

Home Ownership And The Decision To Overspend

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An empirical model of overspending derived from the life cycle savings model was estimated for home owners and renters. Age, income stability indicators, family structure, marital status and race appear to have different impacts in the models, implying that the life cycle model may not equally characterize home owners and renters. Financial professionals need to be aware of the impact of the housing tenure decision on overall spending and savings. Practitioners can use these results to encourage clients to reconsider home purchases in light of expected changes in spending patterns that may impede a clients progress toward other financial goals.

KEYWORDS: *Overspending, housing tenure, life cycle savings model, consumer expenditure survey*

Purchasing a home has long been considered one a household's best investments. For most Americans, real estate assets dominate other forms of wealth holdings (U.S. Bureau of the Census, 1993, p. 487). Through the 1970s and early 1980s, U.S. home owners benefited from 10% annual increases in home values (U.S. Bureau of the Census, 1993, p. 482). With home owners devoting a significant portion of their budgets toward mortgage payments (U.S. Bureau of the Census, 1993, p. 456), it is not surprising that the asset holdings of Americans are disproportionately weighted toward residential real estate.

Though it appears that American families have benefited greatly from home ownership, the question remains as to whether investing in a home makes good sense from a financial planning perspective. Is purchasing a home a sound investment option or simply a good consumption decision? Are home owners forced to make better financial decisions given the financial discipline necessary to obtain and payoff a mortgage? Do home owners exhibit behaviors more typical of those following a long-term financial plan? These are the general questions addressed in this article.

This article focuses on the overspending behavior of renters and home owners. Overspending may be due to any number of factors--from heavy spending on housing and durables while establishing a household (Tobin, 1967) to fluctuating income patterns of the major wage earners in the households (Hanna, Fan & Chang, 1995). Although overspending may be rational at some points in

the life cycle, persistent indebtedness places households at risk of not achieving major financial goals.

By comparing the spending behavior of families that own their homes to those who rent, it is hoped that we can learn more about the budgeting, investing and overall financial planning decisions made by these individuals at various stages in the life cycle. Analysis of the spending behavior of home owners and renters can give new insights as to whether overspending is part of a rational plan to meet family goals, or whether it is mandated by the additional burden of spending on home maintenance, property taxes, furnishings and other expenses related to home ownership. Financial advisors, real estate professionals and credit counselors can use these comparisons when working with households considering home ownership.

The Literature

The empirical work on overspending can be categorized as studies that focus on housing tenure, overspending, family savings and the adequacy of emergency funds. There are few empirical studies that focus specifically on the impact of housing tenure on consumer spending.

Housing Tenure and Spending

Paulin (1995) provides the most extensive analysis of the differences between the consumption decisions of home owners and renters. Using 1989 and 1990 data from the Consumer Expenditure Survey, Paulin found substantial differences in consumption patterns between home

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owners and renters for several aggregate commodity categories. For both home owners and renters, income, age and family size were related to the level of expenditure on various aggregate commodity groups. The relationship between income, age and family size was not constant across owners and renters. For example, the level of expenditure for primary housing and related services increased with age for renters and decreased for home owners. Paulin found that health and personal care expenditures increased with age at a faster rate for home owners than it did for renters. Significant differences in reactions to income changes across tenure status were also reported. Home owners were more sensitive to income changes when choosing a level of recreation and transportation expenditure but less sensitive to income changes for food purchased for home consumption. It is important to note that Paulin used total expenditure as a proxy for income, with the result being a total level of expenditure and/or income exactly equal to the sum of the expenditures on each category. While this is an accepted practice in demand analysis (given the well noted problems with income under reporting in survey data), it does not allow for the identification of individuals whose expenditures exceed their incomes.

Overspending

Oh (1995) used reported income in an analysis of spending patterns of renters. Oh characterized those with a rent burden (spending more than 30% of after-tax income on rent) using data from the 1980 to 1991 Consumer Expenditure Survey. Oh found households with a rent burden to be more likely to spend more than their reported income.

