

PERSPECTIVES OVER THE ECONOMIC TRANSITION AND DEMOGRAPHIC AGING IN EASTERN EUROPE

Ionel-Calin MICLE

College Prep International, Quebec, Canada
7475 Sherbrooke St W, Montreal, Quebec H4B 1S3, Canada, e-mail: ionel.micle@prepinternational.com

Corina-Florina TĂTAR

University of Oradea, Department of Geography, Tourism and Territorial Planning,
1 University St., 410087, Oradea, Romania, e-mail: corina.tatar@didactic.uoradea.ro

Marcu Simion STAȘAC

University of Oradea, Department of Geography, Tourism and Territorial Planning,
1 University St., 410087, Oradea, Romania, e-mail: marcu_stasac@yahoo.com

Marius I. STUPARIU

University of Oradea, Department of Geography, Tourism and Territorial Planning,
1 University St., 410087, Oradea, Romania, e-mail: marius_stupariu@yahoo.co.uk

Liviu BUCUR

University of Oradea, Department of Geography, Tourism and Territorial Planning,
1 University St., 410087, Oradea, Romania, e-mail: liviubucur@yahoo.com

Vasile GRAMA

University of Oradea, Department of Geography, Tourism and Territorial Planning,
1 University St., 410087, Oradea, Romania, e-mail: vasile.grama2014@gmail.com

Gyula NAGY

University of Szeged, Department of Economic and Social Geography,
2 Egyetem Street, Szeged 6722, Hungary, e-mail: geo.nagy.gyula@gmail.com

Cezar MORAR*

University of Oradea, Department of Geography, Tourism and Territorial Planning,
1 University St., 410087, Oradea, Romania, e-mail: cezar.morar@gmail.com

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Abstract: The countries of Eastern Europe represent a particular case from the demographic and economic point of view, as their demographic transition overlapped the economic development process. This represents a major challenge for the sustainability of their health and pension systems and has resulted in reforms and measures to support economic growth and increase the birth rate. Two categories of countries from Eastern Europe were analysed,

* Corresponding Author

Romania and Poland as representatives of the ex-Communist countries that joined the European Union and the Russian Federation as representative of the former Soviet Union. The Russian Federation experienced the most profound changes after 1990, being the only country in the Eastern bloc that is close to the generational replacement threshold, the only country with a positive migration balance, but also the only country with the lowest life expectancy.

Key words: Economic transition, demographic aging, Eastern Europe

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INTRODUCTION

Demography is a word derived from the Greek, “*demos*” meaning people, society or citizen and “*graphie*” describing a particular subject. Demography analyses human populations and profiles them according to their specific characteristics and dynamic processes (Thomas, 2018). Demography studies the size and composition of populations according to various criteria such as age, ethnic origin, sex, marital status, level of education, spatial distribution; dynamic processes such as birth, death, migration, and the relationships between population composition and population change (Lundquist et al., 2015).

Other authors (Caselli et al., 2006) make a clear distinction between the population and the individuals, the latter being able to age more quickly or slowly, but never being able to rejuvenate, whereas a population can rejuvenate if the birth rate increases. Demography deals not only with the size and growth of the population, but also with the composition of the population (Preston et al., 2001), like the age for example, which is generally defined according to the person’s birthday (Poston and Bouvier, 2010). Lately, the foci of age-related researches shifted on analysing the aging population. It is estimated that until 2050, for the first time in the human history, there will be more elderly people than children in the world (Lundquist et al., 2015). In the developed countries, people will have increased lifetime and they are likely to live longer in the future. Regarding old age, Vincent (2003) mentions that there are certain stereotypes in societies with older populations as being bound by tradition and lacking innovation, which can affect economic performance.

Most European states are undergoing an aging process. This trend is significant due to a fertility drop and a mortality increase at advanced ages. For the 27 countries of the European Union, the proportion of people aged 75 and over, almost doubled between 1980 and 2015 (from 4.8% to 9%). The differences between Central and Eastern Europe have an impact on the process of population aging and interregional relations (Botev, 2012).

Central and Eastern Europe have experienced considerable instability in mortality since the 1960s. Long periods of stagnation in life expectancy have been followed by rapid increases in life expectancy or subsequent faster declines, before more recent periods of improvement (Aburto and van Raalte, 2018).

