Too Far Away to Care about? Predicting Psychological Preparedness for Retirement Financial Planning among Young Employed Adults[1]

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Abstract

Knowing which factors underlie beliefs concerning financial planning for retirement (FPR) among young adults is essential for designing interventions to support their actual FPR. Therefore, we examined predictors of FPR-related beliefs and current retirement savings in a sample of 502 employed Slovak adults aged 20 to 35 years. Actual savings and all dimensions of psychological preparedness for FPR were positively predicted by retirement financial literacy and self-rated financial literacy. Moreover, we found that perceived FPR emotional load decreases with education, and perceived FPR task complexity diminishes with age. Further, increasing income was predictive of a higher subjective FPR competence and a perception of FPR as less stressful. Finally, professional experience in the financial domain was linked to a higher self-assessed capability in terms of FPR, but also with a lower personal FPR engagement. Our findings stress the need for effective communication of information about FPR's relevance to young people.

Keywords*: financial retirement planning, financial retirement beliefs, financial literacy, saving, young adults*

JEL Classification*:* J26

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[1] This research was supported by a grant from Slovak Ministry of Education Science, Research and Sport of the Slovak Republic VEGA 2/0118/17 *Risk assessment in decision making of individuals on the personal and company/business finances and business opportunities*.

Introduction

Pension Reform in Slovakia

Due to demographic and economic changes, almost all countries in Europe are facing the problem of how to enable their citizens to be financially secure in old age. Within both shorter and longer time horizons the resources that working people have been contributing to the pay-as-you-go (PAYG) pension schemes will not be sufficient to maintain standards of living for all pensioners. As the old model of sharing society's resources between working people and retirees is becoming unsustainable, governments in Europe have implemented structural reforms within their pension systems. The most dramatic pension reforms were witnessed in Central and Eastern European countries, many of which have undertaken reform as part of a much wider transition from communism to liberal democracy (Hershey, Henkens and van Dalen, 2010; ILC-UK, 2012).

Slovakia belongs to those countries of the European Union where demographic changes will be detrimental to the provision of retirement pensions in the very near future. According to forecasts, Slovak population will dramatically decrease from about five and a half million to five million by 2030. In the 1950s, about 100,000 children were born every year. The birth rate decreased to 61,000 children per year in the 1990s, and those latter people are now entering the labour market. The number of employed people of working age is falling noticeably due to this decline in the population growth, and at the same time the baby boomer generation is retiring in Slovakia and their life expectancy is increasing (Vaňo, 2015).

In 2004, Slovakia implemented the pension reform that has been gradually increasing the statutory retirement age and which seeks to support the employees own retirement savings. The government aimed to diversify pension risks and stabilize the basic income of individuals in their old age by creating additional pension funds. The pension system in Slovakia currently consists of three pillars. The first, the state PAYG pillar, is mandatory for all workers. The second and the third pillar are based on accumulating private savings in private financial institutions and both are optional for employees at present. Due to this pension reform, the responsibility has been shifted to individuals – who should plan and save for retirement in order to supplement the amount provided by the state pension scheme and so secure their own financial well-being in retirement.

Consequences of Pension Reforms for Young People

The pension reforms which have occurred in Slovakia are consequential, especially for young people. It is almost certain that they will not be provided with such high state pensions as the current pensioners have so far been receiving. Thus,

financial planning for retirement becomes crucial and more critical for young people rather than for their counterparts who are already approaching retirement age.

The pension reforms mean that the younger generations are being urged to start their retirement planning from the very beginning of their professional careers. An early start with retirement saving seems to be a necessary precondition for ensuring one's own security in old age. Yet, relatively small numbers of young people in Slovakia take this step. Out of those who entered the labour market between 2008 and 2011, only 30% voluntarily joined the second pillar (as of 2015; Rizman, 2016). This was due to several reasons. Since 2005, the terms and prerequisites for savings in the first and the second pillar have changed several times. Political disputes over the second pillar and its recurring opening and closing (in terms of being available for savers) also did not strengthen savers' confidence. Both the state and the private financial institutions have failed to comprehensively inform young people about conditions and prospects relating to financial security in retirement. There is another reason for disengagement with the second pillar: this new pension scheme requires higher levels of both individual responsibility and financial knowledge, compared to PAYG scheme.

Although empirical studies concerning this topic in Slovakia have been missing so far, retirement specialists and officials in pension management companies observe that very few young people are aware of the basic principles of financial security in retirement (see for example Kopecký, 2017; Mittaš, 2017). Notably many young people do not clearly understand that they must build their own capital pension contributions in the second and the third pillar while the contributions they pay to the first pillar are immediately consumed for the payments to the current pensioners. Trust in the state-based pension scheme – a remnant from older generations – is still quite high among many young people. Yet, given the current situation, this confidence is unfounded.