Bae, Hanna and Lindamood (1993) used BLS Consumer Expenditure Data from the 1990 survey. They calculated an income to spending ratio for each consumer unit to identify patterns of overspending in households. They found that 40% of American households spent more than their take-home incomes (indicated by an income to spending ratio above one) and 25% of the sample spent at least 127% of their take-home income. At least 25% of households in each family size and age group spent more than they brought home. Bae, et al. did include housing tenure in their model of overspending and found home owners with mortgages to be more likely to overspend than renters or homeowners without mortgages.

Chang (1994) analyzed data from the Survey of Consumer Finance to show that 40% of U.S. households

had negative saving between 1983 and 1986. Chang defined saving as the increase in real net non-housing assets between the two survey periods, and found that 40% of American families had a decrease in non-housing wealth between 1983 and 1986. This decrease was experienced more by younger and lower income households than older and higher income households. One interpretation is that younger households with lower current income may have been expecting a higher income in the future and thus were overspending. Chang found that higher levels of non-housing assets in 1983 led to less savings (declining asset levels) during the three subsequent years, while income in 1983 was positively related to increasing asset levels (savings) for the coming years. Home ownership in 1983 did not impact the level of family savings over the following three years.

Family Savings

Hefferan (1982) used the 1972-73 Consumer Expenditure Survey to investigate the determinants of current family savings. Hefferan found savings (measured as the difference between current expenditure and income) to be primarily an increasing function of income and wealth. Home ownership appeared to be positively related to the decision to save as well as the level of savings. In fact, Hefferan found home owners with mortgages to be both more likely to save as well as saving more than families with similar educations and family life cycle characteristics. This finding contradicts Bae, et al. (1993) and could be a result of recent changes in the banking industry which have made home mortgages more accessible (*The Wall Street Journal*, 1996).

Davis and Schumm (1987) investigated family savings behavior and the satisfaction with the current savings levels of 1739 married couples in 13 rural and urban states in 1977 and 1978. They asked respondents to choose a category closest to the amount they had saved or invested in the past 12 months. Davis and Schumm (1987) identified an income threshold above which families tended to run a surplus. For those above the income threshold, savings was found to be a function of income, education, household size and home ownership. Home ownership was shown to be positively correlated with the actual level of savings and the wife's satisfaction with current financial asset holdings.

Adequacy of Emergency Funds

Other studies of family spending patterns have focused on the adequacy of emergency funds held by the family. A family with adequate emergency funds may be more

likely and able to overspend. There is no clear uniform recommendation for an adequate emergency fund, however, most of the empirical studies have shown that U.S. households have inadequate liquid assets to cover emergency expenses for 3 months (Chang, 1995; Hanna & Wang 1995; DeVaney, 1995; Zhou, 1995). Chang (1995) found home owners in 1983 more likely to have a least three months worth of emergency fund savings. Hanna & Wang (1995), estimating liquid assets held by households using the 1990-91 Consumer Expenditure Survey, revealed that 70% of households did not have enough liquid assets to cover 3 months of spending. Those with higher levels of home equity were found to be more likely to have liquid assets that would last 3 months if current income was discontinued. DeVaney (1995), using the 1977 and 1989 Survey of Consumer Finance, also found home equity levels to be positively related to the likelihood that a family had adequate emergency funds in 1977 and 1989. Finally, Zhou (1995), using the 1989 Survey of Consumer Finance, found that age, net worth and home ownership are positively related to holding adequate emergency funds.

The empirical research directly examining the overspending behavior of families is limited and the findings regarding the influence of home ownership on savings and overspending appears to be somewhat contradictory. Therefore, the purpose of this study is to explore the effect of home ownership on household overspending behavior. Many household characteristics such as household size, marital status, number of children and employment status are added to the model to further explain overspending behavior of households and differentiate the spending behavior of home owners from renters.

Theoretical Model

According to the conventional life cycle savings hypothesis, a rational family adopts a lifetime consumption plan that balances the utility gained from acquiring additional investment assets against expenditures on current consumption across all stages of the life cycle (Ando & Modigliani, 1963^a). However, the consumer decision to own a home may negatively impact families' consumption paths given the significant costs of buying and maintaining a home. The decision to live in owned housing could also require the household financial manager to be more fiscally responsible so that the family can obtain a loan and continue making house payments throughout the long contract period.

