

INFLUENCE OF DEMOGRAPHIC AND SOCIAL FACTORS OVER VOLUNTARY PENSION AND LIFE INSURANCE IN ROMANIA

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Abstract: *The European Union faces major demographic changes on medium and long term, the elderly population increasing in contrast to the young generation [17]. Demographic trends presented in the Ageing Report [7] look unpromising for the next decades. In the context of the pressure which demographic aging puts upon social protection systems, pension systems' management is a challenge even for the developed countries. Another challenge is the low penetration of life insurances in emerging economies, although life insurance has become an effective tool to encourage savings, and compete with other forms of saving. This paper is a comparative analysis on how the residence environment of respondents, the development region, education and income level influence the possession of a voluntary pension and life insurance in Romania. Our study uses the descriptive analysis as research methodology, and the practical documentation is based on data provided by a representative survey among Romania's active population (aged 18-65 years).*

Keywords: *Voluntary pension system, demand for life insurance, Romania, demographic factors, poverty line.*

INTRODUCTION

In order to address the challenge of the aging population, the European Commission and the Social Protection Committee (SPC) cooperate with Member States to support, monitor and assess the impact of pension system reforms on the double objective to accumulate adequate pensions (prevent and combat poverty) and to ensure long-term sustainability of the pension systems. Over the last decade of pension system reforms, in response to population aging, more and more countries have expanded the role of existing private pension schemes and introduced new elements of private pension schemes in their pension systems. This occurred specifically to improve the sustainability of pensions by adding private components to the scope of the public scheme, offsetting the reductions of future replacement rates of public systems.

Another method of long-term saving that offers individuals financial security while contributing to the economic growth of a country is the life insurance. According to Beck and Web (2002), insurance products are important elements that encourage long-term savings, which can be redirected towards investment projects in both the private and public sectors; insurance companies are leading providers of financial services in developed countries [3]. Although life insurance has become an effective tool to encourage savings, and competes with other forms of savings (bank deposits, securities), its penetration degree records low levels in many of the emerging economies.

This study achieves a comparative analysis of the manner in which demographic and social factors influence the possession of private pensions and life insurance for a representative sample of Romania's active population. Our analysis will take into account the residence environment from where the respondents originate – urban /rural, region of development, level of education and income levels.

Our study begins with a review of the factors that influence the demand for life insurance, continues with a presentation of the Romanian pension system, the research methodology and the results of the comparative study and ends with the conclusions section.

FACTORS INFLUENCING THE DEMAND FOR LIFE INSURANCE - LITERATURE REVIEW

Life insurance is defined as "a contract concluded between a natural person or legal entity and an insurer, the insurer is the one who undertakes to pay an amount of money upon the occurrence of disability of the policyholder, and the policyholder undertakes to pay a fixed amount to the insurer at the designated term" [21].

The study of life insurance and the factors influencing the demand for life insurance is an issue carefully researched by the specialists in the field, especially in the last century when life insurance has been deemed a force for the economic growth.

The first researchers who developed a theoretical framework to explain the demand for life insurance are Yaari (1965) and Hakansson (1969). According to Yaari, "life insurance is a function that depends on the wealth, income expected throughout the lifetime of an individual, interest rate, life insurance policies account and the discount rate"[20]. Hakansson (1969) believes that the "individuals' legacy and the uncertainty of circumstances are important determinants of the demand for life insurance" [9].

The conceptual framework developed by Yaari was extended by Lewis (1989) by including a new variable in the model, namely the number of dependents, who concluded that this variable was closely related to the consumption of life insurance. Lewis (1989) also considered notable the preferences of the household members to which the future insured belonged, whereas when an individual made a decision on the insurance, he/she took into account the dependent members. According to Lewis' model, the probability of purchasing a life insurance increases with the current value of the beneficiaries' consumption, aversion towards the risk and the probability of death of the policyholder.

Mossin (1968) proposed another model on the demand for life insurance that took into account the risk aversion of individuals with a certain level of assets, concluding that the demand for life insurance varied inversely proportional to the level of an individual heritage.