The first step in financial planning for retirement (FPR) for young people in Slovakia is enrollment in the second pillar. In this pillar, individual retirement savings accounts are opened for them which accumulate their employers' and their own contributions. The decision to enroll in this pillar should be made early in one's career – ideally immediately after entering one's first job. According to current regulations, only people up to 35 years can enroll in the second pillar. As with other financial choices, multiple factors determine the decisions made by young people to plan and save for retirement – either through the enrollment into the second pillar or by using other forms.

Determinants of FPR

Understanding why some people succeed and others fail to save adequately for retirement has become a topic of policy interest and represents a great challenge

for social scientists worldwide. Most FPR studies have been conducted within the context of the United States pension system. However, several authors have pointed out important differences between the history of pensions and its institutionalization in the U.S. and Europe. In addition, there are also regional differences within Europe. The Eastern-Central European countries are characterized by a transition period to newly founded pension schemes; i.e., they have a short tradition of individual retirement accounts and a great reliance on state-based public pension schemes (Fernández-López et al., 2010).

Empirical studies of financial preparation for retirement take place mainly in relation to economics, behavioural economics and psychology. The most commonly examined factors related to financial preparation for retirement are: *demographic* (such as age, gender, marital status, education, and region); and *socio--economic* characteristics (income, source of income, employment status, and financial market indicators). Links between psychological factors (personality traits, forethought, intentionality, self-regulation, attitudes, beliefs, retirement goal clarity, etc.) and FPR have not been extensively examined so far and studies concerned with the interaction of psychological and structural factors are even scarcer.

Structural Factors and their Role in FPR

Many studies agree that the probability of saving for retirement rises with *age* in accordance with the life-cycle theory. People approaching retirement spend more time thinking, planning, saving and otherwise preparing for retirement (Adams and Rau, 2011). Baláž (2012a) found that people in Slovakia start to think about additional savings for retirement, at the earliest, in their 50s. Compared to the elderly, young people often see no reason to engage in preparation for retirement since retirement is still so far away for them. This is quite alarming because the pension reforms clearly imply that an early onset of financial planning for retirement among young people is necessary.

A common finding in empirical studies is that *women* are less likely to save for retirement than men. Women were found to be less financially literate and less secure about their ability to make financial decisions (Bucher-Koenen and Lusardi, 2011). This, however, corresponds to a complex interplay of numerous factors. Noone, Alpass and Stephens (2010) examined the gender gap in retirement planning and savings in more detail, assessing the extent to which women are disadvantaged with regard to their retirement planning and the factors that may affect retirement plans. They found that perceived retirement and current economic living standards were associated with financial preparedness. Women were economically disadvantaged compared to men and this negatively affected their financial preparation.

A certain level of *income* is needed to engage in any financial planning. A higher salary increases the propensity of an individual to engage in retirement planning: the higher an individual's income, the higher the probability that they will save for retirement. In addition, income levels tend to positively correlate with employment status and education. Individuals with higher income and employment status have access to additional benefits and this means they also have greater resources available for saving.

Formal education is expected to be in a positive relationship with planning skills and thus more educated people should be more likely to financially plan for retirement. Individuals with higher education have both greater earning potential and are more able to understand the need for engagement in their retirement preparation (Lusardi and Mitchell, 2011). Yet, the results in relation to this are more complex, partially because education, income, and wealth tend to be highly correlated. The research findings in general indicate that retirement savings increase with age, income, and education level.

As for more specific individual predictors, it can reasonably be expected that individuals with a higher level of *financial knowledge* have a greater tendency to plan and save for retirement. Empirical results show that financial knowledge is positively related to retirement planning activities and financial saving practices. Moreover, the research findings suggest that access to financial knowledge, rather than overall education level, is the factor which is highly influential in retirement saving (Hershey and Mowen, 2000). Van Rooij, Lusardi and Alessie (2011) found a strong positive relationship between financial knowledge and retirement planning in the Netherlands; those who were more financially knowledgeable were more likely to plan for retirement. In addition, Hayslip, Beyerlein and Nichols (1997) found that younger adults tend to show a high level of retirement anxiety because they lack accurate information about retirement.

Fernández-López et al. (2010) analysed the determinants of European retirement savings based on a sample of more than 6,000 individuals from 8 European countries. Their results indicated that the driving forces in the decision to save for retirement were quite similar across all these countries. This choice was positively related to age, financial literacy, household income, employment status, and saving habits. Although the country-level institutional factors do seem to play a crucial role in the individual's retirement attitudes, remarkably, the authors found that the same three main factors – age, financial literacy, and income – determine retirement saving behaviour across all eight countries. Higher levels of these variables positively influence retirement savings. As an indicator of whether people plan to save for retirement (the dependent variable) Fernández-López et al. (2010) used one question which addressed saving targets.[2]

Beliefs Concerning FPR and their Role in FPR

Hershey, Jacobs-Lawson and Austin (2012) argue that "demographic indicators are, in and of themselves, not explanatory variables, but instead proxies that covariate with other indicators that are more explanatory in nature" (p. 417). Demographic and structural characteristics represent objective and verifiable measurements, thus, they serve important functions when it comes to public policy interventions at a global level. However, demographic and structural indicators do not explain a sufficient amount of variance in individuals' retirement financial planning and saving. Moreover, the relationships that have been found between structural indicators and FPR have not been consistently supported across all studies.

