compared with an average of 5 percent for all households) and that nearly 73 percent of the weekly food expenditures of the oldest group were spent on food at home.[16]

Differences in consumption patterns of older households. The literature reviewed thus far suggests that the necessities of housing, healthcare, and food become major expenditure burdens later in life. According to some studies, however, the individual financial burdens of older households vary by age, gender, income, assets, health, marital status, and other factors. Poor older households have been found to have the largest financial burdens, spending approximately three-fourths of their total expenditures on housing, food, and healthcare.[17] In addition, a significant variation in food expenditures has been reported among older households—a variation due to differences in age, income, place of residence (rural versus urban), education level, race, and marital status.[18]

Kathleen McGarry and Robert F. Schoeni found that out-of-pocket medical expenditures of married older households in the final 2 years of life were equal to 30 percent of their annual income; for people in the lowest income quartile, that share was equal to approximately 70 percent.[19] Out-of-pocket medical expenditures and their burden among the elderly also appear to vary according to age, income, health condition, and insurance coverage. For example, it has been reported that these expenditures increase (in terms of dollar amounts) with income and that their budget share is higher for low-income individuals than for high-income individuals.[20]

In recent years, many studies have examined how the burden of paying for healthcare affects the wealth of older Americans. Because out-of-pocket medical expenditures are particularly large at the end of one's life, their burden in old age may severely affect the financial well-being of the elderly. Moreover, Hyungsoo Kim and Jinkook Lee have found that the financial burden and wealth depletion caused by health problems differ greatly across elderly populations of different ethnic and racial backgrounds.[21] Kim and Lee also have found that new health events and existing health conditions significantly influence the wealth depletion of the elderly, but that these impacts vary across individuals of different marital status; whereas an occurrence of new health events results in wealth depletion for elderly people in married households, existing chronic health conditions are associated with wealth depletion for older people in single households.[22] Further, Gong-Soog Hong and Soo Yeon Kim have reported that insurance status, liquid assets, life-cycle stage, household size, education, and self-employment status are significant factors affecting an elderly household's budget share of healthcare expenses.[23] Other researchers have determined that out-of-pocket medical expenditures increase by approximately 200 percent in the few years before death, an increase resulting in a significant asset depletion in the last year of life.[24]

Literature gaps. While previous research unequivocally suggests that older Americans tend to allocate a large portion of their income to necessities, such as food, housing, and healthcare, it is less clear whether (and how much) the financial burden of these necessities affects the consumption of other goods and services and, in turn, the economic well-being of the elderly. Reduced consumption of other goods and services, if present, has the potential to lower the quality of life of older Americans, an adverse effect that would vary according to age, income, and other household characteristics. Thus, to improve our understanding of the relationship between consumption and well-being, a more careful investigation examining the interrelationships among different consumption categories is needed. When financial resources are limited, an increase in need and spending for one category is likely to be associated with consumption decreases in other categories.

Existing studies concerned with the consumption behavior of older households either focus on specific demographic or socioeconomic groups or analyze their spending on various consumption items. Although these studies provide ample evidence for the economic status associated with aging, there has been little effort to piece these separate aspects into one complete picture. By considering all consumption categories and their interdependence, the present article takes a more holistic approach to understanding the differences in consumption patterns among older Americans and their economic well-being.

Methods

Data and study sample. This article uses 2010–2011 data from the CE,[25] an ongoing, nationally representative survey of the U.S. civilian noninstitutional population.[26] The CE has introduced multiple imputations since 2004 in order to address nonresponses to income questions.[27] Besides providing more complete information on income, expenditures, and other household characteristics useful for the analysis of older consumers' spending patterns, the 2010–2011 data also permit an investigation of these patterns after the most recent recession.

The study sample includes only those households whose heads or spouses were age 65 and over and who participated in four consecutive quarters of CE interviews. In addition, to reduce the possible distortions in spending patterns produced by households with extreme means, the sample excludes households within the highest and lowest 1 percent of disposable incomes. The final sample includes 1,943 older American households; their sociodemographic characteristics are presented in table 1.

Table 1. Descriptive statistics of the sample, 2010–2011 data

Variables	Percent in sample
Demographic characteristics	
Race	
White	87.53
Black	8.30
Other	4.17
Marital status	
Married couple	48.58
Other	51.42
Education	
Less than high school	21.89
High school	30.93
More than high school	47.18
Household characteristics	
Living arrangement	
Couple only	45.64
Single	43.14
Other	11.22
Housing tenure	
Own without mortgage	58.57
Other	41.43
Employed household member	
Yes	27.68
No	72.32
Region	
Northeast	20.21
Midwest	22.22
South	37.54
West	20.03
City population size	
> 4.0 million	27.97
1.2–4.0 million	23.08
0.33–1.19 million	6.23
125.0–329.9 thousand	26.05
< 125.0 thousand	16.67
Mean age of sample (years)[1]	74.44 (7.38)

See footnotes at end of table.

Table 1. Descriptive statistics of the sample, 2010–2011 data

Variables	Percent in sample
Mean household income (dollars)[1]	43,431 (40,439)
Mean household expenditures (dollars)[1]	38,199 (17,481)

Notes:

See footnotes at end of table.

