A Decomposition of the Various Effects of Retirement on Consumption

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Abstract

The specific aim of the proposed research is to both theoretically and empirically catalog the different ways one could expect consumption in a household after retirement to be different than consumption before retirement. The long term goal of this research is to help better inform best practices for financial planners, professionals and educators in the construction of financially prudent retirement plans. This decomposition can be separated generally into three main paradigms. The first two of these paradigms concern how preferences affect consumption before and during retirement, while the third is concerned with the financial constraints retirement brings.

First, it is proposed that consumption in retirement is different from consumption before retirement not only because of the retirement event itself, but also because one ages in retirement. It is important and instructive for a prudent financial plan to account for how aging affects consumption preferences *and* how being retired, independent of age, would affect such preferences. The proposed research will estimate the effects of both age and the retirement event itself on the consumption of different categories of different goods and services
Second, it is proposed that different theoretical approaches render different hypotheses regarding how a rational agent would plan to change their consumption in retirement (both with respect to age effects and retirement event effects). For example, a biological model (e.g. Lee and Novielli, 1996) might focus on the decreased caloric needs, or increased health care services, required at older ages. An inter-temporal choice model (MaCurdy, 1981) would imply that planned consumption at older ages should decrease, to account for lower survival expectations. A household production model (Becker, 1965) would predict that the increase in leisure time that comes with retirement would have profound impact on both the amount of consumption in retirement and the combinations of goods and services used.

Third, it is proposed that both the uncertainty inherent in the retirement planning process and the lack of planning and education information of many households in general, make for profound differences between planned consumption in retirement and observed consumption. For example, this uncertainty makes it unclear whether changes (particularly decreases) in consumption after retirement are intended, or merely the consequences of poor planning.

The Consumer Expenditure Survey (CE) will be used to test the ideas above in order to understand which of them are more important in understanding how consumption changes during the lives of most Americans. The CEX interviews a cross section of approximately 8000 American households every two years regarding their consumption choices, as well as a host of demographic information. The CEX also interviews U.S. households continuously five times over a fifteen month period. The first part of the empirical section will describe the consumption of American households aged 50 and over by consumption category, age, retirement status, and savings balances as a first glimpse of how the aforementioned processes may be manifesting themselves.

I Introduction

This paper is a theoretical exploration of the ways in which one could reasonably expect household expenditures to change due to retirement from the labor force. Understanding these changes is important for determining a financially sound retirement plan, and therefore important to health and economic well being in retirement.

There has been an abundance of recent literature examining the financial well being of the baby-boom generation, in expectation of its collective exit from the labor force (Yuh, Montalto and Hanna, 1998; Bernheim, 1996; Moore and Mitchell, 1998.). This body of literature has consistently shown that baby-boomers are not saving enough to maintain current levels of consumption into their retirement years. Whether this apparent "under-saving" is due primarily to uninformed financial planning or personal preference is unclear. In other words, are boomers under-saving because they don't understand how much they need to retire, because they are choosing to live with less consumption in retirement, because they expect to save more in the future, or some combination of the three? This dilemma is commonly referred to as the "retirement savings puzzle" (Banks, Blundell and Tanner, 1998). This paper will shed light on this question by using economic theory to generate hypotheses about what one would expect would happen to a household's expenditures in retirement.

There has also been an abundance of empirical work examining expenditure changes in retirement. In their study of expenditure patterns of 3,599 retirees during the years 1972-1973, and 1986-1987, Nieswiadomy and Rubin (1995) proposed that with increased life expectancy and better health, older retirees would purchase more leisure activities, and the marginal propensity to consume leisure related services would increase. Results indicated substantial increases in the preferences of retirees for leisure activities over time. They found that the propensity for retirees to purchase leisure-oriented commodities doubled, and that the retired spent more out-of-pocket for health care. Health care expenditures correlated positively with age, as older retirees greatly increased the amount of money spent on their health care. Expenditure shares for food, cash gifts, and apparel declined for both groups, while alcohol and entertainment purchases increased.

Hitschler (1993) compared the spending habits of older consumers in 1980 and 1990. Households were separated into two groups, those aged 65-74 were the

"younger group" while those aged 75 and older were the "older group." They found that the "younger group" had higher total expenditures than did the "older group" for both years, with the exception of health care.