The decision to save for retirement, which is so far-distant in young people's minds, results from beliefs which an individual holds about the relevance of financial preparation for retirement and all related aspects. In general, attitudes, emotions, and beliefs (whether accurate or not) represent factors that drive much of one's financial behaviours (Klontz et al., 2011). In order to initiate financial preparation, for instance, people have to believe that the savings and investments will result in improvements in their standard of living in their post-employment period. They must be sure that they have sufficient knowledge and are competent to plan and invest. In addition, their perceived urgency of an early start of FPR is of great importance. They need to believe that this task is not beyond their capacity and also that they have sufficient resources that they can, indeed, save. It is also crucial that they do not experience too much stress and anxiety when dealing with financial transactions and financial decision making.

Hershey and his colleagues incorporated psychological indicators into their models of financial planning for retirement. They suggested that the psychological constructs mediate the relationships between demographic indicators, and financial behaviours and decision making. In 2004, Hershey introduced the first conceptual model using dimensions important for creating "psychological profiles" of investors. Similarly to Payne, Bettman and Johnson (1993), Hershey considered the decision makers' personalities, the tasks, and the environment (cultural ethos) to be the critical factors in financial decision making. With respect to the domain, financial resources and economic forces have been added as additional factors (Hershey, 2004, p. 32). In the 2007 study, Hershey et al. verified

[2] The authors asked: "What do you/would you save for? (retirement, housing, consumption, holidays, contingency reserve, particular purposes such as a car, for the family, long-term care planning, special event, no specific reason, all the above)" (pp. 235 – 236). Participants who chose saving for retirement as their first option, and those with pension funds, were coded as 1, and otherwise participants were coded as 0.

the model labelled as psycho-motivational – because it describes the psychological field of forces that predispose individuals to act in personal finance. In the follow-up studies, the strong effects of psychological variables were verified also in cross-cultural comparisons (Hershey, Henkens and van Dalen, 2007; Hershey, Jacobs-Lawson and Austin, 2012).

The Present Research

The objective of this study is to explore factors that support positive beliefs in relation to financial planning for retirement and facilitate the subsequent engagement of young employed adults in retirement saving. Numerous factors may contribute to positive attitudes and retirement saving choices. The challenge is to identify the cues that are relevant in predicting young people's tendencies to prepare financially for retirement, and to assess the contribution of individual cues. Therefore, we analysed the extent to which structural variables and financial knowledge predict those beliefs that are important in financial planning for retirement among our target group.

We focused on young people who are employed. Although many university students are likely to have had experience with multiple jobs of relatively short durations, they still maintain their student status (i.a., social security contributions for students are paid by the state and they do not have to decide whether to join the second pillar). The employed young people have already entered the adult workforce, and with more or less success, they are striving toward economic self-sufficiency. Students and employed young people, although of the same age, differ not only in work commitments and security of permanent income, but they may also have different work-related plans, attitudes, and ideas about labour market opportunities, resulting from their different socio-economic status. We have examined psychological predictors of financial planning for retirement among undergraduates in economic and non-economic disciplines in another study (Bačová and Kostovičová, 2017).

We included structural variables and personality characteristics (beliefs) in our research study as they interact in generating the forces that motivate young employed people to financially plan and prepare for retirement. In addition to the socio-demographic variables which have been investigated most frequently so far (age, gender, education, income, and employment sector), we were interested in whether professional experience in the financial domain, which is assumed to be linked to higher financial skills, plays a role in psychological preparedness to financially plan for retirement. Three indicators of financial knowledge were included: performance in the general financial literacy test and the retirement financial literacy test, and subjective assessment of financial knowledge.

In order to capture how young people perceive the environment, the tasks, their capacities, and their opportunities in relation to financial preparation for retirement, we designed a personal belief inventory. It comprises all important components that are involved in financial preparation for retirement, i.e. the socio-legal environment of FPR, the FPR task, and one's capacity and motivation for FPR. Even though the inventory has been tailored for the conditions of financial retirement planning prevalent in Slovakia, we believe it is suitable for use in other cultural and legal environments. Thus, the scales focus on the general aspects that are important when considering engagement in FPR: confidence in the pension system, FPR task demands, perceptions of own competence, motivation, and emotional load.

To sum up, our objective was to examine the extent to which structural variables and financial knowledge predict beliefs about financial planning for retirement in the sample of young employed people. We expected that being older, male, more highly educated, better-paid, in work in a financial occupation, and having greater financial literacy would be predictive of more positive beliefs about financial planning for retirement and higher current retirement savings.

Method

Participants

A sample of 759 young employed Slovak adults was recruited via a marketing agency. Financial non-professionals were addressed through the online panel. Financial professionals were searched for in the database and then phoned to request their participation in the research. Both groups filled out the electronic questionnaire which included all dependent and independent measures. We excluded almost one fifth (n = 146) who failed to pass the attentional check. Another 111 people were excluded due to ambiguous answers on FPR beliefs items (i.e., "neither agree nor disagree" for more than 50% of statements) or due to missing data.

