

---

**RESEARCH IN THE CONSUMER'S INTEREST**

---

---

**ROBERT O. WEAGLEY AND EUNJEONG HUH**

---

---

**The Impact of Retirement on Household Leisure Expenditures**

---

**Household leisure expenditures for retired and near-retired households were examined in order to better understand the dynamics associated with the move to retirement status. Data from the 1995 Consumer Expenditure Survey indicated that retirement, total expenditures, and education had positive impacts on leisure expenditures. For retired households, greater total expenditures and education increased expenditures, while age and the presence of earned income decreased expenditures. For near-retired households, greater total expenditures, education, and the presence of asset income significantly increased leisure expenditures.**

---

Significant social and economic changes are influencing the patterns of work and leisure time in Americans' lives. As market work time has declined, studies of time use have demonstrated that the average American has more leisure time than in the 1960s (Juster 1985; Robinson and Godbey 1997; Stafford and Duncan 1985). According to data from the Americans' Use of Time Project, average weekly work hours for employed people ages 18 to 64 declined from 42 hours in 1965 to 36 hours in 1985. Concurrently, average weekly free time for all Americans aged 18 to 64 significantly increased from 35 to 40 hours. In particular, older Americans have greater free time as they are, with the bounty of increased retirement benefits, on average retiring earlier and reducing their work time (Robinson and Godbey 1997).

With more time for leisure, Americans have spent more money on leisure goods. According to the Department of Labor's Consumer Expen-

Robert O. Weagley is an associate professor in the Department of Consumer and Family Economics, College of Human Environmental Sciences, University of Missouri-Columbia (weagleyR@missouri.edu). Eunjeong Huh is a lecturer in the Department of Consumer Studies, Seoul National University.

This research was, in part, supported by the Missouri Agricultural Experiment Station project number MO-HSSL0599.

The Journal of Consumer Affairs, Vol. 38, No. 2, 2004

ISSN 0022-0078

Copyright 2004 by The American Council on Consumer Interests

diture Survey (CES), the average household expenditure on entertainment<sup>1</sup> increased from \$200 in 1960 to \$1,834 in 1996, with the household budget share for entertainment increasing from 3.3% to 5% during the same period. In addition, nearly 41% of all consumer units interviewed in 1997 reported additional expenditures for pleasure trips and vacations, accounting for 7% of their quarterly expenditures (U.S. Department of Labor 1998).

Studies on leisure expenditures have focused on aggregate American demand for leisure-related goods and services and have reported sizable increases over the last four decades (Blaine and Mohammad 1991; Fisk 1963; Kitchen and Hutchison 1990; Wagner and Washington 1982). Fewer studies focused on household leisure expenditures. Thompson and Tinsley (1979) examined the relationship between income and leisure expenditures and did not consider other factors. Dardis et al. (1981, 1994) investigated the impact of household socioeconomic characteristics on leisure expenditures by categorizing leisure expenditures as passive, active, or social leisure expenditures, thus limiting the analysis by their choice of categorization.

Our study examines the differences in total leisure expenditure patterns for retired and near-retired households, in the attempt to better understand the dynamics associated with the move to retirement status. Previous studies note the impact of retirement on households' consumption behavior and expenditure patterns (McConnel and Deljavan 1983; Moehrl 1990; Nieswiadomy and Rubin 1995; Rubin and Nieswiadomy 1994, 1995). Clearly, retirement forces older households to adjust to an altered economic environment. Withdrawal from full-time market work often requires retired households to adjust their consumption patterns to reflect a new resource constraint, as well as actualizing their preferences following retirement (McConnel and Deljavan 1983). The differences in leisure expenditures between retired and near-retired households are our focus.

## STUDIES OF LEISURE EXPENDITURES

Thompson and Tinsley (1979) examined the income elasticity for recreation expenditures and found per capita leisure expenditures to be positively related to income for all income classes. Leisure income elasticities were greater than one for all but the lowest income class, indicating that leisure is primarily a luxury good.

Dardis et al. (1981) investigated households' leisure expenditures on total recreation. The results indicated that recreation expenditures were pos-

itively related to income and education while negatively related to the age of the household head. It was also found that households with a black household head and households with young children spent less on recreation. Residential location was a significant factor, with urban households spending more on leisure than rural households.

More recently, Dardis et al. (1994) investigated the impact of household socioeconomic characteristics on leisure expenditures with data from the 1988–89 CES. They divided leisure expenditures into three groups: active leisure, passive leisure and social entertainment. It was found that income, the number of adults, and education had significantly positive impacts on leisure expenditures, while race (black) and the age of household head had negative impacts. Rural as well as urban West households spent less for passive leisure.

Several expenditure studies included leisure as a consumption category. Using data from the 1987 CES, Walker and Schwenk (1991) found that households with the reference person age 69–79 spent more on entertainment, reading, and education than households with the reference person age 80 or older. Hammonds-Smith et al. (1992) analyzed income and expenditures of older people by educational attainment, using the 1990 CES data. Their results indicated that the higher the educational level, the more income older people spent on entertainment.

