THE EVOLUTION OF POPULATION AGING IN ROMANIA

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Abstract:

The paper highlights the demographic factors which determine population aging, population development in Romania as well as the consequences of population aging. Circumstantial fertility index, mortality rate and increase of life expectancy are some determinants of population aging which are used in this paper. Information concerning young population, working population, and the elderly as well as the report of economic and demographic dependency are used in the context of evolution of population. Eventually, the economic, social, medico-sanitary, medico-social, psychosocial and sociocultural consequences are analysed. As in most European countries, Romania also faces a number of complex economic and social consequences of population aging, which is affected by a lower fertility rate and an increased mortality rate.

Keywords*: demographic, population aging, young population*

JEL classification: *O15, O43, R11*

Introduction

As it has happened in most the European countries, demographic aging has become increasingly visible in Romania since the year 2000; its consequences are economic, social and in other areas as well: medical-sanitary and medical-social or psychosocial and psychocultural.

Since 2000 the result of the aging process became more visible when the elderly outnumbered the young population; since 2012 it was easily perceivable when the share of the elderly (65 and above) of 16.1% exceeded the ratio of the youngsters (0 – 14 years) of 15.8% according to scientific assessments.

One of the causes is that nowadays the fertility rate is influenced by a number of factors related to culture, state policy on demography, religion and other factors with specific manifestation in each country.

An important aspect to be considered is that a decrease of the fertility rate leads to the decrease of future generations able to enter the labour market and bring an important contribution to national insurance and health insurance for the retired population. This could have an important effect on the prosperity of the elderly, especially in the developing countries, which cannot provide enough support for this category of population.

A simplistic approach concerning the modification of the structure by large age groups, in particular increasing the share of the population aged 65 and above, generates social and political pressure relating to the altered allocation of resources in society, and can generate conflicts between generations.

A diminished potential support ratio[62] or an increased demographic dependency rate show a major pressure manifested by the existence of a growing number of beneficiaries of the public pension and health systems compared to the decreasing number of taxpayers. Therefore, the working population, which is declining, will be charged with an increasingly difficult mission by paying increased taxes and contributions so as to provide a constant and sufficient income for the retried.

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[62] *The potential support ratio represents the number of persons between the 15 and 64, as a percentage of those aged 65 and over, whereas the dependency ratio represents the number of persons aged 65 and over, as a percentage of those between 15 and 64.*

The reduction in fertility rates in developed countries was based on a number of economic and social factors which must be emphasized:

- diminished number of traditional households, which generate a high fertility rate, useful for both productive activity and for ensuring the security of the elderly;

- modernization of women by detachment from old customs, access to all levels of education;

- increased attention of parents towards children' upbringing and education, which require more time and higher expenses;

- relatively more spare time, more varied possibilities of spending it, but also the existence of individual or collective means of transport, high-tech equipment (TV, computer, telephony, etc.) and the families' desire to have access to these facilities which incur considerable costs;

- promoting social insurance, in particular pension systems (public and private) but also some social care institutions which have diminished the children's role in supporting parents at old age.

An element to be considered is the fact that European population faces the emergence of a new age group called by some specialists the "fourth age", namely those aged 80 and above, with an increasing ratio and in continuous growth.

Such changes must be taken into account because they involve structural changes in society at the economic, infrastructure, health and social care levels related to this new age group.

However, there is no infrastructure for social assistance, which is often required by the new age group of 80 and over.

These aspects are quite poorly understood in today's society and the implications can be important, especially on the background of poor preparation of society and economies to support such efforts.

The new group of 80 and over is also growing in Romania and has major implications in the time horizon 2060.

These changes in the structure by large age groups have a major influence on various processes, especially economic, social and political as well.

Thus, as population ages, a number of benefits such as pensions, medical care or supporting the elderly require to ensure them for longer periods.

1. Aging of Romania's population

There are demographic changes in Romania with medium and long term effects determined by the worsening structure of the three components of population dynamics: birth, mortality and external migration.

The analysis of the last three (published) censuses of population of Romania shows that the population of Romania was of 22,810,035 inhabitants in 1992, out of which 11,213,763 men representing 49.2% and 11,569,272 women representing 50.8%; the population was 21,680,974 in 2002, respectively 10,568,741 men representing 48.7% and 11,112,233 women representing 51.3%; a decrease of the population by about 1.1 million people is visible.

The population registered in 2011 was of 20,121,641 persons out of which 9,788,577 men representing 48.6% and 10,333,064 women representing 51.4%.