Consequently, we analysed the data from the remaining 502 participants – 52% females (n = 259), and 48% males (n = 243) – aged 20 to 35 years (M = 29.9, SD = 3.8). More than a half of the sample (n = 282) had a university degree and the remaining 43.8% (n = 220) had completed secondary education. One fifth (n = 100) of our sample was employed in the public sector and the rest (n = 402) worked in the private sector (including self-employed people). A quarter of our participants (n = 128) were professionals in the financial domain, working as accountants, economists, invoice clerks, pay clerks, financial managers

or financial officers. As for the financial situation, the monthly income of 23.7% (n = 119) of the participants was lower than 500 EUR, it ranged from 500 EUR to 800 EUR among 40.6% (n = 204) of the participants, and the monthly wages of the remaining 35.7% (n = 179) participants were higher than 800 EUR. The intervals for monthly income were based on calculations determining whether entering the 2nd pillar is more or less advantageous for the employee's future pension although there are several other important factors that might influence this.

Design and Procedure

After completing a set of socio-demographic items, the participants assessed their understanding of financial matters (i.e., they self-rated their financial literacy) and filled out two objective financial literacy tests (i.e., overall financial literacy, and retirement financial literacy). After answering all the financial knowledge items, participants were provided with a brief description of the pension system in Slovakia in order to ensure the same information about FPR opportunities were in the minds of all the participants. Subsequently, the participants were asked to express their level of agreement with statements, so capturing their beliefs concerning financial planning for retirement. Finally, the participants answered some questions about their current financial preparations for retirement (participation in the three pension pillars, and savings and investment; see the next section for more details).

Dependent Measures

Beliefs Concerning Financial Planning for Retirement

In the process of developing the FPR beliefs inventory, we tried to identify the most relevant beliefs of young people with regard to financial planning for retirement. We gathered fifty-two statements that were intended to address the components of the FPR process. The first set of items concerned their assessment of the social and legal environment of FPR, and their confidence in the society's economic system – specifically relating to reliance on state social security in FPR. The next category of items focused on their perception and evaluation of the relevance, feasibility, and complexity of the FPR task. The final set of statements allowed for a self-evaluation of the participants' characteristics, such as their perception of the future, their attitudes to financial risk, motivation for FPR, self-rated FPR personal competence, financial stress and anxiety, and locus of control. These items were administered to 602 participants working in non-financial professions. As a result of a psychometric analyses of the responses (Bačová et al., 2017), we finalized the inventory as an overall measure of *psychological*

preparedness for FPR. It contains 23 items, grouped into 5 scales. Namely, trust in the 2nd pillar (2 items, α = .75), beliefs about personal competence in relation to FPR (4 items, α = .76), beliefs about personal engagement in relation to FPR (7 items, α = .81), beliefs about the task complexity of FPR (5 items, α = .78), and the emotional load represented by FPR (5 items, α = .78).

The Trust in the 2nd pillar scale captures the participant's beliefs concerning the idea that savings in the 2nd pillar will result in improvements in one's standard of living in retirement. *The Personal competence scale* represents the participant's belief in their own abilities in relation to FPR and their self-rated knowledge of possibilities for FPR. *The Personal engagement scale* focuses on the perceived need for an early start to FPR. *The task complexity scale* expresses an overall rating of the FPR task demands, including the difficulties related to entering and participating in the 2nd pillar. *The FPR emotional load scale* concerns the stress and anxiety which accompanies retirement financial planning and decision making, along with a possible lack of financial resources. A higher score in the scale means a higher level in terms of the belief. All scales are given in Appendix 1.

Current Financial Preparation for Retirement

We addressed the engagement of our participants in financial preparation for retirement beyond the mandatory 1st pension pillar: participation in the 2nd pillar and in the 3rd pillar, and in other investments. We created an overall measure of retirement saving methods, ranging from 0 to 3 – *Current saving*. Moreover, we were particularly interested whether participants are enrolled in the 2nd pillar – *2nd pillar saving*.

Independent Measures

Socio-demographic Indicators

We focused on six possible socio-demographic predictors of FPR beliefs and current savings among young adults: *age*, *gender* (0: female, 1: male), *education* (0: high school, 1: university), *employment sector* (0: state, 1: private), *professional experience in financial domain* (0: no, 1: yes), and monthly *income* (1: less than 500 EUR, 2: 500 – 800 EUR, 3: more than 800 EUR).

Financial Literacy

Self-rated Financial Literacy

The participants indicated a subjective estimate of their understanding of financial matters – *Self-rated financial literacy* – answering the following question: "To what extent do you understand economic matters such as interest,

inflation, mortgage and the like?" (1: "I do not understand at all"; 5: "I understand very well").

