

# SUSTAINABILITY DETERMINANTS OF THE PUBLIC SOCIAL SECURITY SYSTEM

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**Abstract:** *The present paper aims to highlight the main problems facing the current pension system in Romania, by analysing the main determinants and by identifying the weak links in the social insurance circuit. Through an analysis of the cause of the effect, it aims to highlight the main problems of the Romanian pension system and the impact they have in society, endangering the quality of life, the future evolutions within the economic and social activity. In Romania, because of the decreasing number of the population, the public pension system can no longer provide for adequate pensions for the future generations of Romanians. According to them, the population tends to underestimate their real savings needs in the world, including countries which are more developed and financially educated than Romania.*

**Key words:** *public social security system, migration, pensions*

## 1. Introduction

The social insurance system represents a current subject of interest debated at both national and international level.

The first models of social security systems, according to the scientific literature, can be found starting with 1883, when the first mandatory program of social insurance at a national level was started in Germany, during the time of Chancellor Otto von Bismarck; health insurance in 1883, work compensation in 1884, pensions for the elderly and the impaired in 1889 (Cace, 2004). Therefore, different European countries adopted the German model, Great Britain being the country who developed a new framework of social insurance.

Nowadays, the insurance models present throughout Europe have a complex system of financing composed by employees and employers' contributions, but also different financial sources, all of them representing versions of the Bismarck and Beveridge models. The first model initiated by Otto von Bismarck was composed of a series of defining elements such as:

- People considered to be insured were either employees or people with insurance contracts;

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- Contributions, determined according to wages, represented the main form of finance for the insurance system;
- Wages were considered to be the fundamental base for contributions

Later on, William Henry Beveridge presented a distinct form of the insurance system, including (Carp, 2012):

- Social insurance;
- General health services;
- Compensations for work related accidents;
- Family aid;
- Protection against unemployment;

This system made possible the *inclusion* of the whole state population and had as main source of financing the state budget, where payments were equal shares so they could cover the total contributions.

The convergence of the two social security systems reveals two topical themes. Firstly, the problem of poverty and wage inequality is considered, and secondly it targets the diminishing of unforeseen social risks by raising the level of social security.

Over time, there have been a multitude of changes in Europe that influenced insurance systems. Every factor that contributed to these changes has put its mark on the perspective over insurance. A first impact on the financing of the insurance system came from the fertility rate, leading to a demographic change. According to the reports of the last years, population age structure has also undergone changes, the population over 65 years of age exceeds the young population, so the ratio currently stands at 1 to 4, and it is estimated that by 2050, this report will have reached 1 to 2. Considering the demographic evolution of the population, the social security contributions are borne by a smaller number of the active population.

Over the last decades, changes in social insurance have put their mark on Romanian society, the factors that have contributed to these changes and the negative oscillations being multiple, from the decrease of the birth rate to the increase of the state's migration. The pension system of the Romanian state is at a turning point, the predictions related to this aspect being unfavourable to the Romanian population.

This paper aims to highlight the main problems faced by the current pension system in Romania by analysing the main determinants and by identifying the weak links in the social insurance circuit.

The rest of the paper is structured as follows: section two presents some modern concepts regarding the social security system, the next section is about the determinants of sustainability of the public social security budget, and the last part is dedicated to the discussion and conclusion.

## **2. Modern Concepts regarding the Social Security System**

The specialized literature brought to the forefront a concept specific to the 21<sup>st</sup> century, namely "portability", which describes the possibility of preserving the value of the accumulated pension, even when there is a change in the workplace. Lack of portability would bring great disadvantages to beneficiaries, representing a retirement

deficit, a deficit that would have been paid unless it had been a change (Blake and Orszag, 1998). Portability means the right to retirement by calculating and transferring the amount of pension due to the beneficiary, irrespective of the domicile chosen by the beneficiary (Fortenza, 2008). For defined contribution (DC) pension schemes, contributions are aggregated into an individual savings account, which is used to buy an annuity or to pay a retirement pension from the scheduled activity. These pension schemes are normally fully portable, more precisely insured persons can take over their savings account rights when they switch to another pension scheme.