For the south-eastern and central Europe most countries were below the median value, such as Romania, Bulgaria, Slovakia, Poland which have less than 3.5% of people aged 75 and over (Gaymu, 2017). The aging acceleration in the countries of southern Europe is due to the shrinking young population and the sustained growth of the elderly. An approach to the intersection of politics and demographic challenges in Hungary and Poland is made in the study of Petrova and Inglot (2020).

The ex-communist countries of Eastern Europe represent a special case from an economic and demographic point of view. These countries have gone through their demographic transition without ever achieving an economic development status (Hoff, 2008) and today, almost without exception, they show a negative population growth rate. Similar to “*a locomotive in the opposite direction*”, it is the lowering of fertility which preceded economic development, which has difficulty in taking hold.

Today, the former satellites of the USSR (e.g. Poland and Romania) have come closer to the West as democratic countries, members of the EU, having taken the path of capitalist development, but their economic and demographic strength is weakened by the population aging and a “*haemorrhage*” of labour moving abroad, connected to other existing challenges.

Poland and Romania are two countries which adhered the EU in two different stages (2004 and 2007 respectively) and therefore they have a different level of development (Ilieş et al., 2010; Morar, 2012a; Morar, 2012b; Herman et al., 2019; Niemets et al., 2021), in the same time, Russia is not a member of the European Economic Area. In other historical times, all three nations were part of the Community of Reciprocal Economic Aid (CAER)¹, created at the initiative of the USSR in 1949, as an economic organization of the European Communist states.

In the northern countries where the demographic transition took place in a “*natural*” way by following the stages of industrialization, urbanization and economic development, we can now observe a fertility below the generation replacement threshold, a high life expectancy, therefore aging at the top and bottom of the age pyramid and a shortage of manpower, partly filled by immigration.

In Eastern Europe, we observe the same characteristics except that here the process was much more abrupt with a drop in fertility not as a consequence of development and increase in life expectancy, but of a drop in the standard of life and the youth’s massive migration to cities and abroad.

Faced with this situation, there are many challenges, especially with regard to the sustainability of health and pension systems, given that these countries have not had the time to put in place effective social policies, so aging could enhance the economic problems that caused it as in a vicious circle if we do not undertake the adequate reforms.

MATERIALS AND METHODS

To fully understand the complex process of demographic aging in Eastern Europe, it is first necessary to clearly explain the social, economic and political context in which the demographic transition has occurred in these countries compared to the western capitalist countries where the transition took place in a “*natural*” way over a long period of transformations (industrialization and progressive urbanization, sanitary and epidemiological revolutions, drop in infant mortality, increase in life expectancy, drop in fertility, aging).

In Eastern Europe, all these happened in a few years because of a Communist type planning. After the Second World War, these countries were rural and agricultural, little industrialized with a young population which was experiencing the dawn of a baby boom after the war and socio-economic reconstruction, so they followed the same path as Western Europe. The Communist regime accelerated the normal course of development and completely disrupted these societies. From one day to another, the rural population was dispossessed of properties and material goods and had two choices: to either stay in the village and work in the new agricultural cooperatives controlled by the State (and which constituted their property before), or to migrate to the cities (most of them artificially enlarged, without adequate infrastructure) to settle in standard apartments, built for small families and to work in large factories controlled also by the State. The older ones have chosen to stay, the younger ones have gone to towns. As a result, the villages became populated by an elderly and destitute population, so fertility rates fell drastically while the towns were overcrowded and made up of a young population, of working age, but who lived in conditions which discouraged the birth rate (food rations, small standard apartments, poverty, social insecurity).

After the fall of the Communist system, in the new social and economic chaotic context part of the long transition to the Capitalist democracy, the people from the cities who were having plenty of employment opportunities, income and housing guaranteed by the State and a free health and education system, have lost even this security.

¹ Former Community of Independent States (CSI)

From one day to the next, their jobs disappeared and their qualifications were no longer in demand on the job market. Consequences were that people reduce expenses and uncertainties as much as possible by decreasing the birth rate even further and emigrate massively abroad in the context of the opening of borders. After the depopulation and the aging of the villages during the Communist era, it was the time of cities to follow the same path, where the total population started to decrease.

The accession to the European Union with the non-refundable funds received for Romania and Poland have improved somehow the overall socio-economic context, leading to an increase in standard and life expectancy. The main demographic variables that account for the population aging are related to the decline in fertility, the increase in life expectancy and migration, but beyond these causes in the case of Eastern Europe we must add aging as a consequence of imposed policies, mentioned previously. The data obtained from the interpretation of the demographic indicators used, were processed and synthesized, the synthesis based on analysis generated results, being arguments for defining the conclusions.

