POPULATION AGEING IN ROMANIA: FACTS AND ANALYSIS

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Abstract

Romania knows an important change in the age structure that is followed by a demographic ageing process. This process has economic and social consequences. An ageing population has effects both for a country's budget, and also for the labour market, and hence for the economic growth. In this context, Romania's position is less favorable as compared to the 27 EU average.

It is widely accepted that, unless serious measures are taken, the growth in the proportion of the elderly population will affect many aspects of economic and social development. The continuing augmentation of the ratio of people in older dependent age groups relative to those in working-age groups will increase the financial pressure on the health and security systems. In this context, the economic, social and demographic policies must be adapted to the new age structure of the population.

Key words: population ageing, Romania, dependency ratio, economic pressure

JEL Code: J14, J10, C10

Introduction

In the last decades, lower fertility rates and higher life expectancy have determined significant changes in the age structure of the population. These changes result in an increased proportion of the elderly population and these changes have important consequences in economy and society. Population ageing is the process by which older individuals become a proportionally larger share of the total population, as a long term trend and as a firm tendency.

Ageing is an important consequence of low fertility and therefore of the related low family size. Longer life expectancy and international migration have both consequences on

ageing. Also, improvement in health in general, and in particular, at higher ages gave an impetus to the ageing process (Daróczi, 2005, p.221).

In an article by Lee and Mason (2010) a number of potentially important issues related to changes in population age structure are explored. Lee and Mason studied the interaction between demographic change and human capital investment. They demonstrated that increased human capital investment associated with lower fertility may mitigate the increased cost associated with an ageing population. Population ageing involves growing transfers from workers to the elderly in developed countries today, through rising payroll tax rates and family support burdens.

Zamac et al. (2010) analyzed low fertility and long run growth in an economy with a wide public sector. They showed that an increase in the relative costs of children can cause a fertility trap to occur only if social norms start adapting to lower fertility.

The investigation of the relationship between ageing and the evolution of health care expenditure per capita in the EU-15 countries is the purpose of the paper by Bech et al. (2010). One of their conclusions is that only life expectancy at age 65 has a long-run bearing on health expenditures.

Zweifel et. al. (1999) studied the relationship between health care expenditure (HCE) and age, using longitudinal data. They concluded that the terminal phase of life is costly independent of whether individuals die at age 60 or 90. Therefore, per capita HCE is not necessarily affected by the ageing of the population due to an increase in life expectancy. Rather, an increase in the share of elderly population seems to shift the bulk of HCE to higher age, leaving per capita HCE unchanged.

1 Population ageing in Europe

Each country is at a certain stage in its demographic transition. The levels of fertility and mortality at a certain given moment are influenced by the initial levels of these two phenomena, the beginning of the transition, and by its duration (Rotariu, T. 2010, p. 107). In Europe, the process of ageing was accelerated in the second half of the 20th century.

Many studies show that ageing in some European countries either is or will become an important phenomenon with significant consequences in economy and society. In the European countries, the percentage of the population over 65 increased from 15.60% in 2000 to 17.38% in

2010. European countries population aged over 65 years old (%) will increase to 20.06% in 2020 and to 23.55% in 2030, by the Eurostat provisions.

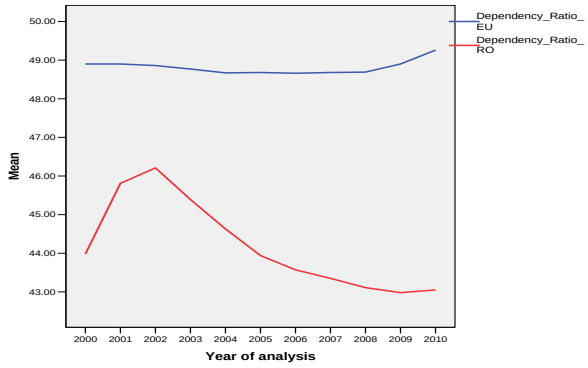
The economic pressure that inactive population places on active population can be measured by the ratio between inactive population versus active population. In Europe, the dependency ratio increased from 48.9% in 2000 to 49.26 in 2010, and the estimates for 2025 are 55 inactive persons for 100 active persons, while the ratio for 2050 is 72 inactive persons for 100 active persons (World Population Prospects, http://esa.un.org/.).