Defined benefit-based pension schemes (DB) result in a promise of a retirement-dependent pension and the number of years of insurance. In this case, a transfer of the insured from a pension scheme to another scheme may lead to the loss of pension rights (Carp, 2012).

According to Cichon's theoretical demonstrations (1999), the determination of pension levels and the financing of the pension system are analysed separately and independently, so that pension benefits calculated on the defined contribution formula can be funded through three main methods: Full funding, Partial financing, no funding (PAYG scheme) (Carp, 2012).

Full funding is represented by paying a global contribution according to the person's income over the insured period. The contribution rate is set to be uniform over longer periods. In this case, the reserves are equal to the present value of the pensions. Contributions collected annually must be in line with the public social security expenditure for the same year.

The pay-as-you-go (PAYG) scheme depicts a common system among former socialist countries, applied after 1990, a redistributive type based on intergenerational solidarity, and operates according to the contributory principle that social security funds are based on contributions payable by natural and legal persons participating in the public system, social security entitlements based on paid social security contributions. More specifically, it is a system in which current retirees receive their income (pensions) from the contributions of current employees, so that the level of pensions is closely linked to the level of income from salaries.

### **3. Determinants of Sustainability of the Public Social Security Budget**

As of January 2018, mandatory social contributions were subject to changes according to *OUG 79/2017 for altering and completing the law no. 227/2015 regarding Fiscal Code*, such that:

- The social security contribution under normal conditions, with a total share of 25%, falls entirely to the employee;
- The social security contribution for special conditions in an additional quota of 4% falls on the employer (employee + employer);
- The social insurance contribution under special working conditions, with an additional quota of 8%, is the responsibility of the employer (employee + employer);

- Social security contributions for health insurance of 10% are also payable to the employee;
- The insurance contribution is 2.25% and falls to the employer (OUG 79/2017).

A detailed analysis of Romania's socio-demographic evolution reveals unfavourable effects that affect the sustainability of the social security budget, and therefore directly affects the current pension system. Determinants include declining birth rates, increasing external migration and changing negative life expectancy. All of these lead to the aging of the population, which degrades the current pension system of the Romanian state. Thus, long-term economic projects point to a gradual rise in pension expenditure, which will make a number of measures against this phenomenon possible, from raising the retirement age to restraining early retirement.

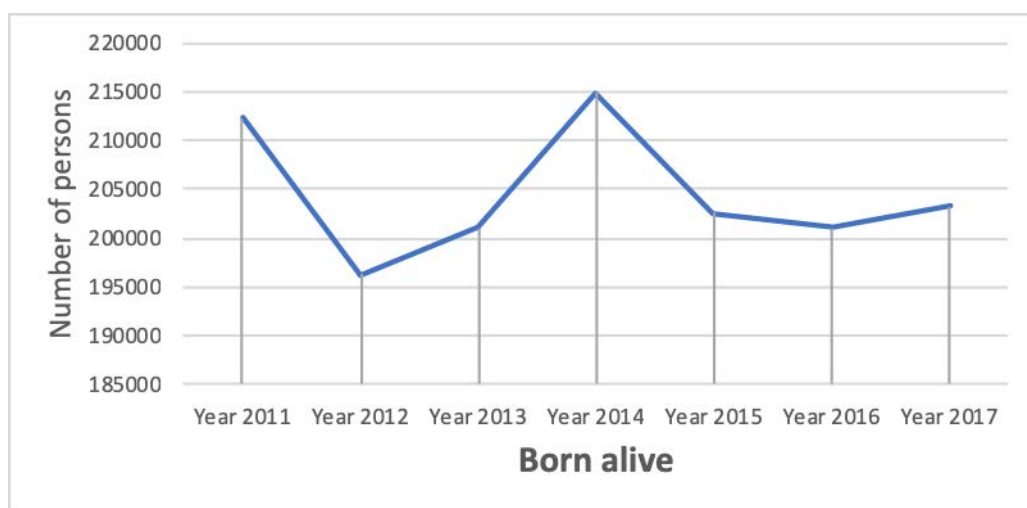
Nativity is represented by the frequency of births of living children in the population, being expressed by the ratio of the number of births in one year to the actual number of the population. Natality is one of the active elements of the natural balance and is more variable in space and time as it can be more easily controlled and influenced than mortality. Gross birth rate is calculated in most cases as a ratio between the number of alive births in one year and the number of living populations.