The data show that the population decreased in 2002 by about 1.6 million people compared to the 1992 census. Compared to 1992, the population decreased in 2011 by about 2.7 million (*Table 1 - Total population, by sex and residence, at the censuses of 1992, 2002, 2011*)

Table 1:

Total population, by sex and by residence, at the censuses of 1992, 2002, 2011

Years	Indicators	Total			Urban			Rural		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
1992	Population - total	22,810,035	11,213,763	11,596272	12,391,819	6,047,785	6,344,034	10,418,216	5,165,978	5,252,238
	% population by sex, in total	100.0	49.2	50.8	100.0	48.8	51.2	100.0	49.6	50.4
2002	Population - total	21,680,974	10,568,741	11,112,233	11,435,080	5,493,397	5,941,683	10,245,894	5,075,344	5,170,550
	% population by sex, in total	100.0	48.7	51.3	100.0	48.0	52.0	100.0	49.5	50.5
2011	Population - total	20,121,641	9,788,577	10,333,064	10,858,790	5,185,636	5,673,154	9,262,851	4,602,941	4,659,910
	% population by sex, in total	100.0	48.6	51.4	100.0	47.8	52.2	100.0	49.7	50.3

Source: "Census Of Population And Housing - 1992, 2002" (1992, 2002) and Table no. 2 - "Stable population by sex and age group - categories of localities, macro regions, development regions and counties" from "Census of Population And Housing - 2011 "(2011)

One can notice that population of Romania and its demographic structure underwent new evolutions and mutations. The changes in the population dynamics are the direct result of the trends regarding demographic phenomena, birth, mortality and migration (internal and external).

Regarding the structure of population by sex, the female population is predominant, its share increasing from 50.8% in 1992 to 51.4% in 2011.

The demographic aging process is more visible by comparing the two age groups of the elderly:

- **increasing trend** - the 60 - 64 years old group was of 1,232,053 persons in 1992 (representing 5.4% of the total), 1,143,333 persons in 2002 (representing 5.3% of the total), and 1,244,286 persons in 2011 (representing 6.2% of the total);

- **increasing trend** – there were 2,510,259 persons in the 65 age group in 1992 (representing 11.0% of the total), out of which 1,040,703 men (representing 41.5%) and 1,469,556 women (representing 58.5%). In 2002, there were 3,049,882 people this age group (representing 14.1% of the total), out of which 1,264,349 men (representing 41.5%) and 1,785,533 women (representing 58.5%); there were 3,247,744 persons in 2011 (representing 16.1% of the total), out of which 1,306,954 men (representing 40.2%) and 1,940,790 women (representing 59.8%).

Therefore, the elderly in the group of 65 and over in Romania increased by over 700,000 people from the 1992 census to the 2011 census, mainly as a consequence of:

- the changes in the couples' demographic behaviour towards their own reproduction;

- the natural diminution and negative balance of the external migration that led to the decline of young population;

- the changes in population mortality.

The changes in the structure and dynamics of the population in Romania are directly caused by the evolutions recorded at the level of the demographic phenomena (birth, mortality and migration).

Thus, there is a decrease of the ratio of the young population aged between 0 - 14 years, from 22.7% (in 1992) to 15.9% (in 2011) and an increase of the elderly of 65 and over, from 11.0 % (in 1992) to 16.1% (in 2011).

The elderly cannot be regarded as a homogeneous entity, it includes the subgroup of "younger" seniors (65-74 years) and the subgroup of "older" seniors (75 and over).

2. Population aging index in Romania

The aging index represents the percentage ratio between the number of persons aged 60 and over and that of children aged between 0 and 14. The aging index of the population of Romania, on July 1, 2012, is presented in Table 2.

Table no. 2:

The aging index of the population of Romania by sex and development regions, on July 1, 2012

Region	Persons		
	Total	Male	Female
Total	140.2	114.2	167.7
North – East	115.2	95.3	136.1
South – East	143.0	117.7	169.7
South – Muntenia	158.0	127.3	190.5
South – West - Oltenia	163.5	134.7	194.2
West	150.5	121.0	181.8
North - West	131.3	107.2	156.6
Central	130.7	108.2	154.5
Bucharest - Ilfov	153.1	119.4	189.1

Source: National Statistics Institute

With regard to data on July 1, 2012 in Romania, the aging index was 140.2% (167.7% - female, 114.2% - male). The regions most affected by aging were: South-West - Oltenia - 163.5% (194.2% - female, 134.7% - male) and South-Muntenia - 158.0% (190.5% - female, 127.3% - male), and the regions least affected by the phenomenon of aging were: Central - 130.7% (154.5% - female, 108.2% - male) and North-East - 115, 2% (136.1% - female, 95.3% - male).

Thus, the considerable differences between the aging index for females and males are pointed out, which is an additional proof supporting the feminization of the aging process of the Romanian population.

