

THE INFLUENCE OF THE DEMOGRAPHIC PHENOMENA ON PENSION EXPENDITURE IN EU MEMBER STATES

Elena Lucia Croitoru,
Vasile Ilie ¹

Abstract

The demographic situation in the EU Member States is changing and the age pyramid reverses. This indicates a low number of active people and a growing number of retired. The effect is the increase in pension expenditure. This growth pose serious problems to all Member States, as projections show growth and over 100% in the horizon of 2060 in terms of pension expenditure.

Keywords: demography, pension system; pension expenditure; age limit pension

JEL Classification: H55; H59; J11; J14; J18

1. Introduction

Demographic change is one of the greatest challenges with which the economy and society are facing and precisely in this context, it is necessary to analyze in detail the various demographic trends that are responsible for the changes that Member States are facing. In addition, demographic changes have an impact not only on population size (are responsible for the rapid growth of the world population in the twentieth century) but also to the economic slowdown. Such trends have a strong impact on social systems and are directly related to the management of pension schemes.

The main cause of aging is the transition from traditional population breeding with high birth rates, to the modern regime, characterized by low birth rates. So, fertility is in constant decline, while life expectancy is increasing slowly but continuously. Under these conditions, the main result of this evolution is the increasing proportion of elderly, so that if the decrease in fertility and birth narrows the demographic pyramid, increasing life expectancy "thickens" its top.

¹ Author Croitoru Elena Lucia is Assistant Professor of Social Insurance at Romanian American-University, Bucharest, e-mail: lucia.croitoru@profesor.rau.ro

Author Ilie Vasile is Professor of Corporate Finance at Academy of Economic Studies, Bucharest, e-mail: vasile.ilie@fin.ase.ro

The paper is structured so as to contribute to the clarification of demographic trends and the influence of the pension expenditure in EU member states, analysing both the current situation and the future one.

2. Demographic analysis of the EU member states and its influence on pension expenditure

2.1. Population size and its growth

In the last years, there have been changes in the total population in each EU Member State. The population of the European Union Member States increased, with the exception of Bulgaria, Germany, Estonia, Lithuania, Hungary and Romania. Be noted that these growth rates were quite low and were based with the exception of Spain, France, the Netherlands, Slovakia and the UK, on migration as the main component in natural population growth and not on natural growth rate. These growth rates will diminish as population projections EUROPOP 2010 shows and almost all states will face population decline in the next decades. Considering these aspects, EU Member States will need to think about measures to stimulate their social systems and the main pension schemes, as in social terms, a shrinking population indicates difficulties in providing essential public goods and services, such as social security.

2.2. Population ageing

With the slowing population growth are resulting changes in the age structure of the population, the number of older people in the European Union has already exceeded the number of children in 1995. Changes in the structure of population ageing are highlighted in particular the pyramid of aging, which it is considered that it will change considerably in the coming decades, as the population aged 65 and over in the EU-27 will increase from 17.4 % (the present value) by 30%, much of this growth is expected to occur during the period 2020-2040.

In each Member State, things are different. In every state, there were changes in the age structure of the population, and the forecasts are not encouraging. Thus, measuring the rate at which population is ageing (European Commission), Member States can fall into three groups:

- group I, in which most states will experience a poor start, continue with moderate growth, as exemplified by the case of Sweden. If in 2010 the share of population aged 65 or over is the fourth largest (18.1%) in the EU-27, by 2060, due to a lower age structure is designed to be the eighth among the lowest, reaching the 26.6%. A similar situation, although growth will be slightly faster, will meet for Belgium, Denmark, France, Cyprus, Luxembourg, Portugal, Finland and the UK. The dutch, they will be part of the group, but on the basis of atypical model: the proportion of people aged 65 and over was lower in 2010 (15.3%), but is projected to grow rapidly in 2040 (27.3 %) and thus to align forecasts for other members of this group;

