

## **PENSION SYSTEM IN REDUCING POVERTY RISK IN ROMANIA**

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### **Abstract**

*Pension systems, regardless of form and organisation, have the main purpose to reduce poverty. Due to demographic changes, which put a high pressure on social insurance budgets, the regulation of the last decade have targeted in maintaining the sustainability of pension systems. In this context, we are wondering to what degree the main objective of these is fulfilled. In this paper, we made a quantitative and qualitative analysis as comprehensible as possible about the public pension system of Romania and the risk of poverty in the case of persons over 65 years old. The main conclusion that outcomes this study highlights that the pension system have an essential role in poverty reduction, but there are high differences between genders, situation which need improving legislation regarding women protection.*

**Keywords:** globalization, ageing, people, pension fund's sustainability.

**JEL classification:** H55, I32.

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### **1. Introduction**

Social insurance systems, included pension systems which have been developed as a consequence to the need of protection of older people against the risk of poverty. Chancellor Otto von Bismark developed the first regulations in the social protection field by collecting contributions and further repartition of allowances, through which it wanted to compensate the inability

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of maintaining financial independency of the contributors following the occurrence of disability, work accidents, pathologies or old age.

In Great Britain, William Beveridge proposes to provide financial aids to all citizens threaten by poverty risk, regardless of their contributory status. Nowadays, this form of social protection represents the so-called non-contributory pension system, through which it is guaranteed a minimum income to persons with modest wage incomes and short contributory history that do not allow obtaining a pension from the contributory system (Schwarz, 2006).

In social protection and social insurance field, the main role is hold by the state, institution which, through fiscal sovereignty, owns the power of collecting and redistribute incomes, being able in this way to intervene directly in decreasing the risk of poverty among older people (Littlewood, 2014) and also in diminishing the uncertainty of incomes needed to a decent living standard (Mitrut and Wolff, 2011).

Analyzing political leadership system in different countries it was observed, according with the items mentioned above, that there are also differences in terms of organisation the social insurance system. In case of democratic political systems, it is the tendency that social transfers being conditioned (Dodlova et.al, 2017) by the accomplishment of some eligibility criteria as: residence, age, income level, and in the case of pension systems based on contributory principle it is also added the achievement of minimum contribution period. Therefore, it can be considered that public pension systems based on contributory principle are stringent and limitative (Beju, 2007) in accessing benefits. So, it can be said that redistribution made by modern pension systems, influenced by contributory history, do not have direct intention to reduce citizens poverty (Collado and Iturbe-Ormaetxe, 2010).

In Europe, pensions are the main source of income for elderly people. The essential objective of pension systems is “to provide adequate income in old age while ensuring financial sustainability and maximising employment” (European Commission, 2016, p.1). Alignment of standard retirement age with life expectancy will induce an increased participation of persons over 50 years old and women in labor market, generating positive effects on pension systems generosity (Grech, 2014a).

It is important to highlights that in Central and Eastern European countries, and especially in the emerging ones, economic growth leads to an

increased inequality in incomes distribution. The growth levels of income inequality in emerging countries from Central and Eastern Europe have to constitute the basement to establish policies to reduce inequality. These elements are in stringent correlation with pension systems, but also with the social sustainability of them (Neagu, Dumiter and Braica, 2016).

In the context of demographic transition, main reforms adopted aimed maintaining sustainability of pension systems, precondition to provide adequate incomes and ensuring a decent lifestyle to elderly (von Nordheim, 2017). Actually, “pension adequacy and pension system sustainability are interrelated” (Mladen, 2012, p.10) and must be regarded as “two sides of the same coin”.

Regulating the multipillar structure of pension systems has led to outsourcing a part of budgetary pressure and developed personal responsibility for incomes obtained at retirement age. State role in ensuring an adequate pension seems to minimalize, but actually it was strengthened the understanding of necessity to provide an adequate level of pensions (Grech, 2014b).

Investing pension funds at stock market has the aim to enhance financial resources for ensuring financial independency of elderly, but we cannot overlook that pension value is dependent on the investment return. In condition of a slow rhythm of economic growth and low risk portfolios, the return obtained is moderate and financial resources needed for pensions could be insufficient. Therefore, public pension system is the way to avoid poverty and 2nd Pillar is focused especially to adequate incomes and to ensure a suitable replacement rate, meanwhile facultative pension funds give the opportunity to life savings (Lannoo, Barslund, Chmelar & von Werder, 2014).

