

Threatens to long-term sustainability of pension system in Romania

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Abstract-Starting 2007 Romania Insurance Budget registered rising imbalances of the budget due to consecutive spiky increase in pension benefit combined with an augmenting number of pensioners. The prospects regarding the pension expenditure on medium term were strongly affected by the financial and economic crisis: under the effect of automatic stabilizers and of the consecutives increases in pension values in the previous years, the social security costs (pensions, unemployment, minimum pension, social assistance) increased in 2010 up to a maximum of 9% in GDP. This situation will deteriorate in the coming decades taken into account the negative trend of the demographic projections, specifically the low birth rate, increase in life expectancy and consequently an accelerated ageing process.

Key words: *pension system sustainability; ageing process; dependency ratio*

I. INTRODUCTION

For the members of European Union, like Romania, the main objective is to create a modernized social model sustainable on the long term, following a virtuous correlation between the objectives settled in the Lisbon Strategy: productivity – employment – social cohesion. This correlation gets efficiency in line with social equity, stimulating the economic growth process under the terms of public finances' stability. Any internal or external factor, which generates the break of the previous relations is able to result either in the slowing down of the economic growth rate (or even recession), or in a decrease of the employed population, an emphasis of the social inequities or all, on the most unfavorable conditions, even in all the three effects together. As a consequence, the public debt of the Romanian economy would get increased, thus decreasing the possibility to provide cohesion through budget transfers.

One of the factors which could represent a threat for the model assumed by Romania is constituted by the ageing of the population. This process itself is not an unfavorable aspect, as its effect is the economic development, materialized in the increase of life expectancy. Instead, the incapacity of the current policies promoted on the labour

market, in education and in the social field for adjusting to the demographic changes, represents the source of this problem. As a consequence, the basic difficulties induced by the ageing process are generated by the low capacity of the Romania to increase the population's participation to the labour market, without affecting the citizens' life quality. Introducing this objective within the reforms for welfare state is an opportunity in order to decrease the impact of increasing the percentage of aged persons in the Romanian economy.

In this study, we have made a presentation of the main demographic transformation in Romania, and, according to them, we have analyzed the solutions for decreasing the stress upon the aged population. The objective is to identify a few good practices in the fields of public and private pensions, in the functioning of the labour market and in the coordination between professional life and family life.

II. DEMOGRAPHIC EVOLUTIONS IN ROMANIA

Not only the ageing of the population, but also the decrease of the birth rate, related to the increase of life expectancy represent the main challenges from an economic, budgetary and social point of view in Romania. These evolutions would have a negative impact upon the potential growth and they will generate the increase in public expenditures, especially for those referring to pensions, to health care and to the social services for the aged persons. The population's structure change rate will depend on the trends recorded by the life expectancy, by the birth rate and by the number of persons who migrate in EU.

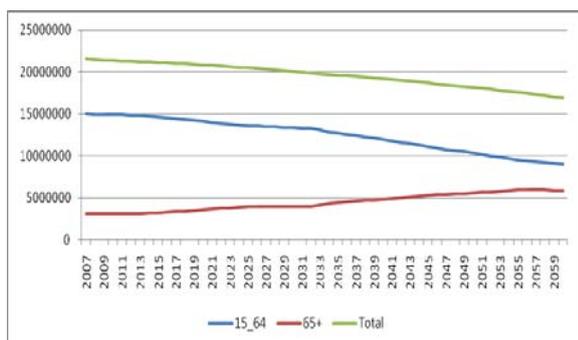


Figure 1. Demographic forecast in Romania 2007-2060

Romania is included in the group of the most vulnerable economies from European Union, under the terms in which the predicted decrease of the human population is overlapping the decrease tendencies of the human population which is able to work and of increase in the percentage of the persons who are over 65 years old. Under these terms, the human population's structure tends towards the unsustainable shape of the reverse pyramid in 2060. One of the most important risks refers to the increase in the dependency rate of those who are inactive on the active persons, and this could generate the collapse of the public social insurances system, in the absence of important reforms during the next ten years.

In terms of demography (EUROPOP 2009 released by Eurostat), Romania will face major challenges related to ageing population as, despite a life expectancy on the up - to a relatively close level to the European Union average, the fertility rate is amongst the lowest in the region [5]. The demographic forecast for Romania shows a significant decrease of the population, by 25%, respectively a decline of the population number by 4.6 million persons in 2060 as compared to 2008. The speed of the ageing process will affect the age composition of the population in the sense that the age structure is progressively worsening. This evolution is reflecting in the Fig.1, which has on the OY axis the number of citizens in Romania.

The higher and higher stress upon the persons who are able to work can also be noticed in the analysis made with reference to percentage of the human population with ages between 25 and 54 years old, this category representing 80% of the national employed citizens. Their percentage will decrease from 45% of the total population, recorded at present, to 32.8% in 2060, the decreasing trend being present since 2025. According to the forecasts made by Eurostat for Romania, the changing rhythm for the human population's structure is quite slower until 2030. Thus, during the period 2010-2030, the percentage of the persons who are over 65 years old will get increased by 5 percents, and during the subsequent twenty years by 10 percents, while the percentage of the citizens who are able to work will decrease by 3.2 percents, for the first time interval, and 3 times during the period 2030-2050.

