What Happens to Consumption When Children Fly the Coop?
A Test of the Permanent Income Hypothesis

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Abstract:

The last decades before retirement include many changes in disposable income that may impact one's ability to save for retirement: repayment of mortgages and children becoming financially independent, to name a few. The typical formulation of the life-cycle model would suggest no changes to per-capita consumption in response to these changes, as long as households are not liquidity constrained and these events are predictable. Using consumption data from the *Health and Retirement Study* (HRS), this paper explores whether household consumption and wealth responds to children leaving the home. In contrast to the predictions of the life-cycle model, we find that households increase per-capita nondurable consumption when their children leave the house. The increase leaves total household consumption broadly unchanged, crowding out additional saving. Further, we find no evidence of increases in wealth after the children leave the household.

I. Introduction

With the disappearance of traditional pensions, declining Social Security replacement rates, and increases in longevity, the retirement landscape is shifting dramatically. Today, responsibility for a comfortable retirement rests mostly on the individual. This has led to widespread concern about the adequacy of American households' retirement savings. Recent estimates of the percent of households saving sub-optimally vary greatly, especially for younger cohorts. Munnell, Golub-Sass, and Webb (2007) estimate that 44 percent of Late Boomer households, born between 1955 and 1964, are at risk of being unable to maintain their pre-retirement standard of living in retirement. In contrast, Scholz and Seshadri (2008) estimate that only 11 percent of these households are saving sub-optimally. Whether this cohort is on track for a comfortable retirement depends in large part on whether they will actually increase their saving rate when their children leave home and they have repaid their mortgages.

According to the life-cycle/permanent income hypothesis (PIH), households should smooth the marginal utility of consumption over their lifetimes. The PIH has two important implications. First, if income peaks between age 40 and 60, and if mortgage payments and expenses of child rearing peak at younger ages, then households *should* do most of their retirement saving after age 40. Second, families with children will optimally choose to enjoy greater consumption when their children are growing up and lower consumption subsequently, implying lower target replacement rates *and* smaller accumulations of wealth than their childless counterparts.

If households do, in fact, behave as the PIH theory suggests may be appropriate, then low levels of retirement saving among younger households might not be a matter of

public policy concern, since they will catch up later in life and should, unless childless, be aiming for relatively modest replacement rates. The assumption that households consumption-smooth in this manner contributes to Scholz and Seshadri (2008) conclusion that many households approaching retirement have adequate retirement savings.

Whether households in fact behave according to the PIH is an open question. Testing the predictions of the life-cycle/permanent income hypothesis with micro-data has been of interest since Hall's (1978) seminal paper. Predictable income shocks used for identification include tax rebates (Souleles 1999; Shapiro and Slemrod 2003; Johnson, Parker, and Souleles 2006; Agarwal, Liu, and Souleles 2007), tax changes (Shapiro and Slemrod 1995, Parker 1999), tuition payments (Souleles 2000), car loan repayment (Stephens 2008), mortgage repayment (Coulibaly and Li 2006, Scholnick 2009), paycheck receipt (Stephens 2006, Stephens 2003), union contract changes (Shea 1995), and payments from the Alaska Permanent Fund (Hsieh 2003). To our knowledge, children moving out of the household has not been used to test the PIH before. Different methodologies, assumptions, and data sets have led to a wide range of estimates, which could be interpreted either as favoring or rejecting the theory.[1] The reason postulated most often for rejecting the theory is bounded rationality (Browning and Collado 2001).

Using the HRS Consumption and Activities Module (CAMS) data in pooled cross-section, this study tests the predictions of the PIH by examining consumption and savings behavior as children leave the household. We examine household and per-person spending on various categories of goods (durables, non-durables, and non-discretionary items).

[1] For a complete review of the literature on testing the life-cycle/permanent income hypothesis, see Browning and Lusardi (1996) and Scholnick (2009).