The life cycle savings hypothesis maintains that individuals deliberately save and dis-save during their lifetime, but in the case of home ownership, it may be difficult for the family to maintain desired spending and savings patterns. Typically, an individual's income is expected to be low at a young age, rise with professional achievements, and then fall with retirement. Although consumption may vary with time, it is assumed not to change greatly with transitory changes in income. As a result, to maximize satisfaction, households borrow during the early stages of the life cycle against their expected future earnings to offset debt and to shrink the gap between consumption and income. The life cycle model also suggests that households repay the debt and accumulate wealth during middle-age, then borrow from savings mainly to adjust for declining earned income during retirement. In the basic life cycle model, the household bases decisions on events which are assumed to be known with certainty. As income is neither constant nor certain, households may either prepare themselves for the emergencies by accumulating assets or borrow to adjust to unexpected income fluctuations.

A prescriptive life cycle savings model proposed by Hanna, Fan and Chang (1995) maintained that the percent of income to save today should depend on the expected lifetime non-investment income pattern. Households who are sure that their real incomes will increase substantially in the future may rationally not begin saving for retirement until 25 years before retirement. However, uncertainty in future incomes and retirement ages may make saving early appear the rational choice (Fan, Chang & Hanna, 1992).

The life cycle savings model is expected to describe the spending patterns of home owners and renters alike and this is a testable hypothesis. The general hypothesis tested in the analysis that follows is that renters and owners exhibit similar patterns in overspending. In particular, overspending is hypothesized to vary similarly across housing tenure status with age, income, income stability, education, household structure, marital status, employment status, race and region characteristics.

The specific hypotheses based on the allocation of consumption over the life cycle are listed below. Middle age groups were expected to be less likely to overspend. Higher levels of income were expected to be associated with lower levels of overspending. The likelihood of overspending was expected to decrease at a decreasing rate with income, thus the natural log of income is used as the measure of income in the empirical model. Higher

levels of financial assets may allow for greater spending from savings and thus higher overspending rates were expected to be associated with higher asset levels. Collecting unemployment compensation, welfare and income from other sources are indicators of income instability and were expected to be associated with lower overspending rates. The purchase of a vehicle during the sample period was expected to be associated with higher levels of overspending. Lower levels of education could also imply lower future expected earnings and thus, rationally, less overspending than would a more educated consumer with the same income level (e.g., a medical intern versus a factory worker). The presence of children in larger households was expected to lead to higher levels of overspending. Female headed households were also considered to have less income stability and thus lower levels of overspending were expected for households headed by females. Marital instability also indicates income instability and may associate with lower overspending levels. The self employed and unemployed were perhaps less able to draw on future expected earnings and thus may overspend less. Minorities may have more income uncertainty, and thus would be expected to overspend less than otherwise similar white non-Hispanics. Minorities may also have less access to credit and thus be constrained from overspending. Finally, the region of the country may be associated with varying levels of credit availability and overspending opportunities.

This study is similar to the Bae, et al. (1993) analysis. However the dataset is 8.7 times larger, allowing better estimation of effects of demographic variables such as race on overspending. This article also analyzes overspending separately for renters and owners, whereas the Bae, et al. analysis only had one analysis for all households.

Methods

Data

Data on expenditures and socio-demographic characteristics were drawn from the 1990-1992 Consumer Expenditure Survey (CES) conducted by the Bureau of the Census for the Bureau of Labor Statistics (BLS). The CES is an ongoing study that collects data on expenditures, income, and major socio-demographic characteristics of a consumer unit. The CES is the most detailed, nationally representative data set on American spending.

Only households that completed interviews for any four consecutive quarters during the period 1990-1992 were

included in this study so that expenditures could be evaluated on an annual basis. Households reporting a negative income for the year and those who did not report income were excluded. This left a sample of 7,498 households that either lived in rented or owned housing. All dollar values used in this study were adjusted to 1992 dollar values.

Some Details on Variable Measurement

Quarterly expenditures were summed to get each household's *annual total expenditure*. The annual total expenditure of each consumer unit was adjusted for social security payments (FICA), pension contributions, and life insurance payments. FICA and pension contributions were subtracted from total expenditures as most of these payments were withheld by employers. After-tax family income was also adjusted by subtracting FICA and pension contributions to obtain household *disposable income*. This allows the income variable used in this research to represent the amount a household can spend on current consumption, repayment of loans, and savings.

