

Population Aging In Romania

Aging: the only means of living longer.

Voltaire

(His real name was François-Marie Arouet.

Born on November 21, 1694, Paris, the Kingdom of France,

deceased May 30, 1778 Paris, the Kingdom of France

(French Enlightenment writer and philosopher)

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Abstract: *This paper emphasizes that population aging concerns the world, the public environment and scientific research and a discerning approach may create the assumptions for economic revival. Workforce nowadays acknowledges realities involving permanent adjustment and reorientation depending on developments in the technical and technological fields and its migration has become an almost instantaneous phenomenon. For this purpose, it is necessary to consider the fact that along with migration, dislocations in the active population occur, which often are not immediately supported by new contingents; therefore disturbances are created both on the labour market but also in the demographic plan. It is important to seek solutions to minimize their impact on the Romanian economy affecting economic growth and the level of development. Labour migration is mainly amplified by economic reasons. Labour force migration is a phenomenon which may have some benefits on international markets such as the European labour market considering its role in stabilizing the European labour market. At the same time it may represent a major benefit in balancing unemployment rate in the Euro area, or even in some European states which are aware of the labour market imbalances. However, it should be noted that population aging is recorded*

in the regions where dislocations occur: it is a phenomenon which may generate a decline in the economic growth and affect the living standard, should there be no thorough analysis. Therefore a closer monitoring of migration is mandatory, as aging population is one of its consequences, which must be investigated in the regional context.

Key words: demography, aging, migration, economic growth, standard of living.

JEL Classification: J11, J61, O15

Introduction

Issues relating to national economy have represented a permanent concern for researchers, the academic environment and specialists, especially in approaching the new economic context after the change occurred in 1989. Almost all the states which change to the new economy system have sought and have been concerned with finding solutions for economic restructuring and to cope with the context and reality they were experiencing. Labour force was an important element, as a factor of production used in different combinations to manufacture goods, services necessary for consumption. Romania has been confronted with a natural phenomenon of population decline since 1990 until nowadays. Another important element that should be taken into account is the one relating to migration, which includes both its internal and external forms. Migration is an important factor at the international level and it has occurred more and more often in the past few years. Migration from areas such as Asia, the Middle East and North Africa towards more developed areas in Europe represents a reality of the present; conflicts, poverty, social inequalities, lack of good jobs and natural environment are among the main reasons.

Environment is an important element affecting migration, which is being discussed during international political and economic

meetings. It is brought into attention by the importance of the phenomenon as well as by the effects of this process which also starts from issues related to the environment.

During the Eurasian Economic Summit held on February 6-7, 2019 in Istanbul, at the 22nd century Eurasian Economic Summit, a series of issues such as the leaders' responsibilities for the future of our society, globalization, health, migration, populism, as well as the role of religions in today's society were discussed. At the same time the summit sessions have included speeches on various topics such as technology development and future of humankind, new dimensions of globalisation, religious dimensions of water and the relationship between water and migration.

Over 300 participants from 44 countries, among which state and government leaders, presidents and members of Parliament, ministers, religious leaders, headed by His All-Holiness Ecumenical Patriarch Bartholomew the first, political analysts, representatives of the business environment, writers, journalists, UN representatives and other international organizations attended this meeting. Abdullah GÜL, President of the Republic of Turkey (2007-2014), Bujar NISHANI, President of Albania (2012-2017), Danilo TURK, President of Slovenia (2007-2012), Phil VUJANOVIĆ, President of Montenegro (2006-2018), Gjorge IVANOV, President

of Macedonia, IVO JOSIPOVIĆ, President of Croatia (2010-2015), Mladen IVANIC, President of Bosnia and Herzegovina (2014-2018), Petru Lucinschi, President of the Republic of Moldova (1997-2001), Stjepan MESIĆ, President of Croatia (2000-2010), Valdis ZATLERS, President of Latvia (2007-2011), Ali YERLİKAYA Governor of Istanbul, Mevlüt ÇAVUSOĞLU, Minister of Foreign Affairs of the Republic of Turkey, Alenka BRATUSEK, Vice Prime Minister of Slovenia, Elena KIRTICHEVA Ph.D., Ambassador, Secretary General of the Economic Forum in Vienna, prof. Vujica LAZOVIC Ph.D., former Vice Prime Minister of Montenegro, Seyed Kamal KHARRAZI Ph.D., Minister of Foreign Affairs of Iran (1997-2005), Dumitru Braghis Prime Minister of the Republic of Moldova (1999-2001), Archbishop Bartholomew, Ecumenical Patriarch of Constantinople, Patriarchal Vicar of the Syrian Orthodox Church in Istanbul, Leonardo MANZARI, Director of the European Institute For Eurasian Dialogue were some of the personalities present at the 22nd edition of the summit.

