

POPULATION IN ROMANIA WITHIN THE UNITED EUROPE

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Abstract

Romania joined the European Union with an important human capital of 21.5 million inhabitants (being the 7th country in size in the UE at the moment of its adherence in 2007). Nevertheless, it goes through a process of great demographic changes. On a long-term, the outcomes of this process are worrying. The continuous trend of population decrease that started in 1992, will also continue in the future and the evolution of its population's structure on age groups, correlated with the evolution of birth rate, death rate and migration, highlight a powerful trend towards demographic ageing and a high level of social dependence.

In this paper we aim at making an analysis of the demographic situation of Romania in the European context, as well as the future trends of evolution of the demographic behaviour of the Romanian population.

Keywords: demographic decrease, demographic ageing, demographic and social dependence

JEL classification: A13, J11

1. MAIN DEMOGRAPHIC DEVELOPMENTS

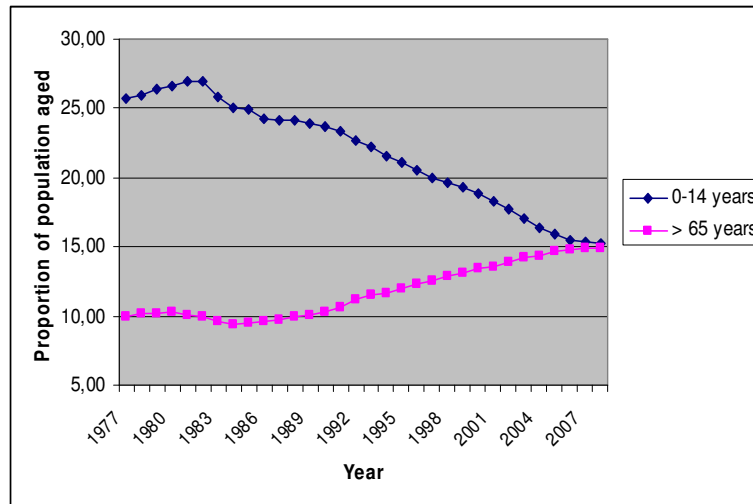
The analysis of the evolution of the population in Romania in the last half century enables the highlight of certain specific features of the demographic behaviour from this country as well as potential future consequences of the phenomena occurring during this pe-

riod. In this paper, we focus on some of these features such as: demographic ageing, an unsuccessful pronatalist policy, the forced urbanization, a high percentage of the population occupied in agriculture.

1.1. A population that entered the process of demographic ageing

The demographic ageing phenomenon is a long-term one, its causes and effects requesting multidimensional analyses that include various factors, apart from the demographic ones. The main drivers of this process are: the decrease in the birth rate, a fertility process that does not ensure the replacement of the generations, the increase in life expectancy and in the weights of the elderly people, etc. [1, 2].

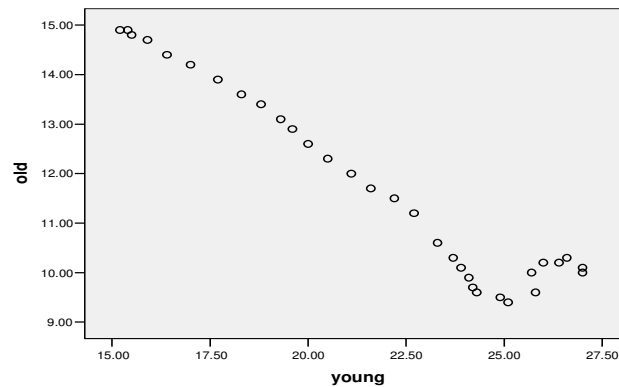
While the effects of this phenomenon are immediately felt both at demographic level (demographic dependence) and at economic level (economic dependence), its causes are more difficult to identify, having deep roots in the history of a population. As statistical data show, in Romania the ageing process has started to be visible since the 70s of the last century. The phenomenon implies the continuous increase in the weight of the elderly (people aged 65 years and over) from the total population, as well as a decrease in the weight of the young (persons aged between 0 and 14 years).