(1) Standard deviations are shown in parentheses.

Note: All values are weighted.

Source: 2010–2011 CE data and authors' calculations.

Variables. We regrouped the original CE expenditure categories into 17 mutually exclusive categories; table 2 lists these categories and their descriptions. The expenses for food, alcoholic beverages, lodging, and transportation while on trips were categorized as “travel.” The quarterly data on expenditures for each category were aggregated to produce their annual sums. To obtain a disposable income measure, we added tax refunds and other monetary receipts, such as refunds from insurance policies, to the mean of the five imputed values for after-tax income.

Table 2. Descriptions of consumption categories

Categories	Descriptions
Food	Food expenditures in home city
Utilities	Utilities, fuels, and public services
Contributions	Cash contributions, personal insurance, and pensions
Clothing	Apparel and services
Personal care	Personal care appliances and services (e.g., wigs, hairpieces, or toupees; electric personal care appliances; and personal care services for men and women, including haircuts)
Housing equipment	Household furnishings and equipment (household textiles, furniture, floor coverings, major appliances, small appliances, and miscellaneous household equipment)
Shelter	Shelter expenditures in home city, including mortgage principle and interest for owned home and/or vacation home, rents, insurance, taxes, and maintenance
Transportation	Transportation in home city
Healthcare	Health insurance, medical services, prescription drugs, and medical supplies
Reading	Books, magazines, and newspapers
Entertainment	Total entertainment, including sound systems, sports equipment, toys, cameras, and downpayments on boats and campers
Travel	Total of all trip expenditures (airfare, local transportation fees, tolls and parking fees, and car rentals for trips; rent for lodgings, such as vacation homes and motels; and expenditures on food and alcoholic beverages)
Household operations	Domestic services (e.g., gardening and lawn care services, including management fees for lawn care in co-ops and condos, and babysitting and daycare) and other household expenses (e.g., cost of materials purchased for termite and pest control and for jobs considered replacement or maintenance/repair; moving, storage, and freight express; and repair of household appliances, excluding garbage disposals, range hoods, and built-in dishwashers)
Tobacco	Tobacco and smoking supplies
Alcoholic beverages	Alcoholic beverage expenditures in home city
Education	Tuition; fees; and textbooks, supplies, and equipment for public and private nursery schools, elementary and high schools, colleges and universities, and other schools
Miscellaneous	Safety deposit box rentals, checking account fees and other bank service charges, credit card memberships, legal fees, accounting fees, funerals, cemetery lots, union dues, occupational expenses, expenses for other properties, and finance charges other than those for mortgages and vehicles

Source: Authors' compilation based on CE expenditure categories.

With respect to weighting, we created a longitudinal weighting factor. As pointed out by Sally E. Reyes-Morales, CE participants who have completed all four interviews are more likely to be older, married, and homeowners.[28] Consistent with this observation, using 2010–2011 data, we found that the complete interview sample (consisting of those who completed all four interviews) and the intermittent interview sample (consisting of those who did not complete all four interviews) had significantly different sample characteristics. (See table 3.) (Note that the complete and intermittent interview samples differ from the study sample used in subsequent analyses and presented in table 1.) Previous studies have adjusted the weight variable to account for the underrepresented young renters.[29] Likewise, we rescaled the weight variable provided in the CE by the inverse proportion of the elderly population (for which either the household head or spouse was 65 years old or over) who completed all four interviews.

Table 3. Demographic characteristics of complete and intermittent sample, 2010–2011 data

Variables	Complete sample		Intermittent sample		T-value
	Mean	Standard deviation	Mean	Standard deviation	
Age of reference person (years)	52.65	16.71	46.86	17.84	24.58***
Married (percent)	54.63	49.79	46.76	49.90	11.43***
Owned house without mortgage (percent)	28.25	45.03	20.41	40.31	12.99***
Sample size	7,419		17,844		–

Notes:
***Statistically significant at *p* < .001.

Source: 2010–2011 CE data and authors' calculations.

Analyses. The first set of analyses was performed to identify the consumption patterns of older households. We conducted a factor analysis using the annual expenditures for all consumption categories and identified six categories that reflect the consumption behaviors of the elderly. The two consumption categories with factor loadings of less than 0.4—the categories of education and miscellaneous—indicated significantly loose connectivity with the other consumption categories for grouping and were therefore dropped from further analyses. Using these dimensions as classification criteria, we performed a cluster analysis to group older households with similar spending patterns.

The second set of analyses was applied to further examine and compare the economic status of each consumption cluster in a multivariate setting. Generalized linear model (GLM) tests and F-tests were employed to investigate group differences in terms of sociodemographic characteristics and economic status. Household income and expenditure levels were reexamined with the use of a needs-based measure; the official poverty line and the sources of household income also were compared across clusters.

Results

Components of consumption. Six aggregate consumption categories, or factors, drawn from the factor analysis are presented in table 4. Each factor represents a dimension of the underlying consumption needs of households. Our results point to an interdependence among the consumption categories within the same factor.

Table 4. Results of factor analysis, 2010–2011 data

Variables	Factor 1 Essentials and contributions	Factor 2 Postponables	Factor 3 Healthcare and reading	Factor 4 Shelter and transportation	Factor 5 Expendables	Factor 6 Treats	Communality

See footnotes at end of table.