Table 1

*Number of born alive 2011-2017*

Born alive						
Year 2011	Year 2012	Year 2013	Year 2014	Year 2015	Year 2016	Year 2017
<b>Number of persons</b>						
212,199	196,242	201,104	214,932	202,501	201,023	203,231

Source: *insse.ro*, author's calculations

Fig. 1. *Number of born alive 2011-2017*

Source: *insse.ro*, author's calculations

As it can be seen in the year 2017, 203,231 children were born in Romania, a lot less than the number registered in 1991 of over 275,000 children. As of 2014, Romania has registered natality decreases, a phenomenon which influences future generations negatively.

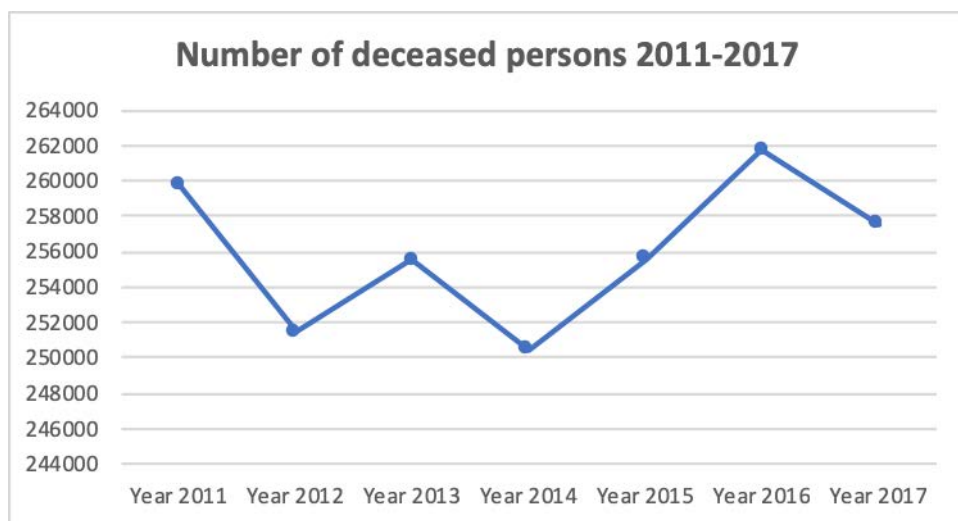
Mortality, being another component of the population movement, has high thresholds in Romania. The significant increase in the level of this component should be considered in the demographic perspective of Romania.

*Number of deceased persons 2011-2017*

Table 2

Year 2011	Year 2012	Year 2013	Year 2014	Year 2015	Year 2016	Year 2017
<b>Number of persons</b>						
259,723	251,439	255,539	250,466	255,604	261,697	257,547

Source: *insse.ro*, author's calculations



**Fig. 2. Number of deceased persons 2011-2017**

Source: *insse.ro*, author's calculations

In 2017, approximately 257.5 thousand people with their usual residence in Romania died, 480 thousand fewer than in 2016 and 1943 thousand more deaths than in 2015. Despite the fact that the total number dropped in 2017 compared to 2016, the odds are, however, equally alarming, with figures showing fairly high compared to 2014.

Analysing birth rates and mortality rates for the year 2017, it can be concluded that a higher number of deceased people is certified compared to alive births, the difference affecting the replacement of future generations, the young population experiencing significant changes in the future, and the sustainability of pensions will also be unbalanced.

The causes of migration can vary from economic to social and political. People leave an area either for better development opportunities and a better socio-economic level, or they are fled to another area following calamities or disasters, wars, religious or

political persecutions. Recently developed and applied studies have led to the development of some theories that try to capture both the modalities and the causes of migration in order to better assess the impact and anticipate population movements. We can explain migration by balancing weaknesses in labour markets, between supply and demand, we can go down to the micro level to explain the phenomenon by estimating the benefits of migration by each individual in relation to the expected costs. But in reality, the mere economic difference between states is incapable of explaining a complex and perpetual process (Staicu and Moraru, 2006; Socol and Socol, 2006; Dincă and Brătulescu, 2011; Vasile, 2012).