We find that households increase per-capita non-durable consumption when their disposable income increases, in apparent violation of the life-cycle model. The sensitivity analysis rejects liquidity constraints as the reason. This behavior may be attributable to rule-of-thumb savings behavior, myopia, bounded rationality, or a well-defined preference for greater consumption at that stage in life. Whatever the underlying reason, this finding has important implications for one's assessment of retirement preparedness. Households that saved little when the children lived at home continue to save little when the children leave home, despite the increase in capacity for saving. These households will arrive at retirement with insufficient wealth to meet the replacement rate target obtained from the PIH, let alone the increased standard of living enjoyed after the children leave.

The remainder of the paper is organized as follows. Section II presents the standard PIH model and the testable predictions. Section III presents the data. Section IV provides descriptive statistics and analysis. Section V presents the econometric model and results. Section VI concludes.

II. Model

The standard PIH model assumes that a household derives utility $U(c)$ from period-by-period consumption. Abstracting from uncertainty, mortality, and other risks, liquidity constraints, and assuming that the rate of interest equals the rate of time preference, the model predicts that individuals equalize each period's marginal utility of consumption over their lifetimes. In order to incorporate household composition changes, such as the presence of children, the standard adjustment to the simple model

allows households to derive utility from person-equivalent units of consumption. The utility function itself does not change when children are in the household. Expected lifetime utility is then expressed as:

$$\sum_{j=s}^{T} \beta^{j-s} n_j U\left(\frac{c_j}{n_j}\right) \quad (1)$$

where c_j is consumption at time j, n_j is the number of people in the household[2] and β is the time discount factor. Consumption is chosen to maximize utility subject to the lifetime budget constraint:

$$\sum_{j=s}^{T} R^j (I_{j-} c_j) = 0 \quad (2)$$

where R^j is the interest rate earned on assets. The key implication remains unchanged, the marginal utility of consumption is smoothed over time, or:

$$U'\left(\frac{c_j}{n_j}\right) = \frac{R}{\beta}\lambda \quad (3)$$

Predictions of the Model

Equation 3 also implies that per-person consumption should be smoothed over time, and household consumption will vary based on the number of people in the household. Figure 1 illustrates the household consumption profile over time as children appear and leave the household, assuming no liquidity constraints or uncertainty. We thus examine how well this prediction from the PIH matches actual savings and consumption patterns. Comparing household and per-person consumption of households before and after children move out of the house with the consumption patterns of

[2] For exposition, we will assume that adults and children are equivalent and weighted as 1 each. Since most of the children in our data set are teenaged or older, the equivalent weighting seems reasonable, and we also use equal weighting in the results presented. We have also done the analysis using the relative weighting of children at .7, and find no difference in our results.

households without changes in the number of children in the household is similar to a difference-in-difference setup, and allows us to test the predictions of the PIH.

III. Data

This project uses HRS (CAMS) data to investigate whether the consumption of households approaching retirement responds to predictable changes in financial circumstances, such as children leaving home. The CAMS was administered bi-annually from 2001 to 2007 by mail to a random sample of 5,000 individuals drawn from the HRS. While the CAMS collects less precise consumption data than the *Consumer Expenditure Survey* (CEX), typically used to measure the sensitivity of consumption to changes in income or expenditures (for example, Stephens 2008 and Souleles 1999), it offers the advantage of being a multi-year panel, instead of the one-year panel available in the CEX. This panel feature enables us to directly measure the response of consumption to a change in disposable income.

We match consumption data measured in one year to the HRS core interview data from the previous calendar year. For example, the 2001 consumption data is matched to 2000 HRS data for financial and family structure information. The age of the household respondents is measured in the year of the consumption data. Consumption and income data are normalized to 2007 dollars.

Given that the timing of the consumption data and the number of members in the household are not collected in the same year, we must be careful when deciding which households can be classified as having children who have moved out of the household. The HRS variable for “resident children” is used to determine the number of children

living in the household. A household falls in the category of "children moved out" if the number of resident children is positive and the same in 2000 and 2002 and the number of resident children is zero in 2006 and 2008. People are defined as "never had resident children" if the resident children variable is zero from 2000 through 2008 inclusive. The category "always had resident children" corresponds to a positive and constant resident children variable from 2000 through 2008, inclusive.

