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How Do Children Affect the Need to Save for Retirement?

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Abstract

Children consume a substantial portion of a household's income while living at home, but are usually financially independent by the time the parents reach retirement age. Relatively little attention has been paid to how children affect parents' need to save for retirement. In this paper I use expenditure data from the Panel Study of Income Dynamics to construct life cycle expenditure patterns from households with children and childless households, comparing the two to gain insights on how children affect household consumption and how these differences may affect retirement planning strategies for parents versus childless adults. For households who had children, expenditures from ages 65 through 69 are 3 percent lower than from ages 45 to 49, while for childless households expenditures rise 33 percent from ages 45 to 49 through ages 65-69. Similarly, parental household expenditures at age 65-69 are equal to about 80 percent of earnings from ages 45-49, versus 94 percent for nonparental households. These life cycle expenditure patterns appear sufficiently distinct that both households planning for retirement and analysts evaluating the adequacy of household retirement saving should consider the presence of children in the household as a factor affecting the wealth necessary for retirees to maintain their pre-retirement standard of living in retirement.

Introduction

Working-age households preparing for retirement generally seek to maintain their pre-retirement standard of living once they cease working. But for working-age households with children, it is unclear what that pre-retirement standard of living entails. Is parents' pre-retirement standard of living best represented by total household expenditures, including expenditures parents make on behalf of their children, or is it best represented by the amount that parents spend on their own consumption? This question has received relatively little attention among retirement researchers, but the way in which the question is answered has important implications for how much parents should save and for our assessment of the overall retirement saving adequacy of U.S. households.

Economists ordinarily think about retirement saving in the context of the life cycle model, which holds that individuals will tend to spend and save in an effort to smooth the marginal utility of consumption over time. Financial planners may not think in such terms formally, but the idea of a replacement rate – retirement income as a percentage of pre-retirement earnings – implicitly embraces the idea that households wish to maintain their standard of living from work into retirement. Maintaining an equivalent standard of living between work and retirement may not entail equal household expenditures over time, because the cost of living in retirement is generally lower than while working and because households of different ages may derive equal utility from different levels of spending. Nevertheless, this basic framework allows for considerations of how much a household might wish to save and how well households in general have prepared for retirement.

This basic framework becomes more nuanced if children enter the picture. Children impose significant costs on households, in terms of food, clothing, healthcare, shelter and

education. Child-raising costs reduce the income available for parents to consume themselves, lowering the standard of living of parents even if the material standard of living of the household is unchanged. And yet those costs are transitory, since in most households children have become financially independent by the time the parents approach retirement age. Moreover, some households will have children while others remain childless. All of this complicates a financial planning strategy that uses simple rules to help retirees to maintain their pre-retirement level of expenditures, since part of those pre-retirement expenditures were consumed by children who no longer remain in the household.

In this paper I use expenditure data from the Panel Study of Income Dynamics to construct life cycle expenditure patterns from households with children and childless households, comparing the two to gain insights on how children affect household consumption and how these differences may affect retirement planning strategies for parents versus childless adults. I find that parents and non-parents exhibit distinct life cycle expenditure patterns, enough so that household retirement planning and analyses of households' retirement savings adequacy could benefit by taking parental status into account.

[Expenditures on Children and Their Impact on Retirement Saving Needs](#)

A variety of studies have attempted to estimate the direct costs of raising children. Most draw upon the Consumer Expenditure Survey (CE), which is a cross-sectional household survey of spending in a wide variety of categories. The most prominent is from the United States Department of Agriculture, which regularly updates a series of studies titled "Expenditures on Children by Families." The latest version of this series was issued in 2017, relying upon CE data for 2015. (See Lino et al, 2017).

The USDA estimates child-related costs for households by marital status, region, income level and number of children. Expenditure categories include food, transportation, health care, clothing, child care, education, housing and miscellaneous expenses. Expenditures on education beyond age 17 are not included in the study, meaning that college-related expenses may be significantly understated in these analyses. For some expenditure categories, such as food, child-related costs are inferred from other surveys on how expenditures are allocated between household members. In other cases, such as expenditures on housing, USDA uses regression analysis to analyze how spending by households with children differs from that of similar households without children.

While the USDA study analyzes a variety of scenarios, it finds that a middle-income household with two children spends nearly one-third of its annual income keeping its children fed, clothed, cared for and educated through high school graduation. A single-parent household with a low income of \$24,000 spends approximately 40 percent of its \$81,700 annual income on child-related costs. Lino et al. (2017) survey other research on child-related expenditures, finding a similar range of results. For a married couple with two children, other studies find children consuming between 31 and 47 percent of total household expenditures. Those funds are not available for consumption by the parents. The composition of child-related costs changes as children age, though total annual costs increase only a small amount, from \$12,680 for a single child aged 0 to 2 to \$13,900 for a single child aged 15 to 17.