▪ for the group II, countries have in common that, in 2010, the population was already aging and projections are at a moderate rate. A good example is Germany, whose share in 2010 of population 65 years and over was 20.7%, being the highest in the EU-27. The aging population in Germany is estimated that it will take a sustained until 2040 and then almost stops during 2050. Austria, Greece, Spain, Italy and Slovenia is estimated to follow the German model, while Ireland has a moderate aging model, even if it starts from a young population and an aging sustained in 2050. Similar for both groups, as we have seen, is that after 2040 will experience a moderate pace of aging;

▪ group III, consisting of the states of Central and Eastern Europe, is characterized by an aging population, especially after 2040, according to population projections. This is well illustrated by Slovakia. In 2010, he recorded the second (after Ireland, who presented a level of 11.3%) the lowest level of aging population (12.3%) across the EU, but it is estimated that by 2060 will reach 36.1%, positioning is thus second in the group of countries with the highest rate immediately after Poland, whose rate is expected to reach 36.2%. In Slovakia, aging is likely to continue at a rapid pace even after 2040. Similarly, it is expected that it will happen in Bulgaria, Romania, Cyprus, Hungary, Lithuania, Latvia, Malta and Poland, although the pace of aging will be slower. In these countries, the share of population aged 65 and over is currently low and is estimated to grow slowly in 2020, but after this time will be an increasing pace.

2.3. Life Expectancy

Life expectancy at birth has increased considerably in recent years, both for women and for men. At Member State level, the differences in life expectancy remain significant as can be seen in table no. 1. For males, the lowest life expectancy was recorded by Lithuania (67.7 years), while the highest was recorded by Sweden (79.4 years). For women, the lowest life expectancy was recorded by Romania and Bulgaria (77.5 years), while the highest was found in France (90 years). The difference between the highest and lowest life expectancy was 11.7 years for men (between Sweden and Lithuania) and 12.5 years for women (between France and Bulgaria / Romania).

Life expectancy at birth and at the age of 65 are almost perfectly correlated, this proves that, the more life expectancy at birth is higher with so life expectancy at age 65 is higher. Comparing these data, we observe that in terms of life expectancy, it is more relevant for men live longer than women.

For the next decades, in the European Union Member States (table 1.), the life expectancy is expected to increase. By 2060, the highest life expectancy at birth for men will be reach in Italy and Sweden (85.5 years) and for women in France (90 years). In terms of life expectancy at age 65 years, France is the country that both men (23 years) and women (26.6 years) will reach the highest level.

From the social point of view, increasing life expectancy will bring substantial changes in social security spending. I believe that this will lead to greater pressures on

public expenditure of services for the elderly and especially pensions. General public finances could become unsustainable in many countries, thus affecting the balance of pension systems. Allowing increase public spending by the aging factor leads to budget deficits, which would result in an intolerable debt, it creates a spiral of debt.

Table no. 1 Demographic trends and pension expenditure as a percentage of GDP in EU member states

