

Does Age Really Matter? An Analysis of Age and Savings Behavior Among Tennesseans

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Abstract

Using data obtained from Extension clientele, this study seeks to understand the relationship between age and length of savings time and the effect of age on savings amount. Findings from the study indicate a dependency exists between age and savings time and that age has an effect on savings amount. Additionally, the presence and influence of three negative life events on non-savers and savers is examined. Results from the study are discussed in light of life cycle theory.

Introduction

For years, theoretical attempts have been made to understand the aggregate savings behavior of adults, but researchers have just over the past few decades had the capacity to test theoretical models using real data and large data sets. Consequently many questions remain about how, and to what extent individual factors impact savings patterns. Using a survey instrument designed by Extension Specialist faculty, and applied to an extensive convenience sample of clientele participating in Extension educational programs, this study seeks to answer the following research questions:

1. Is there a dependent relationship between age and length of savings?
2. What effect does age have on amount of savings per month?

Review of Literature

Since Fisher's theoretical work (1930) on spending and investment, there has been great interest in the variability of individual consumption and savings patterns across the lifespan. While efforts have been made to refine, test and re-conceptual what became known as the lifecycle model, considerable disagreement exists as to the ability of the model to serve as a tool for understanding personal savings behavior. According to the lifecycle model, individual/household consumption will be high and savings low during the early working life. However, as income increases, the amount of money set aside for savings will increase reaching a peak during the most productive work years. The amount saved will be drawn upon to fund post-retirement years (Friedman, 1957).

While attempts to fully validate the lifecycle model with real world data have produced mixed results, efforts have been made to test various components of the model. In his 1998 study of personal savings in the United States, Attanasio examined relationships between age cohort effect and personal savings. Using the Consumer Expenditure Surveys (CEX) from 1980 to 1991, Attanasio was able to identify a typical age profile for savings behavior. According to his research, the typical age-savings profile is humped-shaped with the peak of savings occurring around age 57. In their study of population growth and national savings, Deaton and Paxson, 1997, found that while savings rates vary with the demographic of age, this variance is small resulting in only slight influences on savings. The researchers conclude "although . . . savings patterns can be interpreted in terms of age effects . . . the effects are not always plausible and are frequently suggestive of the importance of other, non lifecycle explanations" (Deaton & Paxson, 1997, p. 113.) Bloom, Canning, and Graham, 2003, cite the need for additional study concerning the extent to which increased longevity and improvements in health impact the savings rate of individuals/ households. Based on their expanded model of lifecycle savings, Bloom, Canning, and Graham find that any accompanying boost in savings due to anticipated increases in longevity would be negated by increased dependency needs among the aging. Furthermore, the authors argue for expanding their model to account for the effects of institutional factors.

Methods

A survey instrument designed to assess personal savings behavior of adults residing in a southern state was developed. The instrument consisted of eight questions concerning savings behavior as well as four demographic questions designed to characterize the sample. Data were collected at a variety of county-based educational programs including programming focused on Human Development, Nutrition and Food Safety, Health and Safety, as well as Personal Financial Management. Of note, however, is that a large amount of data was collected from a summer series of financial education seminars intended to prepare math, social studies, family & consumer sciences

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teachers and Junior ROTC instructors to implement new requirements for inclusion of a personal finance course in the state's required curriculum.

Analysis of Data

A total of 601 surveys were included in the analysis. A majority (62.6%) of the survey responses were from adults ages 46 and older. Only 37.4% of the respondents were from adults under age 46. Data from the remaining 601 surveys were analyzed using Pearson's chi square tests and ANOVAs. The null hypotheses tested were: Length of savings time is not dependent on age, and (2) Mean savings amount is not affected by age.

Results: Length of Savings Time and Age

To test the null hypothesis regarding the dependency between age and length of savings a Pearson's chi-square test of age group and savings time was performed. Since the resulting p-value ($p = <.001$) is less than alpha of .05, the null hypothesis is rejected (see Table 1). The rejection of the null indicates that for this data, length of savings time and age are dependent.