Schwenk (1994) found that the urban elderly spent more on entertainment and reading than the rural elderly, especially, elderly women who lived alone. Using data from the 1984–85 CES, Cook and Setterstein (1995) examined how expenditure patterns of elderly persons (aged 65–74 and 75 and over) differed from those of younger adults (aged 45–54 and 55–64) at different income levels. The results of the multivariate analyses indicated that income levels had a positive impact and age had a negative impact on households' spending on entertainment and reading. However, elderly households, both middle- and high-income, spent significantly more on reading than their younger counterparts.

Abdel-Ghany and Sharpe (1997) analyzed differences in consumption patterns between households with a reference person age 65–74 (the "young-old") and households with a reference person age 75 and older (the "old-old"), using the 1990 CES data. They found that young-old households spent more on entertainment than old-old households, but there was not a significant difference in expenditures for either reading materials or education between the two groups.

In expenditure studies focused on retired households, McConnell and Deljavan (1983) analyzed expenditure differences between retired and

non-retired households, using the 1972–73 CES data. While they found no differences in average budget shares for recreation and vacations between retired and non-retired households, expenditure elasticities indicated that recreation and vacation expenditures were luxury goods for non-retired households but necessity goods for retired households.

Rubin and Nieswiadomy (1994) analyzed differences in spending patterns between retired and non-retired households over age 50. They found that non-retired households allocated a greater budget share to entertainment and education than did retired households. However, retired households had a greater marginal propensity to consume entertainment.

Rubin and Nieswiadomy (1995) also examined the economic adjustment of household entry into retirement and its impact on expenditure patterns, using data from the 1984–87 CES. For married-couple households, expenditures on entertainment were significantly lower for retired households. While single-male households spent more on entertainment after retirement, it was found that single-female households spent slightly less on entertainment after retirement. It was also found that, after retirement, single-male households spent more and single-female households spent slightly less on reading, while married-couple households spent about the same on reading as the average pre-retirement and retired married couple. Importantly, the marginal propensity to consume leisure was found to be significantly larger following retirement.

Nieswiadomy and Rubin (1995) analyzed expenditure patterns of retirees by comparing the 1972–73 CES data with 1986–87 CES data. They found the budget shares for leisure expenditures to be greater in 1986–87 than in 1972–73. Moreover, the marginal propensity to consume leisure more than doubled. These results imply that preferences for leisure activities increased.

To summarize, many household expenditure studies have focused on leisure, even though the measures and definitions of leisure varied. Based on our review of related literature, we concluded that household income; age, education, race of the household head; and residential location were relatively important factors affecting household expenditures on leisure. The question remains as to how these results may differ for near-retired and retired households, as retirement alters the consumer's choice set.

#### THEORETICAL MODEL

This study employs the theory of household time allocation in a household production function framework as the basic theory (Becker 1975).

The consumer is seen to derive utility (satisfaction) from two composite goods: quantity of household-produced goods ( $G$ ) and quantity of produced recreation goods ( $R$ ). The consumer maximizes a well-behaved utility function:

$$U = u(G(X, H), R(C, L)) \quad (1)$$

where  $U(\cdot)$  is assumed to be concave and twice continuously differentiable with positive first partial derivatives for  $G$  and  $R$ . The production functions,  $G(\cdot)$  and  $R(\cdot)$ , are also assumed to be concave with positive marginal products for  $X$  and  $H$ , and  $C$  and  $L$ , respectively.  $X$  is the quantity of market-purchased goods used in the production of  $G$ ;  $H$  is hours of household production;  $C$  is quantity of market-purchased leisure goods; and  $L$  is hours of leisure time.

If the total time available to the individual for market work ( $M$ ), household work ( $H$ ), and leisure time ( $L$ ) is  $T$ , then:

$$T = M + H + L. \quad (2)$$

Let the consumer be paid an hourly wage ( $w$ ), and  $V$  be non-labor income, then:

$$wM + V = P_X X + P_C C \quad (3)$$

where  $P_X$  = price vector for other market-purchased goods and  $P_C$  = price vector for leisure goods used to produce recreation services.

Thus, the consumer's full income can be expressed as:

$$wT + V = P_X X + P_C C + wL + wH. \quad (4)$$

Utilizing a Lagrange function to maximize the utility function within these constraints,

$$L = u(G(X, H), R(C, L)) + \lambda (wT + V - P_X X - P_C C - wL - wH). \quad (5)$$

And stating the first order conditions yields:

$$L_h = U_g g_h - \lambda w = 0, \quad (6)$$

$$L_x = U_g g_x - \lambda P_x = 0, \quad (7)$$

$$L_l = U_r r_l - \lambda w = 0, \quad (8)$$

$$L_c = U_r r_c - \lambda P_c = 0, \text{ and} \quad (9)$$

$$L_\lambda = wT + V - P_X X - P_C C - wL - wH = 0. \quad (10)$$

From (6) and (7):

$$MRS_{hx} = U_g g_h / U_r g_x = g_h / g_x = w / P_x, \quad (11)$$

and from (8) and (9):

$$MRS_{lc} = U_r r_l / U_r r_c = r_l / r_c = w / P_c; \quad (12)$$

i.e., the marginal rate of technical substitution of household time for market-purchased goods is equal to the consumer's wage rate divided by the price of purchased goods. From equations (11) and (12), the consumer's technical decisions on the quantity of time and goods to be used in production of both  $G$  and  $R$  are derived. As the consumer's wage rate increases, the greater will be the equilibrium marginal rate of substitution of goods for time. In this case, the demand for time allocated in both household production and leisure would decrease and the demand for both leisure goods and market-purchased goods increase. This production decision implies that market-employed individuals would use more leisure goods and market goods, combined with less leisure time and less household production time to produce household goods and recreation goods, as the wage rates of the employed are clearly greater than those of retired people.