The *spending to income ratio* and the ratio threshold for overspending used in this study are similar to the concepts used in Bae, Hanna, & Lindamood (1993). The spending to income ratio is defined as annual total expenditures divided by annual disposable income. A ratio value of greater than one is defined as overspending, and a ratio value of one or less is defined as not overspending. As Bae, et al. discussed, the values for this ratio have an enormous range^b. For this reason threshold models are considered most appropriate in an analysis of the determinants of overspending.

Household's *net financial assets* were calculated by subtracting debts from total financial assets. Total financial assets equal the sum of checking, brokerage, and savings account balances, money owed to the consumer unit, market value of all stocks, bonds, mutual funds and other such securities, and investment in own farm or business. Credit was defined as the total amount owed by the household as of the last set of bills.

All other variables were defined as dummy variables where a one means the consumer unit belongs to the group and a zero means that they do not. For example, the dependent variable is coded as a one if the family spending was more than income and as a zero otherwise. The variables all appear in Table 1 where the distribution of the sample is presented in detail.

Multivariate Analysis

Multivariate models of overspending were estimated for both renters and home owners. Logistic regression was used to measure the independent effects of age, income, income stability proxies, education, family structure, employment status, race and region on the likelihood of overspending among renters and home owners. Logistic regression is appropriate given the large number of explanatory variables and the limited distribution of the dependent variable--the decision to overspend. The interpretation of logistic regression results is also relatively straightforward. For example, for dummy independent variables, the odds ratios reported in Table 2 can be interpreted as the relative likelihood of overspending between the grouped identified by the dummy variable and the reference group.

An empirical test for differences between renters and home owners was conducted by estimating a full interaction model.^c In each case where the estimated coefficient for the interaction term was significant with 90% confidence there was statistical evidence of a difference between renters and home owners with respect to that independent variable. In each case where a statistical difference between models exists a check mark appears in Table 2.

Findings

Description of the sample and the proportion of overspending households

Table 1 provides a description of the sample and the proportion of renters and home owners overspending. About 71% of the sample lived in owner occupied housing. This is somewhat higher than the U.S. population figure of 65% of units being owner occupied during the early 1990s (U.S. Bureau of the Census, 1993, p. 724). The distribution of the sample across age, education, household structure, marital status, employment status, race and region is generally consistent with U.S. population statistics for the sample period (U.S. Bureau of the Census, 1993). Over 40% of the households spent more than their take home income. This is the same finding as Bae et al. (1993). Renters spent more than their income in 47% of the cases, while home owners overspent in 37% of the cases. Overspending was most prevalent among renters in all sub-categories defined in Table 1. Among home owners, overspending appears to be declining with age until age 55-59. After these prime retirement saving years, overspending appears to rise in frequency with age. The pattern is slightly different for renters where the frequency of overspending appears to bottom out

between 45 and 54 years of age. Very young home owners (under 25 years old) appeared to be overspending more than older home owners. Among renters, households whose reference person was under 25 or over 60 years of age overspent in about half of the cases.

Home owners report significantly higher incomes and expenditures. Home owners also report significantly higher levels of financial assets relative to liabilities. Net financial assets for home owners top \$2,500 on average while renters financial assets exceed liabilities by only \$326.

Welfare recipients, those purchasing a vehicle, widowed and separated reference persons, and unemployed and self-employed reference persons all appear to have been members of overspending households in more than half of the cases. Notably, about two-thirds of unemployed and self-employed renters overspent and over half of the Black and Hispanic renting population appeared to be overspending.

Overspending Model for Home Owners and Renters

Estimated coefficients, odds ratios and parameter stability tests are reported in Table 2. Both models appeared to do an adequate job of characterizing overspending. Concordant rates above 80% and the Pseudo R² levels over 40% imply that a significant amount of the variance in the likelihood of overspending is being explained by these models.