Source: [Done by the author according to data offered by INS, 1990-2009]

Figure no. 1 The weight of the young and elderly population in Romania between 1977-2008

The relation between the evolutions of weights of the two age groups is presented in Figure 2. The data show the existence of an inverse connection between the two variables, the intensity of this connection being fairly strong. For a linear-type connection, the correlation coefficient between the two variables equals -0.96. This result indicates that the ageing process relies on a simultaneous strongly correlated variation of the weights of the two population groups, which means that the demographic ageing process that Romania is faced with is a serious one, bringing about important future implications.



Source: [Done by the author according to data offered by INS, 1990-2009]

Figure no. 2 The correlation between the weight of the young and the elderly population in Romania between 1977-2008

The phenomenon took proportions after 1990, therefore, in the present, the weight of the young population is below the average of the European Union. In 2008, in Romania, the weight of people aged between 0 and 14 years was 15.2% while in the EU the average proportion was 15.7% [3].

One of the main causes of this phenomenon is represented by the continuous decline in the birth rate for quite a long period of time in the past. Generally, this decrease in the birth rate occurs on the background of a complex process in which an important role is played by economic, social and cultural factors. In Europe, such factors have determined what specialists name birth control. Due to the increase in the urbanization level, the educational level and the occupancy level, the population tends to adopt a different reproductive behaviour. In Romania, such behaviour has been visible especially in the second part of the communist era.

Table no. 1 Life expectancy at birth by sex in Romania

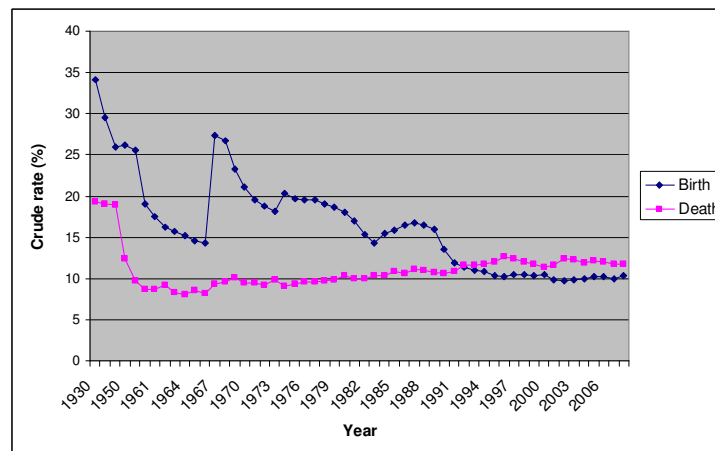
Period	Both sexes combined	Male	Female
1950-1955	61.1	59.4	62.8
1955-1960	64.1	62.4	65.9
1960-1965	66.8	65.2	68.8
1965-1970	66.8	65.7	67.9
1970-1975	69.2	66.9	71.5
1975-1980	69.5	67.0	72.0
1980-1985	69.7	66.8	72.6
1985-1990	69.5	66.5	72.7
1990-1995	69.4	65.8	73.2
1995-2000	69.7	66.1	73.5
2000-2005	71.3	67.7	75.0
2005-2010	72.1	68.7	75.7

Source: [Population Division of the United Nations, World Population Prospects, 2006]

Another cause of the demographic ageing is represented by the increase in life expectancy of the population. In Romania, the average life expectancy has raised by 11 years since 1950 until now (Table 1). The specialists show that a sensitive influence on demographic ageing is achieved for increases in life expectancy over 70 years [4, 5]. The data from Table 1 indicate a more rapid increase in life expectancy after 1990, so that this phenomenon has a more important influence on the demographic ageing.

1.2. An unsuccessful pronatalist policy within a difficult social and economic environment

When Ceausescu took the power in 1965, Romania was already on a continuous descending slope as regards birth rate, a tendency that had been registered since the beginning of the 20th century. As the statistical data show (figure 3), the pronatalist policy promoted by the communist regime after 1965 succeeded in having positive effects only for a short period of time. The shock of the anti-abortion law from 1966 had a short-term effect. The birth rate doubled from one year to another (1966-1967), but the tendency towards evolution of this phenomenon remained the same, that is of decline. For approximately 20 years, following the decline tendency of birth rate registered in the past, the inertness of the effects of the pronatalist actions promoted by the Communists after 1965 also came to an end.