RESULTS & DISCUSSION

Fertility

The fertility decline started later than in Western Europe, but at a higher speed. While Western countries needed over 60 years to go from a high fertility demography, to a low fertility one, the Eastern countries have passed from one stage to the next in about 20 years (Anderson, 2002). Fertility began to fall below generation replacement rates in 1960 (Zakharov, 2008). Afterwards, it had an upturn thanks to the pro-natalist policies put in place (notably the ban on abortion in Romania in 1966), but after 1990 the decline was more accentuated and well below Western Europe. Only Japan has experienced such a rapid decline in fertility (Hoff, 2008).

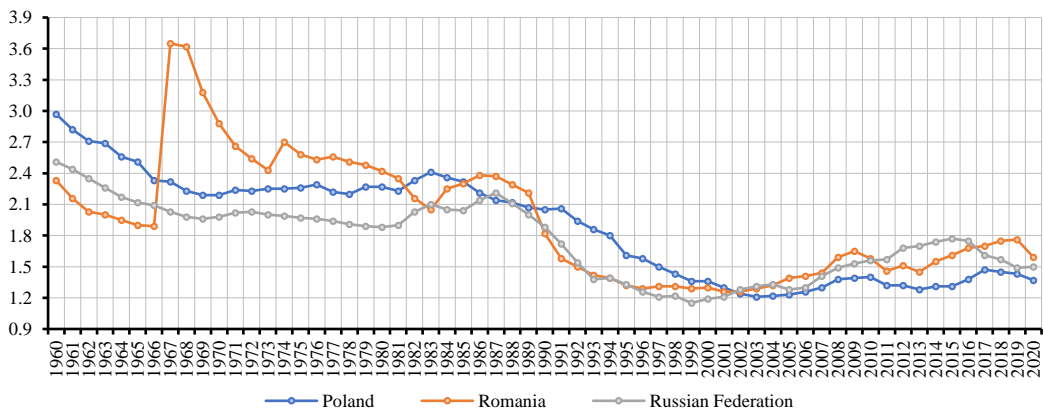


Figure 1. The Total Fertility Rate (children/woman) evolution in Poland, Romania and Russian Federation between 1960-2020

(Data source: World Bank, World Development Indicators, 2021)

We observe a much higher birth rate in the 1960s in Romania (the Total Fertility Rate ISF (Indice synthétique de fécondité) in Romania was 1.90 children/woman in 1966 before the abortion ban and next year in 1967, it was 3,66 children/woman (Mureşan et al., 2008)) than in Poland or Russia, but which also declined more rapidly thereafter in the 1970s (figure 1).

In the evolution of the Total Fertility Rate, by following the curves, we can distinguish four fertility evolution stages: a stage before 1989 with a higher rate for Romania and lower and similar rates for Poland and Russia; the second stage 1990-2000 with a more accelerated and similar decline for Romania and Russia and less accelerated for Poland; the third stage after 2001 with a more accelerated decline in Poland and a slight rise for the other two countries and the fourth

stage, recently, after 2011 where Romania and Poland continue to drop and move closer, and the rise of Russia (the only one in Eastern Europe which is rising), which according to forecasts will be maintained and will get closer to an Total Fertility Rate of 1.7 children/woman, thanks to the recent pro-birth policy (Zakharov, 2008).

A forecast made by the United Nations in 2020 (figure 2) for 2020-2100, by comparing the fertility rate in Europe as a whole continent, Eastern Europe and the analysed countries shows that the trend described previously in stage 4 will continue while Romania and especially Poland will remain below the Eastern European average, so in the long term their population will age more than the regional average while Russia will experience a slight “*rejuvenation*” or rather a less accentuated aging, because its rate of 1.7 children/woman (Table 1) is still below the generation replacement threshold, even if Russia has the highest abortion rate in Eastern Europe (Zakharov, 2008).