By itself, the USDA-type analyses do not determine how adults should or will save for retirement. In the Consumer Expenditure Survey there is only a very limited capacity to follow households over time and once a child has left the household that household is no longer identified as having had children. The CE data report only if a child is present in the household at

the time the survey is conducted, not whether the household has children who are no longer residing at home. Thus, it is not possible using CE data to analyze how parents spend after their children have left.¹ However, Lino et al. and similar analyses do demonstrate that a substantial share of household incomes are dedicated toward the costs of raising children. This provides a prima facie case for further exploration of the issue.

Using cross-sectional data, Attanasio and Browning (1995) show that the typical inverted-U shaped household age-expenditure profile is flattened considerably after accounting for changes to household size. This implies that late-career household expenditures will be more representative of the spending level that parents wish to maintain in retirement, versus a higher average expenditure level that occurred over longer periods in which the household contained children. Similarly, Browning and Ejrnæs (2002) conclude that the number and age of children are important in determining the pattern of household consumption expenditures. Attanasio et al. (1999) also conclude that household demographics are an important driver of age-expenditure patterns. Banks et al. (1994) find that relative to childless households, households with children consume a greater share of their lifetime resources earlier in life – when children are present – and a smaller share in retirement.

Two studies illustrate the potential importance of children to retirement saving adequacy. Biggs (2009) calculated retirement income replacement rates by applying an adult-equivalence scale to household incomes both pre- and post-retirement. The household adult equivalent scale, derived from Citro and Michaels (1995), accounted both for economies of scale of families living together and the share of (mostly pre-retirement) income consumed by children. This

¹ A very short-term analysis is possible using the quarterly CE data, if a child leaves the household during the period over which the survey is conducted. However, we are here interested in longer-term spending, which the CE data cannot capture.

study found that typical replacement rates for the full population increased by approximately 18 percentage points when pre- and post-retirement incomes were adjusted for household size. This net improvement in replacement rates includes both increases in replacement rates for parents but also lower replacement rates for widows and widowers, who lose economies of scale in costs of living relative to when their spouse was still alive. While Biggs (2009) did not attempt to estimate the share of households with retirement incomes inadequate to maintain their pre-retirement standards of living, an increase of 18 percentage point in median replacement rates would substantially reduce the share of households that are presumed to be underprepared for retirement.

Munnell, Rutledge and Webb (2014) also apply the Citro-Michaels household size adjustment formula to the model used in calculating the National Retirement Risk Index, whose baseline figures do not include any adjustment for children. Munnell, Rutledge and Webb find that, for households in the year 2004, accounting for household expenditures on children reduces the number of households deemed to be “at risk” of inadequate retirement savings by over two-thirds, from 35 percent to 11.5 percent. Together, these studies show that measures of retirement saving adequacy are very sensitive to the treatment of children. However, these studies do not by themselves confirm that savings goals should be adjusted for parental status.

Scholz and Seshadri (2009) analyze household wealth in the Health and Retirement Study while controlling for a range of factors including the number of children. The authors build a lifecycle model premised on the idea that parents wish to maintain their own pre-retirement standard of living in retirement, rather than that of the household as a whole when it contained children. They find that households with children hold roughly 10 percent less wealth per child

than otherwise-similar households that lack children, a finding that the authors consider consistent with the life cycle model in their study.

In contrast, several other studies conclude that household expenditures and saving are not responsive to children. Two studies from researchers at the Center for Retirement Research at Boston College frame the question in terms of whether household expenditures decline when children leave home. If so, then an adjustment for children in gauging retirement income adequacy would make sense. If spending does not decline when children leave home, this would imply that parents scale up their consumption, effectively “taking over” spending that formerly went to supporting their kids.

Coe and Webb (2010) used the Health and Retirement Survey’s Consumption and Activities Mail Survey (CAMS) component, following households over the period 2001 through 2008 and concluding that household spending did not change substantially at the time that children were reported as no longer living at home. Shrinking household sizes implied that parents’ per capita spending on non-durable items increased substantially, such that parents increased their own consumption by the amount previously expended on children. However, Coe and Webb suffered from a small sample of only 36 households who had children leave home during the period in which they participated in the HRS, leading to imprecise estimates. Likewise, the HRS sample averaged age 60 (for men) and age 56 (for women) at the beginning of the 2001-2008 period, meaning that this group is older than most parents at the time children leave home, as well as closely approaching retirement age.