Table 4. Results of factor analysis, 2010–2011 data

Variables	Factor 1 Essentials and contributions	Factor 2 Postponables	Factor 3 Healthcare and reading	Factor 4 Shelter and transportation	Factor 5 Expendables	Factor 6 Treats	Communality
Food	83	16	–17	–9	–9	4	0.65
Utilities	70	–20	10	–5	12	–11	.64
Contributions	–47	0	37	4	9	–17	.34
Clothing	4	79	–15	8	–1	–1	.64
Personal care	11	64	23	–23	–13	–14	.51
Housing equipment	–18	45	–1	19	11	0	.32
Healthcare	–5	–13	83	–2	–20	–1	.66
Reading	–22	25	49	–19	–1	20	.38
Shelter	–23	–12	–52	–50	–27	–6	.93
Transportation	–16	0	–8	94	–22	–4	.83
Entertainment	18	0	–14	–9	80	2	.62
Travel	–37	9	–19	–1	56	1	.47
Household operations	–16	–12	9	–26	44	–6	.24
Alcoholic beverages	–9	2	7	–12	11	74	.57
Tobacco	10	–13	0	8	–13	73	.57
Eigen value	1.92	1.67	1.34	1.25	1.14	1.06	–
Variance explained	1.65	1.35	1.39	1.27	1.20	1.17	–
Percent of variance	19.71	16.13	16.61	15.17	14.34	13.98	–

Note: All values are weighted.

Source: 2010–2011 CE data and authors' calculations.

The first factor, “essentials and contributions,” includes spending on necessities, such as food and utilities, as well as cash contributions. The contributions had a negative loading on this factor, meaning that there was a tradeoff relationship between necessities and contributions (e.g., those who spent more on food and utilities were less likely to contribute).

The second factor includes expenditures on clothing, personal care, and housing equipment and furnishings. Because these categories represent less immediate needs, we labeled them with the moniker “postponables.”

The “healthcare and reading” factor, which is the third factor, includes spending for healthcare and books. Compared with other consumption categories, expenditures on medical services, prescription drugs, and health insurance were more likely to be correlated with spending on books and magazines. This could mean that those who spend more for their health could either be more health conscious or actually have more health problems. People in the former group might be more willing to spend money for their physical and mental health, whereas people in the latter group might lead less outgoing lifestyles, staying longer at their homes or in hospitals and having more time to read.

Shelter and transportation expenditures, taken together, represent the fourth factor (“shelter and transportation”). Shelter was found to have a negative loading, which means that those who spend more on rent and mortgages spend less on transportation. The same consumption pattern was found by Liisa Uusitalo in her study for Finland, a pattern she called a “mobility” dimension.[30] Uusitalo determined that among the poorer population, higher investment in housing strongly restricted the possibilities for mobility spending, such as buying a new car or auto maintenance. Thus, the budget share for shelter was extremely high in the consumer segment with low mobility.

The “expendables” factor includes what households spend for their enjoyment in terms of travel and entertainment. This factor also includes expenditures on various types of household operations, such as gardening, babysitting, and other less frequent household services (e.g., moving, storage, and repair of household appliances). Some of these expenditures could be considered a replacement for household labor, which could perhaps be self-served or privately transferred in households with more limited means.

The last factor, labeled “treats,” had high loadings of tobacco and alcoholic beverages.

In the following analyses, the six factors were reorganized into eight factors, so that the effects of the variables within the same factor have the same direction. “Contributions” and “shelter”—which had negative loadings on the “essentials and contributions” and “shelter and transportation” factors, respectively—were separated from each factor and treated as independent factors.

Consumption clusters. Based on the results of the factor analysis, a K-means cluster analysis was conducted on the expenditure shares for the eight factors, or “clustering criteria.” The standardized scores and the frequencies of each cluster are shown in table 5.

Although eight clusters were derived in the final run of the cluster analysis, the “givers” and the “impatient self-treaters” were dropped from further analysis because of their small sample sizes; these groups represented 2.2 percent and 0.2 percent of the total sample, respectively. The discussion in the remaining sections is based on the following six clusters: the “basic-need-meeters” (cluster 1; n = 522), the “transportation burdened” (cluster 2; n = 235), the “healthcare burdened” (cluster 3; n = 410), the “housing burdened” (cluster 4; n = 503), the “happy retirees” (cluster 5; n = 123), and the “balanced budgeters” (cluster 7; n = 105).

Table 5. Results of cluster analysis, mean standardized scores of consumption, by cluster, 2010–2011 data

Factors	Cluster 1 Basic-need-meeters	Cluster 2 Transportation burdened	Cluster 3 Healthcare burdened	Cluster 4 Housing burdened	Cluster 5 Happy retirees	Cluster 6 Impatient self-treaters	Cluster 7 Balanced budgeters	Cluster 8 Givers
Cluster size[(1)]	522 (26.87)	235 (12.09)	410 (21.10)	503 (25.89)	123 (6.33)	3 (0.15)	105 (5.40)	42 (2.16)
Factor 1 Essentials	.0053	–.0022	–.0003	–.0028	–.0029	–.0011	–.0016	–.0046
Factor 2 Contributions	–.0010	–.0005	.0002	–.0009	.0005	–.0019	.0004	.0211
Factor 3 Postponables	–.0008	–.0006	–.0009	–.0011	.0012	–.0039	.0132	–.0010
Factor 4 Shelter	–.0015	–.0024	–.0024	.0062	–.0022	–.0051	–.0019	–.0026

See footnotes at end of table.