In a similar manner, equations (6) and (8) and equations (7) and (9) may be used to examine equilibrium conditions where optimum quantities of both household-produced goods and recreation goods are determined according to the preferences of the consumer. Starting with equations (6) and (8),

$$U_g / U_r = r_l / g_h. \quad (13)$$

The implication of this relationship is that the decision of the individual regarding his or her time allocation between household production and recreation production depends on the individual's preferences or tastes for recreation vis-à-vis household-produced goods, as well as his or her relative productivity in each activity. Individuals with greater marginal utility from recreation would be expected to spend more time on leisure or less time on household production.

Similarly, from (7) and (9),

$$U_g / U_r = r_c / g_x * P_x / P_c \quad \text{or} \quad U_r / U_g * r_c / g_x = P_c / P_x. \quad (14)$$

Here, the choice between goods as inputs to either recreation or household production depends on preferences, the relative price for purchased mar-

ket goods and leisure goods, as well as each good's marginal products. If leisure goods are relatively expensive compared to other market goods, then one would expect a greater average marginal utility of recreation goods or a lower marginal utility of household-produced goods. Either results in individuals spending less on leisure goods and more on market goods.

In this model, maximizing equation (5) leads to demand functions for leisure goods ( $C$ ), leisure time ( $L$ ), all other market goods ( $X$ ), and household production time ( $H$ ). Looking solely at the demand for  $n$  leisure goods:

$$C_k = f(V, P_x, P_c, w) \quad k = 1, \dots, n \quad (15)$$

where  $V$  = household unearned income,  $P_x$  = prices for market-purchased goods,  $P_c$  = prices for leisure goods, and  $w$  = market wage rate.

Equation (1) indicated that recreation goods are produced as a function of leisure goods and leisure time,  $R = r(C, L)$ . The impact of the change of the wage rate on the demand for leisure time decomposes into the substitution effect ( $\partial L^s/\partial w$ ) and the income effect (endowment income plus consumption income:  $(T-M-H) \partial L/\partial V$  [Varian 1999]).

$$\begin{aligned} \partial L/\partial w &= \partial L^s/\partial w + (T-M-H) \partial L/\partial V \\ &(<0) \quad (>0) \quad (>0) \end{aligned} \quad (16)$$

where  $L$  = leisure time,  $M$  = market work time,  $H$  = household production time,  $w$  = market wage rate,  $T$  = total time, and  $V$  = unearned income. As can be seen, a change in the wage rate has an ambiguous effect on the demand for leisure time. That is, if  $|\partial L^s/\partial w| > |(T-M-H)\partial L/\partial V|$ , then  $\partial L/\partial w < 0$ , and vice versa.

If the average preferences of consumers for leisure time and goods are complementary, an increase (decrease) in the consumer's wage rate would result in a decrease (increase) in the demand for leisure goods. On the other hand, if goods and time are substitutes, an increase in the wage rate would induce greater expenditures on goods to employ with relatively expensive time to produce recreational services, similar to the production decision. As such, leisure good demand for use in the production of recreation can either be positively or negatively affected by whether the individual is market employed or retired. For employment clearly increases the opportunity cost of time and impacts the demand for leisure goods through the opportunity cost of time.

## METHOD

The 1995 Consumer Expenditure Survey (CES) data, conducted by the Bureau of Labor Statistics, were the subject data. All four quarters of data from 1995 were employed as quarterly observations in order to control for variations in expenditures that exist across different months of the year, while measuring the effect of the focus variables.

Similar to other studies, the sample was restricted to households where the head of the household was aged 50 or older. A retired household was defined as one headed by an individual aged 50 or over who reported retirement status in the year 1995 (Nieswiadomy and Rubin 1995; Rubin and Nieswiadomy 1994, 1995), while the near-retired were all those working (with earned income) and not self-reporting as being retired. When a husband was reported as retired, the household was included as a retired household, regardless of the wife's work status. When the wife is retired and the husband is still working, the household was included in the near-retired group, reflecting the more traditional male breadwinner orientation predominant in this age cohort. Households where the household head was not working for reasons other than retirement were excluded from the sample. Moreover, the sample was limited to those with complete responses to income questions. Finally, the total sample size over the four quarters was 5,468 consumer units consisting of 2,510 retired and 2,958 near-retired households.