Dushi et al (2015) used the HRS and the Survey of Income and Program Participation (SIPP) with a focus on how household retirement saving shifted when children left home. The authors conclude that households modestly increased 401(k) contributions when children became

financially independent, but not by as much as a life cycle model would predict. If this result is interpreted more broadly, it would support Coe and Webb's conclusion that parents increase expenditures to absorb spending on children who have left home. However, this approach suffers from several potential shortcomings. First, 401(k)s are not the only possible forms of saving; households could save in other forms or pay down debt, including mortgage principal. Second, the amount that an employee contributes to his 401(k) is strongly influenced by psychological inertia and by employer matching contributions, which are offered in roughly three-quarters of 401(k) plans. The strength of employer matches, which often are 50 cents for each dollar of employee contributions, could dominate changes to saving due to changing household size as children leave home. Thus, one would not expect large individual-level contribution changes from year to year even if the need or ability to save changed. And third, the authors' estimates of the effects of children leaving home differ substantially based on how they define the child-leaving event, indicating that children leaving home is not measured with great precision. It is not clear that children no longer residing at home is the same as becoming financially independent. A child leaving for college may impose greater financial strains on parents, and some children taper off parental support only over a period of time.

Several studies bearing on different questions also may shed light on the relationship between children and parents' expenditures. Coulibaly and Li (2006) analyze how household expenditures change in the period immediately following homeowners' final mortgage payment. Similar to children leaving home, paying off a mortgage produces a predictable and long-lasting increase in homeowner's available income. Coulibaly and Li find essentially all of that increase is dedicated either to increased financial saving or to the purchase of durable goods, with little being consumed by nondurable expenditures. Stephens (2008) found a similar result with regard

to the repayment of auto loans, with households saving 70 to 80 percent of the increase in available income when a car loan is repaid.

These findings leave unclear how parental expenditures change when children become economically independent, such that additional research could help add clarity.

The PSID Data

In this project, I use the Panel Survey of Income Dynamics (PSID) to study trends in household expenditures over time, in particular looking at how household spending changes in the period after children reach adulthood. We investigate whether or not parents “take over” their kids’ consumption once they become financially independent or whether household spending falls as children leave home and household size declines. The answers to these questions are particularly important in determining whether parents are saving adequately for retirement.

However, this project does not attempt to precisely determine the moment when children become economically independent, an event which has proven difficult to isolate and which, in any case, may consist of a decline in parental support rather than a discrete cutoff. Rather, it examines patterns over longer periods in which children are presumed to transition from being fully dependent to more-or-less financially independent, contrasting expenditures by age to those of childless households.

The PSID is the longest-running U.S. household panel survey, starting in 1968 with the goal of studying the dynamics of income and poverty. Since the survey’s inauguration, more than 75,000 individuals have been interviewed. Up until 1997, the data were gathered annually; the survey is now conducted biennially.

In 1999, the PSID expanded its collection of consumption expenditure variables. Previously these data had been limited to food and housing expenditures. With the 1997

inclusion of transportation, health care, education, utilities, and child care expenditures, the PSID now covers more than 70 percent of consumption measured by the Consumer Expenditure Survey. (Charles, et al 2007.) This allows for more detailed analysis of household expenditure changes over time, which are difficult to conduct with cross-sectional data sources such as the Consumer Expenditure Survey.

The PSID is broken down into a number of distinct files. The data are primarily available at the household level; the family data file contains an extensive collection of variables ranging from philanthropic behavior to health care utilization to expenditures. This study is primarily interested in analyzing trends in consumption; to do so, I track family expenditures over time. I use the childbirth and history file to identify parents and non-parents within the data. In order to correctly merge the childbirth and family expenditure files, I use the individual data file.

The PSID Individual File contains records of each person ever in a PSID family from 1968 through the present. The data include summary values that cover the entirety of the individual's response time frame (most recent number of children, whether ever married, number of marriages, etc.), as well as yearly variables that track education, income, and other trends. Compared with the family data file, the individual data are fairly limited; I use this file to merge records from all sources (family, childbirth) at the individual level.

What makes the individual data crucial is its inclusion of a unique person identifier. Each individual who enters the PSID is assigned this "person id" number and keeps it throughout their entire sampling period with the survey. This provides a distinct advantage over identifying by family; families change with additions, split-offs and deaths, while the person identifier stays the same.

While the family data contain a large range of variables, we are primarily interested in household expenditures. For data years 1999 through 2014, the PSID consumption data are available separately from all other variables. The normal survey questions ask about household consumption over flexible time frames (weekly/monthly food consumption, etc.). Annualized amounts are extrapolated based on these original responses and included in these “packaged data” files. I focus on following major expenditure categories: food, housing, child care, transportation, and health expenditures. The data are available in nine separate files, one for each year.

Parents are identified using the PSID Childbirth and Adoption History File. This file contains all records of childbirth and adoption in PSID families beginning in 1985. These data were collected from all individuals who were of childbearing age throughout the survey years. Variables include parent and child birth dates, place of child’s birth, the child’s birth order, birth weight, birth length, race, and date of death. This file is unique in that it can contain multiple observations per parent, one for each of their children. This file was designed to be linked to the PSID individual data.