Compared to other EU countries the pace of ageing is among the highest, next to Czech Republic, Lithuania, Malta

and Slovakia evolution. According to demographic forecast, Romania will have the third largest share of people over 65 years from European Union in 2060 year. Thus, proportion of the elderly (65+) in total population will be 35% in 2060 year, compared to 15% in 2010 year. Poland and Slovakia would record higher levels of the elderly in 2060 year – 36.2%, respectively 36.1%, European average being 32%. The shares of people of working age will strongly reduce by 15 pp, as the number of young people will be on declining path, because the drop in the population of fertility age is expected to offset the assumption of enhancing fertility rate (TABLE I).

III. THE ESTIMATION OF THE PRESSURE ON THE ACTIVE POPULATION

So that we could outline the stress degree of the population's ageing process upon the citizens who are able to work or upon the workers, we have calculated four indicators, the first two of them showing the stress upon the persons who are able to work, and the other two upon the employed persons. The values of the last two indicators can be influenced by the reforms for increasing the participation on the labour market, including for the immigrants [1].

a) *old-age dependency ratio, calculated as a percentage ratio between the population over 65 years old and the population which is able to work (between 15 and 64 years old).*

TABLE I DEMOGRAPHIC INDICATORS IN ROMANIA

	2010	2020	2030	2040	2050	2060
Fertility rate	1,32	1,37	1,41	1,44	1,48	1,52
Life expectancy at birth						
- males	69.8	73.0	75.5	77.8	79.9	81.9
- females	76.6	79.3	81.3	83.2	85.0	86.6
Life expectancy at 65						
- males	13,6	15,2	16,6	17,9	19,2	20,4
- females	16,3	18,0	19,4	20,7	22,0	23,2
Net migration (thousand)	-5.6	6,3	-0,8	12,9	12,7	3,9
Population (million)	21,4	20,8	20,0	19,2	18,1	16,9
Working age population (15-64) as % of total	69.9	67.9	66.8	62.6	57.3	53.6
Elderly population (65 and over) % of total	14,9	17,4	20,3	25,5	30,9	35.0

Source: EUROPOP database 2009

If in present old-age dependency ratio in Romania is less than European Union (21% compared with 25%), then in 2060 year Romania will have a greater ratio (65%, compared with 53% European average). Romania is included in the group of the most vulnerable countries in terms of demographic evolution, together with Poland, Lithuania and Slovakia [3].

b) *total dependency ratio, which represents the percentage of the population which is not able to work (over*

65 years old and below 15 years old) out of the human population which is able to work.

This indicator can also be obtained by adding the dependency rate of the children to the dependency rate of the aged persons, calculated as a ratio between the populations which is below 15 years old and the persons who are able to work. The estimates show that the total dependency ratio in Romania will get increased from 43% in 2010 to 87% in 2060, the increase being quite lower until 2020. The European average will increase from 49% in 2010 year to 79% in 2060 year, the less vulnerable countries being Austria, Belgium and Denmark.

c) *economic old-age dependency ratio, which outlines the percentage of the inactive citizens who are over 65 years old out of the employed population, of which ages are between 15 and 64 years old.*

This indicators outlines to a greater extent the impact of the reforms introduced in the pension systems, which refer to the conditioning of granting transfers for extending the period spent on the labour market by the aged persons (even over 65 years old). Even under the terms of increasing the age retirement, Romania will record an increase in number of the persons who are over 65 years old and who left the labour market from 30 to 99 for each 100 workers. Poland and Romania would record a ratio of one inactive person (65+) to one employed person in 2060, while Bulgaria, Lithuania, Hungary and Slovakia would be characterized by a dependency rate of 90%. As for Romania, the ratio will be inferior to the European average until 2040, and afterwards it will get increased by 41 percents, if compared to only 11 percents recorded by EU average.

d) *total economic dependency ratio, which is determined as a ratio between total population less employed as percentage of employed population 15-64.*

This is the most complete indicator, as it outlines the number of the persons who benefit from the budget transfers (pensioners, children, inactive persons, etc.) and who depend on the support of the employed population. All the member countries will record quite higher rates beginning with 2020, but in Lithuania, Poland, Slovakia and Romania the increase will be much higher (approximately 60 percents). In 2060, Romania would record the highest level in EU-27, when one employed person should support 2.1 persons who are potential beneficiaries from transfers.

TABLE II ESTIMATION OF THE DEPENDENCY RATIOS IN ROMANIA

	2010	2020	2030	2040	2050	2060
Old-age dependency ratio, %	21	26	30	41	54	65
Total dependency ratio, %	43	47	50	60	75	87
Economic old-age dependency ratio %	30	35	43	59	81	99
Total economic dependency ratio %	135	135	147	167	193	210

Source: own calculation on the EUROPOP 2009 database

On the contrary, Denmark, Sweden, the Netherlands, Cyprus and Great Britain, in 2060, will record a rate of total economic dependency which will be lower than the European average recorded at present (124%), as a result of the increase in the women's employment rate, and also that of the persons who are over 55 years old and of the immigrants.