### Dependent Variables

Our dependent variable is a household's total dollar expenditures on leisure-related goods and services during the current quarter, the sum of 90 specific expenditure items. Broadly, the expenditures include 1) membership fees and admissions; 2) televisions, radios, and sound equipment; 3) pets, toys, and playground equipment; 4) reading; 5) sports equipment; 6) recreation vehicles; and 7) vacations and trips.<sup>2</sup>

### Independent Variables

The independent variables are total expenditures for the quarter, a proxy for permanent income; work status of the household head; the presence of particular income sources; and household characteristics such as age, education, race, family type, home ownership, and residential location. Interview quarter and month are included to control for the months of record.<sup>3</sup>

### *Household Income*

Total expenditures better represent lifetime consumption patterns when compared to current income (Friedman 1957). Empirically, respondents report their expenditures more accurately than their income, as they tend to avoid reporting income and sometimes have difficulty in recalling income. It is hypothesized that household income would have a positive impact on leisure expenditures.

It is also possible that there exists a change in preferences for leisure expenditures among retired people. According to Nieswiadomy and Rubin (1995) and Rubin and Nieswiadomy (1995), retired households have a shift in preferences toward leisure and their marginal propensity to consume leisure is significantly increased, implying a greater income elasticity for leisure goods in retirement.

### *Work Status*

The focus of this work is to illuminate the effect retirement has on leisure expenditures. We consider two reasons to explain possible differences in leisure expenditure patterns between retired and near-retired households. First, if retired individuals have a greater preference for leisure goods, at their average level of permanent income they would demonstrate an expenditure elasticity that is greater than that of the non-retired. Secondly, we examine the relationship between the leisure goods and leisure time from both production and consumer theory to see if they are substitutes or complements.

First, a consumer's technical decisions on the quantity of time and goods used in production argue that as a consumer's wage rate increases, he or she will substitute goods for time, as the ratios of the marginal rate of technical substitution of time for goods will increase as the wage rate increases. As such, it would be expected that employed people demand more leisure goods than the retired because wage rates of employed people are greater than those of retired people. Thus, from the perspective of production theory, retirement would be expected to have a negative impact on leisure good consumption. This has been found in other empirical studies (Dardis et al. 1981; Rubin and Nieswiadomy 1994).

Second, from the perspective of preferences, leisure expenditures can be complements or substitutes with leisure time as the price of time (i.e., the wage rate) changes. The impact of the cross-price changes on the demand for leisure goods decomposes into an income effect and a substitution effect (equation 16) with an ambiguous total effect. If leisure expenditures

are substitutes for leisure time, employed individuals would consume more leisure goods and less leisure time than retired individuals, similar to the production effect above. On the other hand, if leisure expenditures and time are complements, employed individuals would purchase less leisure goods than retired individuals, while controlling for other factors. Thus, retirement could have either a negative or a positive effect on leisure expenditure depending on whether leisure goods expenditures are substitutes or complements with leisure time, respectively.

#### *Age of the Household Head*

The age of the household head was coded as a continuous variable for the number of years of age. For married-couple households this was defined as the age of the husband, while for single households it was the age of the subject household head, male or female. It is hypothesized that age has a negative impact on leisure expenditures because declining health conditions of older consumers (over age 50) interfere with participation in leisure.<sup>4</sup>

#### *Education*

The education level of the household head was divided into four categories: less than high school, high school graduate, some college, and college graduate or over. The reference group was college graduate or over. It is hypothesized that education has a positive impact on leisure expenditures.

#### *Race*

The race of the household head was categorized as black or non-black households, with non-black households as the reference category. Following other studies' results (Dardis et al. 1984, 1991) black households are expected to expend less on leisure, when controlling for other factors, reflecting a lesser preference for leisure goods and services.

#### *Family Type*

Family type was classified into married-couple households, single-male-headed households, and single-female-headed households based on the marital status and the gender of the household head. Single-male-headed households were used as the reference group.

### *Home Ownership*

The housing tenure status of the household was divided into three groups: own with a mortgage, own without a mortgage, or rental household. It is hypothesized that there is a positive relationship between home-ownership and leisure expenditures, with greater home equity, as measured by ownership without a mortgage, increasing expenditures.

### *Income Sources*

It is expected that there are differences in the effect of income sources on the propensity to consume leisure goods. This study employs five categorical variables for income sources: earned income from wages and salaries, annuity or pension income, Social Security Railroad Retirement (SSRR) income, asset income, and transfer income (e.g., worker's compensation, veterans' payments, unemployment compensation, supplemental security income, annual value of food stamps, or income from public assistance or welfare). The income sources were coded as 1 if the household had that particular income source and coded as 0 if the household did not have income from that source.

### *Residential Location*

Residential location was divided into urban Northeast, urban Midwest, urban South, urban West, and rural areas, as reported in the Consumer Expenditure Survey. Rural was used as the reference group to more accurately measure the urban-rural difference, as well as being the only possible measure of differences in household preferences and tastes by region. It is hypothesized that households in urban areas would spend more on leisure than households in rural areas.

### *Quarter/Month*

These variables were used to identify the months in which the expenditures were made, as leisure expenditures can be expected to vary across the months being reported in the rotating panel.