During the Eurasian Economic Summit in 2019, His Excellency Mr. Emil Constantinescu, the President of The Institute for Advanced Studies in Levant Culture and Civilization - Centre of Excellence of the World Academy of Art & Science, and Luiza Niță, the History Of Culture And Civilisation Directorate, have emphasized the role of education and humanism as solutions of the current populism, defined as a social and moral failure of the Western representative democracy: "By the degradation of the level of culture and education, society lacks people able to judge by their own and we are heading towards a society with democratic institutions,

but without citizens. In my opinion, there is a need for a new humanism based on the universal moral values and it can be promoted only in the academic environment and used as the basis for the reconstruction of civil society, able to revive the democratic institutions. This is our responsibility, of the academic environment".

Bartholomew, the Ecumenical Patriarch, expressed during this international forum the opinion that there is an implicit connection between the water deficit and migration, which is not a "simplistic and superficial" one. At the same time, Patriarch Bartholomew pleaded for everyone's right to have access to the natural resources of the planet; if denied, this will inevitably and gradually lead to "severe challenges and serious conflicts".

His Holiness believed that clean water represented a fundamental right and mentioned that "It is, therefore, our choice and your choice to pay attention to these connections and support access to clean water for each human being". He also pointed out that "Access to clean water is a fundamental human right, inviolable and non-negotiable". While referring to those over two billion people who "are tragically forced to live without enough and suitable water for household or personal use", the Patriarch considered that "water does not belong and may not belong to a person or a nation, it belongs to the whole world forever".

Therefore migration is a phenomenon that is discussed and addressed from scientific, cultural, academic points of view within the framework of international events, as permanent attempts to find solutions.

One should consider that migration is influenced by a number of factors related to the natural environment, but there are also

reasons including living conditions, the level of development.

In terms of the age of persons who are involved in migration, greater attention should be given to people who should constitute families and give birth to children and who contribute to the growth of birth rate.

However, the absence of favourable living and development conditions leads to migration to areas of the world which can provide such conditions, whereas other areas face population aging. Such a phenomenon is not just at international level, but it also occurs within Member States. Romania has also been facing population aging for more than 30 years. It is necessary to submit important efforts to insure balance. The author's opinion according to which Romania needs help instead of criticism is obvious. It is important to use research, foreign in particular, as well as Romanian literature for us to find the best way to develop.

Romanian research in the field of demography and of research on births and deaths consists of a treasure with valuable works published abroad at the highest scientific and academic level.

1. Literature research

We shall discuss a topic already studied by Nicholas Georgescu-Roegen, namely the influence of the mother's age, rank of birth and birth order on stillbirth (1928-1930, France).

The famous economist along with other researchers reached conclusions in his study on birth depending on the mother's age and the number of children already born by the same mother. We shall present these conclusions in this paper.

The mortality rate for the first born, according to the researchers, is likely to be influenced by the duration of the marriage in a first stage - if this marriage lasts less or longer than nine months. They also claim that stillbirth is much higher when mothers are married for more than nine months than in the other case. It is considered that this difference is given by a social selection, which influences stillbirths of children born of mothers married for less than nine months. Research shows that many illegitimate relationships, followed by pregnancy, are not legitimized if the child is born prematurely, dead, whereas the child who is born at term, alive, is declared after the relationship has become a legitimate one.

Table no. 1 Stillbirth coefficient of the first born

The mother's age	Duration of marriage		Coefficient
	< 9 months	> 9 months	
< or equal to 20	28.3	31.4	90.1
20 - 24	30.3	34.2	88.6
25 - 29	38.7	48.1	80.5
30 - 34	52.2	72.7	71.9
39 - 39	68.4	108.6	63.0
40 < or equal	108.9	153.3	71.0

The researchers who are the authors of the study do not believe that this difference expresses the influence which duration of the marriage may exert on the coefficient of stillbirths in case of first time mothers. According to their opinion, this influence, should it manifest itself, would only be limited, because the difference mentioned also affects very young mothers who, however, must be married only for a little while.

The research supports the assessment according to which the coefficient of stillbirths grows, in general, with the mother's age.

The analysis of this law also emphasizes the fact that in relation to the order of births, there are a number of exceptions which are significant. Thus, for the second, third and fourth child, stillbirth is higher for very young mothers (under 20 years old); for the sixth and seventh child, there is a minimum number of stillbirths in the case of mothers aged between 25 and 30 years.

The authors of the research also notice the reason for this difference: repeated pregnancies exhaust very young mothers; on the contrary, it is known that, after the age of 27, 28 years, one of the most important causes of dystocia among first time mothers is ossification of the sacrococcygeal ligament.