Objective Financial Literacy

Six multiple-choice items were used to measure comprehension of financial concepts. The first four questions are well established within surveys designed to measure financial literacy in the U.S. and other countries (e.g., Bucher-Koenen and Lusardi, 2011; Lusardi and Mitchell, 2011; Van Rooij, Lusardi and Alessie, 2011). They have been widely replicated and adapted (in Slovakia see Baláž, 2012b). We also used two additional questions focused on long-term investments (although some of the basic financial literacy questions were time-framed as well). The first question addressed knowledge of inflation and purchasing power: i.e., real rates of return over time. The basic calculations regarding compound interest rates were the essence of the second question. The third question focused on the understanding of risk diversification benefits (reduced risk). The comparison of entry and exit charges and investment returns over 10 years were the subjects of the fourth question. The fifth question tested knowledge concerning mortgage interest. And finally, the participants' understanding of risk reduction over a long-term horizon investment was measured via the sixth question. All questions are listed in Appendix 2.

Objective Retirement Financial Literacy

The 13-item *Retirement financial literacy* test was designed to determine the level of knowledge concerning the retirement financial system in Slovakia. The multiple-choice questions addressed the overall pension system and the three pension pillars specifically. We employed a binary coding (correct/incorrect) for the items in the two objective financial literacy tests.

In the first question the participants were asked about the number of pillars within the pension system in Slovakia (item No. 1). The next four questions, related to the 1st pillar, tested for knowledge of: the obligation to participate in the pillar (item No. 2); institutional money management in the pillar (item No. 3); money use in the pillar (item No. 4); and pension funds for those who are only engaged in the 1st pillar (Item No. 5). Further, a set of six questions regarding the 2nd pillar addressed: the obligation to participate in the pillar (item No. 6); institutional money management in the pillar (Item No. 7); the possibility of immediate exit from the pillar (item No. 8); contributions to the 1st pillar while simultaneously involved in the 2nd pillar (item No. 9); money use in the pillar (item No. 10); and pension funds for those who are engaged in the 2nd pillar (item No. 11). The last two questions, relating to the 3rd pillar, covered: the obligation to participate in the pillar (item No. 12); and the possibility of immediate exit from the pillar (Item No. 13).

Results

We conducted a series of regression analyses for the seven dependent variables, with two groups of predictors. A number of socio-demographic factors entered the analyses in Step 1, namely: age, gender, education, employment sector, professional experience in financial domain, and income. In Step 2, three measures of financial literacy were added into the models: self-rated financial literacy (FL-S), financial literacy (FL), and retirement financial literacy (FL-R). The inclusion of a higher number of predictors increases the risk of multicollinearity. Therefore, we started with a correlation analysis (Table 1). None of the correlation coefficients were higher than .50. All the measures of financial literacy were positively correlated with education and income. We also found positive relationships between the two objective financial literacy scores and age. Moreover, men exhibited higher levels of both self-rated and the objective financial literacy than women, and financial professionals scored better in the retirement financial literacy test compared to non-professionals.

T a b l e 1

Correlations among Predictors: Socio-demographic Indicators and Financial Literacy (FL)

		1	2	3	4	5	6	7	8
1.	Age								
2.	Gender	–.01							
3.	Education	.15*	.04						
4.	Sector	–.01	.07	–.11					
5.	Experience	.07	–.35*	–.08	.06				
6.	Income	.25*	.29*	.28*	.11	.02			
7.	Self-rated FL	.11	.17*	.22*	.10	.01	.29*		
8.	FL	.13*	.13*	.17*	.04	.02	.28*	.32*	
9.	Retirement FL	.28*	.11	.19*	.09	.12*	.27*	.26*	.40*

Note: * Correlation is significant after applying Bonferroni correction.
Source: Authors' calculations based on own research.

We tested the data for normality and homoscedasticity, and checked the remaining collinearity problems via the variance inflation factors (VIF). The VIF coefficients over 5 are considered problematic. The collinearity diagnostic found a maximal VIF value of 1.39. Further, we conducted the Mahalanobis distance (MD), Cook's distance and Durbin-Watson tests to check the assumptions with regard to outliers, influential cases, and autocorrelation in the residuals (Field, 2009). With large samples (N = 500), MD values above 25 are cause for concern. We therefore excluded two participants from the subsequent regression analyses. We did not identify any problematic cases when examining the Cook's distances and the Durbin-Watson test statistics.

In other words, the assumption that no point exists which exerts an undue influence on the model and the assumption that there were no independent errors in regression were met.

Structural Variables Predicting Personal Beliefs and Retirement Saving

The first series of models, with socio-demographic indicators only (Table 2, Model 1) showed that *age*, *education*, *income***,** and *professional experience* in a financial domain are significant predictors of FPR-related beliefs and current retirement savings. First, age and income were linked to higher trust in the 2nd pillar, a lower perceived FPR task complexity, and a greater range of current retirement saving methods. Trust in the 2nd pillar was associated with higher education as well. Increasing income, together with professional experience, predicted a greater self-assessed personal competence in FPR, and income and education were positively related to a lower level of emotional load due to FPR. Finally, age and education were positive predictors of personal engagement in FPR.