Enz (2000) studied the relationship between the demand for life insurance and economic development, concluding that while the income elasticity varied, there was a connection between the penetration degree of life insurance and income per capita, this indicating that the consumption of life insurance tended to rise with the economic growth in developing countries, but once it reaches the level of developed countries, the insurance consumption begins to decline.

There is a vast specialized literature that has used demographic and social variables in the analysis of the demand for life insurance determinants. We further present the results achieved in chronological order.

According to Hammond et al. (1967), Burner & Palmer (1984), Truett & Truett. (1990), Hwang & Greenford (2005), Li et al. (2007) factors such as income and education have a significant impact on the consumption of life insurance. Gao (2003) noted that in addition to the income level and education, urbanization and other changes in the social structure were factors that determined individuals to conclude life insurance policies in China.

International studies with similar conclusions belong to Anderson & Nevin (1975) who, using 20 independent variables and three dependent variables (cost of insurance premiums, number of policies of life insurance entered into and the type of insurance policies purchased), analyzed the behavior of newlyweds on the purchase of life insurance. The study results showed that six of the independent variables (education, current income, expected income, assets, insurance owned by the husband before marriage, insurance owned by the wife before marriage) explained the number of life policies holders. Three other independent variables (assets, portfolio held by the husband before marriage, influence of the insurance agent) resulted to be significant in explaining the type of life insurance purchased.

Nestersova (2008), using a data panel for 14 countries, for a period of 11 years (1996 to 2006), examined the determinants of demand for life insurance in Ukraine and some other countries of the former Soviet Union and Central and Eastern Europe. The study outcomes indicated that in countries with high life expectancy, income, education level and member of the European Union, the consumption of life insurance was higher.

Curak (2013) analyzed the demographic and social determinants of life insurance consumption in Croatia by using a questionnaire-based survey. The variables used were age, gender, education, occupation, marital status, number of household members. The research results indicate that age, occupation and education have a significant impact on the demand for life insurance in Croatia while gender, marital status and number of family members do not seem to influence the demand for life insurance.

Sarkodie & Yusif (2015), using a logistic regression model, study the determinants of life insurance demand in Ayeduase-Kumasi community, Ganda, from a consumer perspective. Their study indicates that income, high education level, number of dependents, a better perception of insurance companies - they all substantially increase the chances of concluding a life insurance policy.

3. ANALYSIS OF THE PENSION SYSTEM IN ROMANIA

According to the Financial Supervision Authority, "the insurance market, the capital market and the private pension market, both individually and cumulatively, still have a relatively low comprehensiveness reported to the size of the national economy, being significantly less developed compared to the banking market" [2].

To improve the impasse of the public pension system, a multi-pillar pension scheme has been implemented in Romania, including state and private pensions.

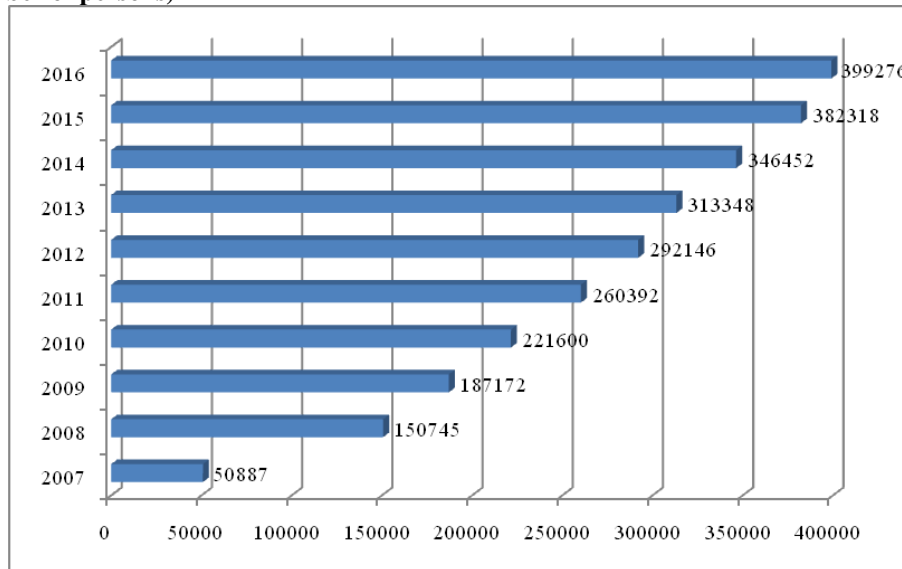
1st pillar - the public pension system, is regulated by Law 263/2010, binding pay-as-you-go type, based on intergenerational solidarity and works according to the principle of contribution. At present, taxpayers pay for providing the income of today's pensioners, their pensions being paid in the future by the taxpayers of that moment. But the big problem is a continuing reduction in the number of taxpayers and an increased number of pensioners.