Source: [Done by the author according to data offered by INS, 1990-2009]

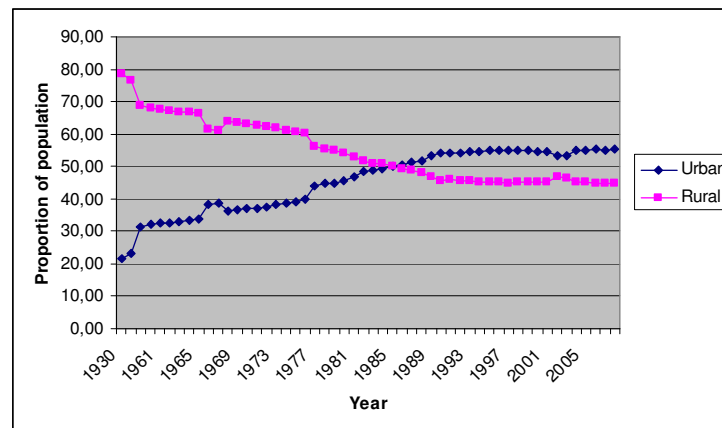
Figure no. 3 The crude birth rates and death rates in Romania in the years 1930, 1938, 1940, 1950, 1955 and during 1960-2008

If the pronatalist attempts of the communist regime are corroborated with its economic and social development project, we may conclude that the demographic measures that had been taken, from the anti-abortion law (the famous Decree 770 from 1966) to the economic incentives for each newborn, had the expected effect only for a short period of time. The relocation from the rural to the urban areas of a great number of persons, the collectivization in the rural regions, the poor living conditions in the new urban centres are only a few examples that show the difficult context that the population of Romania had to face during the process of changes initiated by the new post-war regime. The artificial jump of natality

achieved in 1967 will not prevent the continuous trend of decline in the birth rate in Romania throughout the entire communist era. The statistical data about the demographic behaviour in Romania show that the policies for birth rate increase were not correlated with the living conditions of the society and did not focus either on a long period of time, as the demographic phenomena call for, those being rather inert.

1.3. The forced urbanization of Romania

In the 1930 census, one may discover that 78.6% of the population in Romania lived in the rural area, while in the 1948 census a weight of 76.6% is reached (figure 4). The project for the new society created after the Second World War aimed at reducing the imbalance between the rural and the urban areas. In 1965, the population from the urban areas reached the proportion of 33% and in 1985, by means of special efforts, the urban and the rural populations in Romania are equal, each of them claiming 50% of the total population. Even though considered a positive element, the urbanization of Romania was possible due to a huge demographic effort, about whose consequences we have few researches. During only 37 years, more than a quarter of the population in Romania had to go through a transformation process, moving from the rural to the urban areas. Such relocation mainly meant a migration of the population from villages to cities. The problems generated by such a transfer (from the social and economic uprooting to the cultural one, having great impact on the community development) had important consequences at demographic level, the most significant outcome being the decrease in the birth rate. The growth of cities was achieved at rapid pace, mainly caused by industrialization.



Source: [Done by the author according to data offered by INS, 1990-2009]

Figure no. 4 The urbanization level in Romania in the years 1930, 1948, 1956 and during 1960-2008

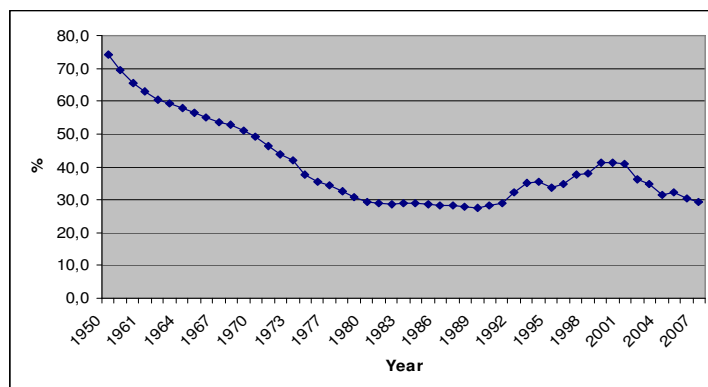
The urbanization of Romania also meant the transformation, sometimes forced, of some big villages into towns. Though proclaimed towns, these localities had and still have a precarious infrastructure, with social problems related to the concentration of population in improper locative spaces or with poor living conditions. In 2008, the urbanization level in