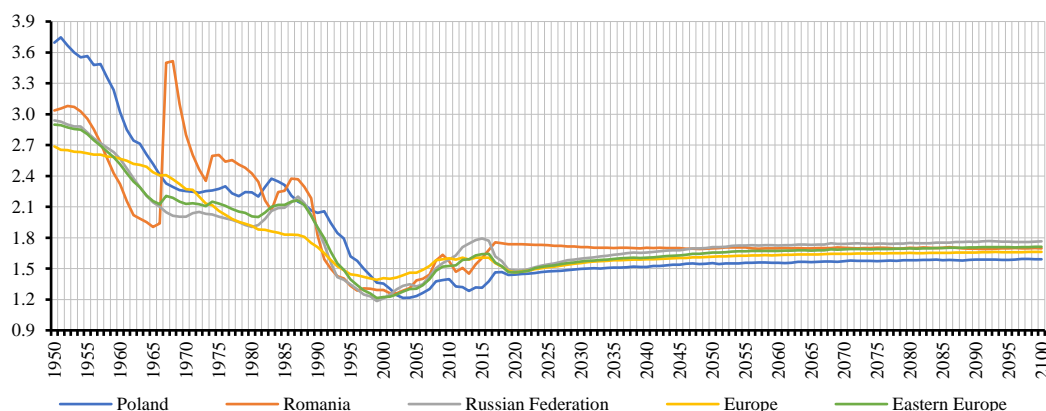


Figure 2. The comparative total fertility rate between Poland, Romania and Russian Federation (1950-forecast 2100)

(Data source: UN Population Division Data Portal)

Most of the consulted authors concluded that the fertility drop in Eastern Europe is a consequence of the difficult socio-economic conditions due to the post-communist economic transition, but they also speak of the second demographic transition (Sobotka, 2008; Kotowska et al., 2008; Mureşan et al., 2008) caused not only by the socio-economic crisis, but also by a change in social values and behaviours (postponement of age at first marriage and first birth, cohabitation is becoming more and more widespread to the detriment of marriage, the increase in the use of contraceptives and abortion, investment in the quality and education of children and less interest in an extended family etc) (Zakharov, 2008). With fertility rates below the generation replacement threshold and an increasing mortality, the population of these countries will continue to age and even decrease.

As peculiarities at the level of the analysed countries it is necessary to underline the following: marriage at the youngest ages in Romania, the lowest cohabitation rate in Poland (country of Pope John Paul II, where the Catholic Church is still influential), the abortion rate and contraceptive use in Russia (contraceptives were banned there during the Soviet regime).

The pro-natalist measures put in place seem to work only in Russia, which thanks to higher government revenues can afford a more generous maternity bonus, but also thanks to other measures (free nurseries, maternity leave paid at 100% of the wages of mothers, free hospital fees etc.). In Poland and Romania, pro-natalist measures do not work because of the difficulties of reintegration into work after maternity and less flexible working hours (in addition in these countries the costs of daycare are only partially state subsidized) (World Bank, 2007).

Table 1. Total fertility rate comparative in Poland, Romania, Russian Federation, Europe and Eastern Europe (1950-2020)

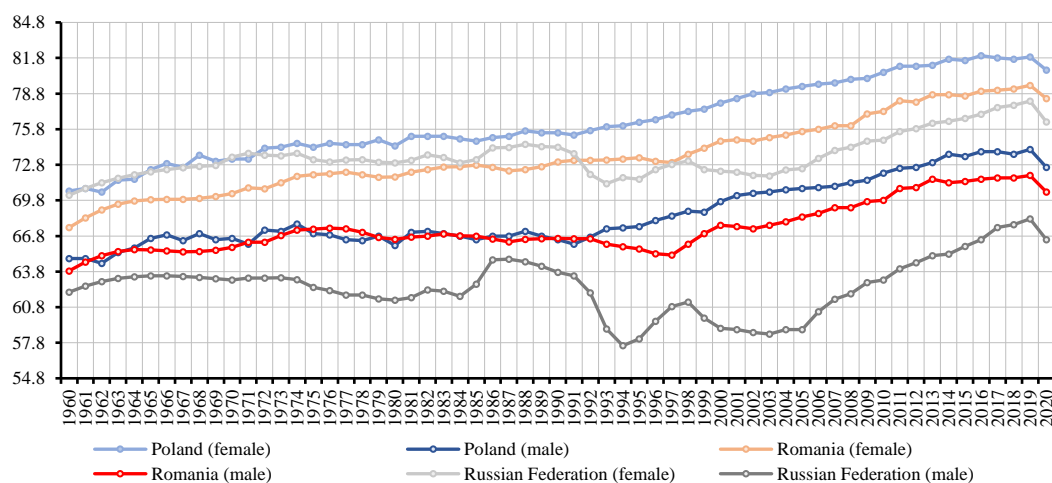
(Data source: UN Population Division Data Portal)