In this paper we proposed to analyze how public pension system of Romania is able to accomplish its objective of reducing poverty among retired persons and the degree of adequacy of public pensions in ensuring a decent living standard. The study made reference exclusively to public pension system because Romania has implemented 2nd Pillar only in 2007 and at present there are not beneficiaries of this pillar.

To analyse the impact of social transfers made through pension system on poverty of persons over 65 years old in Romania, we have considered essential the rate of poverty and social exclusion risk *vis – á – vis* of social transfers, including pensions compared to rate of poverty and social exclusion risk. The analysis is realised on the last 10 years period (between 2007 and

2016), taking into account gender and cut-off threshold of mean equivalized net income.

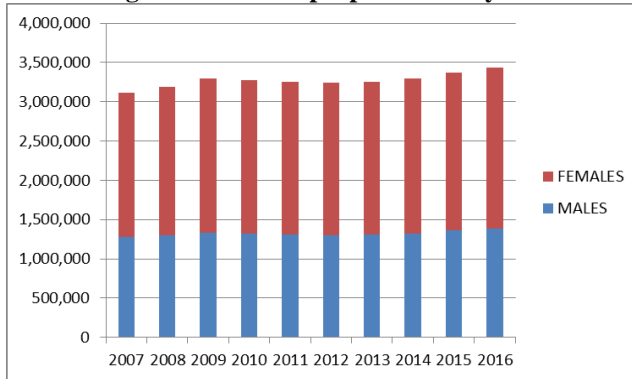
In Romania, public pension system has a significant influence in reducing the risk of poverty among elderly, but it appears inequalities between genders. In the case of females, discontinuous participation on the labor market and low wages have a direct connection with the benefits of pension system, it's level being quite low. The next reforms should take into consideration these aspects in order to ensure neutrality and equality between beneficiaries.

This paper contains' one section dedicated to present the risk of poverty and social exclusion among the persons over 65 years old in Romania, followed by the analysis of the effects of social transfers through pension system on poverty.

## **2. Risk of poverty over 65 years old in Romania**

In the last 10 years, according to National Institute of Statistics, the number of resident persons in Romania decreased with approximate 7%, and the number of persons over 65 years old recorded an increase with approximate 320,000 persons, in compliance with Figure 1. The largest share is held by females' respectively 10% of resident population, because of their medical status. From medical point of view, women succeed on preserving health condition for a longer time, being firstly protected by hormonal structure, but also because they are giving more importance to personal care and medical checks, as well as keeping an active lifestyle. Prevention, early diagnosis of pathologies and appropriate therapy lead to regaining health condition. On average, Romanian females are more longevive than males, having life expectancy longer than males with approximate 7 years.

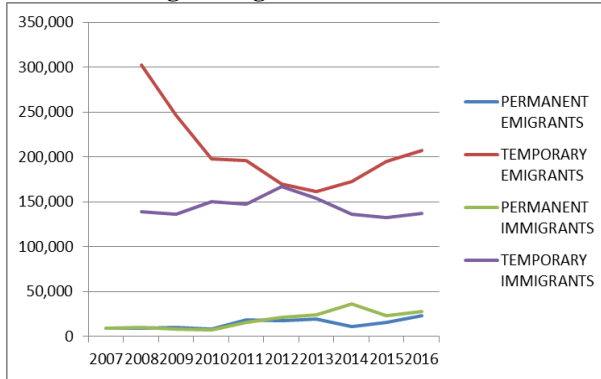
**Fig. 1. Number of people after 65 years**



Source: Own processing based on the data available at the National Institute of Statistics Database.

Demographic situation of European Union is characterized by a population mean age of 42 years and 7 months, increased share of population over 65 years old by 2.3% in the last 10 years, decreased fertility rate and increased life expectancy. Besides these, Romania is also confronting a negative rate of migration. In Figure 2, it can be observed the increasing number of permanent emigrants, while reducing number of temporary emigrants. Starting with the year of 2014, theirs number begun to grow, gender distribution being approximately equal. Regarding the immigrants, Romania attracted in the last 10 years approximately 18,000 permanent immigrants, meanwhile the number of temporary immigrant's are diminishing. Unfortunately, Romania is an exporting country of labor force for the high industrialized states and at the moment is not able to attract foreign labor force which could counterbalance the demographic decline and emigration, condition which could also has beneficial effect to pension system sustainability (Pânzaru, 2015).

