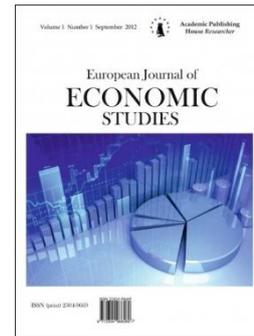


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Effect of Person's Age on Supplemental Investment Habits Towards Retirement in Federation of Bosnia and Herzegovina

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Abstract

This research will examine the effect of person's age on supplemental investment habits towards retirement in Federation of Bosnia and Herzegovina. Thus, the basic aim of the study is to find out if the age of individuals have an effect on saving and investing habits for retirement. It has been observed that age of person has effect on the supplemental investment habits towards retirement. In this research both primary and secondary data will be used. The primary data for this research was gathered in the form of survey. Data analysis was conducted in SPSS software. Statistical tests were run to see if the age of individuals has effect on saving for retirement. As we found in previous researches that age plays very important role in saving and investing habits, also in this research we came to the conclusion that age of individuals really plays an important role in saving habits of citizens from Federation of Bosnia and Herzegovina.

Keywords: investment habits, retirement plan, pension savings, supplemental investments, person's age.

1. Introduction

A supplemental investment habit is very important factor for shaping the economic well-being of individuals. Individuals need saving for many reasons, but in this study we will just focus on saving to prepare for retirement. It is important to start saving early and to save consistently. So, the more you are able to save during your working career, the greater income will be during your retirement.

In this study the main factor that is wanted to be examined is effect of person's age on supplemental investment habits towards retirement in Federation of Bosnia and Herzegovina.

In following sections basic definitions of keywords will be defined, the reasons how age is affecting supplemental investment habit towards retirement as well as research objectives and hypothesis will be presented and analyzed. The collected data for this study will be presented in methodology section. For the methodology section, one hypothesis will be tested. Data will be analyzed by performing descriptive statistics and inferential statistics. Results of this research will outline key factors of person's age affecting supplemental investment habits towards retirement in Federation of Bosnia and Herzegovina.

2. Literature Review

The main part of a successful lifelong investment strategy is disciplined saving habits, regardless of whether you are saving for retirement, or something else (Pettigrew, 2007). For the

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respondents of (Luigina Canova, 2005) saving for retirement is important to guarantee financial situation in the retirement period of life.

Investing is a lifelong process. The best possible way is to start saving for retirement as soon as it is possible, so you will be in better position in the long run. It's best to start saving and investing as soon as you start earning money. The discipline and skills you learn will benefit you for the rest of your life. But no matter how old you are when you start thinking seriously about saving and investing, it's never too late to begin. It's important to start saving early and to save consistently. The more you are able to save during your working career, the greater your income will be during retirement (National Research Council, 2013). In this research we agree with (Cobb-Clark, 2006) that most of individuals may have some kind of difficulties in summing their expectancy about retirement plans.

Hogarth (1991) in his article found that age is significant factor influencing saving for the future. In the article of (Lusardi, 1996) it is stated that the age distribution within one household has effect on the level of saving. As well as (Furnham, 1985) said that age plays very important role in saving habits. His research showed that not all people save in the same way and for the same reason. Most young people save in a bank, the middle age people save through a mortgage, and the older people save through life insurance. Reasons for saving and investing also change through life cycle.

According to (Nick Pettigrew, 2007) research, life stage is one of the most important variables that may have effect on saving behavior. When individuals get older they increased financial responsibilities. These responsibilities stimulate them to start saving as soon as possible, and also to save more consistently. Generally, most young people spend the money that they earned on enjoying the life while they are still young, and they think they would be in better financial position when they get older and start saving until then. This means that young people prioritize spending now over saving for the future.

Many respondents in research report of (Nick Pettigrew, 2007) think they will wait for saving until they have better job and will be more stable in their lives generally. Thus, (Lusardi, 1999) in his research consider that almost one-third of people that are in age from 51-61 yet didn't start to think or save for retirement.

Individuals with age over 50 save more regularly than the individuals around 30 years, and those aged 30 more than younger individuals. Older people save more for retirement whereas younger people save more for house or an apartment (Furnham, 1985).

Hurd (1987) also has the same opinion that elderly seem to accumulate more money as they age even though the life cycle hypothesis implies they should de-cumulate.

Many young people are focused on the present financial planning, but few of them are starting to think when they reach 30s (Nick Pettigrew, 2007). As an outcome, many of them are not thinking about how their retirement would be funded: My opinion settles with his, many young individuals in Federation of Bosnia and Herzegovina are not even thinking about retirement and investing for retirement by their age increases.