Since the PSID provides data on the birth year of the eldest child, it is possible to identify which individuals were parents in a given year. Importantly, however, in this study an individual is denoted as a “parent” if they *ever* had a child during the period for which we have data, meaning that parents are distinguished from non-parents even in years prior to their having children. Thus, parenthood is viewed on a lifelong basis, such that expenditures are tracked before children enter the home and after they become economically independent.

Defining Expenditures

Beginning in 1968 the PSID gathered a small set of expenditure figures, generally limited to food and housing. Using these data, researchers sometimes imputed total household consumption based upon food expenditures. (E.g., Skinner, 1987.) As noted above, beginning in 1999 the PSID began tracking an expanded set of consumption categories including food, housing, transportation, health care, child care, utilities and education. Together, these data provide a more complete picture of household expenditures than that available prior to 1999. For most of the analysis, I define total expenditures as the sum of the following categories. These variables are available throughout the 1999-onward sample and are constructed from a number of sub-categories:

1. Food, including food consumed at home; away from home; delivered food and alcohol.
2. Housing expenditures, including mortgage payments; rent; property taxes; utilities; maintenance and household furnishings.
3. Transportation expenditures, including vehicle purchases, loans or leases; insurance; repairs; gasoline and expenditures on other forms of transportation.
4. Child care expenditures.
5. Education, including for children.
6. Health care expenditures, including insurance premiums, prescription drugs, doctor's visits and hospital and nursing home care.

Beginning in 2005, additional variables were added. These track expenditures on telecommunications, clothing and apparel, trips and vacations, and recreation and entertainment. From 2005 to 2015, total household expenditures including these expanded categories have ranged from 4.2 percent greater to 2.7 percent lower than found in the Consumer Expenditure

Survey, indicating broad consistency between the two surveys.² To increase sample sizes I rely upon the 1999 through 2017 data for most of the presentations that follow.

Normalizing Annual Expenditures Using the Average Wage Index

The basic process is to calculate mean expenditures by five-year age group by household type for parents and non-parents. While the PSID is a panel study that tracks households over time, in only a relatively small number of cases is a household tracked over a full period in which children would be expected to shift from fully financially dependent upon parents to fully independent. Since the PSID data allow for at most 17 years of continuous coverage of any respondent household's expenditures, I instead pool the data to calculate expenditures by age, which allows for the construction of stylized full adult-life expenditure patterns.

However, one challenge faced in this project is that PSID respondents are born in different years. Since average earnings tend to rise over time and expenditures are over the long term heavily based upon earnings, younger PSID respondents will tend to have higher expenditures at any given age than older respondents even if age-expenditure profiles contingent upon lifetime income are similar. Thus, combining birth cohorts without any adjustment could skew the results.

To account for this, nominal annual expenditures by age are indexed for the growth of the economywide Average Wage Index (AWI). The AWI is the Social Security Administration's measure of average earnings of Social Security program participants, who make up the vast majority of the U.S. workforce. Indexing expenditures to a common year provides an approximation of how much different PSID households would have consumed at a given age

² For details, see <https://psidonline.isr.umich.edu/Guide/Quality/DataComparisons.aspx>

were they all born in the same year. This adjustment process implicitly assumes that age-expenditure patterns are similar over time when adjusted for the growth of average earnings. This allows for easier comparability of households and construction of expenditure profiles of parents and non-parents by age.

This indexing process requires choosing a base year and age. I use 2015 as the base year and 65 as the base age.³ Each nominal expenditure-by-age sample is first expressed as a percentage of the nominal AWI in the year in which it takes place. It is then expressed as a percentage of the inflation-adjusted AWI in the year corresponding to a base age of 65 in 2015, where the AWI is adjusted for inflation using the Personal Consumption Expenditure (PCE) deflator. For instance, if at age 60 in 2000 a respondent had household expenditures equal to 50 percent of the AWI in that year, the adjustment process would convert that nominal figure to an amount equal to 50 percent of the real AWI in the year 2010, which corresponds to age 60 when age 65 is based at the year 2015.

Table 1 shows sample sizes by age group and parental status for ages 20-24 through 80-84. During most of the age ranges with which we are concerned sample sizes for parental households appear adequate, in particular if we are concerned with longer-term trends rather than variation over a single year in which children are deemed to become financially independent. At older ages, particularly for households who never had children, sample sizes are smaller. For instance, the sample contains only 186 childless households from ages 80 through 84. This should be borne in mind in assessing results at older ages.

³ Sensitivity analysis using different base ages finds that the qualitative patterns expressed here are broadly consistent.