## DESCRIPTIVE STATISTICS

Table 1 presents the comparison of the characteristics of near-retired and retired households. For leisure expenditures, retired households spent

TABLE 1  
*Economic and Demographic Profiles of Two Subsamples*

Variables	Near-Retired (n = 2,958)		Retired (n = 2,510)	
	Mean	(Standard error of the mean)	Mean	(Standard error of the mean)
<i>Continuous Variables</i>				
Annual total leisure expenditures	\$ 3,096	(105.12)	\$ 1,792	(87.95)
Annual total expenditures	\$37,783	(510.62)	\$20,949	(342.57)
Age of household head	59	(0.13)	73	(0.16)
	<i>Frequency</i>	<i>(Percent)</i>	<i>Frequency</i>	<i>(Percent)</i>
<i>Education of Head</i>				
Less than high school	514	(17.4%)	918	(36.6%)
High school graduate	980	(33.1%)	816	(32.5%)
Some college	592	(20.0%)	377	(15.0%)
College graduate or over	872	(29.5%)	399	(15.9%)
<i>Race of Head</i>				
White	2,605	(88.1%)	2,257	(89.9%)
Black	249	(8.4%)	195	(7.8%)
Other	104	(3.5%)	58	(2.3%)
<i>Family Type</i>				
Married-couple	1,909	(64.5%)	1,237	(49.3%)
Female-headed	707	(23.9%)	949	(37.8%)
Male-headed	342	(11.6%)	324	(12.9%)
<i>Home Ownership</i>				
Owned with mortgage	1,446	(48.9%)	410	(16.3%)
Owned without mortgage	1,037	(35.1%)	1,606	(64.0%)
Rented	475	(16.1%)	494	(19.7%)
<i>Residential Location</i>				
Northeast	567	(19.2%)	570	(22.7%)
Midwest	705	(23.8%)	506	(20.2%)
South	744	(25.2%)	636	(25.3%)
West	664	(22.4%)	468	(18.6%)
Rural	278	(9.4%)	330	(13.1%)
<i>Presence of Income Sources</i>				
Earned income	2,688	(90.9%)	358	(14.3%)
Pension income	540	(18.3%)	1,303	(51.9%)
Social Security retirement income	719	(24.3%)	2,304	(91.8%)
Asset income	1,116	(37.7%)	1,046	(41.7%)
Transfer income	382	(12.9%)	318	(12.7%)
<i>Quarter</i>				
1995 first quarter	745	(25.2%)	644	(25.6%)
1995 second quarter	765	(25.9%)	609	(24.3%)
1995 third quarter	762	(25.7%)	640	(25.5%)
1995 fourth quarter	686	(23.2%)	617	(24.6%)
<i>Month of Interview</i>				
First month	1,016	(34.3%)	879	(35.0%)
Second month	998	(33.4%)	827	(32.9%)
Third month	944	(31.9%)	804	(32.0%)

less (\$1,792) than near-retired households (\$3,096). Given that retired households have, on average, lower total expenditures, the result for the average budget share spent on leisure reveals a different story. Average budget shares indicate that retired households spent a slightly greater portion of the household income on leisure (8.6%) compared to working households (8.2%). This suggests a preference toward leisure in retired households.

All other distributions are as expected, with the retired having a lesser proportion with a mortgage-financed home and earned income and a greater proportion with pension income and social security income. It is also of interest to note the greater proportion of retirees with less education, reflecting the change in educational expectations between the average year of high school graduation, calculated by the difference in the average age and the age of 18, for the retired of 1940 compared to that of the near-retired of 1954.

## RESULTS

Table 2 presents the results of the ordinary least squares analysis for total leisure expenditures for the entire sample. The results indicate that retired households spent significantly more on leisure expenditures than near-retired households, while controlling for other factors. As other factors were controlled, this positive coefficient represents increased preferences for leisure in retired households. The results also point to a confirmation of a complementary relationship between leisure goods and leisure time, as the value (price) of the time of a retired worker is less and leisure expenditures are greater. Thus, the complementary relationship is seen to influence leisure expenditures, as compared to a technical substitution effect of goods for time as suggested by production theory.

As hypothesized, total expenditures as a proxy for permanent income had a significant and positive impact on leisure expenditures. We found an average expenditure elasticity, calculated at the mean expenditure and income, of 1.20. Hence, leisure expenditures, as found in past studies, can be classified as a luxury good, as the average percentage increase in leisure expenditure is greater than the percentage increase in permanent income.

The education of the household head was found to be an important variable in explaining leisure expenditures. Households with a less educated household head spent significantly less on leisure compared to those with a household head with greater education. Other independent variables did not have significant impacts on households' leisure expenditures for the analysis of the total sample.

TABLE 2

*Results of Regression Analysis for Leisure Expenditures for the Total Sample (n = 5,468)*

Variable	Coefficient	Standard Error
<i>Constant</i>	-311.943	(359.747)
<i>Work Status (Near-retired)</i>		
Retired	548.378 **	(135.860)
<i>Income</i>		
Total expenditures	0.104 **	(0.002)
<i>Race of Head (Non-black)</i>		
Black	115.843	(227.610)
<i>Family Type (Single-male-headed)</i>		
Married	-210.275	(197.666)
Single-female-headed	-97.881	(206.423)
<i>Education of Head (College graduate and over)</i>		
Less than high school	-1030.424 **	(188.175)
High school graduate	-760.443 **	(171.512)
Some college	-434.750 *	(193.243)
<i>Home Ownership (Rented)</i>		
Owned w/mortgage	63.011	(192.250)
Owned w/o mortgage	295.219	(175.486)
<i>Region (Rural)</i>		
Northeast	-185.889	(228.367)
Midwest	-97.372	(225.459)
South	-129.131	(222.760)
West	268.369	(230.562)
<i>Quarter (Fourth quarter)</i>		
First quarter	163.824	(172.579)
Second quarter	19.594	(173.147)
Third quarter	181.717	(172.210)
<i>Interview Month (Month 3)</i>		
Month 1	-4.509	(148.562)
Month 2	-145.627	(149.985)
Log Likelihood	-53714.235	

\*Significant at the 0.01 level; \*\* significant at the 0.001 level.

