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Measuring Conspicuous Consumption

John L. Murphy[1]

Abstract

Approximately 15 percent of households have a negative or zero net worth, leaving them vulnerable to financial insecurity at retirement. Some are vulnerable at retirement, in part, due to their lack of saving. However, some are also at risk because of their rates of consumption, relative to their income. There have been several studies that show that Blacks and Latinos have low savings rates, in part due to higher conspicuous consumption. Conspicuous consumption is defined as the buying of goods or services solely for the purpose of public display of wealth, as opposed to covering basic needs. Unfortunately, there are few scales that assess the construct with appropriate psychometric properties. This work attempts to provide a scale by which practitioners can measure consumption/spending and thus assess the threat of financial vulnerability. The creation of adequate measures of consumption may elucidate whether the issue of financial insecurity is related to financial literacy, inability to save' or consumption. Ultimately, the goal of this research is to sharpen the ability of policy makers, researchers, and practitioners in order to assist communities most at risk for financial insecurity.

Keywords: consumption, scale, wealth, literacy, poverty, retirement

1. Introduction

Research has shown that there are too few persons adequately saving for their retirement (Engen et al., 2005; Malroutu & Xiao, 1995; Mitchell & Moore, 1998). In the past, when defined benefit (DB) pensions were more the norm, the average American believed they were secure in retirement with their employer provided retirement pension plan (Butrica, Iams, Smith, & Toder, 2009; Butrica & Johnson, 2010; Murphy, 2013), their Social Security benefits, and their own personal savings. Collectively, these income sources (employer pensions, Social Security benefits, and personal savings) are generally referred to as the "three-legged stool" of retirement (DeWitt, 1996).

The employer pension dimension of the three-legged stool has changed over recent decades. The DB pensions plans upon which many Americans depended in the past are rare today (Butrica et al., 2009). Today, the most common pensions are defined contribution (DC) retirement savings plans. As a result, workers entering the job market today will likely rely on resources accumulated in DC plans in retirement. In contrast to DB plans, under a DC plan format, the responsibility to set aside money for retirement resides largely with the worker. The nature of DC plans requires participants to choose how much they want to reserve within a tax-deferred saving account. Once participating, individuals choose from several plans from which to invest. Increasing individual choice has both advantages and disadvantages. Having multiple choices can lead to the absence of a decision (Botti & Iyengar, 2006; Inesi, Botti, Dubois, Rucker, & Galinsky, 2011; Ratner et al., 2008; Scheibehenne & Greifendeder, 2010; Scheibehenne, Greifeneder, & Todd, 2009) and puts the burden of saving on the worker. There are several types of DC plans, each having a variety of employer monetary contributions. Some employers may match the contribution a worker makes, while others may contribute a percentage of the employee contribution.

[1] Office of Retirement Policy, Social Security Administration, Corresponding email: ohsixbaby@me.com, Mobile: (202) 494-3280. Office (202) 358-6033

Research has shown that outside of a workplace retirement savings plan, many Americans are not able to save enough on their own to secure an adequate income after they retire (Engen et al., 2005). Currently, the bottom 90 percent of Americans hold a zero savings balance or a negative savings rate (Thomson, 2016). Studies have shown that the sheer number of retirement products available may overwhelm workers who wish to provide an adequate retirement for himself or herself. The number of choices may lead many to make no choice at all, thereby decreasing their nest egg at the time of retirement (Carroll, Choi, Laibson, Madrian, & Metrick, 2009).

Complicating the issue of retirement saving, particularly within a DC plan vehicle, is consumption. Because savings in DC plans involve more of a choice, consumption patterns can influence how much workers save. Conspicuous consumption can, in turn, correlate with lower retirement savings. Conspicuous consumption can be defined as the buying of goods or services solely for the purpose of public display of wealth as opposed to covering basic needs (such as food, shelter, minimal clothing, utilities, etc.) (Chaudhuri & Majumdar, 2006).

The paper describes a consumption scale designed by the author, using the Health and Retirement Study (HRS), a nationally representative, longitudinal survey of individuals aged 50 and older and their spouses. The scale is a preliminary creation using an exploratory factor analysis (EFA) approach, used to study consumption habits.

2. Background

As noted previously, conspicuous consumption can be thought of as the buying of goods or services solely for the public display of wealth and are not needed for the basic necessities (i.e., food, shelter, etc.) (Chaudhuri & Majumdar, 2006). The basic argument of this article states that if individuals' consumption patterns are excessive, they will be less likely to save enough for their retirement and may become vulnerable to financial instability during their retirement stage of life.