The consumption data is categorized into three broad categories for the analysis. Durable consumption includes purchases of large household electronics (refrigerator, washing machine, dishwasher, television set, and computer) and automobiles. Non-discretionary consumption includes home and vehicle insurance, taxes and maintenance, health insurance and health supplies, as well as standard home expenses (mortgage/rent, electricity, water, heat, and phone). Non-durables consumption includes purchases of housekeeping supplies, personal care products, apparel, leisure and hobby items, vacations, any food purchases (including dining out), and gasoline. Non-durable consumption is expected to be the most responsive to changes in disposable income.

The base case is aimed at getting the sample as large as possible. Table 1 outlines the sample selection criterion. The first cut is to make sure households are observed in every wave. In order to eliminate confounding household composition issues such as divorce or death, we only allow intact and stable households (either single or married) in the sample. The biggest drop in sample size is due to matching the HRS respondents to the consumption data. We further limit the sample to households with the same number of members in all waves for the control groups, to limit problems of changing household composition within the comparison groups. This leaves us with a total sample size of

3,128 observations representing 796 households: 684 never having children in the household, 56 have children who move out, and 56 always have the same number of children living with them.

IV. Descriptive Statistics

We examine consumption over time, dividing the sample into four groups by the household changes that occur. The first group has no children and a constant number of adults in the household in all years. It includes households that never had children, and those whose children moved out prior to 2001. The second group has children in the household in 2001, but not by 2005 or in 2007.[3] The third has children in 2001 and 2003, but not by 2007. The last group has a constant number of children in the household in all years we observe them. Figure 2 plots the per-person non-durable consumption in each interview. Two facts are clear from this figure. First, households without children present consume more non-durables per-person than households with children. Second, households where children move out show large increases in per-person non-durable consumption, while stable households show a relatively stable pattern in their per-person non-durable consumption. This pattern is the first suggestion that the predictions from the PIH do not hold in this context.

Table 2 presents the average characteristics of the households in our sample by household composition. The first observation is clear: those households who always have children living with them are different from the other two groups. They are less likely to be married, more likely to be minorities, and have much lower income on

[3] This group reports having children in the household in 2000 and 2002, but not in 2004, 2006, or 2008. We can identify that the children moved out between 2002 and 2004, but have no means of ascertaining whether this occurred before or after the 2003 CAMS survey.

average. The characteristics of those who never have children and those whose children leave are much more similar. The latter group is slightly more likely to be married, black, and working, but the average income and ages are almost identical. Tests for differences between the sample means of those who always had resident children or who had resident children move out and those of households who never had resident children confirm the above relationships are statistically significant.

V. Model and Results

In order to test the predictions of the PIH, we compare consumption patterns over time between households that have children leave and those who do not have changes in the number of children in the household. This provides us with two control groups: those who never have children in the household and those who always have children in the household. We allow these control groups to have different intercepts and slopes from each other. In essence, we employ a difference-in-difference estimation strategy to test for differences between household types in changes in consumption over time. The estimating equation is thus:

$$C_t = \alpha + \beta_1 X_t + \beta_2 KidsMoveOut + \beta_3 KidsAlreadyMovedOut_t + \beta_4 y_t + \beta_5 KidsAlwaysWith + \beta_6 KidsAlwaysWith * y_t + \varepsilon_t \quad (4)$$

where C_t is the natural log of either total household or per adult equivalent consumption at time *t*. We will explore three types of expenditures to measure consumption: non-durables, durables, and non-discretionary spending. X_t is a vector of control variables that includes age and age squared of the household head, log income at time *t*, race, marital status, and working status indicator variables. *KidsMoveOut* is an indicator