The question of retirement's effect on consumption is a difficult one to investigate for several reasons. First, it is difficult to investigate the question empirically because actual retirement expenditures can be confounded by poor financial planning. It is pretty clear that retirees consume at a lower rate than non-retirees do. It is not clear that this lower rate of consumption was planned beforehand. This makes empirical analysis of the effects of retirement on consumption difficult at best and impossible at worst. For example, there are a whole host of studies that claim lower caloric intake levels, lower food consumption, and higher food insecurity rates among older Americans. (Burt, 1993; Mahajan & Schafer, 1993; Walker and Beauchene, 1991). Food insecurity aside, it is hard to discern whether lower food consumption is partly based on preference, or entirely based on financial constraints.

Second, a retiree's saving desires and his/her consumption desires are not synonymous. Desired retirement wealth can include desired bequests. Since the debate surrounding the existence of a bequest motive among retirees has yet to be resolved, using household savings to make inferences about consumption in retirement is not appropriate.

This theoretical exploration into how consumption changes in retirement will be explicitly split into two paradigms – the effects of *being retired* on consumption, and the effect of *age* on consumption. This division works from a financial planning perspective as well: in other words, there are two basic phenomena that prospective retirees need to plan for. First, you will be retired, i.e. no longer working, and that can influence your attitudes towards consumption, independent of how old you are. Second, you will be getting older throughout retirement (and your working years), and this fact will also change your consumption habits/preferences, independent of being a retiree. Therefore, each behavioral model outlined here will be used to yield insight into the effects of *being retired* on consumption and the effects of *getting older* on consumption separately.

Hanna, Fan, and Chang (1995) use simulation do illustrate a comprehensive picture of age's effects on consumption, with one major limitation: they do not incorporate leisure into the utility function. By leaving leisure out of the equation, their simulations fail to address how the amount of leisure in a specific

period of time could effect the decision about how many goods and services to consume in that period. Furthermore, we could expect that how one views free time, its usefulness, and its productivity, could change with age. Therefore, incorporating leisure into the models discussed provides a richer picture into the relationship between retirement and desired consumption.

Sections 2, 3, and 4 are theoretical analyses of the effects of retirement on consumption. Section 2 uses a static framework, focusing on the effects of age on the marginal rate of substitution between consumption and leisure. Section 3 is a Life Cycle model, focusing on how planned consumption would be different at different ages (in the Hanna, Fan and Chang tradition), and how planned consumption would change at the point of retirement. Section 4 uses a household production model to examine how age and retirement effects the production of household commodities, and therefore consumption patterns. Section 5 attempts to test some of these ideas using the 2004 Consumer Expenditure Survey, and Section 6 offers some concluding comments.

II Static Models

We can use static, one-period models of economic choice to yield hypotheses regarding whether preferences toward consumption versus leisure change with age and with retirement. Few studies have dealt with the effect of age of head of household with changes in consumption, and no studies to the author's knowledge estimate precisely the effect age has on preferences directly. An exception is Zeldes (1989), who used age to derive testable implications for the behavior of consumption in the presence of borrowing constraints. This study yielded no specific results with respect to age effects, however.

Thinking about the effects of retirement on consumption in a static framework at first seems to not make much sense. However, there is some value into thinking about the effect of retirement in this manner. How does not working effect our consumption? In a static framework, this is akin to asking what happens to consumption if we constrain the household to zero hours of work. Under this framework, retirement would be exogenous.

If the zero hours of work constraint is not binding, i.e. if the marginal substitution between consumption and leisure is less than or equal to the wage rate, then unconstrained desired hours of work are zero, and there is no effect on consumption. If the household is *constrained* by the retirement condition, i.e.

without the constraint, the consumer would choose to work, then the effect of this constraint is less consumption than otherwise. Figure 1 is an illustration of this difference. Here, the consumer in chooses consumption (C) and leisure (L) to maximize their utility subject to the price of consumption (p) wages (w) and unearned income (V). Note that in this example, the consumer constrained by retirement only consumes at V, while if they are unconstrained, they work (T-L*) and consume C* > V. This is a fairly straightforward point, but it highlights the problem of examining data on consumption by age to examine how preferences change. While the beginning of this section shows how we might expect preferences to change, viewing retirement as a constraint can demonstrate how consumption decisions may have very little to do with preferences. There are many retirees who became that way voluntarily but for whom it is currently a constraint – "un-retiring" is not feasible, and their consumption may be affected by such a constraint.