Romania was higher by one percentage than that attained by the end of the communist period (in 1990 it was 54.3% and in 2008 it was 55.2%), which shows that within the last 20 years in Romania there have not been great changes in the urbanization level. On the contrary, there have been fluctuations due to some internal migrations from the urban to the rural areas, as well as due to the external migration from villages to the developed countries in search for a place of work (as it may be noticed for the years 2002 and 2003, Figure 4).

1.4. A population having a high occupancy rate in agriculture

The standards of the developed countries show that the structure of the population by occupation has evolved towards a hierarchy where the last position belongs to the population occupied in agriculture, with percentages between 4 and 7%. Romania is far from these standards. As statistical data prove, the modern period started in Romania with a fairly large proportion of the population occupied in agriculture. During the communist period, the industrialization and urbanization process led to a decrease in the weight of the population occupied in the primary sector (Figure 5).

If in 1950, almost three quarters of the population of Romania were occupied in agriculture (74.1%), in 1970 half of the country population was still in this situation and in 1985, when half of the population lived in the city, the occupation in agriculture was of 28.5%. At the end of the communist period, despite an aggressive urbanization project and an intensive development in agriculture, another 27,5% of the population was occupied in this activity field.



Source: [Done by the author according to data offered by INS, 1990-2009]

Figure no. 5 The weight of the population occupied in agriculture in Romania, 1950-2007

Such a track of the population occupation has had and still has implications at demographic level. The focus of the communist project on urbanization created a great discrepancy between the rural and the urban. The poor living conditions of the population from the rural regions reflected in the evolution of the demographic phenomena such as: very high infant death rate, decreasing birth rate, reduced life expectancy etc.

2. ROMANIA AFTER 1990 AND THE DEMOGRAPHIC IMPACT

After the fall of the communist regime, Romania entered a transition process of its entire society, so that the previous demographic trends were amplified by the transformation processes that occurred in this period.

The most visible effect of this convergence is represented by the negative natural growth that has been registered in Romania on a constant basis since 1992 until the present (Figure 3). The trend towards the increase in the death rate from the communist era, correlated with the trend towards the decrease in the birth rate that speeded up by the end of the communist period and during the first transition years, have led to a unique situation in the modern history of Romania: the population decreases naturally from one year to another, the yearly number of deaths being greater than that of births. This phenomenon, once started, has a great deal of inertness. Since 1992 until 2008 it is relatively a short period of time for demographic phenomena, though in Romania there are no signs that this start of the phenomenon would be refrained or even eliminated by the change of the ratio between births and deaths. The high death rate in the period after 1990 represents a follow-up of the tendency from the communist period. This phenomenon prevalently occurs with generations that have a recent history connected with the whole mechanism of the communist social engineering.

Another demographic phenomenon that sharpened during the transition period is the demographic ageing. As the statistical data show [INS], in less than 20 years the structure of the population by ages has registered considerable changes: the weight of the youth aged between 0 and 14 years has dropped from 23.7%, in 1990, to 15.2%, in 2008, while the weight of the elderly (aged over 65 years) has raised from 10.3%, in 1990, to 15% in 2008. The phenomenon is strongly correlated with the negative migration balance, that generally affected the young generation of Romania, as well as with the continuous decrease in the birth rate after 1990. The ageing phenomenon is sustained by the change of the fertility pattern in Romania, change that implies the increase in the fertility weight at ages above 25 years [6].