Table 1
Distribution and Proportion Overspending

	Distri- bution	% overspending		
		All	Owners	Renters
All households	100	40.2	37.3	46.7
Age # 25	3.5	51.0	43.3	52.3
Age \$ 25 & < 30	9.0	38.0	33.2	41.3
Age \$ 30 & < 35	11.4	35.7	32.0	42.4
Age \$ 35 & < 40	11.3	37.2	32.8	47.1
Age \$ 40 & < 45	11.3	37.6	34.2	47.6
Age \$ 45 & < 50	8.6	36.5	34.7	43.0
Age \$ 50 & < 55	7.4	35.0	32.9	43.4
Age \$ 55 & < 60	6.3	34.3	30.5	48.9
Age \$ 60 & < 65	6.9	46.9	45.1	52.8
Age \$ 65 & < 70	7.5	48.0	47.0	53.3
Age \$ 70 & < 75	7.1	45.9	43.7	53.3
Age \$ 75 & < 80	5.2	48.7	47.8	51.1
Age \$ 80	4.6	43.5	41.0	49.1
Receiving other income	9.3	44.3	43.0	49.1
Unemp. compensation	6.2	37.0	32.6	48.4
Welfare recipients	4.0	58.7	52.9	59.9
Purchased vehicle	25.5	55.1	53.3	60.7
Less than high school	23.4	48.3	45.8	51.8
High school graduate	30.9	40.2	37.7	45.6
Some college	22.1	40.2	37.1	47.3
College graduate	23.6	32.7	30.2	40.0
Size = 1	24.6	46.7	46.0	46.9
Size = 2	31.3	36.7	35.2	42.1
Size = 3	17.3	39.8	36.8	48.0
Size = 4	15.6	36.7	32.2	50.8
Size = 5	7.0	39.8	37.7	46.7
Size = 6 or more	4.2	45.0	39.9	55.0
Families with chldrn<18 yrs	28.3	38.2	33.1	51.0
Female headed household	27.1	50.7	48.4	52.8
Married	59.9	35.0	33.9	40.4
Widowed	12.7	52.6	50.4	57.5
Divorced	11.9	46.6	43.4	50.3
Separated	3.3	54.6	50.6	56.2
Never married	12.1	42.4	37.2	44.7
Employed	64.7	34.2	31.4	40.5
Not working	9.1	60.0	56.5	64.0
Self-employed	6.0	52.2	48.1	66.7
Retired	20.2	47.1	45.5	53.1
White non-Hispanic	80.3	39.2	37.4	44.7
Black non-Hispanic	10.7	44.4	37.6	50.5
Hispanic of any race	6.0	47.5	41.7	53.5
Asian	2.6	34.9	27.6	45.0
American Indian	0.4	45.6	35.3	56.2
Northeast, non-rural	19.4	39.7	35.2	48.5
Midwest, non-rural	23.3	36.9	34.6	42.5
West, non-rural	20.6	39.9	37.0	46.6
South, non-rural	25.6	41.6	38.4	47.7
Rural	11.1	45.9	44.6	52.8
Income, spending, assets(\$)		Mean		
Disposable income		30,199	33,302	20,071
Household expenditures		26,185	29,181	18,756
Net financial assets		1,928	2,568	326

For owners and renters alike, higher income levels (natural log) were associated with a lower likelihood of overspending. This finding corresponds with most

empirical studies of spending patterns (Bae et al.,1993; Davis & Schumm, 1987; Hefferan, 1982). The balance of financial assets had little impact on the overspending decision, with owners appearing to be slightly more likely to overspend when net financial assets increased. Home owners receiving unemployment compensation were far less likely to overspend, as were all welfare recipients. Receiving another source of income and purchasing a vehicle were positively related to overspending.

The overspending patterns of owners and renters were impacted similarly by education. Those with less than a high school education were less likely to overspend than those with higher education levels. However, renters appear to be only half as likely to overspend when compared with high school diploma recipients who rent, while owners without a high school education are three quarters as likely to overspend as their high school educated counterparts.