Results

This section presents stylized life cycle expenditure patterns. Figure 1 displays annual household expenditures by age for all households in the full sample, using both the full 1999-2017 and the 2005-2017 sample enhanced with additional spending categories. The annual decline in expenditures following retirement is a familiar pattern reported in a number of studies, including Hurd and Rohwedder (2003). This post-retirement decline in household spending is generally attributable to factors other than children leaving the household, including connections between health status and the utility derived from expenditures, as discussed in Finkelstein and Luttmer (2003). The amount of the decline in household spending – 20 percent from ages 60-64 to age 75-79 – is broadly consistent with the projection model in Hurd and Rohwedder (2011).

To provide a better picture of household expenditures by parental status, Figure 2 uses the 1999-2017 data to show mean household expenditures by age group separately for households who had children and for households who remained childless throughout the ages examined here. Given that most births take place between the ages of 25 to 35 one might expect children to begin becoming economically independent roughly two decades later, when the parents are aged 45 to 55. Expenditures between parents and non-parents are similar early in adult life, when only a few of the future parental households would actually have had children. As parental households age their expenditures exceed those of non-parents, such that by ages 45 to 49 parental households' mean annual expenditures of \$50,476 are 39 percent higher than non-parents household expenditures of \$36,248. Of course, this increase in household expenditures is not due solely to expenditures on children: households with children are more likely to be married than those without children, such that increases in expenditures from ages 20 to 24 reflect increases in adult household size as well as the inclusion of children. However, parental

household expenditures peak during their 50s and then decline, while expenditures for non-parental households continue to increase through retirement age. For instance, in the 15 years from ages 50-54 through ages 60-69, mean expenditures for parental households decline by 16 percent while rising by 13 percent for non-parental households, a relative change of 29 percentage points. While noting smaller sample sizes at older ages, by ages 80 to 84 expenditures for parental households are 17 percent below age 50-54 levels for non-parental households but 28 percent below ages 50-54 for parental households.

Figures 3 and 4 decompose household expenditures by category for parents and for non-parents. I have arranged components of household spending that might plausibly be related to children at the bottom of the figures, in order that changes over time might be more readily discernable. These categories include childcare, education, housing and food. Both figures exhibit peaks, but for parental households these peaks occur in their 50s while for non-parents expenditures peak from ages 65 through 74.

What is of interest in Figures 3 and 4 is that categories of spending one might associate with raising children tend to decline as parents reach late middle age, but actually increase among non-parental households. The changes are summarized in dollar terms in Table 2. Annual education expenses decline by \$2,782 for parental households between the ages of 45 to 49 and ages 65 to 69, while falling by only \$325 for non-parental households. Such declines in education expenditure for parents seem consistent with children completing college and perhaps educational loans being paid off. Similarly, annual transportation expenses decline by \$1,685 for parents but increase by \$1,523 for non-parents. This also may be related to children becoming economically independent. Likewise, food spending by non-parental households increases by \$1,709 per year, while remaining roughly constant (a \$68 annual) increase for

parental households. Annual housing expenditures decline by \$721 for parents while increasing by \$3,396 for non-parents. In all categories except for trips and recreation relative nonparental spending changes are higher than for parental households.

In sum, the disaggregated spending data in Figures 3 and 4 lends support to the inference from Figures 1 and 2 that the decline in household expenditures among parental households beginning in the parents' 50s is attributable to the household's children becoming economically independent, even if it is difficult to identify the precise date upon which economic independence is attained. In total, annual household expenditures declined by \$1,542 (3.5 percent) for parental households between ages 45-49 and ages 65-69 while rising by \$12,032 (33.2 percent) for non-parental households.

Next, I bring pre-retirement earnings into the picture, as most measures of retirement income adequacy such as replacement rates use earnings as a base. However, rather than comparing incomes in retirement to pre-retirement earnings, as is common in replacement rate calculations, I instead compare *expenditures* at retirement to pre-retirement earnings. If we assume that first, the retirees in the PSID sample are on average able to maintain their pre-retirement standard of living and second, that retirees consume their full incomes, the resulting expenditures-to-earnings calculations would provide a replacement rate target by parental status.

Many measures of retirement income adequacy, including both replacement rates and life cycle models, use some average of earnings in the years prior to retirement as a proxy for the standard of living desired by the household once it retires. However, there is no consensus regarding how pre-retirement earnings should be expressed (Springstead and Biggs, 2008). The Social Security Administration's well-known replacement rate figures compare initial Social Security benefits to the average of the highest 35 years of pre-retirement earnings, where those

earnings are first indexed for the growth of national average wages. Mathematically, this approach effectively compares the benefit paid to the average new retiree in a given year to the wage of the average worker in that year, an approach that may compare the well-being of retirees and workers but does not calculate how effectively retirees can replace their own prior earnings. Likewise, many financial planners calculate replacement rates by comparing initial retirement benefits to final earnings immediately prior to retirement. While perhaps appropriate for public sector employees who participate in defined benefit retirement plans, when applied to the general population final earnings replacement rates ignore the volatility of earnings in a given year and the tendency for private sector employees to reduce work hours and earnings in the years preceding retirement.