III Life Cycle Model

Static models can be very useful in understanding how preferences might be different in retirement than during the work years, particularly in our understanding of how preferences for leisure might change with age. However, a model that takes the well being of the individual over the entire life cycle as the objective can yield further insight into the effects of retirement on consumption. These further insights will come not so much by understanding how preferences change, but by showing us how decisions about consumption at different points in time might fit into a whole plan.

To think of consumption in a life cycle context, one views the consumer standing in the present with various choices about *when* to spend their money. One can think of those various time periods as different "goods," where the relative prices of the goods are defined to be the real interest rate between periods. Given interest rates and prices, the consumer's goal is then to allocate their resources (time and money) optimally by choosing amounts of consumption in each time period. Borrowing and lending markets make the timing of earnings irrelevant to the timing of expenditure.

As stated previously, Hanna, Fan and Chang (1995) do an excellent job of cataloging the effects that age might have on an optimal consumption plan in a

life-cycle context. In general three things happen to your desired consumption at a certain point in time as that point gets further into the future (i.e. as you age). First, ***the price of consumption in the future is generally cheaper than consumption now*** because of positive real interest rates. If you can earn interest over and above the rate of inflation, than resources now could buy more consumption if they were saved and invested. This means that if preferences about when to consume were the same in all time periods (i.e. controlling for the effects of age we found in the previous section) then we would expect consumption to go *up* as you age. Second, ***consumption farther in the future has less value, because you are less likely to survive to enjoy it***. Consumption farther into the future has less intrinsic value because there is a chance that you will not survive to future years. This means that we would expect consumption to go down as you age, as households consume more of their resources in periods they are more likely to be alive. [2]

The simulations run by Hanna, Fan and Chang showed that, in general, the first phenomenon above tended to dominate the second at earlier ages, while in the later years, the second tended to dominate the first. Therefore, in nearly all the simulations run by Hanna, Fan and Chang, consumption eventually starts to decrease. However, in some of these simulations, it doesn't begin to decrease until well into old age, depending on the real interest rate that is assumed (the higher the assumption about real interest, the later in life consumption will begin to decrease).

Third, ***the less tolerance you have for risk, the more likely a household will be to plan for equal levels of consumption over time***. This third effect tends to "dampen" the second effect. The more averse to risk the household is, the less willing the household is to decrease consumption during periods it isn't likely to survive. With high-risk aversion, one would expect households to plan to consume nearly as much in old age as at young ages.

What Hanna, Fan and Chang do not take into account in their simulations is the effect that leisure time has on optimal consumption. This issue wasn't specifically addressed formally in the literature until MaCurdy (1981). MaCurdy argues that the individual's objective is not so much *optimal consumption* as it is *satisfaction maximization*. Since it reasonable to assume that time spent not working (leisure) effects the consumer's satisfaction in ways time spent working

[2] Hanna, Fan and Chang state in their paper that "Certainty is assumed in the analyses presented in this paper." However, they have included a discount rate of preferences equal to survival probabilities, which are an attempt to "mimic" the effect of survival risk on optimal consumption.

does not, then Hanna, Fan and Chang's descriptions of optimal consumption only hold if the amount of leisure per period is held constant over the life cycle. If an individual plans to retire, how would this affect the optimal consumption path? With reasonable assumptions about real rates of return and risk aversion, we would expect individuals to generate a relatively "smooth" or constant stream of satisfaction (consisting of both consumption *and* leisure) over the life course, the same way relatively smooth streams of consumption were generated in the Hanna, Fan and Chang simulations. This implies that *consumption in retirement would be lower than consumption before retirement*. To generate smooth satisfaction when leisure is relatively high during retirement and relatively low before it, the consumer must counteract the imbalance in leisure with relatively low consumption in retirement and relatively high consumption before it.

The Life Cycle model has contributed to our understanding of the effect of consumption in the following way. As one ages, optimal consumption should rise, and then fall at very late ages. For risk averse households, these rises and falls are fairly small. Therefore, there isn't much evidence either way for what a rational retirement planner would do to plan for changes in consumption as they age. Retirement, on the other hand, should cause consumption to go down, because the rational consumer will plan for less consumption in times of abundant leisure, so as to generate smooth levels of satisfaction over time. All told, it appears that the life cycle model is leading us to deduce that retirement will decrease consumption.

IV Household Production Model

The Household Production Model (Becker, 1965) can be particularly useful for looking at the effects of both age and the retirement decision itself on consumption. Under the household production model, Households receive utility from "commodities" or "Z-goods." These commodities require both time and consumption as inputs. For example, a particular Z good might be a family meal, which requires as inputs the groceries, electricity, use of a stove, and the time and effort required to prepare it. The usefulness of the household production model lies in its guiding principle that time is required to enjoy different goods and services.