Table 5. Results of cluster analysis, mean standardized scores of consumption, by cluster, 2010–2011 data

Factors	Cluster 1 Basic-need-meeters	Cluster 2 Transportation burdened	Cluster 3 Healthcare burdened	Cluster 4 Housing burdened	Cluster 5 Happy retirees	Cluster 6 Impatient self-treaters	Cluster 7 Balanced budgeters	Cluster 8 Givers
Factor 5 Transportation	–.0009	.0095	–.0011	–.0019	–.0020	–.0019	–.0004	–.0030
Factor 6 Healthcare	–.0017	–.0019	.0066	–.0023	–.0020	–.0030	–.0010	–.0014
Factor 7 Expendables	–.0009	–.0009	–.0007	–.0014	.0129	–.0012	.0008	–.0006
Factor 8 Treats	.0007	–.0004	–.0005	–.0004	–.0004	.0562	.0002	–.0008
Pseudo F-statistic	266.09							
R-squared	.3961							

Notes:

See footnotes at end of table.

(1) Values in parentheses are in percent.

Note: All values are weighted.

Source: 2010–2011 CE data and authors' calculations.

Budget shares and expenditure levels of each cluster. The budget shares and expenditure levels of the eight clusters are shown in table 6. The “happy retirees” were the richest group, with a total expenditure of $53,880. They could afford to spend as high as 30.7 percent of their expenditures on “expendables” (e.g., entertainment, travel, and household operations), a spending level well above the range of 7–11 percent for the other clusters. The “balanced budgeters” were the second-richest group, with a total expenditure of $46,518. While their spending share on “postponables” (e.g., personal care, clothing, and housing equipment) was 15.8 percent, that share ranged from 3 to 5 percent in other clusters. This group’s budget shares also were the most evenly distributed across consumption categories. Judging from their spending behavior, the “balanced budgeters” appear to be a more static group of older households than the “happy retirees,” a more active and outgoing cluster. Together, these two groups constituted 11.7 percent of the sample.

Table 6. Mean budget shares and expenditure levels, by cluster, 2010–2011 data

Factors	Cluster 1 Basic-need-meeters	Cluster 2 Transportation burdened	Cluster 3 Healthcare burdened	Cluster 4 Housing burdened	Cluster 5 Happy retirees	Cluster 6 Impatient self-treaters	Cluster 7 Balanced budgeters	Cluster 8 Givers
Budget shares of consumption expenditure (percent)(1)								
Factor 1 Essentials	43.39 (11.11)	23.87 (8.12)	28.89 (7.91)	22.36 (7.26)	22.25 (7.06)	26.68 (9.71)	25.44 (6.80)	17.84 (6.96)
Factor 2 Contributions	3.24 (4.91)	3.98 (4.96)	4.99 (5.45)	3.42 (5.06)	5.53 (6.44)	1.89 (1.71)	5.30 (5.21)	36.86 (11.18)
Factor 3 Postponables	3.70 (2.98)	3.86 (2.89)	3.65 (2.75)	3.49 (2.79)	5.41 (3.49)	1.08 (.68)	15.78 (4.50)	3.53 (2.67)
Factor 4 Shelter	16.71 (9.97)	13.8 (8.77)	13.92 (8.07)	42.19 (12.60)	14.52 (9.40)	5.07 (7.70)	15.44 (9.13)	13.23 (9.49)
Factor 5 Transportation	10.61 (6.61)	32.74 (9.66)	10.14 (5.74)	8.34 (5.69)	8.17 (5.57)	8.37 (7.94)	11.62 (5.97)	6.15 (3.44)
Factor 6 Healthcare	11.26 (5.92)	10.76 (6.05)	27.53 (7.66)	10.10 (5.51)	10.67 (5.34)	8.54 (5.71)	12.48 (6.21)	11.7 (6.10)
Factor 7 Expendables	7.93 (5.05)	7.98 (5.10)	8.24 (5.01)	7.11 (5.17)	30.74 (9.73)	7.34 (1.65)	10.65 (5.06)	8.37 (4.75)
Factor 8 Treats	1.75 (3.58)	.99 (2.12)	.90 (2.15)	1.00 (2.34)	.98 (2.01)	39.75 (13.30)	1.38 (2.60)	.70 (1.24)
Factors total	98.60 (3.91)	97.98 (4.30)	98.26 (4.74)	98.00 (5.66)	98.27 (4.24)	98.73 (1.12)	98.09 (3.72)	98.38 (2.70)
Levels of annual consumption expenditure (dollars)(1)								
Factor 1 Essentials	9,434 (4,486)	9,323 (4,260)	7,867 (3,328)	8,392 (5,237)	11,228 (5,652)	4,267 (1,975)	10,997 (5,543)	10,169 (5,160)
Factor 2 Contributions	943 (1,817)	2,020 (2,975)	1,641 (2,185)	1,546 (2,684)	3,192 (4,760)	315 (282)	2,178 (2,362)	27,580 (29,268)
Factor 3 Postponables	1,005 (1,143)	1,841 (1,967)	1,210 (1,315)	1,667 (2,240)	2,983 (2,604)	153 (107)	7,785 (6,546)	2,386 (2,494)
Factor 4 Shelter	3,942 (3,340)	6,328 (6,857)	4,347 (4,001)	16,499 (11,881)	8,118 (7,249)	906 (1,393)	8,278 (11,153)	7,733 (6,172)

See footnotes at end of table.