Table 3

*Migration – residence change 2011-2017*

<i>Migration – residence change</i>						
2011	2012	2013	2014	2015	2016	2017
no. of persons						
466,901	342,933	390,198	369,612	382,928	376,318	412,180

Source: *insse.ro*, author's calculations

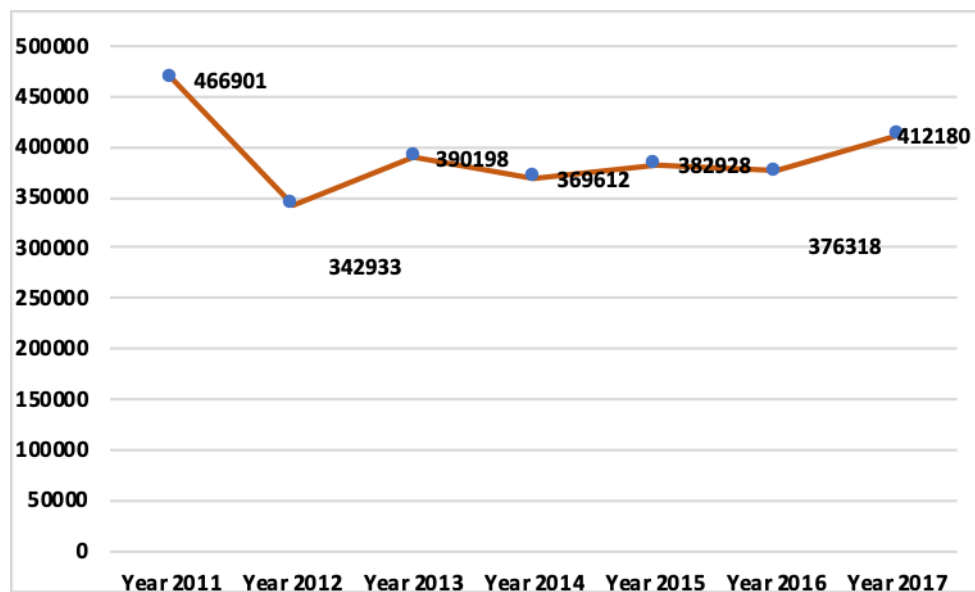


Fig. 3. *Migration – residence change 2011-2017*

Source: *insse.ro*, author's calculations

Figure 3 shows a decrease in migration in 2012 compared to 2011, with about 123 thousand people, but in 2017 there is a worrying figure of 412 thousand people.

After a long period of migration and declining birth rates, Romania is currently facing an acute shortage of labour in many areas of the country. There are 4.7 million employees with legitimate work contracts, out of 8 million of the employed population, and another 3 million people left abroad. This personnel crisis in Romania could only be

solved by raising wages and by doubling, in a first phase, the number of work permits given by the Romanian state to foreigners.

Workforce available

Table 4

	Year 2011	Year 2012	Year 2013	Year 2014	Year 2015	Year 2016	Year 2017
	000's						
<b>Male</b>	7222.7	7233	7233.9	7223.1	6603.4	6536.5	6572.8
<b>Female</b>	6824.9	6814.7	6799.8	6774.8	5994.3	5944.6	5989.2
<b>Total</b>	14047.6	14047.7	14033.7	13997.9	12597.7	12481.1	12562