Therefore, to understand the effects of age on consumption, one needs not only to consider how the utility function U(Z) changes, as in section II. One also needs to understand how the production function – the way in which leisure and

goods generate the Z commodities – changes as we age. So there are two questions that we must answer in order to understand the effects of age on consumption. First, do our preferences switch from "goods intensive commodities" – Z commodities which require more goods then time – as we age? If this were true, then we would expect consumption to go up as we age. Second, what happens to a person's efficiency with respect to turning goods and time into Z commodities? Let's go back to the "meal" example. We might expect that as one gets older, it would take more time and effort to prepare a meal. Furthermore, we might expect the goods required to prepare it would remain more or less constant. This implies that the production function with respect to meals has changed, namely, that the marginal product of time has decreased. If this is true, then we would expect the individual to respond by putting *more goods into the production process and less time*, to re-equate the marginal product of consumption and time (assuming consumption and time exhibit diminishing marginal returns in the production process). Therefore, if for most Z commodities, the effect of age on the production process were to decrease the productivity of time relative to goods (a reasonable assumption), then the result would be to increase consumption as one ages.

How would consumption change at retirement according to the Household Production model? With more time in retirement, the household would presumably have more time to invest in the production of every conceivable commodity. Assuming diminishing marginal returns to that time in the production of commodities, this would mean that the productivity of time would decrease. To re-equate the marginal productivities of goods and time for each commodity, one would need to respond with more consumption. In other words, if you have time, you need goods to go with it

V Methods

The Bureau of Labor Statistics' 2004 Consumer Expenditure Survey (CE) was used to test the various theories presented regarding why consumption changes in retirement. The CE documents the spending habits of a representative sample of American households, and provides information relevant for the computation of the Consumer Price Index. Every 3 months, approximately 8000 households are asked to recall information regarding major expenditures (the interview survey) and to keep track of their purchases over a period of two weeks (the diary survey). Households are included in the sample for 5 consecutive quarters, so that the survey is constantly replenished with approximately 1600 new

households. For this study, the characteristics and income dataset (FMLY) are used, which gives information each quarter on various demographic characteristics of the households, as well as estimates of expenditures and savings balances at the time of the interview. While all four quarters of the 2004 CE will be used, the main focus of the analysis will be on the first quarter of 2004, where 7926 households were interviewed. Only the 3554 of those households – where the reference person was over 50 – were used here. The reference person is defined as that individual in the household (or the one that the interviewee picks) "…who owns or rents the home."

A household is defined as retired as follows. If the household is made up of 1 individual, or a single individual with dependents, the household is retired if the individual earned no income in the last quarter, and gives the reason for not doing so as being "retired." They are defined as not retired if they earned income in the past quarter. The household is deleted from the sample if they gave as reasons or not working: taking care of the home, going to school, being ill or disabled, or unable to find work. For households consisting of a partnered couple, the household is defined as retired if at least one member is defined as retired (as in the single case) and neither is working. It is defined as not retired if at least one member is working. If both members are not working for some reason other than retired, they are deleted. Table 1 shows the breakdown of households in the first quarter of the 2004 data, by retirement status (defined above) and marital status. 242 of the over-50 households in the sample were deleted using the criteria above (about 7 percent of the over-50 population). Approximately 44 percent of the sample is married or partnered, and 38 percent of the sample is retired (28 percent of the married couples and 49 percent of the single households). The single sample is significantly older than the married sub-sample, primarily due to the prevalence of widowhood at older ages

Table 2 shows the way in which expenditures in the first quarter of 2004 differs by retirement status, age and marital status. Unlike the results in Table 1, these results are weighted to reflect differences in the probability that each household ended up in the sample. For example, if Household A resided in a place where it has twice as good a chance of being selected as Household B, then Household B gets twice as much weight in the analysis in Table 2. This is designed to make the results representative of the entire United States population. The results show that the proportion of households that are retired grows with age. It is important to remember that the age variation in spending is technically a cohort affect, as the results are not reporting on individual households as they age. Nevertheless, the results in Table 2 seem to suggest that when looking at

households of the same retirement status, consumption declines with age, and at most every age, households that are retired consume less than households that are not, with the exception of young single retirees (of which there is a very small sample). Single households that are retired spend about 90 percent of what retired households spend, while for married households that number is 51 percent. The youngest households (aged 50-54 years) that are not retired spend about one-third more than their over-80 counterparts, but these numbers vary wildly among the retired group, perhaps due to smaller samples of young retirees.