**Fig. 2. Migration in Romania**

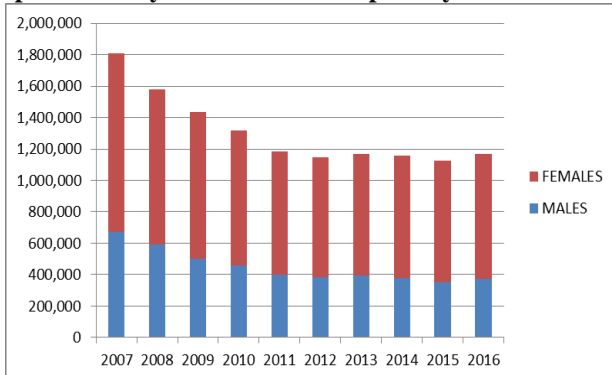


Source: Own processing based on the data available at the National Institute of Statistics Database.

The impact of these phenomenon's upon the pension system are pointed out by reducing the level of collected contribution at 66% of total incomes of State Social Insurance Budget and progressive increase of expenditures with pensions.

Regarding the number of persons over 65 years old threatened by the risk of poverty and social exclusion, it can be observed a decrease with approximate 35% of their number, which represents 23.9% of total population number, fact highlighted by Figure 3. The largest share it is owned by women, 63% in the year of 2007 raising at 68% in the year of 2016. These results are the consequence, firstly of the difference existing between number of females and number of males, and secondly, because of large live expectancy of females.

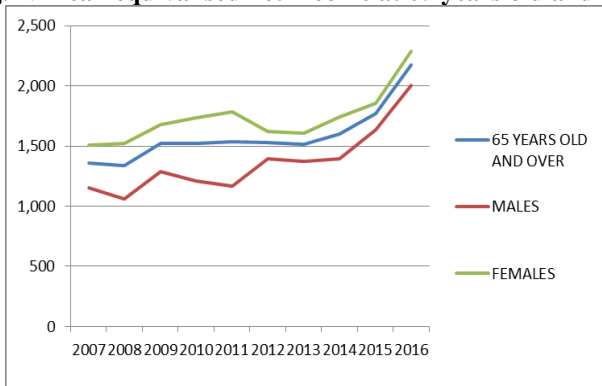
**Fig. 3. People after 65 years old at risk of poverty or social exclusion**



Source: Own processing based on the data available at the Eurostat Database.

Assessing the risk of poverty is made in relation with equivalized disposable net income, indicator developed by Organization for Economic Cooperation and Development to comparability of individual incomes. This indicator represents the disposable net income of each household, in case all members are equal. In the case of Romania, this income before social distribution of persons over 65 years old, recorded a remarkable growth, but it does not exceed 2,300 RON, according with Figure 4. Values are a little higher in case of females because of majority share in total population over 65 years old.

**Fig. 4. Mean equivalised net income at 65 years old and over**



Source: Own processing based on the data available at the Eurostat Database.

Reported at this indicator, the rate of poverty and social exclusion risk in European Union is very high. In the case of Romania, this value is under the mean value of European Union, but it grows at over 80%, depending on cut-off threshold of income, fact highlighted by the numbers of Table 1. In the case of males, this indicator has higher levels than females, explication being given by the higher value of equalized disposable net income of females.

**Table 1. At risk of poverty and social exclusion by threshold before social transfers (pensions included)**

Cut-off rate		40% of mean equalised income	50% of mean equalised income	60% of mean equalised income
2007	Males	83.7	85.7	88.9
	Females	80.2	83.2	86.2
2008	Males	86.2	89.4	91.8
	Females	82.6	85.4	87.6
2009	Males	86.2	89.5	92.1
	Females	82.9	85.8	88.9
2010	Males	88.2	90.4	92.7
	Females	83.4	86.0	89.2
2011	Males	88.6	90.6	93.1
	Females	82.9	85.9	88.8
2012	Males	85.5	88.7	90.6
	Females	83.5	86.4	88.7
2013	Males	85.3	88.3	91.2
	Females	83.3	86.3	88.9
2014	Males	84.6	88.1	91.3
	Females	81.9	85.6	88.9
2015	Males	83.2	86.8	89.5
	Females	82.2	85.6	88.6
2016	Males	81.6	85.0	87.9
	Females	80.0	83.4	87.2

Source: Own processing based on the data available at the Eurostat Database.