Overall, renters and home owners appear to have different determinants of overspending. Age appears to be related to overspending for home owners more than for renters. Relative to the oldest group (80 plus years of age), home owners were more likely to overspend in all age groups except for those under 25 years old. The calculated odds ratio for home owners 45 to 50 years of age implies that this group is three times more likely to overspend than the oldest group when controlling for income, assets, education, household structure, employment, race and region differences. Age appears to play less of a role in overspending among renters. Only two of the younger age categories appeared to be different than the oldest group of renters.

Household structure also appeared to have a similar impact on overspending for renters and home owners. Larger households were more likely to overspend and those with children under 18 were less likely to overspend than those without young children. However, marital status had a very different impact on overspending across housing tenure. For home owners, married, divorced and separated respondents were more likely to be in a consumer unit that out spent its disposable income when compared to singles with similar characteristics. Among renters, only widows appeared more likely to overspend than single renters. Separated home owners were nearly twice as likely to overspend than single home owners while separated renters were not more likely to overspend than single renters.

Table 2
Logistic Regressions for Overspending of Home Owners and Renters

Variable	Home owners		Renters		$\beta_{Hi} \dots \beta_{Ri}$
	Coeff. (β_{Hi})	Odds Ratio	Coeff. (β_{Ri})	Odds Ratio	
Age (80 # Age)					
Age < 25	.553	1.74	.573	1.77	
25 # Age < 30	.972‡	2.64	.498	1.64	
30 # Age < 35	.865‡	2.38	.723*	2.06	
35 # Age < 40	.830‡	2.29	.595	1.81	
40 # Age < 45	1.042‡	2.83	.942†	2.56	
45 # Age < 50	1.103‡	3.01	.592	1.80	
50 # Age < 55	.897‡	2.45	.571	1.77	
55 # Age < 60	.617‡	1.85	.810*	2.25	
60 # Age < 65	.850‡	2.34	.608	1.84	
65 # Age < 70	.825‡	2.28	.774†	2.17	
70 # Age < 75	.504‡	1.66	.237	1.27	
75 # Age < 80	.701‡	2.01	.054	1.06	T
Ln Disp. Inc.	-3.041‡	0.05	-2.767‡	0.06	
Net Fin. Assets†	.004*	1.00	.011	1.00	
Unempl. Comp.	-.373†	0.69	.358	1.43	T
Welfare recipient	-.557*	0.57	-.722‡	0.49	
Other Income	.444‡	1.56	.406*	1.50	
Purchased Vehicle	1.921‡	6.83	1.610‡	5.00	
Education (H. S.)					
< High School	-.346‡	0.71	-.609‡	0.54	T
Some College	.433‡	1.54	.317†	1.37	
College Graduate	.942‡	2.56	.801‡	2.23	
HH Structure (Size = 2)					
Size = 1	-.659‡	0.52	-.919‡	0.40	T
Size = 3	.621‡	1.86	.479†	1.61	
Size = 4	.579‡	1.78	.857‡	2.36	
Size = 5	.929‡	2.53	.687‡	1.99	
Size = 6 or more	.747‡	2.11	1.263‡	3.54	T
Child < 18?	-.502‡	0.61	-.293*	0.75	
Female Hd Hshld	-.015	0.98	-.024	0.98	
Marital Status (single)					
Married	.444†	1.56	.001	1.00	
Widowed	.277	1.32	.494†	1.64	
Divorced	.511‡	1.67	.199	1.22	
Separated	.676†	1.97	.019	1.02	T
Employment (Employed)					
Not working	.097	1.10	.071	1.07	
Self-employed	.480‡	1.62	.983‡	2.67	
Retired	-.077	0.93	.168	1.18	
Race (white non-Hispanic)					
Black non-Hisp.	-.676‡	0.51	-.226	0.80	T
Hispanic	-.232	0.79	.041	1.04	
Asian	-.090	0.91	.037	1.04	
American Indian	-.406	0.67	-.065	0.94	
Region (South, non-rural {n-r})					
Northeast,n-r	.178	1.19	.276*	1.32	
Midwest,n-r	-.227†	0.79	-.330†	0.72	
West,n-r	.404‡	1.49	.412†	1.51	
Rural	-.314†	0.73	-.263	0.77	
CONSTANT	28.223‡		25.700‡		
-2 Log Likelihood	4726.0		2063.5		
Model χ^2	2372.2‡		876.1‡		
Pseudo R ²	48.7%		45.1%		
Concordant	86.2%		84.1%		

Reference groups are in parentheses †In \$1,000s

*p<.1, †p<.05, ‡p<.01

T implies significance of the variable in full interaction model thus $\beta_{Hi} \dots \beta_{Ri}$

Employment status had a similar impact on overspending across housing tenure. Households where the respondent was self-employed were more likely to overspend than households with employed respondents.