Country	Year	1950	1960	1970	1980	1990	2000	2010	2020
Poland		3.71	3.03	2.26	2.25	2.05	1.36	1.41	1.45
Romania		3.05	2.33	2.81	2.43	1.83	1.30	1.58	1.75
Russian Federation		2.95	2.58	2.01	1.91	1.90	1.22	1.60	1.49
Europe		2.70	2.58	2.28	1.93	1.72	1.42	1.61	1.47
Eastern Europe		2.91	2.52	2.14	2.02	1.91	1.23	1.53	1.47

Life expectancy

While the decline in fertility affects the age pyramid from the bottom, the increase in life expectancy produces an aging from the top of the pyramid (figure 7), as cohorts aged 65 and over take on increasing weight in the total population.

Life expectancy has not stopped increasing in the countries of Eastern Europe, but with peculiarities from one country to another and among gender. During the communist period, life expectancy was close to that of Western countries, especially that of women, but after 1990 the increase slowed down and in some cases even fell, as is the case of the life expectancy of women from Russia or between 1970 and 2000 life expectancy fell from 64 to 59 years (figure 3), a phenomenon never seen in peacetime and in the absence of pandemics. The explanation is excessive alcohol consumption and smoking, especially among men aged 35-49 (Hoff, 2008).

**Figure 3.** The life expectancy evolution in Poland, Romania, Russian Federation by sex (1960-2020) (Data source: World Bank, World Development Indicators, 2021)

Russia also shows a great difference in life expectancy between sexes (over 11 years in 2015). Romania and Poland have experienced a steady increase in life expectancy since 1950 (figure 4), but they still fall below Western countries.

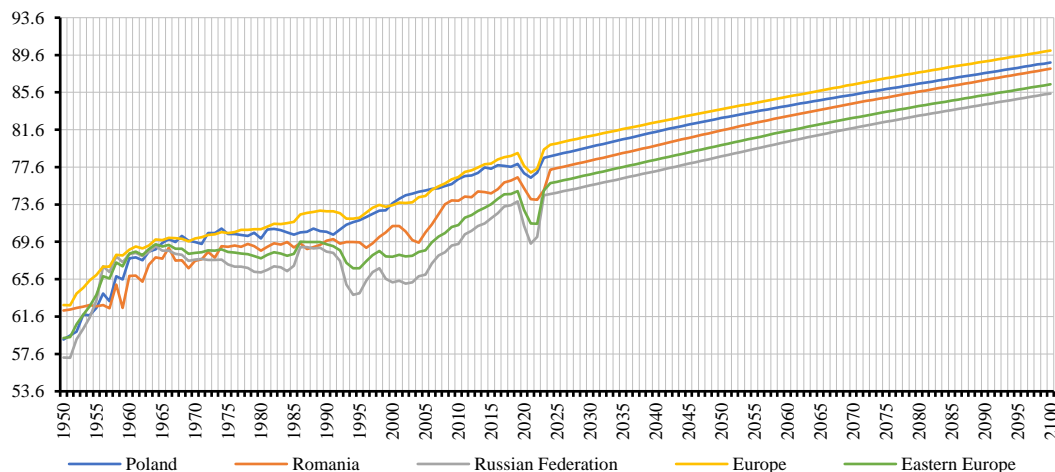


Figure 4. The comparative evolution of life expectancy in Poland, Romania, Russian Federation, Europe and Eastern Europe (1950-2020)
(Data source: UN Population Division Data Portal, 1950-2020)

Migration

Even if the data on migration are more difficult to measure, given that within the EU territory, movement is free and the flows at the borders are less controlled and centralized, it is true that in almost all the countries of Eastern Europe the migratory balance is negative except for Russia, as showed below (figure 5).