The evolutions of the four dependency ratios in the following five decades for Romania are included in the TABLE II. The mean conclusion is that Romania will register a greater demographic pressure beginning with 2030 year, our economy becoming one of the most vulnerable from European Union.

Estimating of the pressures degree on the active population is very important to determine the sustainability of the public pensions system.

IV. THE IMPACT OF THE DEMOGRAPHIC EVOLUTIONS ON THE PUBLIC PENSION SYSTEM IN ROMANIA

The first overall assessment of Romanian pension system was made within the common projection exercise of age-related expenditure 2008-2060 carried out by the European Commission, included in the 2009 Ageing Report. The long-term forecast for pension expenditures, which we have made in this study, took into account EUROPOP 2009 demographic assumptions and DG ECFIN projections for the evolution of the labor market and macroeconomic indicators. In order to design a basic scenario of the demographic transformation on the public pension, we consider the latest changes of the pension legislation:

- new value of the point of pension (43.3% of the gross average salary instead of 45% in October 2008);
- increase in social security contribution rates by 2.4 pp in February 2009;
- freezing the pension point value in 2010 as in the previous year.

The projections of population and employment rates adopted within this scenario are based on a cohort approach,

which represents an obligatory condition for the calculation of new entrants into the pension system according to the methodology used in the pension model. As a result, the number of contributors evolves in line with the total of employees for the length of the whole forecasting period, plus a part of self employee that, according to the law conclude voluntary contracts with House of Pension. Analogously, the number of pensioners is consistent with population projections and took into account the continuation of increase in retirement age for men and women as stipulated in the actual Pension Law.

According to the evolutions included in the TABLE III, the ratio of pensioners over people aged +65 is expected to decrease over time due to increase in retirement age, to reducing the number of disability pensions due to aging process with less young people while the number of survivor's pensions will remain stable. However, due to the demographic development characteristic to an ageing population the number of PAYG pensioners will exceed in the 2040 years the number of contributors to the system. The "support ratio" is seen to decrease deeply, by 23 percent in 2060 compare to 2010, even if we have supposed a slight increase in the self-employed participation to the system. Because of "support ratio" reduction will increase the public pension system deficit, from 2% in 2010 year to at least 4% in 2060 year, leading to a public debt above 200% of GDP, compared with 35% in present.

The number of pensioners will increase due both to life expectancy development and to the high share of "young" pensioners as the actual legislation is quite permissive in that sense. In 2005-2009 the real retirement age was about 54 year, and less than a half of the PAYG pensioners retired at the statutory retirement age. This evolution suggests the urgent need for balancing the system, by increasing the real retirement age, from 54 years near to the standard retirement age (60 for women and 65 for men from 2015).

TABLE III NUMBER OF PENSIONERS AND CONTRIBUTORS IN THE SOCIAL SECURITY SCHEME

	2010	2020	2030	2040	2050	2060
1. pensioners (thousand)	5710	5271	5652	6307	6736	6445
2. people aged 65+ (thousand)	3204	3631	4060	4890	5613	5916
Ratio of (1)/(2) in %	178	145	139	129	120	109
3. contributors	6136	6630	6464	6185	5689	5297
Ratio of (3)/(1) in % "support ratio"	107	126	114	98	84	82

Source: own calculation on the EUROPOP 2009 database

In contrast, coverage ratio will decrease steadily over time. The main reason should be found in the slow increase of the retirement age, but also structural reasons as the effect of forced retiring in the ailing industry in the late 90's will gradually disappear as well the pensioners coming from co-operatives, that are subject to a social pension paid apart from social insurance budget. So that in early 20's we will see the lowest level of pensioners. In the future the actual non-contributively persons (estimated at 1.5-2.3 million), the

majority working in the grey economy will ask for a social aid as they will not be eligible for a public pension. An additional decline in the coverage ratio occurs in later years when the total population is also lowering.

V. CONCLUSIONS

In this study, we have estimated on the EUROPOP database, the pressure degree of the population aging on the Romanian economy. We believe that the decrease of the labour force with 39% in the following five decades and the increase with 13% of the pensioners number, in the absence of social reforms and of labour markets, will generate the decrease of the budget revenues, and also the increase of the state's expenditures, both effects generating the worsening of the budget balance. The demographic challenges will generate the increase of the public expenditures with pensions as a percentage of the GDP in Romania but the reforms for the pension system can generate a decrease of the stress set upon the national budget. The main solutions identified in the most member states refers to the coordination between the pensioning age and the increase of life expectancy, of limiting the access to the early pensioning schemes and of establishing of incentives to delay retirement on the labour market. These measures should result in the increase in the participation rate of the aged workers and also in the decrease of the economic dependency rate of the employed persons in Romania.

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