variable set equal to one if the household experiences a child leaving the household between 2001 and 2007. $KidsAlreadyMovedOut_t$ is an indicator variable denoting that the household had a resident child at the time of the 2001 CAMS surveys, but that the child had moved out of the household prior to the current survey. It is in essence an interaction term between year of observation and the "treatment" of having children move out of the household. This variable will measure any change in the trend of consumption over time between households without any children and those whose children move out. This formulation implicitly assumes that moving out has a constant impact on consumption – that is, consumption does not depend on how many years it has been since the child moved out of the house. y_t is set of year dummy variables. *KidsAlwaysWith* is an indicator variable set equal to one if the household had resident children at all four CAMS surveys. This specification allows for the two control groups with stable household compositions to have different consumption levels. $KidsAlwaysWith * y_t$ is an interaction term between the control group dummy and the year indicator variables, allowing for different trends in consumption over time for those who always have children in the household. β_3 will tell us if consumption trends differ between households without children and households that experience children leaving. We will compare the difference between β_3 and β_6 to test for significant differences in the trends of consumption between households whose children remain and those whose children move out.

We were initially concerned about a possible endogeneity problem, namely that household composition changes could be driven by other factors, such as decreases in income, that also impact consumption patterns. We explored using the age of the

children (when they turn 18 and 22, typical ages of emancipation) as instrumental variables to address this issue. These ages were in fact significant predictors of children leaving the household. However, we could not reject that the children leaving was exogenous (the χ^2 statistic was around .4 in all specifications). Thus we stick to the more efficient OLS regression framework in this paper.

The results of the baseline specification are presented in Table 3. Columns 3.1 and 3.2 present the results for household-level and per-person non-durable consumption, respectively. Columns 3.4 and 3.5 are for household-level and per-person durable consumption.

For non-durable consumption, both at the per capita and household level, almost all of the demographic variables are important covariates. Blacks and retirees spend less, even after controlling for income. Married households, conversely, spend more on non-durables. There is an important non-linear trend in non-durable consumption by age. The estimates suggest that the income elasticity of non-durable consumption is in the order of 17 percent. There is very little time trend for either of our control groups, as measured by the year dummies or the interaction terms between the year and the *KidsWith* variable. An important time trend is associated with our treatment group. Households who have children move out experience dramatic increases in per-capita spending on non-durables. In 2001, per-capita non-durable consumption did not differ between those who always have children and those whose children eventually move out, both of which consume less than households who do not have children present. However, once the children leave the household, per-person consumption jumps in the order of 37 percent. The estimates suggest that the per-person consumption increases by

slightly less than 50 percent of the initial difference in consumption between households who never have kids and those who have children. The total non-durable consumption of these households falls by only a small amount and falls well short of statistical significance.

Not surprisingly, our ability to predict durable consumption is quite limited, and the coefficients are imprecisely estimated. Only income and marital status are important covariates in our model. What is important is that we do not pick up differential trends in durable spending, either at the household or per-capita level, based on whether children are present in the household or move out. This suggests that households are not going out and spending the money that used to go to support their children on a new car, boat, or house.

In contrast to our findings for non-durables, we find that patterns of non-discretionary spending more closely follow the predictions of the life-cycle model. These results are presented in Table 4. Columns 4.1 and 4.2 present the OLS regression results for household-level and per-capita expenditures on non-durables. We cannot reject the hypothesis that per-capita non-discretionary spending remains constant following the departure of a child, and the reduction in total household expenditure is large and statistically significant.

Since a major component of non-discretionary spending is related to the house, we further explored this finding by limiting the sample to only those households that do not move between 2000 and 2008. These results are presented in columns 4.3 and 4.4, for household-level and per-capita expenditures, respectively. For this subsample, the pattern is reversed. We find no significant changes in household spending on non-

discretionary items, but an increase in per-person non-discretionary expenditures. This finding suggests that savings is not increasing for households who do not liquidate their housing wealth, since total household expenditures in all categories (non-discretionary, non-durable, and durable) remain unchanged.

Sensitivity Tests

The sample in the baseline case is not very restrictive. For example, we do not limit the sample by the age of the child, which may mean that we are including older children that might be contributing to the household finances, instead of being a net consumer of household resources. This would bias our results downward. We also do not limit the sample to pre-retirement households, which would also bias our results. We do a number of sample restrictions in order to test the robustness of our finding. The results are generally robust to a number of sample restrictions.