Table 1: Chi-Square Tests: Age and Length of Savings

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	63.746	10	.000
N Valid Cases	423		

An examination of the adjusted residuals for age and length of savings in Table 2 provides more detail concerning about the dependency between age and length of savings. The adjusted residual indicates the extent to which the observed count in a cell is less or more than would be expected under the null hypothesis of no dependency. An adjusted residual of ≥ 2.0 or ≤ -2.0 indicates a greater difference between the cross tabulated factors. Among those saving less than one year, the differences were most evident in age groups 18-24 (saving more than expected) and age group 46-55 (saving less than expected). Among respondents saving one to five years, differences were slightly more than expected in the age group 18-24, more than expected in the age group 25-35, and less than expected in the age group 56-65 and age group greater than 65. Among those respondents saving more than five years there were less than expected in the age groups 18-24, 25-35, and 36-45. There were more than expected in the age group 56-65 and only slightly more than expected in the age group over 65.

Table 2: Adjusted Residuals Age Group and Length of Savings

Age Group	Length of Savings		
	<1yr	1-5 yrs	>5 yrs
18-24	4.4	2.2	-4.4
25-35	1.7	3.1	3.7
36-45	1.8	1.9	-2.6
46-55	-2.5	-0.5	1.9
56-65	-1.9	-3.0	3.7
>65	0.1	-2.5	2.1

Results: Savings Amount and Age

More than a third (35.4% of respondents) were savings \$100 to \$300 per month. The next highest amount category was $> \$500$ with 27.5% of respondents saving more than \$500 a month. To test the null hypothesis that mean savings amount is not affected by age an analysis of variance (ANOVA) was performed. The greatest variation from the mean in amount saved was found for respondents ages 56-65 as compared to the other age groups. This age group significantly differed in mean amount saved from age groups 18-24, 25-35, and over 65. Age groups inclusive of ages 18-45 did not differ significantly in mean amount saved, nor did age groups inclusive of ages 25-55.

Impact: Life Events on Savings

Of the respondents who indicated reasons for not saving, 38.7% indicated they were not saving due to a lack of income; 45.2% due to excess expenses; 9.0% due to having too many things they wanted to spend money on; 3.2% due to not giving thought to their finances, and 8.4% due to perceiving they are already financially secure.

Separate analysis was performed to determine whether the sub-group of respondents who had experienced a life event (high medical expenses, loss of home or property, and significant reduction in household income) differed significantly in the mean amount saved to the sub-group of respondents not experiencing such an event. No significant difference was found in the mean amount of savings overall. However, within the sub-group affected by life events there were significant differences in mean amount of savings by age group. The largest effect was found for age group 56-65. The group differed significantly in mean amount saved from age groups 25-35 and over 65.

Table 3: Life Events Experienced by Non-savers and Savers

	Non-Savers	Savers
Medical expenses	26.5%	16.4%
Loss of home/property	1.3%	1.1%
Reduction in household income	25.8%	15.1%

Conclusions and Recommendations

The fact that such a large proportion of respondents were public school teachers likely meant that the convenience sample characteristics differed somewhat from the general population. First, the fact that the sample had relatively high job security and good insurance protection likely meant that individuals negatively affected by unemployment were under-sampled, and that the negative effects of high medical cost may have been mitigated by insurance. The number of teachers included in the sample likely also limited variability of certain sample characteristics. On the other hand, the greater homogeneity of the sample might have constrained the effect of income, which was not measured or controlled in the analysis.

While the data generally supports the theory of lifecycle savings, this study found that the degree of dependency between age and length of savings time is not equal across all of the age groups. The data confirms that respondents tended to delay savings while young and attempt to “catch up” immediately prior to retirement. This raises the question as to what role other life stage factors may play in influencing length of savings time.

The data reveals particularly pronounced differences in the savings patterns among young adults, those approaching retirement, and those retired. The effects predicted by life cycle theory appear to be more pronounced early in adulthood and in pre-retirement. In other words, young adults appear to be saving less than life cycle theory may predict, while those immediately pre-retirement are saving more than predicted by lifecycle theory. While researchers have proposed savings among age groups follows a smooth humped-shaped distribution peaking around age 57, the data from this study indicates the shape of the distribution is skewed right, initially flatter through middle age, peaking sharply prior to retirement and falling sharply after retirement.

Across all age groups, those affected by life events were not as likely to indicate saving the maximum amount per month (\$501+) as those not affected. While they still saved, these individuals were not able to save as much per month as those who were not affected by the life events mentioned. This effect was especially pronounced in the pre-retirement age group indicating that negative life events occurring immediately prior to retirement have the potential for especially harmful financial results.

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