T a b l e 2

Regression Models for FPR Beliefs and Current Retirement Savings

	Model 1						**Model 2**					
	TP	PC	PE	TC	EL	CS	TP	PC	PE	TC	EL	CS
Age	.10*	.06	.16**	–.16**	–.06	.29**	.04	<.01	.09	–.10*	–.03	.25**
Gender	.04	.05	.03	–.03	–.02	.06	<.01	–.02	–.01	.02	.02	.03
Education	.11*	.04	.10*	–.07	–.15**	<.01	.07	–.07	.04	<.01	–.10*	–.04
Sector	.06	.05	.02	–.07	–.04	.04	.03	–.01	–.01	–.03	–.01	.02
Experience	.02	.16**	–.09	–.01	–.06	.07	–.02	.13**	–.13**	.04	–.03	.05
Income	.11*	.22**	.05	–.15**	–.35**	.19**	.07	.11**	–.02	–.09	–.30**	.15**
FL-S							.12*	.47**	.17**	–.26**	–.22**	.11*
FL							–.05	.05	.05	.06	.02	.01
FL-R							.24**	.11*	.21**	–.24**	–.10*	.12*
Adj. R^2	.05	.09	.05	.08	.20	.15	.11	.32	.13	.18	.25	.18
F	5.4	9.6	5.2	7.9	21.5	16.1	7.6	27.5	9.0	13.4	19.4	12.9
ΔR^2							.06	.23	.08	.11	.06	.03
F for ΔR^2							11.4	56.9	15.5	22.4	12.2	5.5

Note: Coefficients are standardized β weights, * $p < .05$, ** $p < .01$; FL – Financial Literacy (S – Self-Rated, R – Retirement), TP – Trust in the 2nd Pillar, PC – Personal Competence, PE – Personal Engagement, TC – Task Complexity, EL – Emotional Load, CS – Current Savings; All F and F for ΔR^2 values are significant at the .1% level ($p < .001$).

Source: Authors' calculations based on own research.

Entering financial literacy measures into the models (Table 2, Model 2) significantly increased their explanatory power. Yet, in the case of current retirement savings, the change was rather small. The results indicate that *self-rated financial literacy* and *retirement financial literacy* are the only predictors of trust in the 2nd pillar. Moreover, these two measures of financial knowledge are predictable

of a wider portfolio of current saving methods, higher levels of personal FPR competence and engagement, and lower levels of perceived FPR task complexity and emotional load. As for the socio-demographic variables, increasing *income* was the strongest predictor of a less intense FPR emotional load, and it was also related to a higher personal FPR competence, and a greater range of current retirement saving methods. Next, increasing *age* was the strongest predictor of the extent of current retirement savings, and it was linked to a perception of FPR as a less complex task. Further, *professional experience* in financial domain was predictive of higher personal FPR competence but lower personal FPR engagement. Finally, higher *education* was associated with a lower level of emotional load related to FPR. *Gender*, *employment sector*, and *objective general financial literacy* proved not to predict current retirement savings or any of the beliefs concerning FPR.

Structural Variables Predicting 2nd Pillar Enrollment

In addition, a logistic regression was run to ascertain the effects of the socio-demographic indicators (Model 1) and the financial literacy measures (Model 2) on the likelihood that participants entered the 2nd pillar. In the first model, we identified two predictors: *income* and *sector*: $\text{Exp}(B)_{\text{INCOME}} = 1.47$, $p = .020$, $\text{Exp}(B)_{\text{SECTOR}} = 0.47$, $p = .005$, Nagelkerke's $R^2 = .22$, $\chi^2(6) = 83.45$, $p < .001$. Thus, a higher likelihood of enrollment in the 2nd pension pillar was linked to working in the private sector (as opposed to the state sector) and increasing income.

As for the second model, the Wald criteria demonstrated that *sector* and *retirement financial literacy* made a significant contribution to prediction, $\text{Exp}(B)_{\text{SECTOR}} = 0.52$, $p = .019$, $\text{Exp}(B)_{\text{FL-R}} = 1.35$, $p < .001$, Nagelkerke's $R^2 = .29$, $\chi^2(3) = 30.24$, $p < .001$, $\chi^2(9) = 113.70$, $p < .001$. Again, participants working in the private sector were substantially more likely to enroll in the 2nd pillar than state sector employees. At the same time, increasing retirement financial literacy was associated with a higher likelihood of enrollment in the 2nd pension pillar. The model with all nine variables explained 29.4% ($\Delta R^2 = .07$) of the variance in 2nd pillar saving and correctly classified 79.2% of cases.

Discussion

This present study was based on the assumption that financial planning for retirement (FPR) – a necessary precondition for securing an individual's financial well-being in retirement – is facilitated by psychological readiness, which is, in turn, reflected in positive beliefs about retirement planning. In other words,

we assumed that the pension reforms would only serve their purpose if young people were willing and able to adapt to the proposed changes in the pension system and to accept the associated challenges. In our research, the level of psychological preparedness was specified and assessed via young people's beliefs about the utility of the second pillar, their self-assessed personal competence in retirement planning, their engagement in this task, and a low emotional load and perceived difficulty associated with the FPR task.