Country	Population (mil)		Fertility rate		Life expectancy at birth-male		Life expectancy at birth-female		Life expectancy at 65-male		Life expectancy at 65-female		Net migration (thousand)		Pension expenditure as a percentage of GDP	
	2010	2060	2010	2060	2010	2060	2010	2060	2010	2060	2010	2060	2010	2060	2010	2060
BE	10,9	13,5	1,84	1,84	77,3	84,6	82,6	89	17,4	22,3	20,9	25,7	61,3	32	10,3	14,7
BG	7,5	5,5	1,56	1,67	70,3	81,7	77,5	86,6	13,8	20,6	17	23,6	-9,9	0,7	9,1	11,3
CZ	10,5	10,5	1,49	1,62	74,3	83,2	80,4	87,8	15,3	21,2	18,7	24,5	30,5	18,3	7,1	11
DK	5,5	6,1	1,84	1,84	77	84,4	81,1	88,4	16,8	22	19,5	25,1	12,3	8,7	9,4	9,2
DE	81,7	66,2	1,36	1,54	77,6	84,8	82,7	88,9	17,4	22,4	20,6	25,4	41	72,3	10,2	12,8
EE	1,3	1,2	1,62	1,70	69,8	81,6	80,1	88	14,1	20,9	19,1	24,9	-0,5	0	6,4	4,9
IE	4,5	6,6	2,07	1,99	77	84,5	82	88,9	16,8	22,2	20	25,5	-21,5	15,6	4,1	8,6
GR	11,3	11,3	1,52	1,64	77,8	84,9	82,8	88,3	17,9	22,6	20,2	24,6	26,2	25,3	11,6	24,1
SP	46,1	52,2	1,40	1,56	78,6	85,4	84,7	89,9	18,2	22,9	22,1	26,3	79,1	185,2	8,9	15,1
FR	64,9	73,7	2,00	1,95	77,9	85,1	84,6	90	18,5	23	22,7	26,6	71,9	62,9	13,5	14
IT	60,5	64,9	1,42	1,57	78,9	85,5	84,2	89,7	18,1	22,8	21,7	26,1	360,7	244,3	14	13,6
CY	0,8	1,1	1,50	1,62	78,3	85,1	82,8	89	17,8	22,5	20	25,3	2,2	4,1	6,9	17,7
LV	2,2	1,7	1,31	1,51	68,3	81,1	78	87,2	13,5	20,6	18,1	24,4	-3,4	0,6	5,1	5,1
LT	3,3	2,7	1,55	1,66	67,7	80,7	78,7	87,1	13,5	20,4	18,4	24,2	-13	0,8	6,5	11,4
LU	0,5	0,7	1,59	1,68	77,8	84,9	82,9	89,5	17,3	22,4	21,1	26,1	6,3	2,6	8,6	23,9
HU	10	8,8	1,32	1,51	70,4	81,9	78,4	87,4	14	20,9	18,1	24,6	22,5	18,9	11,3	13,8
MT	0,4	0,4	1,44	1,59	77,6	84,9	82,3	88,9	17	22,2	20,2	25,4	-1,2	0,4	8,3	13,4
NL	16,6	17,1	1,79	1,81	78,7	85,2	82,8	89,1	17,5	22,3	20,9	25,6	35,5	6,2	6,5	10,5
AT	8,4	8,9	1,39	1,56	77,6	84,8	83	89,1	17,6	22,4	20,9	25,6	19,1	25,8	12,7	13,6
PL	38,2	32,6	1,40	1,56	71,7	82,4	80,1	87,9	14,8	21,2	19,1	24,8	11,7	14,1	10,8	8,8
PT	10,6	10,2	1,32	1,51	76,5	84,2	82,5	88,6	17,1	22,1	20,4	25,1	18,5	27,8	11,9	13,4
RO	21,4	17,2	1,38	1,55	70	81,8	77,5	86,7	14,1	20,8	17,2	23,8	-0,2	7,6	8,4	15,8
SI	2,1	2,1	1,54	1,65	75,8	84	82,3	88,8	16,4	21,9	20,2	25,3	11	3,8	10,1	18,6
SK	5,4	5,1	1,41	1,57	71,6	82,2	79,1	87,4	14,1	20,8	18	24,3	10,6	6,8	6,6	10,2
FI	5,4	5,7	1,86	1,86	76,6	84,4	83,2	89,2	17,3	22,3	21,3	25,8	14,8	7,3	10,7	13,4
SE	9,4	11,5	1,94	1,90	79,4	85,5	83,4	89,3	18,2	22,7	21,1	25,7	59,9	19,5	9,6	9,4
UK	62,2	79	1,94	1,91	78,3	85,2	82,4	89,1	18	22,8	20,7	25,7	197,9	133,6	6,7	9,3