To test more thoroughly how age and retirement status are related to consumption, a multivariate model was used. Ordinary least squares regression was used to look at the relationship between age, retirement status and expenditure, controlling for a wide range of demographic and control variables. The descriptive statistics for these variables are found on Table 3, for the entire sub-sample and by retirement status. The control variables used for the regression are household size, and a number of "dummy variables" for whether the household is in an urban area, owns their own home, are married/partnered, have dependents under 18 in the household, whether the household reference person self-identifies as Black/African-American, and whether the household has a high school diploma, and a college degree. Savings balances are used not as a control variable, but to test for liquidity constraints (discussed below).

Table 4 (Model 1) Shows the effect of age and retirement status, controlling for the variables in Table 3. Also included is a squared term for age and family size, to account for nonlinear effects of these variables on consumption. The retirement effect is negative – controlling for other variables, retired households spend about $2000 less per quarter than non-retired households. The age effect is more complex; at younger ages, the effect seems positive, but the positive squared term implies that this effect decreases with age as well, to the point where by age 76, the net effect of age is positive.

Regardless, the age effects seem much smaller than the retirement effect. One way to see this in Figure 2, which simulates annual consumption over time, based on the regression results in Table 4, Model 1. The simulation assumes a couple, the reference person age 50, living in an urban area, owning a home, with no children, not Black, and with a college degree (the selection of these dummy variables effect the level of consumption, but not the shape of the age-consumption profile). The simulation assumes the household retires at age 65, one spouse dies at 76 (at which point the household becomes 1-person, single),

and the other member dies at 85. These ages roughly correspond to life expectancies of men and women at age 50 in the general population. The figure dips first at the simulated point of retirement, and again when the first spouse dies. The age effects can be seen by the way that the curve bends slightly down, and eventually slightly up, over time (independent of the two dips). This figure shows that the effect of widowhood and retirement (either voluntary or involuntary) on consumption is much larger than that of old age.

Table 5 shows the changes in consumption for households whose retirement status changed in the calendar year 2004. While these numbers do not suffer from the cohort effects inherent in Tables 3 and 4, the sample sizes are rather small, preventing statistically significant results. Nevertheless the 63 households in 2004 that retired within the year saw an average decrease in their expenditures of $1130 in the quarter they became retired, while the 44 households that experienced the opposite change in retirement status actually increased their consumption by an average of $784 in the quarter they came out of retirement.

Other that visualizing the importance of retirement and age effects on consumption as in Figure 2, another way to conceptualize these effects is to understand the implications on lifetime consumption, which would inform how much to save. The present value of all future consumption for the hypothetical household in Figure 2, starting at age 65, is $305,642 (in 2004 dollars, assuming a 4 percent real discount rate). This would correspond to how much the household would need to save for their retirement, not including Social Security and pensions. If the simulation ignored the effects of retirement (that is, ignoring that consumption in retirement tends to decrease in retirement when making these calculations), then the number would be $412, 531, a difference of 35 percent. Ignoring the effects of widowhood, by contrast, would only be a difference of 9 percent (the widowhood effect is large, but comes at a later age on average, and therefore has a smaller effect). Ignoring that age effects consumption depends on *when* the effects are ignored. If the household used age-65 consumption to estimate all future consumption (but did account for retirement and widowhood effects), they would estimate the present value of retirement consumption at $314,948, a difference of only 3 percent. Using age-50 consumption as an estimate (after all, retirement planning would presumably start well before age 65), would result in a present value of $357, 236, or about a 17 percent difference. Either way, it seems that retirement is affecting consumption significantly more than age (and widowhood).

.The key question is whether or not these differences are "voluntary" – that is, whether or not the effects are because of liquidity constraints. Do households anticipate these changes to their consumption and plan for them, or decrease consumption because of financial planning errors (i.e. not saving enough for their retirement)? Model 2 of Table 4 shows the results of regressing expenditures while including an interaction term of age and retirement status, to test whether the retirement effect is different at older ages. It shows that the retirement effect is smaller at older ages – younger households reduce their consumption at retirement significantly more than at older ages. If you assume that younger households retire with more financial freedom than older ones, it implies that the retirement effect could be more voluntary. Model 3 includes a savings variable in the regression, as well as savings interaction terms with age and retirement status. Not surprisingly, households with more savings spend more. Also, it seems that savings seems to mitigate the effect that retirement has on spending. A household with approximately $27,000 of savings would have no retirement effect and a positive retirement effect at higher asset levels. Even more surprisingly, higher savings seems to lead to *larger* age effects: households with more assets presumably see a faster decline in consumption with age than those with less. One possible explanation for this latter result could be cohort effects – perhaps older households with more assets also prefer less consumption over time. The results from Model 2 and Model 3 seem to give mixed results regarding whether or not liquidity constraints are playing a role in consumption changes.