Among all the demographic traits of conspicuous consumers, the most common feature is that they tend to spend on non-essential goods and services in a manner that is inconsistent with their incomes (Sivanathan & Pettit, 2010). Such individuals occupying lower socioeconomic statuses are at a greatest risk for financial insecurity at retirement and more likely to be dependent solely on Social Security benefits. Some have incomes that can sustain such spending, but many others are vulnerable during retirement because they have not adequately prepared. Instead of saving for retirement, they have spent unnecessarily on items that will not support them during their retirement years.

The literature indicates that minorities are more at risk of non-essential consumption at rates higher than the rest of the population. Blacks and Hispanics spend more of their income on luxury goods than whites (Mazzocco, Rucker, Galinsky, & Anderson, 2012). Studies have found that minorities are in jeopardy of experiencing retirement insecurity because of their high rates of consumption relative to their income (Marcolin & Abraham, 2006; Perry & Morris, 2005). Similarly, Charles, Hurst, & Roussanov (2009) report that blacks and Hispanics spend more of their income on luxury goods than whites and that their low savings rate is due, in part, to higher conspicuous consumption. However, the authors note that social status was a more important driver than race. In addition, they state that heavy consumption is implicated in the reduced spending by minorities on health and education related expenses and the lower accumulation of wealth.

The result of higher consumption and lower savings rates is a greater dependence on Social Security (Attanasio & Brugiavini, 2003; Feldstein, 1974; Hubbard, Skinner, & Zeldes, 1995; Modigliani & Sterling, 1983; Richard H. Thaler & Shlomo Benartzi, 2004; van der Klaauw & Wolpin, 2008). For example, in 2009, estimates using Current Population Survey (CPS) data show that, for persons aged 65 and over, Social Security benefits accounted for 90 percent or more of income for about 22 percent of married beneficiary couples and about 43 percent of non-married beneficiaries (Office of Retirement and Disability Policy, 2011).

For these reasons, consumption patterns influence retirement security. Consumer overspending increases the probability of savings depletion, insufficient funds for healthcare expenses, and a lower standard of living at retirement for oneself and one's spouse, and greater dependency on children or family members for assistance (Helman & Christie, 2012; Herb & Lewis, 1978; Warner & Cramer, 1995). The result of these instances can lead to a greater dependence on Social Security, Medicare, or need-based programs for seniors. In order to increase retirement security, it is imperative to moderate consumer spending when it exceeds income, eliminate consumer debt, and maximize saving behavior (Helman & Christie, 2012).

Current Consumption Scales

One way that practitioners determine consumer financial health is with consumption scales. The clinician, financial consultant, or field worker attempting to assess the strengths and weaknesses of a person's fiscal health may want to understand their spending patterns. The consumption scale offers insight into potentially problematic areas. For example, if it's determined that dining out represents a significant portion of said person's spending, then spending changes may be recommended.

Current consumption scales exist, but there is a need for such scales with proven psychometric properties, which means they are both reliable and valid (Roy Chaudhuri, Mazumdar, & Ghoshal, 2011). These authors developed an 11-item consumption scale that is one-dimensional, which means that it does not consider necessary purchases versus luxury purchases. This difference is important in understanding spending in areas that may be considered non-essential. Additionally, the scale lacks a psychometric pedigree and there is no data provided on the scale's reliability. The authors point out the factor that the scale only measures consumption and does not consider utilitarian purchasing.

O'Cass and McEwen (2004) developed a self-administered questionnaire consumption scale which was administered to a non-probabilistic convenience sample of 315 young consumers. However, the methodology means that the scale is not likely to be generalizable. In addition, the scale focuses on the intersection of conspicuous consumption and branding. The authors indicate that status consumption and conspicuous consumption are two distinct constructs, but branding is linked to status consumption and not to conspicuous consumption (O'Cass & McEwen, 2004; O'Cass & Frost, 2002).

Eastman, Goldsmith, & Flynn (1999) developed a brief self-report scale to measure status consumption, which they define as the consumption of goods or services to achieve social prestige. The measure has good psychometric properties, but their construct (status consumption), like O'Cass and Frost (2002), is related to branding. Another scale developed by Chen, et al. (2008) and has good reliability and validity, has the same focus; it too examines consumption through branding.

3. Scale Development Method

Because of the shortcomings in the current field of consumption scales, the author developed a measure for use by practitioners to assess and identify those whose retirement savings may be negatively affected by consumption patterns 2. This scale is designed for universal use, however, they are especially pertinent to persons who have limited financial means. Specifically, those who high levels of debt, have limited financial resources, members of some minority groups, or those living 'paycheck to paycheck' are especially vulnerable to retirement insecurity.