Source: Summarized from The 2012 Ageing Report: Underlying Assumptions and Projection Methodologies, European Economy 4/2011 and Ageing Report: Economic and bugetary projections for the Eu-27 member states (2008-2060), European Commission, Brussels, 2009

2.4. Fertility rate

In the last years the general trend of fertility in the European Union has been downward, so that at the present time none of the Member States achieved a fertility rate above 2, as can be seen from Table no.1. The states with the highest fertility rate were France and Ireland (2), opposite being situated Latvia with a fertility rate of 1.31, thus approaching the critical level considered to be the value of 1.3. Denmark, Hungary, Portugal and Romania are countries whose fertility rate is close to the level considered to be critical.

Projections made by the Commission and presented in Table no. 1 shows that fertility rates will decline in the horizon of 2060, so most notable value will be in United Kingdom (1.91), and the lowest will be in Portugal and Hungary with a level of 1.51.

In our opinion, the reasons for these variations are a mix of national differences, cultural, socio-economic. Should be noted, however, governments adopted policies that influence the decision to the family and, therefore, can make the difference. This may be an indicator in terms of social security because a high fertility rate is a constant of pension systems due to low replacement rates.

2.5. Migration

Most of Member States as can be seen from the table no. 1 reported a greater number of immigrants than emigrants, yet, there have been countries like Malta, Ireland, Romania, Bulgaria, Lithuania, Latvia and Estonia who reported a greater number of emigrants. Of these, Estonia recorded the highest negative net migration of 22,500 people. In absolute terms, Italy and the UK were the states that have the highest positive net migration, Italy with 360, 700 people and Great Britain with 197.9 thousands. Projections, by the year 2060, shows that there will be a negative net migration, but the states that are currently experiencing a negative migration trend will be of up to a thousand people. However, Great Britain and Italy will maintain a positive trend of net migration. EU migration movements make a much more diverse population and at the same time creates new challenges for European society, one of the challenges are related to expenditure on pensions.

2.6. Pension expenditure

Pension expenditure as a percentage of GDP have ranged in European Union member states, as can be seen from table no.1. The highest value was recorded in Italy 14%, France 13.5%, followed by Austria with 12.7%. On the opposite side Ireland is 4.1% and Latvia with 5.1%.

Projections of pension expenditure in the horizon of 2060 shows that demographic factors will seriously put their imprint. Thus, most states will register growth of these expenditures. The most notable increases will be for Greece (whose level of pension spending will double), Luxembourg (15.3%), Cyprus (10.8). The expected increase is due to the increase in old-age pensions (which will grow more than invalidity or survivors' benefits due to aging of the population) and those

anticipated (Croitoru, 2011, p.121). There are countries where evolution expenditures will follow a negative trend, Denmark, Estonia, Poland and Sweden will fall slightly. The other Member States shall record growth, but it is between 2% and 6% of GDP.

3. Conclusion

The transition from a regime of high fertility rate at the one with lower rate is observed in all the member states. The overthrow of the pyramid age, due to the increased in life expectancy, increased labor force 65 years and over and falling fertility rates will lead to significant increases in the dependency ratio retired/contributors. This report will put a serious problem when young cohorts will reach retirement age. Thus, the aging of population with demographic change can have serious economic and social consequences.

Demographic change in recent years represents an important challenge for pension systems in the Member States of the European Union, because they lead inevitably to an increased in pension expenditure and this shows the ensuring of the financial sustainability of pension systems.

The current demographic situation will increase the demand for specific old age, especially considering that the labor force is reduced due to dwindling birthrate. Along with declining birth rates, increasing life expectancy extends the period for receipt of pension, even when stimulation of the active aging is proposed by more and more states. On the other hand, the crisis felt in recent years, resulting in fewer taxpayers because the increasing of unemployment and the reducing of the wages. All these aspects mentioned inevitably lead, as we showed in increase in pension expenditure.

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