VI. Conclusions

The results from the analysis above suggest that actually retiring effects household expenditures much more than declining age. This implies that something about retirement changes a household's preferences for consumption over the lifetime *ex-ante,* or that households do not save sufficiently for their retirement, or some combination. Furthermore, the fact that age effects are small could be the result of mitigating effects of preferences and liquidity constraints; for example, households might have a strong preference to *increase* their consumption as they age, but are forced into lower consumption because of a lack of planning. It is also not clear that widowhood effects would be smaller or greater in the event of perfect retirement financial planning. The fact that the retirement effect is greatly affected by how much households have in savings offers some evidence that financial planning is impacting the effects of retirement on consumption.

The use of panel data would be a way to test for these effects further without any cohort effects, since some portion of the analysis above includes differences that older cohorts has from younger ones in terms of saving and spending decisions.

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Figure 1
Optimal Consumption With and Without a Retirement Constraint.

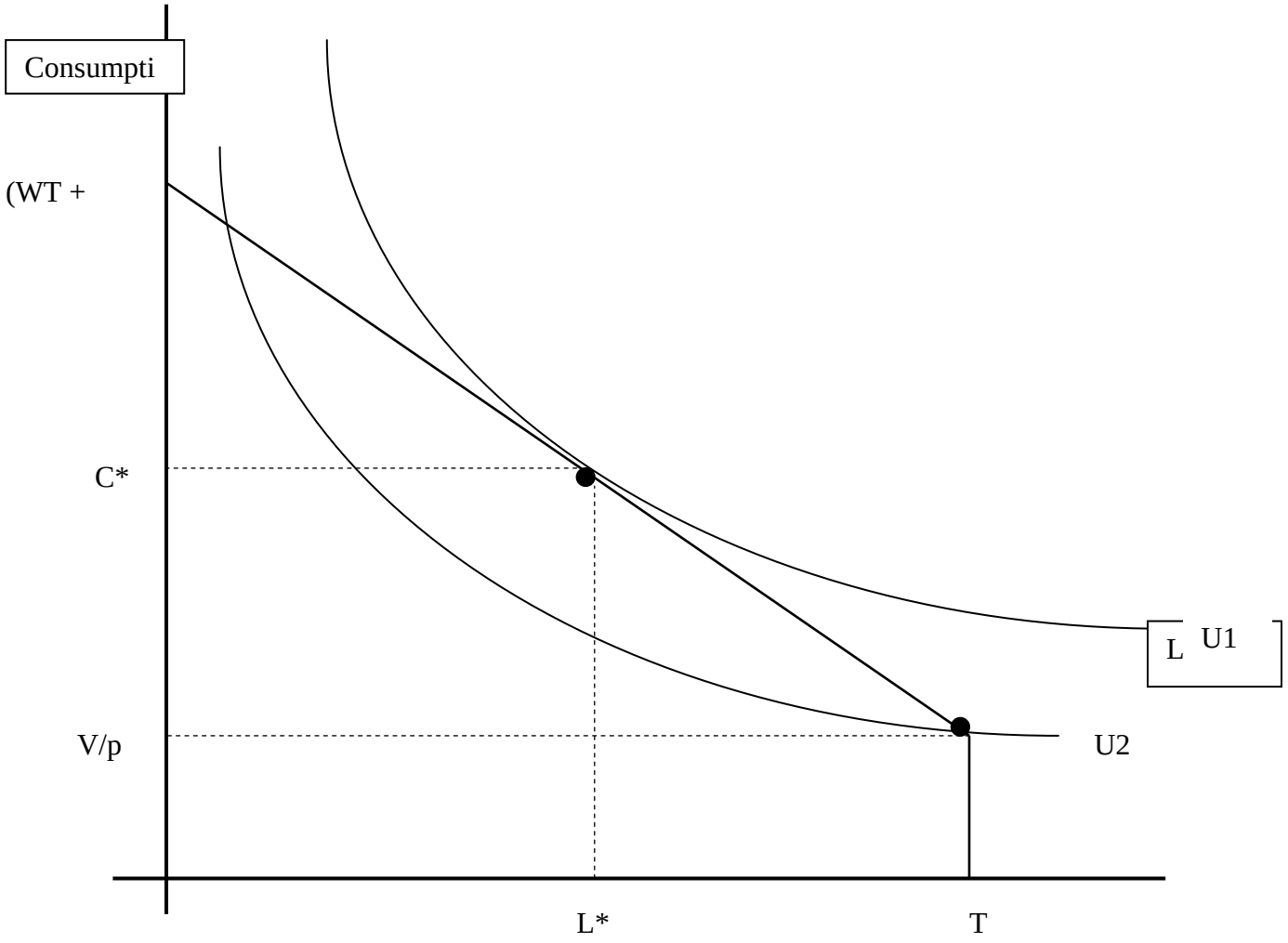

Table 1
Retirement and Marital Status of the
CEX over-50 sample

	Not Retired	Retired	TOTAL
Single	747	726	1473
Married	1322	517	1839
TOTAL	2069	1243	3312

Table 2
Quarterly Expenditures of
Over-50 Households
by Marital Status and Age of
Reference Person

Single-headed households

		Not Retired			Retired	
Age	n	Mean ($)	Median ($)	n	Mean	Median
50-54	288	6033	4319	9	10395	5212
55-59	188	5661	4298	14	6979	4777
60-64	112	6119	3787	59	3917	2866
65-69	76	7354	3657	100	3407	2106
70-74	40	4839	2952	114	3957	3000
75-79	27	6166	2470	166	3422	2020
80+	16	4069	3173	264	3281	2121
All	747	5975	3870	726	5320	2339
					1.953947	

Dual-headed Households

		Not Retired			Retired	