There are a direct connection between poverty and social exclusion risk and the educational level, the higher the level is, the lower the risk is. Explication is obviously, a better training through education brings the possibility to reach working places with high wage incomes. The higher rate, over 40% is recorded in the case of persons that graduated only the lower



secondary education. This value is diminishing below 20% if the persons graduated upper secondary or post-secondary education, and in case of tertiary education the rate of poverty risk has the values about 10%. Also, can be noticed differences between genders, the value of indicator is higher in the case of females. Taking into account the development of analysed cohort in socialist political system, the system which has limited access at higher education and promoted professional education, the results expresses the existing conditions of that system.

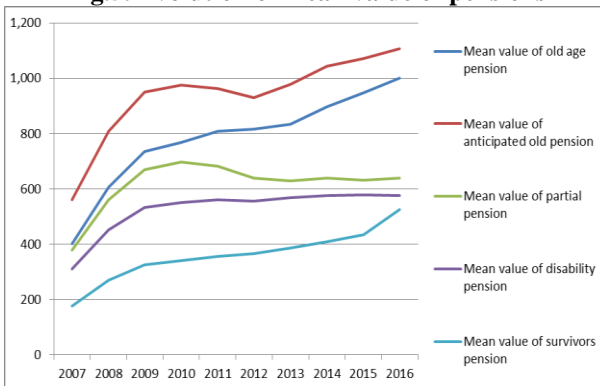
### **3. Effects of public pension on poverty risk of individuals after 65 years old in Romania**

Pension system of Romania consists of three pillars: public pension system, privately – managed compulsory pensions and voluntary pension funds.

The most important share is hold by public pension system which gives five types of pensions, specifically: old age pension, anticipated old age pension, partial pension, disability pension and survivors pension. As a system based on contributory principle and intergeneration redistribution, benefits received is conditioned by achieving eligibility criteria, specified by legislation in force. The pension value is computed based on a score which reflected the incomes earned in activity period and for those was paid contributions at public pension system.

Evolution of mean value of pensions (RON) between years 2007 and 2016 is presented in Figure 5:

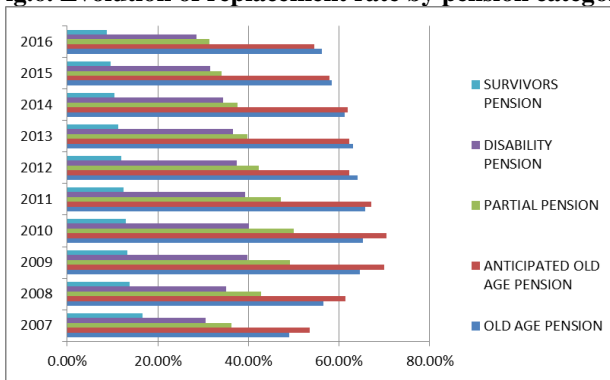
**Fig.5. Evolution of mean value of pensions**



Source: Own processing based on the data available at the National House of Public Pension Database.

In assessing the incomes provided by the pension system and especially in the analysis of pension adequacy, it is important to highlight the evolution of replacement rate, an indicator which shows the ratio between pensions and mean net wage per economy (Figure 6). A high value of this indicator could reduce the risk of poverty among the retirees, but can lead to increased share of expenditures with pensions and can represent a threat for pension system solvency and sustainability.

**Fig.6. Evolution of replacement rate by pension category**



Source: Own processing based on the data available at the National Institute of Statistics Database.