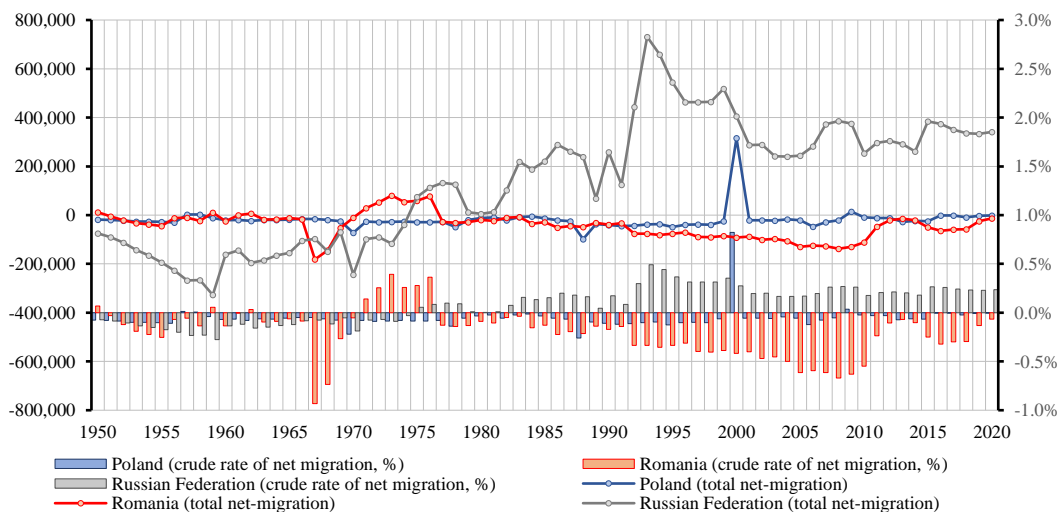


Figure 5. The evolution of the migration in Poland, Romania and Russian Federation (1950-2020)
(Data source: UN Population Division Data Portal, 1950-2020)

The negative natural balance in Romania and Poland is amplified by the negative migratory balance, with a negative influence on the workforce on the one hand (usually it is the active population that migrates) and population aging and the amplification of the dependency ratio on the other hand.

In Russia, between 2010 and 2015, the positive migratory balance managed to compensate for the natural losses so that the total population increased slightly (figure 5). This is explained by

the return migrations from neighbouring ex-Soviet countries, but also by economic immigration attracted especially to extractive industries (hydrocarbons, gold, diamonds) where wages are high.

For Poland we have recently seen (after integration into the EU in 2004) a tendency to gradually transform into a reception country for immigrants, while for Romania there has been a lot of return immigration since 2008.