A peculiar demographic problem at the population level in Romania after 1990 is related to the increasing discrepancy between the rural and the urban environment. The statistical data referring to the natural migration within these two environments after 1990 are worrying (Table 2). Practically, the negative natural growth of Romania after 1992 is mainly due to the negative growth from the rural areas (indicator that has very high values after 2001). If in 1990 the natural growth in the rural areas was positive (still low, with a high death rate), in 2007 the natural growth in the rural regions is -4 per one thousand inhabitants, the lowest level being recorded in 1996 (Table no. 2). The poverty level in the rural areas remains high, and it may be proven by the higher level of infant mortality rate compared with the urban areas (for instance, in 2007, in the rural areas it was 14.2 children per one thousand newborn, while in the urban it was 9.7).

Table no. 2 The natural migration of the population in Romania by environments, between 1990-2007

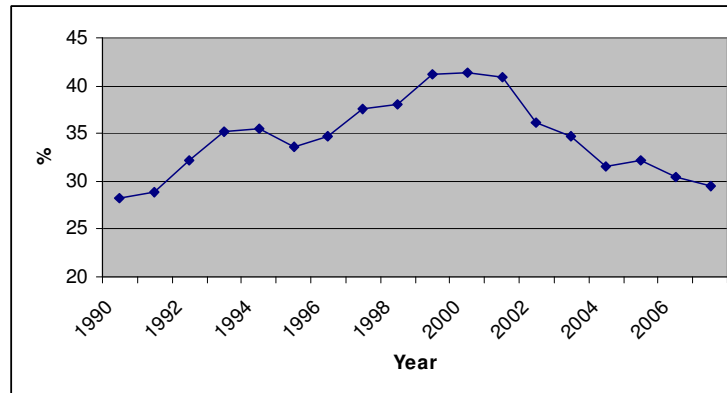
Year	Urban			Rural		
	Mort.	Inf. Mor.	Natural growth	Mort.	Inf. Mor.	Natural growth
1990	8,2	24,1	4,7	13,4	29,7	0,9
1991	8,2	19,6	2,8	13,9	25,8	-1,0
1992	8,7	20,8	1,5	14,8	25,7	-1,9

1993	8,8	19,7	0,8	14,9	26,4	-2,2
1994	8,8	20,1	0,5	15,1	27,2	-2,4
1995	9,1	18,2	-0,2	15,4	23,9	-3,1
1996	9,5	18,5	-0,7	16,5	25,6	-4,5
1997	9,4	18,5	-0,5	15,9	25,0	-3,5
1998	9,2	17,3	-0,2	15,3	23,3	-2,9
1999	9,1	15,2	-0,2	15,1	21,5	-2,8
2000	8,9	16,1	-	14,4	20,8	-2,1
2001	9,0	15,6	-0,6	14,6	20,9	-3,1
2002	9,8	14,5	-1,3	15,3	19,8	-4,3
2003	9,7	13,7	-1,0	15,2	19,4	-4,2
2004	9,6	14,0	-0,2	14,7	19,9	-4,0
2005	9,9	12,4	-	14,9	17,9	-4,3
2006	9,8	11,2	0,3	14,6	17,1	-4,3
2007	9,7	10,2	0,1	14,2	14,1	-4,0

Source: [Done by the author according to data offered by INS, 1990-2008]

In 1990, of the total population, 54.3% lived in the cities. The transition period that Romania has been crossing ever since meant the achievement of some changes regarding the population distribution by environments. Even if on a whole, the weights haven't significantly changed, the transition period brought about a range of conditions and specific transformations at this level. The internal and external migration of the young people from the rural environment was accompanied by a migration of the adults and the elderly to the rural areas, especially under the influence of economic factors. From 1998 until 2005, the population arriving in villages outnumbered the population that settled in the urban areas, which shows that the internal migration balance during this period favours the rural environment. The peak of this trend was achieved in 2004, when in the rural areas arrived 195,445 persons and in the urban areas 174,447 persons [7]. This phenomenon mainly had economic and social causes, the urban population being forced to return to the rural areas after many years, due to crisis circumstances.

Another feature of the post-communist period in Romania is related to the return of an important part of the population to the agricultural activities. As Figure 6 shows, the transition period, that involved numerous lay-offs from the economic activity, has led to an increase in the weight of population in agriculture until 2000, to a maximum figure of 41.3%. Then it follows a period of relative decrease in this weight until 2007 (when the percentage registered is 28.18%). From this viewpoint, of the population occupation in agriculture, Romania entered the EU below the level of the year 1990.