2nd pillar, mandatory private pensions, is regulated by Law 411/2004 on private pension funds, as amended and supplemented by Law 23/2007 and helps the State pension, the contribution of taxpayers being the same as before, the difference being that by this pension, 4% of insurance contributions will be forwarded to a private pension fund.

3rd pillar, voluntary private pensions - in addition to the other two types of pensions which are mandatory, any employee can contribute to a voluntary pension, thus securing additional income for retirement. One can contribute to such a pension fund up to 15% of the gross salary. The advantage of concluding a voluntary pension is the tax deductions for both the employee and employer.

Following the evolution of the number of people who have concluded a voluntary pension, in the period 2007 - June 2016, we notice that the trend is rising.

Figure no.1. Evolution of the number of participants in voluntary private funds between 2007 - June 2016 (number of persons)



Source: author's processing based on the data provided by the Association for private pensions in Romania

While in 2007 the number of people who concluded a voluntary pension was 50,887, this was nearly 8 times higher in June 2016: 399,276 persons. Nevertheless, in Romania the voluntary pension sector records a low level of development, 8 years after the start of voluntary pensions scheme the evolution being below its potential.

4. RESEARCH METHODOLOGY

We shall use as research methodology the descriptive analysis, practical documentation based on data provided by a survey conducted within the research project "Study of life insurance in Romania in an international context: innovation, spatial and behavioral modeling; impact of institutional factors" in Romania's active population (aged 18-65 years), during the period April-May 2016. The sample size includes 1,700 surveyed persons, representative at national level by regions, counties, age groups, levels of education, income levels, gender, and background (urban/rural), by types of places (cities/towns/villages). The interviewing was based on the CATI method (Computer-Assisted Telephone Interview), the average duration of a questionnaire being about 10 minutes, not exceeding 15 minutes, according to ESOMAR standards. The response rate is 92.88%, of the 1,700 persons surveyed, 1,579 do not have non-responses. The demographic characteristics of the respondents are shown in the table below:

Table no.1. Demographic characteristics of the respondents

Variable	Category	No.	%
Background	Urban	959	60.73
	Rural	620	39.26
Development region	North-East	213	13.48
	South-East	171	10.82
	South	236	14.94
	South-West	172	10.89
	West	142	8.99
	North-West	210	13.29
	Centre	190	12.03
	Bucharest-Ilfov	245	15.51
Age	18-29	181	11.46
	30-39	314	19.88
	40-49	492	31.15
	49-59	358	22.67
	60 and above	234	14.81
Gender	Male	807	51.10
	Female	772	48.89
Level of education	Elementary to middle school, 8 grades at the most	73	4.62
	Vocational school, apprenticeship, 10 grades	322	20.39
	High school	459	29.06
	Specialized post-secondary or technical foremen profile	162	10.25
	Graduate, postgraduate studies	563	35.65
	Level of income (over the last month)	1-1,000 RON/month	380
1,001-2,000 RON/month	682	43.19	
2,001-3,500 RON/month	381	24.12	
3,501-5,000 RON/month	61	3.86	
5,001-10,000 RON/month	75	4.75	

Source: author's processing

We can notice, for each of the stakeholders in our study, the category with the most respondents: 60.73% of respondents come from urban areas, by development

regions, 15.51% of the respondents from Bucharest-Ilfov region, 35.65% have graduate or postgraduate studies, and by income categories 43.19% of respondents have an income ranging between RON 1,001-2,000.