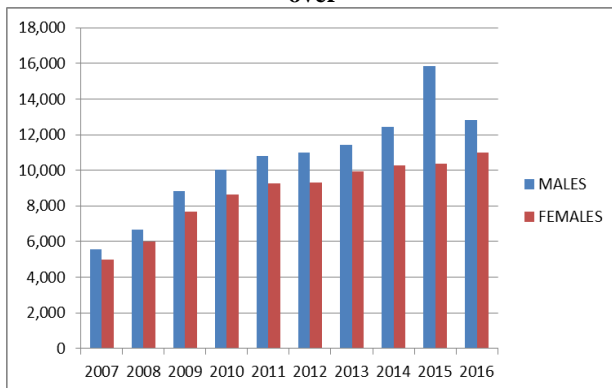
We remark that replacement rate through anticipated old age pension has the higher values. This fact is due to mean value of anticipated old age pension, which has higher values than old age pension. The explication lies on the reduced number of beneficiaries of anticipated old age pension compared with the number of beneficiaries of old age pension. Also, 95% of beneficiaries of anticipated old age pension obtain a pension with values between 700 RON and 2,000 RON. We can observe that starting with the year of 2015, the level of replacement rate through anticipated old age pension is diminishing below the replacement rate through old age pension.

The replacement rate through old age pension has the maximum value 65.79% in the year of 2011, than it is diminishing at 56.16% in 2016. Replacement rate through anticipate pension and replacement rate through invalidity pension have higher values in the year of 2010, following a decrease and by the year 2016 it recorded the value 31.43%, respectively 28.49%. The lowest values of the replacement rate are registered in the case of survivors pension. Its value decreased with 8% in analysed period, explication is given by an accelerate growth rhythm of mean wage per economy comparative with mean value of pensions.

Even it is not establish the optimal value of income replacement rate through pensions, World Bank suggests that the minimum threshold should be at least 40% of the income obtained before retirement (Hagemeyer and Woodall, 2014). In Romania in the year of 2016 this value is reached only through old age and anticipate old age pensions. This situation show up as a result of the same computation method for both pension categories, the only difference being the possibility to retire with at most five years before standard retirement age and exceeding full contribution period with at least 8 years, in case of anticipated old age pension (Law no.263/2010 regarding unitary public pension system).

After social transfers through pension system, equivalised net income has a significant grow with values included between 4,900 RON and 15,900 RON (Figure 7). Gender differences continue to exist, and, if before pension redistribution the values of indicator were higher in the case of females, after pension the value of indicator is higher in case of males. Therefore, it can be concluded that the benefits of pension system are richer for males, and if we think about inactivity periods on labor market, because of the role played by women in family structure, and low incomes obtained by females, these values confirm the reality.

**Fig.7. Mean equivalised net income after pension at 65 years old and over**



Source: Own processing based on the data available at the Eurostat Database.

Regarding the indicator risk of poverty and social exclusion rate after pension redistribution, in Table 2 can be noticed a significant decrease of this indicator with values between 33.9% and 83.8%. It is remarkable that the rate of poverty risk is higher at females than males, as a consequence of differences existing between incomes obtained through pensions, which in the case of females has lower values.

**Table 2. At risk of poverty and social exclusion by threshold after pension transfers**

Cut-off rate		40% of mean equivalised income	50% of mean equivalised income	60% of mean equivalised income
2007	Males	16.1	26.8	39.3
	Females	28.2	38.8	52.3
2008	Males	12.2	22.5	33.1
	Females	21.0	34.6	44.5
2009	Males	9.4	15.4	26.0
	Females	19.2	27.7	37.9
2010	Males	6.1	11.9	22.0
	Females	13.7	23.9	35.5
2011	Males	4.8	9.8	19.5
	Females	8.1	20.2	31.9
2012	Males	4.2	9.3	17.3
	Females	7.6	19.2	30.7

2013	Males	3.8	9.2	17.5
	Females	7.7	18.5	29.2
2014	Males	4.7	8.6	16.8
	Females	9.6	18.4	29.1
2015	Males	6.6	13.3	19.4
	Females	12.9	22.9	32.4
2016	Males	6.0	11.1	17.9
	Females	9.9	21.6	31.0

Source: Own processing based on the data available at the Eurostat Database.

#### **4. Conclusions**

The risk of poverty before social transfers at elderly persons from European Union and Romania raises at over 80% of total population, but this risk is significantly reduces through social transfers and the benefits offered by pension system.