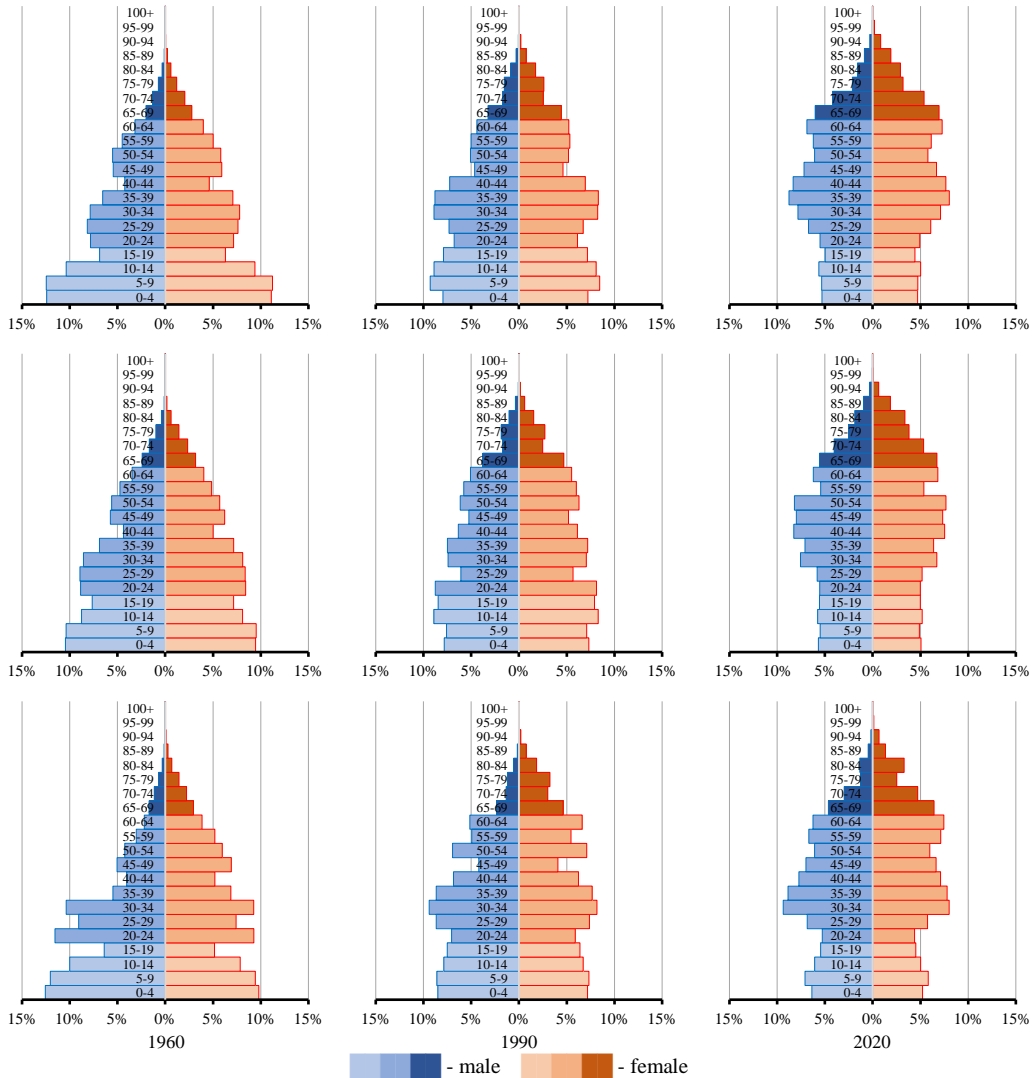


Figure 6. Comparative age pyramids in Poland (up), Romania (middle) and Russian Federation (down), in the years 1960, 1990 și 2020
(Data source: UN Population Division Data Portal)

Demographic changes consequences on the economy and taken measures

Due to a negative natural balance and a negative migration balance (except for Russia), all three countries are experiencing and will experience a decrease in total population, labour force and an older and more dependent society (figure 8).

The recent measures taken to boost fertility and combat the “outward brain drain” show that governments are aware of the challenges ahead and they still have time to take advantage of their demographic dividend and put in place sustainable and equitable social policies. Their aging, even if rapid does not have the amplitude of Western countries (figure 6) and their working population can support the retirement system which unfortunately is almost at 100% by distribution, which for the moment represents a very high percentage of the GDP, lower than Western countries (figure 7), but which in the future may become unsustainable.

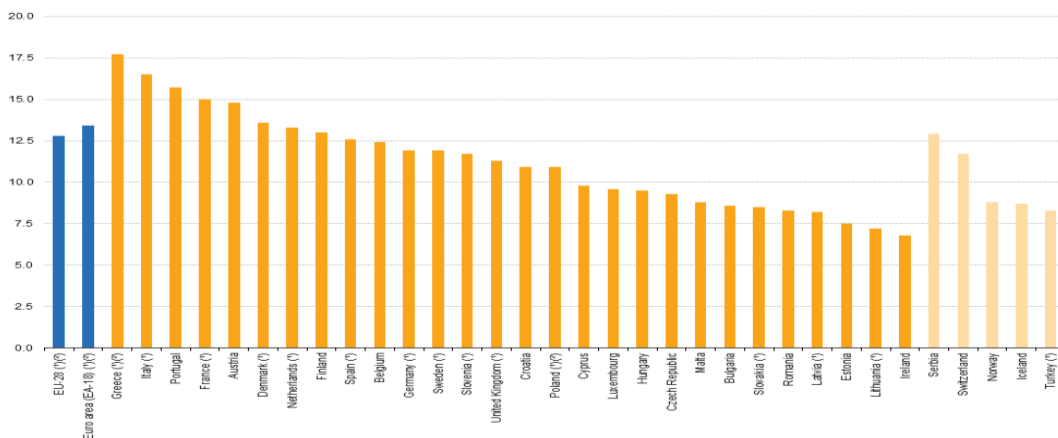


Figure 7. Expenditure with pensions as a percentage of GDP in Romania and Poland compared to other European countries, 2012 (Source: Eurostat, 2012)