Many young workers are unable to save money because many young workers cash inflows are insufficient to support their cash outflows, making it near impossible to set aside money to save. In addition, when young workers are able to find extra cash to save for retirement, many of them have difficulties how to invest these funds (Greco, 2009). Younger individuals also believe that people that are aged from 50 and on are able to save more, because they don't spend money on stuffs that younger people spend on. As well as, in the research of (Barbara Griffin, 2013) it is said that older workers are engaged more in retirement planning than younger workers.

Participants in the research of (Nick Pettigrew, 2007) detected some number of barriers towards saving for the retirement. These included the fact that they saw their own retirement as being a long way off, meaning that it was not worth worrying about at this stage in their lives. Most regarded their 30s as a time when they might start thinking about saving for their retirement.

Nick Pettigrew (2007) in his research stated that individuals need higher income to save more for retirement, because they don't want to spend their actual amount of money. If salary was high enough people will be more motivated to save for retirement. Most of them also think that "good" job will bring the amount needed for saving for retirement. The "good" job is the one that brings more income and also it brings stability and longevity in life. Also, as (Cobb-Clark, 2006) wrote in his paper, retirement plans are very closely related to current labor market position.

Hypothesis

Logical hypothesis can be derived from the research title. Key point in this research is to prove or disprove that the supplemental investment habit is effected by the age of person: **“There is significant relation between age and supplemental investment habits of citizens”** This actually means that if the relation between age of the person and supplemental investment habits of citizens are significantly related, it means that age of person directly has an effect on supplemental habits of citizens. Validity of the hypothesis in this research will be resolved by the correlation coefficient (r), as well as with the coefficient of determination r^2 . If correlation test proofs that the correlation coefficient and coefficient of determination are close to -1 the hypothesis will “fall”, or if it is close to 0 or +1 hypothesis will “stand”.

Methodology

The reason why this study has even been initiated is to see the effect of age on supplemental investment habits of citizens in Federation of Bosnia and Herzegovina. The goal of this study is to show that the age of person has an effect on supplemental investment habits. The way of testing the above mentioned hypothesis is in the form of survey. It was conducted mostly through internet (e-mail, Facebook, etc.) and in printed forms. The sampling method that was used is simple random sampling. Online survey was made by Google Forms, an online tool, for easy survey making. The survey was consisted of 13 questions in English and Bosnian language. Analysis will portray dependent variable, which is supplemental investment habits of citizens, and independent variable, which is age of the person, and in the end the inferential data analysis will be done to see the connection between those variables. The relation between age of person and supplemental investment habits will be analyzed by statistical regression and correlation. Statistical regression will focus on the relationship between age of person and the supplemental investment habits of citizens.

3. Results and discussion

Descriptive statistics

Descriptive statistics are numerical and graphical methods used to summarize data and bring forth the underlying information (Gaur, 2009). In this research the age is variable that is observed.

An online survey was conducted to collect data. A total of 230 responded to the online questionnaire. Respondents from 21 to 30 years of age were the majority as 36,09 % ; the second major category were respondents aged from 31 to 40 years as 23,91 %; the third category were the people aged from 41 to 50 years as 19,57 %; fourth category were people aged from 51 to 65 years as 17,83 %, fifth category were people below 20 years as 2,2 %, while last category were people above 65 years as 0,4 %.

The Figure 1 below demonstrates the percentage distribution of the respondents.

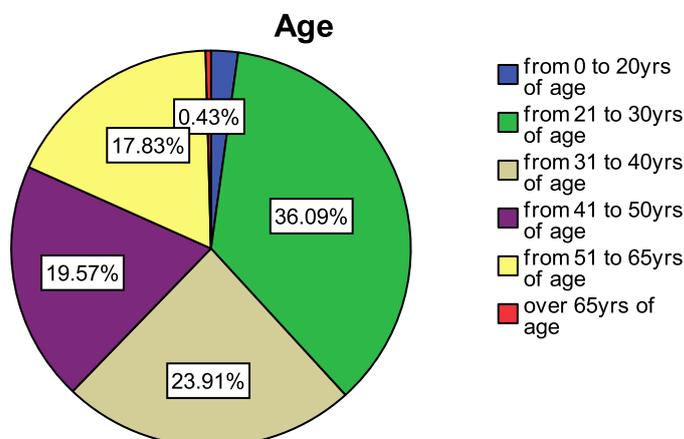


Figure 1: Respondent's age
Source: Author's own calculations.

Table 1. Age distribution of respondents

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	from 0 to 20yrs of age	5	2.2	2.2	2.2
	from 21 to 30yrs of age	83	36.1	36.1	38.3
	from 31 to 40yrs of age	55	23.9	23.9	62.2
	from 41 to 50yrs of age	45	19.6	19.6	81.7
	from 51 to 65yrs of age	41	17.8	17.8	99.6
	over 65yrs of age	1	.4	.4	100.0
	Total	230	100.0	100.0	

Source: Author’s own calculations from SPSS

As well, in the [Table 1](#) it is shown that the most respondents were aged from 21 to 30 years. The number of respondents aged under 20 and over 65 years was very low, only six. The reason why there were low respondent rate for those who were aged over 65 might be that the questionnaire was in online form. But, for those under 20 the reason might be low interest in such research. Respondents aged from 21 to 65 years are in total 224.