In a situation where one passes from a rank of birth to the next one, the authors of the research noticed that stillbirths in general decline for normal cases, respectively for those where there is a compatibility between the mother's age and the number of children she has given birth to. Therefore it is considered that stillbirth for a given age group begins by dropping and it grows in the end. The growth of stillbirths for the highest birth ranks is all the more accentuated as the

mother is younger. Therefore, the stillbirth of the seventh child born of a mother aged 20 to 24 years is much higher than stillbirth of the first born.

2. Population aging in Romania

The decline of population is influenced by the natural decline of population and the large number of people who emigrated but by other elements as well, such as the development conditions which fail to be sustainable for young people and the families they form. As for data at European level, one may approximate to be ample and favour research on populations at national level. At a national level, demographic data and information are for the most part aggregates of the records relating to the deaths, births, marriage, divorces, changes of the domicile or country residence, emigration and immigration.

Natural decline of population as well as migration with change of residence within cities are phenomena undergoing a concerning development. In order to analyse the entire change (growth and decline), the contribution of external migration with change of habitual residence (place of residence for at least 12 months), the numbers of emigrants and immigrants are required. There are no details or synthesizing information among national statistics on the level of migration at the level of localities by means of proper statistical instruments, at least for the time being. Some estimates are made only at county level, which can contribute to the calculations of the population resident in the counties, but which are only estimates. The next population census in the year 2021 aims at acknowledging the population resident in the cities, counties, regions and at national level.

On the basis of the estimated number of the population resident in the counties at the beginning of the year, but also of the natural growth and decline and the county migration may be deducted by estimating the size of external migration, but the reliability of the data does not provide the best accuracy yet.

We try to determine in this paper the natural population growth and decline at the level of localities (common, city, and municipality), the internal migration with change of habitual residence (where the person lives). We mention that we shall use the concept of resident population as it is used in the European Union, after the year 2010.

Without knowing the size of the population resident in localities, we believe that its growth or decline may be determined naturally or by growth or decline of the internal migration, which is an expression of the direction and the amplitude of the changes in the resident population.

The dimensions and features of the depopulation of the country at the territorial level refer to the year 2017 and shall be better assessed by reference to the prior data on the phenomenon at national level during the whole period between 1990 and 2018 and data in table no. 2 (results from other author's research) provide this framework.

Table no. 2 Diminished number of the resident population in the period between 1990 and 2018 and the components of the decline

Period	Decline in the number of individuals	The contribution of natural decline and external migration	
		Natural decline	Net migration
1990-2002	thousand people		
	-1584	-259	-1325
	proportions - in %		
	100.0	16.4	83.6
2003-.010	thousand people		
	-1428	-327	-1101
	proportions - in %		
	100.0	22.9	77.1
2011-2018	thousand people		
	-799	-503	-296
	proportions - in %		
	100.0	62.9	37.1
1990-2018	thousand people		
	-3812	-1090	-2722
	proportions - in %		
	100.0	28.6	71.4

Data Source: Diminished population and natural decline: According to the National Statistics Institute (hereinafter called INS); net migration: and the author's own calculations

Some opinions should be considered based on the data and information presented above:

- one can notice the amplitude the decline of resident population, which reached 3.8 million between 1990 and 2018 and which is expected to reach 4 million in 2020;

- the net trend of diminished development because of external migration throughout the period, by the large number of emigrants during the first two sub-periods;

- the diminished extent of the decline by external migration after 2010, the concomitant growth in the level of the decline by natural drop and establishment of this element as the main cause of diminished population of the country;

- the natural decline of population has elements that determine the occurrence of the phenomenon and also ways of propagation more complex than migration, based on economic, social, cultural, medical and environmental dimensions, but also a series of factors and ways of working that determine the birth rate and mortality of population and which are visible in time, as they manifest rigidity in case of change;

- natural decline of the population which exceeds 1 million inhabitants and to which almost 70 thousand inhabitants have been added annually starting with 2016; it is extremely worrying for the evolution of the country's population; natural decline by improving the conditions essential for birth rate improvement and decline of population mortality rate is a purpose quite difficult to implement and requires extensive material and financial costs.

3. Natural growth and migration at regional level

According to the Romanian national statistical data from the National Institute of Statistics with regard to the natural movement and internal migration with change of residence in localities (communes, cities and municipalities), the impact of two components on the development of the number of the resident population grouped on localities in 2017 may be determined: natural growth and/or decline of population (as the difference between the number of live and dead new born children) and internal migration with change of residence between localities. Another component may also be considered, namely external migration, but it is not known due to lack of statistical instruments for registration in the national statistical records. However there are some estimates available regarding external migration at county level, but with a low degree of reliability.

However they help us draft the demographic profile of localities through the assessment of the correlations between natural growth and/or decline of population and the net internal migration on one level and external migration from localities in the counties on another level.