The results of our specification checks are presented in Table 5. Column 5.1 repeats the base case for per-person non-durable consumption as shown in Table 3 for comparison purposes. Column 5.2 limits the sample to those households that do not move between 2000 and 2008, the same sample as in Table 4, columns 4.3 and 4.4. Column 5.3 limits the sample to those who are working in all periods, which limits the potential confounding factor of retirement during our observation window. Column 5.4 limits the sample to households whose co-residential children are 30 and under in 2000. This attempts to limit the inclusion of co-residential children that are significantly contributing financial resources to the household. As the sample specification changes, our estimates remain remarkably robust. The first two specification checks leave the

coefficient of interest (β_6) virtually unchanged, between -0.35 and -0.41, and these estimates are not significantly different from each other. Only the last check, limiting the age of the children, changes the coefficient to -0.23, but it remains significantly different from zero at the 10 percent level. Further, the relationship between initial per-capita non-durable consumption and the impact of children leaving stays surprisingly stable. In all robustness checks, per-person spending increases by approximately 50 percent of the initial gap between those households without children and those with.

VI. Conclusions

We test the standard PIH formulation that allows for differences in household consumption. This formulation predicts that per adult equivalent nondurable consumption should remain constant, but total household consumption declines when children leave the household. We find the opposite results: per adult equivalent consumption increases, but total household consumption remains constant.

This finding has important policy implications. First and foremost, it suggests that individuals do not increase their retirement savings when they have large increases in disposable income due to their children leaving the nest. Those that, for whatever reason, save little when young, do not catch up late in life on their own and may not benefit from additional catch-up policies that encourage additional retirement savings after child-rearing expenditures end. Policy measures that provide more stimulus to increase retirement saving instead of consumption may be necessary.

The findings of this paper may indicate that how we treat household composition in the standard life-cycle model may be erroneous. Recent work by Browning and

Ejrnaes (2009) measures the child response function for consumption. Their work also suggests that the number of equivalent adults varies with the age and number of children. More work is needed in melding these results and determining their impact on the optimal retirement savings behavior.

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Figure 1: Consumption Profile Assumed in PIH