Table 6. Mean budget shares and expenditure levels, by cluster, 2010–2011 data

Factors	Cluster 1 Basic-need-meeters	Cluster 2 Transportation burdened	Cluster 3 Healthcare burdened	Cluster 4 Housing burdened	Cluster 5 Happy retirees	Cluster 6 Impatient self-treaters	Cluster 7 Balanced budgeters	Cluster 8 Givers
Factor 5 Transportation	2,713 (2,495)	14,800 (10,766)	3,182 (2,829)	3,782 (4,215)	4,454 (4,048)	1,391 (1,312)	5,577 (4,582)	3,801 (2,985)
Factor 6 Healthcare	2,663 (1,949)	4,530 (3,224)	7,925 (4,447)	3,937 (3,022)	5,697 (4,181)	1,084 (470)	5,482 (3,727)	6,968 (4,814)
Factor 7 Expendables	2,058 (2,094)	3,972 (4,233)	2,710 (2,724)	3,367 (4,081)	17,665 (16,068)	1,143 (463)	5,603 (5,292)	5,931 (5,638)
Factor 8 Treats	464 (1,091)	450 (1,045)	270 (620)	355 (708)	544 (1,078)	5,555 (1,062)	618 (1,081)	373 (588)
Factors total	23,223 (13,516)	43,263 (25,871)	29,151 (15,923)	39,544 (26,971)	53,880 (30,728)	14,816 (3,562)	46,518 (30,427)	64,940 (43,314)

Notes:

See footnotes at end of table.

(1) Standard deviations are shown in parentheses.

Note: All values are weighted.

Source: 2010–2011 CE data and authors' calculations.

The “transportation burdened” represented approximately 12.1 percent of older households. Nearly 33 percent of their total consumption went to transportation expenses, compared with 8–12 percent for the other clusters. The “transportation burdened” and the “housing burdened” were the middle groups in terms of total expenditure levels, with expenditures of $43,263 and $39,544, respectively. Representing 25.9 percent of the sample, the “housing burdened” were the second-largest cluster. Households in this group spent 42.2 percent of their total expenditures on rent and mortgages, whereas those in other clusters spent between 5 and 17 percent.

The “healthcare burdened” and the “basic-need-meeters”—which, together, represented nearly 48 percent of older Americans—were the poorest groups. Their annual expenditures of $29,151 and $23,223, respectively, were significantly lower than those of the aforementioned clusters. The “healthcare burdened” were the third-largest group, making up 21.1 percent of the sample. This group’s households spent 27.5 percent of their total expenditures on healthcare, compared with 10–12 percent for the other clusters. The “basic-need-meeters” were the largest cluster, representing 26.9 percent of the sample. Approximately 43.4 percent of their total expenditures were spent on food and utilities, leaving limited resources for other necessities, such as healthcare and housing. Interestingly, the “basic-need-meeters” spent more on “treats” (e.g., alcohol and tobacco) than did the average older household.

Table 7 shows the results of the F-tests, which indicate significant mean differences in sociodemographic characteristics among the six consumption clusters. The “transportation burdened” were the youngest group, with an average age of 71.7 years. Relative to other clusters, they had a higher percentage of married couples (58.6 percent) and a higher percentage of employed household members (37.4 percent). A majority in this group (60.0 percent) tended to live in southern or midwestern cities with less than 1.19 million people. Possible trips to nearby cities or transportation expenses due to work commutes could have added to this group’s high budget share in transportation, the highest among all clusters.

Table 7. Sociodemographic characteristics of the sample, by cluster, 2010–2011 data

Variables	Cluster 1 Basic-need-meeters	Cluster 2 Transportation burdened	Cluster 3 Healthcare burdened	Cluster 4 Housing burdened	Cluster 5 Happy retirees	Cluster 7 Balanced budgeters	X^2/GLM (F-value)
Cluster size(1)	522 (26.87)	235 (12.09)	410 (21.10)	503 (25.89)	123 (6.33)	105 (5.40)	–
Demographic characteristics							
Age (years)	74.18 **b**	71.67 **c**	77.13 **a**	74.13 **b**	73.87 **bc**	72.43 **bc**	21.41***
Race (percent)							
White	81.89	86.93	94.50	86.69	93.45	82.27	2,474,447***
Black	13.41	8.84	3.36	8.31	1.26	12.28	
Other	4.71	4.22	2.14	5.00	5.29	5.45	
Marital status (percent)							

See footnotes at end of table.