5. LIFE INSURANCE VS. VOLUNTARY PENSIONS IN ROMANIA

We further plan to conduct an analysis of the private pensions and life insurance in the studied sample. Our analysis will take into account the residence area from where the respondents originate - urban/rural, development region of the respondents, level of education and income level.

In Romania, the life insurance sector and voluntary pensions sector record low development level compared to other European Union countries. The differences between the status of life insurance and voluntary pensions in Romania and the other countries lead us towards an analysis of factors that determine a low life insurance and voluntary pension consumption in Romania. These factors also include the demographic factors, which represent the subject matter of our analysis.

At the level of the sample studied, only 302 people have concluded life insurance policies (19.1%) while the number of people who have concluded private pensions is 333 (21.1%).

5.1. Area of residence: life insurance vs. voluntary pensions

At the beginning of 2015, of the total of 22,279 million persons, 12,572 million persons lived in urban areas, the share of urban population was 56.4% and 9,707 million people lived in rural areas, the share of rural population was 43.6%.

At the level of sample studied, of 1,579 respondents only 302 concluded life insurance policies. Among these, 64.9% (196 persons in absolute terms) originate from urban areas while 35.1% (106 persons in absolute terms) from rural areas.

As for the voluntary pensions, out of the 333 respondents who concluded a voluntary pension, 65.7% (219 persons in absolute terms) originate from urban areas while 34.23% (114 persons in absolute terms) from rural areas.

Our data indicate that there are significant differences between the urban and rural areas, both in terms of consumption of life insurance and voluntary pensions. These differences between urban and rural areas are due to the fact that in terms of financial education, Romania is divided into a rural Romania, including small towns, and an urban Romania where the penetration of savings products and financial literacy is much higher.

In order to reduce these gaps between urban and rural, we believe it is necessary to: increase population's awareness about life insurance and voluntary pensions, inform people about the rights and obligations of a life insurance and a voluntary pension respectively, and provide permanent assistance to those wishing to conclude or have already concluded a life insurance policy or a voluntary pension.

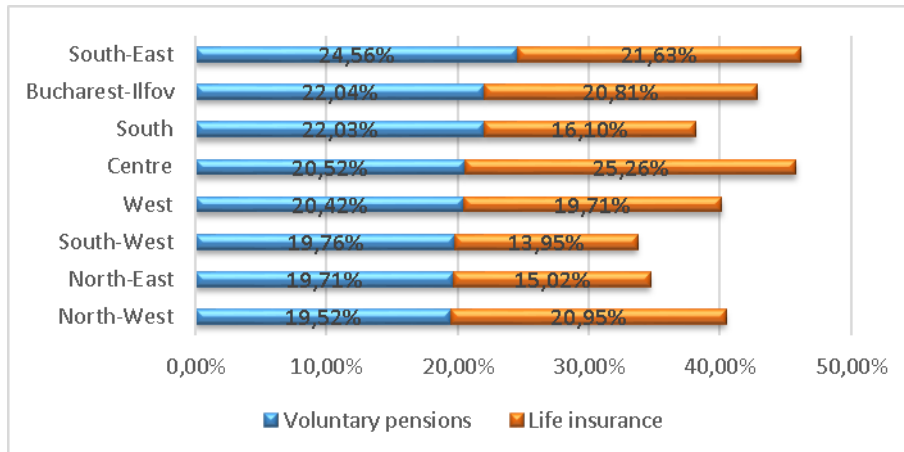
5.2. Development region: life insurance vs. voluntary pensions

An analysis on the development regions allows us to observe that there are regional disparities in the number of people who concluded life insurance policies and voluntary pensions.

In terms of voluntary pensions, the best represented development regions of Romania in our sample are: South East Region with 42 participants (24.56%), Bucharest-Ilfov Region with 54 participants (22.04%) and South Region with 52 participants (22.03). The North West region is ranked last, with 41 participants (19.52%).