Households with a Black non-Hispanic reference person living in owner occupied housing were only half as likely to overspend as households with a White non-Hispanic reference person. Black non-Hispanic renters did not appear to be significantly less likely to overspend when compared to White non-Hispanic referenced households.

Renters in the Northeast and West were more likely to overspend than those in the South. All Midwesterners appeared to be less likely to overspend than those in the South. Rural home owners were less likely to overspend than non-rural home owners.

Discussion and Implications

Contrary to expectations, overspending was more prevalent among renters in many age, income, education, household structure, marital status, employment status, race and region groups. In spite of the significant expenditures which come with home ownership, it appears as though home owners are doing a better job of accumulating financial assets for future consumption. Certainly the application process for mortgages and the preparation process for home ownership leads to a selection bias that causes home owners to appear more fiscally responsible. In fact, it could be the application process for a home mortgage that instills such responsibility in some family financial resource managers. Furthermore, recent changes in banking regulations stemming from the Community Reinvestment Act now require banks to ensure that credit availability matches deposits across tightly defined geographic areas. This is allowing many families to obtain a mortgage and choose owner occupied housing that would have not done so prior to the changes in regulations. This recent change may present a significant challenge to these new home owners who may be attaining mortgages under less strict application guidelines (*The Wall Street Journal*, 1996). These new home owners may provide a unique challenge for financial counselors who are not accustomed to working with as many home owners in danger of foreclosure.

Even though renters overspent more than home owners, a significant proportion of each group overspends. Therefore, identifying and discussing the determinants of overspending for both groups should prove useful for financial planners and counselors.

Overall it would appear that the home ownership process requires a good deal of fiscal responsibility and planning. The data for home owners appears to reflect a greater impact of age on overspending, but the pattern of overspending does not match that expected based on the life cycle savings model. Younger and older households appear less likely to overspend than middle-aged households and all age groups appear more likely to overspend than the oldest age group. This implies more of a cohort effect than a decision based on life cycle stage. Those over age 80 were the only reference persons in the sample who were adults during the depression and it is highly likely that their spending patterns were permanently impacted by this experience. Similarly, the excessive spending in the 40 to 45 year old group could also be explained by a cohort effect.

There are other concerns for financial planners based on the impact of age on overspending across home owners and renters. For example, households with older reference persons who continue to live in owned housing may not be effectively using the wealth accumulated in home equity. This is in evidence with 75 to 80 year old respondents living in owned housing being more likely to overspend than renters in the same age group. Perhaps the recent increase in the availability and use of reverse mortgages will change this situation.

Home owners appear to be reacting more in accordance with expectations based on the life cycle model of savings when it comes to income stability. Home owners receiving unemployment or welfare are less likely to overspend, perhaps in reference to adjusted income expectations (Chang, 1995). Home owners, especially those without mortgages, may be better prepared for fluctuations in income that comes with job loss and less willing to incur debt given lowered expectations of future income.

Perhaps most notable statistically, but not surprising to financial planners or those who have worked with CES data before, is the increase in the likelihood of overspending if a vehicle is purchased by the consumer unit during the sample period. Home owners who purchased a vehicle during the sample period were almost seven times more likely to overspend than those

who did not buy a vehicle. For renters, overspending was five times more likely among those purchasing a vehicle. This is ammunition that can be brought to the table when discussing major purchases with clients. Home ownership may lead to an appearance of credit worthiness to other creditors which can lead to an over accumulation of debt through several periods of overspending.

In direct accordance with the life cycle model of savings, education appears to be positively related to the likelihood of overspending. For many households, continued investment in education may be the reason for overspending. According to the life cycle model this overspending is rational in light of higher expected future earnings. Low likelihoods of overspending for lower educated consumers may also reflect problems with access to credit. Credit is given based on future repayment ability and education has long been viewed by credit providers as a strong indicator of the ability to repay.