First, we found relationships between four structural variables – age, income, professional experience, and formal education – and dimensions of psychological preparedness, except for trust in the second pillar. Taking into account financial literacy, financial professionals, and those with higher income rated themselves as more capable of financial preparation for retirement. Financial professionals also reported a lower tendency to get involved in FPR. Maybe the pursuit of financial professions brings deeper insights into the complexity and uncertainty associated with financial planning and thus simultaneously lowers the perceived urgency of one's engagement. Yet, professional experience was not linked either to enrollment in the second pillar or to the range of current retirement saving methods. We also found subjective ratings of the demands made by the FPR task to decrease with age, and that those with higher income and higher education expressed a lower level of stress and anxiety in regard to retirement financial planning and decision making. As for the actual retirement savings, these were positively determined by participants' ages and incomes, and enrollment in the second pillar was more prevalent among those employed in the public sector. Gender turned out to predict neither beliefs concerning FPR nor current retirement savings.

The fact that financial professional experience, higher income, age, and education created a better psychological background for some positive attitudes towards financial preparation for retirement is not surprising. These patterns are congruent with the results of other studies (e.g. Fernández-López et al., 2010; Lusardi and Mitchell, 2011; Van Rooij, Lusardi and Alessie, 2011). The important finding of our research is that the crucial determinants of all positive FPR beliefs and actual retirement savings were self-rated financial literacy and an objective knowledge of the pension system. Despite the three financial literacy measures being interrelated, performance in the test on general financial literacy did not play a role either in psychological preparedness for FPR, or in current retirement savings. On the other hand, both higher *self-rated financial literacy* and higher *retirement financial literacy* were positive predictors of the trust in the second pillar, FPR personal competence, and belief in the need for engagement in FPR, and negative predictors of emotional load, and FPR task complexity.

Higher self-rated financial literacy and higher retirement financial literacy were also predictive of positive financial behaviour: i.e., higher actual savings for retirement.

In the research using a Slovak sample conducted by Baláž (2012a), *self-rated financial literacy* was associated with an objective knowledge of basic financial concepts and financial products, with declared and actual experience of financial products, and with level of education. Baláž states that even though self-assessed financial knowledge is not always equal to actual, perceived financial literacy can sometimes be a better predictor of financial behaviour than objective literacy, because not only knowledge but also adequate self-confidence is necessary to make qualified financial decisions. In recent years, several empirical studies have indicated the positive role of individuals' financial self-confidence in their financial behaviour. Kicia (2016) studied choices regarding saving for retirement among university staff in Poland and found differences in confidence between those who had made an early decision and those who had procrastinated. Eberhardt et al. (2016) measured specific pension knowledge, general financial literacy, and confidence about such knowledge among employees in the Dutch retail sector (mainly lower-educated women) and found that confidence in pension knowledge had a larger impact on saving decisions than actual knowledge. Our findings provide further support for the view that higher self-rated financial knowledge, i. e. higher financial self-confidence, is associated with more positive beliefs concerning FPR dimensions.

There is only limited research which deals specifically with *knowledge about pension provision systems* in relation to beliefs concerning financial planning for retirement. In their studies, Hershey and colleagues (Hershey and Mowen, 2000; Hershey, Henkens and van Dalen, 2007; Hershey, Henkens and van Dalen, 2010) examined relationships between individuals' personality characteristics, financial knowledge, and financial preparedness. Their results revealed that both personality constructs and financial knowledge were significant predictors of pre-retirement planning. However, subjective perceptions of the individual's pension systems knowledge were assessed in their studies instead of an objective test of actual knowledge – as used in our research.

In their classic studies, Lusardi and Mitchell (2007; 2011) conducted their investigation of the causes and consequences of financial illiteracy in order to better understand why retirement planning is absent in many individuals and households. Their surveys focused mainly on the knowledge of basic financial concepts in general. However, in their 2007 paper they also confirmed that "consumers are not only poorly informed about mortgages or incorrect about interest rates; they also know little about Social Security and pensions, two of the most

important components of retirement wealth" and "there is mounting evidence that knowledge about pensions and Social Security affects retirement decisions" (p. 40).

Hastings, Madrian and Skimmyhorn (2013) pointed out that financial knowledge is costly to accumulate and therefore it is appropriate to consider an optimal level of financial literacy acquisition. They state that individuals cannot become experts in all life domains – that is the essence of comparative advantage. In the light of their considerations, it is possible that, in the case of general financial literacy, it is more effective if other subjects (typically financial advisors) help individuals to compensate for their deficiencies by providing information, advice or financial management. However, given the changes in social conditions and the resulting state pension reforms, it appears that investment in financial retirement literacy among young people would be worth the cost. Our results revealed that in the case of our participants – educated employed young people, it was not financial literacy in general, but their subjective understanding of financial matters and their objective knowledge of the pensions system which predicted their positive attitudes towards financial preparation for retirement and higher actual retirement savings.