Table 7. Sociodemographic characteristics of the sample, by cluster, 2010–2011 data

Variables	Cluster 1 Basic-need-meeters	Cluster 2 Transportation burdened	Cluster 3 Healthcare burdened	Cluster 4 Housing burdened	Cluster 5 Happy retirees	Cluster 7 Balanced budgeters	X^2/GLM (F-value)
Married	40.27	58.63	54.81	42.59	58.84	57.51	2,072,216***
Other	59.73	41.37	45.19	57.41	41.16	42.49	
Education (percent)							
Less than high school	31.85	23.54	21.19	18.29	5.12	12.89	6,539,286***
High school	36.76	29.30	36.35	26.34	13.27	30.01	
More than high school	31.39	47.16	42.46	55.37	81.60	57.11	
Household characteristics							
Living arrangement (percent)							
Couple only	38.56	55.83	50.82	38.69	54.95	57.51	3,380,061***
Single	44.21	31.27	41.63	53.04	38.39	30.89	
Other	17.24	12.90	7.56	8.27	6.66	11.60	
Housing tenure (percent)							
Own without mortgage	67.10	66.43	76.65	22.01	70.08	71.11	16,377,985***
Other	32.90	33.57	23.35	77.99	29.92	28.89	
Working household members (percent)							
Yes	20.19	37.40	21.24	32.57	33.60	39.00	2,212,361***
No	79.81	62.60	78.76	67.43	66.40	61.00	
Region (percent)							
Northeast	18.18	17.68	18.37	25.59	16.88	19.54	4,457,488***
Midwest	17.56	26.67	27.64	18.51	21.58	28.21	
South	49.12	42.95	36.19	28.41	27.17	32.94	
West	15.13	12.70	17.81	27.49	34.37	19.31	
City population size (percent)							
> 4.0 million	27.31	20.04	20.02	39.34	24.34	32.20	6,245,116***
1.2–4.0 million	21.15	19.97	17.28	29.58	27.88	26.51	
0.33–1.19 million	7.97	12.31	5.96	2.82	7.31	1.94	
125.0–329.9 thousand	24.93	26.58	35.66	19.41	23.29	26.35	
< 125.0 thousand	18.65	21.10	21.08	8.84	17.19	13.00	

Notes:

See footnotes at end of table.

(1) Values in parentheses are in percent.

***Statistically significant at $p < .001$.

Note: All values are weighted. The subscripts **a**, **b**, **c**, and **bc** indicate the Scheffe-test results for significant group differences in the GLM test. Means that do not share subscripts within a quintile in the same row differ at $p < .05$.

Source: 2010–2011 CE data and authors' calculations.

The "balanced budgeters" and the "happy retirees" were relatively younger, with average ages of 72.4 years and 73.9 years, respectively. Compared with most other groups, the "balanced budgeters" included more married people and more members with higher education degrees. This group was the most ethnically diverse, with the highest share of nonwhite people (17.7 percent). A large percentage of its members lived in the Midwest (28.2 percent) and in metropolitan areas and large cities with more than 1.2 million people (58.7 percent).

The "happy retirees" had the second-highest percentage of white members (93.5 percent), the highest percentage of married couples (58.8 percent), and the highest percentage of members with higher education degrees. Nearly 82 percent of the individuals in this group had more than a high school diploma, a proportion that ranged only from 31.4 to 57.1 percent in other clusters. The group also had the highest percentage of people living in the West (34.4 percent), compared with only 20 percent for the total sample.

The "housing burdened" and the "basic-need-meeters" were relatively older groups, with an average age of 74 years. The "housing burdened" had the highest share of single households (53.0 percent) and, as expected, the highest share of mortgage payers. While the percentage of mortgage-paying members in other clusters ranged between 23.4 and 33.6 percent, nearly 78 percent of the "housing burdened" were still paying mortgages. Compared with other clusters, the "housing burdened" had more people living in the Northeast (25.6 percent) and in larger cities with more than 1.2 million people (68.9 percent). The relatively higher cost of housing in these areas could have increased the shelter-related expenditures of members of this group.

The "basic-need-meeters" had the highest share of Blacks (13.4 percent) and the least educated members among all clusters. In this group, 31.9 percent had less than a high school diploma. This group also had the lowest percentage of married couples (40.3 percent) and the highest percentage of people with living arrangements other than couples or singles (17.2 percent). These findings perhaps indicate less stable household arrangements. Further, compared with other clusters, the "basic-need-meeters" had the lowest percentage of households with employed members (20.2 percent) and the largest percentage of southerners (49.1 percent). The variation in the size of the cities they lived in was about the same as that of the total sample.

The "healthcare burdened" were the oldest group, with an average age of 77.1 years. They had the highest share of white members (94.5 percent) and tended to be less educated, with 57.5 percent of them having a high school diploma or less. This group had the highest percentage of homeowners (76.7 percent) and, after the "basic-need-meeters," the second-highest percentage of households without employed household members (78.8 percent). Its members were more likely to live in smaller cities in the Midwest, and nearly 56.7 percent of them were living in cities with less than 330,000 people.

Economic status of the consumption clusters. To further examine the variation in economic status across different consumption clusters, we reexamined their household income and expenditure levels relative to the poverty threshold. We also compared the diversity of income sources.