Source: *insse.ro*, author's calculations

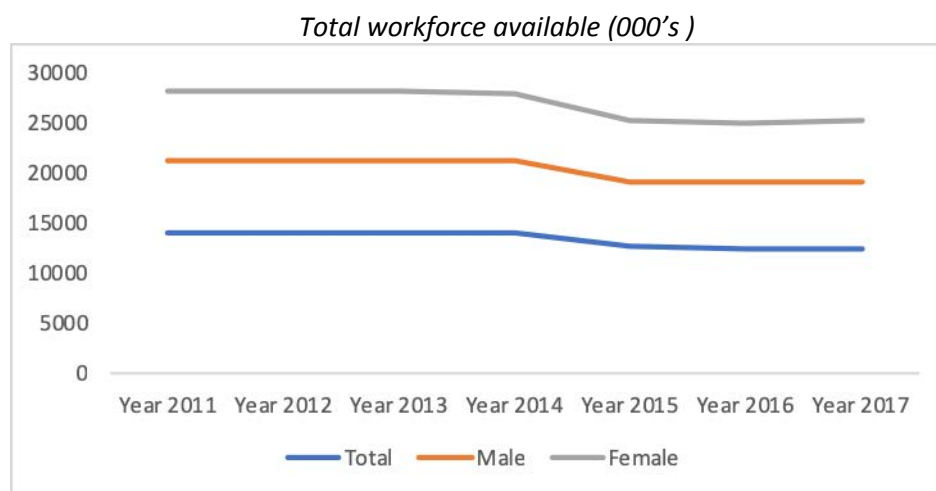


Fig. 4. Total workforce available 2011-2017

Source: *insse.ro*, author's calculations

In 2011, the available resources amounted to 14047.6 thousand persons, these were maintained during the years 2011-2014, and decreased severely starting with 2015, reaching 12562 thousand in 2017. Differences are visible, and the projections regarding the evolution of labour resources in Romania will not change their trend, according to studies.

Considering the negative changes in birth rate, mortality, external migration, but also low labour resources, it is understandable that, in the long run, a major disequilibrium will occur in the population, an imbalance which will mostly be felt from the point of view of economic dependence. Under these circumstances, economic burdens will fall on the active population, a population experiencing severe aging and a decline in the young active population.

Another problem related to severe migrations is the fact that the average age of people leaving the country is between 18 and 40, the age at which the phenomenon of

fertility occurs, so that two birth scenarios are formed: the number of births tends to 0, or births take place outside the country, abroad, so Romania is losing in terms of population growth.

#### **4. Discussions and Conclusions**

Romania presents a very unfavourable demographic situation, and the United Nations' recently published forecasts which show that Romania will experience the world's most drastic population reduction over the period 2017-2050 worldwide: from 19.7 million inhabitants in 2017 to 16.4 million in 2050, that is, a minus of about 17%.

Thus, in Romania, the public pension system can no longer provide for adequate pensions for the future generations of Romanians. According to them, the population tends to underestimate their real savings needs in the world, including more developed and financially educated countries than Romania. Under these circumstances, the risk of under-valuation in our country is even greater.

Pillar I is based on the monthly contributions of employees, but this has been in deficit for several years. One of the main causes of the deficits is the small number of employees in relation to the much higher number of pensioners and the emigration of over 3 million Romanians aged between 25 and 40 years. Practically, monthly employee contributions do not cover the payment of all pensions, pensions that have an ascending trend from one period to the next, as demonstrated in the previous chapters.

A positive element in the transfer of contributions to the employee is: if, in 2017, the employer's and employee's contributions to the Pillar I amounted to 706 lei, with a gross salary of 3,329 lei, in 2018, the contributions reach 849 lei, which means an increase in the contribution to Pillar I by 149 lei. Romanian employees will have a higher pension contribution and a higher pension in the future. There is also a benefit at the level of the state budget, because there is a deficit of the social insurance budget.

A survey conducted at the request of APAPR (Association for Private Managed Pensions in Romania) in 2017 showed that approximately 75% of Romanians (adults, the urban environment, Internet users) want to receive a pension of over EUR 500 at the retirement age, while currently only less than 2% of pensioners enjoy such a level of pension. This huge gap between expectations and reality cannot be compensated only by the public pension system, but it is necessary to strengthen Pillar II of compulsory private pensions and Pillar III of optional private pensions as complementary solutions to the first pillar of state pensions.

An efficient capital market entails a full and unhindered access to Information for all players with the sole aim that speculation will not occur (Dincă and Gîdinceanu, 2011).

Moreover, 38% of Romanians do not save at all for retirement, and for another 39%, their savings cover entirely other aspects (covering loans, renovation of dwellings, cars, holidays etc.) and do not supplement the pension.

Under these circumstances, mandatory pillar II is the only additional source of savings for an overwhelming percentage of the active population in Romania - and for low-income Romanians, Pillar II is the only additional source of savings.



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