The results show significant differences between retired and near-retired households regarding a household's leisure expenditures. Given this result, the sample was separated by work status of the household head to fully examine the differences in household leisure expenditures between retired and near-retired households. Table 3 presents these results.<sup>5</sup> Total expenditures, as a proxy for permanent income, had a significantly positive impact on leisure expenditures for both retired and near-retired households. Expectedly, the age of the household head had a negative impact on leisure expenditures in retired households, but for those near retirement it was not significant. Since the average age of retired households is greater than that of near-retired households, declining health or activity levels may limit leisure expenditures as the retired age.

TABLE 3

*Results of Regression Analysis for Leisure Expenditures for Retired (n = 2,510) and Near-Retired Households (n = 2,958)*

Variable	Retired Households		Near-Retired Households	
	Coefficient	(Std. Error)	Coefficient	(Std. Error)
<i>Constant</i>	2384.113**	(920.212)	-249.656	(1207.616)
<i>Income</i>				
Total expenditures	0.122***	(0.005)	0.098***	(0.003)
<i>Age of Head</i>	-28.372*	(11.345)	-0.087	(17.742)
<i>Race of Head (Non-black)</i>				
Black	-436.626	(297.622)	530.549	(338.746)
<i>Family Type (Single-male-headed)</i>				
Married	-268.563	(246.226)	-193.675	(302.553)
Single-female-headed	-122.243	(249.672)	-60.843	(330.608)
<i>Education of Head</i>				
(College graduate or over)				
Less than high school	-743.574**	(247.798)	-1141.536***	(297.556)
High school graduate	-667.832**	(241.529)	-771.858**	(241.031)
Some college	-856.296**	(276.799)	-149.396	(296.016)
<i>Home Ownership (Rented)</i>				
Owned w/mortgage	41.423	(282.608)	69.907	(276.234)
Owned w/o mortgage	94.625	(214.095)	396.469	(287.945)
<i>Region (Rural)</i>				
Northeast	-342.134	(270.795)	-28.559	(367.478)
Midwest	-165.279	(273.982)	-64.605	(354.847)
South	-209.923	(265.908)	-21.005	(355.095)
West	408.170	(281.625)	230.107	(362.297)
<i>Presence of Income Sources</i>				
Earned income	-525.179*	(237.326)	-79.981	(388.878)
Pension	-242.135	(166.528)	353.032	(257.668)
SSRI	-47.082	(307.502)	-136.008	(292.468)
Asset	-141.985	(166.647)	357.643*	(197.192)
Transfer	-202.035	(245.335)	-226.362	(276.513)
<i>Quarter (Fourth quarter)</i>				
First quarter	244.098	(216.051)	72.846	(261.826)
Second quarter	58.434	(218.975)	-30.617	(259.960)
Third quarter	213.856	(215.641)	121.169	(259.957)
<i>Interview Monthly (Month 3)</i>				
Month 1	24.131	(187.724)	-61.887	(224.367)
Month 2	-140.276	(191.856)	-176.461	(226.004)
Log Likelihood	-24260.437		-29344.832	

\*Significant at the 0.05 level; \*\* significant at the 0.01 level; \*\*\* significant at the 0.001 level.

As expected, the results for the education of the household head indicated that households with a higher level of education spent more on leisure than those with a lower educational level. However, there was no difference found for leisure expenditures in the near-retired households'

sample between those with an educational level of college graduate and those with an educational level of some college. An explanation for the positive effect of education on leisure is that the knowledge and skills acquired through the educational process tends to increase exposure to potential leisure activities, resulting in increased leisure expenditures (Dardis et al. 1994).

The impacts of income sources on leisure expenditures were quite different between retired and near-retired households. For retired households, earned income had a negative impact on leisure expenditures, capturing the greater opportunity cost of time compared to those with no earned income. Thus, for the retired households with earned income, leisure expenditures are less, an indication that goods and time are, again, complementary for this group. For near-retired households, only asset income was significant where it was found to have a positive effect on leisure expenditures.

In order to compare the impact of total expenditures as a proxy for income on leisure expenditures for both retired and near-retired households, a total expenditure elasticity for leisure good expenditures was calculated. For retired households, the total expenditure elasticity was found to be 1.425, while for near-retired households, the total expenditure elasticity was calculated to be 1.196. In both cases, leisure was found to be a luxury good. Moreover, as total expenditures increase (decrease), near-retired households' spending on leisure increases (decrease) slower than it does for retired households. This reflects retired households having a greater preference for leisure than near-retired households, at their average permanent income (total expenditures) and leisure expenditure level. These results are consistent with other studies of retirees, where retired households have a greater marginal propensity to consume leisure goods and services (Rubin and Nieswiadomy 1994, 1995).