Furthermore, the demographic changes result in a declining number of workers and an increasing number of retired people. The dependency ratio of aged population increased in Eorope from 23.4% in 2000 to 26.3% in 2010 and will increase to 32.1 in 2020, and 40.3 % in 2030 (Eurostat, http://epp.eurostat.ec.europa.eu). The number of working people (aged 15-64) that can potentially support one person aged 65 years or more has decreased. In this context, Europe has to face structural changes requiring a modification of the financing of social security systems and health care.

2 ROMANIA

In Romania, the proportion of population over 65 increased from 12.50% in 2000 to 14.94% in 2010. In 2020 the aged population will be 17.43 % and in 2030, 20.25%. This increase indicates that Romania has an ageing population. The dependency ratio has a decreasing trend in Romania (Fig. 1). The highest value was registered in 2001 (45.81%) and the lowest in 2011 (42.86%).

Fig. 1 The dependency ratio in Romania and European Union countries



Source: Eurostat, http://epp.eurostat.ec.europa.eu

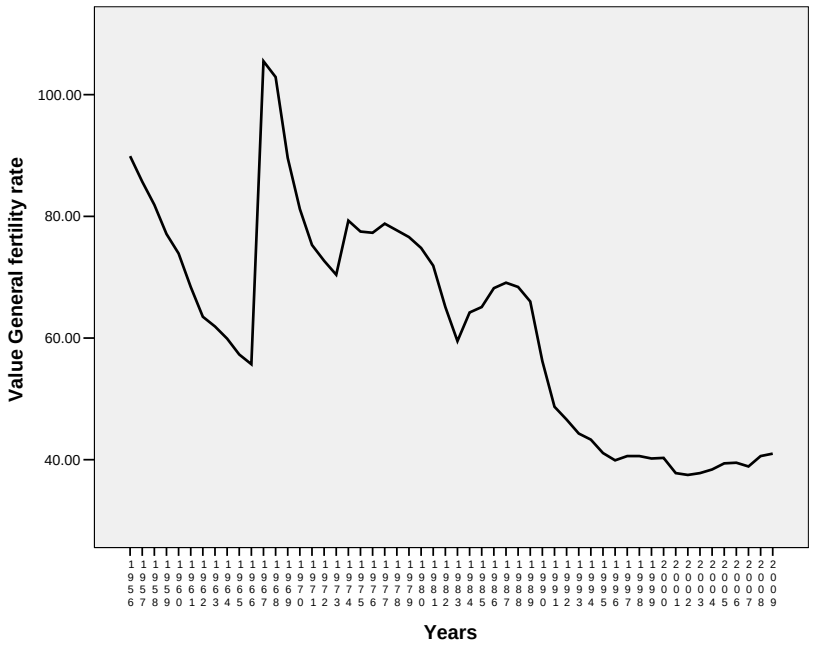
In order to highlight the second period of inactivity[1], that is, people aged 65 and older, the dependency ratio of elderly population measures the number of aged people (inactive) related to 100 adult (active) people. The data indicates a heavy pressure of the economically inactive on the active population.

As concerns the economic burden of pensioners on the active population, the Economic Elderly Support Ratio varied from 2.21 for Italy and 2.62 for Bulgaria to 4.30 for the Slovak Republic and 5.59 for Romania. The very good position of Romania is primarily due to the broad definition of the economically active population combined with a strong income effect in this country (Saczuk 2004). (Bijak et al, p. 5)

In essence, population ageing is a consequence of the changing fertility level. Birth rate decreased in Romania between 1960 and 2009, with the exception of the years 1967 and 1968 (Fig. 2). During these two years, values of 105.5 births and 102.9 births respectively to 1000 women in the 15-49 age group were recorded, far over the values in the previous years or in any of the years that followed (this peak can be accounted for through the enforcement of a decree on forbidding abortion given by the communist authorities). Data show that the country-level variation in the magnitude of ageing is strongly interrelated with past fertility changes.

Fig. 2 Fertility rates in Romania during 1957-2009

[1] The two periods of inactivity are: 0-14 years old and 65 years and older.