3. Economic and demographic dependency and its consequences

Aging population negatively affects the development of economic and social life but also the perspective of demographic evolution. They are highlighted mainly by the report of economic and demographic dependency.

There was a decrease in the number of the employed population, whereas the number of the retired increased. From this perspective, there is an increase of economic dependency. Thus, from 315.1 retired persons with state social insurance[63] per 1,000 employees in 1990, there were 1,125.0 pensioners per 1,000 employees in 2010; their number slightly decreased to 1,073.1 pensioners per 1000 employees in 2013. As for the demographic dependency report, in July 2012, there were 21.5 elderly per 100 adults (15-64 years), with 5.7 persons more than in 1990. (Table no. 3).

[63] *Only the state social insurance pensioners were considered; the oscillation of the economic dependency ratio between 2006 - 2013 was due to the slight variation of the number of employees.*

Table 3:

The dependency rate of young and elderly per 100 adults, by variant designs, in 2012, 2030, 2060.

		2030 by variant			2060 by variant		
	July 1, 2012	constant	optimistic	pessimistic	constant	optimistic	pessimistic
Youth and elderly per 100 adults	2.9	9.1	0.3	7.9	3.4	7.6	59.8
-female	6.4	4.7	6.0	3.4	1.8	6.5	68.2
-male	9.4	3.7	4.6	2.4	5.3	9.1	51.6
Youth per 100 adults	1.4	9.8	0.5	9.1	9.8	2.7	17.1
-female	0.8	.4	0.1	8.7	9.6	2.6	16.9
-male	2.0	0.2	0.8	9.4	9.9	2.8	17.3
Elderly per 100 adults	1.5	9.3	9.8	8.8	3.6	4.9	42.7
-female	5.6	5.3	5.9	4.7	2.2	3.9	51.3
-male	7.3	3.5	3.8	3.0	5.4	6.3	34.2

Source: National Institute of Statistics (2012) and "Projecting the population of Romania at the horizon of 2060 (2030, 2060), pp.29-44

As can be seen for all the design variants, the number of young population per 100 adults will continue to decrease, reaching the pessimistic version of 19.1 persons (17.1 persons in 2060) by 2030, and the optimistic one of 20.5 people (22.7 people in 2060).

The changes that would occur in the population by age groups will determine an increase in the number of persons considered "dependent", respectively with an age under 15 and over 65 per 100 adults, with the lowest values in the pessimistic variant.

The working population, despite undergoing a significant decrease between and 2030-2060, will be about 60.0% of the total population during the 2030-2060 forecast horizon, but the age group structure will become unbalanced.

Within this population segment, at least until 2030, the "old" age groups (near the retirement threshold) will predominate.

In the medium to long term, the ratio between pensioners and employees will remain high, as the structure of Romania's population is atypical; the generations aged 23-48 are very numerous (as a result of the aggressive pro-natalist policies in the period before 1989), whereas the generations aged 0 - 22 are very rare (transition generations).

Thus, rare generations already began to enter the labour market and the increase of the number of employees will not be high. The number of the elderly per 100 adults will increase continuously; the estimates show a steadily increase after 2030 as a result of the massive entry of the many generations born after 1966 in the population group aged 65 and over. Therefore if this ratio will be around 30.0% in the year 2030, it will reach 44.9% in 2060 in the optimistic version, 43.6% in the constant version and 42.7% in the pessimistic version (table no. 3).

4. Conclusions

In Romania, as well as in the other countries affected by demographic aging, the direct causes which led to the aging of population include those related to the demographic factors: the decrease of the birth rate and the increase of the mortality rate, altogether with the influence of the migration flows.

The most important element was the decrease of the birth rate, which had a major influence on the population structure by age groups, contributing to the acceleration of demographic aging. Increased mortality played a secondary role.

The decrease of the birth rate in Romania was fundamentally influenced by the uprooting of the young population from the rural area, which relocated in large numbers in the urban area; they gradually abandoned the rural population's traditional demographic procreative behaviour and switched to a new demographic behaviour based on rigorous planning of births.

Thus, there was an increased demographic aging in rural areas and a gap between the two environments.

Unlike the somewhat latent demographic consequences, the economic consequences have been showing their acute nature for a long time, becoming particularly serious in the recent years.

As for the social consequences of the aging groups of people, they represent a field of research, considering the multiple situations this category of population faces and its various particularities.

Within this framework, distinctive research is necessary on homogeneous sub-collectivities, as the group of the elderly or long living people, for example, generates some implications, whereas the implications among the old males versus the old females, or the married, compared to the widowed, divorced, and single generate different implications.

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