The data used to create the scale were drawn from the core Health and Retirement Study (HRS) and the HRS' Consumption and Activities Mail Survey (CAMS). The HRS is a nationally representative, longitudinal survey of individuals aged 50 and older and their spouses. The core HRS survey is conducted every two years and off-year surveys, such as the CAMS, are conducted in the intervening years. The HRS is one of the foremost sources of information on the population aged 50 or older, asking questions on health, cognition, housing, assets, income, employment, and family structure. In addition to the core survey waves, the HRS supplements its data with separate "modules" that collect data on an eclectic array of other topics. As a general matter, the modules are a subsample of respondents in a particular wave. The CAMS is one such module comprised of a questionnaire assessing individual activities and household patterns of consumption mailed to a subsample of HRS respondents. The CAMS has three sections: activities, consumption, and demographics. The activities section queries respondents on the amount of time spent on activities such as seeing a doctor, paying bills, playing cards, shopping, etc.

[2] It is important to note that this paper only presents an exploratory factor analysis (EFA) for the development of the scale herein presented. The EFA is merely the development of items to measure a particular construct. The EFA should be followed up with a confirmatory factor analysis (CFA) or path analysis to measure how the newly developed scale behaves in concert with other factors. The CFA tests causal models with latent variable, to include the conspicuous consumption factor. It will answer if the scale items hold together and does the scale have explanatory for financial health and security.

The consumption section obtains information about the level and pattern of expenditures of the sampled households. This paper focuses on the 2015 CAMS data, which had a total of 7,231 questionnaires mailed and 5,423 completed, for a response rate of 74 percent. There were two primary methods considered for the creation of the scale. The first was principal component analysis (PCA), and the other, exploratory factor analysis (EFA). Both are data reduction methods. PCA is useful for a potentially large amount of variables that essentially measure the same construct, where the user may wish to streamline the number of items for efficiency. The PCA creates a smaller number of artificial variables, which are known as principal components. These components interpret the original data in a way that accounts for the most amount of variance among the observations.

On the other hand, EFA is utilized when the number of factor structures in the data are to be identified. The EFA informs the user on the number of underlying factors, or constructs, represented by the data. In this case, the desire was to determine how many factors are contained in the data. The goal was to ascertain how many factors were present, which ones measured conspicuous consumption and which ones measured other constructs. For these reasons, the EFA approach was utilized. Because this is the preliminary development, the scale is presented in a similar method to other EFA papers. It focuses on the scale development itself, rather than data analysis (Chen et al., 2008; E. Foa, Cashman, Jaycox, & Perry, 1997; E. B. Foa et al., 2016).

This newly created scale measures the amount of money spent over the last year on non-necessary items such as vacations, shopping trips, entertainment, dining out, gifts, etc. The new variables (conspicuous and utilitarian consumption) were created by using two input variables: 1) the amount of money spent in the last year on goods and services, and 2) the income of the respondent over the same year. The amount of money spent over the last year was taken from the 32-item list included in the CAMS that indicated how much an individual has spent over the last 12-months on various goods and services. The income variable was taken from the HRS and linked to the CAMS data to match respondents. The amount spent on each good or service was used to create a ratio of spending to income, using the annual total income. This intermediate variable was used in the factor analysis.

Initially, the factorability of all 32-consumption ratio items in the survey were examined (see Table 1), using standard criteria for correlation factorability. Twenty-eight of the 32 items correlated at least 0.2 or higher with at least one other item, which suggests appropriate factorability (Cohen, 1988). Responses to the 32-item questionnaire were subjected to exploratory factor analysis using squared multiple correlations as prior communality estimates. The principle factor method was used to extract the factors, along with a varimax (promax) rotation.

Upon review of the initial Eigen values, eleven factors were retained by the mineigen criterion. Factors are defined as individual constructs that are measured by a scale. It is a mathematical determination that scale measures a construct (factor). Because there were eleven factors initially identified, it was imperative to examine how much of the variation (variance) of the scale values is explained by the factors. The first, second, and third factors explained 19%, 4%, and 3% of the variance. The remaining eight factors collectively explained 11% of the variance. These results indicate that the scale measures three factors (constructs). A scree test was performed, suggesting that two factors (conspicuous consumption and utilitarian consumption) were appropriate; thus, these two factors were used in subsequent analysis. The conspicuous consumption factor involved spending on non-essential items, like trips and vacations, while utilitarian consumption involved spending on essential items like water, electricity, and healthcare.

In interpreting the rotated factor pattern, an item was considered to load on a given factor if the factor loading was 0.30 or higher and less than 0.30 for the other factor (O'Rourke & Hatcher, 2013). Loading on a factor determined on which factor a particular scale item belonged. For example, did the amount spent on gifts belong on the utilitarian or the conspicuous consumption factor? An item was also eliminated if it loaded at 0.30 or higher on both factors. Items that load on both factors were ambiguous. Table 1 shows each item and its respective factor loading value. An item was accepted on a particular factor if it its value was at least 0.30 or higher.