For education, comparing across equations, it is clear that greater education increases leisure expenditures for both groups. However, the differences in expenditures that are indicated by the coefficients indicate a greater difference prior to retirement, as compared to during retirement. This suggests a greater similarity of preferences among the retired, regardless of educational level, than that which exists before retirement.

## CONCLUSIONS

An economic model of household leisure expenditures was used to examine the impacts of work status, household income, and household characteristics on leisure expenditures. The results indicate that when the

household is retired, with other factors held constant, the household's total leisure expenditures increase. A greater educational level of the household head also increased leisure expenditures, although the differences in educational groups were less during retirement.

When comparing leisure expenditures between retired and near-retired households, total expenditures and the education of the household head increased leisure expenditures for both groups. The age of the household head had a negative impact on leisure expenditures, but only for retired households. For the influence of the presence of income sources on leisure expenditures, earned income had a negative impact for retired households, while asset income had a positive impact for near-retired households.

These results suggest that retirement is a significant factor for household leisure expenditures. The finding of retirement increasing leisure expenditures combined with the result indicating greater total expenditure elasticity for retired households implies a great preference for leisure after retirement. Moreover, it is indicated that retirement, by reducing the opportunity cost of time, increases the demand for leisure goods through a complementary relationship between goods and time.

This study provides information to researchers, policy makers, financial counselors, and business managers who focus on the leisure expenditures of retired and near-retired households. As the population of the United States continues to age, and the average retirement age continues to decrease, the expenditure patterns of the retired are increasingly important. The results of this study strongly suggest that retired households have a strong preference for leisure and that this preference increases their spending on leisure goods and services. Those that counsel the near-retired about their finances would be mindful to make their clients aware of the average tendency for the retired to increase their preference toward leisure goods when retired. As such, the retiring consumer would be mindful of a probable increase in the share of their budget to be spent on this category of expenditure and be better prepared once they reach that stage of life.

Corporations seem to understand this preference for leisure by retired households, when they institute policies for the elderly, such as discounts on admission fees. Given their preference for leisure goods, the lower price is expected to increase retirees' participation in leisure activities by a greater amount than the same price decrease would increase demand for the near retired. Business managers should be increasingly aware of retirees as a growing market segment and continue to expand leisure goods and services targeted to the retired.

As researchers look to the future, they should be mindful that a house-

hold's production of leisure activities is closely related to time, as well as money. Since this study used the data from the 1995 CES and no measures of time were available, it excluded the use of time spent in leisure activities. Moreover, explicit measures of the value of time are absent from the data, and conclusions relative to time have had to be inferred from the results on the presence of earned income and retirement status. Generally, retirees have relatively more *free* time than employed workers. Thus, retired households could be expected to use more time-intensive leisure than money-intensive leisure (e.g., reading books from the public library) when compared to working households. Therefore, further research is needed to examine households' time spent in leisure as well as expenditures on leisure.

Regardless, as the population ages and the heralded members of the Baby Boom generation reach retirement, leisure expenditures should rise with increases in retirement income. On the other hand, should the boomers fail to financially prepare for their retirement, expenditures on leisure will be reduced by more than the shortfall as the expenditure elasticities indicate that the percentage decrease in leisure expenditures will be relatively greater for retired consumers.

## ENDNOTES

1. This includes fees and admissions; television, radio, and sound equipment; pets, toys, and playground equipment; and other entertainment supplies and equipment.
2. The concept of leisure expenditures is general and its measure varies between researchers. As such, every empirical study provides an approximation of household leisure expenditures. How leisure expenditures are defined will either underestimate or overestimate true leisure consumption. For example, household expenditures on sportswear (e.g., swimwear) and sports shoes (e.g., golf shoes) were excluded from leisure expenditures because these items are typically included in apparel expenditures in CES data.
3. Given the rotating panel design of the Consumer Expenditure Survey, where households report for the preceding three months' expenditures, and given the month of interview, it is not possible to exactly identify seasons without restricting the sample size. As such, no inference to seasonality of expenditures should be implied. Yet, by including the quarter and month of data collection, the exact months for which expenditures are being reported is held constant. To exactly control for season would have greatly restricted the sample size and, if the variables of quarter and month of interview were omitted, it would have created omitted variable bias in the focus coefficients.
4. Age was omitted from the analysis for the total sample, following multicollinearity concerns with the retirement status variable.
5. Equations were estimated where we employed a dummy-variable interaction equation for the model, in order to search for differences across groups in tastes and preferences. In these models, the only coefficients that were significantly different between the retired and the near-retired were for permanent income, age, and education. Our focus remains on the significance of the retirement dummy variable and, when we separate the samples by retirement status, the coefficient on permanent income.