A radiography on the evolution of the population resident in the counties in the year 2017 and the role of the three components mentioned above on the growth and decline can be seen in Table no. 3.

Absolute values were used to illustrate more precisely the degree of population decline (decrease) for the three components in 2017. As can be noticed, population decline is almost generalized only in Bucharest, whereas there is a growth in the number

of individuals (number of inhabitants) in a small number of counties, namely Braşov, Cluj, Iaşi, Sibiu, Timiş and Ilfov county. These components are territorial; those where economic activities allow ensuring living conditions and a development level of the individual and family are more favourable to

evolution and development. The growth in Braşov, Cluj, Iaşi, Sibiu, Timiş counties derives solely from internal migration; all these counties faced natural decline of population. There was also natural decline in the capital city of Bucharest, but internal and external migration prevailed.

Table no. 3 Growth/decline the number of individuals, natural growth/decline, internal and external migration in 2017, author's calculations

County	Growth / decline in the number of individuals	Natural growth/ decline	Net internal migration	Net external migration	County	Growth/ decline of number of individuals	Natural growth/ decline	Net internal migration	Net external migration
Alba	-2662	-1393	-551	-718	Hunedoara	-4554	-2459	-1433	-662
Arad	-2669	-2328	823	-1164	Ialomiţa	-3137	-1445	-1104	-588
Arges	-4831	-2336	-1164	-1331	Iaşi	1233	-419	2274	-622
Bacău	-4619	-2746	-1129	-744	Ilfov	12928	844	14353	-2269
Bihor	-2326	-1570	576	-1332	Maramureş	-2133	-1132	-501	-500
Bistriţa N.	-1326	-368	-346	-612	Mehedinţi	-4339	-1983	-1040	-1316
Botoşani	-5358	-2195	-1806	-1357	Mures	-2461	-1203	-98	-1160
Brasov	436	-250	1414	-728	Neamt	-4397	-2538	-1413	-446
Brăila	-4982	-2455	-1446	-1081	Olt	-6939	-3296	-1758	-1885
Buzău	-6027	-3256	-1244	-1527	Prahova	-7228	-3991	-1148	-2089
Caras S.	-4056	-2182	-1211	-663	Satu Mare	-1884	-942	-339	-603
Călăraşi	-4800	-1915	-1236	-1649	Sălaj	-2094	-649	-463	-982
Cluj	1855	-1018	4300	-1427	Sibiu	352	-85	1475	-1038
Constanţa	-2191	-1320	-70	-801	Suceava	-1145	-333	-217	-595
Covasna	-1424	-499	-432	-493	Teleorman	-8248	-3919	-2182	-2147
Dâmboviţa	-5129	-2376	-767	-1986	Timiş	3298	-770	4443	-375
Doli	-4678	-3932	-266	-480	Tulcea	-2962	-1273	-1005	-684
Galaţi	-4958	-2530	-2024	-404	Vaslui	-4143	-1808	-2155	-180
Giurgiu	-4771	-2065	94	-2800	Vâlcea	-3528	-1023	-1204	-1301
Gorj	-3716	-1562	-1300	-854	Vrancea	-3657	-1876	-758	-1023
Harghita	-1429	-480	-408	-541	Bucharest	980	-2049	2466	563
Romania						-113719	-71125	0	-42594
Population growth					Natural growth of population				
Population decline					Natural decline				
Decline of the number of individuals					The lowest internal migration				
					The lowest external migration				
Positive internal migration					Positive external migration				

Data Source: Population growth/decline, natural growth/decline, internal and external migration in 2017: The National Statistics Institute (hereinafter called INS); author's own calculations

As regards the decline of the number of individuals, Prahova, Teleorman, Buzău, Botoşani counties have the highest values. Prahova, Dolj, Buzău and Teleorman counties are relevant in terms of natural decline. The lowest internal migration was registered in Teleorman, Vaslui, Galaţi and Botoşani counties. The lowest values concerning external migration were recorded in Ilfov and Giurgiu, Teleorman and Dâmboviţa counties.

4. Conclusions

To conclude, we notice the extent of the population decline between 1990 and 2018 and the contribution of natural decline and external migration, at the national level.

The information in Table 3 shows the contributions of the three components, natural growth / decline, internal migration and external migration, to the growth / decline

in the number of resident population in the counties in 2017.

The demographic decline in the regional plan is acknowledged, which creates a pressure on the companies seeking workforce, which can be increasingly difficult to find due to aging population and migration. Due to the lack of internal workforce, foreign

labour force is a solution, but one should also consider the risks arising from here.

It is appropriate to continue and investigate these matters more thoroughly, as they concern the risks to attract and use workforce from abroad, mainly from countries in the Middle East and Asia.

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