Age	n	Mean ($)	Median ($)	n	Mean	Median
50-54	445	10670	7533	4	3791	3615
55-59	367	10213	7248	18	5427	4415
60-64	235	8316	6078	51	5573	3296
65-69	139	9757	6473	105	5041	4039
70-74	90	8450	5673	128	5134	3945
75-79	34	7965	5663	95	5842	3699
80+	12	8456	5094	116	5270	3511
All	1322	9790	6740	517	5324	3809
All HHs	2069	8403	5620	1243	4323	2959

All Results Weighted by the Probability of Selection

Table 3
Control Variable Descriptive Statistics

	All (n=3312)	Not Ret (n=2069)	Ret (n = 1243)
Continuous Variables			
Mean (Std. Dev)			
Age of Reference Person (Yrs)	64.66 (10.92)	58.76 (7.49)	74.66 (8.31)
Household Size	2.04 (1.05)	2.23 (1.09)	1.69 (0.87)
Quarterly Expenditures ($)	6689 (8700)	8403 (9872)	4323 (5410)
Savings Balances ($)	15037 (46806)	12509 (38573)	20434 (59742)
Discrete Variables			
% Residing in Urban Area	85.29	84.65	86.37
% Homeowners	82.68	84.61	79.41
% Married	54.85	63.65	39.92
% Living with Children	11.98	17.51	2.61
% Black (Reference Person)	9.9	9.51	10.56
% High School Diploma	82.22	88.69	71.25
% 4 Year College Degree	26.54	32.58	16.31

All Results Weighted by the Probability of Selection

Table 4
Regression Results

Dependent Variable - Quarterly Expenditures n = 3312	Regression Coefficient (Std Error)		
	Model 1	Model 2	Model 3
Intercept	8464 (5942)	2288 (1738)	1219 (1475)
Retirement Dummy (1 = Retired)	-1958 (412)	-4130 (1517)	-2115 (413)
Savings Balances ($)			.250 (.06)
Age of Reference Person (Yrs)	-238.1 (77.5)	-37.8 (14.4)	-18.1 (18.6)
Age of Ref. Person Squared	1.59 (1.31)		
Household Size	1598 (532)	1608 (523)	1564 (521)
HH Size Squared	-120 (76)	-120 (76)	-112 (76)
Urban Dummy	1460 (404)	1454 (404)	1438 (403)
Homeownership Dummy	1618 (395)	1614 (395)	1513 (393)
Marriage Dummy	1080 (386)	1049 (384)	1084 (383)
Black Dummy	-2021 (488)	-2032 (487)	-1990 (486)
High School Diploma Dummy	1395 (400)	1383 (399)	1383 (398)
College Degree Dummy	3639 (337)	3643 (337)	3552 (337)
(Interactions)			
Retirement Dummy x Age		31.9 (16.6)	
Retirement Dummy x Savings			.080 (.024)
Age x Savings			-.0037 (.001)
R-squared	0.146	0.147	0.155