## REFERENCES

- Abdel-Ghany, M. and F.N. Schwenk. 1993a. Functional Forms of Household Expenditure Patterns in the United States. *Journal of Consumer Studies and Home Economics*, 17: 325–342.
- . 1993b. Differences in Consumption Patterns of Single-Parent and Two-Parent Families in the United States. *Journal of Family and Economic Issues*, 14 (Winter): 299–315.
- Abdel-Ghany, M. and D.L. Sharpe. 1997. Consumption Patterns Among the Young-Old and Old-Old. *Journal of Consumer Affairs*, 31 (1): 90–112.
- Becker, G.S. 1975. *Human Capital*. 2nd ed. Chicago: University of Chicago Press.
- Blaine, T.W. and G. Mohammad. 1991. An Empirical Assessment of U.S. Consumer Expenditures of Recreation-Related Goods and Services: 1946–1988. *Leisure Sciences*, 13: 111–122.
- Boyle, M. 1989. Spending Patterns and Income of Single and Married Parents. *Monthly Labor Review*, March: 37–41.
- Cook, F.L. and R. Setterstein Jr. 1995. Expenditure Patterns by Age and Income Among Mature Adults: Does Age Matter? *Gerontologist*, 35 (1): 10–23.
- Dardis, R., F. Derrick, A. Leheld, and K.E. Wolfe. 1981. Cross-section Studies of Recreation Expenditures in the United States. *Journal of Leisure Research*, 13 (3): 181–194.
- Dardis, R., H. Soberon-Ferrer, and D. Patro. 1994. Analysis of Leisure Expenditures in the United States. *Journal of Leisure Research*, 26 (4): 309–321.
- Fisk, G. 1963. *Leisure Spending-Behavior*. Philadelphia: University of Pennsylvania Press.
- Friedman, M. 1957. *A Theory of the Consumption Function*. Princeton, NJ: Princeton University Press.
- Hammonds-Smith, M., J.C. Courtless, and F.N. Schwenk. 1992. A Comparison of Income, Income Sources, and Expenditures of Older Adults by Educational Attainment. *Family Economic Review*, 5 (4): 2–8.
- Horton, S.E. and J.L. Hafstrom. 1985. Income Elasticities for Selected Consumption Categories: Comparison of Single-Female-Headed and Two-Parent Families. *Home Economic Research Journal*, 13: 292–303.
- Jang, Y.G. 1995. *Human Capital-Enhancing Expenditures: A Comparison of Female-Headed and Married-Couple Households*. Unpublished Dissertation, University of Missouri–Columbia.
- Juster, F.T. 1985. A Note on Recent Changes in Time Use. In *Time, Goods, and Well-being*, edited by F.T. Juster and F.P. Stafford (313–332). Institute for Social Research, University of Michigan.
- Kitchen, J.W. and P.D. Hutchison. 1990. An Analysis of Recreation Expenditures by U.S. Consumers, 1939–1988. *Texas Journal of Agriculture and Natural Resources*, 4: 7–49.
- McConnel, C.E. and F. Deljavan. 1983. Consumer Patterns of the Retired Household. *Journal of Gerontology*, 38 (4): 480–490.
- Moehrl, T. 1990. Expenditure Patterns of the Elderly: Workers and Nonworkers. *Monthly Labor Review*, May: 34–41.
- Nieswiadomy, M. and R.M. Rubin. 1995. Change in Expenditure Patterns of Retirees: 1972–1973 and 1986–1987. *Journal of Gerontology: Social Sciences*, 50B (5): S274–S290.
- Robinson, J.P. and G. Godbey. 1997. *Time for Life: The Surprising Ways Americans Use Their Time*. PA: The Pennsylvania State University Press.
- Rubin, R.M. and M. Nieswiadomy. 1994. Expenditure Patterns of Retired and Nonretired Persons. *Monthly Labor Review*, April: 10–21.
- . 1995. Economic Adjustments of Households on Entry Into Retirement. *Journal of Applied Gerontology*, 14 (4): 467–482.
- Schwenk, F. N. 1994. Income and Consumer Expenditures of Rural Elders. *Family Economic Review*, 7 (3): 20–27.
- Stafford, F. P. and G.J. Duncan. 1985. The Use of Time and Technology by Households in the United States. In *Time, Goods, and Well-being*, edited by F.T. Juster and F.P. Stafford (245–282). Institute for Social Research, University of Michigan.

- Thompson, C.S. and A.W. Tinsley. 1979. Income Expenditure Elasticities for Recreation: Their Estimation and Relation to Demand for Recreation. *Journal of Leisure Research*, 10 (4): 265–270.
- U.S. Department of Labor, Bureau of Labor Statistics. 1998. *Consumer Expenditure Survey, 1995: Interview Survey and Detailed Expenditure Files*.
- . 1999. *Issues in Labor Statistics*, Summary 99–8, August.
- Varian, H. R. 1999. *Intermediate Microeconomics*. 5th ed. New York: W.W. Norton.
- Wagner, F. and V.R. Washington. 1982. An Analysis of Personal Consumption Expenditures as Related to Recreation, 1946–1976. *Journal of Leisure Research*, 13 (1): 37–46.
- Walker, R.S. and F.N. Schwenk. 1991. Income and Expenditure Patterns of Consumer Units With Reference Person Age 70 to 79 and 80 or Older. *Family Economic Review*, 4 (1): 8–13.