Source: [Done by the author according to data offered by INS, 1990-2008]

Figure no. 6 The weight of the population occupied in agriculture in Romania 1990-2007

This reorientation of the population towards the activities from the agricultural field meant the mobility of the population from the urban to the rural environment, either periodical, for economic activities, either permanent, by moving their domicile in the rural environment. The demographic effects of this change of the occupational structure do not only influence the internal mobility of the population, but also the birth rate, the wedding rate and the external migration.

3. THE DEMOGRAPHIC PERSPECTIVE

For most of the specialists, the future predictions of the demographic evolution in Romania are worrying. It is interesting to notice that the pattern of this evolution does not target only Romania, but also a group of countries that are part of the former communist block and that go through the transition period (Table 3). In other words, we deal with a cluster of dominant factors that are related to the long process of changes that these countries have been faced with during the last 50-60 years. Basically, the main pattern is that of correlating some demographic trends that belong to the previous period and which were affected by the new conditions opened by the fall of the communist bloc. The main coordinates of this demographic behaviour pattern are: the population decrease, the decrease in the birth rate, the increase in the mortality rate, the demographic ageing, a negative migration balance.

Table no. 3 Countries or areas whose population is projected to decrease between 2005 and 2050 (medium variant)

Rank	Country or area	Population (thousands)		Difference	
		2005	2050	Absolute	Percentage
More	developed regions				
1	Ukraine	46481	26393	-20088	-43.2
2	Bulgaria	7726	5065	-2661	-34.4
3	Belarus	9755	7017	-2738	-28.1

4	Latvia	2307	1678	-629	-27.3
5	Lithuania	3431	2565	-866	-25.3
6	Romania	21711	16757	-4954	-22.8
7	Russian Federation	143202	111752	-31449	-22.0
8	Republic of Moldova	4206	3312	-894	-21.3
9	Croatia	4551	3686	-866	-19.0
10	Bosnia and Herzegovina	3907	3170	-737	-18.9

Source: [Population Division of the United Nations, *World Population Prospects*, 2006]

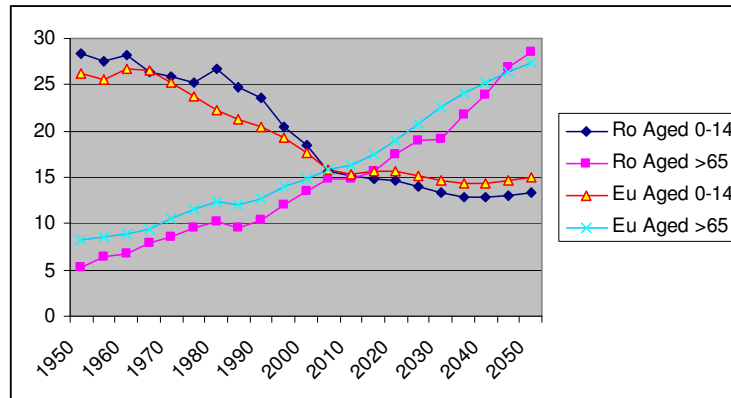
The process of population decrease, on the basis of the negative natural growth, will continue in Romania in the future. For the 2050 forecast horizon, UN indicates a decrease trend to approximately 16 million persons (Table 3). According to these estimates, in 45 years Romania will lose around 5 million persons. The process of the population decrease will accelerate as we approach the 2050 horizon. Thus, until 2020, Romania will remain with a population of over 20 million persons, but in the following 30 years, from 2020 until 2050, our country will lose approximately 4 million people (Table 4).

As regards the process of demographic ageing, Romania will witness an intensification of this phenomenon in the future, towards the 2050 forecast horizon. The statistical data offered by Eurostat enable us to compare the estimated effectives of the weights of the young and elderly persons in the upcoming period. As Figure 7 shows, the general average trend in Europe is the increase in the weight of the elderly and the decrease in the weight of the young, pattern also met in Romania. The variation speeds for the two variables differ, the elderly population having a more accentuated increase tendency. As for the young population, Romania registers a decrease tendency which after 2010 will be below the European average, representing a serious issue. It is also worrying that after 2040, the weight of the elderly population in Romania will outnumber the European average.