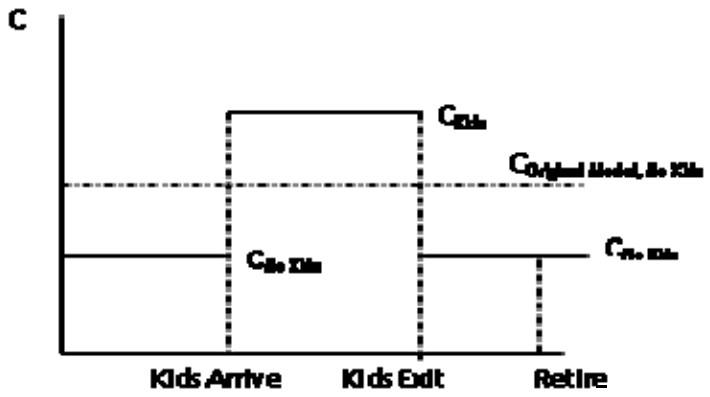

Figure 2. Per-Capita Non-Durable Expenditure, by Treatment Status

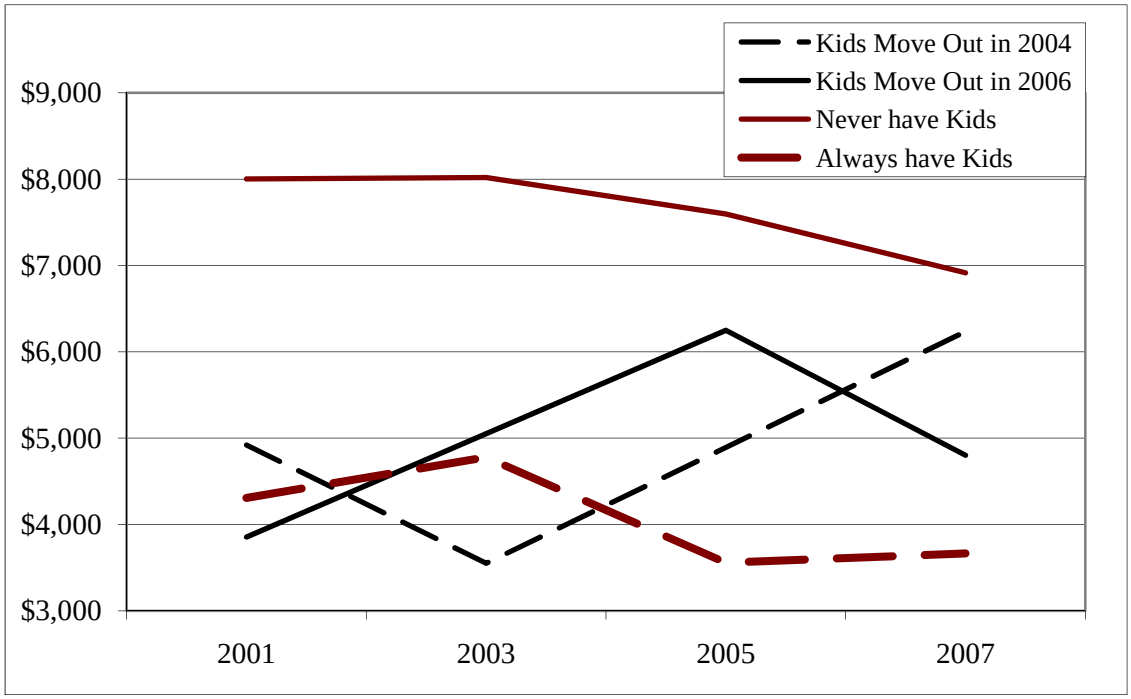

Table 1. ***Sample Selection Criteria***		
	Number of Households	Number of Observations
Provided any type of interview in each wave 2000 - 2008 (inclusive)	8,181	12,353
If partnered, same partner in all waves 2000 - 2008 (inclusive); otherwise single in all waves 2000 - 2008 (inclusive)	7,460	11,184
Consumption Data		
Consumption data is available for each wave between 2001 and 2007 (inclusive)[1]	1,645	6,524
Age		
Age limited to 73 and under	796	3,128
Treatment Group[2]		
The same number of resident children in 2000 & 2002 and no resident children in 2006 & 2008	56	168
Control Group 1		
No resident children in each wave between 2000 and 2008 and the same number of household members in 2000 - 2006 (inclusive)	684	2,736
Control Group 2		
The same positive number of resident children in each wave between 2000 & 2008 and the same number of household members in 2000 - 2006 (inclusive)	56	224
Source: Authors' calculations from HRS data.		
1: Available data means that no more than 10 of the consumption questions have missing data.		
2: For the treatment group, we only have 3 observations per household, since we exclude 1 observation due to not knowing exactly when the child leaves the household.		

Table 2. ***Characteristics by Family Structure***				
	Total Sample	Never Had Resident Children 2000-2008	Always Had Resident Children 2000-2008	Resident Children Moved Out 2000-2008
Married	63%	64%	46%	70%
Retired in 2000	43	43	52	34
Black	9	8	13	14
Hispanic	4	4	7	9
Age in 2001	63	63	63	63
Median 2000 income	$55,987	$57,326	$39,034	$54,546
N	796	684	56	56
Notes: HRS 2006 sample weights. All amounts in 2007 dollars. Income is total household income.				
Source: Authors' calculations from HRS data.				