Given the variety of options available, any replacement rate denominator will be in some way arbitrary. I choose, first, that pre-retirement earnings be represented in real, inflation-adjusted dollars, so that expenditures at retirement are compared to earnings adjusted to have equivalent purchasing power. Second, I choose to measure pre-retirement earnings over a period ranging from middle age to retirement, to exclude young adulthood when earnings and household expenditures often are substantially lower. For these purposes, I use the average of earnings over the period from ages 45 through 59, a period over which peak career earnings have generally been attained but earnings have not yet begun to decline significantly in anticipation of retirement.

Table 3 illustrates differences by parental status. For parents, household expenditures from ages 65 to 69 are equal to 80 percent of average household earnings between the ages of 45 and 99, while non-parental households spend amounts equal to 94 percent of pre-retirement earnings. While these figures do not dictate with precision how retirement saving rates should

differ between parents and non-parents, a 14 percentage point difference in retirement expenditures relative to peak-career earnings is not a trivial difference.

Discussion and Conclusions

One potential response to these findings is that, while nonparents appear to have retirement expenditures on par with pre-retirement earnings while parents' expenditures are far lower, this difference reflects inadequate retirement preparation by parents relative to nonparent. Munnell, Hou and Sanzenbacher (2017) analyze parents and nonparents using the National Retirement Risk Index methodology, finding that parents are at modestly greater risk of inadequate retirement incomes than nonparents. However, the NRRI does not account for the cost of raising children, and so assumes that parents must save for retirement at approximately the same rates as nonparents. This is a difficult question to test objectively, given that the analysis being undertaken here is designed to help set retirement saving and income goals for parents relative to nonparents. However, we can test this supposition using subjective data on retirement satisfaction. If parents are poorly prepared for retirement relative to nonparents, one might expect parents to express lower satisfaction and higher financial insecurity in retirement, all else equal. Rohwedder (2006) utilizes a number of questions in the Health and Retirement Study (HRS), including:

- “All in all, would you say that your retirement has turned out to be very satisfying, moderately satisfying, or not at all satisfying?”
- “Thinking about your retirement years compared to the years just before you retired. Would you say the retirement years have been better, about the same, or not as good?”

- “Please tell me if you worry a lot, somewhat, a little, or not at all [about] not having enough income to get by.”

Based on Scholz and Seshadri (2007), parents in the HRS accumulate relatively less wealth than non-parents, all else equal. If those parents are undersaving for retirement, they should be more likely than childless retirees to answer the HRS questions in a positive manner. But Rohwedder (2006) finds no statistically significant difference in responses to the HRS questions between retired parents and similar retirees who don't have kids. Retired parents are just as satisfied with their standards of living as households who did not have children. While perhaps not dispositive, these subjective assessments support the view that retirement saving goals differ in a meaningful way between parents and nonparents.

Various data sources show that parents expend considerable resources supporting their children. The analysis using PSID data to form age-expenditure patterns indicate that, as households traverse the age range in which children typically become financially independent, parental expenditures decline. This decline occurs both in total and on purchases that might be involved with supporting children, including food, housing, education and childcare. No similar decline is seen for childless households. Rather, expenditures by non-parents follow a slow and steady increase from about age 30 through retirement age.

The PSID data demonstrate that lifecycle age-expenditure patterns differ in meaningful ways between parents and nonparents. Specifically, expenditures in parental households begin to decline at about the time when children are expected to attain financial independence, while expenditures by nonparents continue a slow and steady rise through retirement. As a result, household spending in retirement is substantially higher relative to peak-career earnings for nonparents than for parents. Thus, it is reasonable to conclude that nonparents need to save more

or otherwise secure greater sources of non-Social Security retirement relative to their earnings than do nonparents.

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Tables and Figures

Table 1. Sample sizes by age and parental status

Age	Parents	Non-parents
20-24	3,498	2,057
25-29	7,059	3,062
30-34	7,730	2,275
35-39	7,714	1,702
40-44	7,375	1,484
45-49	7,175	1,419
50-54	6,570	1,362
55-59	5,402	1,142
60-64	4,199	825
65-69	3,006	535
70-74	2,277	337
75-79	1,817	278
80-84	1,335	186

Table 2. Change in Annual Spending by Category, Ages 45-49 to Ages 65-69

	Education	Childcare	Housing	Food	Transportation	Health-care	Home repair, furnishing, clothing	Trips, recreation	Total
Non-parents	(\$325)	(\$170)	\$3,396	\$1,709	\$1,523	\$1,941	\$2,773	\$1,183	\$12,032
Parents	(\$2,782)	(\$387)	(\$721)	\$62	(\$1,685)	\$1,671	\$970	\$1,330	(\$1,542)

Source: Author's calculations from PSID data.