Correlation test

Correlation is a measure of relationship between two variables. The correlation coefficient gives a mathematical value for measuring the strength of the linear relationship between two variables. It can take values from -1 to 1, +1 is representing significantly positive linear relationship, 0 representing no linear relationship and -1 representing significantly negative relationship ([Gaur, 2009](#)). In this analysis bivariate correlation will be tested. Bivariate correlation tests the strength of the relationship between two variables without giving any consideration to the interference some other variable might cause to the relationship between the two variables being tested.

Table 2. Correlation test

		Correlations				
		Age	How_often_p eople_think about_retire ment_fund	Additional _savings_ for_retire ment	Where_partic ipants_save_ additional_m oney	Amount_of _additional _saved_mo ney
Age	Pearson Correlation	1	.308**	.318**	-.223**	.216**
	Sig. (2-tailed)		.000	.000	.004	.007
	N	230	230	230	167	153
How_often_people_ think_about_retire ment_fund	Pearson Correlation	.308**	1	.307**	-.161*	.011
	Sig. (2-tailed)	.000		.000	.037	.893
	N	230	230	230	167	153
Additional_savings_ for_retirement	Pearson Correlation	.318**	.307**	1	-.569**	.439**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	230	230	230	167	153

Where_participants_save_additional_money	Pearson Correlation	-.223**	-.161*	-.569**	1	-.354**
	Sig. (2-tailed)	.004	.037	.000		.000
	N	167	167	167	167	149
Amount_of_additional_saved_money	Pearson Correlation	.216**	.011	.439**	-.354**	1
	Sig. (2-tailed)	.007	.893	.000	.000	
	N	153	153	153	149	153

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Source: Author’s own calculations from SPSS

In every correlation matrix cell, the Pearson’s correlation coefficient is derived, as well, *p*-value for two-tailed test of significance, and the sample size. From the Table 2 we will just follow the relation between age and four other variables (how often people think about retirement fund, additional savings for retirement, where people save additional money and amount off additionally saved money). So, from the matrix output we can see that the correlation coefficient between age and how often people think about retirement fund is 0.308 and the *p*-value for two-tailed test of significance is less than 0.0001. Thus, from these numbers we can conclude that there is a strong positive correlation between age and how often people think about retirement fund. Furthermore, correlation coefficient between age and additional savings for retirement is 0.318 and the *p* value < 0.0001. Thus, they are also highly positively correlated. Third relation we wanted to test was between age and where participants save their additional money. Correlation coefficient between these two is – 0.223 and the *p* value < 0.005 at 5 % significance level. We can conclude that between age and where participants save their additional money is strong negative correlation. Finally, as fourth relation we wanted to see if age has an effect on participants amount of additional saved money. So, we see from the matrix that they are positively correlated because correlation coefficient is 0.216 and the *p* value is 0.007.

Regression analysis

A regression analysis is done to see how the values of one variable are related to another variable and make it able to predict the value of one variable based on another variable. In this analysis simple regression will be tested in order to examine the relationship between additional savings for retirement with the age. Simple regression is analysis where **dependent variable** is based on value of **one independent variable**.

Table 3. Regression analysis

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.912	.084		10.914	.000
	Age	.126	.025	.318	5.069	.000

a. Dependent Variable: Additional_savings_for_retirement

Source: Author’s own calculations from SPSS

From the Table 3 we can see that *p* –value for beta coefficient of age is 0,000 (shown in the Sig column). This value is significant at 5 significant level, since it is less than 5 %. Thus, we cannot accept the null hypothesis which states that there is no significant relationship between age and supplemental investment habits of citizens. Accordingly, we can say-so that the age of citizens is positively related to the supplemental investment habits of citizens in Federation of Bosnia and Herzegovina.

4. Conclusion

The conclusion that was derived from above research and analysis is that the hypothesis "...*There is significant relation between age and supplemental investment habits of citizens ...*" stands, as the statistical tools have shown that the relationship between age and supplemental investment habits of citizens is positively related. The findings of this paper are similar with the previous literature. As (Furnham, 1985) said that age plays very important role in saving habits, also in this research we came to the conclusion which states: age of individuals plays very important role in saving habits of the citizens from Federation of Bosnia and Herzegovina. This conclusion was gathered from the regression analysis.

One of the limitations of this research can be the online survey which lacks the presence of the interviewer to help out. This situation raises the risk for less reliable data. Since the responses were anonymous, some of the surveys might have been filled out just for the sake of completing the request and not with the intentions to contribute to the research itself. This limitation can serve as an example for the students that will graduate nearby, as well for the master and PhD student who could expand this topic deeper.

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