Table no. 4 Estimated Romanian population, 2010-2020

Year	Both sexes combined	Male	Female
2010	21 287	10 350	10 937
2011	21 204	10 306	10 898
2012	21 122	10 262	10 860
2013	21 041	10 219	10 822
2014	20 957	10 175	10 782
2015	20 871	10 130	10 741
2016	20 782	10 084	10 698
2017	20 690	10 037	10 653
2018	20 594	9 988	10 606
2019	20 497	9 938	10 558
2020	20 396	9 887	10 509

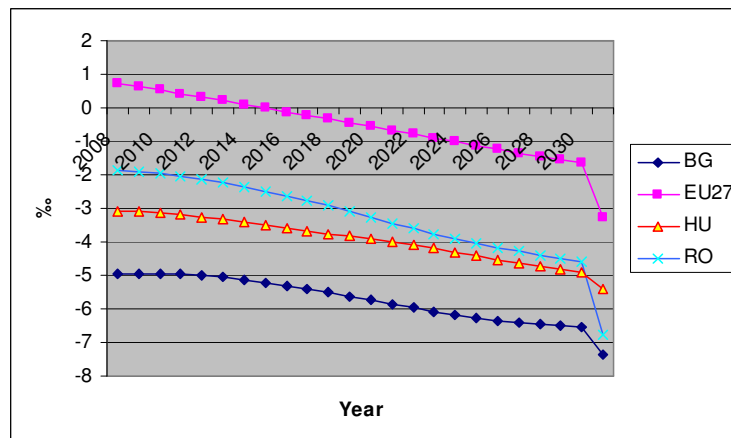
Source: [Population Division of the United Nations, *World Population Prospects*, 2007]



Source: [Done by the author according to data offered by UN, 2009, www.un.org]

Figure no. 7 The weight of the young and elderly population in Romania and Europe between 1950-2050

As regards the natural growth, Romania will remain on the same descending slope, with a growth rate below the EU average (Figure 8), but it is better positioned than Bulgaria and Hungary. Though, after 2030, the natural growth rate in Romania will be smaller than that of Hungary, fact that represents a worrying signal for a country with a far numerous population and therefore, with a more important demographic potential.



Source: [Done by the author according to data offered by EUROSTAT, 2009, <http://epp.eurostat.ec.europa.eu>]

Figure no. 8 The natural growth for Bulgaria, Hungary, Romania and UE27 during 2008-2030 and in the year 2050

4. CONCLUSIONS

The present demographic situation in Romania should be analysed in the larger context of an evolution that has lasted more than 50 years as well as considering the changes that occurred after 1990, triggered by the change of the social and political regime.

The main demographic evolution trends from the communist period were: decrease in the birth rate, increase in the life expectancy, increase in the average female age when giving birth, decline in the weight of young population and increase in the weight of the elderly (demographic ageing). These phenomena occurred in the context of a vast process of economic and social changes imposed by the governing communist programme: urbanization of Romania, industrialization, increase in the educational level, pronatalist economic, social and legislative measures etc. These measures influenced the demographic behaviour of the population and intensified the above-described phenomena.

Romania's entering the transition period after 1990 meant the follow-up of the demographic trends from the past as well as the development of a specific demographic pattern not only for Romania, but also for a group of countries that had just got out of the communist bloc. Thus, in the period after 1990, in Romania a process of continuous population decrease has started on the basis of a negative natural growth, without taking into account the negative migration growth. In this period, the difference of demographic behaviour was deepened between the rural and the urban environment. In the rural areas, the population gets older more rapidly, while the mortality rate and the infant mortality rate are much higher.

In the future, the demographic situation in Romania will worsen. The population will keep decreasing, thus until the year 2050 there are chances that Romania reaches approximately 16 million people. The ageing phenomenon will continue and accentuate, so that towards the 2050 forecast horizon, Romania will have an ageing level above the European average.

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