All Results Weighted by the Probability of Selection

Figure 2
Simulating Consumption over Time

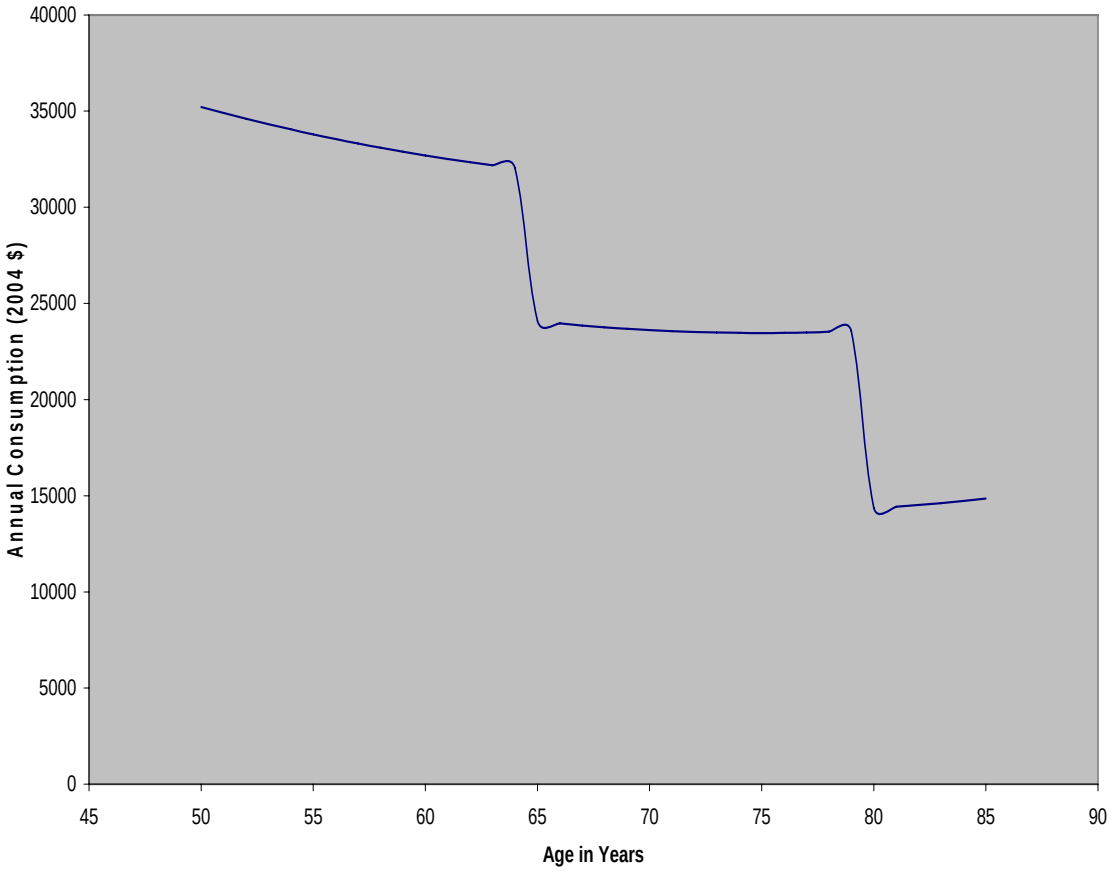

Table 5
Changes in Consumption for Recently Retired Households

Households	n	Change in Consumption (std dev)*
Not Retired in Q1, Retired in Q2	20	-1392 (4224)
Not Retired in Q2, Retired in Q3	22	-866 (2745)
Not Retired in Q3, Retired in Q1	21	-1158 (7264)
All HH that retired in 2004	63	-1130 (5117)
Retired in Q1, Not Retired in Q2	23	1025 (2629)
Retired in Q2, Not Retired in Q3	9	4582 (4483)
Retired in Q4, Not Retired in Q4	12	549 (2809)
All HH that came out of ret in 2004	44	784 (3549)

*This equals the consumption in the quarter after the change, less the expenditure in the quarter
before the change, in 2004
dollars