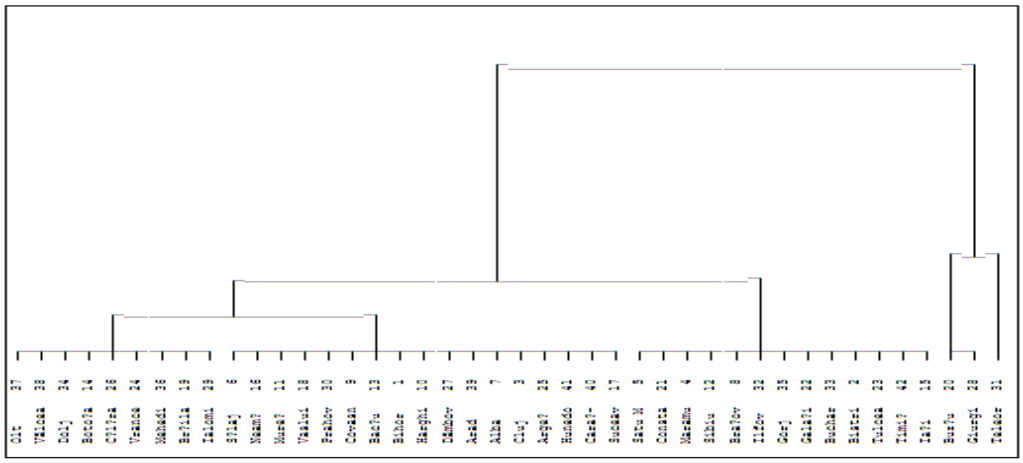


Source: Romanian Yearbook 2010, National Institute of Statistics.

Following 1990, a decrease in the birth rate compounded with the emigration of a part of the active population resulted in a downward trend for Romania's total population. If the current trend of birth rate is stable, Romania will have 16.7 million people in 2050 and no more than 11.9 million in 2075, as compared to 22 million in 1990.

Homogeneous groups of Romania counties will be identified with respect to population ageing process by using cluster analysis. With the help of Cluster analysis we aim to assessing whether data can be summarized meaningfully in terms of a relatively small number of groups of objects which resemble each other and which are different in some respects from the objects in other clusters (Everitt, B. et. al., 2001, p. 10). The dendogram is created with average linkage as the cluster method and squared Euclidean distance as proximity measure. In the first stage the graph shows two large clusters of counties and in the second stage, four clusters (Fig. 3).

Fig. 3 Romanian counties clustered by population ageing indicators



Source: Romanian Yearbook 2010, National Institute of Statistics.

One cluster contains only one county (Teleorman) and that is an outlier with the highest value of old population percentage (21.74%) and the highest value of dependency rate (33.40%). Cluster 2 contains 11 counties, with an average value of old population of 17.08% and an average value of dependency rate of 25.25%. Cluster 3 contains 16 counties and is characterized by an average value of old population of 15.01% and an average value of dependency rate of 21.64%. Cluster 4 contains 14 counties and it is characterized by the lowest average value of old population of 13.21% and the lowest average value of dependency rate of 18.51%.

Conclusions

In the case of a demographically aged population, both the dependency ratio and old dependency ratio increase, which results in an augmented economic pressure onthe active population. Higher living standards, improved health care resulted in a higher life expectancy of the population.

After 1990 birth rate has played a decisive role in accelerating two of the demographic processes that affect Romania's population: demographic decline and demographic ageing. Therefore, increasing fertility of the population, over a long period of time can significantly contribute to the change in the age structure of the population. These evolutions should concern not only demographers, economists, and sociologists, but specialists in the area of social

policies, who elaborate strategies and policies regarding family, work, health, and education (Mihaescu, C. et. al., 2009).

The demographic boom in Romania in the years 1967 – 1968 will be felt around the year 2030, when the people born in that period reach their retirement age. The problem of budgetary balance and of maximizing the efficiency of public expenditure necessary to support such a great demographic pressure is the more urgent and important for Romania, which is a country far behind the European average regarding economic performance (Asandului & Baciu, 2010).

An ageing population has effects both on a country's budget, and also on the labour market, and hence for the economic growth. The serious pressure on the public budget, as well as on public policies must be adapted to the new age structure of the population. Since different age groups have different productive capacities and different economic needs, a country's economic characteristics should transform as its population age structure changes.

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