Future research should overcome some of the limitations inherent in the research reported here. Compared to the general population, a greater number of educated young people participated in our research (i.e., the majority had a university degree); therefore, our results cannot be generalized to all employed young people in Slovakia. At the same time, the sample of professionals was rather heterogeneous and their work experience was not focused only on the specific area of retirement savings. In addition, there are also other measures of current financial preparation for retirement besides the portfolio of saving methods (the three pillars and other investments). It is possible, for example, to quantify the percentage of income that people "put aside" every month.

As for future research directions, there are many other variables beyond those addressed in our study that contribute to the psychographic profile of young savers and are important predictors of the likelihood that they financially prepare for retirement. For instance, it would be worth studying the relationships between FPR and time-related individual characteristics such as consideration of future consequences or perception of future self. We also recommend an examination of the complex interplay between the structural and psychological factors which shape young people's retirement investment behaviours. Finally, experimental testing of various interventions (e.g., different types of appeals) to improve beliefs and behavioural tendencies to financially plan for retirement is also a promising line of research.

Conclusion

The pension system that had long been applied to previous generations of employees underwent radical changes. Thus, the need for financial education of young people to secure their pensions is even more crucial as they cannot learn from their parents' experiences. The results of our research study show that two things are important for positive attitudes towards financial preparation for retirement and retirement savings in young employed people. These two things are financial self-confidence and knowledge of the pension system. Unlike structural variables (such as age, income, professional experience, formal education), these things can be influenced and shaped. Our findings highlight the importance of searching for effective ways of disseminating information about relevance, conditions and procedures of pension provision for young people as soon as possible. Increase in retirement financial literacy may support self-efficacy and self-confidence, improve financial management of individuals, and other dimensions of psychological preparedness for financial retirement planning in the time when young people enter the labour market.

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Appendix 1

The Beliefs concerning financial planning for retirement inventory (R for reverse coded):

TRUST IN THE 2nd PILLAR

1. Saving in the second pillar will not improve my standard of living in retirement. (R)
2. Saving in the second pillar is useless because it is only filling the treasure chest of private institutions. (R)

FPR PERSONAL COMPETENCE

3. I understand the information about saving for retirement, available to me.
4. I know very well how to plan my personal finances to secure my pension.
5. I know more than my peers about how to financially prepare for retirement.
6. In financial matters I am not confident enough to prepare myself adequately for retirement. (R)

FPR PERSONAL ENGAGEMENT

7. Financial planning for retirement is necessary since entering the first employment.
8. It is enough to start in middle age, i.e. in my forties, with my financial preparation for retirement. (R)
9. If I do not initiate my financial preparation for retirement now, I will waste my chance for a decent pension.
10. It is still too early for me to address the issues of financial preparation for retirement. (R)
11. I am working on what I can do now to financially secure myself for retirement.
12. I do not engage in financial preparation for retirement, because I now have too many other problems to deal with. (R)
13. I delay deciding on the financial preparation for retirement for as long as possible. (R)

FPR TASK COMPLEXITY

14. The decision to participate in the second pillar requires a lot of effort.
15. Participation in the second pillar requires tracking legislative changes.
16. Entering the second pillar seems to me as difficult paperwork.
17. Saving in the second pillar is discouraging for me as it requires more knowledge about investing than I have now.
18. Choosing from the options of financial preparation for retirement is very difficult for me.

FPR EMOTIONAL LOAD

19. Long-term financial planning is stressful for me.
20. Daily decisions about money are a great burden for me.
21. I do not have sufficient income so that I could save for my retirement.
22. Thinking about retirement makes me nervous.
23. In the domain of my personal finances I live from day to day.

Appendix 2

The Objective general financial literacy test:

1. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account? a) more than today, b) exactly the same as today, c) less than today, d) do not know.

2. Suppose you had 1,000 EUR in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow? a) more than 1,020 EUR, b) exactly 1,020 EUR, c) less than 1,020 EUR, d) do not know.

3. 'Putting money into one investment usually provides a safer return than putting money into multiple investments.' Is this statement false or true? a) false, b) true, c) do not know.

4. Imagine that banks are offering you to save 3,000 EUR over 10 years. Which of these two offers would you choose? a) entry fee 0.3%; average yield per year 3.0%; exit fee 0.5%; b) entry fee 1.0%; average yield per year 3.3%; exit fee 1.0%; c) do not know.

5. Imagine that bank will give you a mortgage of 50,000 EUR. If the mortgage is given for 15 years, monthly payment will be higher than for a 30-year mortgage. The total interest paid during the 15-year mortgage will be: a) higher compared with the 30-year mortgage, b) exactly the same as with the 30-year mortgage, c) lower compared with the 30-year mortgage, d) do not know.

6. 'The risk of losing money when investing in equity funds is the same when investing for a period of one year as for a period of 20 years.' Is this statement in-correct or correct? a) in-correct, b) correct, c) do not know.