As shown in table 8, household income and expenditure levels across clusters were between two and nearly five times the official poverty line. Our Scheffe test revealed that older households were more diverse in terms of their expenditure-to-needs ratio than in terms of their income-to-needs ratio.[31] The “happy retirees” and the “balanced budgeters” had significantly higher income-to-needs ratios than did the other clusters (clusters 1, 2, 3, and 4). These results suggest that these two clusters are the most affluent in terms of income. The expenditure-to-needs ratio of the “happy retirees” was significantly higher than the ratios of clusters 1, 2, 3, and 4, whereas the expenditure-to-needs ratio of the “balanced budgeters” was significantly higher than the ratios of clusters 1 and 3 and not significantly higher than the ratios of clusters 2 and 4. These results imply that the “happy retirees” might have a higher propensity to consume compared with the “balanced budgeters,” even though these two clusters have similar levels of household income.

Table 8. GLM and Scheffe tests of income-to-needs and expenditure-to-needs ratios, by cluster, 2010–2011 data

Variables	Cluster 1 Basic-need-meeters	Cluster 2 Transportation burdened	Cluster 3 Healthcare burdened	Cluster 4 Housing burdened	Cluster 5 Happy retirees	Cluster 7 Balanced budgeters	F-value
Mean income (dollars)(1)	33,124 (29,079) **c**	50,402 (45,017) **b**	35,531 (29,221) **c**	46,376 (43,388) **b**	66,326 (57,727) **a**	65,668 (51,588) **a**	27.98 ***
Income-to-needs ratio	2.28 (1.86) **c**	3.41 (2.94) **b**	2.57 (2.02) **c**	3.30 (2.81) **b**	4.76 (3.97) **a**	4.66 (3.59) **a**	33.35***
Mean expenditure (dollars)(1)	23,679 (14,116) **d**	44,245 (26,625) **b**	29,818 (16,756) **c**	40,771 (29,247) **b**	54,813 (31,394) **a**	47,920 (33,671) **ab**	64.89***
Expenditure-to-needs ratio	1.65 (.89) **d**	3.06 (1.75) **b**	2.19 (1.09) **c**	2.96 (1.8) **b**	4.07 (2.42) **a**	3.44 (2.58) **ab**	80.38***

Notes:

(1) Standard deviations are shown in parentheses.

***Statistically significant at $p < .001$.

Note: All values are weighted. *Income-to-needs* and *expenditure-to-needs ratios* represent income and expenditure relative to the official poverty line. The subscripts **a**, **b**, **c**, **d**, and **ab** indicate the Scheffe-test results for significant group differences in the GLM test. Means that do not share subscripts within a quintile in the same row differ at $p < .05$.

Source: 2010–2011 CE data and authors' calculations.

The “housing burdened” and the “transportation burdened” were confirmed as forming the middle groups of the economic status hierarchy and were not statistically different from each other (see table 8). The income-to-needs ratios of the “basic-need-meeters” and the “healthcare burdened”—whose incomes were 2.28 times and 2.57 times the poverty threshold, respectively—stood below the ratios of the other groups. While the income-to-needs ratio of the “basic-need-meeters” was not statistically different from that of the “healthcare burdened,” the former’s expenditure-to-needs ratio of 1.65 was the lowest and significantly below that of the “healthcare burdened.” These results suggest that the “basic-need-meeters” represent the least well-off group among older households.

The results of our GLM analyses, which examine the composition of household income, are shown in table 9. These results indicate that the household incomes of older Americans are heavily dependent on social insurance programs, with contributions across clusters ranging from about 64 percent to more than 82 percent. Earnings were as high as 26 percent in the “transportation burdened” group (the youngest group) and in the “balanced budgeters” group (the richest group). The “healthcare burdened,” the oldest group, had the lowest earnings share (12.3 percent) and the highest social insurance share (82.2 percent). The “basic-need-meeters” had the second-largest income share from social insurance.

Table 9. GLM and Scheffe tests of income sources, by cluster, 2010–2011 data (percent)

Income source	Cluster 1 Basic-need-meeters	Cluster 2 Transportation burdened	Cluster 3 Healthcare burdened	Cluster 4 Housing burdened	Cluster 5 Happy retirees	Cluster 7 Balanced budgeters	F-value
Earning	18.40 (32.58) **ab**	26.28 (35.24) **a**	12.26 (25.24) **b**	23.44 (34.76) **a**	21.07 (33.00) **ab**	25.66 (34.61) **a**	8.69***
Social insurance	77.01 (33.21) **ab**	69.00 (35.65) **bc**	82.16 (27.88) **a**	71.06 (35.60) **bc**	69.70 (35.07) **bc**	63.49 (35.14) **c**	10.12***
Social assistance	1.14 (5.18) **a**	.29 (2.00) **ab**	.07 (.74) **b**	.58 (4.02) **ab**	.31 (2.89) **ab**	.41 (2.48) **ab**	4.65***
Assets	2.54 (10.11) **b**	3.68 (12.36) **ab**	4.33 (13.02) **ab**	4.16 (12.92) **ab**	8.27 (16.66) **a**	5.86 (12.89) **ab**	4.79***
Private transfer	.21 (2.86)	.27 (2.75)	.31 (3.36)	.28 (2.98)	.06 (.70)	1.14 (7.09)	1.55
Other	.68 (5.24) **b**	.47 (3.08) **b**	.87 (6.06) **b**	.48 (4.01) **b**	.59 (2.94) **b**	3.44 (13.51) **a**	5.08***

Notes:
***Statistically significant at $p < .001$.