Table 3. Pre-retirement earnings and post-retirement expenditures, by parental status

	Parents	Non-parents
Earnings, ages 50-54	\$61,253	\$54,642
Expenditures, ages 68-72	\$48,934	\$48,280
Expenditures % of earnings	80%	94%

Source: Author's calculations, from PSID data.

Figure 1. Mean household expenditures by age, using 1999-2016 data and enhanced 2005-2016 data.

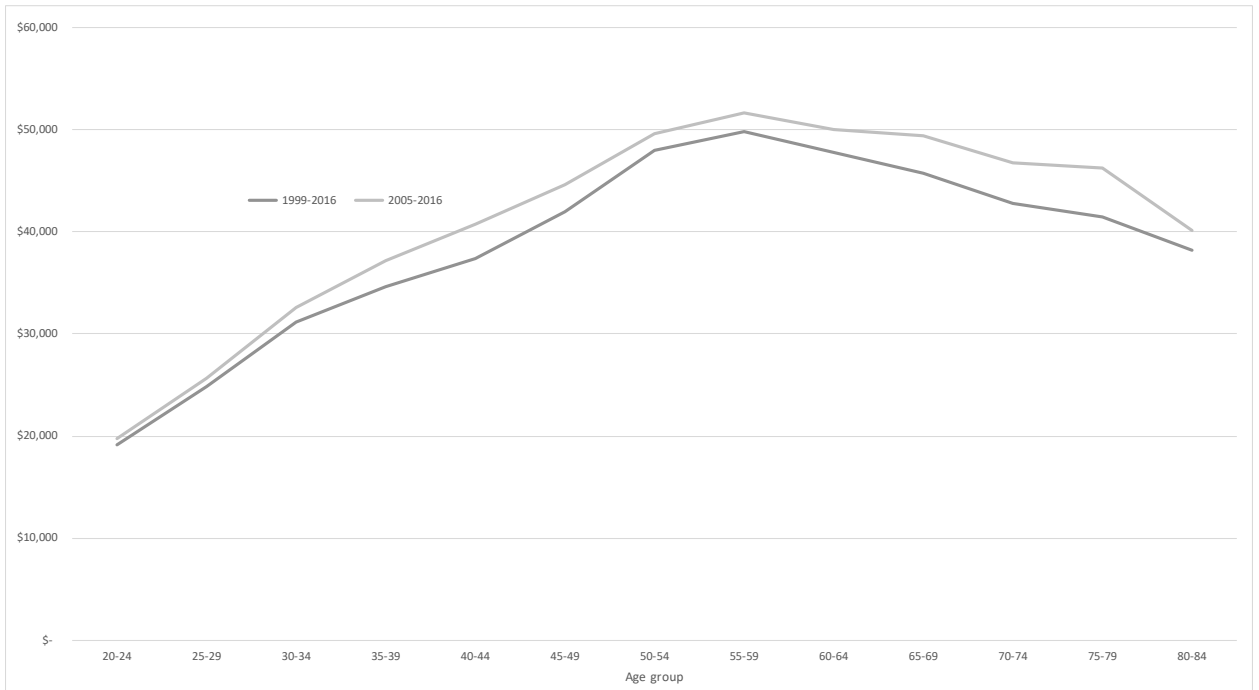


Figure 2. Household expenditures by parental status and age group

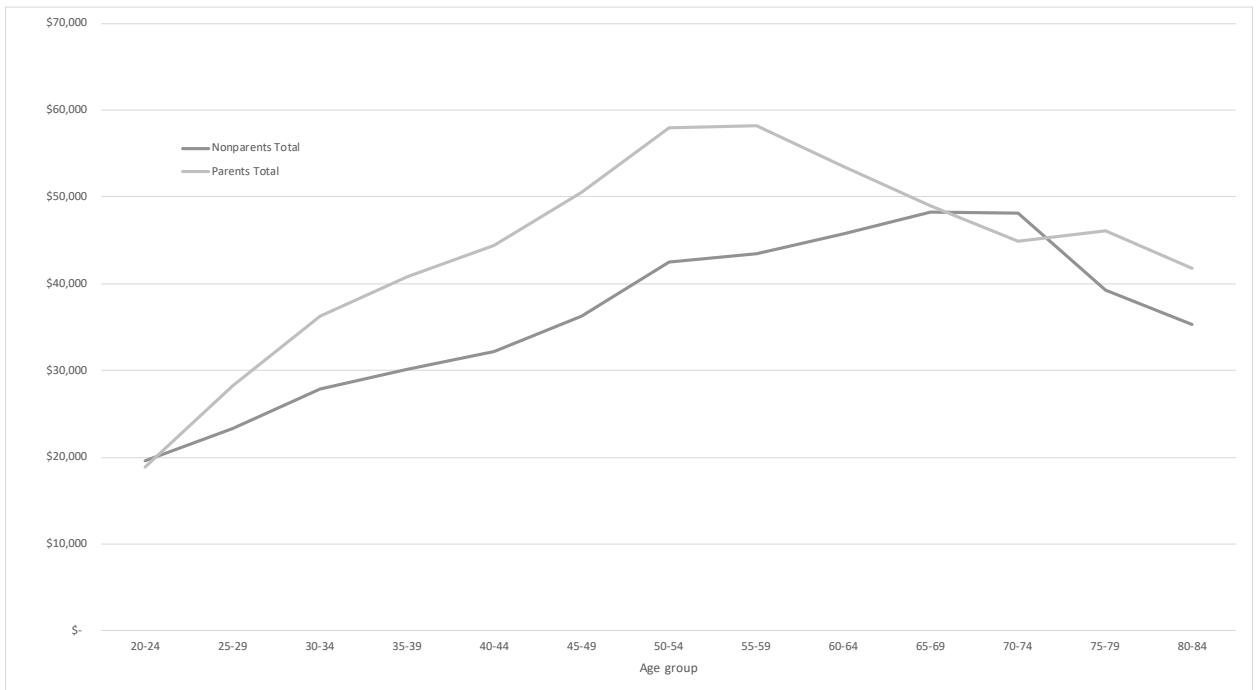


Figure 3. Composition of parental household expenditures by age group

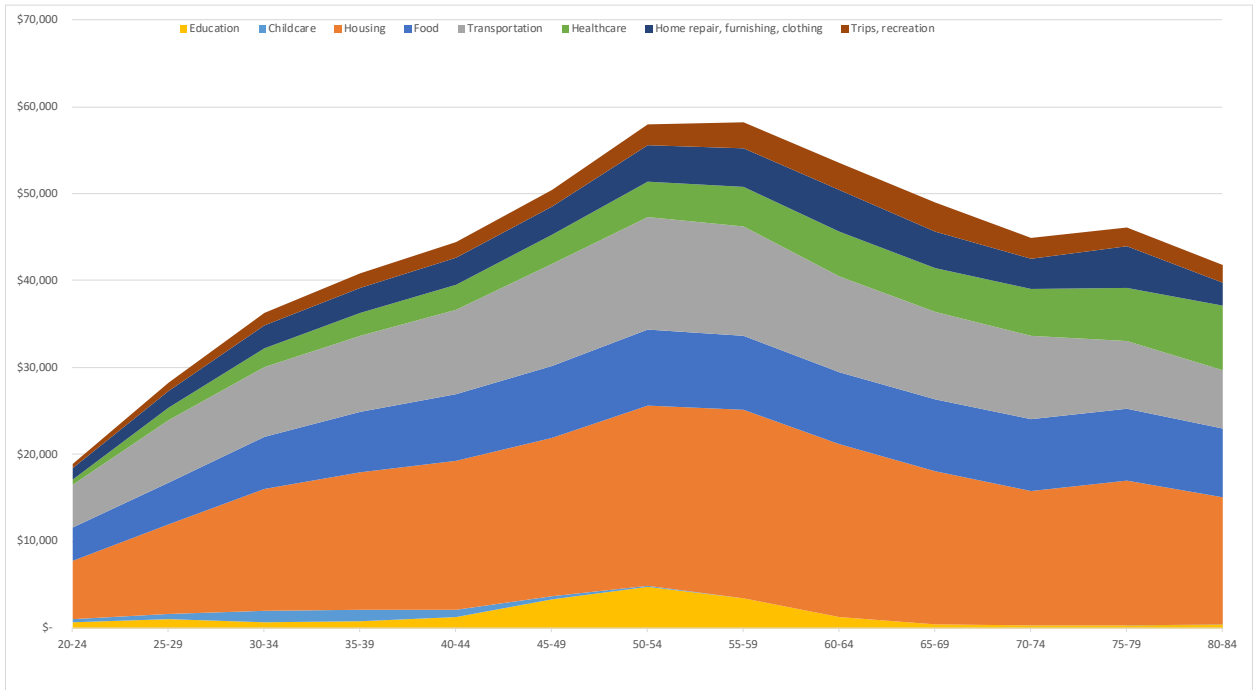


Figure 4. Composition of non-parental household expenditures by age group