The differing impacts of marital status is one of the most striking difference between home owners and renters when it comes to the determinants of overspending. The home is frequently the largest asset controlled by the family. A newly married couple may be tempted to overspend on housing leading to several years of deficit spending early in married life. Impending fiscal problems can also lead to marriage dissolution where home owners appear to fare worst of all relative to renters. Renters can quickly move out of lease contracts and adjust housing expenditures upon separation or divorce. However, home owners may not be able to move as quickly and housing expenditures may be difficult to adjust as income is likely to drop significantly. This is a clear path to unanticipated overspending that could easily derail a previously sound financial plan. The results here can be used to coach clients involved in a separation or divorce when it comes to deciding whether to keep the home. As is commonly advised, the partner who keeps the home upon separation is often confronted with expenditures related to the home that far outstrip the adjusted income.

Finally, the fact that Black non-Hispanic home owners are less likely to overspend could reflect a degree of discrimination in the mortgage application process. If Black non-Hispanic home owners are overspending less, than it may be a result of being held to too high of a standard when applying for financing. However, the appropriate data to draw these conclusions is mortgage

application and foreclosure data not necessarily data on overspending. The fact that Black non-Hispanic home owners are less likely to overspend bodes well for creditors when it comes to collecting the significantly increased amount of credit extended to this group (*The Wall Street Journal*, 1996).

Limitations

As with any attempt to quantify human behavior, there are shortcomings in this study that need to be identified. When income data are collected from survey respondents, it is possible that some income is not reported or inaccurately reported given the personal nature of the question. It is also important to note that households interviewed between 1990 and 1992 may have been reacting to the macroeconomic conditions that prevailed in the early 1990s (generally considered the tail-end of a recession) and implications for current consumer decisions may be inappropriate.

Finally, the spending to income ratio needs to be interpreted with care, as absolute income levels vary so may the actual well being of families. For example, a household having a secure "other" source of income and/or a generous pension plan might spend well beyond disposable income and still be making adequate progress toward financial goals. Conversely, some lower income families spending less than 100% of income might not be making adequate financial progress (Bae et al., 1993).

Conclusions

Overall, the expectations for overspending based on the life cycle savings hypothesis appear to be better reflected by home owners than renters. This is not entirely surprising given the flexibility in spending and budgeting that comes with rented housing. Home owners receiving unemployment compensation appeared less likely to overspend, perhaps reacting to a change in expected future earnings leading to a planned adjustment in spending. Marital status was also found to impact spending differently across housing tenure with home owners appearing to be less able to avoid overspending during marital disruption. While most of the hypotheses based on the life cycle model of savings are supported by the empirical model, age was much more important in the decision to overspend for home owners than it was for renters. However, the impact of age was not always found to be as expected based on the life cycle model. Younger and older home owners were less likely to overspend when controlling for income, education, household structure, marital status, employment, race and

region and the impact of age may be better interpreted as a cohort effect than as a life cycle stage effect.

End Notes

- For a complete mathematical treatment of the consumer's allocation of consumption throughout the life cycle see Chapter 1 of Deaton (1992).
 - The distribution of the ratio of spending to income is similar to that reported in Bae, et al. (1993). Although the median value is reasonable (89% for all households,) the mean values are very high for each group, and the maximum values are extremely high (1679300% for all households)
- | Distribution of spending to income ratio (%) | | | |
|--|---------|--------|---------|
| | All | Owners | Renters |
| Mean | 422 | 136 | 1151 |
| Std.dev | 19919 | 785 | 37492 |
| Maximum | 1679300 | 439 | 1679300 |
| 75%tile | 123 | 120 | 1320 |
| Median | 89 | 86 | 97 |
| 25%tile | 68 | 65 | 74 |
- In this full interaction model, a new variable was calculated to match each independent variable by multiplying the housing tenure dummy by each variable. These interaction terms were added to the model of overspending and the model was estimated using the full sample. For details on testing the stability of regression coefficients across samples see Maddala, 1992, p. 318.

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