Note: All values are weighted. Standard deviations are shown in parentheses. The subscripts **a**, **b**, **c**, **d**, **ab**, and **bc** indicate the Scheffe-test results for significant group differences in the GLM test. Means that do not share subscripts within a quintile in the same row differ at $p < .05$.

Source: 2010–2011 CE data and authors' calculations.

Together, contributions from other income sources—including income from social assistance, assets, private transfers, and “other”—ranged from 5 to 10 percent. The “basic-need-meeters” had the highest share of social assistance income; however, this share was just above 1 percent of their total income. Even though this number might seem small in absolute terms, the income contribution of social assistance for the “healthcare burdened” was significantly lower, at 0.07 percent, and the lowest among all clusters. As expected, the two richest groups, the “happy retirees” and the “balanced budgeters,” had the highest income shares from assets (8.3 percent and 5.9 percent, respectively). The “balanced budgeters” also had a substantially higher income share from other sources. This result, along with the finding that the “balanced budgeters” had the second-largest earnings income, the lowest social insurance income, the second-largest asset income, and the third-largest social assistance income, suggests that this group is more “balanced” in terms of income sources, which is consistent with its more diversified consumption behavior.

THE MAJOR PURPOSE OF THIS ARTICLE was (1) to group older households into meaningful consumption clusters that capture the interrelationships among different consumption categories and (2) to provide a more detailed picture of the economic status of different clusters. The results of our factor analysis revealed eight consumption categories: “essentials,” “contributions,” “postponables,” “shelter,” “transportation,” “healthcare,” “expendables,” and “treats.” These categories were used to perform a cluster analysis, which yielded six consumption clusters (listed in order of cluster size): the “basic-need-meeters,” the “housing burdened,” the “healthcare burdened,” the “transportation burdened,” the “happy retirees,” and the “balanced budgeters.”

According to the cluster analysis, the two relatively well-off groups are the “balanced budgeters” and the “happy retirees,” which together represent only 12 percent of older households. However, at least one in four older households is part of the “basic-need-meeters,” the poorest group, whose average annual income is about $33,000. Together, the “basic-need-meeters,” the “housing burdened,” and the “healthcare burdened” represent nearly 74 percent of older households that might be under financial stress because of spending on necessities such as food, utilities, healthcare, and housing. In addition, nearly 12 percent of older Americans incur significant transportation expenses. When more strict needs-based measures were taken into account, the financial vulnerability of the two poorest clusters—the “basic-need-meeters” and the “healthcare burdened”—became even more evident; the household incomes of these groups were only between 2.28 times and 2.57 times the poverty threshold. This limited amount of financial resources and the two groups’ high dependence on income from social programs might expose them to further vulnerability if any unforeseen negative life events were to occur.

Overall, this article reveals that there are substantial differences in consumption patterns among older Americans and that more than two-thirds of the elderly might experience considerable financial stress because of burdens from healthcare or housing expenditures. Considering that Americans, on average, are expected to spend one-third of their lives in retirement, their economic well-being during the postretirement period could be negatively affected as they struggle to allocate limited resources among necessities, such as food and utilities.

The findings of this article provide policymakers and consumer educators with more detailed information on the quality of life of current retirees. Based on these results, the following suggestions can be made. First, consumer educators and financial planners might need to increase efforts to provide financial knowledge and tools that can help individuals manage their financial life before retirement and thus prepare themselves for the expenses of old age. For example, individuals can become better prepared by securing various sources of retirement income, clearing mortgages before retirement, downsizing (if necessary) to keep their housing assets, and preparing private medical insurance plans for the potential large medical expenses that may arise in the later years of retirement. With nearly 40 million baby boomers reaching retirement, the role of timely retirement planning is essential in determining the quality of retirement life. Second, education in financial planning and resource management has to target the more vulnerable subgroups of the older population. This article found that the “basic-need-meters” were more likely to be less educated, nonwhite, and without working household members. Individuals in this group should be educated on how to effectively set retirement goals and how to wisely invest and allocate their limited resources for retirement.

This article has some limitations. First, it is purely empirical and does not provide in-depth theoretical explanations of the phenomena revealed by its results. As no general consumption theory exists that is specifically applicable to the older population, the assessment of consumption patterns and their relationship to economic well-being is quite arbitrary. Hence, a general theory of older household consumption has to be developed and tested. Second, the results indicate that the “older old” people were more likely to suffer from economic distress than were the “younger old” people. Because this article uses cross-sectional data, it is hard to tell whether this finding reflects a life-cycle effect or the continuation of a vulnerable economic status acquired earlier in life. Furthermore, future research has to investigate the dynamics of the changes in consumption patterns and financial resources during old age.

SUGGESTED CITATION

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NOTES

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