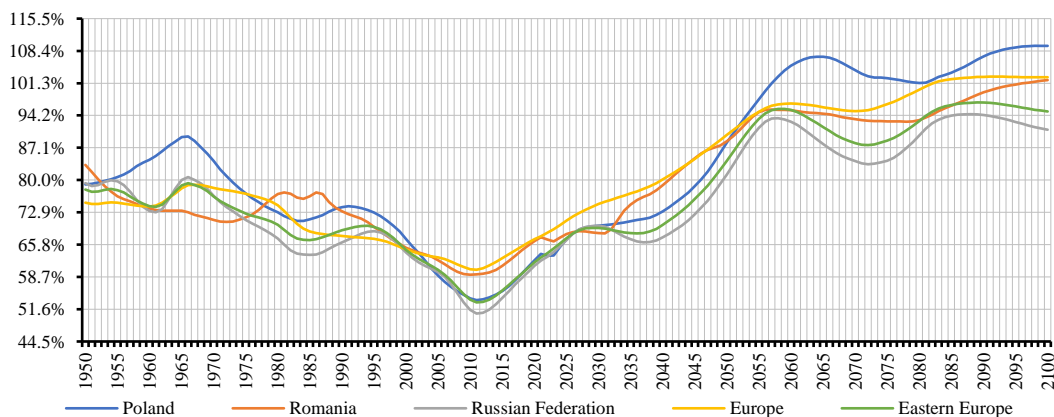


Figure 8. The evolution of the dependency ratio in Poland, Romania, Russian Federation, Europe and Eastern Europe (1950-2020) (Data source: UN Population Division Data Portal, 1950-2020)

Apart from the retirement system costs, in the case of aging populations like the analysed cases, we are also interested in the costs of the public health system and its viability. For the 3 countries in our case study, these costs are still low compared to Western countries and therefore it shows that aging has a reduced impact on these costs as a percentage of the GDP (figure 9).

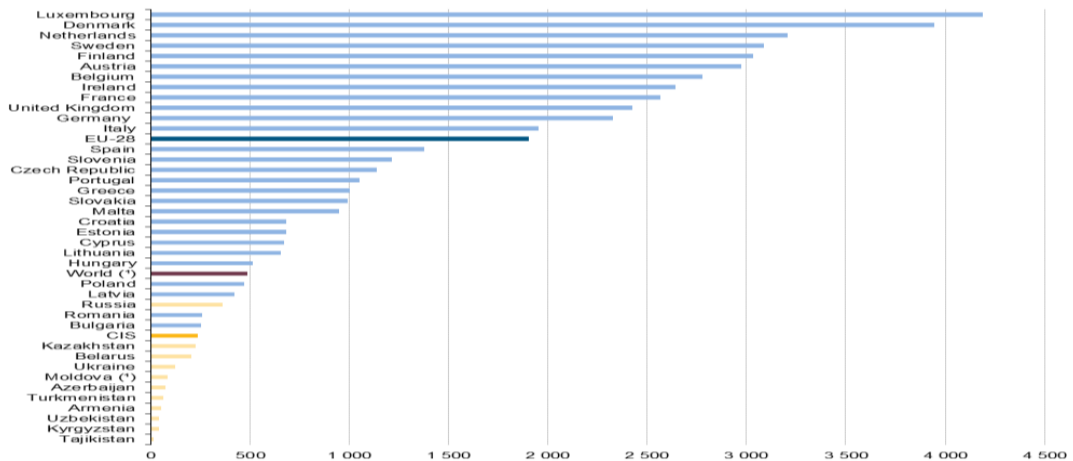


Figure 9. Comparative cost of the health system (in millions of euros) in some European and Central Asian countries, 2012

(Source: EU Member States: Eurostat – online data code: gov_10a_exp; CIS countries: WHO, Global Health Expenditure Database – NHA indicators, Global Health Expenditure Database, World Bank data)

CONCLUSIONS

The three analysed countries currently show an aging society resulting from a demographic and economic transition disrupted by measures taken during the Communist era and after Communism (massive privatizations, unemployment, migration, fertility decline etc.), but who have started to react to these problems and to put in place pro-birth policies and social protection for the elderly.

By the Lisbon Agenda (2009), the European Union required Romania and Poland to put in place policies of poverty reduction and intergenerational equity and the reform of pension systems, education and health and also assist them with non-reimbursable cohesion funding. Russia, thanks to the benefits from its hydrocarbon exports, currently has funds to support its pro-natalist policies and its retirement and health system. Fertility seems to be undergoing a turnaround, in addition its workforce is supplemented by a contingent of large numbers of immigrants.

The problems that should be solved for a long-term economic and social development relate to job offers for young people to encourage them not to leave the country and to give them security to start a family and have children, more generous allowances for children and lower day care costs, lower tuition fees, a more flexible schedule to reconcile work with family, the opening of the working market for the elderly, a better distribution of public funds towards the most disadvantaged and the creation of a public savings fund for future retirees, etc.

The limited space of this research does not allow us to illustrate all the various faces and regional peculiarities of aging, because of the great social diversities of these countries.

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