In Romania, the incomes provided by public pension system to beneficiaries of old age pension reach 55% of the value of mean wage per economy. Even if this value exceeds minimum level propose by World Bank, we consider that it is necessary the improvement of this indicator and give benefits related with the special needs of this sector of population.

The rate of poverty and social exclusion risk after public pension transfers has considerable decreased. Depending on cut-off threshold of mean equivalized net income, the reduction of this indicator is included between 39% and 96%.

Although the reforms of last decade had been oriented towards removing the inequalities and inequities from pension system, females and persons with low wages remain at high risk of poverty, in this regard being necessary the improvement of social insurance legislation.

In the case of Romania, public pension system is, without doubt, the main source of financial protection of elderly persons, but in the context of demographic transition ensuring an adequate replacement rate, establishing equality and equity of intergenerational redistribution and between beneficiaries, and also maintaining system sustainability become true challenges.

## 5. References

- Beju, D.,: *Coordonate ale reformei sistemului de pensii. Cazul României*, *Transylvanian Review of Administrative Sciences*, no.20, 16-32 (2007).
- Collado, M.D., Iturbe-Ormaetxe, I., *Public transfers to the poor: is Europe really much more generous than the United States?*, *International Tax and Public Finance*, Vol. 17, 662-685 (2010).
- Dodlova, M., Giolbas, A., Lay, J.,: *Social transfers and conditionalities under different regime types*, *European Journal of Political Economy*, Vol. 50, 141-156 (2017).
- European Commission, *European semester thematic factsheet: Adequacy and sustainability of pensions* (2017). Available at: [https://ec.europa.eu/info/files/european-semester-thematic-factsheet-adequacy-and-sustainability-pensions\\_en](https://ec.europa.eu/info/files/european-semester-thematic-factsheet-adequacy-and-sustainability-pensions_en)
- Grech, A. G.,: *Evaluating the possible impact of pension reforms on elderly poverty in Europe*, *MPRA Paper No. 57639* (2014a). Available at: <http://mpra.ub.uni-muenchen.de/57639/>
- Grech, A. G.,: *Pension policy design: The core issues*, *MPRA Paper No. 53662* (2014b). Available at: <http://mpra.ub.uni-muenchen.de/53662/>
- Hagemeyer, K., Woodall, J.: *How should the adequacy of pension coverage be balanced against financial sustainability?*, *Australian Journal of Actuarial Practice*, Vol. 2, 21-32 (2014).
- Lannoo, K., Barslund, M., Chmelar, A., von Werder, M.: *Pension Schemes*, *European Parliament's Committee on Employment and Social Affairs* (2014). Available at: <http://www.europarl.europa.eu/studies>
- Littlewood, M.,: *Ageing populations, retirement incomes and public policy: what really matters*, *MPRA Paper No. 56232* (2014). Available at: <http://mpra.ub.uni-muenchen.de/56232/>
- *Legea 263/2010 privind sistemul unitar de pensii publice*, publicată în *Monitorul Oficial nr. 852 din 20 decembrie 2010, cu actualizările ulterioare*
- Mladen, L.,: *A Comparative Review Over the Pension Systems' Performance in Central and Eastern European Countries*, *Journal of Knowledge Management, Economics and Information Technology*, Vol. II, Issues 5, 1-11 (2012).
- Mitruț, A., Wolff, F.,: *Do private and public transfers received affect life satisfaction? Evidence from Romania*, *Journal of Economic Psychology*, no. 32, 969-979, (2011).
- Neagu, O., Dumiter, F., Braica, A.: *Inequality, Economic Growth and Trade Openness: A Case Study for Central and Eastern European Countries (ECE)*, *Amfiteatru Economic*, 18(43), 557 – 574 (2016).
- Pânzaru, C.: *On the Sustainability of the Romanian Pension System in the Light of Population Declining*, *Procedia - Social and Behavioral Sciences*, no. 183, 77 – 84 (2015).
- Schwarz, A.,: *Pension System Reforms*, *SP Discussion Paper, 0608*, *The World Bank* (2006).
- Von Nordheim, F.,: *The 2015 Pension Adequacy Report's Examination Of Extended Working Lives as a Route to Future Pension Adequacy*, *Intereconomics*, Vol. 51, Issue 3, 125-134 (2016).