Table 1. Factor loadings all 32 consumption items 3

Item	Conspicuous factor	Utility Factor
	Conspicuous scale items	
Trips and vacation	.55	-0.16
Home repair services	.41	-0.08
Household furnishings	.38	-0.14
Contributions	.40	-.18
Gifts	.32	-.27
House services	.49	-0.06
Garden supplies	.33	-0.03
Garden services	.39	-0.08
Clothing	.56	-0.12
Personal care	.39	-0.01
Health services – elective	.33	-0.15
Tickets	.31	-0.11
Sports equipment	.41	-0.18
Hobbies	.39	-.19
Dining out	.54	-.12
Gasoline	.31	-.19
	Eliminated items	
Home/Renter's Insurance	.38	.44
Property taxes	.59	-0.12
Vehicle insurance	.51	.15
Home repair (DIY)	.22	-0.05
Mortgage	.2	.39
Rent	-0.05	.04
Electricity utility	.31	.46
Water utility	.19	.71
Heat utility	.21	.44
Phone utility	.21	.31
House supplies	.19	.36
Car payment	.10	.18
Home repairs	.32	0.30
Medical supplies	.24	.51
Vehicle maintenance	.33	-0.31
Health insurance	.13	0.42

With these criteria, 19 items were found to load on the first factor, which was then referenced as the conspicuous factor. The other 13 items were found to load on the second factor, which was then called the utilitarian factor. However, three of these variables were eliminated because they caused the Cronbach alpha coefficient to fall to an unacceptable level (the Cronbach alpha coefficient is a statistic that determines the reliability of an item in a scale). A coefficient of 0.70 is considered the minimum psychometric value for a scale (Cohen, 1988). The final consumption scale included 16-items with a Cronbach alpha of 0.70.

[3] This table reports Factor loadings and communalities based on principle components analysis with orthogonal varimax rotation for all 32 consumption items. A item 'loads' or belong to a particular category (conspicuous or utilitarian) if the factor for a given item is .30 or higher. If the factor achieves .30 or higher for both factors, it is not used in the scale

4. Discussion, Implications, and Future Research

The consumption scale herein developed is designed to help improve retirement financial security by helping practitioners understand the role of consumption on retirement savings during work life. This scale identities two factors, conspicuous and utilitarian, that may identify potential areas of consumption that may reduce retirement savings. Persons scoring higher on the scale (i.e., those with scores of 40 percent or more relative to their total income), are more likely to be conspicuous consumers, meaning they spend more of their income on items such as vacations, dining out, and hobbies; those scoring lower on the scale are less likely to spend on these items.

This tool is intended to be one instrument among several that can help determine threats to retirement preparation. This measure is intended to elucidate to practitioners and consumers their potential vulnerabilities in accumulating retirement resources during their working years relative to their consumption patterns. Accumulating retirement savings is important in avoiding financial insecurity at retirement, which can affect the quality of retirement and make persons more dependent on programs such as Social Security and Medicare. There are several limiting factors in the current scale development that should be considered. One such limitation is the potential that respondents have misreported their consumption patterns over the past year. It is very possible that people simply cannot recall their expenses for the past year, which would make underreporting more likely.

This scale's psychometric pedigree has been calculated using a population of Americans 50 years of age and older; thus, the scale may only be relevant for the population upon which the scale was created. For example, young adults who are contemplating marriage have different financial pressures and responsibilities than persons who have children in college, or whose retirement is five to 10 years away. During various stages of one's life, different spending and consumption patterns may be necessary and thus, the scale may not be applicable for persons under 50 years of age. The timeframe of the scale may not be representative of a typical consumption year. Persons who bought a car during the year being studied may be replacing a car purchased 20 years ago, indicating considerable service costs and depreciation incurred during the last couple of decades. Or it is possible that persons may have saved for a number of years to afford a luxurious vacation or car.

While there is a mathematical rationale for the delineation of excess or non-excess spending, it is also possible that this scale does not consider cultural leanings, biases or traditions when determining whether a purchase is conspicuous. This is a factor not accounted for in this model. The next step in the development of this scale is a confirmatory factor analysis. This paper provided insight into the preliminary argument for such a scale, however there is a need to confirm the results by including other variables in a more holistic analysis. If the results hold when the scale is included in a complete research study and model, then we will have confirmation of the finding. For the purposes of advancing public policy and consumer welfare in this area, future research should develop consistent and valid measures of conspicuous consumption.

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Disclaimer: John is a research analyst in the Office of Retirement Policy, U.S. Social Security Administration; Email: John.Murphy@ssa.gov. The views expressed in this paper are those of the authors and do not necessarily represent the views of the Social Security Administration.

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