An analysis of the life insurance consumption by development regions indicates the Central region with 48 participants (25.26%) as the best represented development region, followed by the South East Region with 37 participants (21.63%). The South-West Region is ranked last, with 24 participants (13.95%). The South-East Region, despite the fact that it is the region where the poverty rate is extremely high (33.3% in 2014 compared to 5.5% in the Bucharest-Ilfov Region) is leading the ranking when it comes to people who concluded a voluntary pension (3rd pillar) and ranks second when it comes to life insurance policies.

Figure no.2 Life insurance vs. voluntary pensions - participants. Distribution by development regions (%)



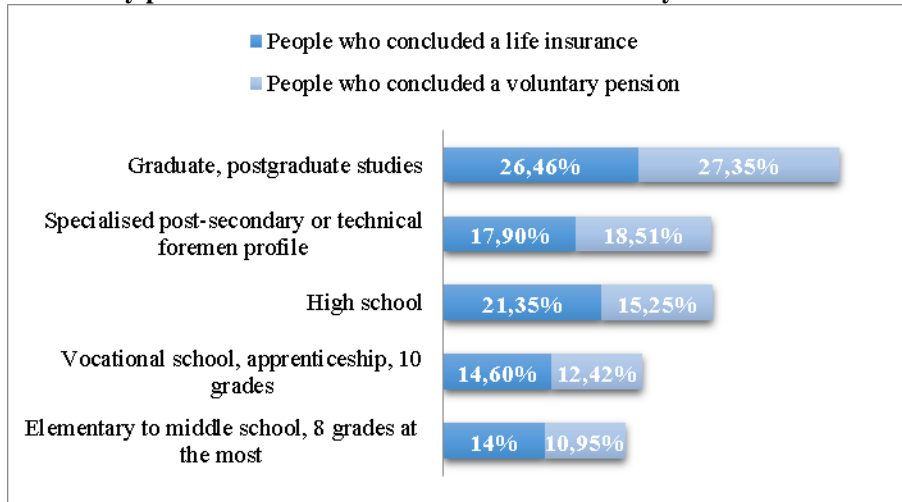
Source: author's processing

5.3. Level of education: life insurance vs. voluntary pensions

Education and the level of education play a crucial role in any person's life. Are people with a higher level of education willing to invest or save through voluntary pension and life insurance? This is the subject of our analysis on the sample studied. Based on the level of education, as resulting from Table.1 "Demographic characteristics of the respondents", the sample is structured as follows: 1.) elementary to middle school, 8 grades at the most - 73 persons; 2.) vocational school, apprenticeships, 10 grades - 322 persons; 3.) high school - 459 persons; 4.) specialized post-secondary or technical foremen profile - 162 persons; 5.) graduate, postgraduate studies - 563 persons;

Statistical data analysis leads us to the following conclusions: people with graduate or postgraduate studies are ranked first when it comes to voluntary pensions (26.46%) and when it comes to life insurance policies (27.35%). The explanation lies in the level of financial literacy among these people but also in the level of income - a higher level of education means better paid jobs, which allow the subscription of a private or voluntary pension or insurance policies.

Figure no.3 Voluntary pensions vs. life insurance. The distribution by level of education