Table 3. ***Models of Consumption Behavior - Base Case***

	Nondurables						**Durables**					
	Household Level Consumption			Per Person Consumption			Household Level Consumption			Per Person Consumption		
	Coefficient		Standard error	Coefficient		Standard error	Coefficient		Standard error	Coefficient		Standard error
	3.1			3.2			3.3			3.4		
2003 Dummy	-0.024		0.035	-0.046		0.036	0.037		0.244	0.023		0.231
2005 Dummy	-0.067		0.041	-0.078	*	0.041	-0.311		0.271	-0.310		0.257
2007 Dummy	-0.087		0.084	-0.089		0.079	-0.270		0.278	-0.259		0.263
Kids Move Out	-0.076		0.090	-0.678	**	0.109	0.251		0.481	-0.137		0.426
Kids Already Moved Out	-0.162		0.107	0.362	**	0.120	-0.667		0.695	-0.303		0.631
Kids Always With	0.040		0.105	-0.620	**	0.116	0.579		0.754	0.252		0.681
Kids Always With*2003	0.214	*	0.125	0.224	*	0.128	-0.238		0.828	-0.217		0.741
Kids Always With*2005	0.056		0.088	0.052		0.086	-0.340		0.797	-0.291		0.701
Kids Always With*2007	0.201		0.135	0.200		0.134	0.447		0.772	0.364		0.693
Age	0.245	**	0.074	0.221	**	0.076	0.371		0.234	0.339		0.216
Age squared	-0.002	**	0.001	-0.002	**	0.001	-0.003	*	0.002	-0.003	*	0.002
Married	0.584	**	0.059	0.096	*	0.051	1.428	**	0.215	1.304	**	0.187
Retired	-0.096	*	0.049	-0.096	**	0.049	-0.323	*	0.194	-0.292		0.182
Black	-0.301	**	0.148	-0.388	**	0.118	-0.432		0.312	-0.488	*	0.291
Hispanic	-0.130		0.140	-0.147		0.137	-0.323		0.408	-0.300		0.394
Log income per person	0.167	**	0.032	0.169	**	0.032	0.346	**	0.080	0.344	**	0.074
Constant term	-0.561		2.400	0.085		2.474	-11.253		7.703	-10.351		7.108
N	3128			3128			3128			3128		

Notes: The first and second columns report coefficients from OLS models estimated using household level analysis weights; Huber-White standard errors, and significance at 90 (*) and 95 percent (**) levels. The dependent variable is the natural log of non-durable consumption, which is the sum of purchases of housekeeping supplies, personal care products, apparel, leisure and hobby items, vacations, any food purchases (including dining out) and gasoline, divided by the number of people in the household. The third and fourth columns present the OLS coefficents and standard errors where the dependent variable is the natural log of durable consumption, which is the sum of the purchases of large household electronics (refrigerator, washing machine, dishwasher, television set, and computer) and automobiles, divided by the number of people in the household.

Source: Authors' calculations from HRS data.

Table 4. ***Models of Non-Discretionary Consumption Behavior***

	Base Sample						**Non-Movers**					
	Household Level Consumption			Per Person Consumption			Household Level Consumption			Per Person Consumption		
	Coefficient		Standard error	Coefficient		Standard error	Coefficient		Standard error	Coefficient		Standard error
	4.1			4.2			4.3			4.4		
2003 Dummy	0.080	**	0.036	0.058		0.037	0.063		0.059	0.046		0.059
2005 Dummy	0.055		0.042	0.043		0.044	0.008		0.073	0.008		0.073
2007 Dummy	0.094	**	0.038	0.087		0.040	0.041		0.063	0.043		0.063
Kids Move Out	0.173	*	0.094	-0.423	**	0.120	-0.018		0.136	-0.492	**	0.140
Kids Already Moved Out	-0.362	**	0.104	0.164		0.127	-0.083		0.162	0.333	*	0.181
Kids Always With	0.203		0.128	-0.453		0.148	0.097		0.220	-0.351		0.229
Kids Always With*2003	-0.118		0.121	-0.108		0.124	-0.096		0.264	-0.079		0.264
Kids Always With*2005	-0.160		0.098	-0.164	*	0.099	-0.098		0.220	-0.128		0.221
Kids Always With*2007	-0.181		0.136	-0.180		0.136	-0.156		0.254	-0.154		0.257
Age	0.285	**	0.083	0.261		0.110	0.362	**	0.150	0.353	**	0.149
Age squared	-0.002	**	0.001	-0.002	**	0.001	-0.003	**	0.001	-0.003	**	0.001
Married	0.371	**	0.054	-0.144	**	0.049	--		--	--		--
Retired	-0.160	**	0.046	-0.156	**	0.049	-0.215	**	0.072	-0.223	**	0.072
Black	0.020		0.104	-0.066		0.100	0.002		0.305	-0.094		0.285
Hispanic	0.000		0.097	-0.013		0.108	0.028		0.192	0.033		0.185
Log income per person	0.137	**	0.030	0.141	**	0.031	0.103	**	0.046	0.109	**	0.047
Constant term	-0.809		2.719	-0.195		3.648	-2.770		4.896	-3.184		4.872
N	3128			3128			1292			1292		