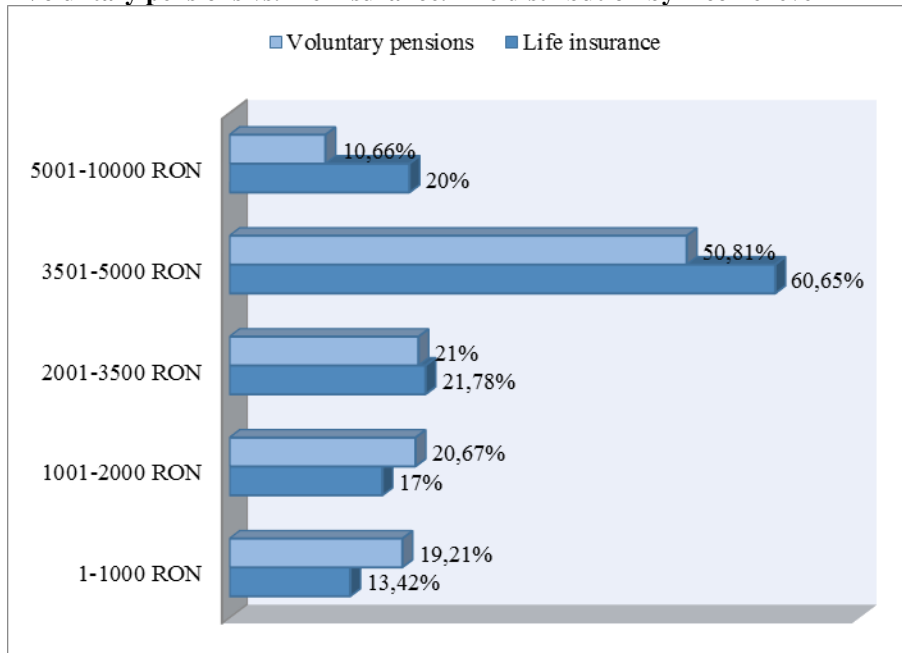
Source: author's processing

5.4. INCOME LEVEL: LIFE INSURANCE VS. VOLUNTARY PENSIONS

Molnar (2011) claims that Romania is one of the Member States of the European Union which has the highest inequalities in income. Income inequality can be observed in the studied sample: the revenues of our respondents start at 62 RON / last month, and go up to 10,000 RON/last months, an extremely large gap. By creating a group of the respondents by income level, we notice that of all the respondents, 24.06% have an income/last month ranging between 1-1,000 RON, 43.19% ranging between 1,001-2,000 RON, 24.12% ranging between 2,001-3,500 RON, 3.86% ranging between 3,501-5,000 RON and the remaining 4.75% ranging between 5,001-10,000 RON/last month.

Does the income level influence the demand for life insurance and the conclusion of a voluntary pension respectively? Statistical data on the sample studied are as follows:

Figure no.4 Voluntary pensions vs. life insurance. The distribution by income level



Source: author's processing

The highest consumption of life insurance and voluntary pension can be observed among people with an income ranging between 3,501-5,000 RON/last month. People at the top of the income pyramid consider life insurance more attractive (20% of respondents have concluded a life insurance policy) as compared to private pensions (10.66% of respondents with an income ranging between 5,001-10,000 RON have concluded a private pension).

Considering that in 2015 the relative poverty line in Romania was 530 RON/family members and the national minimum wage of 1,050 RON in 2015 (increased to 1,250 RON as of 1 May 2016), we are surprised to find that there are people under the poverty line who concluded a voluntary pension or life insurance policy. At the level of our sample, 115 respondents are below the poverty line: 6% of them have concluded a voluntary pension and 6% have concluded a life insurance policy.

In this context, we believe that private pensions and life insurances may represent, along social protection, a valuable tool in the fight against poverty, this phenomenon which affects a considerable number of people worldwide, and the elderly being the population segment most exposed to this risk. Life insurance is vital in countries with a low level of social protection from governments because life insurance can reduce poverty through its savings component

6. CONCLUSIONS

The purpose of this study was to perform a comparative analysis of the demand for life insurance and voluntary pensions (3rd pillar) on a representative sample at

national level, taking into account the residence background of the respondents (urban/rural), the development region from where they originate their level of education and income. Our analysis leads to the following conclusions: the demand for life insurance and voluntary pension is significantly higher in urban than in rural areas, there are regional disparities on the demand for life insurance and voluntary pensions, education and income are determinants of demand for life insurance and voluntary pensions.

Despite their development potential, the life insurance market and the voluntary pensions market are insufficiently developed in Romania. The stimulation of the development of the life insurance and voluntary pension system is extremely important, a functional private pension scheme and the existence of life insurance products tailored to consumers in Romania imply the reduction of the pressure put by socio-demographic and economic changes on the pension system and the social protection system.

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