Notes: The first and second columns report coefficients from OLS models estimated using household level analysis weights; Huber-White standard errors, and significance at 90 (*) and 95 percent (**) levels. The dependent variable is the natural log of non-discretionary consumption, which is the sum of purchases of housekeeping supplies, personal care products, apparel, leisure and hobby items, vacations, any food purchases (including dining out) and gasoline. In columns 4.3 and 4.4, this is divided by the number of people in the household.

Source: Authors' calculations from HRS data.

Table 5. Robustness Checks*: Per-Person Non-Durable Consumption*

	Baseline			Same House			Working in all Waves			Children < 30 in 2000		
	Coefficient		Standard error	Coefficient		Standard error	Coefficient		Standard error	Coefficient		Standard error
	5.1			5.2			5.3			5.4		
2003 Dummy	-0.046		0.036	0.013		0.053	-0.031		0.066	-0.028		0.035
2005 Dummy	-0.078	*	0.041	-0.033		0.055	-0.005		0.077	-0.066		0.041
2007 Dummy	-0.089		0.079	0.035		0.062	0.016		0.088	-0.073		0.082
Kids Move Out	-0.678	**	0.109	-0.637	**	0.185	-0.808	**	0.215	-0.472	**	0.087
Kids Already Moved Out	0.362	**	0.120	0.347	*	0.178	0.407	*	0.227	0.227	*	0.116
Kids Always With	-0.620	**	0.116	-0.405	**	0.196	-0.386	**	0.191	-0.520	**	0.179
Kids Always With*2003	0.224	*	0.128	0.052		0.230	0.111		0.204	0.164		0.210
Kids Always With*2005	0.052		0.086	-0.213		0.131	0.020		0.158	-0.030		0.120
Kids Always With*2007	0.200		0.134	0.032		0.234	-0.148		0.207	0.124		0.249
Age	0.221	**	0.076	0.317	**	0.102	0.061		0.081	0.180	**	0.089
Age squared	-0.002	**	0.001	-0.002	**	0.001	-0.001		0.001	-0.001	**	0.001
Married	0.096	*	0.051	--		--	0.098		0.089	0.076		0.053
Retired	-0.096	**	0.049	-0.121	*	0.062	--		--	-0.090	*	0.051
Black	-0.388	**	0.118	-0.619	**	0.239	-0.432	*	0.236	-0.415	**	0.124
Hispanic	-0.147		0.137	-0.017		0.146	-0.023		0.279	-0.133		0.140
Log income per person	0.169	**	0.032	0.106	**	0.049	0.234	**	0.059	0.172	**	0.034
Constant term	0.085		2.474	-2.271		3.335	4.647	*	2.461	1.432		2.866
N	3128			1292			634			2923		

Notes: The table reports coefficients from OLS models estimated using household level analysis weights; Huber-White standard errors, and significance at 90 (*) and 95 percent (**) levels. The dependent variable is non-durable consumption, which is the sum of purchases of housekeeping supplies, personal care products, apparel, leisure and hobby items, vacations, any food purchases (including dining out) and gasoline, divided by the number of people in the household.

Source: Authors' calculations from HRS data.